

CERTIFICATION

I do hereby certify that the attached Department Policy and Procedure is a true and accurate copy of the original instrument as it is on file at the Department.



City of Seattle

[Signature] Date *01/10/12*

Seattle City Light Department

City Light Department

DEPARTMENT POLICY & PROCEDURE

Subject

Number

DPP 500 P III-305

STANDARDS FOR INTERCONNECTION OF GENERATORS 20 MW AND LESS IN CAPACITY TO SEATTLE CITY LIGHT'S ELECTRICAL DISTRIBUTION SYSTEM

Effective

January 11, 2012

Supersedes

November 22, 2010

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Approved by Jorge Carrasco

1.0 Purpose

- 1.1 This Department Policy & Procedure (DPP) sets standards for interconnection of small generators, net metered up to 100 kW and sized up to 20 MW in capacity, to Seattle City Light's primary electrical distribution system.
- 1.2 This DPP replaced DPP III-305 (2006) which sets standards for interconnection of small generators up to 25 kW in capacity to Seattle City Light's primary electrical distribution system. This policy is consistent with those adopted by the majority of other electrical utilities in Washington State, and is consistent with Washington State and Federal energy policies, notably with the requirements of Chapter 80.60 RCW, Net Metering of Electricity and Chapter 480-108 WAC, Electric companies – interconnection with electric generators; to partially comply with Section 1254 of the federal Energy Policy Act of 2005, Pub. L. No. 109-58 (2005); and to promote the purposes of the state legislature's Substitute Senate Bill 5101, Chapter 300, Laws of 2005 (effective July 1, 2005).

2.0 Organization Affected

- 2.1 Customer Service & Energy Delivery Business Unit
- 2.2 Power Supply & Environmental Affairs Business Unit

3.0 References

STANDARDS FOR INTERCONNECTION OF GENERATORS
20 MW AND LESS IN CAPACITY TO SEATTLE CITY LIGHT'S
ELECTRICAL DISTRIBUTION SYSTEM
DPP III-305

- 3.1 National Electric Code (NEC); National Electric Safety Code (NESC); the Institute of Electrical and Electronics Engineers (IEEE); American National Standards Institute (ANSI); Underwriters Laboratories (UL) standards; Occupational Safety and Health Administration (OSHA) Standard 29, CFR 1910.269; the NEC, Washington Administrative Code (WAC) rules; the Washington Industrial Safety and Health Administration (WISHA) Standard.
- 3.2 National and International Standards applying specifically to interconnection:
- 3.2.1 IEEE Standard 1547-2003, Standard for Interconnecting Distributed Resources with Electric Power Systems.
- 3.2.2 UL Standard 1741, Inverters, Converters, and Controllers for Use in Independent Power Systems. Equipment claiming applicability must be UL listed.
- 3.2.3 IEEE Standard 929-2000, IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems.
- 3.2.4 ANSI Standard C37.90, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.
- 3.2.5 ANSI/IEEE 665, Guide for Generating Station Grounding.
- 3.3 Seattle City Light documents:
- 3.3.1 Seattle City Light Electrical Distribution System Interconnection Requirements, Procedures, Applications, and Agreements for Generating Facilities Not Greater Than 20 MW.
- 3.3.2 Procedures, Requirements, and Standards for Connection to Seattle City Light's High Voltage System.

4.0 Definitions

- 4.1 Applicant. Any person, corporation, partnership, government agency, or other entity applying to interconnect a Generating Facility to the Utility's electrical distribution system pursuant to this chapter.
- 4.2 Application. The written notice as defined in WAC 480-108-030 provided by the Applicant to the Utility that initiates the interconnection process.
- 4.3 Area Network. A section of the Utility's Electrical Distribution System served by multiple transformers interconnected in an electrical network circuit generally used in large, densely populated metropolitan areas in order to provide high reliability of service.

- 4.4 Bulk Electric System. Refers to the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher.
- 4.5 Certificate of Completion. A copy of the Interconnection Agreement, signed by the utility once the electrical inspector having jurisdiction over the installation of the facilities passes the installation, and any work requiring utility staff is completed, such as the installation of a production meter, if required.
- 4.6 Department. The City Light Department.
- 4.7 Electrical Distribution System. All electrical wires, equipment, and other facilities owned or provided by the Utility that are used to transfer electricity to customers.
- 4.8 Generating Facility. A source of electricity owned by the Applicant or Generator that is located on the Applicant's side of the point of common coupling, and all facilities ancillary and appurtenant thereto, including interconnection facilities, which the Applicant requests to interconnect to the Utility's Electrical Distribution System.
- 4.9 Generator. The entity that owns and/or operates the Generating Facility interconnected to the Utility's Electrical Distribution System.
- 4.10 Initial Operation. The first time the Generating Facility is in parallel operation with the Utility's Electrical Distribution System.
- 4.11 In-service Date. The date on which the Generating Facility and any related facilities are complete and ready for service, even if the Generating Facility is not placed in service on or by that date.
- 4.12 Interconnection. The physical connection of a Generating Facility to the Utility's Electrical Distribution System so that parallel operation may occur.
- 4.13 Interconnection Agreement. The standardized terms and conditions that govern the interconnection of Generating Facilities pursuant to these rules. The model interconnection agreement may be modified to accommodate terms and conditions specific to individual interconnections, subject to the conditions set forth in these rules.
- 4.14 Interconnection Facilities. The electrical wires, switches and other equipment used to interconnect a Generating Facility to the Electrical Distribution System.
- 4.15 Net Metering. Measuring the difference between the electricity supplied by the Utility and the electricity generated by a Generating Facility that may be fed back to the Utility over the applicable billing period.

