

## **Proposal Concerning Modifications to LIPA's Tariff for Electric Service**

### **Requested Action:**

Staff proposes to modify LIPA's Tariff for Electric Service ("Tariff") with regard to small generator interconnection procedures and associated charges, to adopt Smart Grid Small Generator Interconnection Procedures for New Distributed Resources 20 MW or Less Connected in Parallel with LIPA Distribution Systems ("Smart Grid SGIP") and to incorporate additional types of customer generation as eligible for net metering.

### **Proposal:**

Staff recommends the adoption of updated standard interconnection procedures for the interconnection of generators up to 20,000 kW (20 MW) in capacity wishing to interconnect with the LIPA distribution system<sup>1</sup>, including "fast track" interconnection procedures for generators up to 2,000 kW (2 MW) and more comprehensive rules for generators above 2,000 kW (2 MW) up to 20,000 kW (20 MW).

LIPA and the rest of the electric industry are pursuing various Smart Grid strategies in the move towards improving reliability, enhancing efficiency and encouraging greater deployment of renewable resources. The Smart Grid strategy encompasses a wide range of tools and approaches to enable the electric grid to be more responsive to changing situations and to encourage greater diversity and participation among a larger set of options, including customer-owned distributed generation. These proposed interconnection procedures for smaller (non-utility-sized) generators up to 20 MW will assist customers in developing additional generation resources that are more tailored to the needs of individual customers on a localized basis throughout the LIPA system.

This update is intended to ensure that LIPA's small generator interconnection procedures are comparable to the procedures approved by the New York State Public Service Commission ("PSC") for the interconnection of small generators up to 2 MW into the distribution systems of the PSC-regulated electric utilities in the State. LIPA's updated procedures also are comparable to the requirements of Public Service Law ("PSL") Sections 66-j and 66-l that govern net metering for certain renewable resources. The proposed procedures for generators between 2 MW and 20 MW are essentially unchanged from current policies and procedures.

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<sup>1</sup> Separate rules apply to generators larger than 20 MW or generators wishing to interconnect to the LIPA transmission system. For these larger generator interconnections, LIPA voluntarily complies with the interconnection procedures set forth in Attachment X of the New York Independent System Operator Open Access Transmission Tariff.

## Smart Grid SGIP

As proposed, the Smart Grid SGIP provides separate procedures and timelines for three size categories of generators:

1. For generators less than 25 kW - simplified and expedited (“fast track”) timetables; the use of standardized, “type-tested” interconnection equipment; and no requirements for system impact studies.
2. For generators above 25 kW up to 2,000 kW - greater documentation of all equipment and evaluation of the need for a “coordinated electric system interconnection review” to determine if there are any reasons to require additional safety equipment, protective relaying, metering and telemetry.
3. For generators above 2,000 kW up to 20,000 kW - a comprehensive study process to determine all possible system impacts; requirements for the generator to pay for interconnection costs and system upgrades identified in the study; and establishment of a study queue to determine the order in which applicants will be evaluated and system impacts attributed to each potential applicant for generator interconnection.

The proposed Smart Grid SGIP also provide for standardized contracts, requirements for dedicated transformers where necessary, and limitations on cost responsibilities for customers eligible for net metering. In addition, the Smart Grid SGIP call for \$350 application fee for all applicants greater than 25 kW and allows for recovery of costs arising from system impact studies that may be required to evaluate the impact of the generator to the LIPA distribution system.

The proposed Smart Grid SGIP replace in full the existing interconnection procedures which were first established in 1999 and updated in 2003. The key differences between the existing requirements and the proposed Smart Grid SGIP are:

- “Fast track” approval of interconnections for generators up to 25 kW.
- Pre-approval of UL 1741 compliant equipment for generators up to 200 kW.
- Application fee for generators above 25 kW.

Certain changes to the Tariff for Electric Service are required for consistency with the proposed Smart Grid SGIP. The proposed Tariff changes are:

- Replace the reference to the existing “*Interconnection Guide for Independent Power Producers*” to proposed “*Smart Grid Small Generator Interconnection Procedures*”.
- Allow for application fees for generators larger than 25 kW. Application fees can be used to offset interconnection costs incurred by the customer, and are refundable to net metering customers. No refund is provided to customers that apply but do not complete the interconnection agreement.
- Eliminate the Interconnection Maintenance Charge for all existing and future interconnections to the distribution system up to 2,000 kW.
- Extend eligibility for net metering to:

- Residential micro-hydroelectric generating facilities up to 25 kW.
- Non-residential micro-hydroelectric generating facilities up to 2,000 kW
- Non-residential fuel cell generating facilities up to 1,500 kW.

Staff proposes to reference the Smart Grid SGIP at several locations within the Tariff, replacing the reference to the former document.

The PSC-approved small generator interconnection procedures include an application fee of \$350 for generators larger than 25 kW. The application fee can be applied to interconnection costs owed by any customer and must be refunded to (or used to cover interconnection costs by) net metering customers. The proposed \$350 application fee is equal to the amount authorized in the PSC-approved interconnection procedures.

The interconnection maintenance charge is being eliminated for all interconnections up to 2,000 kW. The net metering laws (PSL 66-j and 66-l) prohibit such charges for generators that qualify for net metering. Other types of non-residential customer-generators are ineligible for net metering, but the PSC-approved small generator interconnection procedures exempt such non-renewable technologies from the interconnection maintenance charge anyway. To be consistent with State policy, staff further proposes to exempt existing non-net metering customers up to 2,000 kW from the interconnection maintenance charge as well, because these existing customers could cancel their existing interconnection agreements and receive the exemption when they immediately reapply.

Recent amendments to PSL Sections 66-j and 66-l extended the eligibility for net metering for additional types of customer generation. Small hydro-electric generating facilities developed by individual customers (as opposed utility scale hydro-electric dams) can now be used to lower the customer's electric bill, (up to 25 kW for residential customers and 2,000 kW for non-residential customers) and any excess generation can be banked for the customer to use in subsequent months (subject to an annual buy-out at the avoided cost rate for net metering). The same is true for non-residential customers with fuels cells up to 1,500 kW in capacity. Residential fuel cells up to 25 kW are already authorized within the Tariff.

Finally, staff also proposes to correct an oversight in the existing Tariff leaves regarding eligibility for residential net metering and update the table on leaf 34G. On September 23<sup>rd</sup>, 2010, the Board authorized, among other things, "a decrease in the maximum eligible size for residential solar and wind net metering to 25 kW by eliminating the 10% margin that was built into the existing Tariff". The text of the adopted Leaf 34C did not incorporate this change, and staff seeks authorization to update this leaf consistent with the previous authorization. Also, leaf 34G provides a table that summarizes the options available to the customer for net metering. That table references Service Classification No. 11, even though the avoided cost rates applicable to net metering were moved from Service Classification No. 11 and restated on leaf 34H specifically for net metering effective October 30, 2006. The revisions to leaf 34G correct this reference and expands

the table for the additional types of customer generation that are entitled to net metering under the Public Service Law, as proposed here.

**Financial Impacts:**

There are minimal financial implications associated with the adoption of the proposed Smart Grid SGIP, as most of the cost responsibilities associated with interconnection already are embedded in the existing Tariff and procedures. The one major exception is the interconnection maintenance charge. Approximately \$45,000 per year is paid by existing interconnected facilities under 2,000 kW, and Staff’s proposal to exempt these customers from the interconnection maintenance charge would have a minimal impact on revenues.

**Proposed Tariff Changes:**

**1. Rename the referenced document to “Smart Grid Small Generator Interconnection Procedures”:**

**Affected Tariff Leaf:** Leaves 34, 34B, 34E, and 251.

**Reason for Tariff Change**

To reference the updated procedures manual that is comparable to State-wide policy.

**2. Eliminate the Interconnection Maintenance Charge for specific situations**

**Affected Tariff Leaf:** Leaves 258, 265, 266, 279D and 279E.

**Reason for Tariff Change**

To authorize an application fee for generators larger than 25 kW and eliminate the interconnection maintenance charge for generators less than 2,000 kW.

**3. Extend eligibility for net metering to micro-hydroelectric and non-residential fuel cells.**

**Affected Tariff Leaf:** Leaves 16, 18, 19, 34, 34A, 34A-1, 34B, 34C, 34D, 34E, 34F, 34F-1, 34G, 34H and 281.

**Reason for Tariff Change**

To incorporate a recent amendment to Public Service Law Section 66-j as referenced in the Smart Grid SGIP and conform leaf 34C and 34G with previously authorized changes.

**Summary of Proposed Changes:**

In summary, the proposed changes to LIPA's Tariff for Electric Service will improve the Tariff by ensuring that LIPA's Smart Grid Small Generation Interconnection Procedures are comparable to State-wide procedures and facilitate the installation of renewable generation in the service territory.

The proposed revised Tariff Leaf Nos. 16, 18, 19, 34, 34A, 34A-1, 34B, 34C, 34D, 34E, 34F, 34F-1, 34G, 34H, 251, 258, 265, 266, 279D, 279E and 281 and the proposed "*Smart Grid Small Generator Interconnection Procedures*" are attached.

**I. General Information (continued):****B. Abbreviations and Definitions (continued):**

**Demand Customer:** A Customer who is billed for Demand charges.

**Demand Meter:** The device that records the maximum amount of power used by the Customer over a 15-minute interval during a specific period, such as a month.

**Deposit:** A sum of money given as security for payment of service.

**Distribution Facilities:** Facilities used to distribute electric energy to consumers, including supply lines, distribution lines, service laterals, and accessory equipment.

**Distribution Line(s):** A system of poles, wires, ducts, conduits, and additional equipment used for the shared distribution of electricity to Customers.

**E**

**Easement:** (See *Right-of-way*)

**Energy:** Energy is electric power, used or supplied over time, and measured in KWH.

**Existing Overhead Areas:** Areas in which electric distribution facilities are constructed overhead, and there are no requirements to construct facilities underground.

**F**

**Farm Waste Electric Generating Equipment:** Equipment that generates electric energy from biogas produced by anaerobic digestion of agricultural wastes, such as livestock manure, farming wastes and food processing wastes with a rated capacity of not more than one thousand kilowatts (1,000 kW) that is manufactured, installed and operated by Customer-generator in accordance with applicable government and industry standards, connected to the electric system and operated in conjunction with the Authority's transmission and distribution facilities, operated in compliance with the Authority's standards and requirements established therefor, fueled at a minimum of ninety (90) percent on an annual basis by biogas produced from the anaerobic digestion of agricultural waste such as livestock manure materials, crop residues, and food processing waste, and fueled by biogas generated by anaerobic digestion with at least fifty (50) percent by weight of its feed stock being livestock manure on an annual basis.

**Fuel Cell Electric Generating Equipment:** A solid oxide, molten carbonate, proton exchange membrane or phosphoric acid fuel cell, with a combined rated capacity of not more than ten (10) kilowatts for a residential customer or with a rated capacity of not more than one thousand five hundred (1,500) kilowatts for a non-residential customer, that is manufactured, installed and operated in accordance with applicable government and industry standards, that is connected to the electric system and operated in compliance with the Authority's standards and requirements established therefor.

**Fuel and Purchased Power Cost Adjustment Clause:** Provisions made in electric rates schedules for the automatic adjustment of rates due to changes in cost of fuel and purchased power.

**Full-Requirements Customer:** A Customer whose electric power requirements are all supplied by the Authority. (See *Customer – Full Requirements Customer*)

**H**

**Heat-Related Service:** A service provided under a residential space-heating rate classification or service needed to start or operate the primary heating system. It also includes a safe, supplemental electrical heating device that is needed by the Customer because the third party who controls the primary heating system does not supply enough heat.

**I. General Information (continued):****B. Abbreviations and Definitions (continued):**

**Load:** (See *Demand*)

**Load Factor:** The ratio of a Customer(s) average demand to peak demand during a specified period.

**Location:** Property with stated boundaries which is owned or occupied by a single legal entity.

**M**

**Management Services Agreement:** A contractual agreement where a system Manager operates, maintains, and manages the Authority's transmission and distribution system, in accordance with the policies established by the Authority.

**Manager:** The entity engaged by the Authority to operate, maintain and manage the Authority's system under the terms of the Management Services Agreement.

**Micro-Combined Heat and Power Generating Equipment:** An integrated cogenerating building heating and electrical power generation system, operating on any fuel and any applicable engine, fuel cell, or other technology, with a rated capacity of at least one kilowatt and not more than ten (10) kilowatts electric and any thermal output that all full load has a design total fuel use efficiency in the production of heat and electricity of not less than eighty percent, and annually produces at least two thousand (2,000) kilowatt hours of useful energy in the form of electricity that may work in combination with supplemental, or parallel conventional heating system, that is manufactured, installed and operated in accordance with applicable government and industry standards operated in conjunction with the Authority's transmission and distribution facilities.

**Micro-Hydroelectric Generating Equipment:** A Hydroelectric system, with a rated capacity of not more than 25 kW for a residential customer or with a rated capacity of not more than 2,000 kW for a non residential customer, that is manufactured, installed and operated in accordance with applicable government and industry standards, connected to the electric system and operated in conjunction with the Authority's transmission and distribution facilities.

**Month:** A Month in this document is defined as a 30-day period, and monthly rates for billing periods other than a Month are prorated.

**Multi-phase:** Producing, carrying, or powered by multiple alternating voltages, each of which reaches its highest level at different time intervals. (See *Alternating Voltage*)

**Multiple-Occupancy or Multiple Dwelling Building:** A building designed to contain three (3) or more individual residential units for permanent occupancy. Each unit should contain kitchen, bath, and sleeping areas. In some instances, the Tariff may differentiate between buildings that contain three or more units and those that contain four or more units.

**N**

**Net Energy Metering:** The use of a net energy meter to measure, during the billing period applicable to a Customer-generator, the net amount of electricity supplied by the Authority to the Customer-generator and/or the net amount of electricity provided by the Customer-generator to the Authority.

**Net Financing Cost:** The weighted average cost of debt for the Authority, including all costs of issuance of the debt.

**New York Independent System Operator (NYISO):** A not-for-profit corporation established to provide and maintain open access transmission to the power system in New York State, provide for centralized commitment and dispatch of the generation system in New York State, and provide other services.

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~~**New York Power Authority (NYPA):** A New York utility created by New York State.~~

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**I. General Information (continued):****B. Abbreviations and Definitions (continued):**

**New York Power Authority (NYPA):** a New York State Authority responsible for the generation, transmission and sale of electricity to wholesale customers pursuant to the Public Authorities Law.

**Noncoincidental Demand** (See Demand)

**Non-Core Customer:** (See *Customer - Non-Core Customer*)

**Non-Core Service:** Service to Non-Core Customers.

**Non-Residential Applicant:** (See *Customer - Non-Residential Customer*)

**Non-Residing Applicant:** (See *Customer - Non-Residing Customer*)

**O**

**Ohm:** The unit of measurement of electrical resistance.

**P**

**Payment Date:** The Authority considers a payment to be made on the date the Authority or one of its authorized agents receives the payment.

**Payments In Lieu of Taxes (PILOTs):** Payments that the Authority makes to other governmental authorities in replacement of the taxes which were previously collected on utility revenues, assets or operations.

**Performance Payment:** An advance payment made by a Non-Residing Applicant for service construction for multiple occupancy buildings in an underground-designated area. The payment guarantees the Applicant's performance for five (5) years.

**Peak Power or Peak Demand:** See *Power*.

**Power (Electric):** Amount of electrical energy produced or consumed, measured over a specific time period in kilowatts (KW).

1. Apparent Power includes both Real and Reactive Power and is the product of Volts and Amperes in a circuit. Apparent power is expressed in kilovoltamperes (kVA).

2. Instantaneous Power is power at an instant in time.

**Primary Residence:** A service address at which a Customer-generator resides the majority of the time during the year, and which has been given by the Customer-generator and exists in the voter registration catalogues or used by the Customer-generator to determine his/her school district code number as he/she identifies the same on his/her New York State Income Tax Returns.

**I. General Information (continued):****C. General Terms and Conditions (continued):****14. Customer-Owned Electric Generating Equipment****a) Supplemental Service and Back-Up and Maintenance Service**

Except where specifically provided for (See C.7.a)(4)), Supplemental Service and Back-Up and Maintenance Service will be provided under Service Classification Nos. 15 and 12, respectively.

**b) Emergency Generating Facilities**

- (1) The Customer may use emergency standby generating equipment to supply its load during an interruption of the Authority's service, or an Authority-announced voltage reduction, if
- (2) The Customer's wiring and switching equipment will prevent operation of the standby generator when the Authority's service is being provided and will prevent the Customer's current from flowing into the Authority's lines as covered in the Authority booklet, *Specifications and Requirements for Electric Installations*.
- (3) Where Customers are permitted to use standby generating equipment in ways other than provided in (1) or (2) above, those Customers shall take service under Service Classification Nos. 12 and/or 15.

**c) Co-generation and Small Power Production Facilities**

The Authority will:

- (1) Provide Back-Up power to, or purchase power from a qualifying cogeneration or small power production facility as defined by the Federal Energy Regulatory Commission, under Section 210 of the Public Utility Regulatory Policies Act of 1978, if
- (2) That facility enters into an Interconnection Agreement (IA) with the Authority and takes service under Service Classification Nos. 11 and/or 12 and/or 15.

**d) Requirements for Installation and Operation of Electric Generating Equipment**

- (1) Customers who own electric generators in parallel with the Authority's system must enter into an "Interconnection Agreement" (IA) with the Authority.
- (2) Customers who install and operate electric equipment connected to, but not operated in parallel with, the Authority's system must comply with the Authority's "*Specifications and Requirements for Electric Installation*".
- (3) Customers who install and operate electric equipment in parallel with the Authority's system must comply with the Authority's "~~*Interconnection Guide for Independent Power Producers*~~ *Smart Grid Small Generator Interconnection Procedures*".

**I. General Information (continued):****C. General Terms and Conditions (continued):**15. Net Meteringa) Net Metering Requirements

- (1) A Residential Solar Customer-generator shall be net metered only if the rated capacity of the Solar Electric Generating Equipment is equal to or less than twenty five (25) kilowatts. If the rated capacity of the Solar Electric Generating Equipment owned and/or operated by the residential Customer-generators is greater than 25 kilowatts, net metering shall not apply and Customer-generator is served under Service Classification 11-Buy-Back service.
- (2) A Residential Wind Customer-generator shall be net metered only if the rated capacity of the Wind Electric Generating Equipment is equal to or less than twenty five (25) kilowatts. If the rated capacity of the Wind Electric Generating Equipment owned and/or operated by the residential Customer-generator is greater than 25 kilowatts, net metering shall not apply and Customer-generator is served under Service Classification 11-Buy-Back service.
- (3) A Farm Service Customer-generator shall be net metered only if the rated capacity of the Wind Electric Generating Equipment is equal to or less than 500 kilowatts. If the rated capacity of the Wind Electric Generating Equipment owned and/or operated by the Farm Service Customer-generator is greater than 500 kilowatts, net metering shall not apply and Customer-generator is served under Service Classification 11-Buy-Back service.
- (4) A Farm Waste Customer-generator shall be net metered only if the rated capacity of the Farm Waste Generating Equipment is equal to or less than one thousand (1,000) kilowatts. If the rated capacity of the Farm Waste Electric Generating Equipment owned and/or operated by the Customer-generator is greater than 1,000 kilowatts, net metering shall not apply and customer-generator is served under Service Classification 11-Buy-Back service.
- (5) A Residential Micro-Combined-Heat-and-Power (Micro-CHP) Customer-generator shall be net metered only if the rated capacity of the Micro-CHP generating equipment is at least 1 kilowatt and less than or equal to ten (10) kilowatts. If the rated capacity of the Micro-CHP generating equipment owned and/or operated by the residential Customer-generator is greater than 10 kilowatts, net metering shall not apply and Customer-generator is served under Service Classification 11-Buy Back service.
- (6) A Residential Fuel Cell Customer generator shall be net metered only if the rated capacity of the Fuel Cell Electric Generating Equipment is less than or equal to ten (10) kilowatts. If the rated capacity of the Fuel Cell Generating Equipment owned and/or operated by the residential Customer-generator is greater than 10 kilowatts, net metering shall not apply and Customer-generator is served under Service Classification 11-Buy Back service.
- (7) A Residential Micro-Hydroelectric Customer-generator shall be net metered only if the rated capacity of the Micro-Hydroelectric generating equipment is equal to or less than twenty five (25) kilowatts. If the rated capacity of the Micro-Hydroelectric Generating Equipment owned and/or operated by the residential Customer-generator is greater than 25 kilowatts, net metering shall not apply and Customer-generator is

served under Service Classification 11-Buy-Back Service.

- ~~(7) A Residential Customer-generator that combines Solar Electric and Wind Electric Generating Equipment in a hybrid system shall be net metered only if:~~
  - ~~(i) The rated capacity of the combined system is equal to or less than twenty five (25) kilowatts, or five hundred (500) kilowatts if the Residential Solar Customer-Generator is also a Farm Service Customer-Generator, and~~

**I. General Information (continued):****C. General Terms and Conditions (continued):****Net Metering (continued):**

- (78) A Residential Customer-generator that combines Solar Electric, Wind Electric, or Micro-Hydroelectric Generating Equipment in a hybrid system shall be net metered only if:
- (i) The rated capacity of the combined system is equal to or less than twenty five (25) kilowatts, or five hundred (500) kilowatts if the Residential Solar Customer-Generator is also a Farm Service Customer-Generator, and
  - (ii) The solar portion of the installation meets the eligibility for Residential Solar Electric Generating Equipment and
  - (iii) The wind portion of the installation meets the eligibility for Residential or Farm Service Wind Electric Generating Equipment and
  - (iv) The micro-hydroelectric portion of the installation meets the eligibility for Residential Micro-Hydroelectric Generating Equipment.
- (iv) (See table in Paragraph C. 15 h)(2), "Unit Price Credits to a Customer who Provides Net Energy to The Authority" for electric unit price credit applied at different types of generators and hybrid systems).
- (9) A Non-residential Solar or Wind Electric Customer-generator shall be net metered if the rated capacity of the Solar Electric Generating Equipment is equal to or less than 2,000 kilowatts. If the rated capacity of the Solar Electric Generating Equipment is greater than the limits specified herein, net metering shall not apply and the Customer-generator may be served under Service Classification 11-Buy-Back service.
- (10) A Non-residential Micro-Hydroelectric Customer-generator shall be net metered only if the rated capacity of the Micro-Hydroelectric generating equipment is equal to or less than 2,000 kilowatts. If the rated capacity of the Micro-Hydroelectric Generating Equipment owned and/or operated by the non-residential Micro-Hydroelectric Customer-generator is greater than 2,000 kilowatts, net metering shall not apply and Customer-generator is served under Service Classification 11-Buy Back Service.
- (11) A Non-residential Fuel Cell Customer-generator shall be net metered only if the rated capacity of the Fuel Cell generating equipment is equal to or less than 1,500 kilowatts. If the rated capacity of the Fuel Cell Generating Equipment owned and/or operated by the non-residential Fuel Cell Customer-generator is greater than 1,500 kilowatts, net metering shall not apply and Customer-generator is served under Service Classification 11-Buy Back Service.

**I. General Information (continued):****C. General Terms and Conditions (continued):****Net Metering (continued):**

~~(8) A Non-residential Solar or Wind Electric Customer-generator shall be net metered if the rated capacity of the Solar Electric Generating Equipment is equal to or less than 2,000 kilowatts. If the rated capacity of the Solar Electric Generating Equipment is greater than the limits specified herein, net metering shall not apply and the Customer-generator may be served under Service Classification 11-Buy-Back service.~~

**b) Total Capacity Limitations on Net Metering for Customer-Generators**

- (1) The Authority will sign a contract with each of the Residential and Non-residential Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric and Fuel Cell Customer-generators meeting all applicable requirements on a first come, first served basis, until the total rated generating capacity for Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric and Fuel Cell Electric Generating Equipment owned and/or operated by Customer-generators in the Authority's Service territory is equal to 51,200 kW, representing one percent (1.0%) of the Authority's electric peak demand for the year 2005.
- (2) The Authority will sign a contract with each of the Residential, Farm Service and/or Non-residential Wind Customer-generators meeting all applicable requirements on a first come, first served basis, until the total rated generating capacity for Wind Electric Generating Equipment owned or operated by the Customer-generators in the Authority's service territory is equal to 15,300 kW, which represents three-tenths percent (0.3%) of the Authority's electric peak demand for the year 2005.
- (3) The Authority reserves the right to authorize additional generating capacity.

**c) Requirements for Installation and Operation**

- (1) Wiring and switches for Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric, Fuel Cell, Wind or Hybrid Electric Generating Equipment, owned and/or operated by Customer-generators to supply their load and feed energy to the Authority's electric system, shall be arranged in parallel so as to permit the flow of current from the Authority to the Customer-generator and vice-versa.
- (2) Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric, Fuel Cell, Wind or Hybrid Electric Generating Equipment installed in parallel with the Authority's system must comply with the Authority's "~~Interconnection Guide for Independent Power Producers~~Smart Grid Small Generator Interconnection Procedures".
- (3) The Authority shall require a Customer-generator who owns and/or operates Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric, Fuel Cell, Wind, Solar or Hybrid Electric Generating Equipment to pay for the installation of dedicated transformer(s) if it is determined that dedicated transformer(s) is (are) necessary to protect the safety and adequacy of electric service provided to other Customers.
- (4) The Authority may require a Customer-generator who owns and/or operates Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric, Fuel Cell, Wind or Hybrid Electric Generating Equipment to comply with additional safety or performance standards than those specified in the Authority's "~~Interconnection Guide for Independent Power Producers~~Smart Grid Small Generator Interconnection Procedures", perform or pay for additional tests, or purchase additional liability Insurance when the total rated generating capacity of the electric generating equipment that provides electricity to the Authority through the same local feeder line exceeds twenty (20%) of the rated capacity of the total feeder line.

**I. General Information (continued):****C. General Terms and Conditions (continued):****Net Metering (continued):****d) Interconnection and Transformer Charges**

- (1) If the Residential or Farm Service Customer-generator installs Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric, Fuel Cell and/or Wind Electric Generating Equipment with a rated capacity of equal to or less than twenty ~~seven~~five and one half (27.5) kilowatts (25 kW + 10%) the Customer-generator shall not be required to pay the Authority any Interconnection charges.
- (2) If the Residential or Farm Service Customer-generator installs Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric, Fuel Cell and/or Wind Electric generating equipment with a rated capacity of more than twenty ~~seven~~five and one half (27.5) kilowatts (25 kW + 10%), the Customer-generator shall be responsible for payment to the Authority of one-half (1/2) of the interconnection expenses of such solar and/or wind-electric generating equipment.
- (3) The Non-residential Customer-generator shall be responsible for payment to the Authority of one hundred percent (100%) of the interconnection expenses of such solar, Micro-Hydroelectric Fuel Cell and/or wind-electric generating equipment.
- (4) If the Authority determines that it is necessary to install a dedicated transformer or transformers or other equipment to protect the safety and adequacy of the electric service provided to other Customers:
  - (i) The Residential Customer-generator installing Solar Generating Equipment, Micro-Combined-Heat-and-Power Generating Equipment, Micro-Hydroelectric Generating Equipment or Fuel Cell Electric Generating Equipment, shall pay to the Authority the cost of installing the transformer(s) and other equipment, up to a maximum of three hundred and fifty dollars (\$350.00).
  - (ii) The Farm Waste Customer-generator installing Farm Waste Electric Generating Equipment shall pay to the Authority the cost of installing the transformer(s) and other equipment, up to a maximum of five thousand dollars (\$5,000) per farm operation.
  - (iii) The Non-residential Customer-generator installing Solar Generating Equipment with a rated capacity of equal to or less than twenty five (25) kilowatts shall pay to the Authority the cost of installing the transformer(s) or other equipment, up to a maximum of three hundred and fifty dollars (\$350.00).
  - (iv) The Non-residential Customer-generator installing Solar Generating Equipment, Micro-Hydroelectric Generating Equipment, or Fuel Cell Generating Equipment with a rated capacity of equal to or greater than twenty five (25) kilowatts shall pay the costs as determined by the Authority.
- ~~(5) If the Authority determines that it is necessary to install a dedicated transformer or transformers or other equipment to protect the safety and the adequacy of electric service provided to other Customers, the Customer-generator installing wind electric generating equipment shall pay to the Authority the lesser of the: (1) Actual costs, or (2) the charges identified under (i) or (ii) below. (See Paragraph(s) C.15.c)(4) and C.15.d)(5) for other applicable safety requirements and charges):~~
  - ~~(i) Seven hundred and fifty dollars (\$750.00) if the Customer-generator owns and/or operates wind electric generating equipment with a rated capacity equal to or less than 25 kilowatts, or~~

- (ii) ~~Five thousand dollars (\$5000.00) if the Customer-generator owns and/or operates wind electric generating equipment with a rated capacity greater than 25kW but not more than 500 kW.~~



**I. General Information (continued):****C. General Terms and Conditions (continued):****Net Metering (continued):**

(5) If the Authority determines that it is necessary to install a dedicated transformer or transformers or other equipment to protect the safety and the adequacy of electric service provided to other Customers, the Customer-generator installing wind electric generating equipment shall pay to the Authority the lesser of the: (1) Actual costs, or (2) the charges identified under (i) or (ii) below. (See Paragraph(s) C.15.c(4) and C.15.d(5) for other applicable safety requirements and charges):

(i) Seven hundred and fifty dollars (\$750.00) if the Customer-generator owns and/or operates wind electric generating equipment with a rated capacity equal to or less than 25 kilowatts, or

(ii) Five thousand dollars (\$5000.00) if the Customer-generator owns and/or operates wind electric generating equipment with a rated capacity greater than 25kW but not more than 500 kW.

