STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the City of Albany on July 12, 2012

COMMISSIONERS PRESENT:

Garry A. Brown, Chairman
Patricia L. Acampora
Maureen F. Harris
James L. Larocca
Gregg C. Sayre

CASE 11-T-0116 – Application of Long Island Power Authority for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the Public Service Law to Increase the Design Capacity of the Existing 10.6 mile Wildwood to Riverhead Electric Transmission Line from 69 kV to 138 kV.

ORDER ADOPTING THE TERMS OF A JOINT PROPOSAL AND GRANTING CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

(Issued and Effective July 12, 2012)

BY THE COMMISSION:

INTRODUCTION

On March 28, 2011, the Long Island Power Authority (LIPA) submitted an application pursuant to Article VII of the Public Service Law (PSL), seeking a Certificate of Environmental Compatibility and Public Need. The proposed Facility primarily would replace existing insulators with larger insulators on LIPA's existing 10.6 mile Wildwood to Riverhead electric transmission line, entirely within the existing right-of-way (ROW), thereby increasing the design capacity of the existing line from 69 kV to 138 kV (the Project or Facility). LIPA has filed an unopposed Joint Proposal in this proceeding. By this

order, we grant LIPA's application, as modified by the terms and conditions of the Joint Proposal.

Procedural Background

With its application, LIPA submitted a motion that requested waiver of four of the Public Service Commission (Commission) regulations governing the content of Article VII applications (the waiver motion). Deficiencies in LIPA's initial application were noted by the Secretary on April 25, 2011, and LIPA filed supplemental information with the Secretary on June 13, 2011. By order issued July 15, 2011, we granted LIPA's waiver motion. By letter dated July 29, 2011, the Secretary determined that, as of July 15, 2011, LIPA's application, as supplemented, was filed and otherwise in compliance with the filing requirements of PSL §122 and the implementing regulations of 16 NYCRR Parts 85, 86, and 88.

A prehearing conference was held on September 15, 2011, and was attended by representatives of LIPA, Staff, N.Y.S. Department of Environmental Conservation (DEC), and N.Y.S. Department of Agriculture and Markets (Ag & Mkts). No other individual or entity requested party status. Further, no request for intervenor funding was received in this proceeding.

Following exploratory discussions among the parties, LIPA filed a Notice of Impending Negotiations with the Secretary on October 21, 2011, and served the notice on all parties.

On March 16, 2012, LIPA, Staff, DEC, and Ag & Mkts (the Signatory Parties) had executed and filed the Joint Proposal with proposed Certificate Conditions.

By April 10, 2012, each of the parties had filed a statement in support of the Joint Proposal.

On May 10, 2012, an evidentiary hearing was held at the Department's Albany offices, for the purposes of examination of the terms and conditions of the Joint Proposal and the

receipt into evidence of the Joint Proposal and supporting evidence. All parties appeared at the evidentiary hearing.

DESCRIPTION OF THE PROJECT

The transmission line to be upgraded is located in a right-of-way that runs between LIPA's Wildwood and Riverhead Substations. Also located in this ROW adjacent to the existing 69 kV line is a 138 kV wood pole transmission line (Circuit 138-890). The 69 kV transmission line to be upgraded is approximately 10.6 miles and utilizes approximately 170 structural poles. The width of the right-of-way is approximately 100 feet. LIPA proposes to upgrade the transmission line from 69 kV by installing insulators capable of supporting 138 kV transmission on existing conductors and poles. A short piece (approximately 300 feet) of underground 138 kV cable will be installed near the Wildwood Substation to transition the overhead line into the Wildwood Substation. Several poles would be added to the existing right-of-way at the Wildwood Substation, to provide for transition to the underground interconnection to the Substation. LIPA states that no additional property rights will need to be acquired for this Project.

The existing overhead transmission route consists of three right-of-way segments:

2.8 MILES IN THE TOWNS OF BROOKHAVEN AND RIVERHEAD (SEGMENT THREE)

This portion of the transmission line is along the west end of the circuit and is closest to the Wildwood Substation. The first 0.9 miles of this segment is within the Town of Brookhaven. Roads traversed in this portion include: Randall Road, Gateway Drive, Dogwood Road, Overhill Road, Wading River-Manorville Road (County Road 25), North Country Road, Fairway Drive, and Sound Avenue.

6.0 MILES IN THE TOWN OF RIVERHEAD (SEGMENT TWO)

The transmission line proceeds east. Roads crossed include: Hulse Landing Road (County Road 54), Fresh Pond Avenue, Edwards Avenue, Riley Avenue, Twomey Avenue, and Middle Road.

1.8 MILES IN THE TOWNS OF RIVERHEAD AND SOUTHAMPTON (SEGMENT ONE)

The transmission line continues east, crossing Old Country Road (County Road 58) and Middle Country Road (NYS Route 25). The transmission line then proceeds south for one mile, traversing the Long Island Rail Road (LIRR) right-of-way and the Peconic River, a State-designated Scenic River.[1] Lastly, the transmission line continues east for 0.8 miles on LIPA's right-of-way to LIPA's Riverhead Substation, which is located on the south side of NYS Route 25, east of Mill Road.

* * *

The Project provides for a 300-foot underground cable to be installed just outside the Wildwood Substation fence on the south side of the property, which will terminate into the ring bus termination equipment.

The transition from overhead conductors to underground cable will be on three steel poles, one for each phase. Each of these poles will be approximately 60 feet above grade. The 300-foot underground dip is required to prevent a 138 kV overhead crossing of the existing 138 kV wood pole transmission circuit (Circuit 138-890). The undergrounding is necessary to prevent a double circuit outage in the event that the circuit at a higher elevation fails and falls onto the circuit below it.

[1] See generally, Environmental Conservation Law Article 15.

THE JOINT PROPOSAL

The Joint Proposal does not alter the Project as proposed in LIPA's application. Instead, the terms and conditions of the Joint Proposal contain a number of safeguards that, taken together, minimize the potential adverse impacts on the environment resulting from the construction and operation of the Facility. These safeguards relate to the location of the Facility (within an existing ROW), the use of best construction practices, construction timing to minimize impacts, erosion control measures, work zone traffic controls, applicable measures of protection for properties, noise mitigation, and compliance with local laws.

The Joint Proposal's terms and conditions also require advance public notice of construction, residential complaint handling procedures, environmental supervision, and stop-work authority to cease violations. Finally, the terms of the Joint Proposal provide a dispute resolution mechanism to ensure that any disagreements among the Signatory Parties are addressed promptly and brought to the Commission for resolution if the dispute cannot be resolved informally among the Signatory Parties.

THE PARTIES' STATEMENTS IN SUPPORT

The Signatory Parties state that this Joint Proposal gives fair and reasonable consideration to the interests of all parties and that our adoption of its terms and conditions is in the public interest. As described in the Joint Proposal, the Signatory Parties state that this Facility is needed to increase LIPA's electric transmission capacity to the South and North Forks of Long Island, in order to increase reliability and meet the forecasted increase in demand in those areas.

LIPA states that, considering the relatively straightforward type of work being proposed on an existing

transmission line, the possible alternative routes and technologies considered proved to be more costly and environmentally intrusive.

Staff's recommendation is that the overall package of the Joint Proposal's terms and conditions should be adopted because it is in the public interest. In furtherance of its recommendation, Staff argues that the Joint Proposal's terms and conditions would authorize the construction and operation of the Facility subject to specified safeguards to protect the natural and human environment and other public service infrastructure.

Ag & Mkts supports the terms and conditions of the Joint Proposal, noting that provisions regarding routing, construction, and mitigation techniques will result in the protection, to the extent practicable, of the resources impacted by the voltage upgrade of this transmission line.

In supporting the Joint Proposal's terms and conditions, DEC states that its concerns regarding invasive species, use of herbicides along the ROW and in wetland areas, and activities related to the poles on either side of the State-designated Scenic Peconic River have been satisfactorily addressed by the terms and conditions of the Joint Proposal.

DISCUSSION, FINDINGS, AND CONCLUSION

ARTICLE VII STANDARDS

In rendering a decision on an application pursuant to PSL Article VII, we may not grant a certificate for the construction or operation of a major utility transmission facility unless we find and determine:

(a) the basis of the need for the facility;

(b) the nature of the probable environmental impact;

(c) that the facility represents the minimum adverse environmental impact;[2]

(d) what part, if any, of the line shall be located underground;

(e) that such facility conforms to a long-range plan for expansion of the electric power grid;[3]

(f) that the location of the facility as proposed conforms to the applicable state and local laws and regulations issued thereunder;[4] and,

(g) that the facility will serve the public interest, convenience, and necessity.

The concept of "environmental compatibility and public need" requires that we "protect environmental values, and take into account the total cost to society of such facilities" when making a decision on whether we should grant a PSL Article VII certificate.[5] In rendering this decision, no single aspect of an application can be looked at in a vacuum; rather we must

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[2] Considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations including but not limited to, the effect on agricultural lands, wetlands, parklands and river corridors traversed (N.Y. Pub. Serv. Law §126(1)(c)).

[3] Of the electric systems serving this state and interconnected utility systems, which will serve the interests of electric system economy and reliability (N.Y. Pub. Serv. Law §126 (1)(d)(2)).

[4] All of which are binding upon the Commission, except that we may refuse to apply any local ordinance, law, resolution or other action or any regulation issued thereunder or any local standard or requirement which would be otherwise applicable if we find that, as applied to the proposed facility, such is unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such municipality (N.Y. Pub. Serv. Law §126(1)(f)).

[5] See Chapter 272 of the Laws of 1970, Section 1, Legislative Findings.

consider the totality of all of the relevant factors in making the determination of environmental compatibility and public need.

Pursuant to PSL §126(1), the following constitutes our specific findings and determinations with respect to the application of LIPA for a certificate of environmental compatibility and public need.

The Basis of the Need for the Facility

The Joint Proposal describes the basis on this record for a finding of need pursuant to PSL §126(1)(a), relying on several factors. First, based on forecasted load growth, the Project will be needed prior to the summer of 2013. Demand on the East End has increased over the six-year period between 2000 and 2006 by an annual average of 5.2 percent. LIPA forecasts demand to increase on the South Fork at an annual average rate of about 3.3 percent through 2025. As described in the Joint Proposal, this Project is a significant component of LIPA's plans to reinforce the existing transmission capacity of the South and North Forks of Long Island.

The need for this Project is locational (*i.e.*, specific to a particular area), because the North and South Forks (or East End) loads are served by radial lines. As described in the Joint Proposal, this Project is part of the first link in LIPA's chain of supply to the East End. Therefore, this Project is critical to meeting the entire electric system requirements of the East End. The Signatory Parties concur that alternatives such as supply, transmission, or demand side management programs implemented west of Riverhead will not be sufficient to solve this local problem.

Second, beginning as early as 2013, a contingency of the possible loss of the existing Brookhaven to Riverhead double circuit would result in a thermal overload on the existing

Wildwood to Riverhead 138 kV circuit — one of the East Brookhaven corridor circuits. Such an overload would occur assuming the availability of all East End generators. To the extent any of the East End generators are not available or their power output is reduced, the risk of system overload increases, resulting in higher exposure hours to an outage as well as higher overloads. Dispatching Shoreham generation would slightly offload the 138 kV circuit, thus potentially postponing the need for the Project by, at most, one year, if at all.

Avoiding overloads is also premised on the availability of East Brookhaven and East End reactive resources such as the shunt capacitors and dynamic resources. To the extent that the load is higher, or any of these reactive facilities are out of service, the voltage support is reduced, further increasing the potential outage risk. This increased outage risk is associated with the need to maintain constant power. As voltages decrease, the currents on the circuits would need to increase, thus causing higher loading on the circuits in the corridors.

In addition, preliminary developmental plans are being evaluated for Enterprise Park in Calverton (EPCAL) in the Town of Riverhead, which could include a mix of retail, residential, and industrial uses. This development could result in a sharp increase in the need to supply power to the East Brookhaven corridors.

Furthermore, if one circuit is out of service for an extended period of time for maintenance or repair, the system is then exposed to a second contingency scenario. This could potentially become a very critical situation in the East Brookhaven area. As there are only two 138 kV circuits in the East Brookhaven corridors, if the existing Wildwood to Riverhead 138 kV circuit is out of service, a fault could then take out

the existing Brookhaven to Riverhead double circuit facility during peak conditions. If this were to occur, only two 69 kV circuits would remain in service. These two circuits, in addition to the East End generation (which totals approximately 100 MW), would not be able to serve 607 MW of East Brookhaven and East End loads. This would most likely result in a voltage collapse and, thus, large load shedding, affecting thousands of LIPA's customers.

Third, the Federal Energy Regulatory Commission (FERC) is establishing new regulatory requirements that are expected to affect reliability standards that apply to LIPA's facilities. One possible impact is LIPA would be required to design for second contingencies in the future. This Project would help satisfy that requirement.

Finally, the Project will be operated in accordance with New York State Reliability Council, Northeast Power Coordinating Council, and North American Electric Reliability Corporation criteria and will not adversely impact the reliability of the New York State bulk power system.

The Nature of the Probable Environmental Impact

The adverse environmental impacts of this Project are expected to be minimal, limited to temporary construction disturbance, the installation of additional equipment on the existing transmission line, the erection of three poles near the existing Wildwood Substation, and the installation of a 300-foot underground cable just outside the Wildwood Substation.

The selected route, access points and configuration will avoid or minimize the disturbance of natural habitat, land uses, and the human environment because the proposed project uses the existing transmission lines and rights-of-way, avoids or minimizes the disturbance of natural habitat and agricultural land, and avoids disturbance of residential and commercial

properties, activities, traffic and emergency operations in a populated area.

1. Land Use

The Joint Proposal describes the land uses along the Facility route which include agricultural, residential, retail, other businesses and open space. Because the proposed Facility will use the existing ROW, no permanent impact will occur on any of the existing land uses along the route. Any adverse impacts are expected to be temporary in nature, related to construction of the Project, and the proposed Guidelines for the preparation of the Environmental Management and Construction Plan (EM&CP Guidelines) provide for minimizing these possible impacts.

2. Zoning

The Facility will not introduce a new use and is therefore consistent with existing local zoning. Utilization of the existing ROW will ensure that the Facility does not prevent permitted or legally established uses in the zoning district in which the Facility will exist.

3. Visual Impacts

The Joint Proposal contains a detailed description of the areas from which the Facility will be visible. The adverse visual impact of the Facility attributable to this Project will be minimal. The primary change to the existing transmission facility will be to exchange the existing insulators with insulators that are 16 inches longer. The new insulators will be gray, the same color as the existing insulators.

4. Cultural Resources

The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) agreed with the methodology and findings of LIPA's architectural historian who surveyed the area around the Wildwood Substation and the entire length of the

Facility. The architectural historian found no historic resources that would be impacted.[6]

The only ground disturbance that will occur during construction of the Facility will be installation of the 300-foot undergrounding in the area around the Wildwood Substation. OPRHP does not consider that area to be archeologically sensitive. As a result, the Facility is not expected to have any adverse impact on cultural or historic resources.

5. Natural Resources

The vast majority of construction activity for the Facility will consist of changing the insulators on the existing structures, which will have no adverse impact on natural resources. The only loss of natural resource habitat that will occur will be the locations where the new pole structures are to be located, near the Wildwood Substation for the undergrounding transition. The area to be disturbed for installation of the new pole structures is small, and is not ecologically sensitive. The construction and continuing existence of the new pole structures will not have a significant adverse environmental impact.

a. Peconic River and Freshwater Wetlands

The Peconic River, a State-designated Scenic River, is the only stream or river that the Facility will cross. In the vicinity of the Peconic River, the only construction activity related to the Facility will involve changing the insulators on the existing poles adjacent to the river's banks. These structures are set back approximately 15 and 30 feet from the banks of the river, respectively.[7] No in-river work will be

[6] See Hearing Exhibit 6.

[7] See Joint Proposal, Figure 1.

performed and no impacts to the water quality of the river are anticipated to occur.

The only potential adverse impact to wetlands concerns work on Pole 17, the pole structure closest to the north bank of the Peconic River. In this area, potential entry into a regulated freshwater wetland may be necessary. In the event such entry is required, the terms and conditions of the Joint Proposal provide that LIPA will utilize appropriate matting and other mitigation measures to minimize adverse impacts to the freshwater wetland and that construction in this area will be coordinated with DEC. (Pole 16 lies within an area designated as a regulated freshwater wetland adjacent area. However, entry into this wetland adjacent area is not anticipated during construction.)

The Joint Proposal's terms and conditions provide that mitigation steps designed to prevent adverse impacts to the Peconic River and freshwater wetlands will be included in the Environmental Management and Construction Plan (EM&CP). These mitigation provisions include detailed descriptions of erosion control measures and mowing and vegetation treatment plans. Furthermore, an environmental monitor with stop-work authority will be onsite during construction work near the Peconic River.[8]

b. Floodplains

The only portion of the Facility located in the 100-year floodplain consists of three existing pole structures in the vicinity of the Peconic River, Poles 15 and 16 to the south of the river and Pole 17 to the north. These poles are designed to withstand flooding conditions. Temporary access to the poles in order to change the insulators will not impact site topography or otherwise influence flooding characteristics.

[8] See proposed Certificate Condition 32.

c. Agricultural Resources

The Facility crosses active agricultural lands and less than one mile of designated Suffolk County Agricultural District 6. Agricultural activities that currently take place under the existing transmission facility are expected to continue once construction of the Facility has been completed. Temporary impacts during construction will be minimized through scheduling, planning and use of appropriate protective measures.[9] Additionally, the Joint Proposal's terms and conditions provide that an environmental monitor will be onsite during any construction work that occurs in agricultural fields,[10] and that LIPA will restore affected topsoil and field drainage systems. Lastly, LIPA will also comply with site-specific recommendations of Ag & Mkts and its general guidelines for working in agricultural fields.

d. Terrestrial Resources

The terms and conditions of the EM&CP will specify protective measures to minimize the disturbance of the existing ROW. Although no threatened or endangered plant species were encountered during previous field inspections, suitable habitat does occur within the ROW and portions of the study area for the little-leaf tick-trefoil (*Desmodium ciliare)* and velvety bush-clove (*Lespedeza stuvevie).* The presence of these two threatened or endangered plant species has been previously reported. Field inspections will be conducted in the appropriate season to determine the existence of threatened or endangered plant species within the ROW. Should any threatened or endangered plant species be discovered, the Joint Proposal's terms and conditions provide that a management plan will be

[9] See proposed Certificate Conditions 57-63.

[10] See proposed Certificate Condition 32.

incorporated into the EM&CP and will set forth specific steps to avoid harming the species, including area avoidance, transplanting and other appropriate measures.

6. Electromagnetic Fields

In our Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities[11] (Policy Statement), we adopted the requirement that all future Article VII transmission circuits be designed, constructed and operated such that magnetic fields at the edges of their right-of way, measured one meter above ground level, will not exceed 200 milliGauss (mG) when the circuit phase currents are equal to the winter-normal conductor rating. LIPA and Staff state that magnetic field calculations (144.2 mG) show that the Facility is below the 200 mG guidance level under the worst case phasing arrangement.

In Commission Opinion No. 78-13,[12] we established an interim electric field guidance level of 1.6 kV/m at the edge of the ROW. LIPA and Staff assert that the highest calculated electric field value (0.680 kV/m) is below this guidance level.

Further, at Staff's request LIPA has provided a supplemental analysis concerning the structures located closest to the Facility.[13] As reflected in the record, LIPA has committed to use the phasing arrangement for the new 138 kV

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[11] Cases 26529 and 26559, *Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities*, (issued September 11, 1990) in PSC Reports, Vol. 30, Part 3A, 1990; 1990 N.Y. PUC LEXIS 47.

[12] Cases 26529 and 26559, Opinion No. 78-13, *Power Authority of the State of New York and Health/Safety of Extra-High Voltage Lines*, (issued June 19, 1978), in PSC Reports, Vol. 18, Part 2, 1978.

[13] See Hearing Exhibit 3.

circuit that will most reduce magnetic fields at nearby structures.

Minimum Adverse Environmental Impact

We find that the environmental impacts associated with this Facility, will be avoided, minimized or mitigated, as revised by the Joint Proposal's terms and conditions. Those terms and conditions include EM&CP Guidelines, LIPA's preparation of the EM&CP consistent with the EM&CP Guidelines, and LIPA's strict compliance with the Joint Proposal's Proposed Certificate Conditions, the EM&CP, and the terms and conditions of the order(s) approving the EM&CP, during construction, operation, and maintenance of the Facility.