- 4.16 Parallel Operation or Operate in Parallel. The synchronous operation of a Generating Facility while interconnected with the Utility's Electrical Distribution System.
- 4.17 Point of Common Coupling (PCC). The point where the Generating Facility's local electric power system connects to the Utility's Electrical Distribution System, such as the electric power revenue meter or at the location of the equipment designated to interrupt, separate or disconnect the connection between the Generating Facility and the Utility.
- 4.18 Small Generator Interconnection Procedures. Seattle City Light Electrical Distribution System Interconnection Requirements, Procedures, Applications, and Agreements for Generating Facilities Not Greater Than 20 MW document, which specifies the procedures and agreement by which the Utility will evaluate small generating systems up to 20 MW, for interconnection to the Utility's Electrical Distribution System.
- 4.19 Spot Network. A section of an Electrical Distribution System that uses two or more inter-tied transformers to supply an electrical network circuit.
- 4.20 Utility. The City Light Department, also known as Seattle City Light or SCL, which owns and operates the Electrical Distribution System, or the Electrical Distribution System itself, onto which the Applicant seeks to interconnect a Generating Facility.

5.0 Policy

- 5.1 The Department shall follow standards outlined in the *Seattle City Light Electrical Distribution System Interconnection Requirements, Procedures, Applications, and Agreements for Generating Facilities Not Greater Than 20 MW* when interconnecting applicable non-utility generators.
- 5.2 Customers requesting connection to the Bulk Electric System shall comply with the requirements in the *Procedures, Requirements, and Standards for Connection to Seattle City Light's High Voltage System* available from the SCL System Engineering group.
- 5.3 This DPP shall be amended from time to time as required to comply with applicable governmental laws and regulations, such as Net Metering (RCW 80.60) as they are enacted and/or amended.
- 5.4 This DPP does not establish any obligation on the Department to interconnect any generator to Seattle City Light's electrical power system, except as may otherwise be required by applicable laws and regulations (for example generators qualified for net metering, per RCW 80.60).
- 5.5 Interconnection of a Generating Facility within Seattle City Light's Spot Network or Area Network Systems must be inverter-based only. Applicant must provide evidence to the satisfaction of the Utility that its Generating Facility will never result in reverse current flow through the Utility's network protectors. All instances of interconnection within spot network or

area network systems shall require review and written pre-approval by the Utility. Closed transition transfer switches are not allowed in the Utility's electrical Network Systems.

- 5.6 The location of all interconnected non-utility generators within Seattle City Light's electrical power system may be recorded with the System Control Center's System Operator for operational and safety purposes.

6.0 Responsibilities

- 6.1 Seattle City Light staff approving application for interconnection of a non-utility Generating Facility shall be responsible for providing written notice of such approval, with system location data to the Utility's System Operator before such Generating Facility is energized.

7.0 Procedure

- 7.1 The technical standards listed in this section shall apply to all Generating Facilities equal to or less than 20 MW to be interconnected to the Utility's Electrical Distribution System.
- 7.2 General interconnection requirements.
- 7.2.1 Any Generating Facility desiring to interconnect with the Utility's Electrical Distribution System or modify an existing interconnection must meet all minimum technical specifications applicable, in their most current approved version, as set forth in this chapter.
- 7.2.2 The specifications and requirements in this section are intended to mitigate possible adverse impacts caused by the Generating Facility on Utility equipment and personnel and on other customers of the Utility. They are not intended to address protection of the Generating Facility itself, Generating Facility personnel, or its internal load. It is the responsibility of the Generating Facility to comply with the requirements of all appropriate standards, codes, statutes and authorities to protect its own facilities, personnel, and loads.
- 7.2.3 The specifications and requirements in this section shall apply generally to the non-utility-owned electric generation equipment to which this standard and agreement(s) apply throughout the period encompassing the Generator's installation, testing and commissioning, operation, maintenance, decommissioning and removal of said equipment. The Utility may verify compliance at any time, with reasonable notice.
- 7.2.4 The Generator shall comply with the requirements in subsections 7.2.4.1, 7.2.4.2 and 7.2.4.3. However, at its sole discretion, the Utility may approve alternatives that satisfy the intent of, and/or may excuse compliance with, any specific elements of these requirements.