(6) If the Authority determines that it is necessary to install a dedicated transformer or transformers or other equipment to protect the safety and adequacy of the electric service provided to other Customers, the Residential or Farm Service Customer-generator installing a hybrid system shall pay to the Authority either seven hundred and fifty dollars (\$750.00) if the wind generator of the hybrid system has a rated capacity equal or less than 25 kW or five thousand dollars (\$5,000.00) if the wind generator of the hybrid system has a rated capacity greater than 25 kW but not more than 500 kW.

e) Maintenance and Replacement Charges for Interconnection Equipment

The Authority will maintain and replace interconnection equipment installed by the Authority for solar and/or wind electric generators, without direct cost to the Customer.

f) Net Energy Metering

(1) The Authority shall use net energy metering to measure and charge or provide credit for the net electricity supplied by the Authority or provided to the Authority, respectively, by a Residential, Non-residential, Farm Service or Farm Waste Customer-generator.

(2) A common, single metering system shall be used to measure at the point of interconnection with the ~~LIPA~~the Authority's system as a single quantity the net energy associated with Solar, Micro-Hydroelectric, and Wind Customer-generators including cases where they constitute a hybrid system.

(3) In the event that a customer-generator chooses to install wind, micro-hydroelectric or solar electric generation in conjunction with Farm Waste, Micro-Combined-Heat-And-Power or Fuel Cell electric generation, the customer must choose between:

(i) separately measuring the output of the Farm Waste, Micro-Combined Heat And Power or Fuel Cell electric generation for sale to ~~LIPA~~the Authority under Service Classification No. 11 so that the Solar, micro-hydroelectric or Wind electric generation can be billed under the applicable net metering provisions, or

(ii) measuring at the point of interconnection with the ~~LIPA~~the Authority's system as a single quantity the net energy associated with the combined system as if the entire system were derived from Farm Waste, Micro-Combined Heat And Power or Fuel Cell electric generation.

**I. General Information (continued):****C. General Terms and Conditions (continued):****Net Metering (continued):**g) Termination of the Interconnection Agreement

The "Interconnection Agreement" between the Authority and Customer-generator may be terminated as follows:

- (1) The Customer-generator may terminate the Agreement at any time, by giving the Authority sixty (60) days' written notice;
- (2) If the Customer-generator fails to seek final acceptance by the Authority within twelve (12) months after completion of construction, then the Authority may terminate the Agreement on thirty (30) days prior written notice;
- (3) Either Party may, by giving the other Party at least sixty (60) days prior written notice, terminate this agreement in the event that the other Party is in default of any of the terms and conditions of the "Interconnection Agreement". The terminating Party shall specify in the notice the basis of the termination and shall provide a reasonable opportunity to correct the default;
- (4) The Authority may, by giving the Customer-generator at least sixty (60) days prior written notice, terminate this agreement for cause. The Customer-generator's non compliance with the Authority's "~~Interconnection Guide for Independent Power Producers~~ Smart Grid Small Generator Interconnection Procedures" or non compliance with the "Interconnection Agreement" shall constitute a good cause;
- (5) Unless the Interconnection Agreement is terminated pursuant to items (1) through (4) above, the net energy metering service will be provided for a term of ten years from the date of installation of service and thereafter will be automatically renewed for annual periods unless the Authority provides thirty days prior written notice of termination before the end of the term.

h) Net Billing for Eligible Customer-generators

The Authority shall charge or credit an eligible Customer-generator for the net electricity supplied by the Authority to a Customer-generator or for the net electricity provided to the Authority by the Customer-generator, respectively, in the following manner:

- (1) In the event that the amount of electricity supplied by the Authority during the billing period exceeds the amount of electricity provided to the Authority by the Customer-generator, the Authority shall charge the Customer-generator for the net (excess) electricity it supplied to the Customer-generator at the same rate per kilowatt-hour applicable: (a) to service provided to other Customers in the same service class who do not generate electricity on site, and (b) to the month the energy was generated.

**I. General Information (continued):****C. General Terms and Conditions (continued):****Net Metering (continued):**

- (2) For eligible Residential Customer-generators with solar or wind or Micro-Hydroelectric electric generators whose rated capacity is equal to or less than 25kW, or for eligible Residential Customer-generators with hybrid systems where the combination of the rated capacity of the Solar or Micro-Hydroelectric and Wind Electric Generating Equipment of the hybrid system is equal to or less than 25 kW, in the event that the amount of electricity provided to the Authority by the Customer-generator during the billing period exceeds the amount of electricity provided by the Authority to the Customer-generator, the Authority shall apply a credit to the next bill for service at the same rate per kilowatt-hour applicable to service provided to other residential Customers in the same service class who do not generate electricity on site. (See table "Summary of Eligibility for Net Metering" on Leaf 34G).
- (3) For eligible Farm Service Customer-generators with Wind Electric Generating Equipment whose rated capacity is equal to or less than 500 kW, and for Hybrid Systems with Wind Electric Generating Equipment greater than 25 kW and Solar Electric or Micro-Hydroelectric Generating Equipment equal to or less than 25 kW, in the event that the amount of electricity provided by the Customer-generator to the Authority during the billing period exceeds the amount of electricity provided by the Authority to the Customer-generator, the Authority shall apply a credit to the next bill for service at same rate per kilowatt-hour applicable to service provided to other Residential Customers in the same service class who do not generate electricity on site. (See table "Summary of Eligibility for Net Metering" on Leaf 34G).
- (4) For eligible Farm Service Customer-generators with Farm Waste Electric Generating Equipment whose rated capacity is equal to or less than 1,000 kW, in the event that the amount of electricity provided by the Customer-generator to the Authority during the billing period exceeds the amount of electricity provided by the Authority to the Customer-generator, the Authority shall apply a credit to the next bill for service at the same rate per kilowatt-hour applicable to service provided to other customers in the same service class who do not generate electricity on site. (See table "Summary of Eligibility for Net Metering" on Leaf 34G).
- (5) For eligible Residential Customer-generators with Micro-Combined-Heat-and-Power Electric Generating Equipment whose rated capacity is at least 1 kW and equal to or less than 10 kW, or for Fuel Cell Electric Generating Equipment whose rated capacity is equal to or less than 10 kW, in the event that the amount of electricity provided by the Customer-generator to the Authority during the billing period exceeds the amount of electricity provided by the Authority to the Customer-generator, the Authority shall apply a credit to the next bill for service at the SC-11 Avoided Cost Rate per kilowatt-hour.
- (6) For eligible Non-residential Customer-generators with Solar, Wind, Micro-Hydroelectric or Hybrid electric generating equipment whose rated capacity is equal to or less than 2,000 kilowatts, in the event that the amount of electricity provided to the Authority by the Customer-generator during the billing period exceeds the amount of electricity provided by the Authority to the Customer-generator, the Authority shall apply a credit to the next bill for service at the same rate per kilowatt-hour applicable to service provided to other Non-residential Customers in the same service class who do not generate electricity on site.
- ~~(7) For Non-residential Customer-Generators that are served under a rate code with demand~~

~~charges, the monthly billing demand is determined by the maximum measured kilowatt demand actually supplied to the Customer-Generator during the billing period.~~

**I. General Information (continued):****C. General Terms and Conditions (continued):****Net Metering (continued):**

- (7) For eligible Non-residential Customer-generators with Fuel Cell Electric Equipment whose rated capacity is equal to or less than 1,500 kW, in the event that the amount of electricity provided by the Customer-generator to the Authority during the billing period exceeds the amount of electricity provided by the Authority to the Customer-generator, the Authority shall apply a credit to the next bill for service at the SC-11 Avoided Cost Rate per Kilowatt-hour.
- (8) For Non-residential Customer-Generators that are served under a rate code with demand charges, the monthly billing demand is determined by the maximum measured kilowatt demand actually supplied to the Customer-Generator during the billing period.

**I. General Information (continued):**

**C. General Terms and Conditions (continued):**

**Net Metering (continued):**

**Summary of Eligibility for Net Metering**

<b>Segment</b>	<b>Installed Generating Capacity</b>	<b>Excess Generation in Billing Period*</b>	<b>Excess Generation on Anniversary Date*</b>
Residential Customer-Generator	Not to exceed 25 kW in any Combination of solar and/or wind, <u>or micro-hydroelectric electric generation</u>	Carried forward for credit at retail rate in subsequent months	Purchased by <del>LIPA</del> <u>the Authority</u> at the <del>SC-11</del> <u> Avoided Cost Rate on Leaf 34H.</u>
	At least 1 kW and not to exceed 10 kW of micro-combined-heat-and-power and /or fuel cell electric generation	Purchased by <u>the Authority</u> <del>LIPA</del> at <del>SC-11</del> <u>Avoided Cost Rate on leaf 34H</u>	Not applicable
Farm Service Customer-Generator	Solar electric generating equipment not to exceed 25 kW	Carried forward for credit at retail rate in subsequent months	Purchased by <del>LIPA</del> <u>the Authority</u> at the <del>SC-11</del> <u> Avoided Cost Rate on Leaf 34H.</u>
	Wind electric generating equipment not to exceed 500 kW	Carried forward for credit at retail rate in subsequent months	Purchased by <del>LIPA</del> <u>the Authority</u> at the <del>SC-11</del> <u> Avoided Cost Rate on Leaf 34H.</u>
	Farm waste electric generating equipment not to exceed 1,000 kW	Carried forward for credit at retail rate in subsequent months	Purchased by <del>LIPA</del> <u>the Authority</u> at the <del>SC-11</del> <u> Avoided Cost Rate on Leaf 34H.</u>
	Any combination of solar, wind and farm waste electric generating equipment not to exceed 1000 kW total, of which solar cannot exceed 25 kW solar	Carried forward for credit at retail rate in subsequent months	Purchased by <del>LIPA</del> <u>the Authority</u> at the <del>SC-11</del> <u> Avoided Cost Rate on Leaf 34H.</u>
Non-residential Customer-Generator	Not to exceed 2,000 kW <u>in any combination of solar, <del>and</del> wind or micro-hydroelectric generation</u>	Carried forward for credit at retail rate in subsequent months	Purchased by <del>LIPA</del> <u>the Authority</u> at the <del>SC-11</del> <u> Avoided Cost Rate on Leaf 34H.</u>
	<u>Fuel cell electric generating equipment not to exceed 1,500 kW</u>	<u>Carried forward for credit at retail rate in subsequent months</u>	<u>Not applicable</u>
Any Customer that exceeds the Limits specified above or installs electric generating equipment that does not qualify for Net Metering		Not eligible for Net Metering. Energy may qualify for purchase under SC-	Energy may qualify for purchase under SC-11

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\* Note: On termination of service, any remaining excess generation will be purchased by ~~LIPA~~the Authority at the ~~SC-14~~ Avoided Cost Rate on Leaf 34H for the month in which service was terminated.

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**I. General Information (continued):**

**C. General Terms and Conditions (continued):**

**Net Metering (continued):**

(~~68~~) At the end of the first year that service was supplied to a Solar, Wind, Micro Hydroelectric and Farm Waste Customer-generator by means of net metering, and every anniversary date thereafter, the Authority shall promptly thereafter issue payment to the Customer-generator for any value of the remaining credit for the net (excess) electricity provided to the Authority by the Customer-generator during the previous twelve (12) month period. The payment issued to the Customer-generator shall be equal to the sum of the products of the remaining excess (net) energy generated by the Customer-generator during each of the seasons (Summer/Winter) times the corresponding seasonal avoided cost rates.

(~~79~~) For Customer-generators that terminate service or become ineligible for net metering, the Authority shall promptly thereafter issue payment to the Customer-generator for any value of the remaining credit for the net (excess) electricity provided to the Authority by the Customer-generator. The payment issued to the Customer-generator shall be equal to the sum of the product of the remaining excess (net) energy generated by the Customer-generator times the seasonal avoided cost rate on that date.

(~~810~~) The avoided cost rates to be used to issue payment to Customer-generator for energy sold to the Authority by the Customer-generator are:

	*June to September Inclusive	*All Remaining Months
	(\$/kWh)	(\$/kWh)
Energy Rate	0.0362	0.0375
Capacity Rate	<u>0.0191</u>	<u>0.0000</u>
Total Rate	0.0553	0.0375

\*The Fuel and Purchased Power Cost Adjustment (FPPCA) Rate applicable at the time that the energy is sold to the Authority minus \$0.0392 per kWh will be added to the avoided cost rates to be paid by the Authority to the Customer-generator, if the sale took place after July 5, 2006. If the sale took place before July 5, 2006, the value of the FPPCA rate that shall be used shall be that which was in existence when the sale took place without subtracting \$0.0392 per kWh.



**VIII. SERVICE CLASSIFICATIONS (continued):****O. SERVICE CLASSIFICATION NO. 11 - Buy-Back Service:  
(Rate Code: 289)**1. Who Is Eligible

- a) Customers who have the means to generate electricity from a Qualifying Facility as defined under Sections 2 and 66-c of the Public Service Law and Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA), and wish to sell all or part of it to the Authority. An Applicant shall:
  - (1) Submit the proper written application to the Authority, and
  - (2) Furnish the information the Authority requires to determine if the Applicant qualifies, and
  - (3) Comply with the Authority's ~~Interconnection Guide for Independent Power Producers~~ Smart Grid Small Generator Interconnection Procedures, and
  - (4) Execute an Interconnection Agreement (IA) with the Authority. (See Special Provision 7.d.)

2. Customer Options

- a) The Customer may both buy energy from and sell energy to the Authority if:
  - (1) It sells its available energy output to the Authority under this Service Classification, and
  - (2) Buys energy (supplemental, backup, and/or maintenance) from the Authority under another suitable Service Classification, and
- b) The Customer may negotiate a special contract with the Authority, if the Customer operates a facility that can generate more than 100 KW of electricity, and
  - (1) Agrees to supply firm service, or
  - (2) Has an installation the Authority believes requires special facilities, or
  - (3) Wants a long-term contract.

**VIII. SERVICE CLASSIFICATIONS (continued):****O. SERVICE CLASSIFICATION NO. 11 - Buy-Back Service (continued):  
(Rate Code: 289)****Rates and Charges (continued):**(3) Adjustments to Rates and Charges

Each Customer's bill will be increased by the Increases in Rates and Charges to Recover PILOT Payments.

(4) Interconnection Charges

Interconnection Charges are for costs, not recovered elsewhere, that are more than the Authority's ordinary costs would have been to supply the Customer's electrical needs under a suitable Service Classification. The Customer shall reimburse the Authority the full cost, including overheads, of installing interconnection equipment when the equipment is originally installed. The Authority will also charge an application fee of \$350 which may be applied to the costs of interconnection.

(a) The application fee will be returned to Customers that are participating in net metering to the extent it is not used to cover the cost of interconnection.

(b) Customers that are not participating in net metering will not be entitled to the return of any portion of their application fee, even to the extent it is not used to cover the cost of interconnection.

(c) The application fee will not be returned to Customers that withdraw their application or otherwise do not complete their interconnection agreement.

(5) Maintenance Charges for Interconnection Equipment

The Maintenance Charges for Interconnection Equipment will be as follows:

(a) The Authority will maintain interconnection equipment installed on its Property. ~~and the A Customer with more than 2,000 kW of generating capacity or its successor will pay an annual charge of 11.4% based on the total investment in the interconnection equipment.~~

(b) If the interconnection equipment is located on the Customer's property, the Customer has the option to:

(i) Have the Authority furnish and maintain the interconnection equipment, and the Customer or its successor on the site will pay an annual maintenance charge of 11.4% of the total investment in the interconnection equipment, or

(ii) Furnish, own, operate, and maintain all the interconnection equipment, provided that the interconnection equipment and maintenance are suitable for interconnection operations, and the equipment meets Authority specifications and is reasonably available for the Authority's inspection.

(c) Interconnection equipment installed by the Customer and in accordance with the Authority's specifications shall be maintained by the Customer at the Customer's cost.

**VIII. SERVICE CLASSIFICATIONS (continued):****P. SERVICE CLASSIFICATION NO. 12****Back-Up and Maintenance Service (continued):**  
**(Rate Codes: 680, 681)**5. Rates and Charges (continued):f) Adjustments to Rates and Charges

Each Customer's bill will be adjusted for the Fuel and Purchased Power Cost Adjustment Rate, Increases in Rates and Charges to Recover PILOT Payments, the Shoreham Property Tax Settlement Rider, the New York State Assessment Factor, and the Energy Efficiency Cost Recovery Rate.

g) Surcharge for Exceeding the Contract Demand for Back-Up and Maintenance Service

- (1) If the monthly maximum demand supplied for Back-Up and Maintenance Service is greater than the Contract Demand by 10 percent (10%) or less, the Authority will apply a surcharge equal to twelve (12) times the difference in monthly Rate II Demand Charges to that month's bill, or
- (2) If the monthly capacity supplied is greater than the Contract Demand by more than 10 percent (10%), the Authority will apply a surcharge equal to twenty-four (24) times the difference in monthly Rate II Demand Charges to that month's bill, and
- (3) In both 1. and 2., the Authority will increase the Contract Demand to the highest average kilowatts measured in a 15-minute interval during any month (maximum monthly demand).

6. Interconnection Charges

Interconnection Charges are for costs, not covered elsewhere, that are more than what the Authority's ordinary costs would have been to supply the Customer's electrical needs under a suitable Service Classification. The Customer shall pay the Authority the Interconnection Charges in full when the extra costs arise. The Authority will also charge an application fee of \$350 which may be applied to the costs of interconnection.

- (a) The application fee will be returned to Customers that are participating in net metering to the extent it is not used to cover the cost of interconnection.
- (b) Customers that are not participating in net metering will not be entitled to the return of any portion of their application fee, even to the extent it is not used to cover the cost of interconnection.
- (c) The application fee will not be returned to Customers that withdraw their application or otherwise do not complete their interconnection agreement.

**VIII. SERVICE CLASSIFICATIONS (continued):****P. SERVICE CLASSIFICATION NO. 12****Back-Up and Maintenance Service (continued):**  
**(Rate Codes: 680, 681)**7. Maintenance Charges for Interconnection Equipment:

- a) The Authority will maintain interconnection equipment installed on its property. ~~A and the Customer with more than 2,000 kW of generating capacity or its successor will pay an annual charge of 11.4% on the total investment in the interconnection equipment.~~
- b) If the interconnection equipment is located on the Customer's property, the Customer has the option to:
  - (1) Have the Authority furnish and maintain the interconnection equipment, and the Customer or its successor on the site will pay an annual Maintenance Charge of 11.4% on the total investment in the interconnection equipment, or
  - (2) Furnish, own, operate, and maintain all the interconnection equipment, provided that the interconnection equipment and maintenance are suitable for interconnection operations, and the equipment meets Authority specifications, and is reasonably available for the Authority's inspection.
- c) Interconnection equipment installed by the Customer and in accordance with the Authority's specifications shall be maintained by the Customer at the Customer's cost.
- d) Customer shall pay the Replacement Costs, less net salvage, when equipment covered in the Customer's Interconnection Charge needs to be replaced.
- e) If a Customer disputes the Authority's charge for interconnection costs, it may lodge a complaint following the complaint procedures in this Tariff.
- ~~f) Additional technical information for connecting to LIPA's the Authority's electrical system can be found in the Authority's *Interconnection Guide for Independent Power Producers*.~~  
Smart Grid Small Generator Interconnection Procedures.

**VIII. SERVICE CLASSIFICATIONS (continued):**

**R. SERVICE CLASSIFICATION NO. 15  
Supplemental Service (continued):  
(Rate Code: 273)**

h) Demand Charge per month:

	<u>Rate Periods</u>	
	<u>On-Peak</u>	<u>Off-Peak</u>
	June – September Weekdays 12 noon to 8 p.m.	All Other Hours
Demand Charge per KW	\$22.50	None

i) Adjustment to Rates and Charges

Each Customer's bill will be adjusted for the Fuel and Purchased Power Cost Adjustment Rate (except for the energy component for those customers who have contracted to pay energy on the Locational Based Marginal Prices), Increases in Rates and Charges to recover PILOT payments the Shoreham Property Tax Settlement Rider, the New York State Assessment Factor, and the Energy Efficiency Cost Recovery Rate.

j) Reactive Power Charge

Net Reactive Demand Charge per KVAR = \$.27 for primary and transmission voltage service only, and applies from 7 a.m. through 11 p.m.

k) The annual charge for this service is the lower of the annual charges of Service Classification No. 15 or Service Classification No. 2 – MRP for the total electrical requirements of the Customer at that location.

5. Interconnection Charges

a) Interconnection Charges are for costs, not covered elsewhere, that are more than the Authority's ordinary costs would have been to supply the Customer's electrical needs under a suitable Service Classification. The Customer shall pay the Authority the Interconnection Charges in full when the extra costs arise.

6. Maintenance Charges for Interconnection Equipment:

a) The Authority will maintain interconnection equipment installed on its property, ~~and the A Customer with more than 2,000 kW of generating capacity or its successor will pay an annual charge of 11.4% on the total investment in the interconnection equipment.~~

b) If the interconnection equipment is located on the Customer's property, the Customer has the option to:

(1) Have the Authority furnish and maintain the interconnection equipment, and the Customer or its successor on the site will pay an annual Maintenance Charge of 11.4% on the total investment in the interconnection equipment, or

**VIII. SERVICE CLASSIFICATIONS (continued):****R. SERVICE CLASSIFICATION NO. 15  
Supplemental Service (continued):  
(Rate Code: 273)**6. Maintenance Charges for Interconnection Equipment (Continued):

- (2) Furnish, own, operate, and maintain all the interconnection equipment, provided that the interconnection equipment and maintenance are suitable for interconnection operations, and the equipment meets Authority specifications, and is reasonably available for the Authority's inspection.
- c) The customer shall pay the Replacement Costs, less net salvage, when equipment covered in the Customer's Interconnection Charge needs to be replaced.
- d) If a Customer disputes the Authority's charge for interconnection costs, it may lodge a complaint following the complaint procedures in this Tariff.
- e) Additional information is found in the Authority's ~~Interconnection Guide for Independent Power Producers~~ Smart Grid Small Generator Interconnection Procedures.

7. Terms of Payment

The Customer shall pay the balance due in cash, including checks and money orders, on receiving the bill. Late payments shall be subject to Late Payment Charges.

8. Term of Service

- a) The Authority may terminate service to the Customer in accordance with the provisions of this Tariff.
- b) The Customer may return to a full requirements Service Classification only if:
  - i. Its alternative supply is removed or inoperable, and
  - ii. It has paid the rates and charges under Supplemental Service for a minimum of twelve (12) months

9. Special Provisions

- a) Customer Service Options
  - (1) The Customer's supply may be isolated from the Authority's service by a double throw switch, or
  - (2) Connected with the Authority's service for parallel operation.
- b) The Authority will provide suitable metering to measure the Customer's load and the Customer's supply. The Customer will be charged for the meter(s) necessary to measure generator(s) output.
- c) Submetering may be available under certain conditions, as specified in this Tariff.

**IX. Long Island Choice Program (continued):****A. General Provisions (continued):**2. Who is Eligible

- a) In order to participate in the Long Island Choice Program, an Eligible Customer is a Customer who is eligible for service under Service Classification Nos. 1, 1-VMRP(L), 1-VMRP(S), 2, 2-VMRP, 2L, 2L-VMRP, 2-H, or 2-MRP, 5, 7, 7A, 10 and:
  - (1) Receives metered or authorized unmetered electric service from the Authority, and
  - (2) Receives all of their electric requirements from a single supplier except for the output from Solar or Wind Electric Generating Equipment that qualifies for net metering, and
  - (3) Is not explicitly excluded in 2.b), below, and
  - (4) Is licensed by the Authority as a Direct Retail Customer (DRC) or contracts with a licensed Energy Services Company (ESCO) to act as its agent for the scheduling and delivery of Electric Generation Service, and
  - (5) During those phases of the Program where total participation is limited, has been accepted into the Program by the Authority.
- b) Customers who are not eligible to participate in the LI Choice Program are:
  - (1) Customers who receive service under Service Classification Nos. 2-VRTP, 11, 12, 13 or 15.
  - (2) Customers who receive part of their electric requirements from the New York Power Authority (NYPA) including, but not limited to NYPA's Economic Development Power program, High Load Factor program, or Power-for-Jobs program.
  - (3) Customers who receive part of their electric requirements from an Economic Development Power program through a municipal distribution agency.
  - (4) Customers who sell power to the Authority as Qualifying Facilities or Solar, Farm Waste, Micro-Combined-Heat-and-Power, Micro-Hydroelectric, Fuel Cells and Wind Customer-Generators that do not qualify for net metering.
  - (5) Customers who receive a portion of their electric requirements from self-generation or on-site generation that does not qualify for net metering, and require supplemental, backup or maintenance service from the Authority.
  - (6) Customers who receive service under provisions related to Residential Offpeak Energy Storage served under Service Classification No. 1.



**Smart Grid Small Generator Interconnection Procedures  
for New Distributed Resources 20 MW or Less Connected in Parallel with LIPA  
Distribution Systems**



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## **Section I. Application Process**

### **Section I.A. Introduction**

LIPA's Small Generator Standardized Interconnection Requirements and Application Process provides a framework for processing applications for interconnection to LIPA's Distribution System for:

- i. Interconnection of new distributed generation facilities with a nameplate rating of 20 MW or less (aggregated on the customer side of the point of common coupling (PCC)).
- ii. Modifications to existing distributed generation facilities with a nameplate rating of 20 MW or less (aggregated on the customer side of the PCC) that have been interconnected to the LIPA Distribution System and where an existing contract between the applicant and the LIPA is in place.
- iii. For new distributed generation facilities 2-20 MW, interconnection to specific voltage level of the LIPA System will be determined during the study phase of the application process.

Generation neither designed to operate, nor operating, in parallel with LIPA's System is not subject to these requirements.

The application procedures set forth in Section I are organized to facilitate efficient review of potential interconnections to LIPA's Distribution System. These procedures also provide applicants with an understanding of the process and information required to allow LIPA to review and accept the applicants' equipment for interconnection in a reasonable and expeditious manner.

The application procedures for 0-20 MW distributed generator interconnections to LIPA's Distribution System are detailed in Section I and organized for three categories of generator interconnections. Section I.B addresses application procedures for systems of less than 25 kW as well as inverter-based systems above 25 kW up to 200 kW that have been certified and tested in accordance with UL 1741. Section I.C addresses application procedures for systems above 25 kW up to 2 MW. Section I.D addresses application procedures above 2 MW up to 20 MW. All systems 0-2 MW are eligible to use web-based application procedures, which are detailed in Section I.E.

For systems sized between 0-2 MW, the time required to complete the process will reflect the complexity of the proposed project. Projects using previously submitted designs certified per the requirements of Section II.H will move through the process more quickly, and several steps may be satisfied with an initial application depending on the detail and completeness of the application and supporting documentation submitted by the applicant. Applicants submitting systems utilizing certified equipment however, are not exempt from providing LIPA with complete design packages necessary for LIPA to

verify the electrical characteristics of the generator systems, the interconnecting facilities, and the impacts of the applicants' equipment on LIPA's systems.