The application, Joint Proposal, testimony, and exhibits in the record describe the availability and impact of alternatives to the Facility. As required by statute, LIPA considered two alternative routes, each of which would entail overbuilding a 138 kV transmission line above existing facilities, and would entail installation of taller pole structures. One alternative would require expensive horizontal directional drilling under the Long Island Expressway whereas the other alternative includes an expensive 2.3-mile underground section. We agree that the Facility as located and configured is clearly preferable, on balance considering all factors, to any of the alternatives considered. The selected route and configuration is preferred because it will use existing structures in an existing ROW. Further, the selected route will avoid or minimize the disturbance to the human environment and natural habitats.

The two alternative routes that were considered would not provide all the benefits of using both the existing ROW and existing structures, and therefore would cause greater adverse

environmental impacts. Consequently, neither of the alternative routes is preferred over the proposed Facility.

LIPA also considered a number of alternative technologies to evaluate their ability to provide the needed energy that the proposed Facility will provide, including: the no action alternative; generation; demand side management; high voltage direct current (HVDC) transmission, and alternative transmission voltages. We find that, as described in the Joint Proposal, none of these alternative technologies are preferred to the proposed Facility.

In sum, we find that the proposed Project, as located and configured under the terms and conditions of the Joint Proposal, represents the minimum adverse environmental impact considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations.

Extent to Which the Facility Shall Be Located Underground

The Project includes a 300-foot underground cable to be installed just outside the Wildwood Substation fence on the south side of the property. This cable will terminate into the ring bus termination equipment at the Wildwood Substation.

Because the Facility will utilize existing overhead structures and conductors almost exclusively, undergrounding the 10.6-mile transmission line would be prohibitively expensive and would result in significantly greater adverse impacts than the proposed Facility. Undergrounding is estimated to increase the cost of the Project by more than $100 million. Upgrading the line as proposed will be far less expensive and results in almost no permanent adverse environmental impacts or land use issues.

Conformity to Long-Range Plans

The Joint Proposal states that the Facility is consistent with the most recent State Energy Plan and LIPA's Electric Resource Plan. LIPA performed a System Reliability Impact Study (SRIS) to determine the impact of the Facility on the LIPA system.[14] The Facility will eliminate the thermal overload conditions that would result from the loss of the existing Brookhaven to Riverhead double circuit. The Facility does not result in breaker stress and would decrease the likelihood of load shedding and the reliance on local generators and shunt capacitors. The Facility will reduce voltage constraints under various system conditions, will enhance delivery capacity to the east end of Long Island, and will support expected load growth. In conclusion, the Facility will increase reliability of LIPA's system and will not negatively impact other key goals contained in LIPA's Electric Resource Plan.

Conformity to Applicable State and Local Laws

Upon our review of the record in this proceeding, we find that if an Article VII Certificate were to be granted subject to the terms and conditions of the Joint Proposal including the proposed certificate conditions, the substantive provisions of State laws and regulations are or shall be adhered to by the Applicant in the construction and operation of the Facility. Similarly, notwithstanding LIPA's exemption from the jurisdiction of local municipalities, the Facility can be constructed in a manner that conforms to all substantive local laws and ordinances.

[14] See Application, Exhibit 13, Attachment E-4-1.

Public Interest, Convenience, and Necessity

We conclude that certification of the Facility will serve the public interest, convenience and necessity. As described herein above, this Facility is of value to the region's electric transmission and distribution system. The Facility will be capable of delivering additional energy to meet the increasing demands of Long Island's East End and will improve reliability at a reasonable and relatively low cost; the Facility will improve the efficiency of the State's generation resources.

Construction of the Facility will not have any significant permanent adverse impacts. Moreover, the Facility's proposed use of existing structures and existing ROW will minimize temporary adverse construction impacts.

The Certificate of Environmental Compatibility and Public Need is granted, subject to this order, which adopts the terms and conditions of the Joint Proposal, including the proposed certificate conditions attached and appended thereto.

The Commission orders:

1. Long Island Power Authority is granted a Certificate of Environmental Compatibility and Public Need authorizing construction and operation of the Facility, as detailed in the Application, and supplemental filings, including the March 16, 2012 Joint Proposal.

2. The terms and conditions of the March 16, 2012 Joint Proposal submitted by the parties and attached to this order are adopted and made a part of this order.

3. Proposed Certificate Conditions, included as Appendix 3 to the Joint Proposal, are hereby approved and incorporated into this order.

4. Long Island Power Authority shall, within 30 days after the issuance of the Certificate, submit to the Commission

either a petition for rehearing or a verified statement that it accepts and will comply with the Certificate and the conditions placed upon the Certificate. Failure to comply with this condition shall invalidate the Certificate.

5. Long Island Power Authority shall file with the Commission for approval its Environmental Management and Construction Plan, consistent with the Certificate Conditions, no more than one year after the issuance of the Certificate.

6. Long Island Power Authority shall integrate and coordinate maintenance of the certified Facility with that of adjacent facilities.

7. Long Island Power Authority shall promptly notify the Commission in writing should it decide not to complete construction of all or any portion of this Project and shall serve a copy of such notice upon all parties.

8. The Secretary may extend any deadlines established by this order for good cause shown.

9. This proceeding is continued.

By the Commission,

Jaclyn A. Brilling
Digitally Signed by Secretary
New York Public Service Commission

(SIGNED) JACLYN A. BRILLING
Secretary

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 11-T-0116 - Application of Long Island Power Authority for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the Public Service Law to Increase the Design Capacity of the Existing 10.6 mile Wildwood to Riverhead Electric Transmission Line from 69 kV to 138 kV

JOINT PROPOSAL TO THE NEW YORK STATE PUBLIC SERVICE COMMISSION

By: Long Island Power Authority
Staff of the New York State Department of Public Service
New York Department of Environmental Conservation
New York Department of Agriculture and Markets

Dated: March 16, 2012
Albany, New York

Table of Contents

JOINT PROPOSAL TO THE NEW YORK STATE PUBLIC SERVICE COMMISSION

THIS JOINT PROPOSAL is made on the 16th day of March, 2012 by and between the Long Island Power Authority ("LIPA"), the Staff of the New York State Department of Public Service ("DPS Staff"), the New York Department of Environmental Conservation ("DEC") and the New York Department of Agriculture and Markets ("Ag & Mkts") (collectively referred to as the "Signatory Parties").

INTRODUCTION

On March 24, 2011, LIPA submitted an application comprised of a compilation of studies, analyses and other documents purporting to satisfy the requirements of Article VII of the Public Service Law ("PSL") to the New York State Public Service Commission ("Commission"), seeking a Certificate of Environmental Compatibility and Public Need, pursuant to Article VII. The proposed facilities are intended to increase the design capacity of the existing 10.6 mile Wildwood to Riverhead electric transmission line from 69 kV to 138 kV (the "Project" or "Facility").

Supplemental information was filed by LIPA with the Commission and served on the statutory parties on June 13, 2011 in response to the Secretary's letter of April 25, 2011. By letter dated July 29, 2011, the Secretary determined that the submitted documents, as supplemented, are filed or otherwise in compliance with the filing requirements of Article VII, as of July 15, 2011.

After exploratory discussions among the parties, a Notice of Impending Negotiations was filed with the Commission by LIPA on October 21, 2011. A draft Joint Proposal was served on the parties on November 18, 2011.Parties circulated comments on the draft Joint Proposal. A settlement conference was held on January 13, 2012. Further drafts of the Joint Proposal were subsequently circulated for comments amongst the interested parties. Several conference calls were also held amongst the parties, the last one being March 12, 2012.

After thorough discussion of the issues, the Signatory Parties recognize that the parties' various positions can be addressed through settlement and agree that settlement is now feasible. The Signatory Parties further believe that this Joint Proposal gives fair and reasonable consideration to the interests of all parties and that its approval by the Commission is in the public interest.

TERMS OF JOINT PROPOSAL

I. GENERAL PROVISIONS

It is understood that each provision of this Joint Proposal is in consideration and support of all the other provisions of this Joint Proposal and is expressly conditioned upon approval of the terms of this Joint Proposal in full by the Commission. If the Commission fails to adopt the terms of this Joint Proposal, the Parties to the Joint Proposal shall be free to pursue their respective positions in this proceeding without prejudice.

The terms and provisions of this Joint Proposal apply solely to, and are binding only in the context of the purposes and results of this Joint Proposal. None of the terms or provisions of this Joint Proposal and none of the positions taken herein by any party may be referred to, cited or relied upon in any fashion as precedent or otherwise in any other proceeding before the Commission or any other regulatory agency, or before any court of law for any purpose, except in furtherance of ensuring the effectuation of the purposes and results of this Joint Proposal.

The Signatory Parties agree to submit this Joint Proposal to the Commission along with a request that the Commission expeditiously adopt the terms and provisions of this Joint Proposal as set forth herein.

The Signatory Parties recognize that certain provisions of this Joint Proposal contemplate actions to be taken in the future to effectuate fully this Joint Proposal. Accordingly, the Signatory Parties agree to cooperate with each other in good faith in taking such actions.

In the event of any disagreement over the interpretation of this Joint Proposal or implementation of any of the provisions of this Joint Proposal, which cannot be resolved informally among the Signatory Parties, such disagreement shall be resolved in the following manner:

1. the Signatory Parties shall promptly convene a conference and in good faith attempt to resolve any such disagreement; and
2. if any such disagreement cannot be resolved by the Signatory Parties, any Signatory Party may petition the Commission for resolution of the disputed matter.

This Joint Proposal shall not constitute a waiver by LIPA of any rights it may otherwise have including, but not limited to, applying for additional or modified permits, approvals or certificates from the Commission or any other agency in accordance with relevant provisions of law.

This Joint Proposal is being executed in counterpart originals, and shall be binding on each Signatory Party when the counterparts have been executed.

The Signatory Parties agree to provide the necessary testimony and affidavits that will permit the testimony and exhibits agreed upon by the Signatory Parties— as set forth in Appendix 1, attached to this Joint Proposal – to be admitted as record evidence in this proceeding.

II. DESCRIPTION OF FACILITY LOCATION

The entire length of the LIPA right-of-way and line to be upgraded is approximately 10.6 miles. The width of the right-of-way is approximately one hundred (100) feet. The line will be upgraded from 69 kV by installing insulators capable of supporting 138 kV transmission. Several poles at the Wildwood Substation will be added to the existing right-of-way. Existing conductors will not be replaced. A short piece (300 feet) of underground 138 kV cable will be installed near the Wildwood Substation to transition the overhead line into the Wildwood Substation. No additional property rights from public or private land owners need to be acquired for this Project.

The transmission line to be upgraded is located in a right-of-way that runs between LIPA's Wildwood and Riverhead Substations.

A. RIGHT-OF-WAY SEGMENTS

The existing overhead transmission route consists of three (3) right-of-way segments.

SEGMENT THREE (TOWN OF BROOKHAVEN AND TOWN OF RIVERHEAD) – 2.8 MILES

This portion of the transmission line is along the west end of the circuit and is closest to the Wildwood Substation, the first 0.9 miles of which is within the Town of Brookhaven. Roads traversed in this portion include: Randall Road, Gateway Drive, Dogwood Road, Overhill Road, Wading River-Manorville Road (County Road 25), North Country Road, Fairway Drive, and Sound Avenue.

SEGMENT TWO (TOWN OF RIVERHEAD) - 6.0 MILES

The line proceeds east. Roads crossed include: Hulse Landing Road (County Road 54), Fresh Pond Avenue, Edwards Avenue, Riley Avenue, Twomey Avenue, and Middle Road.

SEGMENT ONE (TOWN OF RIVERHEAD/TOWN OF SOUTHAMPTON) – 1.8 MILES

The circuit continues east, crossing Old Country Road (County Road 58) and Middle Country Road (NYS Route 25). The circuit then proceeds south for one (1) mile, traversing the Long Island Rail Road ("LIRR") right-of-way and the Peconic River. Lastly, the circuit continues east for 0.8 miles on LIPA's right-of-way to LIPA's Riverhead Substation (which is located on the south side of NYS Route 25 east of Mill Road.

The existing conductor size is 1192 kcmil ACSR. The diameter of this conductor is 1.302 inches. There is a 7#6 alumoweld static wire on all of these poles as well (diameter is 0.486 inches). There are approximately one hundred and seventy (170) steel poles supporting this circuit. There are no plans to replace these poles, but the configurations at the two terminations (at Wildwood Substation and Riverhead Substation) will be modified so that the circuit can be terminated into the new 138 kV substation racks. The existing steel poles vary in size, but most are eighty (80) foot direct embedded steel poles (seventy feet above grade). Ninety (90) foot and one-hundred (100) foot direct embedded steel poles, which are seventy-nine and eighty-eight feet above grade respectively, were utilized at the road crossings to provide conservative clearances above the roadways in excess of the National Electric Safety Code ("NESC"). Adjacent to the existing 69 kV line is a wood pole line supporting a 138 kV transmission circuit (circuit number designation 138-890). This line is approximately fifty (50) feet from the 69 kV steel pole line. Circuit 138-890 also runs from the Wildwood Substation to the Riverhead Substation (9A). There are no plans to modify this line.

The three hundred (300) feet, just outside the Wildwood Substation fence on the south side of the property, will be an underground cable and will terminate into the ring bus termination equipment. The transition from overhead conductors to underground cable will be on three steel poles (one for each phase); each pole will be approximately sixty feet above grade. The 300-foot underground dip is required to prevent a 138 kV overhead crossing of an existing transmission circuit. The undergrounding will prevent a double circuit outage in the event that the circuit at a higher elevation fails and falls onto the circuit below it.

III. ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

The Commission must consider the totality of all of the relevant factors in making its determination of environmental compatibility and public need. The relevant factors include, without limitation: the electric system, cost, environmental impact, the availability, and impact of alternatives, undergrounding considerations, conformance to long-range plans, State and local laws, public outreach, system reliability and necessity.

A. THE ELECTRIC SYSTEM

LIPA is the sole electric delivery company and the only entity authorized to provide local transmission and distribution of electricity on Long Island east of New York City, as is sanctioned by State law and policy. KeySpan Electric Services LLC doing business as National Grid operates LIPA's local electric transmission and distribution system as a contractor of LIPA.

The Project is a significant component of LIPA's plans to reinforce the existing transmission capacity of the South and North Forks of Long Island. The need for the Project is locational (*i.e.*, specific to a particular area) because the North and South Forks (or East End) loads are served by radial lines. Reinforcements—be they supply, transmission or demand side management programs implemented west of Riverhead—will not solve this local problem. Furthermore, since the Project is part of the first link in the chain of supply to the two forks, it is critical to meeting the entire electric system requirements of the East End.

Demand on the East End has increased over the six-year period between 2000 and 2006 by an annual average of 5.2 percent. LIPA forecasts demand to increase on the South Fork at an annual average rate of about 3.3 percent through 2025. Based on forecasted load growth, the Project will be needed prior to the summer of 2013. Forecasting or projecting growth for the purposes of identifying utility needs for the East End focuses upon the anticipated future demand from the Suffolk County Towns of Riverhead, Southold, Southampton, and East Hampton. Each Town incorporates considerable land area and numerous villages and place designations, each of which has seasonal population fluctuation. The factors that affect utility demand are the year round and seasonal populations, relative amount of vacant land, and estimated anticipated growth. The utility provider is required to plan and design for peak utilization. Suffolk County Planning Department and the Towns of East Hampton and Southampton have produced demographic analyses that can be used to estimate growth in the area. Demographic information for both Towns indicate that summer peak population is "nearly triple" the resident population[1].

Over the ten-year period between 2000 and 2010, demand on the South Fork increased by an annual average rate of 4.4 percent, significantly higher than the 1.6 percent rate for the LIPA system overall, which greatly impacts the East Brookhaven corridor (i.e., the area of the Project located east of the Wildwood Substation in the Town of Brookhaven), see Exhibit 13 of the Application. Looking ahead, LIPA forecasts demand on the South Fork to increase at an annual average rate of about 3.6 percent through 2020. This growth in peak demand has resulted in electric requirements greater than the existing transmission system in East Brookhaven and generating resources on the East End can sustain. While the corridor also supports East Brookhaven, the East Brookhaven projected annual average increase of about 1.3 percent through 2020 is not as big a driver as the East End growth rate.

Starting as early as 2013, the possible loss of the existing Brookhaven to Riverhead double circuit would result in a thermal overload on the existing Wildwood to Riverhead 138 kV circuit —one of the East Brookhaven corridor circuits. This overload would occur assuming the availability of all East End generators. To the extent any of the East End generators are not available or their power output is reduced, the risk of system overload increases, resulting in higher exposure hours to an outage as well as higher overloads. Dispatching Shoreham

[1] Seasonal/second home population, http://www.suffolkcountyny.gov/Departments/Planning/Divisions/PlanningResearch.aspx

generation would slightly offload the 138 kV circuit, thus potentially postponing the need for the Project by, at most, one year, if at all. Avoiding overloads is also premised on the availability of East Brookhaven and East End reactive resources such as the shunt capacitors and dynamic resources. To the extent that the load is higher, or any of these reactive facilities are out of service, the voltage support is reduced, further increasing the potential outage risk. This increased risk is associated with the need to maintain constant power. As voltages decrease, the currents on the circuits would need to increase, thus causing higher loading on the circuits in the corridors. In addition, preliminary developmental plans are being evaluated for Enterprise Park in Calverton (EPCAL) in the Town of Riverhead, which could include a mix of retail, residential, and industrial uses. This development could result in a sharp increase in the need to supply power to the East Brookhaven corridors.

It should be noted that if one circuit is out of service for an extended period of time for maintenance or repair, the system is then exposed to a second contingency scenario. This could potentially become a very critical situation in the East Brookhaven area. As there are only two 138 kV circuits in the East Brookhaven corridors, if the existing Wildwood to Riverhead 138 kV circuit is out of service, a fault could then take out the existing Brookhaven to Riverhead double circuit facility during peak conditions. If this were to occur, only two 69 kV circuits would remain in service. These two circuits, in addition to the East End generation (which totals approximately 100 megawatts ["MW']), would not be able to serve 607 MW of East Brookhaven and East End loads. This would most likely result in a voltage collapse and, thus, large load shedding, affecting thousands of LIPA's customers.

The Federal Energy Regulatory Commission ("FERC") is also working on establishing new regulatory requirements that are expected to affect reliability standards that apply to LIPA's facilities. One possible impact is LIPA would be required to design for second contingencies (N-1-1) in the future. This Project would help satisfy that requirement.

Finally, the Project will be operated in accordance with New York State Reliability Council, Northeast Power Coordinating Council, and North American Electric Reliability Corporation criteria and will not adversely impact the reliability of the New York State bulk power system.

B. COST

LIPA estimates the Project will cost approximately $6-8 million dollars in 2011 dollars, see Exhibits 3 and 9 of the Application. LIPA's cost estimates for the alternative routes and technologies are provided below and are understated because they are based on generalized benchmarks. They also do not include external costs, such as the economic effect of modified traffic patterns, impeded access to properties, and loss of business, which are expected to be higher for the alternative routes than the Project route.

LIPA estimates the Project will provide an additional performance benefit of approximately 150 MW. Using the median cost of $7 million, the unit cost is approximately $0.05 million/MW. Alternative 1 is primarily an overhead (with 2 underground dips) transmission route and is estimated to cost approximately $20-22 million dollars and would provide an additional performance benefit of approximately 150 MW. Using the medium cost of $21 million, the unit cost is approximately $0.14 million/MW. Alternative 2 is the same transmission route as Alternative 1 except the facility would be an underground/overhead hybrid with over 20% of the route being entirely underground. Alternative 2 is estimated to cost approximately $38-40 million and would provide an additional performance benefit of approximately 150 MW. Using the median cost of $39 million, the unit cost is approximately $0.26 million/MW.

With respect to alternative technologies, alternative costs and MW supply were collected for generation and demand side management options. Based on information collected for LIPA's Electric Resource Plan, LIPA estimated the typical capital cost for the following simple cycle peaking facilities:

- Dual LM6000s (79.9 MW); and
- LMS 100 (105 MW).

The cost data collected for the units above were for generic installations on Long Island and provide relative information of costs for comparison purposes only. Given the lack of gas supply and the expected difficulty in siting a new generating unit on the South Fork of Long Island, the actual costs would be much higher.

Information on smaller scale generation projects were also developed and they include:

- Renewable resources (200 kW photovoltaic roof panel); and
- Distributed generation (10 MW biodiesel combustion turbine).