- 7.2.4.1 Code and standards. Applicant shall conform to all applicable codes and standards for safe and reliable operation. Among these are the National Electric Code (NEC), National Electric Safety Code (NESC), North American Electrical Reliability Corporation (NERC) Reliability Standards, applicable regional, sub-regional and Power Pool requirements, the Institute of Electrical and Electronics Engineers (IEEE), American National Standards Institute (ANSI), and Underwriters Laboratories (UL) standards, and local, state and federal building codes. The Generator shall be responsible to obtain all applicable permit(s) for the equipment installations on its property.
- 7.2.4.2 Safety. All safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) Standard 29, CFR 1910.269, the NEC, Washington Administrative Code (WAC) rules, the Washington Industrial Safety and Health Administration (WISHA) Standards, and equipment manufacturer's safety and operating manuals.
- 7.2.4.3 Power Quality. Installations will be in compliance with all applicable standards including IEEE Standard 519-1992 Harmonic Limits.

7.3 Specific interconnection requirements.

- 7.3.1 For Generating Facilities greater than 100 kW, Applicant shall furnish and install on Applicant's side of the meter, a UL-approved safety disconnect switch which shall be capable of fully disconnecting the Applicant's Generating Facility from the Utility's Electrical Distribution System. The disconnect switch shall be located adjacent to Utility meters and shall be of the visible break type in a metal enclosure which can be secured by a padlock. The disconnect switch shall be accessible to the Utility personnel at all times.
- 7.3.2 The requirement in subsection 7.3.1 above may be waived by the Utility if: (a) Applicant provides interconnection equipment that Applicant can demonstrate, to the satisfaction of the Utility, performs physical disconnection of the generating equipment supply internally; and (b) Applicant agrees that its service may be disconnected entirely if generating equipment must be physically disconnected for any reason.
- 7.3.3 The Utility shall have the right to disconnect the Generating Facility at the disconnect switch under the following circumstances: when necessary to maintain safe electrical operating conditions; if the Generating Facility does not meet required standards, or these requirements; if the Generating Facility at any time adversely affects or endangers any person, the property of any person, the Utility's operation of its Electrical Distribution System or the quality of the Utility's service to other customers; or failure of the owner of record, as filed with the Utility, to notify the Utility of a sale or transfer of the Generating Facility or the premises on which the Generating Facility is located.

- 7.3.4 Nominal voltage and phase configuration of Applicant's Generating Facility must be compatible to the Utility's Electrical Distribution System at the point of common coupling.
- 7.4 Specifications applicable to all inverter-based interconnections. Any inverter-based Generating Facility desiring to interconnect with the Utility's Electrical Distribution System or modify an existing interconnection must meet the technical specifications, in their most current approved version, as set forth below.
- 7.4.1 IEEE Standard 1547-2003: Standard for Interconnecting Distributed Resources with Electric Power Systems.
- 7.4.2 UL Standard 1741: Inverters, Converters, and Controllers for Use in Independent Power Systems. Equipment must be UL listed. IEEE Standard 929-2000: IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems.
- 7.5 Requirements applicable to all non-inverter-based interconnections (refer to Small Generator Interconnection document in Appendix). Non-inverter based interconnection requests may require more detailed review, testing, and approval by the Utility, at applicant cost, of the equipment proposed to be installed to ensure compliance with applicable technical specifications, in their most current approved version, including:
- 7.5.1 IEEE Standard 1547-2003: Standard for Interconnecting Distributed Resources with Electric Power Systems.
- 7.5.2 ANSI Standard C37.90: IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.
- 7.5.3 Applicants proposing such interconnection may also be required to submit a power mitigation plan for Utility review and approval.
- 7.6 Application for Interconnection.
- 7.6.1 When an Applicant requests interconnection from the Utility, the Applicant shall be responsible for conforming to the rules, regulations, procedures and requirements that are in effect and on file with the Utility. The Utility will designate a point of contact and provide a telephone number or website address for this purpose. The Applicant seeking to interconnect a Generating Facility under these rules must fill out and submit a signed application form. Information must be accurate, the application must be complete, and approved by the Utility prior to its review and approval of the Generating Facility's installation.

The Utility offers four interconnection review paths for Applicants requesting interconnection. Each Level is further detailed in the Department's "Interconnection

Requirements, Procedures, Applications, and Agreements for Generating Facilities Not Greater Than 20 MW" found in the Appendix to this DPP.