The application process and the attendant services are offered on a non-discriminatory basis. LIPA will clearly identify its costs related to the applicants' interconnections, specifically those costs LIPA would not have incurred but for the applicants' interconnections. LIPA will keep a log of all applications, milestones met, and justifications for application-specific requirements. The applicants are to be responsible for payment of LIPA's costs, as provided for herein.

All interconnections to LIPA's Distribution System are subject to the Standard Interconnection Requirements (SIR) set forth in Section II. These requirements detail the technical interconnection requirements and LIPA interconnection policies and practices. Where specific standards or requirements are applicable to a specific type of system or to a system of a particular kW or MW value, such limitations are noted in the applicable standards.

### **Section I.B. Application Process Steps for Systems 25 kW or Less**

The application procedures set forth below are primarily applicable to systems of 25 kW or less. However, applications for inverter based systems above 25 kW up to 200 kW, may follow the expedited application process outlined below of the SIR under the following circumstances:

- i. Where an inverter-based system above 0 kW up to 200 kW has been certified and tested in accordance with UL 1741 and LIPA has approved the project accordingly.

LIPA has fifteen (15) Business Days from the original application submittal to determine and notify the applicant in writing of its findings. For any system above 25 kW that LIPA determines is not eligible for the fast track or expedited application process, the applicant will proceed with the remaining steps of Section I.C (Systems above 25 kW up to 2 MW).

#### **STEP 1: Initial Communication from the Potential Applicant**

Communication could range from a general inquiry to a completed application.

#### **STEP 2: The Inquiry is Reviewed by LIPA to Determine the Nature of the Project**

Technical staff from LIPA discusses the scope of the interconnection with the potential applicant (either by phone or in person) to determine what specific information and documents (such as an application, contract, technical requirements, specifications, listing of qualified type- tested equipment/systems, applicable rate schedules, and metering requirements) will be provided to the potential applicant. The preliminary technical feasibility of the project at the proposed location may also be discussed at this time. All such information and a copy of the SIR as set forth in Section II herein must be sent to the applicant within three (3) Business Days following the initial communication from the potential applicant, unless the potential applicant indicates otherwise. A LIPA representative will be designated to serve as the single point of contact for the applicant

(unless LIPA informs the applicant otherwise) in coordinating the potential applicant's project with LIPA.

### **STEP 3: Potential Applicant Files an Application**

The potential applicant submits an application package to LIPA. No application fee is required for systems 25 kW or less. A complete application package will consist of:

- (1) A letter of authorization by the customer (if the applicant is an agent for the customer),
- (2) The standard single page application form completed and signed by the applicant,
- (3) A signed copy of the standardized contract set forth in Appendix A,
- (4) A Detailed Single Line Diagram for the system identifying the manufacturer and model number of the equipment(s),
- (5) A copy of the manufacturer's data sheet for the equipment(s),
- (6) A copy of the manufacturer's verification test procedure(s) and
- (7) A copy of the equipment(s) certification to UL 1741 if applicable.

The equipment(s) will be considered acceptable by LIPA if it meets the requirements of Section II.H. If the application is not complete, then within five (5) Business Days of receipt of the application package, LIPA will notify the applicant by email, fax, or other form of written communication, and explain the deficiencies. If the proposed system meets the SIR technical requirements LIPA will return a signed and executed standardized contract to the applicant within ten (10) Business Days of receiving the application and the applicant may proceed with the installation. If the proposed system does not meet the SIR technical requirements, then LIPA will so notify the applicant within fifteen (15) Business Days of receiving the application by email, fax, or other form of written communication and explain the technical issues or problems.

With respect to an applicant proposing to install a system rated 25 kW or less, that is to be net-metered, if LIPA determines that it is necessary to install a dedicated transformer(s) or other equipment to protect the safety and adequacy of electric service provided to other customers, the applicant shall be informed of its responsibility for the actual costs for installing the dedicated transformer(s) and other safety equipment. The LIPA Tariff for Electric Service ("LIPA Tariff") specifies the maximum responsibility each applicant shall have with respect to the actual cost of the dedicated transformer(s) and other safety equipment.

### **STEP 4: System Installation**

The applicant will install the system according to LIPA accepted design and the equipment manufacturer's requirements. For net metered systems as defined in Section II.B.6, any modifications related to existing metering configurations to allow for net metering shall be completed by LIPA prior to Step 5. LIPA shall complete the necessary metering changes within ten (10) Business Days of receiving a request from the applicant.

**STEP 5: The Applicant's Facility is Tested in Accordance with the Standardized Interconnection Requirements.**

Verification testing will be performed by the applicant in accordance with the written verification test procedure provided by the equipment manufacturer. The verification testing will be conducted within ten (10) Business Days of system installation at a mutually agreeable time, and LIPA shall be given the opportunity to witness the tests. If LIPA opts not to witness the test, the applicant will send LIPA within five (5) days of the test a written notification, certifying that the system has been installed and tested in compliance with the SIR, LIPA- accepted design and the equipment manufacturer's instructions. The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the tests in Step 5. The applicant must have complied with and must continue to comply with all contractual and technical requirements.

**STEP 6: Final Acceptance**

Within five (5) Business Days of receiving the written test notification from Step 5, LIPA will either issue to the applicant a formal letter of acceptance for interconnection, or will request that the applicant and LIPA set a date and time for an on-site verification and witness operation of the system. This joint on-site verification must be completed within ten (10) Business Days after being requested. Within five (5) Business Days of the completion of the on-site verification, LIPA will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system.

**Section I.C. Application Process Steps for Systems above 25 KW up to 2 MW**

Exception: Inverter based systems above 25 kW up to 200 kW may request authorization to utilize the expedited application process outlined under Section I. B. of the SIR and may proceed with such process if approved pursuant to Section I.B.

**STEP 1: Initial Communication from the Potential Applicant.**

Communication could range from a general inquiry to a completed application.

**STEP 2: The Inquiry is Reviewed by LIPA to Determine the Nature of the Project.**

Technical staff from LIPA discusses the scope of the interconnection with the potential applicant (either by phone or in person) to determine what specific information and documents (such as an application, contract, technical requirements, specifications, listing of qualified type- tested equipment/systems, application fee information, applicable rate schedules, and metering requirements) will be provided to the potential applicant. The preliminary technical feasibility of the project at the proposed location may also be discussed at this time. All such information and a copy of the standardized interconnection requirements must be sent to the applicant within three (3) Business Days following the initial communication from the potential applicant, unless the potential applicant indicates otherwise. A LIPA representative will be designated to serve as the single point of contact for the applicant (unless LIPA informs the applicant otherwise) in coordinating the potential applicant's project with LIPA.

### **STEP 3: Potential Applicant Files an Application.**

The potential applicant submits an application to LIPA. The submittal must include the completed standard application form, including a copy of equipment certification to UL 1741 as applicable, a three line diagram specific to the proposed system, a letter of authorization (if applicant is agent for the customer), and payment of a non-refundable \$350 application fee. Within five (5) Business Days of receiving the application, LIPA will notify the applicant of receipt and whether the application has been completed adequately. It is in the best interest of the applicant to provide LIPA with all pertinent technical information as early as possible in the process. If the required documentation is presented in this step, it will allow LIPA to perform the required reviews and allow the process to proceed as expeditiously as possible.

### **STEP 4: LIPA Conducts a Preliminary Review and Develops a Cost Estimate for the Coordinated Electric System Interconnection Review (CESIR).**

LIPA conducts a preliminary review of the proposed system interconnection. Upon completion of the preliminary review, LIPA will inform the applicant as to whether the proposed interconnection is viable or not, and provide the applicant with an estimate of costs associated with the completion of the CESIR. The preliminary review shall be completed and a written response detailing the outcome of the preliminary review shall be sent to the applicant within fifteen (15) Business Days of the completion of Step 3. LIPA's response to applicants proposing to interconnect systems above 25 kW up to 2 MW, or proposing to interconnect to network systems will include preliminary comments on requirements for safety equipment, protective relaying, metering and telemetry. LIPA will issue the CESIR cost estimate in a letter agreement to the applicant for signature.

### **STEP 5: Applicant Commits to the Completion of the CESIR**

The applicant will indicate his commitment to the CESIR cost estimate by executing the letter agreement within ten (10) business days of receipt. If the customer declines the agreement, the application will be closed. Prior to commencement of the CESIR, the applicant shall provide the following information to LIPA:

- i. A complete detailed interconnection design package
- ii. The name and phone number of the individual(s) responsible for addressing technical and contractual questions regarding the proposed system, and, if applicable, advanced payment of the costs associated with the completion of the CESIR

The complete detailed interconnection design package shall include:

- (1) Electrical schematic drawings reflecting the complete proposed system design which are easily interpreted and of a quality necessary for a full interconnection. The drawings shall show all electrical components proposed for the installation, and their connections to the existing on-site electrical system from that point to the PCC.

- (2) A complete listing of all interconnection devices proposed for use at the PCC. A set of specifications for this equipment shall be provided by the applicant upon request from LIPA.
- (3) The written verification test procedure provided by the equipment manufacturer, if such procedure is required by this document.
- (4) Three (3) copies of the following information:
  - a. Proposed three line diagram of the generation system showing the interconnection of major electrical components within the system. Proposed equipment ratings clearly needs to indicate:
    - i. Number, individual ratings, and type of units comprising the above rating;
    - ii. General high voltage bus configuration and relay functions; and
    - iii. Proposed generator step-up transformer MVA ratings, impedances, tap settings and winding voltage ratings.
  - b. Electrical studies as requested by LIPA to demonstrate that the design is within acceptable limits, inclusive and limited to the following: system fault, relay coordination, flicker, voltage drop, and harmonics.

#### **STEP 6: LIPA Completes the CESIR**

The CESIR will consist of two parts:

- (1) A review of the impacts to the LIPA System associated with the interconnection of the proposed system, and
- (2) A review of the proposed system's compliance with the applicable criteria set forth below.

A CESIR will be performed by LIPA to determine if the proposed generation on the circuit results in any relay coordination, fault current, and/or voltage regulation problems. A full CESIR may not be needed if the aggregate generation is less than: 50 kW on a single-phase branch of a radial distribution circuit; or 150 kW on a single distribution feeder.

The CESIR shall be completed within sixty (60) Business Days of receipt of the information set forth in Step 5. For systems utilizing type-tested equipment, the time required to complete the CESIR may be reduced.

Upon completion of the CESIR, LIPA will provide the following, in writing, to the applicant:

- (1) LIPA system impacts, if any;
- (2) notification of whether the proposed system meets the applicable criteria considered in the CESIR process;



- (3) if applicable, a description of where the proposed system is not in compliance with these requirements;
- (4) Subject to subsections (a) through (d) below, a good faith, detailed estimate of the total cost of completion of the interconnection of the proposed system and/or a statement of cost responsibility for a dedicated transformer(s) or other required interconnection equipment:
  - (a) with respect to an applicant that is not to be net-metered, an estimate shall be provided and shall include the costs associated with any required modifications to the LIPA System, administration, metering, and on-site verification testing;
  - (b) with respect to an applicant that is to be net-metered and that is either a Farm Wind or Non-Residential Wind applicant intending to install wind electric generating equipment with a rated capacity of more than 25 kW, an estimate shall be provided and (i) shall include the costs associated with any required modifications to the LIPA System, administration, metering, and on-site verification testing, and such applicant shall be informed that it is responsible for one-half of such costs, and (ii) shall include the applicant's responsibility for the actual cost of installing any dedicated transformer(s) and other safety equipment up to the maximum set forth in subsection (d) below;
  - (c) with respect to an applicant that is to be net-metered (but not a Farm Wind or Non-Residential Wind applicant covered in subsection (b) above) such applicant shall have no responsibility for the interconnection costs described in subsection (b)(i) above, and a statement shall be provided showing the applicant's responsibility for the actual cost of installing any dedicated transformer(s) and other safety equipment up to the maximum set forth in subsection (d) below and;
  - (d) with respect to an applicant that is to be net-metered, if LIPA determines that it is necessary to install a dedicated transformer(s) or other equipment to protect the safety and adequacy of electric service provided to other customers, the applicant shall be informed of its responsibility for the actual costs for installing the dedicated transformer(s) and other safety equipment. The LIPA Tariff specifies the maximum responsibility each designated applicant shall have with respect to the actual cost of the dedicated transformer(s) and other safety equipment.

**STEP 7: Applicant Commits to LIPA Construction of LIPA's System Modifications.**

The applicant and LIPA will execute a standardized contract for interconnection as set forth in Appendix A and the applicant will provide LIPA with an advance payment for LIPA's estimated costs as identified in Step 6 (estimated costs will be reconciled with actual costs in Step 11).

### **STEP 8: Project Construction.**

The applicant will build the facility in accordance with LIPA-accepted design. LIPA will commence construction/installation of system modifications and metering requirements as identified through the CESIR in Step 6. LIPA system modifications will vary in construction time depending on the extent of work and equipment required. The schedule for this work is to be discussed and agreed upon with the applicant in Step 6.

### **STEP 9: The Applicant's Facility is Tested in Accordance With the Standardized Interconnection Requirements.**

The verification testing will be performed in accordance with the written test procedures provided in Step 5 and any site-specific requirements identified by LIPA in Step 6. The final testing will be conducted within ten (10) Business Days of complete installation at a mutually agreeable time, and LIPA shall be given the opportunity to witness the tests. If LIPA opts not to witness the test, the applicant will send LIPA within five (5) days of the test a written notification, certifying that the system has been installed and tested in compliance with the SIR, LIPA-accepted design, and the equipment manufacturer's instructions.

### **STEP 10: Interconnection.**

The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the tests in Step 9. In addition, the applicant must have complied with and must continue to comply with the contractual and technical requirements.

### **STEP 11: Final Acceptance and LIPA Cost Reconciliation.**

If LIPA witnessed the verification testing, then, within ten (10) Business Days of the test, LIPA will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system. If LIPA did not witness the verification testing, then, within ten (10) Business Days of receiving the written test notification from Step 9, LIPA will either issue to the applicant a formal letter of acceptance for interconnection, or will request that the applicant and LIPA set a date and time for an on-site verification and witness operation of the system. This joint on-site verification must be completed within twenty (20) Business Days after being requested. Within ten (10) Business Days of the completion of the on-site verification, LIPA will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system. At this time, LIPA will also reconcile its actual costs related to the applicant's project against the application fee and advance payments made by the applicant. The applicant will receive either a bill for any balance due or a reimbursement for overpayment as determined by LIPA's reconciliation, except that a net metering applicant may not be charged in excess of the cost of installing the dedicated transformer(s) or other safety equipment described above in Step 6.

### **Section I.D. Application Process (Study Process) Steps for Systems above 2 MW up to 20 MW**

Applicability:

- i. The Study Process shall be used by an Interconnection Customer proposing to interconnect or modify its Small Generator with LIPA's Distribution System, if

- the Small Generator, upon interconnection or after modification, is above 2 MW and up to and including 20 MW.
- ii. The Interconnection Studies conducted under these procedures shall consist of analyses designed to identify the Interconnection Facilities and Upgrades required for the reliable interconnection of the Small Generator to the LIPA Distribution System. These Interconnection Studies will be performed in accordance with Applicable Reliability Standards.
  - iii. The study process shall determine the appropriate voltage level for the interconnection of the new distributed generation facilities.

**STEP 1: Initial Communication from the Potential Applicant.**

Communication could range from a general inquiry to a completed application.

**STEP 2: The Inquiry is Reviewed by LIPA to Determine the Nature of the Project.**

Technical staff from LIPA discusses the scope of the interconnection with the potential applicant (either by phone or in person) to determine what specific information and documents (such as an application, contract, technical requirements, specifications, listing of qualified type- tested equipment/systems, application fee information, applicable rate schedules, and metering requirements) will be provided to the potential applicant. The preliminary technical feasibility of the project at the proposed location may also be discussed at this time. All such information and a copy of the standardized interconnection requirements must be sent to the applicant within three (3) Business Days following the initial communication from the potential applicant, unless the potential applicant indicates otherwise. A LIPA representative will be designated to serve as the single point of contact for the applicant (unless LIPA informs the applicant otherwise) in coordinating the potential applicant's project with LIPA.

**STEP 3: Potential Applicant Files an Application.**

The potential applicant submits an application to LIPA. The submittal must include the completed standard Interconnection Request application form, including a copy of equipment certification to UL 1741 as applicable, a three line diagram specific to the proposed system, a letter of authorization (if applicant is agent for the customer), and payment of a non-refundable \$350 application fee. Within five (5) Business Days of receiving the application, LIPA will notify the applicant of receipt and whether the application has been completed adequately. It is in the best interest of the applicant to provide LIPA with all pertinent technical information as early as possible in the process. If the required documentation is presented in this step, it will allow LIPA to perform the required reviews and allow the process to proceed as expeditiously as possible.

**STEP 4: Scoping Meeting**

- 4.1 A scoping meeting will be held within ten (10) Business Days after the Interconnection Request is deemed complete, or as otherwise mutually agreed to by the Parties. LIPA and the Interconnection Customer will bring to the meeting personnel, including system engineers and other resources as may be reasonably required to accomplish the purpose of the meeting.

- 4.2 The purpose of the scoping meeting is to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The Parties shall further discuss whether LIPA should perform a feasibility study or proceed directly to a system impact study, or a facilities study, or an interconnection agreement. If the Parties agree that a feasibility study should be performed, LIPA shall provide the Interconnection Customer, as soon as possible, but not later than five (5) Business Days after the scoping meeting, a feasibility study agreement (Appendix F1) including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.
- 4.3 The scoping meeting may be omitted by mutual agreement. In order to remain in consideration for interconnection, an Interconnection Customer who has requested a feasibility study must return the executed feasibility study agreement within fifteen (15) Business Days. If the Parties agree not to perform a feasibility study, LIPA shall provide the Interconnection Customer, no later than five (5) Business Days after the scoping meeting, a system impact study agreement (Appendix G1) including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

**STEP 5: Feasibility Study**

- 5.1 The feasibility study shall identify any potential adverse system impacts that would result from the interconnection of the Small Generator.
- 5.2 A deposit of the lesser of fifty (50%) percent of the good faith estimated feasibility study costs or earnest money of \$10,000 is required from the Interconnection Customer.
- 5.3 The scope of and cost responsibilities for the feasibility study are described in Appendix F.
- 5.4 If the feasibility study shows no potential for adverse system impacts, LIPA shall send the Interconnection Customer a facilities study agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study. If no additional facilities are required, LIPA shall send the Interconnection Customer an executable interconnection agreement within five (5) Business Days.
- 5.5 If the feasibility study shows the potential for adverse system impacts, the review process shall proceed to the appropriate system impact study(s).

**STEP 6: System Impact Study**

- 6.1 A system impact study shall identify and detail the electric system impacts that would result if the proposed Small Generator were interconnected

without project modifications or electric system modifications, focusing on the adverse system impacts identified in the feasibility study, or to study potential impacts, including but not limited to those identified in the scoping meeting. A system impact study shall evaluate the impact of the proposed interconnection on the reliability of the electric system.

- 6.2 If no transmission system impact study is required, but potential electric power distribution system adverse system impacts are identified in the scoping meeting or shown in the feasibility study, a distribution system impact study must be performed. LIPA shall send the Interconnection Customer a distribution system impact study agreement within fifteen (15) Business Days of transmittal of the feasibility study report, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, or following the scoping meeting if no feasibility study is to be performed.
- 6.3 In instances where the feasibility study or the distribution system impact study shows potential for transmission system adverse system impacts, within five (5) Business Days following transmittal of the study report, LIPA shall send the Interconnection Customer a transmission system impact study agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, if such a study is required.
- 6.4 If a transmission system impact study is not required, but electric power distribution system adverse system impacts are shown by the feasibility study to be possible and no distribution system impact study has been conducted, LIPA shall send the Interconnection Customer a distribution system impact study agreement.
- 6.5 If the feasibility study shows no potential for transmission system or distribution system adverse system impacts, LIPA shall send the Interconnection Customer either a facilities study agreement (Appendix H1), including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, or an executable interconnection agreement, as applicable.
- 6.6 In order to remain under consideration for interconnection, the Interconnection Customer must return executed system impact study agreements, if applicable, within thirty (30) Business Days.
- 6.7 A deposit of the good faith estimated costs for each system impact study will be required from the Interconnection Customer.
- 6.8 The scope of and cost responsibilities for a system impact study are described in the attached system impact study agreement.

## STEP 7: Facilities Study

- 7.1 Once the required system impact study(s) is completed, a system impact study report shall be prepared and transmitted to the Interconnection Customer along with a facilities study agreement within five (5) Business Days, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the facilities study. In the case where one or both impact studies are determined to be unnecessary, a notice of the fact shall be transmitted to the Interconnection Customer within the same timeframe.
- 7.2 In order to remain under consideration for interconnection, or, as appropriate, in LIPA's interconnection queue, the Interconnection Customer must return the executed facilities study agreement or a request for an extension of time within thirty (30) Business Days.
- 7.3 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).
  - 7.3.1 LIPA shall determine whether the interconnection impacts the New York Transmission System and requires System Upgrade Facilities.
  - 7.3.2 The Interconnection Customer shall be responsible for the cost of any System Upgrade Facilities only if LIPA, based on an Interconnection Study, determines (i) that System Upgrade Facilities are necessary to accommodate the Interconnection Request, and (ii) that the electrical contribution of the project to the need for those System Upgrade Facilities is greater than the *de minimis* impacts defined in Section IV.G.6.f of Attachment S to the NYISO OATT. Such Interconnection Study shall be of sufficient detail and scope to assure that these determinations can be made. If both determinations are made, then the Small Generator shall be evaluated as a member of the next NYISO Class Year, and the Interconnection Customer's cost responsibility shall be determined in accordance with the NYISO's Attachment S procedures.

If the Interconnection Customer elects Capacity Resource Interconnection Service, and its Small Generator is larger than 2 MW, it will be evaluated, by the NYISO, as a member of the next Class Year to determine the Interconnection Customer's responsibility for System Deliverability Upgrades in accordance with Attachment S to the NYISO OATT.
  - 7.3.3 If the determination is made that an Interconnection Customer's project must be included in the NYISO Class Year, that

interconnection customer shall be entitled to expedite its interconnection process in accordance with sections 3.5.3.3 and 3.5.3.4 of the NYISO Small Generator Interconnection Procedures.

- 7.3.4 If LIPA determines that the interconnection impacts the New York Transmission System, LIPA shall notify the NYISO within five (5) Business Days of such determination.
- 7.4 Design for any required Interconnection Facilities and/or Upgrades shall be performed under the facilities study agreement. LIPA may contract with consultants to perform activities required under the facilities study agreement. The Interconnection Customer and LIPA may agree to allow the Interconnection Customer to separately arrange for the design of some of the Interconnection Facilities. In such cases, facilities design will be reviewed and/or modified prior to acceptance by LIPA, under the provisions of the facilities study agreement. If the Parties agree to separately arrange for design and construction, and provided security and confidentiality requirements can be met, LIPA shall make sufficient information available to the Interconnection Customer in accordance with confidentiality and critical infrastructure requirements to permit the Interconnection Customer to obtain an independent design and cost estimate for any necessary facilities.
- 7.5 A deposit of the good faith estimated costs for the facilities study will be required from the Interconnection Customer.
- 7.6 The scope of and cost responsibilities for the facilities study are described in the attached facilities study agreement.
- 7.7 Upon completion of the facilities study, and with the agreement of the Interconnection Customer to pay for Interconnection Facilities and Upgrades identified in the facilities study, LIPA shall provide the Interconnection Customer an executable interconnection agreement within five (5) Business Days.

**STEP 8: Applicant Commits to LIPA Construction of LIPA's System Modifications.**

The applicant and LIPA will execute an interconnection agreement as set forth in Appendix J and the applicant will provide LIPA with an advance payment for LIPA's estimated costs as identified in Step 6 (estimated costs will be reconciled with actual costs in Step 11).

**STEP 9: Project Construction.**

The applicant will build the facility in accordance with LIPA-accepted design. LIPA will commence construction/installation of system modifications and metering requirements as identified in Step 6. LIPA system modifications will vary in construction time depending on the extent of work and equipment required. The schedule for this work is to be discussed and agreed upon with the applicant in Step 6.

**STEP 10: The Applicant's Facility is Tested in Accordance With the Standardized Interconnection Requirements.**

The verification testing will be performed in accordance with the written test procedure provided in Step 5 and any site-specific requirements identified by LIPA in Step 6. The final testing will be conducted within ten (10) Business Days of complete installation at a mutually agreeable time, and LIPA shall be given the opportunity to witness the tests. If LIPA opts not to witness the test, the applicant will send LIPA within five (5) days of the test a written notification, certifying that the system has been installed and tested in compliance with the SIR, LIPA-accepted design, and the equipment manufacturer's instructions.

**STEP 11: Interconnection.**

The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the tests in Step 10. In addition, the applicant must have complied with and must continue to comply with the contractual and technical requirements.

**STEP 12: Final Acceptance and LIPA Cost Reconciliation.**

If LIPA witnessed the verification testing, then, within ten (10) Business Days of the test, LIPA will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system. If LIPA did not witness the verification testing, then, within ten (10) Business Days of receiving the written test notification from Step 9, LIPA will either issue to the applicant a formal letter of acceptance for interconnection, or will request that the applicant and LIPA set a date and time for an on-site verification and witness operation of the system. This joint on-site verification must be completed within twenty (20) Business Days after being requested. Within ten (10) Business Days of the completion of the on-site verification, LIPA will issue to the applicant either a formal letter of acceptance for interconnection or a detailed explanation of the deficiencies in the system. At this time, LIPA will also reconcile its actual costs related to the applicant's project against the application fee and advance payments made by the applicant. The applicant will receive either a bill for any balance due or a reimbursement for overpayment as determined by LIPA's reconciliation, except that a net metering applicant may not be charged in excess of the cost of installing the dedicated transformer(s) or other safety equipment as specified in the LIPA Tariff.

**Section I.E. Web-Based Standard Interconnection Application and Information**

LIPA shall implement and maintain a web-based system to provide customers and contractors current information regarding the status of their SIR application process. The system shall be customer specific and post the current status of the SIR process. At a minimum the following content shall be provided:

- (1) The applicant's name and project/application identification number.



- (2) Description of the project, including at a minimum, the project's type (energy source), size, metering, and location.
- (3) SIR project application status, including all the steps completed and to be completed, along with corresponding completion/deadline dates associated with each step.
  - a. If the next action is to be taken by LIPA, the expected date that action will be completed,
  - b. If the next action is to be taken by the applicant, what exactly is required and a contact for more information,
- (4) Information regarding any outstanding information request made by LIPA of the applicant, and
- (5) The status of all amounts paid and/or due to LIPA by the applicant.
- (6) Access shall be available for the customer and their contractor, such that both can access the information. The web site must be, however, secure and private from unauthorized access.

LIPA web site shall also provide the ability for applicants with systems of less than 2 MW to submit their application for interconnection via the web. The web based application process will be consistent with Appendix B of this Smart Grid Small Generator Interconnection Procedures for New Distributed Resources 20 MW or Less Connected in Parallel with LIPA Distribution Systems ("Smart Grid SGIP") and include the ability to attach associated documentation or drawings associated with each project.

## Section II. Interconnection Requirements

### Section II.A. Provisions that Apply to All Interconnection Requests

**All interconnection requests made pursuant to these Procedures shall be subject to the following terms:**

- 1. Compliance with Deadlines.** LIPA shall make reasonable efforts to meet all time frames provided in these procedures unless LIPA and the Interconnection Customer agree to a different schedule. If LIPA cannot meet a deadline provided herein, it shall notify the Interconnection Customer, explain the reason for the failure to meet the deadline, and provide an estimated time by which it will complete the applicable interconnection procedure in the process.
- 2. Meter Installation.** Any metering necessitated by the use of the Small Generator shall be installed at the Interconnection Customer's expense in accordance with LIPA's specifications.
- 3. Queue Position.** LIPA shall maintain a single queue for requests to interconnect to LIPA's Distribution System by a Small Generator. LIPA shall assign a Queue Position based upon the date- and time-stamp of the Interconnection Request. The Queue Position of each Interconnection Request will be used to determine the cost responsibility for the Upgrades necessary to accommodate the interconnection. At LIPA's option, Interconnection Requests may be studied serially or in clusters for the purpose of the system impact study.
- 4. Withdrawal of Application.** The applicant may withdraw its application at any time by written notice of such withdrawal to LIPA. Such withdrawal will not relieve the applicant from any costs incurred by LIPA to process the application up to the time of withdrawal.
- 5. Effect of Modification to Machine Data or Equipment Configuration.** Any modification to machine data or equipment configuration or to the interconnection site of the Small Generator not agreed to in writing by LIPA and the Interconnection Customer may be deemed a withdrawal of the Interconnection Request and may require submission of a new Interconnection Request, unless proper notification of each Party by the other and a reasonable time to cure the problems created by the changes are undertaken.
- 6. Infrastructure Security.** Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. LIPA complies with the recommendations offered by the United President's Critical Infrastructure Protection Board and best practice recommendations from the electric reliability authority. All small generators interconnecting to LIPA's distribution facilities are expected to meet basic standards for electric system infrastructure and operational security, including physical, operational and security practices.