With respect to demand side management, a cost estimate based on LIPA's Clean Energy Initiative for the period 1999-2008 with a projected peak demand savings of 166 MWs was developed by LIPA. The comparative costs for all these alternate routes, technologies and demand side management are summarized below:

Comparison of Capital Costs in Millions per MW

Transmission and Route Options	Cost
Project Route	$0.05
Alternative 1	$0.14
Alternative 2	$0.26
Technology Options	
Peaking Unit: LMS100	$0.98
Peaking Unit: Duel LM6000	$1.29
DSM: CEI Program	$2.14
Distributed Generation: Biodiesel	$2.82
Solar Photovoltaics	$12.61

C. ENVIRONMENTAL IMPACTS

The application, testimony, and exhibits to be supplied for the record describe the nature of the probable environmental impacts of the Project and are briefly summarized below. The environmental impacts are expected to be minimal, limited to temporary construction disturbance, the installation of additional equipment onto the existing transmission line, the erection of three poles near the existing Wildwood Substation and the installation of a 300 foot underground cable just outside the Wildwood Substation. The Signatory Parties agree that the Project, as located and configured for this Joint Proposal, represents the minimum adverse environmental impact considering the state of available technology and the nature and economics of the various alternatives and other pertinent considerations. The selected route, access points and configuration is preferred because it uses existing transmission lines and right-of-way, avoids or minimizes the disturbance of natural habitat and agricultural land, is reasonable in terms of cost, and avoids disturbance of residential and commercial properties, activities, traffic and emergency operations in a populated area.

By using an existing right-of-way, the Project would not cause any new intrusion into any new scenic, recreational, or historic areas. Crews would work primarily on existing access roads or rights-of-way from trucks to install the new insulators on the existing transmission poles and lines in the rights-of-way. The route avoids heavily timbered areas, high points, ridgelines, and steep slopes. The Project is compatible with existing land use and zoning, which controls future land uses. No additional clearing of the right-of-way is needed for the Project. No explosives would be used in the construction of the Project. No pesticides or herbicides would be used during the construction of the Project, and none would be used in the maintenance of the Project along roadsides, in populated areas, near wetlands and environmentally sensitive areas or in the farmlands. During operation, the Project would not make noise, and no discernible degradation of visual resources would result from construction of the Project.

The Project does not involve ground disturbance except in the immediate vicinity of the Wildwood Substation; therefore, no cleanup would be needed after installing the new insulators and removal of existing insulators. In the vicinity of the Wildwood Substation, the trenches would be backfilled and compacted to the existing grade level. Conditions have been agreed to by the Signatory Parties to minimize any interference with active agricultural land outside the LIPA right-of-ways. In addition, conditions have been agreed to minimize any impact to the Peconic River and to prevent the introduction or spread of invasive species and agricultural pests.

The only portion of the Project to be located underground would be an approximately 300 foot long segment to the Wildwood Substation from the closest pole. The trench would be about 3 feet wide. The soil would be placed back into the trench and compacted. This undergrounding would occur on land under LIPA's control. No excess soil is expected from this operation. No excavation would occur in the vicinity of a stream or water body.

The following sections address the potential for environmental impacts to result from the construction of the Project with respect to various impact types.

LAND USE

Figures B-1(a) through B-1(d) and Figures B-2(a) through B-2(d), included as part of the Article VII application, illustrate existing land uses adjacent to and within ¼ mile of the Wildwood transmission line, which extends from the existing Wildwood Substation in the Town of Brookhaven to the existing Riverhead Substation in the Town of Southampton. The transmission line is located, from west to east, in the unincorporated Hamlets of East Shoreham (Town of Brookhaven), Wading River (Town of Riverhead), Calverton (Town of Riverhead) and Northampton (Town of Southampton). Land uses in the vicinity of the transmission line generally include single-family residential, retail, agricultural, vacant land and open space. To a lesser extent, the study area also includes utility (*e.g.*, energy and stormwater infrastructure), industrial, municipal and community services, transportation and parking uses, and highway corridors.

The transmission line originates at the Wildwood Substation in East Shoreham in the Town of Brookhaven. From the Wildwood Substation, the line runs east within LIPA's right-of-way until it reaches single-family residential properties on the south side of Route 25 in the Town of Riverhead (see Figures B-1(a) and B-2(a)). The study area surrounding this segment of the transmission line includes LIPA-owned utility uses, town and State parkland, and the Shoreham Wading River High School and Library at the western end of the study area; generally followed by single-family residential uses on the north and south sides of the transmission line

(interspersed with several vacant parcels, retail uses, and municipal and community services). A large retail cluster is found at the intersection of Route 25A (Hulse Avenue) and County Road ("CR") 25 (Wading River–Manorville Road), and includes such uses as fast food franchises, a landscaping and nursery establishment, a barber shop, Little Bay Shopping Center (bank, deli, nail salon, cleaners, diner, pizza, etc.), realtors, a gas station, a family medical practice, an insurance agency, a restaurant, a dentist, an ice cream parlor, and other shopping centers, including a variety of retail and personal service shops. Just north of the retail cluster and abutting the transmission line on the south side is the Wading River Elementary School.

To the east is a large agricultural cluster which fronts on the north and south sides of the LIPA right-of-way and includes Condzella's Farm. East of the agricultural uses are approximately 15 single-family residential properties, through which the transmission line traverses, just south of North Country Road. Moving eastward, the transmission line crosses North Country Road and continues through the LIPA right-of-way until it approaches the Riverhead Substation. Abutting the LIPA right-of-way on the north side, beginning where the transmission line crosses North Country Road, are approximately eight single-family residential properties, followed by a golf course, and an additional single-family residential area until one gets to a large expanse of agricultural uses (see Figure B-2(a)). On the south side of the LIPA right-of-way along this segment of the transmission line beginning at North Country Road and ending at the large expanse of agricultural uses, is a single-family home, a nursery, vacant land, a landscaping business, a mobile home community, additional single-family residences and East Wind Catering. Also in this area, the study area includes a small portion of Calverton National Cemetery.

As shown on Figure B-2(b), once the transmission line crosses Sound Avenue, it is generally abutted by a large expanse of agricultural properties and vacant land, with few exceptions (as noted below), before reaching Edwards Avenue. For a distance of about three quarters of a mile east of Fresh Pond Avenue is Suffolk County Agricultural District 6 in the Town of Riverhead, the only mapped Agricultural District that the transmission line transverses. All work in Agricultural District 6 would be performed in accordance with Ordering Clauses 49 through 55.

The exceptions to the agricultural uses noted above include the single-family residential community along Sunwood Drive just west of Hulse Landing, an additional single-family residential property on the south side of the LIPA right-of-way at Fresh Pond Avenue, and a sand mining operation that fronts on Route 25 between Fresh Pond and Edwards Avenues. Beginning at Edwards Avenue and moving east, the transmission line is abutted by agricultural uses and a building/contracting business before reaching Riley Avenue. Between Riley Avenue and Middle Road, the LIPA right-of-way is abutted on the north side by open space, farming operations, and a storage facility. On the south side along this segment of the transmission line are vacant land and agricultural uses, and Manor Road. Several single-family residences are located along the south side of Manor Road within this segment of the study area. The transmission line is abutted by rural residences, vacant land, and agricultural uses east of Middle Road and west of the Long Island Expressway ("LIE"). East of the LIE and west of CR 58, the transmission line is bordered by vacant land on the south and commercial uses including a GMC auto dealer on the north and Applebee's restaurant on the south. Once the transmission line crosses CR 58, it is generally bounded by commercial uses until it reaches the LIRR tracks. These commercial uses include Carl's Equipment and Supply, Jet Towing, Peconic Ironworks, an office building, Kiddie Academy of Riverhead, State Material Mason Supply and Riverhead Raceway. Finally, as shown on Figure B-2(d), the transmission line continues southward through the LIPA right-of-way south of the LIRR tracks, crosses the Peconic River, continues southward

through the LIPA right-of-way, and turns eastward until it ends at the Riverhead Substation. Along this segment of the transmission line, the LIPA right-of-way is generally bounded by county-owned wetlands and undeveloped parkland. Route 24 (Nugent Drive) forms the southern boundary of the study area in this area south of the LIRR tracks.

LIPA sent letters to the respective planning departments of the Towns of Brookhaven, Riverhead, and Southampton on January 5, 2011 to inquire about any planned development projects anticipated in the study area by the project's anticipated build year. Nearly the entire portion of the study area within the Town of Southampton is owned by Suffolk County and is zoned OSC (Open Space Conservation; see "Zoning," below); there are no known plans for development in Southampton. According to the Town of Brookhaven, there are no significant development projects within the Town of Brookhaven portion of the study area. The Town of Riverhead responded on January 19, 2012 that they have 16 site plan applications, both approved and pending, within the study area and two proposed subdivisions. The applications are primarily for commercial and retail uses and total almost 550,000 square feet of development. Considering the Project is an upgrade of insulators on an existing transmission line, and this use exists in close proximity to commercial, retail, and residential uses, the Project would not conflict with the proposed and approved projects planned within the Project study area.

The Signatory Parties agree that the Environmental Management and Construction Plan ("EM&CP") Guidelines, appended hereto as Appendix 4, shall be followed by LIPA in the preparation of the EM&CP for implementation of the proposed upgrades to the existing transmission line.

For the short portions of the right-of-way along public thoroughfares, LIPA will develop and implement a Maintenance and Protection of Traffic ("MPT") Plan. The purpose of the MPT Plan is to ensure safe and adequate traffic operations on the affected roads and streets. Suffolk County Department of Public Works would be contacted to ensure continued safe operation of the County roads in the vicinity of the transmission line, as well as with town highway departments for local roadway management. The MPT Plan measures may include channelization of traffic with barriers and signs and installation of barricades and fencing to secure construction work areas and dissuade vehicles from entering construction zones. Adherence to traffic control measures specified by the New York State Department of Transportation ("DOT") Manual of Uniform Traffic Control Devices ("MUTCD") and local highway departments would result in as little disturbance to traffic flow as possible.

ZONING

The Project would be consistent with local zoning in that it would not introduce a new use. The proposed transmission line upgrades would be consistent with the existing and previously approved uses along the transmission line and within the ¼-mile study area as presently zoned. The Project would not impact zoning districts within ¼ mile of the transmission line, nor would it prevent the orderly and reasonable use of permitted or legally established uses in surrounding zoning districts (See Exhibits 4 and 7 of the Application)

VISUAL IMPACT

For purposes of describing visual character, there are essentially three distinct areas of visual character. These areas include an industrial/commercial area in the vicinity of the Riverhead Substation, an agricultural area between Middle Road and Sound Avenue, and a residential area

between Sound Avenue and the Wildwood Substation. While various other uses are found within these character areas, the areas are primarily defined by the predominant uses within them. It is important to note that the residential character area also has areas of relatively dense vegetation compared to the agricultural and commercial/industrial areas, which have more open fields and low vegetation where trees have been cleared. The transmission line is visible from many locations throughout the study area. However, since the Project construction is for the most part limited to the replacement of insulators along the existing transmission line, the changes to visual conditions would be nearly indiscernible from any likely viewing point. There are no plans to replace the existing conductors or static wire. The Project would only replace the insulators. The existing insulators are gray and have a total length of 49.2 inches and will be replaced with gray, 65.2 inch-long insulators, an increase of 16 inches.

Industrial/Commercial Areas

There are varied Industrial/Commercial areas along the transmission line route. The transmission line is generally not visible between the Riverhead Substation and West Main Street (NYS Route 25) due to dense vegetation south of the Peconic River. The transmission line first comes into view as it crosses West Main Street. Land uses in this area include an auto/truck repair facility and a propane gas facility. The transmission line runs along private property between West Main Street and Old Country Road (County Route 58). Uses along this stretch include a junkyard, lumberyard and mason supply yard that front along Kroemer Avenue. Views of the transmission line are generally limited along Kroemer Avenue due to screening provided by these industrial uses. The transmission line is visible as it crosses Old Country Road. Uses in this area include the Riverhead Speedway, car dealerships, and an Applebee's Restaurant. After crossing Old County Road, the route turns northwest and runs along the rear of the Applebee's parking lot then crosses a private driveway to an industrial facility and runs through a wooded area to Middle Road and Manor Road where the visual character changes to primarily agricultural.

Agricultural Areas

Land use in the portion of the transmission line between Middle Road and Sound Avenue is primarily agricultural. This area also includes some scattered residences and some larger residential subdivisions. The transmission line can be viewed much more frequently for longer durations east of Middle Road. The transmission line runs along Manor Road and is visible along the entire road. The transmission line then continues west and crosses Riley, Edwards, and Fresh Pond Avenues. Views of the transmission line are available across fields and private property from Riley and Edwards Avenues. Residential subdivisions also exist in these areas and views of the transmission line are possible from homes in these subdivisions, especially along Jakes Lane and Pheasant Lane. There are some wooded areas along Fresh Pond Avenue that limit views south of the transmission line. However, more limited vegetation exists north of the transmission line. Therefore, views of the transmission line are possible to the southeast from Fresh Pond Avenue. West of Fresh Pond Avenue, the transmission line runs through approximately 0.7 miles of wooded area that limits views to the west of Fresh Pond Avenue. Some residences at a mobile home park along Fresh Pond Avenue have limited views of the transmission line across open fields. The nearest portion of the transmission line is located approximately 0.4 miles from the mobile home park. The transmission line continues west and crosses Hulse Landing Road. In this area, views of the transmission line vary based on residential development, vegetation, and some agricultural structures. Views from areas south of the transmission line are more prevalent due to the fact that these views take place across

expansive fields with minimal screening. Views from the north are partially screened by vegetation and development in the area. The transmission line also passes by several homes along Sunwood Drive. Views of the transmission line are possible from the homes along the south side of Sunwood Drive. Past Sunwood Drive, the transmission line runs parallel to Sound Avenue for roughly ½-mile before turning north and crossing Sound Avenue about 400 feet east of East Winds Drive.

Residential Areas

The visual character of the areas surrounding the transmission line is primarily defined by residential development and dense vegetation in areas west of the point where the transmission line crosses Sound Avenue. After crossing Sound Avenue, the transmission line turns west and passes Forrest Hollow Lane, the rear portion of a mobile home community along Beemer Avenue and Fairway Drive. This portion of the transmission line generally has dense vegetation to the south, which screens views from these residences; but views of the transmission line are possible where gaps in the vegetation exist. The transmission line is also visible where it crosses Fairway Drive. After crossing Fairway Drive, the transmission line continues west for about ¼-mile then turns south. Views of the transmission line are possible from Deer Run along this north-south stretch of the transmission line route. In this area, the transmission line runs parallel to Deer Run and along the rear portions of many lots along Deer Run. The transmission line crosses North Country Road and runs parallel to the roadway along the south side for about ½-mile through a wooded residential area. In this area, there are limited views of the transmission line. Screening is provided by dense vegetation along North Country Road. Some residents along North Country Road have driveways that cross underneath the transmission line. Views of the transmission line are possible from the residences and driveways. Farther west along North Country Road there is a ¼-mile stretch of agricultural land and open fields. Views of the transmission line are possible in this area and typical of views found in other agricultural areas as described above. West of Laurel Hollow Court and Locust Street, views of the transmission line are not possible from North Country Road due to the presence of dense vegetation and buildings.

Views of the transmission line are possible when crossing the transmission line on Wading River-Manorville Road. Views are brief since the transmission line runs through dense vegetation in this area. This is also true farther west where the transmission line crosses Dogwood Drive and Gateway Drive. From certain areas along Route 25A roughly between Dogwood Drive and Randall Road, the transmission line is visible between buildings and vegetation that line the roadway. Views of the transmission line are also possible from Randall Road as a cleared area allows for more distant views of the transmission line. West of Randall Road, the transmission line enters into the Wildwood Substation.

Currently, the point where the existing overhead transmission line traverses the Peconic River, and where insulators will be replaced, contain no campgrounds, boat launches, picnic grounds, hiking trails, or the like. The transmission line right-of-way at the Peconic River cannot be utilized by anyone because the vegetation is too thick and dense. At the intersection of the existing line and Peconic River, people using the river such as canoeists currently pass under the transmission lines without accessing the banks. When the insulators are replaced, the crews will not be working in the water. Rather, they will be in the right-of-way and will spend approximately two days there, about one day per pole at the two poles on the Peconic River's banks. There will be no impacts to users of the river other than seeing the crew. Two transmission lines are visible along the Peconic River, but trees block the view of the poles until

the viewer is almost directly under the transmission lines. The new insulators will be virtually indistinguishable from the existing insulators when viewed from boats in the river and would not diminish the scenic or recreational qualities of the Peconic River basin. The Project would help preserve the scenic and recreational qualities of the Peconic River by providing the needed electrical transmission capacity in the area without adding another transmission line crossing the Peconic River.

In summary, the potential impacts along the route of the entire existing line are limited to the construction phase. As explained above, the Project would have no discernible effect on visual character within the study area. The only physical changes resulting from the Project are replacement of insulators along the entire transmission line route. The existing insulators have a total length of 49.2 inches and will be replaced with 65.2-inch insulators. Thus, the new insulators will be 16 inches longer. All other components of the transmission line would remain unchanged. There would be no changes to the adjacent transmission line that runs along steel poles. Since the only change would be installation of larger insulators, changes to visual conditions would be negligible. Views of the insulators would generally take place over relatively long distances. Since the perceived size of an object decreases as distance from the object increases, the additional 16 inches would likely not be noticeable from all viewing locations.

CULTURAL RESOURCES

An architectural historian surveyed the area around the Wildwood Substation and the entire length of the transmission line, and found no historic resources that would be impacted. In a letter dated March 1, 2011 from the New York State Office of Parks, Recreation and Historic Preservation ("OPRHP") to Molly McDonald of AKRF, OPRHP agreed with the methodology and the findings, see Proposed Exhibit 6. For the archaeological analysis, only ground disturbance can cause archaeological impacts and the only ground disturbance is in the vicinity of the Wildwood Substation—the change in the insulators cannot cause an archaeological impact. The area around the Wildwood Substation is not considered to be sensitive for archaeological resources, and OPRHP agreed with the lack of potential impacts caused by the new poles.

NATURAL RESOURCES

Potential impacts to natural resources from the Project were assessed by considering the existing and expected future natural resources at the Project location and the potential changes in wetlands and terrestrial resources that would occur as a result of the proposed project. The only loss of natural resources habitat is the location of the new poles near the Wildwood Substation, and the analyses found that the loss and change in habitat would not have a significant adverse environmental impact, see Exhibit 4 of the Application. The changes in the insulators would not cause a loss of habitat or any other impacts to natural resources.

Peconic River

The only stream or river that the existing line crosses is the Peconic River. Pole 16 is on the south river bank and Pole 17 is on the north river bank. Pole 16 is set back about 15 feet from the Peconic River bank while Pole 17 is set back about 30 feet from the Peconic River bank. Both poles can be accessed from the existing right-of-way under the transmission line. No in-water work or new access will be required and no impacts to water quality in the Peconic River are anticipated.

The new insulators will be virtually indistinguishable from the existing insulators when viewed from boats in the water and would not diminish the scenic or recreational qualities of the Peconic River basin. The Project will also help avoid any need to add another transmission line crossing the Peconic River.

Wetlands

The Peconic River and associated freshwater wetlands are identified as DEC Freshwater Wetland R-5 on the agency's freshwater wetland map. As stated above, the transmission line crosses over the river and its wetlands at Poles 16 (south of the river) and 17 (north of the river), see Proposed Exhibit 7. The two poles are located within regulated areas for wetlands (in particular, a Red Maple-Black Gum swamp). No entry into the wetlands will be required to access Pole 16, but the equipment will be within the space designated as the 100 foot adjacent area associated with State regulated wetlands. At Pole 17, on the north side of the river, it may be necessary for vehicles to encroach into a small segment of the regulated freshwater wetlands—approximately 25-30 linear feet—on the access road north of the pole. Should entry into the wetland be necessary, appropriate matting will be used to mitigate impacts to the wetland and the Project will be coordinated with DEC Region 1. Details of the mitigation measures to be implemented to avoid or minimize impacts to the wetlands will be provided in the EM&CP.

Floodplains

The majority of the study area is not within 100 or 500-year FEMA flood hazard zones. Poles 15 and 16 on the south side of the Peconic River, and pole 17 on the north side, are within the 100-year floodplain. These poles have been designed to maintain structural stability under flooding conditions. Temporary access for construction will not affect site topography or otherwise influence floodplain characteristics.