**7. NYISO Matters.**

- a. LIPA shall notify the NYISO of all interconnection requests over 2 MW that are determined to have an impact on the New York Transmission System and require System Upgrade Facilities as determined pursuant to Section II of these procedures.
- b. A new Small Generator whose output may be sold into the wholesale energy, capacity and ancillary services markets operated by the New York Independent System Operator must make an election as to whether it will interconnect on a minimum interconnection basis pursuant to Energy Resource Interconnection Service or whether it will elect Capacity Resource Interconnection Service and satisfy the NYISO Deliverability Interconnection Standard.
- c. LIPA shall notify the NYISO of all interconnection requests electing Capacity Resource Interconnection Service and coordinate with the NYISO regarding necessary studies, procedures and standards applicable to such request.

**8. Site Control.** Documentation of site control must be submitted with the Interconnection Request. Site control may be demonstrated through:

- a. Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Small Generator;
- b. An option to purchase or acquire a leasehold site for such purpose; or
- c. An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant the Interconnection Customer the right to possess or occupy a site for such purpose.

**9. Disputes.** For the period between the submission of any application for interconnection and the execution of a contract for interconnection between the Interconnection Customer and LIPA, the following dispute procedures shall apply for disputes involving administration and review of such request for interconnection with LIPA's Distribution System pursuant to Sections I and II.

- a. The Parties agree to use their commercially reasonable efforts to settle promptly any disputes or claims arising out of or relating to this Agreement through negotiation conducted in good faith between executives having authority to reach such a settlement. Either Party may by written notice to the other Party, refer any such dispute or claim for advice or resolution to mediation by a suitable mediator. The mediator shall be chosen by the mutual agreement of the Parties. If the Parties are unable to agree on a mediator each Party shall designate a qualified mediator who, together with the mediator designated by the other, shall choose a single mediator for the particular dispute or claim. If the mediator chosen is

unable, within thirty (30) days of such referral to reach a determination, then either party may exercise whatever rights and remedies it may have in equity or law consistent with the terms of these procedures.

- b. Unless otherwise agreed to in writing or prohibited by applicable law, the Parties shall continue to provide service, honor all commitments under these procedures, and continue to make payments in accordance with these procedures during the course of any dispute resolution under this Article and during the pendency of any action at law or in equity relating hereto.
- c. Each Party agrees to conduct all negotiations in good faith and will be responsible for one-half of any costs paid to neutral third-parties.

Upon execution of a contract for interconnection between the Interconnection Customer and LIPA as set forth in Appendices A and J (as applicable), the dispute resolution terms of such contract shall govern all disputes between the parties to the interconnection contract.

## **10. Confidentiality**

- a. Claim of Confidentiality
  - i. In connection with the application procedures and interconnection review requirements under Sections I and II, the Parties may exchange information that is deemed to be confidential whether such information is provided in written, oral, electronic or other format (“Confidential Information”). The Party disclosing such Confidential Information is referred to herein as the “Disclosing Party” and the Party receiving such Confidential Information is referred to herein as the “Receiving Party.” The Disclosing Party shall mark all written Confidential Information as “Confidential,” “Proprietary” or the like and in the case of Confidential Information that is communicated orally, the Disclosing Party shall within thirty (30) days follow up such communication with a writing addressed to the Receiving Party generally describing such information and identifying it as Confidential Information. The Parties acknowledge that all information disclosed by the Interconnection Customer in connection with costs, pricing or operation of the Small Generator shall be treated as Confidential Information whether or not such information is marked or identified as Confidential Information. LIPA shall not disclose such Confidential Information without Interconnection Customer’s written consent, which may be withheld in Interconnection Customer’s sole discretion, unless LIPA is otherwise required by law to make such disclosure.
  - ii. The Receiving Party shall protect the Confidential Information from disclosure to third parties consistent with the provisions of this Section

II.A.10 and subject to applicable law, provided however, a Receiving Party may disclose Confidential Information to its Affiliates, Lenders, employees, agents or representatives of such Receiving Party, where such Affiliate, Lender, employee, agent or representative expressly agrees to be bound by the terms of this Section II.A.10 and provided further that the Receiving Party shall be liable for any breach by its Affiliates, Lenders, employees, agents or representatives.

- iii. It is further understood and agreed that money damages would not be sufficient remedy for any breach of this Section II.A.10, and that if a Party breaches this Section II.A.10, the Party disclosing Confidential Information to such breaching Party shall be entitled to specific performance and injunctive and other equitable relief as a remedy for any such breach. The breaching Party agrees to waive any requirement for the posting of a bond in connection with any such remedy. Such remedy shall not be deemed to be the exclusive remedy for breach of this Section II.A.10 but shall be in addition to all other remedies available at law or equity. In the event of any legal action based upon or arising out of this Section II.A.10, the prevailing Party in such action shall be entitled to recover reasonable attorney's fees and costs from the other Party.
- b. Compliance with Law. If either Party is required by law to disclose Confidential Information of the other Party (by oral questions, interrogatories, requests for information or documents, subpoena, civil investigative demands, regulation, statute or otherwise), the Party required to make such disclosure will (i) notify the other Party and provide the other Party the opportunity to review the Confidential Information, and (ii) provide the other Party the opportunity to seek a protective order or other appropriate remedy. In the event that a protective order or other remedy is not obtained or is not pursued within a reasonable period of time, the Party required to make disclosure or such Party's representatives will furnish only that portion of the Confidential Information that it is legally required to disclose and the Party required to make disclosure will request that confidential treatment be accorded the Confidential Information by relevant third parties.
  - c. Compliance with the Freedom of Information Law. If LIPA is requested by a third party to disclose Confidential Information pursuant to the Freedom of Information Law ("FOIL"), LIPA will (i) notify Generator of the request and provide Generator the opportunity to review the Confidential Information; (ii) provide Generator the opportunity to provide information regarding the need for confidential treatment; (iii) evaluate the third party's request for disclosure and Generator's request for confidential treatment; and (iv) determine if the Confidential Information is subject to disclosure under FOIL. If LIPA determines that the Confidential Information is subject to disclosure, it will provide prompt written notice of such determination to Generator so that Generator may seek a protective order or other appropriate remedy. If Generator does not obtain a protective order or no formal proceeding has been initiated by Generator within a

reasonable period of time after LIPA provides notice to Generator of its intent to make public the Confidential Information, then LIPA may disclose such information with no liability or further obligation to Generator.

- d. Treatment of Otherwise Publicly Available Documents. Notwithstanding anything to the contrary in this Article, neither Party shall be required to hold confidential any information that (i) becomes publicly available other than through disclosure by the Receiving Party; (ii) is independently developed by the Receiving Party; or (iii) becomes available to the Receiving Party without restriction from a third party, provided that such third party is not bound by a confidentiality agreement with the Disclosing Party or its representatives. Should any person or entity seek to legally compel a Receiving Party (by oral questions, interrogatories, requests for information or documents, subpoena, civil investigative demands, regulation, statute or otherwise) to disclose any Confidential Information, the Receiving Party will provide the Disclosing Party prompt written notice so that the Disclosing Party may seek a protective order or other appropriate remedy. In the event that a protective order or other remedy is not obtained, the Receiving Party or the Receiving Party's representative will furnish only that portion of the Confidential Information that it is legally required to disclose and the Receiving Party will request that confidential treatment be accorded the Confidential Information by relevant third parties.
- e. Term of Confidentiality. The obligations set forth in this Article shall survive expiration or termination of this Agreement.

**11. Application of Industry Electrical Standards.** Where the interconnection requirements set forth in Sections I and II refer to an industry electrical standard, including standards adopted or promulgated by Underwriters Laboratories (UL), the Institute of Electrical and Electronics Engineers (IEEE) and American National Standards Institute (ANSI) the applicable standard will be the version of that designated standard that is in effect on the date upon which the Interconnection Customer submits, and LIPA receives, a completed application for interconnection with LIPA's Distribution System.

**12. Standard Contract Terms.** Standard contract terms have been established for the contract for interconnection of a Small Generator between 0 kW and 2 MW set forth in Appendix A and the interconnection agreement for a Small Generators sized between 2 MW and 20 MW set forth in Appendix J. The contract for interconnection is a standard form that will be executed by LIPA and the Interconnection Customer in the form set forth in Appendix A and only supplemented as noted within such form with information specific to the Small Generator and Interconnection Customer.

With respect to the execution of an interconnection agreement for a Small Generator between 2 and 20 MW as set forth in Appendix J, any technical standards and requirements set forth in such agreement shall not be modified to be inconsistent with requirements of Sections I and II herein. With respect to all other terms of the interconnection agreement, modifications of such non-technical terms shall be limited to

those necessary to reflect any specific circumstances of the proposed Small Generator (such as the status of the Interconnection Customer as a governmental entity). LIPA reserves all rights and is under no obligation to accept requests for modification of the standard contract terms set forth in Appendix J.

## **Section II.B. Design Requirements**

### **1. Common**

The generator-owner shall provide appropriate protection and control equipment, including a protective device that utilizes an automatic disconnect device that will disconnect the generation in the event that the portion of the LIPA System that serves the generator is de-energized for any reason or for a fault in the generator-owner's system. The generator-owner's protection and control equipment shall be capable of automatically disconnecting the generation upon detection of an islanding condition and upon detection of a LIPA system fault.

The generator-owner's protection and control scheme shall be designed to ensure that the generation remains in operation when the frequency and voltage of the LIPA System is within the limits specified by the required operating ranges. Upon request from LIPA, the generator-owner shall provide documentation detailing compliance with the requirements set forth in this document.

The specific design of the protection, control and grounding schemes will depend on the size and characteristics of the generator-owner's generation, as well the generator-owner's load level, in addition to the characteristics of the particular portion of LIPA's system where the generator-owner is interconnecting.

The generator-owner shall have, as a minimum, an automatic disconnect device(s) sized to meet all applicable local, state, and federal codes and operated by over and under voltage and over and under frequency protection. For three-phase installations, the over and under voltage function should be included for each phase and the over and under frequency protection on at least one phase. All phases of a generator or inverter interface shall disconnect for voltage or frequency trip conditions sensed by the protective devices. Voltage protection shall be wired phase to ground for single phase installations and for applications using wye grounded-wye grounded service transformers.

The settings below are listed for single-phase and three-phase applications using wye grounded-wye grounded service transformers or wye grounded-wye grounded isolation transformers. For applications using other transformer connections, a site-specific review will be conducted by LIPA and the revised settings identified in Step 6 of the Application Process.

The requirements set forth in this document are intended to be consistent with those contained in IEEE Std 1547, Standard for Interconnecting Distributed Resources with Electric Power Systems. The requirements in IEEE Std 1547 above and beyond those contained in this document shall be followed.

## **Voltage Response**

The required operating range for the generators shall be from +/- 5% of nominal voltage magnitude. For excursions outside these limits the protective device shall automatically initiate a disconnect sequence from the LIPA System as detailed in the most current version of IEEE Std 1547. Clearing time is defined as the time the range is initially exceeded until the generator owner's equipment ceases to energize the PCC and includes detection and intentional time delay.

## **Frequency Response**

The required operating range for the generators shall be from 59.3 Hz to 60.5 Hz. For generators greater than 30 kW LIPA may request that the generator operate at frequency ranges below 59.3 Hz as defined in IEEE Std 1547. For excursions outside these limits the protective device shall automatically initiate a disconnect sequence from the LIPA System as detailed in the most current version of IEEE Std 1547. Clearing time is defined as the time the range is initially exceeded until the generator-owner's equipment ceases to energize the PCC and includes detection and intentional time delay.

If the generation facility is disconnected as a result of the operation of a protective device, the generator-owner's equipment shall remain disconnected until LIPA's service voltage and frequency have recovered to acceptable voltage and frequency limits for a minimum of five (5) minutes. Systems greater than 25 kW that do not utilize inverter based interface equipment shall not have automatic recloser capability unless otherwise approved by LIPA. If LIPA determines that a facility must receive permission to reconnect, then any automatic reclosing functions must be disabled and verified to be disabled during verification testing.

## **2. Synchronous Generators**

Synchronous generation shall require synchronizing facilities. These shall include automatic synchronizing equipment or manual synchronizing with relay supervision, voltage regulator, and power factor control.

For all synchronous generators sufficient reactive power capability shall be provided by the generator-owner to withstand normal voltage changes on LIPA's system. The generator voltage VAR schedule, voltage regulator, and transformer ratio settings shall be jointly determined by LIPA and the generator-owner to ensure proper coordination of voltages and regulator action. Generator-owners shall have synchronous generator reactive power capability to withstand voltage changes up to 5% of the base voltage levels. A voltage regulator must be provided and be capable of maintaining the generator voltage under steady state conditions within plus or minus 1.5% of any set point and within an operating range of plus or minus 5% of the rated voltage of the generator.

Generator-owners shall adopt one of the following grounding methods for synchronous generators:

- a) Solid grounding
- b) High- or low-resistance grounding



- c) High- or low-reactance grounding
- d) Ground fault neutralizer grounding

Synchronous generators shall not be permitted to connect to LIPA secondary network systems without the approval of LIPA.

### **3. Induction Generators**

Induction generation may be connected and brought up to synchronous speed (as an induction motor) if it can be demonstrated that the initial voltage drop measured at the PCC is acceptable based on current inrush limits. The same requirements also apply to induction generation connected at or near synchronous speed because a voltage dip is present due to an inrush of magnetizing current. The generator-owner shall submit the expected number of starts per specific time period and maximum starting kVA draw data to LIPA to verify that the voltage dip due to starting is within the visible flicker limits as defined by IEEE Std 519, Recommended Practices and Requirements for Harmonic Control in Electric Power Systems.

Starting or rapid load fluctuations on induction generators can adversely impact LIPA's system voltage. Corrective step-switched capacitors or other techniques may be necessary. These measures can, in turn, cause Ferro resonance. If these measures (additional capacitors) are installed on the customer's side of the PCC, LIPA will review these measures and may require the customer to install additional equipment.

### **4. Inverters**

Direct current generation can only be installed in parallel with LIPA's system using a synchronous inverter. The design shall be such as to disconnect this synchronous inverter upon a LIPA system interruption.

It is recommended that equipment meet all functional requirements of IEEE Std 1547 and be protected by LIPA grade relays (as defined in these requirements) using settings approved by LIPA and verified in the field. The field verification test must demonstrate that the equipment meets the voltage and frequency requirements detailed in this section.

Synchronization or re-synchronization of an inverter to the LIPA System shall not result in a voltage deviation that exceeds the requirements contained in Section II.E, Power Quality. Only inverters designed to operate in parallel with the LIPA System shall be utilized for that purpose.

A line inverter can be used to isolate the customer from the LIPA System provided it can be demonstrated that the inverter isolates the customer from the LIPA System safely and reliably.

### **5. Minimum Protective Functions**

Protective system requirements for distributed generation facilities result from an assessment of many factors, including but not limited to:

- Type and size of the distributed generation facility
- Voltage level of the interconnection

- Location of the distributed generation facility on the circuit
- Distribution transformer
- Distribution system configuration
- Available fault current
- Load that can remain connected to the distributed generation facility under isolated conditions
- Amount of existing distributed generation on the local distribution system.

As a result, protection requirements cannot be standardized according to any single criteria. Minimum protective function requirements shall be as detailed in the table below. ANSI C37.2, Electric Power System Device Function Numbers, are listed with each function.

Synchronous Generators	Induction Generators	Inverters
Over/Under Voltage (Function 27/5 9)	Over/Under Voltage (Function 27/5 9)	Over/Under Voltage (Function 27/5 9)
Over/Under Frequency (Function 81O/81U)	Over/Under Frequency (Function 81O/81U)	Over/Under Frequency (Function 81O/81U)
		Anti-Islanding Protection

The need for additional protective functions shall be determined by LIPA on a case-by-case basis. If LIPA determines a need for additional functions, it shall notify the generator-owner in writing of the requirements. The notice shall include a description of the specific aspects of LIPA's system that necessitate the addition, and an explicit justification for the necessity of the enhanced capability. LIPA shall specify and provide settings for those functions that LIPA designates as being required to satisfy protection practices. Any protective equipment or setting specified by LIPA shall not be changed or modified at any time by the generator- owner without written consent from LIPA.

The generator-owner shall be responsible for ongoing compliance with all applicable local, state, and federal codes and standardized interconnection requirements set forth in Section II herein, as they pertain to the interconnection of the generating equipment. Protective devices shall utilize their own current transformers and potential transformers and not share electrical equipment associated with LIPA revenue metering.

A failure of the generator-owner's protective devices, including loss of control power, shall open the automatic disconnect device, thus disconnecting the generation from the LIPA System. A generator-owner's protection equipment shall utilize a non-volatile memory design such that a loss of internal or external control power, including batteries, will not cause a loss of interconnection protection functions or loss of protection set points.

All interface protection and control equipment shall operate as specified independent of the calendar date.

## 6. Metering

The need for additional revenue metering or modifications to existing metering will be reviewed by LIPA on a case-by-case basis.

**Any incremental metering costs are included in interconnection costs that may be required of an applicant, except where the LIPA Tariff specifies the cost responsibilities for net metered customers**

## 7. Islanding

Generation interconnection systems must be designed and operated so that islanding is not sustained on LIPA distribution circuits. The requirements listed in this document are designed and intended to prevent islanding.

### II. C. Operating Requirements

The generator-owner shall provide a 24-hour telephone contact. This contact will be used by LIPA to arrange access for repairs, inspection or emergencies. LIPA will make such arrangements (except for emergencies) during normal business hours.

Voltage and frequency trip set point adjustments shall be accessible to service personnel only. Any changes to these settings must be reviewed and approved by LIPA.

The generator-owner shall not supply power to LIPA during any outages of LIPA's system that serves the PCC. The generator-owner's generation may be operated during such outages only with an open tie to LIPA. Islanding will not be permitted. The generator-owner shall not energize a de-energized LIPA circuit for any reason.

The disconnect switch specified for system size larger than 25kW and non-inverter based systems of 25 kW or less in Section II.E, Disconnect Switch, may be opened by LIPA at any time for any of the following reasons:

- a. To eliminate conditions that constitute a potential hazard to LIPA personnel or the general public;
- b. Pre-emergency or emergency conditions on the LIPA System;
- c. A hazardous condition is revealed by a LIPA inspection;
- d. Protective device tampering;
- e. Parallel operation prior to LIPA approval to interconnect.

The disconnect switch may be opened by LIPA for the following reasons, after notice to the responsible party has been delivered and a reasonable time to correct (consistent with the conditions) has elapsed:

- a. A generator-owner has failed to make available records of verification tests and maintenance of its protective devices;
- b. A generator-owner's system adversely impacts the operation of LIPA equipment or equipment belonging to other LIPA customers;

- c. A generator-owner's system is found to adversely affect the quality of service to adjoining customers.

LIPA will provide a name and telephone number so that the generator-owner can obtain information about LIPA's lock-out.

The generator-owner shall be allowed to disconnect from LIPA without prior notice in order to self-generate.

Under certain conditions LIPA may require a direct transfer trip (DTT). LIPA shall provide detailed evidence as to the need for DTT.

If a generator-owner proposes any modification to the system that has an impact on the interface at the PCC after it has been installed and a contract between LIPA and the generator-owner has already been executed, then any such modifications must be reviewed and approved by LIPA before the modifications are made.

#### **Section II. D. Dedicated Transformer**

LIPA reserves the right to require a power-producing facility to connect to the LIPA System through a dedicated transformer. The transformer shall either be provided by LIPA at the generator-owner's expense, purchased from LIPA, or conform to LIPA's specifications. The transformer may be necessary to ensure conformance with LIPA safe work practices, to enhance service restoration operations or to prevent detrimental effects to other LIPA customers. The transformer that is part of the normal electrical service connection of a generator-owner's facility may meet this requirement if there are no other customers supplied from it. A dedicated transformer is not required if the installation is designed and coordinated with LIPA to protect the LIPA System and its customers adequately from potential detrimental net effects caused by the operation of the generator.

If LIPA determines a need for a dedicated transformer, it shall notify the generator-owner in writing of the requirements. The notice shall include a description of the specific aspects of the LIPA System that necessitate the addition, the conditions under which the dedicated transformer is expected to enhance safety or prevent detrimental effects, and the expected response of a normal, shared transformer installation to such conditions.

#### **Section II. E. Disconnect Switch**

Generating equipment shall be capable of being isolated from the LIPA System by means of an external, manual, visible, gang-operated, load break disconnecting switch. The disconnect switch shall be installed, owned, and maintained by the customer-generator, and located between the generating equipment and its interconnection point with the LIPA System.

For inverter based systems of 25 KW or less, LIPA will provide reimbursement for the actual cost of the disconnect switch only. Request for reimbursement must be made by the Customer and detailed documentation listing the suppliers' cost of the disconnect switch must be provided.

The disconnect switch must be rated for the voltage and current requirements of the installation. The basic insulation level (B IL) of the disconnect switch shall be such that it will coordinate with that of LIPA's equipment. Disconnect devices shall meet applicable UL, ANSI, and IEEE standards, and shall be installed to meet all applicable local, state, and federal codes. (Applicable Local City Building Code may require additional certification.)

The disconnect switch shall be clearly marked, "Generator Disconnect Switch," with permanent 3/8 inch or larger letters or larger.

The disconnect switch shall be located within 10 feet of LIPA's external electric service meter. If such location is not possible, the customer-generator will propose, and LIPA will approve, an alternate location. The location and nature of the disconnect switch shall be indicated in the immediate proximity of the electric service entrance. The disconnect switch shall be readily accessible for operation and locking by LIPA personnel in accordance with Section II.B, Operating Requirements. The disconnect switch must be lockable in the open position with a 3/8" shank LIPA padlock.

For installations above 600V or with a full load output of greater than 960A, a draw-out type circuit breaker with the provision for padlocking at the draw-out position can be considered a disconnect switch for the purposes of this requirement.

#### **Section II. F. Power Quality**

The maximum harmonic limits for electrical equipment shall be in accordance with IEEE 519 to limit the maximum individual frequency voltage harmonic to 3% of the fundamental frequency and the voltage Total Harmonic Distortion (THD) to 5% on LIPA's side of the PCC. In addition, any voltage fluctuation resulting from the connection of the customer's energy producing equipment to LIPA's system must not exceed the limits defined by the maximum permissible voltage fluctuations border line of visibility curve identified in IEEE Std 519. This requirement is necessary to minimize the adverse voltage effect upon other customers on the LIPA System.

#### **Section II. G. Power Factor**

The Small Generator shall maintain an average power factor, as measured at the PCC, of no less than 0.9 (leading or lagging). Induction power generators may be provided VAR capacity from LIPA's system at the generator-owner's expense. The installation of VAR correction equipment by the generator-owner on the generator-owner's side of the PCC must be reviewed and approved by LIPA prior to installation.

#### **Section II. H. Equipment Certification**

In order for the equipment to be acceptable for interconnection to the LIPA System without additional protective devices, the interface equipment must be equipped with the minimum protective function requirements listed in the table in Section II.A. 5 and be tested by a Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration (OSHA) in compliance with Underwriter's Laboratories (UL) 1741, Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources.

For each interconnection application, documentation including the proposed equipment certification, stating compliance with UL 1741 by an NRTL, shall be provided by the applicant to LIPA. Supporting information from an NRTL website or UL's website stating compliance is acceptable for documentation.

LIPA is not responsible for reviewing and approving equipment tested and certified by a non-NRTL.

If equipment is UL 1741 certified by an NRTL and compliance documentation is submitted to LIPA, LIPA shall accept such equipment for interconnection in New York state. All equipment certified to UL 1741 by an NRTL shall be deemed "certified equipment."

LIPA grade relays need not be certified per the requirements of this section.

### **Section II. I. Verification Testing**

All interface equipment must include a verification test procedure as part of the documentation presented to LIPA. Except for the case of small single-phase inverters as discussed later, the verification test must establish that the protection settings meet the SIR requirements. The verification testing may be site-specific and is conducted periodically to assure continued acceptable performance.

Upon initial parallel operation of a generating system, or any time interface hardware or software is changed, the verification test must be performed. A qualified individual must perform verification testing in accordance with the manufacturer's published test procedure. Qualified individuals include professional engineers, factory-trained and certified technicians, and licensed electricians with experience in testing protective equipment. LIPA reserves the right to witness verification testing or require written certification that the testing was successfully performed.

Verification testing shall be performed at least once every four years. All verification tests prescribed by the manufacturer shall be performed. If wires must be removed to perform certain tests, each wire and each terminal must be clearly and permanently marked. The generator-owner shall maintain verification test reports for inspection by LIPA.

Single-phase inverters and inverter systems rated 25 kW and below shall be verified upon initial parallel operation and once every four years as follows: the generator-owner shall interrupt LIPA's source and verify that the equipment automatically disconnects and does not reconnect for at least five minutes after LIPA's source is reconnected. The owner shall maintain a log of these operations for inspection by LIPA. Any system that depends upon a battery for trip power shall be checked and logged at least annually for proper voltage. Once every four (4) years the battery must be either replaced or a discharge test performed.

## **Section II. J. Interconnection Inventory**

To ensure applications are addressed in a timely manner and monitor the overall interconnection activities, LIPA shall maintain an SIR inventory of projects. At a minimum the following information shall be provided in the inventory:

1. Company
2. Applicant Name
3. System Type
4. System Capacity
5. Net Metered (Yes/No)
6. Protective Equipment
7. Application Review Start and End date
8. Preliminary Review Start and End date
9. CESIR Start and End date
10. CESIR Costs
11. Verification Testing date
12. Final Letter of Acceptance date
13. Total Percentage of SIR Connected Demand

### Section III. Glossary of Terms

**Affected System:** An electric system, other than LIPA's Transmission System, that may be affected by the proposed interconnection.

**Applicable Reliability Standards:** The applicable criteria, requirements and guidelines of the North American Electric Reliability Council, the Northeast Power Coordinating Council, the New York State Reliability Council and related and successor organizations as well as the reliability criteria, requirements and guidelines adopted by LIPA.

**Automatic Disconnect Device:** An electronic or mechanical switch used to isolate a circuit or piece of equipment from a source of power without the need for human intervention.

**Business Day:** Any day on which the Federal Reserve Member Banks in New York City are open for business, and shall extend from 8:00 a.m. until 5:00 p.m. local time for each Party's principal place of business.

**Capacity Resource Interconnection Service:** The service provided to interconnect generating facilities in accordance with the NYISO Deliverability Interconnection Standard, as such term is defined and set forth in Attachment S of the NYISO OATT, in order to qualify such generator to be an installed capacity supplier to the NYISO wholesale capacity markets.

**Cease to Energize:** Cessation of energy flow capability

**Coordinated Electric System Interconnection Review:** Any studies performed by utilities to ensure that the safety and reliability of the electric grid with respect to the interconnection of distributed generation as discussed in this document.

**Customer-Generator:** A LIPA customer who owns or operates electric generating equipment located and used at the customer's premises, and/or the customer's agent.

**Dedicated Transformer:** A transformer with a secondary winding that serves only one customer.

**Direct Transfer Trip:** Remote operation of a circuit breaker by means of a communication channel.

**Disconnect (verb):** To isolate a circuit or equipment from a source of power. If isolation is accomplished with a solid-state device, "Disconnect" shall mean to cease the transfer of power.

**Disconnect Switch:** A mechanical device used for isolating a circuit or equipment from a source of power.

**Distribution System:** LIPA's facilities and equipment used to transmit electricity to ultimate usage points such as homes and industries directly from nearby generators or from interchanges



with higher voltage transmission networks which transport bulk power over longer distances. Voltage levels at which Distribution Systems operate differ among areas.

**Distribution Upgrades:** The additions, modifications, and upgrades to LIPA's Distribution System at or beyond the Point of Interconnection to facilitate interconnection of the Small Generator and render the transmission service necessary to effect the Interconnection Customer's wholesale sale of electricity in interstate commerce. Distribution Upgrades do not include Interconnection Facilities.

**Draw-out Type Circuit Breaker:** Circuit breakers that are disconnected by physically separating, or racking, the breaker assembly away from the switchgear bus.

**Energy Resource Interconnection Service:** The service provided to interconnect generating facilities on a minimum interconnection standard basis which enables the delivery of energy and ancillary services from the Small Generator into the NYISO wholesale markets.

**Generator-Owner:** An applicant to operate on-site power generation equipment in parallel with the LIPA grid per the requirements of this document.

**Good Utility Practice:** Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry in the State of New York during the term of this Agreement, or any of the practices, methods or acts which, in the exercise of reasonable judgment in light of the facts known at the time a decision is made, could have been expected to accomplish the desired results at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practices is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to delineate acceptable practices, methods or acts generally accepted by a significant portion of the electric utility industry operating in the State of New York.

**Interconnection Customer:** Any entity including the Transmission Owner or any of the affiliates or subsidiaries of either, that proposes to interconnect its Small Generator with LIPA's Distribution System.

**Interconnection Facilities:** LIPA's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generator and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Small Generator to LIPA's electric system. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Network Upgrades or System Upgrade Facilities.

**Interconnection Request:** The Interconnection Customer's request, in accordance with the Smart Grid SGIP, to interconnect a new Small Generator, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Small Generator that is interconnected with LIPA's Transmission System.

**Islanding:** A condition in which a portion of the LIPA System that contains both load and distributed generation is isolated from the remainder of the LIPA System. (Adopted from IEEE 929.)

**LIPA Net Metering Rules:** LIPA's Tariff for Electric Service, especially leaves 34A through 34H. All other provisions of the LIPA Tariff for Electric Service also apply.

**LIPA System:** The electric transmission and distribution system owned and/or operated by LIPA and consisting of all real and personal property, equipment, machinery, tools and materials, and other similar items relating to the transmission and distribution of electricity to LIPA's customers.

**LIPA Transmission System:** The facilities and equipment owned, controlled or operated by LIPA that are used to provide transmission service.

**Material Modification:** A modification that has a material impact on the cost or timing of any Interconnection Request with a later queue priority date.

**Network Upgrades:** Additions, modifications, and upgrades to LIPA's Transmission System required at or beyond the point at which the Small Generator interconnects with LIPA's Distribution System. Network Upgrades do not include Distribution Upgrades.

**New York State Transmission System:** New York State Transmission System shall mean the entire New York State electric transmission system, which includes (i) the Transmission Facilities under ISO Operational Control; (ii) the Transmission Facilities Requiring ISO Notification; and (iii) all remaining transmission facilities within the New York Control Area.

**Party or Parties:** LIPA, , Interconnection Customer or any combination thereof.

**Point of Common Coupling:** The point at which the interconnection between the electric utility and the customer interface occurs. Typically, this is the customer side of LIPA revenue meter.

**Point of Interconnection:** The point where the Interconnection Facilities connect with LIPA's Distribution System, which shall include the Point of Common Coupling.

**Preliminary Review:** A review of the generator-owner's proposed system capacity, location on the LIPA System, system characteristics, and general system regulation to determine if the interconnection is viable.

**Protective Device:** A device that continuously monitors a designated parameter related to the operation of the generation system that operates if preset limits are exceeded

**Queue Position:** The order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, which is established based upon the date and time of receipt of the valid Interconnection Request by LIPA.

**Required Operating Range:** The range of magnitudes of LIPA system voltage or frequency where the generator-owner's equipment, if operating, is required to remain in operation for the purposes of compliance with UL 1741. Excursions outside these ranges must result in the automatic disconnection of the generation within the prescribed time limits.

**Safety Equipment:** Includes dedicated transformers or equipment and facilities to protect the safety and adequacy of electric service provided to other customers.

**Small Generator:** Interconnection Customer's device for the production of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Study Process:** The procedure for evaluating an Interconnection Request that includes the Scoping Meeting, Feasibility Study, System Impact Study, and Facilities Study.

**System Upgrade Facilities:** In the case of proposed interconnection projects, System Upgrade Facilities are the modifications or additions to the existing New York State Transmission System that are required for the proposed project to connect reliably to the system in a manner that meets the NYISO interconnection standards.

**Upgrades:** The required additions and modifications to LIPA's Distribution System or Transmission System at or beyond the Point of Interconnection. Upgrades may be System Upgrade Facilities, Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

**Utility Grade Relay:** A relay that is constructed to comply with, as a minimum, the most current version of the following standards for non-nuclear facilities:

<u>Standard</u>	<u>Conditions Covered</u>
<u>ANSI/IEEEC37.90</u>	Usual Service Condition Ratings Current and Voltage Maximum design for all relay AC and DC auxiliary relays Make and carry ratings for tripping contacts Tripping contacts duty cycle Dielectric tests by manufacturer Dielectric tests by user
<u>ANSI/IEEE C37.90.1</u>	Surge Withstand Capability (SWC) Fast Transient Test
<u>IEEE C37.90.2</u>	Radio Frequency Interference
<u>IEEE C37.98</u>	Seismic Testing (fragility) of Protective and Auxiliary Relays
<u>ANSI C37.2</u>	Electric Power System Device Function Numbers

<u>Standard</u>	<u>Conditions Covered</u>
<u>IEC 255-21-1</u>	Vibration
<u>IEC 2555-22-2</u>	Electrostatic Discharge
<u>IEC 25 5-5</u>	Insulation (Impulse Voltage Withstand)

**Verification Test:** A test performed upon initial installation and repeated periodically to determine that there is continued acceptable performance.

**APPENDIX A**

**LONG ISLAND POWER AUTHORITY  
STANDARDIZED CONTRACT  
FOR INTERCONNECTION OF NEW DISTRIBUTED RESOURCE EQUIPMENT  
WITH CAPACITY OF 2 MW OR LESS  
CONNECTED IN PARALLEL WITH THE LIPA DISTRIBUTION SYSTEMS**

**Customer Information:**

**Company Information:**

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_

Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Email: \_\_\_\_\_

Unit Application/File No. \_\_\_\_\_

**DEFINITIONS**

**Dedicated Facilities** means the equipment and facilities on LIPA's system necessary to permit operation of the Unit in parallel with LIPA's system.

**Delivery Service** means the services LIPA may provide to deliver capacity or energy generated by Customer to a buyer to a delivery point(s), including related ancillary services.

**"Net energy metering"** means the use of a net energy meter to measure, during the billing period applicable to a customer-generator, the net amount of electricity supplied by an electric corporation and provided to the corporation by a customer-generator.

**"SIR"** means the Long Island Power Authority Standardized Interconnection Requirements which are applicable to new distributed generation units with a nameplate capacity of 2 MW or less connected in parallel with LIPA distribution system

**"Unit"** means the distributed generation Unit with a nameplate capacity of 2 MW or less located on the Customer's premises at the time LIPA approves such Unit for operation in parallel with LIPA's system. This Agreement relates only to such Unit, but a new agreement shall not be required if the Customer makes physical alterations to the Unit that do not result in an increase in its nameplate generating capacity. The nameplate generating capacity of the Unit shall not exceed 2 MW.

**I. TERM AND TERMINATION**

**1.1 Term:** This Agreement shall become effective when executed by both Parties and shall continue in effect until terminated.

## APPENDIX A

### 1.2 **Termination:** This Agreement may be terminated as follows:

- a. The Customer may terminate this Agreement at any time, by giving LIPA sixty (60) days' written notice.
- b. Failure by the Customer to seek final acceptance by LIPA within twelve (12) months after completion of LIPA construction process described in the SIR shall automatically terminate this Agreement.
- c. Either Party may, by giving the other Party at least sixty (60) days' prior written notice, terminate this Agreement in the event that the other Party is in default of any of the material terms and conditions of this Agreement. The terminating Party shall specify in the notice the basis for the termination and shall provide a reasonable opportunity to cure the default.
- d. LIPA may, by giving the customer at least sixty (60) days' prior written notice, terminate this Agreement for cause. The Customer's non-compliance with an upgrade to the SIR, unless the Customer's installation is "grandfathered," shall constitute good cause.

**1.3 Disconnection and Survival of Obligations:** Upon termination of this Agreement the Unit will be disconnected from LIPA's System. The termination of this Agreement shall not relieve either Party of its liabilities and obligations, owed or continuing at the time of the termination.

**1.4 Suspension:** This Agreement will be suspended during any period in which the Customer is not eligible for delivery service from LIPA.

## II. SCOPE OF AGREEMENT

**2.1 Scope of Agreement:** This Agreement relates solely to the conditions under which LIPA and the Customer agree that the Unit may be interconnected to and operated in parallel with LIPA's system.

**2.2 Electricity Not Covered:** LIPA shall have no duty under this Agreement to account for, pay for, deliver, or return in kind any electricity produced by the Facility and delivered into LIPA's System unless the system is net metered pursuant to LIPA's Net Metering Rules.

## III. INSTALLATION, OPERATION AND MAINTENANCE OF UNIT

**3.1 Compliance with SIR:** Subject to the provisions of this Agreement, LIPA shall be required to interconnect the Unit to LIPA's system, for purposes of parallel operation, if LIPA accepts the Unit as in compliance with the SIR. The Customer shall have a continuing obligation to maintain and operate the Unit in compliance with the SIR.

**3.2 Observation of the Unit - Construction Phase:** LIPA may, in its discretion and upon reasonable notice, conduct reasonable on-site verifications during the construction of the Unit.

## APPENDIX A

Whenever LIPA chooses to exercise its right to conduct observations herein it shall specify to LIPA its reasons for its decision to conduct the observation. For purposes of this paragraph and paragraphs 3.3 through 3.5, the term "on-site verification" shall not include testing of the Unit, and verification tests shall not be required except as provided in paragraphs 3.3 and 3.4.

**3.3 Observation of the Unit - Ten-day Period:** LIPA may conduct on-site verifications of the Unit and observe the execution of verification testing within a reasonable period of time, not exceeding ten (10) Business Days after system installation. The applicant's facility will be allowed to commence parallel operation upon satisfactory completion of the verification test. The applicant must have complied with and must continue to comply with all contractual and technical requirements.

**3.4 Observation of the Unit - Post-Ten-day Period:** If LIPA does not perform an on-site verification of the Unit and observe the execution of verification testing within the ten-day period, the Customer will send LIPA within five (5) days of the verification testing a written notification certifying that the Unit has been installed and tested in compliance with the SIR, LIPA-accepted design and the equipment manufacturer's instructions. The Customer may begin to produce energy upon satisfactory completion of the verification test. After receiving the verification test notification, LIPA will either issue to the applicant a formal letter of acceptance for interconnection, or may request that the applicant and LIPA set a date and time to conduct an on-site verification of the Unit and make reasonable inquiries of the Customer, but only for purposes of determining whether the verification tests were properly performed. The Customer shall not be required to perform the verification tests a second time, unless irregularities appear in the verification test report or there are other objective indications that the tests were not properly performed in the first instance.

**3.5 Observation of the Unit - Operations:** LIPA may conduct on-site verification of the operations of the Unit after it commences operations if LIPA has a reasonable basis for doing so based on its responsibility to provide continuous and reliable utility service or as authorized by the provisions of LIPA's Retail Tariff relating to the verification of customer installations generally.

**3.6 Costs of Dedicated Facilities:** During the term of this Agreement, LIPA shall design, construct and install the Dedicated Facilities. The Customer shall be responsible for paying the incremental capital cost of such Dedicated Facilities attributable to the Customer's Unit. All costs associated with the operation and maintenance of the Dedicated Facilities after the Unit first produces energy shall be the responsibility of LIPA.

## IV. DISCONNECTION OF THE UNIT

**4.1 Emergency Disconnection:** LIPA may disconnect the Unit, without prior notice to the Customer (a) to eliminate conditions that constitute a potential hazard to Company personnel or the general public; (b) if pre-emergency or emergency conditions exist on the LIPA System; (c) if a hazardous condition relating to the Unit is observed by a LIPA inspection; or (d) if the Customer has tampered with any protective device. LIPA shall notify the Customer of the emergency if circumstances permit.

## APPENDIX A

**4.2 Non-Emergency Disconnection:** LIPA may disconnect the Unit, after notice to the responsible party has been provided and a reasonable time to correct, consistent with the conditions, has elapsed, if (a) the Customer has failed to make available records of verification tests and maintenance of his protective devices; (b) the Unit system interferes with Company equipment or equipment belonging to other customers of LIPA; (c) the Unit adversely affects the quality of service of adjoining customers.

**4.3 Disconnection by Customer:** The Customer may disconnect the Unit at any time.

**4.4 LIPA Obligation to Cure Adverse Effect:** If, after the Customer meets all interconnection requirements, the operations of LIPA are adversely affecting the performance of the Unit or the Customer's premises, LIPA shall immediately take appropriate action to eliminate the adverse effect. If LIPA determines that it needs to upgrade or reconfigure its system the Customer will not be responsible for the cost of new or additional equipment beyond the point of common coupling between the Customer and LIPA.

## V. ACCESS

**5.1 Access to Premises:** LIPA shall have access to the disconnect switch of the Unit at all times. At reasonable hours and upon reasonable notice consistent with Section III of this Agreement, or at any time without notice in the event of an emergency (as defined in paragraph 4.1), LIPA shall have access to the Premises.

**5.2 Company and Customer Representatives:** LIPA shall designate, and shall provide to the Customer, the name and telephone number of a representative or representatives who can be reached at all times to allow the Customer to report an emergency and obtain the assistance of LIPA. For the purpose of allowing access to the premises, the Customer shall provide LIPA with the name and telephone number of a person who is responsible for providing access to the Premises.

**5.3 Company Right to Access Company-Owned Facilities and Equipment:** If necessary for the purposes of this Agreement, the Customer shall allow LIPA access to LIPA's equipment and facilities located on the Premises. To the extent that the Customer does not own all or any part of the property on which LIPA is required to locate its equipment or facilities to serve the Customer under this Agreement, the Customer shall secure and provide in favor of LIPA the necessary rights to obtain access to such equipment or facilities, including easements if the circumstances so require.

## VI. DISPUTE RESOLUTION

**6.1 Good Faith Resolution of Disputes:** Each Party agrees to attempt to resolve all disputes arising hereunder promptly, equitably and in a good faith manner.

**6.2 Mediation:** If a dispute arises under this Agreement, and if it cannot be resolved by the Parties within ten (10) Business Days after written notice of the dispute, the parties agree to submit the dispute to mediation by a mutually acceptable mediator, in a mutually convenient location in New York State, in accordance with the then current CPR Institute for Dispute



## APPENDIX A

Resolution Mediation Procedure. The Parties agree to participate in good faith in the mediation for a period of up to 90 days.

**6.3 Escrow:** If there are amounts in dispute of more than two thousand dollars (\$2,000), the Customer shall either place such disputed amounts into an independent escrow account pending final resolution of the dispute in question, or provide to LIPA an appropriate irrevocable standby letter of credit in lieu thereof.

## VII. INSURANCE

**7.1 Recommendation for Insurance:** The Customer is not required to provide general liability insurance coverage as part of this Agreement, the SIR, or any other LIPA requirement. Due to the risk of incurring damages however, LIPA recommends that every distributed generation customer protect itself with insurance.

**7.2 Effect:** The inability of LIPA to require the Customer to provide general liability insurance coverage for operation of the Unit is not a waiver of any rights LIPA may have to pursue remedies at law against the Customer to recover damages.

## VIII. MISCELLANEOUS PROVISIONS

**8.1 Beneficiaries:** This Agreement is intended solely for the benefit of the parties hereto, and if a party is an agent, its principal. Nothing in this Agreement shall be construed to create any duty to, or standard of care with reference to, or any liability to, any other person.

**8.2 Severability:** If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such portion or provision shall be deemed separate and independent, and the remainder of this Agreement shall remain in full force and effect.

**8.3 Entire Agreement:** This Agreement constitutes the entire Agreement between the parties and supersedes all prior agreements or understandings, whether verbal or written.

**8.4 Waiver:** No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed expedient. In the event that any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

**8.5 Applicable Law:** This Agreement shall be governed by and construed in accordance with the law of the State of New York, without regard to any choice of law provisions.

**8.6 Amendments:** This Agreement shall not be amended unless the amendment is in writing and signed by LIPA and the Customer.

## APPENDIX A

**8.7 Force Majeure:** For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: terrorism, acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement, but only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of reasonable efforts. The affected Party will use reasonable efforts to resume its performance as soon as possible.

**8.8 Assignment to Corporate Party:** At any time during the term, the Customer may assign this Agreement to a corporation or other entity with limited liability, provided that the Customer obtains the consent of LIPA. Such consent will not be withheld unless LIPA can demonstrate that the corporate entity is not reasonably capable of performing the obligations of the assigning Customer under this Agreement.

**8.9 Assignment to Individuals:** At any time during the term, a Customer may assign this Agreement to another person, other than a corporation or other entity with limited liability, provided that the assignee is the owner, lessee, or is otherwise responsible for the Unit.

**8.10 Permits and Approvals:** Customer shall obtain all environmental and other permits lawfully required by governmental authorities prior to the construction and for the operation of the Unit during the term of this Agreement.

**8.11 Limitation of Liability:** Neither by inspection, if any, or non-rejection, nor in any other way, does LIPA give any warranty, express or implied, as to the adequacy, safety, or other characteristics of any structures, equipment, wires, appliances or devices owned, installed or maintained by the Customer or leased by the Customer from third parties, including without limitation the Unit and any structures, equipment, wires, appliances or devices appurtenant thereto.

### ACCEPTED AND AGREED:

**Customer:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**LIPA:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**APPENDIX B**

**LONG ISLAND POWER AUTHORITY  
STANDARDIZED APPLICATION  
FOR FAST-TRACK INTERCONNECTION OF DISTRIBUTED RESOURCE  
EQUIPMENT**

**25 KW OR LESS, AND UL1741 COMPLIANT INVERTER SYSTEMS UP TO 200 kW  
IN PARALLEL WITH THE LIPA DISTRIBUTION SYSTEM**

**Customer:**

Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

Fax: (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_ Municipality: \_\_\_\_\_

LIPA Account Number: \_\_\_\_\_

**Agent (if any):**

Name: Phone: (\_\_\_\_) \_\_\_\_\_

Fax: (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_ Municipality: \_\_\_\_\_

**Consulting Engineer or Contractor:**

Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

Address: \_\_\_\_\_

**Estimated In-Service Date:** \_\_\_\_\_

**Existing Electric Service:** \_\_\_\_\_

Capacity: \_\_\_\_\_ Amperes Voltage: \_\_\_\_\_ Volts

Service Character: ( )Single Phase ( )Three Phase

**Location of Protective Interface Equipment on Property:** (include address if different from customer address) \_\_\_\_\_

**Energy Producing Equipment/Inverter Information:** \_\_\_\_\_

Manufacturer: \_\_\_\_\_

Model No. \_\_\_\_\_ Version No. \_\_\_\_\_

( )Synchronous ( )Induction ( )Inverter ( )Other

Rating: \_\_\_\_\_ kW Rating: \_\_\_\_\_ kVA

Generator Connection: ( )Delta ( )Wye ( )Wye Grounded

Interconnection Voltage: \_\_\_\_\_ Volts

**APPENDIX B**

System Type Tested (Total System): ( )Yes ( )No; attach product literature Equipment  
Type Tested (i.e. Inverter, Protection System):  
( )Yes ( )No; attach product literature

Detailed Single Line Diagram attached: ( ) Yes (Provide reference to Sample)

Installation Test Plan attached: ( )Yes

If applicable, Certification to UL 1741 attached: ( )Yes

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CUSTOMER/AGENT SIGNATURE	TITLE	DATE	
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**APPENDIX C**

**LONG ISLAND POWER AUTHORITY  
STANDARIZED APPLICATION  
FOR INTERCONNECTION OF DISTRIBUTED RESOURCE EQUIPMENT  
ABOVE 25 KW UP TO 2 MW  
IN PARALLEL WITH THE LIPA DISTRIBUTION SYSTEM**

**Customer:**

Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

Fax: (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_ Municipality: \_\_\_\_\_

LIPA Account Number: \_\_\_\_\_

**Agent (if any):**

Name: Phone: (\_\_\_\_) \_\_\_\_\_

Fax: (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_ Municipality: \_\_\_\_\_

**Consulting Engineer or Contractor:**

Name: \_\_\_\_\_ Phone: (\_\_\_\_) \_\_\_\_\_

Address: \_\_\_\_\_

**Estimated In-Service Date:** \_\_\_\_\_

**Existing Electric Service:**

Capacity:      Amperes      Voltage:      Volts

Service Character: ( )Single Phase ( )Three Phase

Secondary 3 Phase Transformer Connection ( )Wye ( )Delta

**Location of Protective Interface Equipment on Property:** (include address if different from customer address) \_\_\_\_\_

**Energy Producing Equipment/Inverter Information:**

Manufacturer: \_\_\_\_\_

Model No. \_\_\_\_\_ Version No. \_\_\_\_\_

( )Synchronous ( )Induction ( )Inverter ( )Other \_\_\_\_\_

Rating: \_\_\_\_\_ kW      Rating: \_\_\_\_\_ kVA

Rated Output:      VA Rated Voltage:      Volts

Rate Frequency: \_\_\_\_\_ Hertz Rated Speed:      RPM

Efficiency: \_\_\_\_\_ %      Power Factor: \_\_\_\_\_ %

Rated Current: \_\_\_\_\_ Amps      Locked Rotor Current: \_\_\_\_\_ Amps

Synchronous Speed:      RPM Winding Connection:

Min. Operating Freq./Time:

Generator Connection: ( )Delta ( )Wye ( )Wye Grounded

System Type Tested (Total System): ( )Yes ( )No; attach product literature Equipment Type Tested (i.e. Inverter, Protection System):

## APPENDIX C

Yes  No; attach product literature  
Three line Diagram attached:  Yes  
Verification Test Plan attached:  Yes  
If applicable, Certification to UL 1741 attached:  Yes

### For Synchronous Machines:

Submit copies of the Saturation Curve and the Vee Curve  Salient  Non-Salient  
Torque: \_\_\_\_\_lb-ft Rated RPM: \_\_\_\_\_  
Field Amperes: \_\_\_\_\_ at rated generator voltage and current  
and \_\_\_\_\_ % PF over-excited  
Type of Exciter: \_\_\_\_\_  
Output Power of Exciter: \_\_\_\_\_  
Type of Voltage Regulator: \_\_\_\_\_  
Direct-axis Synchronous Reactance ( $X_d$ ) \_\_\_\_\_ohms Direct-axis Transient Reactance ( $X'_d$ )  
\_\_\_\_\_ohms Direct-axis Sub-transient Reactance ( $X''_d$ ) \_\_\_\_\_ohms

### For Induction Machines:

Rotor Resistance ( $R_r$ ) \_\_\_\_\_ohms Exciting Current \_\_\_\_\_Amps  
Rotor Reactance ( $X_r$ ) \_\_\_\_\_ohms Reactive Power Required:  
Magnetizing Reactance ( $X_m$ ) \_\_\_\_\_ohms \_\_\_\_\_VARs (No Load) Stator Resistance ( $R_s$ )  
\_\_\_\_\_ohms \_\_\_\_\_VARs (Full Load)  
Stator Reactance ( $X_s$ ) \_\_\_\_\_ohms  
Short Circuit Reactance ( $X''_d$ ) \_\_\_\_\_ohms Phases:  
Frame Size: \_\_\_\_\_ Design Letter: \_\_\_\_\_  Single  
Temp. Rise: \_\_\_\_\_ OC.  Three-Phase

### For Inverters:

Manufacturer: \_\_\_\_\_ Model:  
Type:  Forced Commutated  Line Commutated  
Rated Output: \_\_\_\_\_ Amps \_\_\_\_\_ Volts  
Efficiency: \_\_\_\_\_ %

### Signature:

\_\_\_\_\_  
CUSTOMER/AGENT SIGNATURE TITLE DATE

**APPENDIX D**

**LONG ISLAND POWER AUTHORITY  
STANDARDIZED APPLICATION  
FOR INTERCONNECTION OF DISTRIBUTED RESOURCE EQUIPMENT  
ABOVE 2 MW UP TO 20 MW  
IN PARALLEL WITH THE LIPA DISTRIBUTION SYSTEM  
SMALL GENERATOR INTERCONNECTION REQUEST  
(Application Form)**

**Submitted To: Long Island Power Authority  
Distributed Resource Management  
175 East Old Country Road  
Hicksville, New York 11801**

**Fax: 516 545-6134**

An Interconnection Request is considered complete when it provides all applicable and correct information required below. Documentation of site control must be submitted with the Interconnection Request.

**Preamble and Instructions**

An Interconnection Customer who requests an interconnection to LIPA's Distribution System must submit this Interconnection Request by hand delivery, mail, or fax to LIPA.

**Processing Fee or Deposit:**

If the Interconnection Request is submitted under the Fast Track Process, the non-refundable processing fee is \$350, payable to LIPA.

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not qualify for the Fast Track Process, the Interconnection Customer shall submit to LIPA a deposit of the lesser of 50 percent of the good faith estimated feasibility study costs or earnest money of \$10,000 towards the cost of the feasibility study.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

**APPENDIX D**

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Facility Location (if different from above): \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone (Day): \_\_\_\_\_ Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Application is for:** \_\_\_\_\_ **New Small Generator**

\_\_\_\_\_ **Capacity addition to Existing Small Generator**

If capacity addition to existing facility, please describe: \_\_\_\_\_

\_\_\_\_\_

Will the Small Generator be used for any of the following?

Net Metering? Yes \_\_\_ No \_\_\_

To Supply Power to the Interconnection Customer? Yes \_\_\_ No \_\_\_

To Supply Power to Others? Yes \_\_\_ No \_\_\_

For installations at locations with existing electric service to which the proposed Small Generator will interconnect, provide:

\_\_\_\_\_  
(Name on existing LIPA account)

\_\_\_\_\_  
(Existing LIPA Account Number)

Contact Name: \_\_\_\_\_



**APPENDIX D**

Title: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Telephone (Day): \_\_\_\_\_

Telephone (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Requested Point of Interconnection: \_\_\_\_\_

Interconnection Customer's Requested In-Service Date: \_\_\_\_\_

**Small Generator Information**

The small generator will provide the application information required by LIPA in the SIR, as applicable.

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

For Interconnection Customer: \_\_\_\_\_

Date: \_\_\_\_\_

## **APPENDIX E**

### **METERING REQUIREMENTS**

Refer to the document entitled “Revenue Metering Requirements for Generator Facilities Interconnecting to the LIPA Transmission System” for LIPA’s interconnection technical requirements for Small Generators no greater than 20 MW.

## Feasibility Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and LIPA. Interconnection Customer and LIPA each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generator or generating capacity addition to an existing Small Generator consistent with the Interconnection Request completed by Interconnection Customer on \_\_\_\_\_; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generator with LIPA's Distribution System; and

**WHEREAS**, Interconnection Customer has requested LIPA to perform a feasibility study to assess the feasibility of interconnecting the proposed Small Generator with LIPA's Distribution System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the Long Island Power Authority Small Generator Interconnection Procedures for New Distributed Resources 20 MW or Less Connected in parallel with LIPA Distribution Systems (LIPA Small Generator Interconnection Procedures).
- 2.0 The Interconnection Customer elects and LIPA shall cause to be performed an interconnection feasibility study consistent the LIPA Small Generator Interconnection Procedures.
- 3.0 The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the scoping meeting. LIPA reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the LIPA Small Generator

## APPENDIX F1

Interconnection Procedures. If the Interconnection Customer modifies its Interconnection Request, the time to complete the feasibility study may be extended by agreement of the Parties.

- 5.0 In performing the study, LIPA shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.
- 6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generator as proposed:
  - 6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
  - 6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;
  - 6.3 Initial review of grounding requirements and electric system protection; and
  - 6.4 Description and non-binding estimated cost of facilities required to interconnect the proposed Small Generator and to address the identified short circuit and power flow issues.
- 7.0 The feasibility study shall model the impact of the Small Generator regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generator is being installed.
- 8.0 The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.
- 9.0 A deposit of the lesser of 50 percent of good faith estimated feasibility study costs or earnest money of \$10,000 may be required from the Interconnection Customer.
- 10.0 Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the feasibility study must be completed and the feasibility study report transmitted within thirty (30) Business Days of the Interconnection Customer's agreement to conduct a feasibility study.