Agricultural Resources

The Project's ROW traverses active agricultural lands and approximately three quarters of a mile of designated Suffolk County Agricultural District 6 in the Town of Riverhead. Many active agricultural activities currently take place on fee-owned ROW and are expected to continue upon the completion of construction. LIPA will minimize any short-term disruption to farming activities through scheduling, planning, and the use of protection measures prescribed on a site-by-site basis. Active farming, including cropland, currently occurs in many areas on existing right-of-way and demonstrates the compatible co-existence of active farming and transmission line operation. No long-term impacts on farming or agricultural activities are anticipated as a result of this Project; however, during construction, agricultural operations on the Project right-of-way may be disrupted for a single season, depending upon the timing of construction. LIPA will minimize any short-term disruption to farming activities and crop damage through scheduling, planning, and the use of protection and restoration measures, such as rehabilitation of drainage tile and deep tilling of compacted areas, prescribed on a site-by-site basis. Should soil rutting occur in agricultural fields, LIPA will grade and restore topsoil conditions upon completion of work. In addition, all construction debris will be removed from the fields upon the completion of construction. Protection measures and restoration measures such as rehabilitation of drainage tile and deep tilling of compacted areas will be prescribed on a site-by-site basis and will be shown in the EM&CP. LIPA will comply with the Ag & Mkts recommendations and incorporate site-specific recommendations and protection measures. LIPA will address any landowner concerns and comply with the Ag & Mkts guidelines for working on agricultural lands. The Project will not

adversely impact active agricultural lands or designated Agricultural Districts and there will be no permanent impacts to agricultural land use.

Terrestrial Resources

The northeastern and southwestern portions of the study area are occupied by the existing utility right-of-way. This area would be categorized by Edinger et al. (2002)[1] as "mowed roadside/pathways," and described as, "a narrow strip of mowed vegetation along the side of a road, or a mowed pathway through taller vegetation (*e.g.*, meadows, old fields, woodlands, forest), or along utility right-of-way corridors (*e.g.*, power lines, telephone lines, gas pipelines). The vegetation in these mowed strips and paths may be dominated by grasses, sedges, and rushes; or it may be dominated by forbs, vines, and low shrubs that can tolerate infrequent mowing" (Edinger, 2002). Provided in the table below is a list of areas that are expected to be mowed as part of the Project. The EM&CP will specify protection measures to minimize disturbance to the existing right-of-ways, including any possible presence of State-listed threatened or endangered plant species. According to correspondence with the New York Natural Heritage Program ("NYNHP"), State-listed threatened little-leaf tick-trefoil (*Desmodium ciliare*) plants and velvety bush-clover (*Lespedeza stuvevei*) plants were reported within the northeastern and southeastern portions of the study area/utility right-of-way, see Proposed Exhibit 8. These species were not observed during the October 25, 2010 field investigation but habitat within the utility right-of-way/within the northeastern and southeastern portions of the study area would be suitable for these species. Field investigations will be conducted in the appropriate season prior to construction to determine whether these species occur where previously reported. Should these species be found during the survey, a threatened and endangered species management plan that may include avoiding a specified area, transplanting, or other appropriate measures would be prepared and incorporated into the EM&CP. The management plan would be coordinated with DPS Staff and DEC.

Pole Numbers	Access Points	Expected Mowing
9A.14 - 16	ROW north side of Riverhead Substation	None
17-18	ROW south side of Route 25 (River Road)	Mow brush and install swamp mats
19-28	ROW south side of County Road 58	None
29-43	ROW east of Middle Road and/or west of Kroemer Avenue	Mow brush
44-49	ROW east of Twomey Avenue and/or west of Middle Road	None
50	ROW west of Twomey Avenue (parking lot)	None
51-63	ROW east of Riley Avenue	None
64-67	ROW east of Edwards Avenue and/or west of Riley Avenue	None
68-70	Farm field west of Edwards Avenue or from a dirt farm road south of the ROW and west of Edwards Avenue	None
71-92	Orchard entrance east of Fresh Pond Avenue (if	Mow base of Pole 71

[1] Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, A.M. Olivero. *Ecological Communities of New York State*, 2nd Edition. New York Natural Heritage Program. 2002.

Pole Numbers	Access Points	Expected Mowing
	farmer gives permission as in past) or ROW west of Edwards Avenue	Poles 75-76 N/A
		Mow brush between Poles 77 and 81
93-113	ROW east of Hulse Landing Road and/or west of Fresh Pond Avenue	Mow brush west of Fresh Pond Avenue up to farm fields (Poles 93-103)
114-124	ROW via dirt farm road south of Sound Avenue and/or west of Hulse Landing Road	Mow brush (Pole 118)
125-128	ROW via dirt farm road north of Sound Avenue in non-cultivated field adjacent to orchard	None
129-130	ROW via Private Road in trailer park north of Sound Avenue	Mow grass
131	ROW west of Fairway Drive	Restoration of grass under transmission line
132-137	ROW via private nursery driveway on north side of North Country Road	Mow brush (Nursery encroaching on ROW access)
138-140	ROW south side of North Country Road	Mow brush
141-143	Access from south side of North Country Road	Mow brush at base of poles
144-145	Private driveway off south side of North Country Road within easement	Mow brush at base of both poles and trim tree at Pole 144
146-151	ROW east of Wading River Manor Road	Mow grass; mow brush at base of Pole 146
152-154	ROW east of Dogwood Drive and/or west of Wading River Manor Road	Mow grass
155-158	ROW east of Gateway Drive	Mow grass
159-167	ROW east of Randall Road and/or west of Gateway Drive	Mow brush and grass
168	ROW west of Randall Road	Mow brush
169	Lilco Road (Wildwood Substation driveway)	None
169.5-170	ROW at Wildwood Substation	Mow grass

COMMUNICATIONS & ELECTROMAGNETIC FIELDS

The Commission has established standards regarding electric and magnetic fields from electric power lines. Opinion No 78-13 establishes an electric field interim standard of 1.6 kV/m at the right-of-way edge. The Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities establishes an interim standard for magnetic field strength of 200 mG (at winter normal loading conditions) at the transmission line right-of-way edges. An evaluation was performed of the electric and magnetic field strengths associated with the 138 kV upgrade project, which was found to comply with the PSC standards.

LIPA conducted electric and magnetic field measurements to characterize the existing electric and magnetic field levels at four (4) different representative locations along the existing transmission line route. At all locations, other transmission lines were present with the subject line. At most of the measurement locations, objects such as trees, bushes, and shrubs were present beyond the edges of the right-of-way (and sometimes within the right-of-way), which reduced the electric field readings due to shielding.

LIPA used computer modeling to evaluate the existing transmission line(s) and configurations at each of the four (4) locations. Each of the models was then modified to reflect the proposed upgrade changes to the 69 kV circuit. These changes included an increased operating voltage of 138 kV, as well as additional distance from the support structure due to the increased length of the insulators. Electric and magnetic field calculations were then performed for these proposed configurations using winter normal and annual average loading conditions.

LIPA also performed an analysis of the six possible phasing arrangements for the proposed 138 kV circuit upgrade. Calculated electric and magnetic field levels can vary significantly, depending upon the phasing arrangement of the upgraded 138 kV circuit and the phasing of other nearby transmission lines. Locations 2 and 3, of the four (4) locations analyzed, are probably the most representative of the majority of the transmission line route near residential areas and, for these locations, the calculated magnetic field is the lowest when the phasing arrangement for the upgraded 138 kV circuit is arranged as "B-A-C" top-to-bottom. LIPA will utilize this phasing arrangement in order to obtain the overall lowest magnetic field levels at the right-of-way edges.

The following table presents a comparison with the phasing arrangement for the upgraded 138kV circuit arranged as "B-A-C" top-to-bottom, which LIPA will utilize:

Load Case	Electric Field (kV/m) at ROW Edges	Electric Field (kV/m) at ROW Edges Using "B-A-C" Phasing Arrangement	Magnetic Field (mG) at ROW Edges	Magnetic Field (mG) at ROW Edges using "B-A-C" Phasing Arrangement
Measured	0.010	N/A**	8.0	N/A**
Day of Measurements***	0.060	N/A**	8.0	N/A**
Annual Average	0.179 – 0.224*	0.192	6.7 – 9.2*	6.7
Winter Normal	0.179 – 0.224*	0.192	28.2 – 46.1*	34.1

Notes:
* Depending upon the phasing arrangement of the upgraded 138 kV circuit.
** N/A = Not Applicable (on the day the measurements were taken the phasing arrangement was not B-A-C top to bottom).
*** Calculated field values based on loading the day the measurements were taken.

These levels are below the aforementioned Commission standards.

The highest calculated electric field value (utilizing a worst case phasing arrangement with maximum sag) at the right-of-way edge is 0.680 kV/m, which is in compliance with the 1.6 kV/m standard established by Opinion 78-13. The highest calculated magnetic field value at the right-of-way edge is 144.2 mG (utilizing a worst case phasing arrangement with sag under winter normal loading conditions). This calculated magnetic field level is in compliance with the 200 mG standard established by the PSC Interim Policy for magnetic fields. Both of these calculated maximum values occur at the edge of the right-of-way closest to the existing 138 kV transmission line (#138-890) rather than the edge closest to the upgraded 138 kV circuit. Locations 3 and 4 were selected as representative locations where midspan calculations could be performed to evaluate field levels at the right-of-way edges for compliance with these standards.

Since LIPA will utilize the phasing arrangement which produces the lowest overall calculated magnetic field levels at the right-of-way edges, field levels would be lower than those calculated for the worst case phasing arrangement with maximum sag (which comply with Opinion 78-13 and the PSC Interim Policy).

Location	Load Case	Electric Field (kV/m) at ROW Edges	Electric Field (kV/m) at ROW Edges Using "B-A-C" Phasing Arrangement	Magnetic Field (mG) at ROW Edges	Magnetic Field (mG) at ROW Edges using "B-A-C" Phasing Arrangement
1	Measured	0.316 – 0.455	N/A	36.6 – 41.2	N/A
	Annual Average	0.350 – 0.980*	0.710 – 0.830	17.4 – 31.1*	17.4 – 24.0
	Winter Normal**	0.350 – 0.980*	0.710 – 0.830	70.6 – 157.7*	104.6 – 153.6
2	Measured	0.107 – 0.203	N/A	16.0 – 28.0	N/A
	Annual Average	0.260 – 0.380*	0.270 – 0.310	13.1 – 20.6*	13.1
	Winter Normal**	0.260 – 0.380*	0.270 – 0.310	64.9 – 103.5*	64.9 – 67.7
3	Measured	0.021 – 0.560	N/A	13.0 – 33.2	N/A
	Annual Average	0.307 – 0.550*	0.317 – 0.501	9.7 – 22.9*	9.7 – 17.0
	Winter Normal	0.307 – 0.550*	0.317 – 0.501	49.1 – 113.9*	49.1 – 83.9
	Winter Normal at Maximum Sag	0.359 – 0.680*	0.372 – 0.630	60.9 – 144.2*	60.9 – 112.3
4	Measured	0.000 – 0.016	N/A	10.4 – 10.6	N/A
	Annual Average	0.159 – 0.407*	0.169 – 0.353	5.0 – 15.5*	5.0 – 9.0
	Winter Normal	0.159 – 0.407*	0.169 – 0.353	46.1 – 80.1*	46.1 – 46.9
	Winter Normal at Maximum Sag	0.128 – 0.476*	0.140 – 0.429	54.3 – 99.0*	54.3 – 60.9

Notes:
* Depending upon the phasing arrangement of the upgraded 138 kV circuit.
** Winter Normal at maximum sag is not considered for Locations No. 1 and 2 because the measurements were taken near the structures NOT mid-span.

Finally, LIPA performed an evaluation to determine the closest residence to the project line. The closest residence was identified as 6147 North Country Road in Riverhead, where the house is located about fifty (50) feet north of the 69 kV circuit centerline (69-955). This location corresponds to measurement Location 3 for evaluation and computer modeling purposes. The closest residence is located within a cluster of trees, which would provide electric field shielding and reduce electric fields at the location of the residence. In addition, the residence is located close to an angle structure supporting the 69 kV circuit. Therefore, calculated fields levels would probably be lower due to the increased height of the conductors above ground level. The following table summarizes the measured and calculated values for this location.

Closest Residence (50-Feet North of 69 kV circuit at Location 3)	Electric Field (kV/m)	Magnetic Field (mG)
Measured (but at Profile Location)	0.010	8.0
Calculated for Day of Measurements Load	0.060	8.0
Calculated for Annual Average Load	0.192*	6.7*
Calculated for Winter Normal Load	0.192*	34.1*

Note: * Utilizing a phasing arrangement of B – A – C top to bottom for the upgraded 138 kV circuit.

DPS Staff requested, and LIPA provided, a supplemental analysis concerning the closest structures to the Project. See LIPA's response to DPS-6, previously submitted to DPS Staff, see Proposed Exhibit 3. All calculated electric and magnetic field values are within Commission guidelines.

D. THE AVAILABILITY AND IMPACT OF ALTERNATIVES

ALTERNATIVE ROUTES

The Signatory Parties agree that the preferred route for the Project described above is superior from both environmental and economic perspectives because the transmission line is already in place. Two alternative routes, as discussed below, are inferior because they would entail greater environmental impacts and would cost significantly more to build. In addition, either alternative would create greater disruption during construction for the public.

Two alternative routes were addressed in the Application. These alternative routes, although feasible from a construction standpoint, are expected to cause more public objections from an aesthetic and safety point of view. In addition, either alternative will be more costly than the Project route. A large portion of the existing route traverses farmland and only 30% of the proposed route is within fifty (50) to one-hundred (100) feet of residential and/or commercial properties. In contrast, the alternative routes would proceed through congested residential and commercial areas and would require the installation of many more new poles. The alternative routes improve the ease of access to the transmission line for maintenance and repair, since they are along public roads; however, construction and maintenance of these alternative routes would cause periodic disruptions to traffic along public roads. Aesthetics (*i.e.,* taller poles) could also be an issue to the community. The Article VII certification process, therefore, could be unduly delayed. Most importantly there would be safety concerns, as the new wood poles would have greater risk to accidents from vehicles and interference from the general public. LIPA evaluated other alternative routes along County Road 58 (Old Country Road) and Mill Road. Suffolk County and the potentially affected towns have strongly advocated that all new lines be installed underground. In addition, they have initiated litigation to stop or delay past overhead installations. By utilizing existing structures and avoiding the installation of a significant number of additional aboveground structures, the Project should avoid or minimize local opposition.

Alternative 1 (Overhead with Two (2) Underground Cable Dips):

This alternative route would entail overbuilding a 138kV transmission line above existing overhead distribution facilities. Approximately one-half of the existing distribution wood poles, along this route, would be replaced with taller transmission wood poles to support the new 138 kV conductors. Two sections would require an underground cable installation (due to a conflict with an existing overhead transmission line and restrictions at the LIE). The total length is approximately 9.9 miles.

Segment Three (approximately 2.3 miles) – Wildwood Substation to NYS Route 25A & Sound Avenue (Town of Brookhaven and Town of Riverhead):

This segment starts at the Wildwood Substation. The first 300 feet would be an underground cable, just outside the Wildwood Substation fence on the south side of the property, into the ring bus termination equipment. The right-of-way proceeds 800 feet south from the Wildwood Substation along the driveway (also known as Lilco Road) that leads to what was the Shoreham Nuclear Power Station ("SNPS") just west of Randall Road. The right-of-way then continues east on NYS Route 25A. The transmission poles would replace existing distribution poles which are primarily on the south side of NYS Route 25A. A new wood pole line would be constructed on the LIPA right-of-way 500 feet west of Randall Road. The transition from overhead conductors to underground cable would be on three (3) steel poles (one for each phase); each pole varying in height, approximately sixty (60), seventy (70) and eighty (80) feet above grade.

The description, type, and configuration of the underground cable would be similar to what is described on the Project route (see Segment Three above). There are approximately thirty-four (34) residential homes and twenty-four (24) commercial structures on NYS Route 25A along this segment. These structures are approximately fifty (50) to seventy (70) feet from the existing line. As such, it can be expected that the electric and magnetic fields generated by the transmission line, although low in value, will be higher than that of the Project route. It is anticipated four (4) or five (5) new guy wire easements on some front lawns or corner properties and approximately forty-five (45) new wood transmission poles would be required for this part. The surrounding environment on this portion consists mostly of commercial and residential properties.

Segment Two (approximately 5.6 miles) – via the intersection of NYS Route 25A & Sound Ave. to NYS Route 25 (near Interstate Route 495) (Town of Riverhead):

The route would proceed south and east on Parker Road (a/k/a NYS Route 25A). The existing distribution facilities are on the west side of this road; the new transmission facilities would follow this pole line. This part of the route continues east on NYS Route 25 to just west of the LIE, where the overhead wire would transition to underground cable (near Twomey Ave. and NYS Route 25). The existing distribution wood pole line is primarily on the south side of NYS Route 25; and the new transmission line would be determined by the location of the existing distribution facilities. It is preferable to overbuild on existing distribution poles so as to avoid possible community objections with the addition of a new wood pole line on the opposite side of the street. Similar to Segment One, it is anticipated every other distribution pole would be replaced with a taller and stronger transmission pole. New pole sizes would vary from sixty (60), seventy (70) and eighty (80) feet above grade (approximately twenty (20) to thirty (30) feet taller than existing poles). Approximately one hundred and fifteen (115) new wood transmission poles would be required for this segment. The surrounding environment on this portion consists mostly of residential properties (approximately sixty (60) homes or farmland structures), and commercial establishments (approximately twenty-two (22)) and runs adjacent to Calverton National Cemetery property on Parker Road (a/k/a NYS Rte. 25A). The approximate distance from the line to the existing structures is sixty (60) to seventy (70) feet.

Segment One (approximately 2 miles)- from Riverhead Substation via NYS Route 25 & LIE (Towns of Riverhead and Southampton):

From just west of LIE, this segment would continue east on NYS Route 25 to LIPA's Riverhead Substation (which is located on the south side of NYS Route 25 east of Mill Road in the Town of Southampton). Existing distribution wood poles (which are primarily on the south side of NYS Route 25) would be replaced with taller transmission wood poles. Existing poles vary in height, from thirty (30) to forty (40) feet above grade; these poles would be replaced with taller poles with a higher strength rating. The new transmission poles would be twenty (20) to thirty (30) feet taller than the existing distribution poles. Not every distribution pole would need to be replaced. It is anticipated that every other pole would require replacement as the transmission conductors can typically traverse mid-span distribution poles. Additional guy wire easements would be required to support the new transmission poles in critical areas where the conductors turn or where there is a significant line angle. It is estimated that four (4) new guy wire easements would be required from private property owners on this portion. Each new easement would need to be negotiated with the property owner. These easements would vary in size, but are typically six (6) feet wide by thirty (30) feet long. A sketch and a legal document would need to be prepared for each site and presented to each property owner for negotiation and signature. These guy wires are typically on front lawns, which may cause opposition from the property

owners. Two (2) underground cable dips would be required on this portion. The first underground cable dip would be near Kroemer Avenue, which is approximately 1,300 feet from the Riverhead Substation on NYS Route 25. The cable dip is required underneath the existing 138kV overhead circuit (circuit number designation is 138-890). The description of the cable size and type is similar to what is described above (see Segment Three of the Project or existing route). The length of this underground section would be approximately five hundred (500) feet. An underground cable is required because the only other way to traverse the existing conductors would be the application of an extremely tall pole (well over one hundred feet), which would be aesthetically objectionable. In addition, LIPA prefers to avoid two overhead transmission circuits crossing at the same location due to reliability concerns (*i.e.*, the possibility of losing two transmission circuits simultaneously if one should fail). This area is predominantly residential with some vacant land. The transition from overhead conductors to underground cable would be on three wood poles (one for each phase); each pole varying in height, approximately sixty (60), seventy (70) and eighty (80) feet above grade. A second underground cable would be needed under LIE near the intersection of NYS Route 25 and River Road, west to NYS Route 25 and Twomey Avenue. The length of this underground section would be approximately 3,000 feet. The underground cable size, configuration, and transition would be similar to the 500-foot cable dip, near Kroemer Avenue, as described above. However, in this case, two (2) manholes would be required for cable splices, one approximately 1,000 feet west of River Road, and another approximately 1,000 feet east of Twomey Ave. The manholes would be fabricated from concrete and their size would be eighteen (18) feet long by eight (8) feet wide and eleven (11) feet deep. There are no existing overhead facilities in this area and it is anticipated that Federal, State, County and/or Town authorities would oppose the installation of a new overhead transmission line and road crossings. Approximately forty-five (45) wood transmission poles would be required for this portion, most of which would require distribution attachments. This alternate route, along this segment, has approximately thirty-seven (37) homes and fifteen (15) commercial establishments. These structures would be closer to the transmission facilities than on the existing (Project) route. On the existing (Project) route, the structures are sixty (60) feet to one hundred (100) feet from the transmission line. On this alternate route, along this section, the transmission line would be thirty (30) feet to sixty (60) feet from the residential and commercial establishments. As such, it can be expected that the electric and magnetic fields generated by the transmission line, although low in value, will be higher than that on the proposed route.

Positive Aspects for Alternative 1

- The overall route is shorter by approximately 0.7 miles.
- Accessibility for repairs and maintenance would be improved due to the fact that all the facilities are on State roads as opposed to remote right-of-ways.