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- 11.0 Any study fees shall be based on LIPA's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within thirty (30) calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, LIPA shall refund such excess within thirty (30) calendar days of the invoice without interest. LIPA shall not be obligated to perform or continue to perform any Interconnection Study work for the Interconnection Customer unless the Interconnection Customer has paid all amounts in compliance herewith.
- 13.0 Miscellaneous.
- 13.1 Accuracy of Information. Except as Interconnection Customer may otherwise specify in writing when it provides information to LIPA under this Agreement, Interconnection Customer represents and warrants that the information it provides to LIPA shall be accurate and complete as of the date the information is provided. Interconnection Customer shall promptly provide LIPA with any additional information needed to update information previously provided.
- 13.2 Disclaimer of Warranty. In preparing the system impact study, LIPA and any subcontractor consultants employed by LIPA shall have to rely on information provided by Interconnection Customer, and possibly by third parties, and may not have control over the accuracy of such information. Accordingly, neither LIPA nor any subcontractor consultant employed by LIPA makes any warranties, express or implied, whether arising by operation of law, course of performance or dealing, custom, usage in the trade or profession, or otherwise, including without limitation implied warranties or merchantability and fitness for a particular purpose, with regard to the accuracy, content or system impact conclusions of the system impact study. Developer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representation or warranties have formed the basis of its bargain hereunder.
- 13.3 Force Majeure. For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from

## APPENDIX F1

fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement.

- 13.4 **Limitations of Liability.** In no event shall any Party or its subcontractor consultant be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, arising under or in connection with this Agreement or the system impact study or any reliance on the system impact study by Developer or third parties, even if one or more of the Parties or its subcontractor consultants have been advised of the possibility of such damages. Nor shall LIPA be liable for any delay in delivery or for the non-performance or delay in performance of LIPA's obligations under this Agreement.
- 13.5 **Indemnification.** Interconnection Customer shall at all times indemnify, defend, and save harmless LIPA, and their respective directors, officers, members, employees and agents from any and all damages, losses, claims and liabilities ("Losses") by or to third parties arising out of or resulting from the performance by LIPA under this Agreement, any bankruptcy filings made by Interconnection Customer, or the actions or omissions of Interconnection Customer in connection with this Agreement, except to the extent such Losses arise from the gross negligence or willful misconduct by LIPA or their respective directors, officers, members, employees or agents. The amount of any indemnity payment hereunder shall be reduced (including, without limitation, retroactively) by any insurance proceeds or other amounts actually recovered by the indemnified party in respect of the indemnified action, claim, demand, cost, damage or liability. The obligations of Interconnection Customer to indemnify LIPA shall be several, and not joint or joint and several.
- 13.6 **Third-Party Beneficiaries.** Without limitation of Sections 13.2, 13.3 and 13.5 of this Agreement, Interconnection Customer further agrees that subcontractor consultant hired by LIPA to conduct or review, or to assist in the conducting or reviewing, an Interconnection Feasibility Study shall be deemed third party beneficiaries with respect to Sections 13.2, 13.3, 13.4 and 13.5.
- 13.7 **Term and Termination.** This Agreement shall be effective from the date hereof and unless earlier terminated in accordance with this Section 13.7,

## APPENDIX F1

shall continue in effect for a term of one year or until the system impact study for Interconnection Customer's Small Generator is completed, whichever event occurs first. Interconnection Customer or LIPA may terminate this Agreement upon the withdrawal of the Interconnection Customer's Application under Section II.A.4 of LIPA's Small Generator Interconnection Procedures.

- 13.8 **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to any choice of laws provisions.
- 13.9 **Severability.** In the event that any part of this Agreement is deemed as a matter of law to be unenforceable or null or void, such unenforceable or void part shall be deemed severable from this Agreement and the Agreement shall continue in full force and effect as if each part was not contained herein.
- 13.10 **Counterparts.** This Agreement may be executed in counterparts, and each counterpart shall have the same force and effect as the original instrument.
- 13.11 **Amendment.** No amendment, modification or waiver of any term hereof shall be effective unless set forth in writing signed by the Parties hereto.
- 13.12 **Survival.** All warranties, limitations of liability, indemnification and confidentiality provisions provided herein shall survive the expiration or termination hereof.
- 13.13 **Independent Contractor.** LIPA shall at all times be deemed to be an independent contractor and none of their employees or the employees of its subcontractors shall be considered to be employees of Interconnection Customer as a result of this Agreement.
- 13.14 **No Implied Waivers.** The failure of a Party to insist upon or enforce strict performance of any of the provisions of this Agreement shall not be construed as a waiver or relinquishment to any extent of such party's right to insist or rely on any such provision, rights and remedies in that or any other instances; rather, the same shall be and remain in full force and effect.
- 13.15 **Successors and Assigns.** This Agreement, and each and every term and condition hereof, shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns. No assignment shall be permitted where the assignee is currently in litigation with one of the Parties to this Agreement, except with the consent of the affected Party.

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13.16 Due Authorization. Each Party to this Agreement represents and warrants that it has full power and authority to enter into this Agreement and to perform its obligations hereunder, that execution of this Agreement will not violate any other agreement with a third party, and that the person signing this Agreement on its behalf has been properly authorized and empowered to enter into this Agreement.

14.0 All disputes shall be resolved in accordance with the procedures set forth in Section II.A.9 of the LIPA Small Generator Interconnection Procedures.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[LIPA]**

**[Insert name of Interconnection Customer]**

\_\_\_\_\_

Signed \_\_\_\_\_ Signed \_\_\_\_\_

Name (Printed): \_\_\_\_\_ Name (Printed): \_\_\_\_\_

\_\_\_\_\_

Title \_\_\_\_\_ Title \_\_\_\_\_



**Attachment A to  
Feasibility Study Agreement**

**Assumptions Used in Conducting the Feasibility Study**

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the scoping meeting held on \_\_\_\_\_:

- 1) Designation of Point of Interconnection and configuration to be studied.
  
- 2) Designation of alternative Points of Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and LIPA.

## System Impact Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, (“Interconnection Customer,”) and LIPA. Interconnection Customer and LIPA each may be referred to as a “Party, ” or collectively as the “Parties.”

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generator or generating capacity addition to an existing Small Generator consistent with the Interconnection Request completed by the Interconnection Customer on \_\_\_\_\_; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generator with LIPA’s Distribution System;

**WHEREAS**, LIPA has completed a feasibility study and provided the results of said study to the Interconnection Customer (This recital to be omitted if the Parties have agreed to forego the feasibility study.); and

**WHEREAS**, the Interconnection Customer has requested LIPA to perform a system impact study(s) to assess the impact of interconnecting the Small Generator with LIPA’s Distribution System, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the Long Island Power Authority Small Generator Interconnection Procedures for New Distributed Resources 20 MW or Less Connected in parallel with LIPA Distribution Systems (LIPA Small Generator Interconnection Procedures).
- 2.0 The Interconnection Customer elects and LIPA shall cause to be performed a system impact study(s) consistent with the LIPA Small Generator Interconnection Procedures.
- 3.0 The scope of a system impact study shall be subject to the assumptions set forth in Attachment A to this Agreement.
- 4.0 A system impact study will be based upon the results of the feasibility study and the technical information provided by Interconnection Customer in the

## APPENDIX G1

Interconnection Request. LIPA reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the system impact study. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the system impact study may be extended.

- 5.0 A system impact study shall consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, and grounding reviews, as necessary. A system impact study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. A system impact study shall provide a list of facilities that are required as a result of the Interconnection Request and non-binding good faith estimates of cost responsibility and time to construct.
- 6.0 A distribution system impact study shall incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, grounding reviews, and the impact on electric system operation, as necessary.
- 7.0 Affected Systems may participate in the preparation of a system impact study, with a division of costs among such entities as they may agree. All Affected Systems shall be afforded an opportunity to review and comment upon a system impact study that covers potential adverse system impacts on their electric systems, and LIPA has twenty (20) additional Business Days to complete a system impact study requiring review by Affected Systems.
- 8.0 If LIPA uses a queuing procedure for sorting or prioritizing projects and their associated cost responsibilities for any required Network Upgrades, the system impact study shall consider all generating facilities (and with respect to paragraph 8.3 below, any identified Upgrades associated with such higher queued interconnection) that, on the date the system impact study is commenced -
  - 8.1 Are directly interconnected with LIPA's System; or
  - 8.2 Are interconnected with Affected Systems and may have an impact on the proposed interconnection; and
  - 8.3 Have a pending higher queued Interconnection Request to interconnect with LIPA's System.

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- 9.0 A distribution system impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within thirty (30) Business Days after this Agreement is signed by the Parties. A transmission system impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within forty-five (45) Business Days after this Agreement is signed by the Parties, or in accordance with LIPA's queuing procedures.
- 10.0 The Interconnection Customer shall provide to LIPA a deposit or other commercially reasonable security in an amount equivalent to the good faith estimated cost of a Distribution System impact study and the good faith estimated cost of a transmission system impact study.
- 11.0 Any study fees shall be based on LIPA's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within thirty (30) calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, LIPA shall refund such excess within thirty (30) calendar days of the invoice without interest. LIPA shall not be obligated to perform or continue to perform any Interconnection Study work for the Interconnection Customer unless the Interconnection Customer has paid all amounts in compliance herewith.
- 13.0 Miscellaneous.
- 13.1 Accuracy of Information. Except as Interconnection Customer may otherwise specify in writing when it provides information to LIPA under this Agreement, Interconnection Customer represents and warrants that the information it provides to LIPA shall be accurate and complete as of the date the information is provided. Interconnection Customer shall promptly provide LIPA with any additional information needed to update information previously provided.
- 13.2 Disclaimer of Warranty. In preparing the system impact study, LIPA and any subcontractor consultants employed by LIPA shall have to rely on information provided by Interconnection Customer, and possibly by third parties, and may not have control over the accuracy of such information. Accordingly, neither LIPA nor any subcontractor consultant employed by LIPA makes any warranties, express or implied, whether arising by operation of law, course of performance or dealing, custom, usage in the trade or profession, or otherwise, including without limitation implied warranties or merchantability and fitness for a particular purpose, with regard to the accuracy, content or system impact conclusions of the system impact study. Developer acknowledges that it has not relied on any

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representations or warranties not specifically set forth herein and that no such representation or warranties have formed the basis of its bargain hereunder.

- 13.3 Force Majeure. For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement.
- 13.4 Limitations of Liability. In no event shall any Party or its subcontractor consultant be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, arising under or in connection with this Agreement or the system impact study or any reliance on the system impact study by Developer or third parties, even if one or more of the Parties or its subcontractor consultants have been advised of the possibility of such damages. Nor shall LIPA be liable for any delay in delivery or for the non-performance or delay in performance of LIPA's obligations under this Agreement.
- 13.5 Indemnification. Interconnection Customer shall at all times indemnify, defend, and save harmless LIPA, and their respective directors, officers, members, employees and agents from any and all damages, losses, claims and liabilities ("Losses") by or to third parties arising out of or resulting from the performance by LIPA under this Agreement, any bankruptcy filings made by Interconnection Customer, or the actions or omissions of Interconnection Customer in connection with this Agreement, except to the extent such Losses arise from the gross negligence or willful misconduct by LIPA or their respective directors, officers, members, employees or agents. The amount of any indemnity payment hereunder shall be reduced (including, without limitation, retroactively) by any insurance proceeds or other amounts actually recovered by the

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indemnified party in respect of the indemnified action, claim, demand, cost, damage or liability. The obligations of Interconnection Customer to indemnify LIPA shall be several, and not joint or joint and several.

- 13.6 **Third-Party Beneficiaries.** Without limitation of Sections 13.2, 13.3 and 13.5 of this Agreement, Interconnection Customer further agrees that subcontractor consultant hired by LIPA to conduct or review, or to assist in the conducting or reviewing, an Interconnection Feasibility Study shall be deemed third party beneficiaries with respect to Sections 13.2, 13.3, 13.4 and 13.5.
- 13.7 **Term and Termination.** This Agreement shall be effective from the date hereof and unless earlier terminated in accordance with this Section 13.7, shall continue in effect for a term of one year or until the system impact study for Interconnection Customer's Small Generator is completed, whichever event occurs first. Interconnection Customer or LIPA may terminate this Agreement upon the withdrawal of Interconnection Customer's application pursuant to Section II.A.4 of LIPA's Small Generator Interconnection Procedures.
- 13.8 **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to any choice of laws provisions.
- 13.9 **Severability.** In the event that any part of this Agreement is deemed as a matter of law to be unenforceable or null or void, such unenforceable or void part shall be deemed severable from this Agreement and the Agreement shall continue in full force and effect as if each part was not contained herein.
- 13.10 **Counterparts.** This Agreement may be executed in counterparts, and each counterpart shall have the same force and effect as the original instrument.
- 13.11 **Amendment.** No amendment, modification or waiver of any term hereof shall be effective unless set forth in writing signed by the Parties hereto.
- 13.12 **Survival.** All warranties, limitations of liability, indemnification and confidentiality provisions provided herein shall survive the expiration or termination hereof.
- 13.13 **Independent Contractor.** LIPA shall at all times be deemed to be an independent contractor and none of their employees or the employees of its subcontractors shall be considered to be employees of Interconnection Customer as a result of this Agreement.

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13.14 No Implied Waivers. The failure of a Party to insist upon or enforce strict performance of any of the provisions of this Agreement shall not be construed as a waiver or relinquishment to any extent of such party's right to insist or rely on any such provision, rights and remedies in that or any other instances; rather, the same shall be and remain in full force and effect.

13.15 Successors and Assigns. This Agreement, and each and every term and condition hereof, shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns. No assignment shall be permitted where the assignee is currently in litigation with one of the Parties to this Agreement, except with the consent of the affected Party.

13.16 Due Authorization. Each Party to this Agreement represents and warrants that it has full power and authority to enter into this Agreement and to perform its obligations hereunder, that execution of this Agreement will not violate any other agreement with a third party, and that the person signing this Agreement on its behalf has been properly authorized and empowered to enter into this Agreement.

14.0 All disputes shall be resolved in accordance with the procedures set forth in Section II.A.9 of the LIPA Small Generator Interconnection Procedures for New Distributed Resources 20 MW or Less Connected in Parallel with LIPA Distribution Systems.

**IN WITNESS THEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[LIPA]**

**[Insert name of Interconnection Customer]**

\_\_\_\_\_

\_\_\_\_\_

Signed \_\_\_\_\_

Signed \_\_\_\_\_

Name (Printed):

Name (Printed):

\_\_\_\_\_

\_\_\_\_\_

Title \_\_\_\_\_

Title \_\_\_\_\_

**Attachment A to  
System Impact Study Agreement**

**Assumptions Used in Conducting the System Impact Study**

The system impact study shall be based upon the results of the feasibility study, subject to any modifications in accordance with the standard Small Generator Interconnection Procedures, and the following assumptions:

- 1) Designation of Point of Interconnection and configuration to be studied.
  
- 2) Designation of alternative Points of Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and LIPA.



## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, ("Interconnection Customer,") and LIPA. Interconnection Customer and LIPA each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generator or generating capacity addition to an existing Small Generator consistent with the Interconnection Request completed by the Interconnection Customer on \_\_\_\_\_; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generator with LIPA's Distribution System;

**WHEREAS**, LIPA has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested LIPA to perform a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generator with LIPA's Distribution System.

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

- 1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the Long Island Power Authority Small Generator Interconnection Procedures for New Distributed Resources 20 MW or Less Connected in parallel with LIPA Distribution Systems (LIPA Small Generator Interconnection Procedures).
- 2.0 The Interconnection Customer elects and LIPA shall cause a facilities study consistent with the LIPA Small Generator Interconnection Procedures.
- 3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.
- 4.0 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to

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implement the conclusions of the system impact study(s). The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of LIPA's Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities.

- 5.0 LIPA may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generator if it is willing to pay the costs of those facilities.
- 6.0 The Interconnection Customer shall provide to LIPA a deposit or other commercially reasonable security in an amount equal to the good faith estimated facilities study costs.
- 7.0 In cases where Upgrades are required, the facilities study must be completed within forty-five (45) Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within thirty (30) Business Days. Projects that are subject to the NYISO OATT Attachment S cost allocation process shall be processed in accordance with the NYISO's Attachment S procedures
- 8.0 Once the facilities study is completed, a facilities study report shall be prepared and promptly transmitted to the Interconnection Customer.
- 9.0 Any study fees shall be based on LIPA's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.
- 10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within thirty (30) calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, LIPA shall refund such excess within thirty (30) calendar days of the invoice without interest. LIPA shall not be obligated to perform or continue to perform any Interconnection Study work for the Interconnection Customer unless the Interconnection Customer has paid all amounts in compliance herewith.
- 11.0 Miscellaneous.
  - 11.1 Accuracy of Information. Except as Interconnection Customer may otherwise specify in writing when it provides information to LIPA under this Agreement, Interconnection Customer represents and warrants that the information it provides to LIPA shall be accurate and complete as of the date the information is provided. Interconnection Customer shall promptly

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provide LIPA with any additional information needed to update information previously provided.

- 11.2 Disclaimer of Warranty. In preparing the system impact study, LIPA and any subcontractor consultants employed by LIPA shall have to rely on information provided by Interconnection Customer, and possibly by third parties, and may not have control over the accuracy of such information. Accordingly, neither LIPA nor any subcontractor consultant employed by LIPA makes any warranties, express or implied, whether arising by operation of law, course of performance or dealing, custom, usage in the trade or profession, or otherwise, including without limitation implied warranties or merchantability and fitness for a particular purpose, with regard to the accuracy, content or system impact conclusions of the system impact study. Developer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representation or warranties have formed the basis of its bargain hereunder.
- 11.3 Force Majeure. For purposes of this Agreement, "Force Majeure Event" means any event: (a) that is beyond the reasonable control of the affected Party; and (b) that the affected Party is unable to prevent or provide against by exercising reasonable diligence, including the following events or circumstances, but only to the extent they satisfy the preceding requirements: acts of war, public disorder, insurrection, or rebellion; floods, hurricanes, earthquakes, lightning, storms, and other natural calamities; explosions or fires; strikes, work stoppages, or labor disputes; embargoes; and sabotage. If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, such Party will promptly notify the other Party in writing, and will keep the other Party informed on a continuing basis of the scope and duration of the Force Majeure Event. The affected Party will specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the affected Party is taking to mitigate the effects of the event on its performance. The affected Party will be entitled to suspend or modify its performance of obligations under this Agreement, other than the obligation to make payments then due or becoming due under this Agreement.
- 11.4 Limitations of Liability. In no event shall any Party or its subcontractor consultant be liable for indirect, special, incidental, punitive, or consequential damages of any kind including loss of profits, arising under or in connection with this Agreement or the system impact study or any reliance on the system impact study by Developer or third parties, even if one or more of the Parties or its subcontractor consultants have been advised of the possibility of such damages. Nor shall LIPA be liable for

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any delay in delivery or for the non-performance or delay in performance of LIPA's obligations under this Agreement.

- 11.5 Indemnification. Interconnection Customer shall at all times indemnify, defend, and save harmless LIPA, and their respective directors, officers, members, employees and agents from any and all damages, losses, claims and liabilities ("Losses") by or to third parties arising out of or resulting from the performance by LIPA under this Agreement, any bankruptcy filings made by Interconnection Customer, or the actions or omissions of Interconnection Customer in connection with this Agreement, except to the extent such Losses arise from the gross negligence or willful misconduct by LIPA or their respective directors, officers, members, employees or agents. The amount of any indemnity payment hereunder shall be reduced (including, without limitation, retroactively) by any insurance proceeds or other amounts actually recovered by the indemnified party in respect of the indemnified action, claim, demand, cost, damage or liability. The obligations of Interconnection Customer to indemnify LIPA shall be several, and not joint or joint and several.
- 11.6 Third-Party Beneficiaries. Without limitation of Sections 11.2, 11.3 and 11.5 of this Agreement, Interconnection Customer further agrees that subcontractor consultant hired by LIPA to conduct or review, or to assist in the conducting or reviewing, an Interconnection Feasibility Study shall be deemed third party beneficiaries with respect to Sections 11.2, 11.3, 11.4 and 11.5.
- 11.7 Term and Termination. This Agreement shall be effective from the date hereof and unless earlier terminated in accordance with this Section 11.7, shall continue in effect for a term of one year or until the system impact study for Interconnection Customer's Small Generating Facility is completed, whichever event occurs first. Interconnection Customer or LIPA may terminate this Agreement upon the withdrawal of the Interconnection Customer's application pursuant to Section II.A.4 of LIPA's Small Generator Interconnection Procedures.
- 11.8 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York, without regard to any choice of laws provisions.
- 11.9 Severability. In the event that any part of this Agreement is deemed as a matter of law to be unenforceable or null or void, such unenforceable or void part shall be deemed severable from this Agreement and the Agreement shall continue in full force and effect as if each part was not contained herein.

## APPENDIX H1

- 11.10 Counterparts. This Agreement may be executed in counterparts, and each counterpart shall have the same force and effect as the original instrument.
  - 11.11 Amendment. No amendment, modification or waiver of any term hereof shall be effective unless set forth in writing signed by the Parties hereto.
  - 11.12 Survival. All warranties, limitations of liability, indemnification and confidentiality provisions provided herein shall survive the expiration or termination hereof.
  - 11.13 Independent Contractor. LIPA shall at all times be deemed to be an independent contractor and none of their employees or the employees of its subcontractors shall be considered to be employees of Interconnection Customer as a result of this Agreement.
  - 11.14 No Implied Waivers. The failure of a Party to insist upon or enforce strict performance of any of the provisions of this Agreement shall not be construed as a waiver or relinquishment to any extent of such party's right to insist or rely on any such provision, rights and remedies in that or any other instances; rather, the same shall be and remain in full force and effect.
  - 11.15 Successors and Assigns. This Agreement, and each and every term and condition hereof, shall be binding upon and inure to the benefit of the Parties hereto and their respective successors and assigns. No assignment shall be permitted where the assignee is currently in litigation with one of the Parties to this Agreement, except with the consent of the affected Party.
  - 11.16 Due Authorization. Each Party to this Agreement represents and warrants that it has full power and authority to enter into this Agreement and to perform its obligations hereunder, that execution of this Agreement will not violate any other agreement with a third party, and that the person signing this Agreement on its behalf has been properly authorized and empowered to enter into this Agreement.
- 12.0 All disputes shall be resolved in accordance with the procedures set forth in Section II.A.9 of the LIPA Small Generator Interconnection Procedures.

**APPENDIX H1**

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**[LIPA]**

**[Insert name of Interconnection Customer]**

\_\_\_\_\_

Signed \_\_\_\_\_ Signed \_\_\_\_\_

Name (Printed): \_\_\_\_\_ Name (Printed): \_\_\_\_\_

\_\_\_\_\_

Title \_\_\_\_\_ Title \_\_\_\_\_

**Attachment A to the  
Facilities Study Agreement**

**Data to Be Provided by the Interconnection Customer**

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT)  
Amps

One set of metering is required for each generation connection to the new ring bus or existing LIPA station. Number of generation connections: \_\_\_\_\_

Will an alternate source of auxiliary power be available during CT/PT maintenance?  
Yes \_\_\_\_\_ No \_\_\_\_\_

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes \_\_\_\_\_ No \_\_\_\_\_  
(Please indicate on the one-line diagram).

What type of control system or PLC will be located at the Small Generator?

---

---

What protocol does the control system or PLC use?

---

---

Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

Physical dimensions of the proposed interconnection station:

---

**APPENDIX H2**

Bus length from generation to interconnection station:

---

Line length from interconnection station to LIPA's System.

---

Tower number observed in the field. (Painted on tower leg)\*:

---

Number of third party easements required for transmission lines\*:

---

\* To be completed in coordination with LIPA.

Is the Small Generator located outside of LIPA's service area?

Yes \_\_\_\_\_ No \_\_\_\_\_ If Yes, please provide name of local provider:

---

Please provide the following proposed schedule dates:

Begin Construction Date: \_\_\_\_\_

Generator step-up transformers  
receive back feed power Date: \_\_\_\_\_

Generation Testing Date: \_\_\_\_\_

Commercial Operation Date: \_\_\_\_\_



**APPENDIX I**

(Former LIPA Attachment 7)

**Small Generator Certificate of Completion**

Is the Small Generator owner-installed? Yes \_\_\_\_\_ No \_\_\_\_\_

Interconnection Customer: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Address: \_\_\_\_\_

Location of the Small Generator (if different from above):

\_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

Electrician:

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone (Day): \_\_\_\_\_ (Evening): \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

License number: \_\_\_\_\_

Date Approval to Install Facility granted by LIPA: \_\_\_\_\_

Application ID number: \_\_\_\_\_

Inspection:

The Small Generator has been installed and inspected in compliance with the local building/electrical code of \_\_\_\_\_

Signed(Local electrical wiring inspector, or attach signed electrical inspection):

\_\_\_\_\_

Print Name: \_\_\_\_\_

Date: \_\_\_\_\_

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INTERCONNECTION AGREEMENT  
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GREATER THAN 2 MW AND UP TO 20 MW**

**(Former LIPA Attachment 11)**

**INTERCONNECTION AGREEMENT  
FOR A SYSTEM  
GREATER THAN 2 MW AND UP TO 20 MW  
AT [ADDRESS]**

**BETWEEN**

**LONG ISLAND LIGHTING COMPANY D/B/A LIPA**

**AND**

**[PARTY NAME]**

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THIS INTERCONNECTION AGREEMENT (this “Agreement”) is made and entered into this \_\_\_ day of \_\_\_\_\_, 2011 by and between Long Island Lighting Company doing business as LIPA (“LIPA”), a corporation organized under the laws of the State of New York and a wholly-owned subsidiary of Long Island Power Authority (“Authority”) which is a corporate municipal instrumentality and political subdivision of the State of New York, each with its headquarters at 333 Earle Ovington Boulevard, Uniondale, New York 11553 and [PARTY NAME] organized under the laws of the State of [\_\_\_\_\_] (“Generator”), with its offices at [PARTY ADDRESS]. LIPA and Generator may be jointly referred to in this Agreement as the “Parties,” or individually as a “Party.”

WHEREAS, LIPA owns electric facilities and is engaged in the generation, transmission, distribution, and sale of electric energy in the State of New York; and

WHEREAS, Generator intends to construct, own, operate, and maintain (or cause to be constructed, operated, and maintained) an electric power generation facility (the “Plant”) to be located at [ADDRESS]; and

WHEREAS, Generator desires to interconnect the Plant with LIPA’s System; and

WHEREAS, LIPA desires to interconnect LIPA’s System with the Plant;

NOW THEREFORE, in consideration of the mutual covenants and promises set forth below, and for other good and valuable consideration, the receipt, sufficiency, and adequacy of which are hereby acknowledged, the Parties, intending to be legally bound, hereby covenant, promise, and agree as follows:

**ARTICLE 1**  
**CONSTRUCTION AND DEFINITIONS**

1.1 Construction. Any references herein to this Agreement, or to any other agreement, shall include any exhibits, attachments, and addenda hereto and amendments thereto, as the same may be amended from time to time.

1.2 Definitions. Any term used in this Agreement and not defined herein shall have the meaning customarily attributed to such term by the electric utility industry in the State of New York. When used with initial capitalization, unless otherwise defined herein, whether singular or plural, the following terms, as used in this Agreement, shall have the meanings as set forth below:

“Affiliate” means any other entity directly or indirectly controlling or controlled by or under direct or indirect common control of a specified party. For purposes of this definition, “control” means the power to direct the management and policies of such entity or specified party, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise. A voting interest of ten percent (10%) or more shall create a rebuttable presumption

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of control. The Parties acknowledge that the T&D Manager shall not be construed to be an Affiliate of LIPA as such term is defined and used herein.

**“Agreement”** shall have the meaning identified in the Preamble and shall include all exhibits, schedules, appendices, and other attachments hereto and amendments thereto that may be made from time to time pursuant to the terms of this Agreement.

**“Arbitrators”** shall have the meaning set forth in Section 10.4 of this Agreement.

**“Authority”** shall have the meaning set forth in the Preamble, including its successors and assigns as permitted hereunder.

**“Business Day”** means any day on which the Federal Reserve Member Banks in New York City are open for business, and shall extend from 8:00 a.m. until 5:00 p.m. local time for each Party’s principal place of business.

**“Commercial Operation Date”** means the date on which the Plant has successfully completed its Performance Test and all tests required in accordance with NYISO procedures to provide Output in the corresponding NYISO markets in accordance with the applicable rules promulgated by the NYISO, and is available and capable of delivering Output pursuant to the terms of this Agreement.

**“Confidential Information”** shall have the meaning set forth in Section 15.1 of this Agreement.

**“Cure Plan”** shall have the meaning set forth in Section 9.2(b)(ii) of this Agreement.

**“Date of Initial Interconnection”** means the date on which the Plant is first electrically interconnected to LIPA’s System, which is intended to occur on or before [DATE].

**“Demarcation Point”** means the point of electrical interconnection between Generator’s Interconnection Facilities and LIPA’s Interconnection Facilities, located at [ADDRESS], as set forth in Exhibit A hereto.

**“Disclosing Party”** shall have the meaning set forth in Section 15.1 of this Agreement.

**“Environmental Law”** means all former and current federal, state, local, and foreign laws (including common law), treaties, regulations, rules, ordinances, codes, decrees, judgments, directives or orders (including consent orders) and Environmental Permits, in each case, relating to pollution or protection of the environment or natural resources, including laws relating to Releases or threatened Releases, or otherwise relating to the generation, manufacture, processing, distribution, use, treatment, storage, arrangement for disposal, transport, recycling or handling of Hazardous Substances.

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**"Environmental Permits"** means the permits, licenses, consents, approvals and other governmental authorizations, with respect to Environmental Laws relating primarily to the operation of the Plant.

**"Event of Default"** shall have the meaning set forth in Section 9.1 of this Agreement.

**"FERC"** means the Federal Energy Regulatory Commission or any successor agency thereto.

**"FOIL"** shall have the meaning set forth in Section 15.3 of this Agreement.

**"Force Majeure Event"** shall have the meaning set forth in Article 12 of this Agreement.

**"Generator"** shall have the meaning set forth in the Preamble, including its successors and assigns as permitted hereunder.

**"Generator's Interconnection Facilities"** means all facilities and equipment identified on Exhibit A, that are located between the Plant and the Demarcation Point, including any modification, addition, upgrades or replacement of such facilities and equipment, necessary to Interconnect the Plant with LIPA's System. Generator's Interconnection Facilities are sole use facilities.

**"Good Utility Practice"** means any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry in the State of New York during the term of this Agreement, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time a decision is made, could have been expected to accomplish the desired results at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practices is not intended to be limited to the optimum practice, method or act to the exclusion of all others, but rather to delineate acceptable practices, methods or acts generally accepted by a significant portion of the electric utility industry operating in the State of New York.

**"Hazardous Substance"** means (i) any petrochemical or petroleum products, crude oil or any fraction thereof, ash, radioactive materials, radon gas, asbestos in any form, urea formaldehyde foam insulation or polychlorinated biphenyls, (ii) any chemicals, materials, substances or wastes defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "contaminants" or "pollutants" or words of similar meaning and regulatory affect contained in any Environmental Law or (iii) any other chemical, material, substance or waste which is prohibited, limited or regulated by any Environmental Law.

**"Indemnified Party"** shall have the meaning set forth in Section 11.1 of this Agreement.

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**“Indemnifying Party”** shall have the meaning set forth in Section 11.1 of this Agreement.

**“Interconnection”** means the electrical interconnection of the Plant with LIPA’s System.

**“Interconnection Facilities”** means Generator’s Interconnection Facilities, if any, and LIPA’s Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Plant and the Point of Attachment, including any modifications, additions, upgrades or replacements that are necessary to physically and electrically interconnect the Plant to LIPA’s System. Interconnection Facilities are sole use facilities and shall not include additions, modifications or upgrades to LIPA’s System.

**“Interest Rate”** shall have the meaning set forth in Section 3.4 of this Agreement.

**“Lenders”** means any Person, or agent or trustee of such Person, who provides financing for the Plant.

**“LIPA”** shall have the meaning set forth in the Preamble, including its successors and assigns as permitted hereunder.

**“LIPA’s System”** means the electric transmission and distribution system owned and/or operated by LIPA and consisting of all real and personal property, equipment, machinery, tools and materials, and other similar items relating to the transmission and distribution of electricity to LIPA’s customers.

**“LIPA’s Interconnection Facilities”** means all facilities and equipment identified on Exhibit A, that are located between the Demarcation Point and the Point of Attachment, including any modifications, additions, upgrades or replacements of such facilities and equipment. LIPA’s Interconnection Facilities are sole use facilities and shall not include additions, modifications or upgrades to LIPA’s System.

**“Metering Devices”** means all meters, metering equipment, data processing equipment, and associated equipment used to measure, record or transmit data relating to the provision and transmission of Output from LIPA’s System to customers pursuant to the terms of this Agreement.

**“NYCA”** means the New York Control Area.

**“NYISO”** means the New York Independent System Operator or any successor thereto that administers the wholesale electricity markets in the State of New York substantially as a whole, including without limitation, any regional transmission organization so authorized by the FERC.

**“Other Party Group”** shall have the meaning set forth in Section 11.10.(e) of this Agreement.



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**“Output”** means collectively, the capacity, energy, and ancillary services produced by the Plant.

**“Party”** or **“Parties”** shall have the meaning set forth in the Preamble, together with any successor or assign, as permitted hereunder, of either.

**“Plant”** shall have the meaning set forth in the Recitals, including the balance of plant equipment, fuel handling facilities, step-up transformer(s), output breakers, and necessary generation and transmission lines to connect to the Demarcation Point, and associated protective equipment.

**“Performance Test”** means the performance tests as more fully described in Exhibit J (D) hereto.

**“Point of Attachment”** means the point, as set forth in Exhibit J (A), where the Interconnection Facilities connect to LIPA’s System.

**“Project Site”** means that parcel of land where the Plant is located and described in the attached Appendix A; and located in [ADDRESS].

**“Receiving Party”** shall have the meaning set forth in Section 15.1(a) of this Agreement.

**“Records”** shall have the meaning set forth in Section 16.3 of this Agreement.

**“Release”** means any actual or threatened release, spill, emission, emptying, escape, leaking, dumping, injection, pouring, deposit, disposal, discharge, dispersal, leaching or migration into the environment or within any building, structure, facility or fixture.

**“RTO”** means any regional transmission organization/independent transmission operator or organization, which is approved by the FERC pursuant to FERC Order No. 2000.

**“Statute”** shall have the meaning set forth in Section 16.3 of this Agreement.

**“Summer Season”** means, after the Commercial Operation Date, each of the periods from June 1 through September 30 of any year during the term of this Agreement.

**“System Emergency”** means the existence of a physical or operational condition or the occurrence of an event which, at the time of such occurrence or event that: (i) in the judgment of the Party making the claim, is imminently likely to endanger life or property, or (ii) in the case of LIPA, impairs or will imminently impair the safety and/or reliability of LIPA’s System or LIPA’s Interconnection Facilities, or (iii) in the case of Generator, impairs or will imminently impair the safety and/or reliability of the Plant or Generator’s Interconnection Facilities. System restoration and black start are part of a System Emergency, provided that Generator is not obligated to possess black start capability.

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**“System Pre-Emergency”** means the existence of a physical or operational condition or the occurrence of an event which, at the time of such occurrence or event, could reasonably be expected, if permitted to continue, to lead to a System Emergency.

**“T&D Manager”** means the entity, or any successor or assignee thereof providing certain operation, maintenance and other services to LIPA related to LIPA’s System, pursuant to that Amended Restated Management Services Agreement, dated as of January 1, 2006, as amended from time to time (the “MSA”) or any other similar agreement or arrangement.

**ARTICLE 2  
TERM**

This Agreement shall become effective (the “Effective Date”) upon execution by both Parties, and shall remain in full force and effect, subject to termination as provided herein, for a period of ten (10) years from the Effective Date or such other longer period as the Generator may request and shall be automatically renewed for each successive one-year period thereafter. Generator shall have the right to cease operation of the Plant and terminate this agreement upon thirty (30) days’ notice to LIPA. Either Party may terminate this Agreement in accordance with Article 9.

**ARTICLE 3  
BILLING AND PAYMENT**

3.1. Billing Procedures. Within five (5) Business Days after the first (1st) day of each month, each Party shall prepare an invoice for any outstanding and due costs, fees or other payments owed it by the other Party pursuant to this Agreement or otherwise subject to reimbursement by Generator. Each invoice shall delineate the month in which such costs or services were incurred or provided, shall fully describe the costs or services incurred or rendered, and shall be itemized to reflect the incurrence of such costs and the provision of such services. Each Party shall pay the undisputed invoiced amount, if any, to the other Party on or before the twentieth (20) Business Day following receipt of the other Party’s invoice. Payment of invoices by either Party shall not relieve the paying Party from any responsibilities or obligations it has under this Agreement, nor shall it constitute a waiver of any claims arising hereunder nor shall it prejudice either Party’s right to question the correctness of such billing.

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3.2 Billing Payment Addresses

- i. T&D Manager:  
National Grid Electric Services LLC  
Power Asset Management (PAM)  
175 East Old Country Road  
Hicksville, New York 11801  
Attention: Manager, LIPA Power Asset Management  
Fax: (516) 545-6134

With a copy to LIPA:

Long Island Power Authority  
333 Earle Ovington Boulevard, Suite 403  
Uniondale, New York 11553  
Attention: Vice President of Power Markets  
Fax: (516) 222-9137

- ii. Generator:  
[NAME]  
[ADDRESS]  
Attention:  
Fax: \_\_\_\_\_

or such other and different addresses as may be designated in writing by the Parties.

3.3 Billing Disputes.

(a) Notice. A Party receiving any invoice from the other Party shall examine same to ensure that it has been calculated correctly, and shall promptly notify the billing Party of any errors therein which the receiving Party in good faith believes have been made, along with the facts providing the basis for such belief. The billing Party will promptly review such complaint and reply to the specific claims made by the receiving Party.

(b) Dispute Resolution. If the Parties are unable to settle the contested portion of any invoice, such dispute shall be settled in accordance with Article 10.

(c) Obligation to Pay Uncontested Amounts. The existence of a dispute with regard to any payment due shall not relieve the indebted Party of any obligation to timely pay any uncontested amounts due under this Agreement or from fulfilling any other obligation under this Agreement.

(d) Payment of Disputed Amounts. Upon resolution of a dispute in respect to any disputed amount, a party shall pay interest on any unpaid amount determined to be

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owed to the other party from the date due under the original invoice until date of payment. Such interest shall be computed at the effective interest rate as established by Section 2880 of the Public Authorities Law of the State of New York, and any successor thereto (the "Interest Rate").

(e) Deadline for Disputing Amounts. Except in instances where it is demonstrated that fraud hindered the discovery of billing errors, any claims for adjustments must be made within two (2) years of when the invoice was issued.

3.4 Interest. If either Party fails to make any payment required by this Agreement when due, including contested portions of invoices, or if due to an incorrect invoice issued by a Party, the other Party may request an overpayment requiring a refund by the billing Party, such amount due shall bear interest at the Interest Rate for each day from the due date of the payment or the date on which the overpayment was made until the date of payment. Payments mailed on or before the due date shall not be charged interest for the period of mailing. If the due date of any payment falls on a Sunday or legal holiday, the next Business Day shall be the last day on which payment can be made without interest charges being assessed.

3.5 Survival. The provisions of this Article 3 shall survive termination, expiration, cancellation, suspension, or completion of this Agreement to the extent necessary to allow for final billing and payment.

**ARTICLE 4  
REGULATORY APPROVALS**

4.1 Generator shall be responsible for obtaining and maintaining the effectiveness of all necessary governmental permits required for Generator to construct, operate maintain and replace Generator's Interconnection Facilities. LIPA shall be responsible for obtaining and maintaining the effectiveness of all necessary governmental permits required for LIPA to construct, operate, maintain, and replace LIPA's Interconnection Facilities.

**ARTICLE 5  
SALE OF ELECTRICITY**

There shall be no sale of electricity to LIPA.

**ARTICLE 6  
INSTALLATION, OPERATION, AND MAINTENANCE  
OF THE INTERCONNECTION FACILITIES**

6.1 LIPA shall interconnect the Plant with LIPA's System at the Point of Attachment, permit the Plant to operate in parallel with LIPA's System, and shall provide all services reasonably necessary to achieve these purposes.

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6.2 Generator shall be responsible, for (a) all costs of designing, engineering, procuring, constructing, installing, commissioning, testing, operating, maintaining, and replacing the Generator's Interconnection Facilities and for providing data acquisition and control interfaces to permit the safe and reliable operation of the Interconnection Facilities in accordance with Good Utility Practice and the RTO/NYISO Tariff and Rules, and (b) all costs of designing, engineering, procuring, constructing, installing, commissioning, testing, operating, maintaining, and replacing LIPA's Interconnection Facilities. An estimate of the initial cost of LIPA's Interconnection Facilities is set forth in Exhibit E. Generator shall reimburse LIPA for all costs of designing, engineering, procuring, constructing, installing, commissioning, testing, and replacing LIPA's Interconnection Facilities. Generator shall reimburse LIPA on a monthly basis for maintenance costs of the Interconnection Facilities in accordance with the applicable Service Classification tariff in LIPA's retail electric tariff (presently Service Classification No.11). LIPA, through its T&D Manager will invoice Generator for the foregoing costs.

6.3 Generator shall design, engineer, procure, construct, install, commission, test, operate, maintain, and replace Generator's Interconnection Facilities in conformance with: (a) the design specifications, construction standards, performance requirements, and operating standards specified in Appendices B, C, and D to this Agreement; (b) the testing procedures for the Generator's Interconnection Facilities, specified in Exhibit D to this Agreement; (c) all applicable laws, rules and regulations of federal, state and local governmental authorities that have jurisdiction over Generator with respect to the Generator's Interconnection Facilities; (d) Good Utility Practice.

6.4 Generator shall design, engineer, procure, construct, install, commission, test, operate, and maintain the Plant in accordance with: (a) the design specifications, construction standards, performance requirements, and operating standards specified in Appendices B, C, and D to this Agreement; (b) the testing procedures for the Plant, specified in Exhibit D to this Agreement; (c) all applicable laws, rules and regulations of federal, state, and local governmental authorities that have jurisdiction over Generator with respect to the Plant; and (d) Good Utility Practice.

6.5 Prior to the Date of Initial Interconnection, the Parties shall jointly develop detailed testing procedures for the Interconnection Facilities, to the extent any such procedures are not adequately specified as part of the applicable RTO/NYISO Tariff and Rules or within Exhibit D.

6.6 Prior to the date of Initial Interconnection, the Parties shall also jointly develop a detailed set of coordinated operating instructions. The operating instructions shall be developed in accordance with this Agreement and any other binding agreement between the Parties in effect during operation of the Plant.

6.7 If applicable, LIPA shall undertake design of and performance of verification studies for the Plant.

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6.8 In order for LIPA to make a timely assessment of Generator's compliance with the requirements of Section 6.4 of this Agreement, prior to the Date of Initial Interconnection, Generator will submit to LIPA for LIPA's review, engineering drawings of the Plant, including detailed one-line functional relaying drawings, three-line alternate current ("AC") schematics, and all AC and direct current control schematics associated with the Plant. Such engineering drawings shall be of sufficient scope and detail to permit LIPA to reasonably assess Generator's compliance with the design requirements of Section 6.4 of this Agreement. Generator will send final engineering drawings to LIPA at least one (1) month prior to the Date of Initial Interconnection. LIPA shall provide written approval of the final engineering drawings promptly after Generator's submission to LIPA and prior to the Date of Initial Interconnection, which written approval shall not be unreasonably withheld or delayed. The Plant shall not be interconnected with LIPA's System until the Generator's Interconnection Facilities and the Plant have been approved by the New York Board of Fire Underwriters (or other similar body having jurisdiction).

6.9 Generator shall have the right to install its own meters at the Plant and shall maintain them according to Good Utility Practice. Prior to the Commercial Operation Date, Generator shall install, to specifications provided by LIPA and at Generator's expense, adequate metering and communications equipment as described in Appendices A and B. Generator shall pay the monthly charges associated with such communication channel(s).

6.10 Except as otherwise provided herein, each Party shall maintain its equipment and facilities and perform its maintenance obligations that could reasonably be expected to affect the operations of the other Party, according to Good Utility Practice. Unless the Parties mutually agree to a different arrangement, neither Party shall be responsible for performing the maintenance of the other Party's equipment, regardless of the location of said equipment.

6.11 Each Party may request, pursuant to Good Utility Practice, that the other Party test, calibrate, verify or validate its telemetering, data acquisition, protective relay equipment, control equipment or systems, or any other equipment or software pursuant to Good Utility Practice or for the purpose of troubleshooting problems on interconnected facilities, consistent with the other Party's obligation to maintain its electric generation equipment and facilities.. In the event that such testing reveals that no problems exist with the equipment or systems in question, the Party requesting such testing shall be responsible for all costs and expenses related to the requested test(s). Each Party shall be responsible for all costs to test, calibrate, verify or validate its own equipment or software at intervals required by NYISO or any successor RTO. Each Party shall supply the Party requesting the test, at no cost to such Party, with copies of the resulting inspection reports, installation and maintenance documents, test and calibration records, verification and validations of the telemetering, data acquisition, protective relay, or other equipment or software.

6.12 From time to time, modifications may be required of the Interconnection Facilities due to, but not limited to, general usage, unforeseen damage, operating requirements of the Plant, or operating requirements of LIPA's System. When such modifications are required, the Parties will jointly determine the reason for the modification. Generator shall be responsible for all

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costs associated with modifications to the Interconnection Facilities that are required to accommodate the interconnection of Generator's Plant. Any modifications to the Interconnection Facilities during the term of this Agreement must conform to the requirements of Exhibit B to this Agreement.

**ARTICLE 7  
ISOLATION RIGHTS**

7.1 LIPA shall be responsible for installing such equipment or control system as determined by LIPA to allow for the disconnection of the Plant from LIPA's System. LIPA shall at all times during the term of this Agreement have access to the disconnect switch as indicated in Exhibit A to this Agreement, to electrically isolate the Plant from LIPA's System pursuant to Section 7.4.

7.2 LIPA shall design, operate, and maintain LIPA's Interconnection Facilities so such equipment or control system automatically disconnects the Plant from LIPA's System in the event of: (a) the occurrence of a fault on that portion of LIPA's System serving the Plant, in accordance with the requirements specified in this Agreement; (b) de-energization of the portion of LIPA's System that interconnects with the Plant; (c) an equipment failure or other condition occurring in the Interconnection Facilities or the Plant which creates or contributes to a System Emergency or System Pre-Emergency.

7.3 LIPA shall design, operate and maintain LIPA's Interconnection Facilities to fail in an open position, so that the Plant and LIPA's System will disconnect if there is any failure of a disconnect device on the Interconnection Facilities.

7.4 LIPA shall give advance notice to Generator of the need for disconnection of the Plant from LIPA's System, and coordinate with Generator on any such disconnection of the Plant, provided however, that LIPA may, in accordance with Good Utility Practice, disconnect the Plant without prior notice to Generator and maintain such disconnection if:

- (a) failing to disconnect the Plant from LIPA's System would create or contribute to a System Emergency or System Pre-Emergency;
- (b) immediate maintenance operations are required on LIPA's System to prevent a System Emergency or System Pre-Emergency; or
- (c) isolation is required to facilitate restoration of system outages or for safety considerations.

7.5 Whenever LIPA disconnects the Plant without prior notice to Generator, LIPA shall provide immediate oral notice, to be followed by written notice to Generator within one (1) day of such disconnection, which oral and written notice shall provide the reason, and, if possible, the expected duration of such disconnection.

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7.6 LIPA may also request Generator to disconnect the Plant to perform non-immediate maintenance operations on LIPA's System that (a) are consistent with Good Utility Practice, including disconnecting the Plant in order to interconnect another generator to LIPA's System, and (b) require the Plant to be disconnected in order for LIPA to perform such maintenance on LIPA's System, provided that a minimum of twenty-four (24) hours of advance notice and an estimate of the duration of such disconnection are provided to Generator by LIPA. To the extent possible, LIPA will schedule all such maintenance operations of LIPA's System and LIPA's Interconnection Facilities at times that are mutually convenient for LIPA and Generator and in accordance with Good Utility Practice and taking into consideration Generator's schedule of planned outages.

7.7 Following any LIPA disconnection of the Plant, reconnection shall occur when:

- (a) all existing System Emergency or System Pre-Emergency conditions have been corrected; or
- (b) in the case of maintenance required on LIPA's System, such maintenance has been completed; and
- (c) it is safe to do so in accordance with Good Utility Practice.

7.8 Generator shall give advance notice to LIPA of the need for disconnection of the Plant from LIPA's System (other than regularly planned disconnections as required under LIPA Tariff SC-13), and coordinate with LIPA on any such disconnection of the Plant, provided however, that Generator may disconnect the Plant without prior notice to LIPA and maintain such disconnection if:

- (a) failing to disconnect the Plant from LIPA's System would create or contribute to a System Emergency or System Pre-Emergency;
- (b) immediate maintenance operations are required to prevent a System Emergency or System Pre-Emergency; or
- (c) isolation is required for safety considerations.

7.9 Whenever Generator disconnects the Plant without prior notice to LIPA, Generator shall inform LIPA as quickly as possible of the time, reason, and, if possible, the expected duration of such disconnection.

7.10 Following any Generator disconnection of the Plant, reconnection shall occur when:

- (a) all existing System Emergency or System Pre-Emergency conditions have been corrected; or



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- (b) in the case of maintenance, such maintenance has been completed; and
- (c) it is safe to do so in accordance with Good Utility Practice.

**ARTICLE 8  
INSPECTION AND ACCESS RIGHTS**

8.1 Generator shall provide LIPA with access to the Interconnection Facilities located on the Project Site at reasonable times, including weekends, and upon reasonable prior notice. The notice condition does not apply in the case of a System Emergency, and LIPA shall at all times during the term of this Agreement have access to the disconnect switch, as indicated in Exhibit A to this Agreement, to electrically isolate the Plant from LIPA's System pursuant to Article 7.

8.2. While at the Project Site, all representatives of LIPA shall observe such safety precautions as may be required by law or by Generator, and shall conduct themselves in a manner that is consistent with Good Utility Practice and that will not interfere with the operation of the Plant or the Generator's Interconnection Facilities.

8.3 Neither Party shall construct any facilities or structures or engage in any activities that will interfere with the rights granted to the other Party under this Agreement or rights-of-way, licenses, or easements secured by and/or for the other Party.

8.4 The access rights granted hereunder shall be effective for the term of this Agreement and shall neither be revoked, nor shall either Party take any action that would impede, restrict, diminish, or terminate the rights of access or use granted by such access rights.

8.5 Each Party shall have the right to inspect or observe, at its own expense, the maintenance activities, equipment tests, installation, construction, or other modifications to the other Party's Interconnection Facilities and associated telecommunication facilities, as the case may be, which may reasonably be expected to adversely affect the observing Party's operations or liability. The Party desiring to inspect or observe shall notify the other Party in accordance with the notification procedures set forth in Article 13 of this Agreement. If the Party inspecting the equipment, systems, or facilities observes any deficiency or defects that may be reasonably be expected to adversely affect the operations of the observing Party's system or facilities, the observing Party shall notify the other Party, and the other Party shall make any corrections necessitated by Good Utility Practice

8.6 Subject to the provisions of Section 11.1, each Party shall be solely responsible for and shall assume all liability for the safety and supervision of its own employees, agents, representatives, and subcontractors. All work performed by either Party that reasonably could be expected to affect the operations of the other Party shall be performed in accordance with all applicable laws, rules, and regulations pertaining to the safety of persons or property, including,

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without limitation, compliance with the safety regulations and standards adopted under the Occupational Safety and Health Act of 1970, as amended from time to time, the National Electrical Safety Code, as amended from time to time, and Good Utility Practice.

**ARTICLE 9  
EVENTS OF DEFAULT; TERMINATION**

9.1 Event of Default. The occurrence of one or more of the following events so long as the same is continuing shall constitute an “Event of Default” under this Agreement:

(a) Failure by either Party to substantially perform any material obligation under this Agreement, and which failure continues for a period of forty-five (45) days after notice thereof has been received by such Party from the non-defaulting Party; or

(b) Failure by either Party to pay any undisputed amount due under this Agreement which continues for a period of thirty (30) days after notice of such non-payment is delivered to the defaulting Party; or

(c) The dissolution or liquidation of a Party or the issuance of any order, judgment or decree by a court of competent jurisdiction under the bankruptcy, reorganization, compromise, arrangement, insolvency, readjustment of debt, dissolution or liquidation or similar law of any jurisdiction whether now or hereafter in effect adjudicating a Party bankrupt or insolvent or otherwise granting relief under any such law; or

(d) A Party petitions or applies to any tribunal for, or consents to the appointment of or taking possession by, a receiver, liquidator, custodian, trustee or similar official of such Party or of a substantial part of the assets of such Party; or any such petition or application is filed or any such proceedings are commenced against a Party and such Party by any act indicates its approval thereof, consent thereto or acquiescence therein or such petition or application remains undismissed for sixty (60) days; or

(e) A Party makes a general assignment for the benefit of its creditors or makes an admission in writing that it is unable to pay its debts generally as they become due; or

(f) The revocation or loss of any license, permit, or other governmental approval (i) materially affecting Generator’s ability to operate the Plant or Generator’s Interconnection Facilities, or (ii) materially affecting LIPA’s ability to operate LIPA’s Interconnection Facilities, provided that but for Generator’s or LIPA’s negligence, as the case may be, no such revocation or loss of such license, permit or other governmental approval would have ensued.

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9.2 Notice and Opportunity to Cure Event of Default. Upon actual discovery of an Event of Default, a Party claiming the occurrence of such Event of Default must promptly provide the alleged defaulting Party with a Notice of Default and the defaulting Party shall have, in the case of failure to pay any undisputed amount, thirty (30) days and, in other defaults, forty-five (45) days to complete one of the following:

(a) cure the Event of Default; or

(b) if such default reasonably requires additional time to cure then such defaulting Party will, from the date such Party receives the Notice of Default, have (i) such longer time as is reasonable under the circumstances, not to exceed the greater of one hundred and eighty (180) days or to the mid-point of the next Summer Season to complete such cure or (ii) if the defaulting Party provides a commercially reasonable cure plan acceptable to the other Party that requires more time than provided in Section 9.2 above (“Cure Plan”), then the defaulting Party shall be extended such additional time provided for in the Cure Plan to cure the Event of Default and the other Party shall have no right to terminate this Agreement, provided that the defaulting Party diligently pursues such Cure Plan; or

(c) undertake dispute resolution pursuant to Article 10.

9.3 Dispute of Claim of Event of Default. If, within thirty (30) days of the service of a Notice of Default pursuant to Section 9.2, the Party alleged to be in default disputes in writing that an Event of Default has occurred, either Party may seek resolution of such dispute pursuant to the terms of Article 10, and this Agreement shall not be terminated by the Party claiming the occurrence of the Event of Default prior to such resolution of such dispute pursuant to the procedures of Article 10.

9.4 Remedies. This Agreement may be terminated by the non-defaulting Party effective immediately upon the non-defaulting Party providing written notice to the defaulting Party of termination if: (a) the defaulting Party or its Lenders fail to cure the Event of Default within the cure periods provided under Section 9.2 and any action for dispute resolution under Article 10 with respect to the alleged Event of Default has been completed and not determined favorably to the allegedly defaulting party; or (b) through the dispute resolution process under Article 10, it is determined that an Event of Default has occurred and the defaulting Party, pursuant to terms of this Agreement has not cured or diligently endeavored to cure, the default, as the case may be. Upon termination, the non-defaulting Party shall be entitled to such damages as are available at law and equity, subject to Article 11 hereof. The termination of this Agreement under this Section 9.4 shall not discharge either Party from any obligations, which may have accrued under this Agreement prior to such termination.

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**ARTICLE 10  
DISPUTE RESOLUTION**

10.1 Any dispute arising out of, or relating to, this Agreement, with the exception of termination pursuant to Section 9.4 or a breach of a Party's indemnity obligations under Article 11 or a Party's obligations under Article 15 of this Agreement, shall be subject to the dispute resolution procedures specified in this Article 10 which shall constitute the sole and exclusive procedures for the resolution of such disputes.