Negative Aspects for Alternative 1

- Overbuilding transmission facilities on existing distribution wood pole lines may incite community opposition to the project. Several locations, especially along NYS Route 25 and NYS Route 25A are near residential homes and stores where a transmission line does not currently exist.
- The integrity of the transmission line will be jeopardized due to the increase in possibility of hit poles, which may trip out the line and create public safety concerns.

- Ten (10) to fifteen (15) new guy wire easements would need to be negotiated with the property owners. Some guy wires may be intrusive to property owners as they will be on front lawns.
- The cost for this alternate route will be more due to the additional pole installations, easements to be negotiated and acquired, additional underground cable dips and cost to transfer the distribution facilities.
- Directional drilling under the LIE is expected to cost an additional $6 to $8 million.
- Exposure to electric and magnetic fields are expected to be greater than the existing route because there are more residential and commercial structures along this alternate route and the structures would be closer (approximately 192 existing structures along the alternate route compared to approximately 114 structures along the proposed route).
- Pre-mature abandonment of the existing steel pole line asset (built in 2002) would be cost prohibitive.
- Installation and maintenance of the line would have large impact on local traffic.

Alternative 2 (Overhead and Underground - Hybrid)

This alternative route would entail overbuilding a 138 kV transmission line above existing distribution facilities on Segments One and Two (same route as above). As to Segment Three, it would follow the same route as described under Alternative 1 except it would be entirely underground. This portion was chosen to be underground because this segment is closest to existing commercial and residential homes; and underground is generally considered to be more aesthetically acceptable. An underground electric three-phase transmission line of approximate distance of 2.3 miles would utilize underground solid dielectric cable design with cross-linked polyethylene insulation rated at 138,000 volts AC (138 kV). The solid dielectric cable would be constructed of 3947 kcm (2000 mm sq), copper conductor approximately 2.15 inches in diameter, having cross-linked polyethylene insulation approximately 0.85 inches thick rated at 138 kV AC. A corrugated metallic sheath would surround the insulation to provide mechanical protection and prevent water migration into the cable. An outer polyethylene jacket would encase the metallic sheath. In all, each cable would measure approximately 5.6 inches in diameter.

The transmission line would consist of three cables. Each cable would be installed within a 12-inch high-density polyethylene ("HDPE") conduit. The cable conduits would be installed in a set of three (3) with a trefoil (triangular) configuration, buried nominally at forty-two (42) inches below-grade along the designated route. The cables would be spliced at manholes spaced approximately 1,500 ft apart. At the Wildwood Substation and at the location where the underground cable transitions to overhead wire, the cable would be terminated at a terminal structure. The terminal structures would be installed within a security fence that provides gated access for periodic maintenance.

Positive aspects for Alternative 2

- The overall route is shorter by approximately 0.7 miles.
- Accessibility for repairs and maintenance would be improved due to the fact that all the facilities are on the road rather than on remote right-of-ways.
- The transmission facilities that run through the Villages of Wading River and East Shoreham would be underground and create less of a visual impact than Alternative 1 (which would be an overhead installation).

- Electric and magnetic fields are expected to be less on Segment Three than for Alternative Route 1 because this portion will be placed underground.

Negative Aspects for Alternative 2

- Overbuilding transmission facilities on existing distribution wood pole lines may incite community opposition to the project (Segments 1 and 2).
- Five (5) to ten (10) new guy easements on private property would be required (Segments 1 and 2) and could generate public opposition because they would be located on or near front lawns.
- The integrity of the overhead portions of transmission line will be jeopardized due to the increase in possibility of hit poles and digging near the cable, which may trip out the line and create public safety concerns.
- Construction of the underground portion (Segment 3) will disrupt the community and commercial establishments along Route 25A (Villages of Wading River and East Shoreham).
- Premature abandonment of the existing transmission steel pole line asset (built in 2002) would be cost prohibitive.
- More customers will be directly impacted during construction since there are more existing structures along this alternate route than on the proposed route (approximately 192 existing structures along the alternate route compared to approximately 114 structures along the proposed route).
- Additional cost for undergrounding of transmission lines is typically three to four times the cost of overhead installation.

ALTERNATIVE TECHNOLOGIES

This section discusses alternative technologies that were evaluated to determine if they could fulfill the energy requirements of the Project. The alternative technologies considered are:

- No Action;
- Generation;
- Demand Side Management;
- High voltage direct current (HVDC) technology; and
- Alternative transmission voltages

No Action

The No-Action alternative was rejected, as it does not solve the thermal overloads or the potential outages in the East Brookhaven or East End LIPA system. This would require reliance on local (East End) generation and addition of load shedding to alleviate the potential overloads. Therefore, this option was deemed unacceptable.

Generation

This option consists of using generation to satisfy the level of demand so as to eliminate the need for the Project. The East End currently has generation capacity of approximately 97 MW. This generation, when in service, reduces the amount of power transmitted through East Brookhaven into the Riverhead Substation. In addition, dispatching Shoreham generation units also slightly offloads the 138 kV circuits into Riverhead by increasing the load carried on the 69 kV circuit.

However, by around 2013, the system will be at a point where the East End generation will be insufficient in preventing and alleviating thermal overloads on the Wildwood to Riverhead 138 kV circuit. While dispatching Shoreham units might enable the Project to be postponed by no more than one year, the units are uneconomic and would not normally be dispatched during peak conditions. There is limited oil storage located on the South Fork, so additional generation would require the addition of a costly, new, natural gas pipeline to supply a new unit. The East Brookhaven and East End areas also have a considerable amount of land dedicated as preservation land, as well as strong residential opposition to the construction of new utility facilities that would make installation of a new generation unit and natural gas pipeline in those areas difficult.

Demand Side Management Programs

This option consists of using Demand Side Management ("DSM") Programs including conservation to reduce the demands on the East End so as to eliminate the need for the Project. This option is inadequate to meet the growing demands in the area. LIPA continues to implement DSM programs across its system to reduce system demands. The impacts of these programs are incorporated in LIPA's load forecast and although they reduce the demand, they do not eliminate the need for this Project for the East End load. As part of LIPA's energy efficiency and demand side management program ("EE & DSM Program"), LIPA has implemented the Clean Energy Initiative (CEI), LIPA *edge* and the Peak Reduction Program ("PRP"). LIPA *edge* and PRP combined allow LIPA to control approximately 125 MW of electric demand during peak periods across its service territory. In contrast, the Project is designed to increase supply to the East End by 150 MWs.

LIPA is extensively involved in existing and proposed additional EE and DSM programs. These programs and their impacts are incorporated into LIPA's forecasted demands. To the extent that this reduces the rate of growth in LIPA's electric demand it allows LIPA to adjust the need dates of its system improvements. However, all of the efforts described above will not reduce demand in the load sufficiently to eliminate the need for the Project. LIPA's programs are expected to reduce all of Long Island's growth in demand by about 100 MW by 2010. This is about two-thirds of the capability of the Project's capacity of 150 MW. The estimated 100 MW reduction is based on the load in the entire LIPA service territory. EE and DSM program reductions that could be achieved in the East End and Brookhaven area will be well below the territory-wide 100 MW estimate. Accordingly, expected EE and DSM penetration for the area is unable to completely satisfy the need for the Project.

High Voltage Direct Current ("HVDC") Design Technology

With respect to design technology, the use of high voltage direct current HVDC technology was considered. Use of HVDC technology is appropriate for connecting utility systems over long distances, where control of the power is required, where the control of electrical losses is important, or where there is a difference in operating frequency between power grids. HVDC technology requires converter stations, which are costly and require significant amounts of land for their placement. In the case of this Project, none of the typical justifications for use of HVDC exist because the circuit is to be connected and be part of an existing integrated AC system.

Alternate Transmission Voltages and Re-Conductoring

Lastly, alternative transmission voltages other than as proposed or re-conductoring is not a reasonable option given the capacity needed to meet the anticipated overall eastern part of East

Brookhaven and East End load growth. The existing Wildwood to Riverhead 69 kV circuit (circuit proposed to be upgraded under this Project) is already built with 1192 ACSR. This conductor has one of the highest ratings possible on an overhead transmission line; as a result, additional re-conductoring without major structural modifications (e.g., bundled conductor) is not possible. Use of 138 kV is compatible with the existing infrastructure at the two substations and is consistent with the future plans for the East Brookhaven transmission system. The Riverhead and Wildwood substations, to which the Project will interconnect, consist of transmission equipment operating at both 69 kV and 138 kV levels.

Addition of another overhead 69 kV line would be limited to approximately 170 MW of capacity, thus two circuits (the existing Wildwood to Riverhead 69 kV circuit and the new circuit) would be required to provide approximately the same level of supply as the Project. This would increase the potential environmental impact since there is no room on the existing ROW, as well as add material and construction costs and line losses from the new circuit. By upgrading the 69 kV circuit into a 138 kV operation, the proposed upgraded line will be able to transmit as much as 332 MW of power, which will be adequate to meet the anticipated demand in the East Brookhaven and East End.

E. UNDERGROUND TRANSMISSION

Underground transmission lines are one of the traditional methods of expanding transmission capacity within utility service areas. Given that the poles and conductors are already in place with only insulators being in need of upgrade, construction of an underground cable is redundant and economically unfeasible. Moreover, an underground alternative would represent a major new construction project with associated impacts. A cost estimate to install the Wildwood to Riverhead transmission line underground was prepared. The estimate was based on a 138 kV underground cable rated at 300/445/675 MVA Summer and Winter running 10.6 miles between the Wildwood and Riverhead Substations. The estimate, based in 2012 dollars, is about $110,000,000; far more than the estimated cost of the Project—$5,970,000. Upgrading of the existing overhead circuit for this Project results in virtually no environmental or land use impacts.

F. CONFORMANCE TO LONG-RANGE PLANS FOR EXPANDING THE ELECTRIC POWER GRID

The Project does not violate any long-range plans, is consistent with the most recent State Energy Plan, is consistent with the LIPA Electric Resource Plan, and will not adversely impact the electrical system of the State and interconnected systems. The contributions of the Project will help achieve the goals and objectives that LIPA's Electric Resource Plan seeks for the transmission system on Long Island. In its most recently approved Electric Resource Plan[1] LIPA developed five (5) goals that are intended to guide the initiatives and actions LIPA undertakes over the next decade. The goals are: (i) Meet LIPA's reliability requirements established by the New York State Reliability Council and the New York Independent System Operator; (ii) Improve operating efficiencies and attract private and government funding to support LIPA's technology and resource planning initiatives to reduce customers' bills and support economic development on Long Island; (iii) Pursue a cost-effective strategy and plan for reducing

[1] http: //www.lipower.org/company/powering/energyplan10.html//www.lipower.org/company/powering/energyplan04.html.

electricity use 15% by 2015, in recognition of the State's 45 x 15 clean energy initiative; (iv) Pursue a cost-effective strategy and plan for increasing LIPA's mix of renewable energy resources in its power generation portfolio, to voluntarily support its share of the State's goal of increasing electricity generation from renewable energy resources to 30% by 2015, consistent with the State's 45 x 15 clean energy initiative; and (v) Study and implement, as practicable, strategies for reducing emissions of harmful air, water, and land pollutants and support reductions in greenhouse gas emissions to a level 20% below 2005 levels by 2020, in recognition of Governor David A. Paterson's Executive Order No. 24 establishing a goal to reduce greenhouse gas emissions eighty percent by the year 2050. The design of and benefits provided by the Project are consistent with these objectives to the extent they are applicable to the needs of this Project.

G. STATE AND LOCAL LAWS

NEW YORK STATE

LIPA is a corporate municipal instrumentality of the State, a body corporate and politic and political subdivision of the State, exercising essential governmental and public powers. Public Authorities Law, § 1020-c(1). To carry out its state governmental purposes, LIPA is required solely to ". . .apply to the appropriate agencies and officials of the federal and State governments for such licenses, permits or approval of its plans or projects as it may deem necessary or advisable. . . ." *See,* Public Authorities Law § 1020-g(e).

National or State Wild, Scenic, or Recreational Rivers

In accordance with Title 16 USC Chapter 28, there are no National Wild, Scenic, or Recreational Rivers within the Project study area. However, the Peconic River is designated by New York State as Scenic and Recreational in accordance with Sections 15-2713 through 15-2715 of the Environmental Conservation Law. The Peconic River is designated as a Scenic River from a point approximately 10.5 miles from the western boundary of the Red Maple swamp to the LIRR bridge between Connecticut and Edwards Avenue; and approximately three miles from Middle Country Road (NYS Route 25) to the confluence with the previously described segment. The Peconic River is designated as Recreational River from a point approximately 5.5 miles from the LIRR bridge between Connecticut and Edwards Avenue to Grangabel Park dam in downtown Riverhead[1].

The Project route crosses the Peconic River within an area designated as Recreational, but not designated as Scenic. Because the only change to the existing poles is adding new insulators, the Project will not change or adversely affect the existing views or recreational use of the Peconic River. Further, the Project would help preserve the scenic and recreational qualities of the Peconic River by providing the needed electrical transmission capacity in the area without adding another transmission line crossing the Peconic River.

New York State Parks, Recreation, and Historic Preservation Law

The New York State Historic Preservation Act of 1980, as set forth in Section 14.09 of the New York State Parks, Recreation and Historic Preservation Law requires that state agencies consider

[1] http://www.dec.ny.gov/lands/32739.html

the effects of their actions on any properties listed on or determined eligible for listing on the State and National Registers of Historic Places and affords the Commissioner of OPRHP (i.e. the New York State Historic Preservation Office) and the State Board for Historic Preservation the opportunity to comment.

As discussed above, an architectural historian surveyed the area around the Wildwood Substation and the entire length of the transmission line, and found no historic resources that would be impacted. OPRHP agreed with the methodology and the findings in a letter dated March 1, 2011, see Proposed Exhibit 6. For the archaeological analysis, only ground disturbance can cause archaeological impacts and the only ground disturbance is in the vicinity of the Wildwood Substation. The area around the Wildwood Substation is not considered to be sensitive for archaeological resources, and OPRHP agreed with the lack of potential impacts caused by the new poles and trenching for the underground connection to the Wildwood Substation, see Proposed Exhibit 6. Thus, the Project would not pose a significant adverse impact to historic or archaeological resources.

New York State Coastal Zone Management and Policy Consistency

In 1982, New York State adopted its Coastal Management Program, which is designed to balance coastal development with conservation of the State's coastal resources. It promotes waterfront revitalization and water-dependent uses while protecting fish and wildlife, open space, scenic public vistas, and public access to the shoreline. The New York State Department of State ("DOS") administers this program at the State level.

The New York State Coastal Management Program provides for local implementation when a municipality adopts a local waterfront revitalization program ("LWRP"). An LWRP is a refinement of the State's coastal policies, developed jointly by the State and a municipality. The Town of Brookhaven, Town of Southampton, and Town of Riverhead do not have an approved LWRP. On Long Island Sound, the State Coastal Policies have been refined in the Long Island Sound Regional Coastal Management Program. Reflecting existing State laws and authorities, these regional policies take the place of the statewide policies of the New York's Coastal Management Program, see Exhibit 4 of the Application.

The Project was reviewed for consistency with these policies. As a conservative measure, the Project was also assessed for consistency with the State's 44 Coastal Policies. Since the Town of Brookhaven, Southampton, and Riverhead do not have an approved LWRP, consistency with a State-approved LWRP is not applicable. As detailed in the Application, the Project is consistent with the policies of the New York State and the Long Island Sound Coastal Management Program.

New York State Wetland Program

New York's freshwater wetlands are regulated under Article 24 of the Environmental Conservation Law (the Freshwater Wetlands Act). The Act directs the DEC to regulate land use in and around certain freshwater wetlands with a protective buffer area extending 100 feet upland of a wetland boundary. In general, to be regulated under the Freshwater Wetlands Act, a wetland must be 12.4 acres or larger. Smaller wetlands may be regulated under this Act if they are deemed to have unusual local importance as defined by DEC. The Act requires DEC to map all regulated wetlands so as to identify those wetlands that meet the criteria set forth in the law, and to provide a mechanism by which affected property owners can be notified that a particular wetland in their area is protected. Examples of activities that require a freshwater wetland permit

include: construction of buildings, roadways, septic systems, bulkheads, dikes, or dams; placement of fill, excavation, or grading; modification, expansion, or extensive restoration of existing structures; drainage; and application of pesticides.

LOCAL

Notwithstanding LIPA's exemption from the jurisdiction of local municipalities, LIPA submitted an analysis of County and town codes in the Application. The analysis was submitted for the sole purpose of allowing the Commission to evaluate under Article VII the Project's compliance with the substantive local requirements that would otherwise be applicable to a major utility transmission facility. Nothing herein should be construed or interpreted as LIPA agreeing to: subject itself to the jurisdiction of any county or local municipality; waive its exemption from such jurisdiction; or, waive or forfeit any right to which it is entitled under the law. The Signatory Parties agree that the Project can be constructed by LIPA in a manner that conforms to all substantive requirements of such local laws and ordinances.

Suffolk County Local Laws and Ordinances

Consistent with the introductory paragraphs of this section, the Signatory Parties have reviewed all of the local laws and ordinances of Suffolk County that would otherwise be applicable to a major utility transmission facility such as the Project, but for Public Authorities Law § 1020-g(e). The Signatory Parties agree that the Project can be constructed by LIPA in a manner that conforms to all the substantive provisions of such local laws and ordinances. LIPA has not asked the Commission to refuse to apply any of the substantive provisions of the local laws and ordinances of Suffolk County.

Towns of Southampton, Riverhead and Brookhaven Codes, Laws, and Ordinances

Consistent with the introductory paragraphs of this section, the Signatory Parties have reviewed all of the local codes, laws and ordinances of the Towns of Southampton, Riverhead and Brookhaven that would otherwise be applicable to a major utility transmission facility such as the proposed Project, but for Public Authorities Law § 1020-g(e), and agree that the Project can be constructed by LIPA in a manner that conforms to all substantive provisions of such local codes, laws and ordinances.

H. SYSTEM RELIABILITY IMPACT STUDIES

A system reliability impact study was performed by LIPA to determine the impact of this Project on the LIPA system, see Exhibit 13, Attachment E-4-1 of the Application. The Project will eliminate the thermal overload on the Wildwood to Riverhead 138 kV circuit in the event of the loss of the existing Brookhaven to Riverhead double circuit. This Project would alleviate the need for load shedding and reduces reliance on local generators and shunt capacitors. The Project does not result in breaker overstresses. The Project will significantly reduce the exposure hours to voltage constraints on East End for the loss of the existing Riverhead to Canal 138 kV cable under various system conditions. Moreover, the Project would enhance the delivery capability of the North and South Forks' transmission system and act as a strong source to support the East End electrical load growth.

I. PUBLIC OUTREACH

LIPA conducted an outreach program regarding the Application including contacting elected officials, and making the Article VII Application available on the LIPA website, www.lipower.org. Copies of the Application have also been provided to several local libraries. Letters and notices of the Project were mailed to the 271 customers along the existing right-of-way. The public has not raised any issues regarding the Project, due primarily to the use of the existing transmission line and rights-of-way. No person other than the Signatory Parties expressed an interest to participate in the settlement discussions.

J. REAL PROPERTY CONSIDERATIONS

No additional real property rights from public or private lands are required to make the upgrades detailed in the Application.

IV. PROPOSED FINDINGS

The Signatory Parties agree that the record in this proceeding supports the proposed findings set forth in Appendix 2 attached hereto.

V. PROPOSED CERTIFICATE CONDITIONS

The Signatory Parties agree that that the proposed certificate conditions set forth in Appendix 3 attached hereto are acceptable and appropriate for inclusion in a Certificate of Environmental Compatibility and Public Need authorizing construction and operation of the Project as configured herein.

VI. EM&CP GUIDELINES

The Signatory Parties agree that the EM&CP Guidelines set forth in Appendix 4 attached hereto are acceptable and appropriate for application to the Project as configured herein.

CASE 11-T-0116

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

By: _____

Sam M. Laniado, On Behalf of and Counsel to the
Long Island Power Authority

Dated: March 16, 2012

CASE 11-T-0116

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal. The Staff of the New York State Department of Public Service's execution of and willingness to be bound by the Joint Proposal is contingent on filing of an acceptable proposed Exhibit 7 by March 27, 2012 as described above in Appendix 1 of the Joint Proposal.

By: _____

Anthony Belsito, Assistant Counsel, On Behalf of
The Staff of the New York State Department
of Public Service

Dated: 3/16/2012

CASE 11-T-0116

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

By: _____

Larry S. Eckhaus, Esq., On Behalf of the
New York State Department of
Environmental Conservation

Dated: 3-15-12

CASE 11-T-0116

IN WITNESS WHEREOF, the Parties hereto have this day signed and executed this Joint Proposal.