10.2 The Parties agree to use commercially reasonable efforts to settle promptly any disputes or claims arising out of or relating to this Agreement through negotiation conducted in good faith between executives of the Parties having authority to reach such a settlement. Either Party may by written notice to the other Party, refer any such dispute or claim for advice or resolution to mediation by a suitable mediator. The mediator shall be chosen by the mutual agreement of the Parties. If the Parties are unable to agree on a mediator, each Party shall designate a qualified mediator who, together with the mediator designated by the other, shall choose a single mediator for the particular dispute or claim. If the mediator chosen is unable, within thirty (30) days of such referral to reach a determination that is acceptable to the Parties, the matter shall be referred to arbitration as set forth below. All negotiation and mediation discussions pursuant to this Section 10.2 shall be confidential, subject to applicable law, and shall be treated as compromise and settlement negotiations for purposes of Federal Rule of Evidence 408 and applicable state rules of evidence.

10.3 Except for claims for temporary injunctive relief under Section 10.5, neither Party shall bring any action at law or in equity to enforce, interpret, or remedy any breach or default of this Agreement without first complying with the provisions of this Article 10; provided however, that if the Arbitrators (as defined below) fail to issue a decision within one hundred eighty (180) days after the commencement of arbitration under Section 10.4, then either Party may bring any action at law or in equity to seek enforcement, interpretation or remedy of any breach of this Agreement.

10.4 Any dispute subject to resolution under this Article 10, which has not been resolved by discussion or mediation within thirty (30) days from the date that either negotiations or mediation shall have commenced and which is not subject to the FERC's jurisdiction shall be settled by arbitration before three (3) independent and impartial arbitrators (the "Arbitrators") in accordance with the then current commercial arbitration rules of the American Arbitration Association, except to the extent that such rules are inconsistent with any provision of this Agreement, in which case the provisions of this Agreement shall be followed, and except that the arbitration under this Agreement shall not be administered by the American Arbitration Association without the express agreement of the Parties. The Arbitrators shall be (i) independent of the Parties and disinterested in the outcome of the dispute, (ii) persons otherwise experts in the electric utility industry, including bulk power markets and transmission systems, and (iii) qualified in the subject area of the issue in dispute. The Parties shall choose the Arbitrators within thirty (30) days, with each Party choosing one Arbitrator and those two Arbitrators choosing the third Arbitrator. Judgment on the award rendered by the Arbitrators

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may be entered in any court in the State of New York having jurisdiction thereof. If either Party refuses to participate in good faith in the negotiations or mediation proceedings described in Section 10.2, the other Party may initiate arbitration at any time after such refusal without waiting for the expiration of the applicable time period. Except as provided in Section 10.5 relating to provisional remedies, the Arbitrators shall decide all aspects of any dispute brought to them including attorney disqualification and the timeliness of the making of any claim.

10.5 Either Party may, without prejudice to any negotiation, mediation or arbitration procedures, proceed in the courts of the State of New York to obtain provisional judicial relief if, in such Party's sole discretion, such action is necessary to protect public safety, avoid imminent irreparable harm, provide uninterrupted electrical and other services, or preserve the status quo pending the conclusion of any dispute resolution procedures employed by the Parties or pendency of any action at law or in equity. Except for temporary injunctive relief under this Section, neither Party shall bring any action at law or in equity to enforce, interpret, or remedy any breach or default of this Agreement without first complying with the provisions of this Article; provided, however, that if the Arbitrators fail to issue a decision within one hundred eighty (180) days after the commencement of arbitration under Section 10.3, then either Party may bring any action at law or in equity to seek enforcement, interpretation or remedy of any breach of this Agreement.

10.6 The Arbitrators shall have no authority to award damages excluded under Article 11 or any other damages aside from the prevailing Party's actual, direct damages plus interest at the Interest Rate for each day commencing on the date such damages were incurred through date of payment. The Arbitrators shall not have the authority to make any ruling, finding, or award that does not conform to the terms and conditions of this Agreement. The Arbitrators' award shall be in writing and shall set forth the factual and legal bases for the award. The Parties to the arbitration shall each bear their own litigation expenses for the arbitration and shall evenly divide the common costs of the arbitration.

10.7 Unless otherwise agreed to in writing or prohibited by applicable law, the Parties shall continue to provide service, honor all commitments under this Agreement, and continue to make payments in accordance with this Agreement during the course of any dispute resolution under this Article and during the pendency of any action at law or in equity or any arbitration proceeding relating hereto.

10.8 All applicable statutes of limitation and defenses based upon the passage of time and similar contractual limitations shall be tolled while the procedures specified in this Article 10 are pending. The Parties will take such action, if any, required to effectuate such tolling. Without prejudice to the procedures specified in this Article 10, a Party may file a complaint for statute of limitations purposes, if in its sole judgment such action may be necessary to preserve its claims or defenses. Despite such action, the Parties will continue to participate in good faith in the procedures specified in this Article 10.

10.9 The Arbitrators shall have the discretion to order a pre-hearing exchange of information by the Parties, including, without limitation, the production of requested documents,

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the exchange of summaries of testimony of proposed witnesses, and the examination of the Parties by deposition. The Parties hereby agree to produce all such information as ordered by the Arbitrators and shall certify that they have provided all applicable information and that such information was true, accurate and complete

10.10 The site of any arbitration brought pursuant to this Agreement shall be in a location in Nassau County, New York County or Suffolk County as is mutually agreed to by the Parties.

**ARTICLE 11  
INDEMNITY, LIMITATION OF LIABILITY; INSURANCE**

11.1 Indemnity. Each Party (the “Indemnifying Party”) shall at all times indemnify, defend, and hold the other Party (the “Indemnified Party”) harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, the alleged violation of any Environmental Law, or the release or threatened release of any Hazardous Substance, demands, suits, recoveries, costs and expenses, court costs, attorneys’ fees, and all other obligations by or to third parties, arising out of or resulting from (a) the Indemnifying Party’s performance of its obligations, or its actions or inactions, under this Agreement, except as expressly provided otherwise herein, (b) the Indemnified Party's actions or inactions in performing obligations on behalf of the Indemnifying Party in accordance with this Agreement, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party or (c) the violation by the Indemnifying Party of any Environmental Law or the release by the Indemnifying Party of any Hazardous Substance.

11.2 Indemnified Party. If an Indemnified Party is entitled to indemnification under this Article 11 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under this Article 11, to assume the defense of such claim, such Indemnified Person may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

11.3 Indemnifying Party. If an Indemnifying Party is obligated to indemnify and hold any Indemnified Party harmless under this Article 11, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual loss, net of any insurance or other recovery, except that any insurance carrier shall be subrogated to the Indemnified Party’s interest to the extent of any insurance recovery paid to the Indemnified Party.

11.4 Indemnity Procedures. Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this Article 11 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless and to the extent that such failure or delay is materially prejudicial to the Indemnifying Party.

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11.5 Except as stated below, the Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include one or more Indemnified Parties and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may be legal defenses available to it and/or other Indemnified Parties which are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party or Indemnified Parties having such differing or additional legal defenses.

11.6 The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in which event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed.

11.7 LIPA Equipment Design and Review. Notwithstanding any other provisions of this Agreement, neither LIPA, its officers, trustees, employees, and agents nor those of its parent shall be liable to Generator, or its contractors or subcontractors, for any claims, costs, expenses, losses, lawsuits, judgments, attorney's fees or damages arising out of LIPA's equipment design and review, except for instances arising out of LIPA's failure to act in accordance with Good Utility Practice, gross negligence or willful misconduct. Generator shall indemnify and hold LIPA and its officers, trustees, employees, and agents, harmless from any claims, costs, expenses, losses, damages or judgments made against LIPA or incurred by any of Generator's contractors or subcontractors except for instances arising out of LIPA's failure to act in accordance with Good Utility Practice, gross negligence or willful misconduct. This indemnification and hold harmless obligation shall be separate from and independent of any other obligations of Generator to indemnify and hold harmless LIPA and its officers, directors, employees, and agents.

11.8 Consequential Damages. Except for indemnity and defense of action obligations set forth in this Article 11, in no event shall either Party be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages (including attorney's fees or litigation costs), including but not limited to loss of profit, revenue or opportunity, loss of the use of equipment or facilities, cost of capital, cost of temporary or substitute equipment, facilities, services or replacement power, down time costs; and claims of customers of either Party, connected with, or resulting from, performance or non-performance of this Agreement or any action undertaken in

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connection with, or related to this Agreement, including, without limitation, any such damages which are based upon causes of action for breach of contract, tort (including negligence and misrepresentation), breach of warranty or strict liability.

11.9 Survival. Each Party's indemnification and defense of action obligations under this Article for acts or occurrences prior to the expiration, termination, completion, suspension or cancellation of this Agreement shall continue in full force and effect regardless of whether this Agreement expires, terminates, or is suspended, completed or canceled. Except as noted above, such obligations shall not be limited in any way by any limitation on insurance, by the amount or types of damages, or by any compensation or benefits payable by the Parties under workers' compensation acts, disability benefits acts or other employee acts, or otherwise.

11.10 Insurance. Prior to the commencement of this Agreement, Certificates of Insurance from Generator and LIPA and / or all of Generator's and LIPA's contractors / subcontractors, that perform activities on the Project Site relative to this Agreement, shall be furnished to Generator and LIPA, as the case may be. Each Party shall, at its own expense, maintain in force throughout the term of this Agreement, and until released by the other Party, the following minimum insurance coverage, with insurers authorized to do business in the State of New York. For LIPA, T&D Manager and the Authority must be added to and insured under the following coverages:

(a) Employers' Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Attachment is located.

(b) Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of one million dollars (\$1,000,000.00) per occurrence/one million dollars (\$1,000,000.00) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

(c) Comprehensive Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of one million dollars (\$1,000,000.00) per occurrence for bodily injury, including death, and property damage.

(d) Excess Public Liability Insurance over and above the Employers' Liability Commercial General Liability and Comprehensive Automobile Liability Insurance coverage, with a minimum combined single limit of twenty million dollars (\$20,000,000.00) per occurrence/twenty million dollars (\$20,000,000.00) aggregate.



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(e) The Commercial General Liability Insurance, Comprehensive Automobile Insurance, and Excess Public Liability Insurance policies shall name the other Party, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. For LIPA, Other Party Group shall include the Authority and T&D Manager and its affiliates. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this Agreement against the Other Party Group and provide thirty (30) days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition. Insurance as specified herein must be maintained at all times during the life of this Agreement. Each Party shall provide the other Party with renewal certificates if said insurance policies are to expire prior to the expiration or termination of this Agreement. Said certificates must be provided within ten (10) days after the renewal date. Insurance as specified herein must be maintained at all times throughout the term of this Agreement.

(f) The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one (1) insured been covered. Each Party shall be responsible for its respective deductibles or retentions.

(g) The Commercial General Liability Insurance, Comprehensive Automobile Liability Insurance, and Excess Public Liability Insurance policies, shall be on an occurrence basis.

(h) The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this Agreement.

(i) Within ten (10) days following execution of this Agreement, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, each Party shall provide certification of all insurance required in this Agreement, executed by each insurer or by an authorized representative of each insurer.

(j) Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of this Article 11 to the extent it maintains a self-insurance program; provided that, such Party's senior secured debt is rated at investment grade or better by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of this Article 11. For any period of time that a Party's

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senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under this Article 11. In the event that a Party is permitted to self-insure pursuant to this Article, it shall notify the other Party that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in this Article 11.

(k) The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this Agreement.

**ARTICLE 12**  
**FORCE MAJEURE**

12.1 The term "Force Majeure Event" as used herein means those acts, omissions or circumstances which are outside of the affected Party's control and which could not be reasonably anticipated or avoided in accordance with Good Utility Practice, including without limitation any act of God, strikes or other labor disputes, acts of the public enemy, accidents, war (declared or otherwise), invasion, civil disturbance, riots, fires, storms, flood, ice, earthquakes, explosions, or action or inaction of a Governmental Authority (other than LIPA) that precludes the construction, interconnection or operation of the Plant. A Force Majeure Event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

12.2 If a Force Majeure Event causes either Party to be rendered wholly or partly unable to perform its obligations under this Agreement, except for the obligation to make payments under this Agreement when due, that Party shall be excused from performance or liability for damages to the other Party solely to the extent and during such period such Party's performance is affected.

12.3 Any Party claiming Force Majeure shall: (i) provide prompt oral notice followed by written notice to the other Party within three (3) Business Days of such Force Majeure Event giving a detailed written explanation of the event and estimate of its expected duration and probable effect on the performance of that Party's obligations hereunder, and (ii) use due diligence in accordance with Good Utility Practice to continue to perform its obligations under this Agreement to the extent unaffected by the Force Majeure Event and to remove promptly the condition that prevents performance and to mitigate the effects of the same, except that settlement of any strike or labor dispute shall be in the sole judgment of the affected Party.

12.4 No obligations of either Party which arose before the occurrence of the Force Majeure Event causing the suspension of performance are excused as a result of the occurrence.

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**ARTICLE 13  
NOTICES**

All notices shall be in writing and shall be deemed sufficiently given when mailed by United States registered or certified mail, postage prepaid, return receipt requested, hand-delivered, sent by facsimile transmission (confirmed in writing) or sent by recognized overnight courier service, addressed as follows:

To LIPA:

LIPA  
333 Earle Ovington Boulevard, Suite 403  
Uniondale, New York 11553  
Attention: Vice President of T&D Operations  
Fax: (516) 222-9137

With a copy to:  
Long Island Power Authority  
333 Earle Ovington Boulevard, Suite 403  
Uniondale, New York 11553  
Attention: General Counsel  
Fax: (516)222-9137

To T&D Manager:  
National Grid Electric Services LLC  
LIPA Power Asset Management (PAM)  
175 East Old Country Road  
Hicksville, New York 11801  
Attention: Manager, Power Asset Management  
Fax: (516) 545-6134

To Generator:

[NAME]  
[ADDRESS]  
Attention: [NAME AND TITLE]  
Fax: \_\_\_\_\_

or such other and different addresses as may be designated in writing by the Parties.

**ARTICLE 14  
ASSIGNMENT OR TRANSFER**

Neither this Agreement nor any rights or obligations hereunder may be assigned or transferred, by either Party without the prior written consent of the other Party (such consent not to be

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unreasonably withheld or delayed; provided that this Agreement may be assigned to an Affiliate with the understanding that no such assignment shall relieve the assigning Party from its obligations hereunder; and further provided that the restrictions on assignment contained in this Article shall not in any way prevent either Party from pledging, mortgaging or assigning its rights hereunder as security for its indebtedness.) Except as otherwise provided in this Article, a Party shall only consent to an assignment by the assigning Party if, in the non-assigning Party's reasonable judgment, the assignee is fully capable of performing all of the assigning Party's obligations under this Agreement and possesses the technical capability, experience, and financial capability to perform in the manner required. At least thirty (30) days prior to the effective date of the proposed assignment, the assigning Party shall deliver to the non-assigning Party an assignment and assumption agreement, duly executed, in which the assignee unconditionally assumes all of its assignor's obligations to the non-assigning Party and agrees to be bound by all of the terms and conditions of this Agreement, and whereby the assignee makes certain additional representations and warranties as appropriate for assignee as contained in this Section. Any purported assignment of this Agreement not in accordance with this Article shall be of no force and effect. Provided however, that a proposed assignment, notice of which is provided less than thirty (30) days prior to its proposed effective date shall be effective thirty (30) days following such notice.

**ARTICLE 15**  
**CONFIDENTIALITY**

15.1 Claim of Confidentiality.

(a) In connection with this Agreement, the Parties may exchange information that is deemed to be confidential whether such information is provided in written, oral, electronic or other format ("Confidential Information"). The Party disclosing such Confidential Information is referred to herein as the "Disclosing Party" and the Party receiving such Confidential Information is referred to herein as the "Receiving Party." The Disclosing Party shall mark all written Confidential Information as "Confidential," "Proprietary" or the like and in the case of Confidential Information that is communicated orally, the Disclosing Party shall within thirty (30) days' follow up such communication with a writing addressed to the Receiving Party generally describing the information and identifying it as Confidential Information. The Parties acknowledge that all information disclosed by Generator in connection with costs, pricing or operation of the Plant shall be treated as Confidential Information whether or not such information is marked or identified as Confidential Information. LIPA shall not disclose such Confidential Information without Generator's written consent, which may be withheld in Generator's sole discretion, unless LIPA is otherwise required by law to make such disclosure.

(b) The Receiving Party shall protect the Confidential Information from disclosure to third parties consistent with the provisions of this Article 15 and subject to applicable law, provided however, a Receiving Party may disclose Confidential

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Information to its Affiliates, Lenders, employees, agents or representatives of such Receiving Party, where such Affiliate, Lender, employee, agent or representative expressly agrees to be bound by the terms of this Article 15 and provided further that the Receiving Party shall be liable for any breach by its Affiliates, Lenders, employees, agents or representatives.

(c) It is further understood and agreed that money damages would not be sufficient remedy for any breach of this Article 15, and that if a Party breaches this Article 15, the Party disclosing Confidential Information to such breaching Party shall be entitled to specific performance and injunctive and other equitable relief as a remedy for any such breach. The breaching Party agrees to waive any requirement for the posting of a bond in connection with any such remedy. Such remedy shall not be deemed to be the exclusive remedy for breach of this Article 15 but shall be in addition to all other remedies available at law or equity. In the event of any legal action based upon or arising out of this Article 15, the prevailing Party in such action shall be entitled to recover reasonable attorney's fees and costs from the other Party.

15.2 Compliance with Law. If either Party is required by law to disclose Confidential Information of the other Party (by oral questions, interrogatories, requests for information or documents, subpoena, civil investigative demands, regulation, statute or otherwise), the Party required to make such disclosure will (i) notify the other Party and provide the other Party the opportunity to review the Confidential Information, and (ii) provide the other Party the opportunity to seek a protective order or other appropriate remedy. In the event that a protective order or other remedy is not obtained or is not pursued within a reasonable period of time, the Party required to make disclosure or such Party's representatives will furnish only that portion of the Confidential Information that it is legally required to disclose and the Party required to make disclosure will request that confidential treatment be accorded the Confidential Information by relevant third parties.

15.3 Compliance with the Freedom of Information Law. If LIPA is requested by a third party to disclose Confidential Information pursuant to the Freedom of Information Law ("FOIL"), LIPA will (i) notify Generator of the request and provide Generator the opportunity to review the Confidential Information; (ii) provide Generator the opportunity to provide information regarding the need for confidential treatment; (iii) evaluate the third party's request for disclosure and Generator's request for confidential treatment; and (iv) determine if the Confidential Information is subject to disclosure under FOIL. If LIPA determines that the Confidential Information is subject to disclosure, it will provide prompt written notice of such determination to Generator so that Generator may seek a protective order or other appropriate remedy. If Generator does not obtain a protective order or no formal proceeding has been initiated by Generator within a reasonable period of time after LIPA provides notice to Generator of its intent to make public the Confidential Information, then LIPA may disclose such information with no liability or further obligation to Generator.

15.4 Treatment of Otherwise Publicly Available Documents. Notwithstanding anything to the contrary in this Article, neither Party shall be required to hold confidential any

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information that (i) becomes publicly available other than through disclosure by the Receiving Party; (ii) is independently developed by the Receiving Party; or (iii) becomes available to the Receiving Party without restriction from a third party, provided that such third party is not bound by a confidentiality agreement with the Disclosing Party or its representatives. Should any person or entity seek to legally compel a Receiving Party (by oral questions, interrogatories, requests for information or documents, subpoena, civil investigative demands, regulation, statute or otherwise) to disclose any Confidential Information, the Receiving Party will provide the Disclosing Party prompt written notice so that the Disclosing Party may seek a protective order or other appropriate remedy. In the event that a protective order or other remedy is not obtained, the Receiving Party or the Receiving Party's representative will furnish only that portion of the Confidential Information that it is legally required to disclose and the Receiving Party will request that confidential treatment be accorded the Confidential Information by relevant third parties.

15.5 Term of Confidentiality. The obligations set forth in this Article shall survive expiration or termination of this Agreement for a period of two years after expiration or termination of this Agreement.

**ARTICLE 16**  
**MISCELLANEOUS**

16.1 Binding Effect. This Agreement shall inure to the benefit of and shall be binding upon the Parties and their respective successors and assigns.

16.2 Counterparts. This Agreement may be executed in several counterparts, each of which shall be an original and which together shall constitute one and the same instrument.

16.3 Records. Each Party shall establish and maintain complete and accurate books, records, documents, accounts, and other evidence directly pertinent to performance under this Agreement (hereinafter, collectively, the "Records"). The Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter. The New York State Comptroller, the New York State Attorney General, and any other person or entity authorized to conduct an examination, as well as the New York State agency or agencies involved in this Agreement, shall have access to the Records during normal business hours at Generator's or LIPA's offices, as the case may be, within the State of New York or, if no such office is available, at a mutually agreeable and reasonable venue within the state, for the term specified above for the purposes of inspection, auditing, and copying. LIPA shall take reasonable steps to protect from public disclosure any of the Records that are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute"), provided that: (i) Generator shall timely inform LIPA, in writing, that said Records should not be disclosed; (ii) said Records shall be sufficiently identified; and (iii) designation of said Records as exempt under the Statute is reasonable. Nothing contained herein shall diminish, or in any way adversely affect, Generator's or LIPA's right to discovery in any pending or future litigation.

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16.4 Amendments. This Agreement may not be amended, changed, modified or altered except in writing and signed by the Parties.

16.5 Severability. If any article phrase, provision, or portion of this Agreement is, for any reason, held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction, such article, phrase, provision or portion so adjudged shall be deemed separate, distinct, and independent, and only deemed invalid in that particular instance, and the remainder of this Agreement shall be and remain in full force and effect and shall not be invalidated, rendered illegal, unenforceable, or otherwise affected by such adjudication.

16.6 Prior Agreements Superseded. This Agreement shall completely and fully supersede all other prior understandings or agreements, both written and oral, between the Parties relating to the subject matter hereof.

16.7 Survival. Provisions of this Agreement which by their nature would survive termination or expiration of the Agreement shall survive. Without limitation of the preceding sentence, applicable provisions of this Agreement shall continue in effect after expiration or termination of this Agreement as specifically provided herein and to the extent necessary to provide for final billings, billing adjustments, and payments pertaining to liability and indemnification obligations arising from acts or events that occurred while this Agreement was in effect.

16.8 Dispute Resolution. Any disputes arising under this Agreement shall be resolved in accordance with the procedures established in Article 10 of this Agreement.

16.9 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York notwithstanding its conflict of laws provisions.

16.10 Waiver. No delay or omission in the exercise of any right under this Agreement shall impair any such right or shall be taken, construed or considered as a waiver or relinquishment thereof, but any such right may be exercised from time to time and as often as may be deemed expedient. If any agreement or covenant herein shall be breached and thereafter waived, such waiver shall be limited to the particular breach so waived and shall not be deemed to waive any other breach hereunder.

16.11 Taxes. The Parties shall use reasonable efforts to administer this Agreement and implement the provisions thereof in accordance with their intent to minimize taxes.

16.12 Non-interference. Each Party agrees that it will not construct any facilities or structures at the Project Site or engage in any activity at the Project Site that will materially interfere with the rights granted to the other Party under this Agreement.

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16.13 Further Assurances. Each of the Parties hereto shall execute and deliver any and all additional documents or instruments (including easements and other rights in land), in recordable form, and provide other assurances, obtain any additional permits, licenses, and approvals required, and shall do any and all acts and things reasonably necessary, to carry out the intent of the Parties hereto and to confirm the continued effectiveness of this Agreement.

16.14 Headings. The headings used for the articles herein are for convenience and reference purposes only and shall in no way affect the meaning or interpretation of the provisions of this Agreement.

16.15 Entire Agreement. This Agreement constitutes the entire agreement and understanding between the parties with respect to the subject matter hereof, and supersedes and replaces any prior or contemporaneous undertakings, commitments, or agreements, oral or written, as to its subject matter. This Agreement may be modified or amended only by an instrument in writing signed by authorized representatives of the Parties on or after the date hereof.

*[Signature pages to follow on next page]*



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IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date first set forth above.

**LONG ISLAND LIGHTING COMPANY d/b/a LIPA, by and through  
its agent, NATIONAL GRID ELECTRIC SERVICES LLC**

By: \_\_\_\_\_  
(Signature)

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**[PARTY NAME]**

By: \_\_\_\_\_  
(Signature)

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date \_\_\_\_\_

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**EXHIBIT A  
SYSTEM ONE-LINE / POINT OF ATTACHMENT  
AND INTERCONNECTION AND INTERCONNECTION  
FACILITIES / DEMARCATION POINTS**

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**EXHIBIT B  
INTERCONNECTION AND METERING STANDARDS**

**Interconnection Guide**

The Interconnection Facilities shall be subject to the interconnection standards provided in the “Requirements for Generating Facility Interconnection to the LIPA Transmission System.”

**Metering Standards**

Metering pursuant to the terms of this Agreement shall be subject to the “Requirements for Generating Facility Interconnection to the LIPA Transmission System.”

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**EXHIBIT C  
FACILITY DESIGN AND VERIFICATION STUDIES**

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**EXHIBIT D  
COMMISSIONING, STARTUP, AND MAINTENANCE  
PROCEDURES FOR INTERCONNECTION FACILITIES**

**Introduction**

Testing of all protective devices shall be performed on the Generator's Interconnection Facilities prior to the final functional testing of the interconnection scheme. The testing shall be performed by Generator. Relay and operational tests shall be performed in accordance with NPCC Document A-4, "Minimum Maintenance Criteria for Protective Systems." A certified relay test report shall be furnished to LIPA/T&D Manager within two weeks after completion of all testing. Generator shall notify LIPA/T&D Manager at least seven (7) business days in advance of the protective device testing to provide an opportunity for LIPA/T&D Manager to be present during the testing.

Submitted documentation of the operational relay testing shall include graphic or digital recordings of actual current and voltage levels obtained during the test(s). Each relay test shall include a calibration check and an actual trip of the circuit breaker from the relay being tested.

A log of all relay target indications resulting from automatic circuit breaker operations shall be maintained. The relay target information is utilized to verify cause of the failure and to determine if relays operated as expected to isolate the Generator's Interconnection Facilities from LIPA's transmission system. This data shall be reviewed periodically, and upon request, shall be made available for Generator's inspection.

**Operational Testing**

Detailed and coordinated operational test procedures shall be developed jointly by LIPA/T&D Manager and Generator. These test procedures must include relay settings, continuity of relay circuits, breaker trip and close coils (AC and DC circuits), insulation impedances of protective circuits and current and voltage transformers.

To the maximum degree practicable, the components used in protection systems shall be of proven quality, as demonstrated either by actual experience or by stringent tests under simulated operating conditions, to ensure that the reliability of the protection system shall not be degraded or reduced.

The test procedures must demonstrate that:

- (a) All relays operate from all possible sources of trip signals or voltage.
- (b) All relays trip the desired breaker(s).
- (c) The Generator's Interconnection Facilities will be isolated for complete loss of the Facility.
- (d) The ratio and polarity of relay and instrument transformers are correct.
- (e) The phase angle characteristics of directional and other relays are correct.
- (f) Relays have been tested at pick-up and three multiples of minimum pick-ups (e.g., three, five, and eight times).

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All relays must be field verified and bench tested to meet the following tolerance criteria:

<b>Test Parameter</b>	<b>Tolerance of Specified Settings</b>
Current	+/- 5%
Voltage	+/- 5%
Time	+/- 5%
Frequency	+0.05 hertz
Phase Angle	+/- 3 degrees

The actual operational tests shall be performed after all equipment is installed and repeated every two years thereafter. Certified test results shall be submitted to LIPA/T&D Manager. Periodic inspections of AC and DC control power for all circuit breaker, reference single-line diagrams, relay protection diagrams, and coordination test data must accompany test reports.

LIPA/T&D Manager shall be notified by Generator at least seven (7) business days prior to the operational tests.

**Maintenance**

All equipment associated with the Generator's Interconnection Facilities shall be maintained in accordance with LIPA's then-current maintenance procedures and Good Utility Practice.

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**EXHIBIT E  
INTERCONNECTION COST ESTIMATE**

**The current interconnection estimate is [INSERT DOLLAR AMOUNT]**

The illustration above represents an estimate of reimbursable cost. Upon execution of this Agreement, estimated cost will be progress billed in three (3) equal installments. Estimated costs are subject to a final reconciliation which will be invoiced upon completion of all work and final accounting of all costs.