By: Chris Cuddeback

Christopher Cuddeback, Senior Attorney,
On Behalf of the New York State Department of
Agriculture and Markets

Dated: March 16, 2012

Appendix 1: List of Testimony, Exhibits & Appendices to Be Admitted

A. TESTIMONY

Direct Testimony of a Joint Panel of Witnesses Consisting of James Parmelee, Curt J. Dahl, Gary Petchauer, Philip C. Sears and J. Michael Silva

B. PROPOSED EXHIBITS

1. Application to the NYPSC for a Certificate of Environmental Compatibility and Public Need, submitted March 24, 2011, and determined compliant on July 15, 2011.
2. Letter from Paul Cotrone on behalf of LIPA to Secretary Brilling, dated June 13, 2011 transmitting "Supplement to the March 2011 Application of the Long Island Power Authority" filed in the instant proceeding.
3. LIPA Response to DPS Staff Information Request Nos. 1-7, and Supplemental Response to No. 6.
4. LIPA Response to DEC Staff Information Request Nos. 1-2.
5. LIPA Response to Ag & Mkts Information Request No. 1.
6. Letter from New York State Department of Parks, Recreation and Historic Preservation to Molly McDonald of AKRF on behalf of LIPA, dated March 1, 2011 agreeing with the methodology and findings of the historic resources survey as well as the documented lack of potential impacts caused by the Project to archaeological resources.
7. Figure 1 depicting DEC freshwater wetlands and approximate delineated wetland boundary in which work would be performed in the vicinity of the Peconic River and the Project. This Exhibit is being revised and will be circulated to the parties for review. It is intended to be finalized by March 27, 2012.
8. Letter from New York Natural Heritage Program to Lucinda Kalin of AKRF on behalf of LIPA, dated November 8, 2011 identifying threatened and endangered species in the vicinity of the Project.

Appendix 2: Proposed Findings

1. The Project, which is to upgrade an existing 69 kV transmission line to 138 kV, is necessary in order to protect against load shedding and outages, and to meet the needs of anticipated future demand in the Suffolk County towns on the North and South Forks of Long Island.
2. The nature of the probable environmental impacts for this Project is expected to be limited to ordinary construction impacts from installation activities along the route. The impacts will include temporary construction noise, and temporary land use disturbance.
3. The Project, as proposed by the parties, represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other considerations such as the effects on agricultural lands, wetlands, parklands, and river corridors traversed.
4. Construction activities on the Project will be located within the existing LIPA right-of-way and near and within the Wildwood and Riverhead Substations with the exception of a short piece (300 feet) of underground 138 kV cable that will be installed near the Wildwood Substation to transition the overhead line into the Wildwood Substation.
5. Construction of the Project is consistent with the most recent New York State Energy Plan which sets forth the State's energy policies and long-range planning objectives and strategies for expansion of the electric power grid of the electric systems serving the State and interconnected utility systems, and is consistent with LIPA's Electric Resource Plan for the transmission system on Long Island.
6. The location of the Project, as proposed by the parties, conforms to the substantive provisions of the applicable State and local laws and regulations.
7. The Project will serve the public interest, convenience, and necessity.

Appendix 3: Proposed Ordering Clauses/Certificate Conditions

The New York State Public Service Commission ("Commission") orders:

1. Subject to the conditions set forth in this Opinion and Order, Long Island Power Authority ("LIPA") is granted a Certificate of Environmental Compatibility and Public Need ("Certificate") authorizing construction and operation of the Project, as detailed in the Application and Supplemental Filings.
2. LIPA shall, within 30 days after the issuance of the Certificate, submit to the Commission either a petition for rehearing or a verified statement that it accepts and will comply with the Certificate. Failure to comply with this condition shall invalidate the Certificate.
3. LIPA shall promptly notify the Commission in writing should it decide not to complete construction of all or any portion of this Project and shall serve a copy of such notice upon all parties.
4. LIPA shall integrate and coordinate maintenance of the certified Project with that of adjacent facilities.

Description of Route

5. The transmission line to be upgraded is located in a right-of-way that runs between LIPA's Wildwood and Riverhead Substations. The entire length of the LIPA right-of-way and line to be upgraded is approximately 10.6 miles. The width of the right-of-way is approximately one hundred (100) feet. The line will be upgraded from 69 kV by installing insulators capable of supporting 138 kV transmission. Several poles at the Wildwood Substation will be added to the existing right-of-way. Existing conductors will not be replaced. A short piece (300 feet) of underground 138 kV cable will be installed near the Wildwood Substation to transition the overhead line into the Wildwood Substation.

   The existing overhead transmission route consists of three (3) right-of-way segments.

   Segment Three (Town of Brookhaven And Town Riverhead) – 2.8 Miles

   This portion of the transmission line is along the west end of the circuit and is closest to the Wildwood Substation, the first 0.9 miles of which is within the Town of Brookhaven. Roads traversed in this portion include: Randall Road, Gateway Drive, Dogwood Road, Overhill Road, Wading River-Manorville Road (County Road 25), North Country Road, Fairway Drive, and Sound Avenue.

   Segment Two (Town of Riverhead) - 6.0 Miles

   The line proceeds east. Roads crossed include: Hulse Landing Road (County Road 54), Fresh Pond Avenue, Edwards Avenue, Riley Avenue, Twomey Avenue, and Middle Road.

   Segment One (Town of Riverhead/Town of Southampton) – 1.8 Miles

The circuit continues east, crossing Old Country Road (County Road 58) and Middle Country Road (NYS Route 25). The circuit then proceeds south for one (1) mile, traversing the Long Island Rail Road ("LIRR") right-of-way and the Peconic River. Lastly, the circuit continues east for 0.8 miles on LIPA's right-of-way to LIPA's Riverhead Substation (which is located on the south side of NYS Route 25 east of Mill Road.

The existing conductor size is 1192 kcmil ACSR. The diameter of this conductor is 1.302 inches. There is a 7#6 alumoweld static wire on all of these poles as well (diameter is 0.486 inches). There are approximately one hundred and seventy (170) steel poles supporting this circuit. There are no plans to replace these poles, but the configurations at the two terminations (at Wildwood Substation and Riverhead Substation) will be modified so that the circuit can be terminated into the new 138 kV substation racks. The existing steel poles vary in size, but most are eighty (80) foot direct embedded steel poles (seventy feet above grade). Ninety (90) foot and one-hundred (100) foot direct embedded steel poles, which are seventy-nine and eighty-eight feet above grade respectively, were utilized at the road crossings to provide conservative clearances above the roadways in excess of the National Electric Safety Code ("NESC"). Adjacent to the existing 69 kV line is a wood pole line supporting a 138 kV transmission circuit (circuit number designation 138-890). This line is approximately fifty (50) feet from the 69 kV steel pole line. Circuit 138-890 also runs from the Wildwood Substation to the Riverhead Substation (9A). There are no plans to modify this line.

The three hundred (300) feet, just outside the Wildwood Substation fence on the south side of the property, will be an underground cable and will terminate into the ring bus termination equipment. The transition from overhead conductors to underground cable will be on three steel poles (one for each phase); each pole will be approximately sixty feet above grade. The 300-foot underground dip is required to prevent a 138 kV overhead crossing of an existing transmission circuit. The undergrounding will prevent a double circuit outage in the event that the circuit at a higher elevation fails and falls onto the circuit below it.

Laws and Regulations

6. Consistent with the discussion, *supra*, concerning State and local laws:

    a. Each substantive State, and local law, regulation, code and ordinance applicable to the Facility authorized by the Certificate shall apply.

    b. No State or local legal provision purporting to require any approval, consent, permit, certificate or other condition for the construction or operation of the Project authorized by the Certificate shall apply, except (i) those of the Public Service Law and regulations and orders adopted thereunder; (ii) those provided by otherwise applicable State law for the protection of employees engaged in the construction and operation of the facilities; (iii) those permits issued under a federally delegated or approved environmental permitting program; and (iv) those referenced in this Certificate.

    c. LIPA shall construct the Facility in a manner that conforms to all standards of the American National Standards Institute ("ANSI") including, without limitation, the National Electric Safety Code ("NESC") [including Institute of Electrical Engineers ("IEEE" Standard IEEE C2 latest version] and any stricter standards adopted by LIPA.

d. LIPA shall construct the Facility in a manner that conforms to all applicable requirements of the New York State Uniform Fire Prevention and Building Code.

e. LIPA shall operate the Facility in conformance with applicable Federal Energy Regulatory Commission ("FERC") approved tariffs, market rules, and operating procedures of the respective independent system operators ("ISOs").

7. Nothing herein shall preclude LIPA from voluntarily subjecting itself to any State or local approval, consent, permit, certificate or other condition for the construction or operation of the Project, subject to the Commission's ongoing jurisdiction.

   a. LIPA shall coordinate all work performed in the rights-of-way of city, town and County highways with the respective highway departments for such highways, subject to the Commission's ongoing jurisdiction.

   b. LIPA shall comply with the requirements for the protection of underground facilities set forth in 16 NYCRR Part 753 "Duties of Excavators".

   c. A copy of each permit or approval received from the issuing agencies, if any, shall be provided to New York State Department of Public Service ("DPS) Staff ("DPS Staff") by LIPA promptly after receipt by LIPA of such permit or approval and before commencement of construction across the affected area.

   d. If LIPA believes that any action taken, or determination made, by a State or local agency in furtherance of such agency's review of any applicable permits or approvals, is unreasonable or unreasonably delayed, LIPA may petition the Commission, upon reasonable notice to that agency, to seek a determination of any such unreasonable or unreasonably delayed requirement. The permitting agency may respond to the petition, within three business days, to address the reasonableness of any requirement or delay.

Environmental Management and Construction Plan

8. The Environmental Management and Construction Plan ("EM&CP") shall be prepared in accordance with Environmental Management and Construction Plan Guidelines, attached as Appendix 4 of the Joint Proposal, as if Appendix 4 were included herein in its entirety as an Ordering clause. All construction plans shall be certified by a Professional Engineer that is licensed and currently registered in New York State.

9. The EM&CP shall be submitted to the Commission and the parties for review. The parties shall have 45 days from the filing thereof to review the EM&CP and provide comments to the Commission.

10. LIPA shall not begin site preparation or construction with respect to the Project (except surveying, soils testing, and other such related activities as are necessary to prepare the final design plans) before the Commission has approved EM&CP for the Project.

11. Except where this Certificate requires otherwise the environmental protection measures contained in the Application shall be incorporated into the EM&CP. These measures shall be applied during construction, operation and maintenance of the certified Facility.

12. Deviation from the design height and location of structures shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a provision of the Joint Proposal or the Order would be created.

EM&CP Contents

13. In addition to the guidelines listed in Appendix 4, LIPA shall provide as part of the EM&CP:

    a. A final design plan that reflects conformance of the Facility design with the Certificate, applicable federal and State requirements, and local substantive requirements (including, but not limited to, applicable regulations, including those of: The Bureau of Alcohol, Tobacco and Firearms; Occupational Safety and Health Administration; NYS Department of Labor; the Uniform New York State Fire Prevention and Building Code (chemical and waste-storage use and handling regulations)).

    b. An identification and explanation for any proposed deviation from the location or design of structures, with supporting documentation.

    c. Details of nearby electric, gas, telecommunication, water, sewer, and related facilities and measures to protect the integrity, operation, and maintenance of those facilities.

    d. A plan indicating the details and design measures to protect the cathodic protection system and physical conditions of nearby facilities and structures, including any underground facilities. The plan shall include appropriate mitigation measures such as grounding and upgrade of existing protection devices or other facilities as appropriate for and identified in cooperation with owners or operators of adjacent or nearby structures, pipelines, tanks, fences, etc.

    e. A detailed construction schedule as part of each segment of the EM&CP, indicating limitations on access, construction, and restoration within any distinct areas such as parklands, residential areas, highway right-of-way, agricultural areas etc.

    f. The specification of noise mitigation procedures.

    g. The delineation of certified right-of-way and additional work areas to which LIPA shall confine construction and subsequent maintenance activities, depicting property rights, clearing rights, access rights, and such other matters as appropriate to address the site and environmental conditions and property interests of affected landowners and relevant requirements of the EM&CP. The delineation shall include the specific location and acreage of any needed real property or real property rights.

    h. Details of street work, including provisions for minimizing the duration and extent of open excavation, traffic disruptions, and work within and adjoining public streets and rights-of-way.

    i. Drawings delineating the locations of existing and proposed access roads. Proposed access road improvements shall be indicated, including measures for environmental impact minimization and access control.

j. A traffic control plan for all the roadways, bicycle paths and pedestrian walkways directly affected by construction activities prepared in conformance with the Manual of Uniform Traffic Control Devices ("MUTCD").

k. Fuel and chemical handling procedures and a spill response and route emergency plan. This plan shall provide proposed methods of handling spills of petroleum products and any hazardous or controlled substance which may be stored or utilized during construction, operation or maintenance of the Facility.

l. The designation of Facility construction worker parking areas.

m. A plan for removal and reuse, recycling or disposal of equipment.

n. Detailed soil handling and erosion control plans including details on the installation of sedimentation/erosion control devices around areas to be disturbed and any stockpiled soils, temporary seeding, and re-vegetation to prevent erosion during construction.

o. Mowing and vegetation treatment plans, including plans for those freshwater wetland and adjacent areas where the Project crosses the Peconic River, shall be indicated on the design drawings as applicable.

p. Best management practices and measures for monitoring construction and protecting water quality at or near groundwater recharge basins.

q. Appropriate controls and protocols for weekend and/or nighttime work if otherwise allowed, including but not limited to noise controls and lighting controls.

r. An explanation of why any measures mentioned in Appendix 4 are not applicable to this Project.

EM&CP Process

14. Contemporaneously, LIPA shall submit five hard copies and one electronic copy of the EM&CP documents to the Commission, one hard copy and two electronic copies to each of the New York State Department of Environmental Conservation ("DEC") and the New York State Department of Agriculture and Markets ("Ag & Mkts") and one copy to active parties on the service list who request the document. LIPA shall also place copies for inspection by the public in at least one public library or other convenient location in each municipality in which construction will take place. Contemporaneously with the submission and service of the EM&CP, LIPA shall provide notice, in the manner specified below, that the EM&CP has been filed.

15.

a. LIPA shall serve written notice(s) of filing the EM&CP on all active parties to this proceeding, on all statutory parties to this proceeding and on the 271 residents along the line, and shall attach a copy of the notice to each copy of the EM&CP. Further, LIPA shall publish the notice(s) in a newspaper of general circulation in the vicinity of the Project within seven days after filing the EM&CP.

b. There is no need to acquire permanent right-of-way or off-right-of-way access since access already exists. However, if necessary, for all permanent right-of-way or off-right-of-way access that may be acquired for the Project, LIPA shall cause an

examination of title (title search) to be conducted in the same manner as would be conducted by a reputable title insurance company to identify all – of-record – owners, mortgagees, lien holders, leaseholders or others with an interest in such property rights to be acquired. LIPA shall serve written notice(s) of filing the EM&CP on each such person identified, on each person owning the underlying land right to an existing easement being used and on each person currently leasing a portion of any right-of-way to be used for the Project.

16.

a. The written notice(s) and the newspaper notice(s) shall contain, at a minimum, the following:

   1. a statement that the EM&CP has been filed;
   2. a general description of the Project, the need for the Project, the alternatives considered, and of the EM&CP;
   3. a listing of the locations where the EM&CP is available for public inspection;
   4. a statement that any person desiring additional information about a specific geographical location or specific subject may request it from LIPA;
   5. the name, address, and telephone numbers of LIPA's representative;
   6. the address of the Commission; and
   7. a statement that any person may be heard by the Commission on any matter or objection regarding the EM&CP by filing written comments with the Commission and LIPA within 30 days of the filing date with the Commission of the EM&CP (or within 30 days of the date of the newspaper notice, whichever is later).

b. A certificate of service indicating upon whom all EM&CP notices and documents were served and a copy of the written notice shall be submitted to the Commission at the time the EM&CP is filed, and shall be a condition precedent to approval of the EM&CP.

17.

a. LIPA shall report any proposed changes to the EM&CP to DPS Staff; DPS Staff shall refer to the Secretary of the Commission (or a designee) reports of any proposed changes that do not cause substantial change in environmental impact or are not related to contested issues decided during the proceeding. DPS Staff shall refer all other proposed changes in the EM&CP to the Commission for approval.

b. Upon being advised that DPS Staff will refer a proposed change to the Commission, LIPA shall notify all Signatory Parties and all active parties that have requested (before the approval of the EM&CP) to be so notified, as well as property owners or lessees whose property is affected by the proposed change. The notice shall: (1) describe the original conditions and the requested change; (2) state that documents supporting the request are available for inspection at specified locations; and (3) state that persons may comment by writing or calling (followed by written confirmation) to the Secretary of the Commission within 15 days of the notification date and (4) provide the Secretary's electronic mail address, phone number and

mailing address. Any delay in receipt of written confirmation will not delay Commission action on the proposed change.

c. LIPA shall not execute any proposed change until it receives oral or written approval, except in emergency situations threatening personal injury, property damage or severe adverse environmental impact, or as specified in the EM&CP.

Notices, Reports and Consultations

18. Applicable provisions of the Certificate, EM&CP, and orders approving the EM&CP shall be accommodated in any design, construction, ownership or maintenance contracts associated with the Facility. LIPA shall provide construction contractors with complete copies of the Certificate, approved EM&CP, updated construction drawings, and any site-specific plans. To the extent that the listed documents are available before contracts for construction services are executed, such copies shall be provided to the contractors prior to execution of such contracts.

19. LIPA shall notify all construction contractors that the Commission may seek to recover penalties for violation of the Certificate, not only from LIPA, but also from its construction contractors, and that construction contractors may also be liable for other fines, penalties and environmental damage.

20.

a. LIPA shall make available to the public a toll free or local phone number of an agent or employee where complaints may be received 24/7 during the construction of the certified Facility. In addition, the phone number of the Secretary and the phone number of the Commission's Environmental Compliance Section shall be provided.

b. LIPA shall report to DPS Staff every complaint that cannot be resolved after reasonable attempts to do so, or within 30 days after receipt of the complaint (whichever comes first).

21.

a. No less than two weeks before commencing site preparation, LIPA shall:

1. provide notice to local officials and emergency personnel; and,

2. provide such notice for dissemination to local media and display in public places (such as general stores, post offices, community centers and conspicuous community bulletin boards).

b. The notice shall contain:

1. a map and a description of the Facility in the local area;

2. the anticipated date for start of construction;

3. the name, address and local or toll-free telephone number of an employee or agent of LIPA;

4. a statement that the Project is under the jurisdiction of the New York State Public Service Commission, which is responsible for enforcing compliance with environmental and construction conditions, and which may be contacted at an address and telephone number to be provided in the notice; and

5. the notice shall be written in language reasonably understandable to the average person.

c. Upon distribution, an electronic copy shall be submitted to the Secretary of the Commission.

22. Neither LIPA nor any contractors in its employ shall construct, improve or use any access roads not described in the EM&CP. Should the need arise for additional off-right-of-way access, LIPA shall submit a request to DPS Staff; the request shall be considered consistent with the provisions listed above and if the change may involve a site listed or eligible for listing on the State or National Register of Historic Places, DPS Staff will consult with New York State Office of Parks, Recreation and Historic Preservation ("OPRHP").

23.

a. At least two weeks prior to the start of construction, LIPA shall hold a preconstruction meeting. An agenda, location and attendee list shall be agreed upon between DPS Staff and LIPA.

b. LIPA shall supply draft minutes from this meeting to all attendees, the attendees may offer corrections or comments and LIPA shall issue the finalized meeting minutes to all attendees.

c. If, for any reason, the construction contractor cannot finish the construction of this Project, and a new construction contractor is needed, there shall be another preconstruction meeting with the same format as outlined above.

24.

a. LIPA shall inform the Commission and DPS Staff at least five days before commencing construction.

b. LIPA will: mail a postcard to each of the 271 residences located along the line prior to any insulator work being performed along the route containing a contact number for complaints or concerns approximately three weeks prior to construction in those areas. The information on the postcard will contain, among other items, a LIPA contact e-mail address and phone number so residents can contact LIPA via e-mail, text or telephone.

c. Eight weeks prior to the start of construction, LIPA will mail a summary of the project to local newspapers in the form of a press release. That press release will also contain information on the location of libraries where the EM&CP has been placed in order for residents to obtain information.

25. Before Facility construction begins, and after considering the nature of the particular right-of-way segment with respect to issues such as highway and traffic safety, one or two edges of the Facility right-of-way shall be delineated and marked as specified in the EM&CP for that segment. Also, LIPA shall stake and flag all off-right-of-way access roads and working and staging areas.

26. During construction LIPA shall provide DPS Staff with weekly status reports summarizing construction, and indicating construction activities and locations scheduled for the next two weeks.

27. Within ten days after the Project is in service, LIPA shall notify the Commission of that fact.

28. Within ten days of the completion of final restoration that may be necessary, LIPA shall notify the Commission and all Signatory Parties that all restoration has been completed in compliance with this Certificate and the EM&CP.
29. During construction, LIPA shall periodically consult with State and local highway transportation agencies about traffic conditions near the project site and shall notify each such transportation agency of the approximate date work will begin using access points that take direct access from the highways under their respective jurisdictions.
30. LIPA shall keep local fire department and emergency management teams apprised of chemicals and waste on site.
31. LIPA shall immediately notify DEC, through its Spill Hotline, and DPS Staff of any fuel or chemical spills.

Environmental Supervision

32. LIPA shall designate a full-time supervisor and construction inspector for the Project. A part-time environmental monitor who shall have the requisite environmental qualifications, shall be available as needed but, at a minimum, shall be on-site when work occurs near the Peconic River, in the vicinity of the Wildwood Substation, and in agricultural fields. The environmental monitor shall have stop work authority over all aspects of this Project. The supervisor shall be on site during all phases of construction and restoration. The environmental monitor(s) and construction inspector(s) shall be equipped with sufficient documentation, transportation, and communication equipment to effectively monitor contractor compliance with the provisions of this Certificate, applicable sections of the Public Service Law, and the EM&CP. The name and qualifications of the supervisor, inspector(s) and environmental monitor(s) shall be submitted to DPS Staff at least two weeks prior to the start of construction. All costs thereof shall be borne by LIPA.
33. The authority granted in the Certificate and any subsequent order(s) in this proceeding is subject to the following conditions necessary to ensure compliance with such order(s):
    a. LIPA shall regard DPS Staff representatives (certified pursuant to Public Service Law § 8) as the Commission's designated representatives in the field. In the event of any emergency resulting from the specific construction or maintenance activities that violate or may violate the terms of the Certificate or any other order in this proceeding, such DPS Staff representatives may issue a stop-work order for that location or activity.
    b. A stop-work order shall expire in 24 hours unless confirmed by a single Commissioner. If a stop-work order is confirmed, LIPA may seek reconsideration from the confirming Commissioner or the whole Commission. If the emergency prompting the issuance of a stop-work order is resolved to the satisfaction of the Commissioner or the Commission, the stop-work order will be lifted. If the emergency has not been satisfactorily resolved, the stop-work order will remain in effect.
    c. Stop-work authority shall be exercised sparingly and with due regard to the potential economic costs involved and possible impact on construction activities. Before exercising such authority, DPS Staff representatives shall consult (wherever practicable) with LIPA representatives possessing comparable authority. Within

reasonable time constraints, all attempts shall be made to address any issue and resolve any dispute in the field. In the event the dispute cannot be resolved, the matter shall be immediately brought to the attention of LIPA, the Project Manager and the DPS, Chief, Office of Energy Efficiency and the Environment. In the event that a DPS Staff representative issues a stop-work order, neither LIPA nor the contractor will be prevented from undertaking any such safety-related activities as they deem necessary and appropriate under the circumstances. Stop-work or implementation of measures, as described below, may be directed at the sole discretion of the DPS Staff representative during these discussions.

d. If a DPS Staff representative discovers that a specific activity is a significant environmental threat that is, or may immediately become, a violation of the Certificate or any other Order in this proceeding, the DPS Staff representative may—in the absence of responsible LIPA supervisory personnel or the presence of such personnel who, after consultation with the DPS Staff representative, refuse to take appropriate action—direct the field crews to stop the specific environmentally harmful activity immediately. If responsible LIPA personnel are not on site, the DPS Staff representative shall immediately thereafter inform the supervisor and/or environmental monitor of the action taken. The DPS Staff representative may lift the stop-work directive if the situation prompting its issuance is resolved. DEC Region 1 Staff shall be immediately notified of any significant environmental threats and stop-work directives.

e. If the DPS Staff representative determines that a significant threat exists such that protection of the public or the environment at a particular location requires the immediate implementation of specific measures, the DPS Staff representative may, in the absence of responsible LIPA supervisory personnel, or in the presence of such personnel who, after consultation with the DPS Staff representative, refuse to take appropriate action, direct LIPA or its contractors to implement the corrective measures identified in the EM&CP. The field crews shall comply with the DPS Staff representative's directive immediately. The DPS Staff representative shall immediately thereafter inform LIPA's supervisor or environmental monitor of the action taken.

34. LIPA shall organize and conduct site compliance audit inspections for DPS Staff as needed, but not less frequently than once per month during the site preparation and construction and phases of the Project, and at least annually for two years after the Project is operational.

    a. The monthly inspection shall include a review of the status of compliance with all certification conditions, requirements, and commitments, as well as a field review of the project site, if necessary. The inspection report shall also include:

        1. review of all complaints received, and their proposed or actual resolutions;

        2. review of any significant comments, concerns or suggestions made by the public, local governments, or other agencies;

        3. review of the status of the Project in relation to the overall schedule established prior to the commencement of construction; and

        4. other items LIPA or DPS Staff consider appropriate.

b. LIPA shall provide a written record of the results of the inspection, including resolution of issues and additional measures to be taken, to agencies involved in the inspection audit.

Cultural Resources

35. Should archeological materials be encountered during construction, LIPA shall stabilize the area and cease construction activities in the immediate vicinity of the find and protect the same from further damage. Within twenty-four hours of such discovery, LIPA shall notify DPS Staff and OPRHP Field Services Bureau to determine the best course of action. No construction activities shall be permitted in the vicinity of the find until such time as the significance of the resource has been evaluated and the need for and scope of impact mitigation has been determined.
36. Should human remains or evidence of human burials be encountered during the conduct of archeological data recovery fieldwork or during construction, all work in the vicinity of the find shall be immediately halted and the remains shall be protected from further damage. Within 24 hours of any such discovery, LIPA shall notify DPS Staff and OPRHP Field Services Bureau. All archaeological or burial encounters and their handling shall be reported in the status reports summarizing construction activities and reviewed in the site compliance audit inspections.

Public Health and Safety

37. All chemicals and waste shall be secured in a locked and controlled area.
38. LIPA shall engineer and construct the Project to be fully compatible with the operation and maintenance of nearby electric, gas, telecommunication, water, sewer, and related facilities.
39. The Project shall be designed and constructed to avoid adverse effects on the cathodic protection system and physical conditions of existing structures and facilities, including any underground facilities.

Electric and Magnetic Fields

40. LIPA shall design, engineer and construct the Project such that its operation shall comply with the electromagnetic field ("EMF") standards established by the Commission in *Opinion No. 78-13* (issued on June 19, 1978) and the *Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities* (issued September 11, 1990), respectively.

Waterbodies and Regulated Wetlands

41. LIPA shall minimize disruption to regulated wetlands during the construction of the Project and long-term maintenance of the facility.
    a. Regulated wetland locations within the project area shall be delineated in the field and indicated on the EM&CP drawings.
    b. Any activities that may affect regulated wetlands shall be designed and controlled to minimize adverse impacts to the maximum extent practicable.

c. LIPA shall, to the maximum extent practicable, avoid direct impacts to regulated wetlands. Any direct impacts to wetlands shall be appropriately mitigated.

d. Prior to any construction access in this area, equipment shall have been appropriately cleaned and dried to protect against the spread of invasive species.

e. Construction and access through regulated wetlands or adjacent areas shall be done with tracked equipment or on temporary swamp mats and shall be restricted to access roads and work areas set forth on the approved EM&CP drawings. Brush mowing with cleaned equipment may be required to facilitate installation of any swamp mats.

42. Mowing or trimming of existing vegetation in regulated wetlands or in or near waterbodies shall be limited to that material necessary to allow completion of construction activities and to allow for reasonable access for long-term maintenance so as to reduce the amount of activity and disturbance to the wetland and adjacent area.

43. There shall be no discharge from construction activities to any regulated wetlands or protected streams or waterbodies.

44. Equipment or machinery shall not be washed in any regulated wetland or adjacent area.

45. There shall be no excavation or stockpiling of any excavated materials within one hundred (100) feet of any regulated wetland and adjacent area or protected stream or waterbody.

46. Refueling of equipment, storage mixing, or handling of open containers of pesticides, chemicals labeled “toxic”, or petroleum products shall be prohibited within 100 feet of any regulated wetland and adjacent area or protected stream or waterbody.

47. All work on poles located within 100 feet of the Peconic River shall be performed from existing access roads that are located under the transmission line. No in-water or from-the-water work shall be involved. Prior to commencement of construction activities at these poles, silt fencing and/or straw bales shall be installed along the banks of the Peconic River.

Construction

48. Equipment and component delivery, trenching, backfilling, and insulator and cable installation shall only take place between 7 AM – 6 PM on weekdays. In addition, extended work hours beyond 6 PM to complete work at a particular site along the route in the event unforeseen circumstances occur, will be permitted and DPS Staff will be notified within 24 hours of the event with an explanation of why extended work hours were required. Nothing therein shall preclude LIPA from making the necessary arrangements for the extension of work hours with appropriate local agencies in compliance with local ordinances. DPS Staff shall be notified at least 48 hours in advance if planned weekend, evening or holiday construction should become necessary.

49. The construction schedule shall be coordinated so as to minimize outages of the existing circuits adjacent to the Project, outages of the substations and interconnected transmission facilities.

50. Existing transmission facility components replaced as part of construction of this Project shall be removed from the right-of-way to appropriate destinations and handled

appropriately for re-use or recycling, as available, based on insulator's condition. DPS Staff shall be notified if any major equipment is removed and/or replaced.

51. Appropriate measures shall be taken to minimize fugitive dust and airborne debris from construction activity.

52. Disturbed areas and ruts shall be restored to original grades and conditions with permanent re-vegetation and erosion controls appropriate for those locations. Disturbed pavement, curbs and sidewalks shall be restored to their original preconstruction condition or improved.

53. Sedimentation/erosion control devices shall be installed around areas to be disturbed and any stockpiled soils to prevent soil erosion during construction. These erosion control devices shall be installed prior to construction and shall be maintained in place until the right-of-way has been re-vegetated and/or stabilized in accordance with pre-existing conditions. Sedimentation/erosion control devices shall be inspected periodically and immediately following any storm event and shall be repaired or replaced immediately, as necessary.

54. Neither LIPA nor any contractors in its employ shall clear or alter any areas outside the boundaries of the certified Project, except off right-of-way access roads designated in the EM&CP.

55. Vegetation Removal

    a. Tree removal is not anticipated during construction of this Project. However, as discussed above under "Terrestrial Resources," mowing of the right-of way to access a pole will be allowed in selected areas.

    b. Within the right-of-way, north of the Peconic River, pruning of trees shall be allowed for access to work at Pole 17; however, no clearing of trees is authorized. Any cuttings of invasive species shall be left in place. If there is a need to use timber-mats or swamp mats within the freshwater wetland or freshwater wetland adjacent areas, LIPA shall consult with DEC Region 1 Staff and identify and describe mat locations and any other restorative requirements, such as re-seeding, that may be needed, in the EM&CP. In all cases, the mats shall be cleaned prior to entry and use in the area and prior to their removal from freshwater wetlands and adjacent areas.

    c. Should it be necessary to remove brush and branches, all woody debris shall either be chipped and spread on the right-of-way or removed from the right-of-way. No woodchips shall be stored or spread in parklands, wetlands, active agricultural fields, or within 50 feet of floodplains, streams or drainages.

56. Within 75 days of the completion of all construction and restoration activities, LIPA shall provide to DPS Staff as-built drawings of the Project certified by a Professional Engineer that is licensed and currently registered in New York State.

57. The locations of croplands and other agricultural lands along the right-of-way shall be shown on the plan and profile drawings developed for the EM&CP. The Project Environmental Monitor shall be responsible for overseeing the protection of agricultural lands during construction. His/Her responsibilities shall also include initial restoration of any disturbed agricultural land and follow-up restoration. The Project Environmental Monitor will provide site-specific agricultural information as necessary through both field review and direct contact with affected farm operators, Ag & Mkts and DPS Staff. The Project Environmental Monitor also will maintain regular contact with the affected farmers and Ag

& Mkts concerning farm resources and management matters pertinent to the agricultural operations and the site-specific implementation of the EM&CP. The following standard guidelines will be applied during construction within agricultural lands to the extent practicable. Site-specific details for construction and restoration within agricultural lands will be in the EM&CP.

a. Installation of the new insulators will only be done in agricultural lands during the non-growing season. (November 15th to March 15th).
b. All access ways across active agricultural lands will be limited to a width of 15 feet maximum and, will follow hedge rows, right-of-ways, and field edges, when practicable, to minimize impacts to agricultural land.
c. Roads that traverse agricultural fields will be on high-ground topography.
d. All parking areas, construction-staging areas, and other temporary support facilities will be located outside of active agricultural fields.
e. Disturbance of surface and subsurface drainage features will be avoided to the maximum extent practicable. Any drainage features disturbed by construction will be repaired or replaced to "like-new" conditions.
f. The locations of agricultural lands, vulnerable soils, underground drainage systems, areas under cultivation, and in active agricultural use where insulator installation is to be done will be shown on all relevant drawings.
g. Prior to traversing, farm roads to be used for access will be improved as required. To provide stable access, such improvements could include the installation of geotextile fabric and crushed stone.
h. LIPA shall work with farmers employing rotating method of crop growth to minimize or avoid impacts on their plans.

58. Procedures shall be implemented during construction within agricultural lands to minimize impacts. To minimize the potential for soil compaction and mixing, low-impact equipment (*i.e.*, high-flotation-tracked vehicles or vehicles equipped with flotation tires) will be used in areas of active farming and; trucks and vehicles equipped with standard tires will be restricted from agricultural fields during wet weather when rutting may occur. Where access is required from paved roadways to the installation area in agricultural fields, stabilized construction entrances will be installed in accordance with the standard in New York Standards and Specifications for Erosion and Sediment Control (August 2005). Where necessary to avoid soil compaction, top soil will be removed during construction and replaced and the original grade restored at the completion of work.
59. All parking areas, construction-staging areas, and other temporary and permanent support facilities will be located outside of active agricultural fields. The boundaries of all rights-of-way and work areas shall be identified with temporary markers to keep equipment from going off the approved right-of-way and work areas. No vehicular activity will be allowed outside the marked area.
60. To the extent possible, the locations of subsurface drain tiles will be identified prior to construction. When in the field, the Project Environmental Monitor shall mark any exposed or damaged tiles revealed after grading or topsoil stripping has occurred. If required, a site-specific plan will be prepared for the replacement of drainage systems damaged during construction.

61. The Project Environmental Monitor will determine when suitable weather and soil moisture conditions exist to allow for final restoration activities. Although the restoration activities in agricultural lands may vary, the following general guidelines will apply:

    a. Excess gravel or fill will be removed from along access roads, around structures, and in temporary parking and staging areas.
    b. Compaction tests will be made on the affected agricultural fields.
    c. If determined necessary, compacted soils will be de-compacted. Soil de-compaction will be conducted prior to topsoil replacement.
    d. Following de-compaction of the subsoil, the surface of the subsoil will be rock-picked to remove all rocks measuring 4 inches or greater.
    e. The topsoil will be re-graded to match original depth and contours.
    f. Restored topsoil will be stabilized by seeding and/or mulching.
    g. Soil de-compaction and topsoil replacement will not be performed after October 1 or prior to May 1, unless approved on a site-specific basis.
    h. All access roads will be re-graded as necessary to create a smooth travel surface, to allow crossing by farm equipment, and to prevent interruption of surface drainage. Temporary water bars and culverts will be removed if they no longer are necessary.
    i. Any surface or subsurface drainage features damaged during construction will be repaired or replaced as necessary.
    j. Upon completion of restoration, all construction debris will be removed and disposed of offsite.
    k. Damaged fencing or gating will be restored to "like new" condition in its original location following construction. The base of all new posts will be secured to a reasonable depth below the surface to prevent frost heave.

62. Seed mixtures for use on agricultural lands will be determined in consultation with the Soil and Water Conservation District as well as the landowner. Lime and fertilizer rates will be chosen in the same manner. If mulching is necessary, only straw mulch will be used over seedbeds. On active agricultural slopes, temporary diversion berms, dirt, or straw bales may be used to control erosion. If dirt is used, it shall be made with topsoil and in connection with a version scaled down from the typical diversion berm. The dirt diversion berm shall be no higher than between 6 and 8 inches. If straw bales are used, the area under the bales shall need to be re-seeded with the appropriate seed mix upon removal.

63. LIPA shall develop an invasive species prevention and management plan for agricultural areas and DEC regulated freshwater wetlands and adjacent areas. The plan, which shall be submitted as part of the EM&CP, shall:

    a. Describe and show on maps where invasive species have been identified within and near proposed work areas.
    b. Identify and describe measures that will be implemented to minimize the introduction of new invasive species and the spread of existing invasive species during soil disturbance, vegetation management, transport of materials, and landscaping/revegetation.
    c. Contain a list of invasive species including all those identified in DEC's "Interim List of Invasive Plant Species in New York State".

d. Identify and describe best management practices that will be implemented to prevent the transport of invasive species, including:

i. Soil disturbances shall be minimized by reducing work areas to the smallest size practical.

ii. Bare soils shall be re-vegetated as soon as practical to minimize possible establishment of invasive species.

iii. Appropriate erosion and sediment control measures shall be used on any exposed soil areas.

iv. All equipment, including vehicles, trailers, machinery, and tools, shall be cleaned of loose soil and vegetative matter prior to the equipment leaving one agricultural field or DEC regulated freshwater wetland and moving to another field or DEC regulated freshwater wetland or returning to the work yard.

v. The field cleaning shall be done within the work area as shown on the EM&CP drawings.

vi. The cleaning methods shall be brush and broom, or high-pressure air.

vii. No staging or laydown areas shall be allowed within agricultural fields or DEC regulated wetlands.

viii. All field management personnel shall be trained in the identification of invasive species.

Transportation

64. LIPA shall minimize the impact of Project construction on traffic circulation. Traffic control personnel and safety signage shall be employed to ensure safe and adequate traffic flow when secondary roadways are affected by construction. LIPA shall submit, as part of the EM&CP, a Maintenance and Protection of Traffic ("MPT") Plan for access to the existing transmission line. Construction worker parking shall be designated in areas which do not interfere with the normal flow of traffic, cause a safety hazard or interfere with existing land uses and shall be specified in the EM&CP. The Project shall adhere to traffic control measures specified by the New York State Department of Transportation ("DOT") MUTCD and local highway.

65. Direct disturbance to properties shall be avoided by accessing the right-of-way from existing roadways or approved access roads.

Long Term Maintenance after Construction

66. Long Term Maintenance after construction shall include:

a. Vegetation management for the maintenance of this right-of-way shall consist primarily of limited brush and grass mowing, to provide truck access to each pole, and an adequate, safe workspace around each pole. Limited tree trimming may be required at a few pole locations. In addition, should it be necessary to operate vehicles within a any portion of freshwater wetlands in the vicinity of Pole 17, temporary swamp mats may be deployed for maintenance access prior to any vehicular access into the wetland. Brush mowing may be required to facilitate installation of any swamp mats. Where the existing access road width is insufficient, brush shall be mowed to provide a 15 foot

wide path as needed. In addition, a work space including a 20 foot radius shall be mowed around each pole as needed. The specified brush mowing device shall be a horizontal-shaft brush hog (Fecon or equivalent) to minimize cut stubble and stumpage, which might present a tripping hazard and cause tire damage. Chemical treatments may be applied at selected areas along the ROW. Maintenance of the right-of-way through regulated wetlands shall be done by crews on foot with tracked equipment or on temporary swamp mats and shall be restricted to access roads.

b. Prior to operation of the Project, LIPA shall submit to the Commission for approval and provide a copy to any party so requesting, a long-term right-of-way management plan for the Project to be used following construction. The plan shall:

i. contain a list of residential areas and environmentally significant features (including as a minimum any stream-crossings, wetlands, vegetation planning areas, important wildlife habitats, parks, officially-designated trails and visual screens), provisions to minimize maintenance impacts on those areas and features, and any applicable Environmental Conservation Law or other statutory mandated permit approvals that shall be needed for maintenance activities, such as herbicide applications to freshwater wetlands, and State Pollution Discharge Elimination System permits;

ii. contain a vegetation and land-use inventory for the first and each subsequent treatment (the vegetation inventory shall include the right-of-way location, desirable and undesirable species lists, vegetation type, height, density and treatment technique);

iii. contain a list of potential undesirable right-of-way uses (*e.g.*, trash dumping, trespass or encroachment) and policy measures to remedy or control such uses;

iv. describe the treatment techniques and chemicals proposed for use, and limit chemical use to approved usages and dosages;

v. describe a LIPA policy on surveillance, posting and installation of deterrents to adverse right-of-way access; and,

vi. describe project management including Project monitoring, patrols, marking and maintenance of facilities, coordination of activities with underlying landowners or land managers, and maintenance of erosion control features, access roads, landscape plantings and vegetation.

Appendix 4: Environmental Management and Construction Plan Guidelines

The environmental management and construction plan ("EM&CP") for the Project, consisting of appropriate maps, charts, illustrations, and text, shall be organized and developed in accordance with these Guidelines. The EM&CP shall include appropriate cross-references, indicating where the plan addresses the specific guidelines of this document. Whenever any of the Guidelines or Certificate Conditions cannot be followed, the Certificate Holder shall so indicate and provide a sufficient explanation as to why the Guideline or Certificate Condition cannot be followed and propose a viable and appropriate alternative.

A. Plan and Profile Details. A Line Profile[1] (at an appropriate scale) and plan drawings (scale minimum 1 inch = 200 feet)[2] showing:

1. Project Location

   a. The boundaries of any new, existing and/or expanded right-of-way ("ROW")[3] or road boundaries if cables are to be constructed underground in streets; plus areas contiguous to the ROW or street within which the applicant will obtain additional rights; and an explanation of the need for those additional rights.

   b. The location of each Project structure (showing its size, material and type and indicating the GSA-595A federal standard color designation or manufacturers color specification to be used for painted structures), structural foundation, fence, gate, down-guy anchor, and any counterpoise (typical counterpoise drawings will suffice) required for the Project; conductors, insulators and static wires and other components attached to Project structures.

   c. Existing utility or non-utility structures on the ROW, and indicate those to be removed or relocated (include circuit arrangements where new structures will accommodate existing circuits, indicate methods of removal of existing

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[1] The lowest conductor of an overhead design shall be shown in relation to ground at the maximum permissible conductor temperature for which the line is designed to operate, i.e., normally the short-time emergency loading temperature specified by the New York ISO. If a lesser conductor temperature is used for the line profile, the maximum sag increase between the conductor temperature and the maximum conductor temperature shall be indicated for each ruling span. For underground Project design, show relation of Project to final surface grade, indicating design depth-of-cover.

[2] Contour lines (preferably at 5-foot intervals) are desirable on the photo-strip map if they can be added without obscuring the required information.

[3] The term "ROW" in these *Guidelines* includes transmission corridor ROW property, property to be used for substations, disposal sites, underground terminals, storage yards, and other associated facilities. Where such properties cannot reasonably be shown on the same plan or photo-strip, maps or plan drawings used for the transmission line, additional maps or drawings at convenient scales should be used.

facilities, and show the new locations, types and configurations of relocated facilities).

d. Any relocated or underground utility or non-utility structures.

e. The relationship of the Project to nearby fence lines, roads, railways, airfields, property lines, hedgerows, fresh surface waters, wetlands, other water bodies, significant habitats, associated facilities, flowing water springs, nearby buildings or structures, major antennas, oil or gas wells, and pipelines or blowdown valves. State any objections raised by federal, State, or local transportation (highways, waterways, or aviation) officials to the final location or manner of installation of, or access to, the certified Project.

f. The location of any proposed new or expanded switching station, substation, or other terminal or associated utility or non-utility structure (attach plan[1] - plot, grading, drainage, and electrical – and elevation views with architectural details at appropriate scales). Indicate the type and expected impact of outdoor lighting, including design features to avoid off-site illumination and minimize glare; the color and finish of all structures; the locations of temporary or permanent access roads, parking areas, construction contract limit lines, property lines, designated floodways and flood-hazard area limits, buildings, sheds, relocated structures, and any plans for water service and sewage and waste disposal.

g. The location and boundaries of any areas whether located on or off the ROW proposed to be used for fabrication, designated equipment parking, staging, lay-down, and conductor pulling. Indicate also any planned fencing or screening of storage and staging areas. If access and laydown areas cannot be limited to upland areas, provide justification for any access area which is proposed to be located in a State-regulated wetland or protected stream or waterbody.

h. The proposed location of all on- or off- ROW access, temporary construction, and permanent maintenance roads, indicating access from other roadways.

i. The location for ready-mix concrete chute washout and any other cleaning activities (e.g., control of invasive species).

2. <u>ROW Clearing</u>

a. The locations of sites, if any, requiring trimming or clearing of vegetation and the geographic limits of such trimming or clearing. Indicate in text and on the drawings the specific methods for the type and manner of cutting, and disposition or disposal method for cut vegetation (*i.e.*, chip; cut and pile; salvage merchantable timber, etc.). Designate methods for management of vegetation to be cut or removed at each site, indicating the rationale for the method designated. Sites should be based on an initial ROW vegetation inventory conducted prior to clearing and access road construction, and should be distinguished by criteria such as:

[1] Preferably 1" = 50' scale with 2-foot contour lines.

1. any geographical area bounded by distinctly different cover types requiring different cut-vegetation management methods; or
2. any geographical area bounded at each end by areas requiring distinctly different cut-vegetation methods due to site conditions such as land use differences, population density, habitat or site protection, soil or terrain conditions, fire hazards or other factors;
3. different property-owners requesting specific vegetation treatment or disposal methods;
4. delineation and protection of desirable vegetation species; and
5. indication of areas requiring (off-ROW) danger tree removal.

b. The location of any areas where specific tree protection measures shall be employed to avoid damage to specimen trees, stands of desirable species, important screening trees or hedgerows. Details of specific measures should be specified in text and site plans.

3. Building and Structure Removals

Indicate the locations of any buildings or structures to be acquired, demolished, moved or removed. In text, provide the rationale for the acquisition and removal of buildings or structures.

4. Surface Waters, Wetlands, Significant Habitats

a. Indicate the name, water quality classification and location of all rivers and streams (whether perennial and intermittent) within 100 feet of, or crossed by, the proposed ROW or any off-ROW access road constructed, improved or maintained for this Project. Indicate the procedures that were followed to inventory such resources and provide copies of any resulting data sheets and summary reports to DPS Staff and DEC Staff. Describe the measures to be taken in each location to protect streambank stability, stream habitat, and water quality including, but not limited to: crossing technique or method; crossing structure type; applicable prohibition period for in-stream work, other timing restrictions; stream bed, bank, and vegetation restoration measures; and other site-specific measures appropriate to the location for impact minimization, resource protection, and Project construction management. For each waterbody, indicate the water index number and GPS coordinates for all existing and proposed crossings. On the plan maps, indicate:

1. stream crossing method and delineate any designated streamside "protective or buffer zone" in which construction activities shall be restricted to the extent necessary to minimize impacts on rivers and streams;
2. the activities to be restricted in such zones; and
3. any designated floodways or flood hazard areas to be traversed by the Project or access roads, or otherwise used for Project construction or the site of associated facilities.

b. Show the location of all potable water sources including springs and wells on the ROW or within 100 feet of the ROW or access roads indicating on a site-by-site basis, precautionary measures to be taken to protect each water source.

c. A table of waterbodies crossed by the Project that indicates: Town (location), Existing Structure Span (milepost), Stream Name, Field/Map Identification Name, Perennial (P) or Intermittent (I), New York Stream Classification, Comments, Crossing Method and Length, and Fishery Type.

5. Wetlands

a. All wetlands and wetland adjacent areas located within the ROW or crossed by the ROW or any off-ROW access road constructed, improved or maintained for the Project shall be identified, delineated in the field, and depicted on EM&CP drawings, and such delineations shall be delivered for review to DPS Staff and DEC. Indicate the location and type of any wetland (e.g., marsh, meadow, bog, or scrub-shrub or forested swamp) within or adjoining the ROW or any access road, as determined by site investigation and delineation. A table of each State-regulated wetland crossed, indicate the following: Town (location), Existing Structure Span (milepost), Wetland Field Designation, NYSDEC Classification Code, Wetland Type, NWI Classification, Proposed Structure Located within Wetland (Y/N), Total Area of Temporary Disturbance/Impact, Dead End Structures in NYSDEC Wetland, Tangent Structures in NYSDEC Wetland, Total Area of Permanent Disturbance in NYSDEC Wetland (sq. ft.), Area Crossed by Project, Conversion of Forested Wetland, and Comments. Provide a narrative description of the wetland, including the vegetation, hydrology and wetland functions and values and the wetland delineation determination form. The wetland delineation report should also include photographs of the wetlands. Indicate in text, and on plans as appropriate, on a site-by-site basis the precautions or measures to be taken to protect such wetlands, associated drainage patterns, and wetland functions.

b. Describe all activities that will occur within regulated wetlands or adjacent areas (e.g. construction, filling, grading, vegetation clearing, and excavation) and assure that the activity is consistent with the weighing standards set forth in 6 NYCRR 663.5(e) and (f). Describe how impacts to wetlands and 100 foot adjacent areas will be avoided; how impacts will be minimized; and how unavoidable impacts will be mitigated. Provide detailed plans for mitigating all unavoidable impacts. Mitigation plans must separately address impacts to each of the wetlands benefits described in ECL Article 24 (ECL § 24-0105(7)). Plans shall provide for wetland mitigation in the same watershed.

c. The EM&CP shall delineate the wetland "protective or buffer zone" in which construction activities shall be restricted to the extent necessary to minimize impacts on wetlands. Describe the activities to be restricted in such zones.

6. Landscaping

Show locations of existing or proposed vegetative planting, earthwork, or installed features to screen or landscape substations or other Project components. Describe in text and on detailed drawings, any screening or landscaping plans proposed.

7. Noise Sensitive Sites

Show the locations of noise-sensitive areas along the proposed ROW and then specify procedures to be followed to minimize noise impacts related to ROW clearing, Project construction, and operation. Indicate the types of major equipment to be used in construction or Project operation; sound levels at which that equipment operates; days of the week and hours of the day during which that equipment will normally be operated; any exceptions to these schedules; and any measures to be taken to reduce audible noise levels caused by either construction equipment or Project operation.

8. Other Environmentally Sensitive Areas

a. Indicate the general locations of any known ecologically and environmentally sensitive sites (including, but not limited to, rare and endangered species or habitats, deer winter yards, and archaeological sites), within or nearby the proposed ROW or along the general alignment of any access roads to be constructed, improved or maintained for this Project. Indicate the procedures that were followed to identify such resources and specify the measures that will be taken to protect or preserve these resources. Reports prepared to identify and analyze such sites shall be made available to DPS Staff upon request.

b. Indicate the location and identification of sensitive land uses and resources that may be affected by construction of the facilities or by construction-related traffic (i.e., hospitals, emergency services, sanctuaries, schools, residential areas, etc.). Specify measures to minimize impacts on these resources.

9. Recreational Areas

Indicate the locations where existing or planned recreational uses, if known to the Certificate Holder at the time of the submission of the EM&CP, would affect or be affected by Project location, construction, or other ROW preparation. Explain in text how these recreational uses or plans were (or can be) accommodated in Project construction operation and maintenance.

10. Agricultural Areas

a. Indicate the locations of sites under cultivation or in active agricultural use, including pasture, hayland, and cropland.

b. Indicate the location of any unique agricultural lands including maple sugarbushes, organic muckland and permanent irrigation systems, as well as areas used to produce specialty crops such as vegetables, berries, apples, grapes.

c. Indicate the location of vulnerable soils in agricultural areas that are more sensitive than other agricultural soils to construction disturbance due to slope, soil wetness, and shallow depth to bedrock.

d. Indicate the location of all land and water management features including subsurface drainage, surface drainage, diversion terraces, buried water lines, and water supplies.

e. Designate the site-specific techniques to be implemented to minimize or avoid construction-related impacts to agricultural resources.

B. Description and statement of objectives, techniques, procedures, and requirements.

1. Erosion Control

a. Describe the temporary and permanent measures to be taken during all construction phases to stabilize and restore soils, control erosion, and preserve natural drainage patterns in areas where significant soil disturbances (including removal of vegetative cover, grading, or excavation) are proposed. Include standards, practices, erosion control measures, and techniques to address construction management, communications, planning, monitoring and reporting requirements as appropriate for conformance with Storm Water Pollution Prevention Plan details and whether compliance with SPDES will be required.

b. In coastal erosion hazard areas, include plans to demonstrate compliance with the standards for coastal erosion hazard protection as required by 6 NYCRR Part 505.

2. Petroleum, Fuel, and Chemical Handling Procedures

a. The EM&CP shall include a plan for the storage, handling, transportation and disposal of petroleum fuels, oil, chemicals, hazardous substances, and other potentially harmful substances which may be used during, or in connection with, the construction, operation, or maintenance of the Project. The plan shall address how to avoid spills and improper storage or application in the vicinity of any wetland, river, creek, stream, lake, reservoir, spring, well or other ecologically sensitive site, or existing recreational area along the Project ROW and access roads.

b. The EM&CP shall include a plan for responding to and remediating the effects of any spill of petroleum or other hazardous substances in accordance with applicable State and Federal laws, regulations, and guidance, and shall include proposed methods of handling spills of petroleum products and any hazardous substances which may be stored or utilized during the construction and site restoration, operation, and maintenance of the Project.

3. Environmental Supervision

a. Describe protocols for supervising demolition, vegetation clearing (including any use of herbicides), construction and site restoration activities to ensure minimization of environmental impact and compliance with the environmental protection provisions specified by the Certificate.

b. Specify the titles and qualifications of personnel proposed to be responsible for ensuring minimization of environmental impact throughout the demolition, clearing, construction and restoration phases, and for enforcing compliance with environmental protection provisions of the Certificate and the EM&CP. Indicate the amount of time each supervisor is expected to devote to the Project specifically including the amount of time the supervisor/monitor is expected to be in the field observing construction of the Project.

c. Explain how all the environmental protection provisions will be incorporated into contractual specifications, and communicated to those employees or contractors engaged in demolition, clearing, construction, and restoration.

d. Describe the procedures to "stop work" in the event of a Certificate violation. Identify the company's designated contact including 24/7 emergency phone number, for assuring overall compliance with Certificate conditions.

4. Clean-up and Restoration

Describe the Certificate Holder's program for ROW clean-up and restoration, including:

a. the removal of any temporary roads; restoration of lay-down or staging areas; the finish grading of any scarified or rutted areas; the removal of waste, scrap metals, surplus or extraneous materials or equipment used; and

b. plans, standards and a schedule for the restoration of vegetative cover; include specifications to address:

   1. design standards for ground cover:

      (a) species mixes and application rates by site;

      (b) site preparation requirements (soil amendments, stone removal, subsoil treatment or drainage measures); and

      (c) acceptable final cover percentage by cover type.

   2. planting installation specifications and follow-up responsibilities; and

   3. a schedule or projected dates of any seeding and/or planting.

c. Plans to prevent unauthorized access to and along the ROW, if deemed necessary.

5. Herbicides

If LIPA determines that herbicide use is required, it shall so indicate and provide a sufficient description of the application, including, but not limited to, the following:

a. Specify the locations where herbicides are to be applied and the application techniques to be used. Provide a general discussion of the site conditions (e.g., land use, target and non-target vegetation species composition, height and density) and the choice of herbicide, formulation, application method, and timing.

b. Provide a general comparative analysis of any proposed herbicide applications using the following selection criteria: selectivity, efficacy, toxicity, persistence, and cost-effectiveness.

c. Describe the procedures that will be followed during application to protect non-target vegetation, streams, wetlands, potable waters and other waterbodies, protected habitats under ECL Article 11, and residential areas and recreational users on or near the ROW.

d. The ROW and adjoining properties shall be posted (in accordance with ECL part 33 and 6 NYCRR part 325).

e. LIPA shall include a comprehensive list of herbicides and method of application for use in the ROW.

6. Agricultural Areas

a. Describe the program, policies and procedures to mitigate agricultural impacts, and explain how construction plans avoid or minimize soil compaction, crop production losses, and potentially wet agricultural soils. Also, list locations where such procedures have been and will be followed by Project construction and restoration.

b. Indicate specific techniques and references to appropriate agricultural protection measures recommended by the NYS Department of Agriculture and Markets, as available.

7. Access Roads

a. Discuss the necessity for access to the ROW, including the areas where temporary or permanent access is required; and the nature of access improvements based on natural features, equipment constraints, and vehicles to be used for construction and maintenance, and the duration of access needs through restoration and the maintenance of the Project.

b. The location of proposed permanent access roads, temporary access roads and existing access roads shall be delineated on maps and provided in an electronic format.

c. Identify the types of access which will be used and the rationale for employing that type of access including consideration of:

1. temporary installations (e.g., over-land provisions, corduroy, mat and fill, earthen road, geotextile underlayment, gravel surface, etc.);

2. permanent installations (e.g., cut and fill earthen road, geotextile underlayment, gravel surface, paved surface, etc.);

3. use of roads, driveways, farm lanes, rail beds, etc.; and

4. other access, e.g., helicopter or barge placement.

For each temporary and permanent access type provide a figure or diagram showing a typical installation (include top view, cross section and side view with appropriate distances and dimension). Where existing access ways will be used, indicate provisions for upgrading to meet appropriate standards.

d. Indicate the associated drainage and erosion control features to be used for access road construction and maintenance. Provide diagrams and specifications (include plan and side views with appropriate typical dimensions) for each erosion control feature to be used, such as:

1. staked straw bale or check dam (for ditches or stabilization of topsoil);

2. broad-based dip or berm (for water diversion across the access road);

3. roadside ditch with turnout and sediment trap;
4. French drain;
5. diversion ditch (water bar);
6. culvert (including headwalls, aprons, etc.);
7. sediment retention basin (for diverting out-fall of culvert or side ditch); and
8. silt fencing.

e. Indicate the type of stream crossing method to be used in conjunction with access road construction. Provide diagrams and specifications (include plan and side view with appropriate dimensions) for each crossing device and rationale for their use. Stream crossing devices may include, but are not limited to:

1. timber mat;
2. culverts including headwalls; and
3. bridges (either temporary or permanent).

f. The use of fords is not allowed, Existing fords shall be upgraded to bridges, culverts or other permanent crossings that are approved by DPS.

g. All diagrams and specifications should include type and size of material to be placed in stream and on stream approaches.

8. <u>ROW Management Plans During Construction</u>

a. Describe the extent of ROW clearing required for the construction and operation of the Project.

b. Describe the manner of disposition of cleared vegetation and spoils and any excess concrete.

c. Identify the factors such as the attributes of the site, outcome of landowner negotiations, and attributes of the logs, upon which the Certificate Holder's removal of the merchantable logs resulting from clearing the ROW for the Project will be based.

d. Describe the herbicide use plan for all vegetation clearing.

e. Identify the sites, if any, requiring clearing of vegetation and the geographic limits of such clearing. Indicate in text and on the drawings the specific methods for the type and manner of cutting and disposition or disposal method for cut vegetation (e.g. chip, cut and pile, salvage merchantable timber, etc.). Designate methods for management of vegetation to be cut or removed at each site, indicating the rationale for the method designated. Sites should be based on an initial ROW vegetation inventory conducted prior to clearing and access road construction, and shall be distinguished as follows:

1. Any geographical area bounded by distinctly different cover types requiring different cut-vegetation management methods;
2. Any geographical area bounded at each end by areas requiring distinctly different cut-vegetation management methods due to site-specific conditions

such as land use differences, population density, habitat or site protection, soil or terrain conditions, fire hazards or other factors;

3. Specific property owners requesting specific vegetation treatment or disposal methods;

4. Delineation and protection of desirable vegetation species; and

5. Indication of areas requiring off-ROW danger tree removal.

f. Identify the locations where specific tree protection measures shall be employed to avoid damage to specimen tree stands of desirable species, important screening trees or hedgerows. Details of specific measures shall be specified in text and plans.

g. Describe the interim ROW vegetation management plan to be used for the Project from the beginning of vegetative clearing until the comprehensive site-specific long-range ROW management plan is submitted. Include a description of the initial and follow-up vegetation treatment techniques; and the proposed contents of any post-construction and long-range ROW management plans. Such plans, when submitted, shall describe the goals and objectives and include supporting inventories and analyses, proposed and alternative techniques (including, but not limited to, consideration of vegetative screening and buffer areas at locations such as stream crossings, public roadways and residential areas), schedules and any other important environmental information deemed necessary.

h. Describe interim ROW management plans and standards for securing, stabilizing, monitoring and addressing ROW access roads, Project maintenance and analysis of compliance with any post-restoration requirements.

9. Certification

The EM&CP shall include a certification by the Certificate Holder that the EM&CP has been organized and developed in accordance with these Guidelines and Certificate Conditions, that it includes appropriate cross-references, indicating where the EM&CP addresses the specific Guidelines; and that wherever any of the Guidelines are not followed, the Certificate Holder has so indicated, provided a sufficient explanation as to why the Guideline could not be followed and proposed a viable and appropriate alternative.