- 7.6.1.1 Level 1 – For certified, inverter-based Generating Facilities that have a generating capacity of 100 kilowatts (kW) or less on the radial system, Spot or Area Network systems under certain conditions, that pass all specified technical screens.
 - 7.6.1.2 Level 2 – For all Generating Facilities that have a generating capacity of 2 MW or less that pass all specified technical screens.
 - 7.6.1.3 Level 3 – For all Generating Facilities that: (a) pass specified technical screens; (b) do not export power to the Utility; and (c) have a generating capacity of 20 MW or less.
 - 7.6.1.4 Level 4 – For all Generating Facilities that do not qualify for Level 1, Level 2, or Level 3 interconnection review process.
- 7.6.2 Application Fees. The Utility has set application fees for the following types of Generating Facility applications:
- 7.6.2.1 Level 1 – No interconnection application fee for certified inverter-based facilities equal to or less than 100 kW.
 - 7.6.2.2 Level 2 and 3 – The Utility may elect to charge an application fee of \$50 plus \$1 per kW of the generating capacity for its review.
 - 7.6.2.3 Level 4 – The Utility may elect to charge an application fee of \$100 plus \$1 per kW of the generating capacity, including charges for actual time spent for its review.
- 7.6.3 Application Prioritization. All generation interconnection requests pursuant to this chapter will be prioritized by the Utility in the same manner as any new load requests. Preference will not be given to either request type. The Utility will process the application and provide interconnection in a time frame consistent with the average of other service connections.
- 7.6.4 Application Evaluation. All generation interconnection requests pursuant to this chapter will be reviewed by the Utility for compliance with these requirements and procedures. If the Utility in its sole discretion finds that the application does not comply with these requirements, the Utility may reject the application. If the Utility rejects the application it shall provide the Applicant with written notification stating its reasons for rejecting the application.

7.6.5 Applicant elects and the Utility shall cause to be performed the study consistent with Section H(3) of the Small Generator Interconnection document.

7.7 General Terms and Conditions. The general terms and conditions listed in this section shall apply to all Generating Facilities interconnecting to the Utility.

7.7.1 Any electrical Generating Facility with a maximum electrical generating capacity of 20 MW or less must comply with these requirements to be eligible to interconnect and operate in parallel with the Utility's Electrical Distribution System. These requirements shall apply to all interconnecting Generating Facilities that are intended to operate in parallel with the Utility's Electrical Distribution System, irrespective of whether the Applicant intends to generate energy to serve all or a part of the Applicant's load, or to sell the output.

7.7.2 In order to ensure system safety and reliability of interconnected operations, all interconnected Generating Facilities shall be constructed and operated by Generator in accordance with these requirements and all other applicable federal, state, and local laws and regulations. It is the sole responsibility of the Generator to ensure compliance with such requirements and all applicable laws and regulations.

7.7.3 Prior to initial operation, all Generators must notify the Utility once their installed Generating Facility passes electrical inspection by the appropriate authority; execute the appropriate interconnection agreement contained in the Appendix, as well as any other agreement(s) required by this DPP for the disposition of the Generating Facility's electric power output. The interconnection agreement between the Utility and Generator establishes the interconnection standards, cost allocation and billing agreements, and on-going maintenance and operation requirements.

7.7.4 This DPP and the "Interconnection Requirements, Procedures, Applications, and Agreements for Generating Facilities Not Greater Than 20 MW" document (the "Small Generator Interconnection document") govern the terms and conditions under which the Applicant's Generating Facility will interconnect with, and operate in parallel with, the Utility's Electrical Distribution System. This DPP and the Small Generator Interconnection document do not govern the settlement, purchase or delivery of any power generated by Applicant's Generating Facility. The purchase or delivery of power, including net metering of electricity pursuant to Chapter 80.60, RCW, and other services that the Applicant may require will be covered by separate agreement or pursuant to the terms, conditions and rates as may be from time to time approved by the Utility. Any such agreement shall be complete and fully executed prior to initial operation and properly filed with the Utility.

7.7.5 Applicant or Generator shall promptly furnish the Utility with copies of such plans, specifications, records, and other information relating to the Generating Facility or the

ownership, operation, use, or maintenance of the Generating Facility, as may be reasonably requested by the Utility from time to time.

- 7.7.6 For the purposes of public and working personnel safety, any non-approved generation interconnections discovered will be immediately disconnected from the Utility's Electrical Distribution System.
- 7.7.7 To ensure reliable service to all Utility customers and to minimize possible problems for other customers, the Utility will review the need for a dedicated-to-single-customer transformer. Interconnecting Generating Facilities may require a separate transformer. If the Utility requires a dedicated transformer, the Applicant or Generator shall pay for all costs of the new transformer and related facilities.
- 7.7.8 Metering.
- 7.7.8.1 Net Metering for Solar, Wind, Hydropower and Fuel Cells as set forth in RCW 80.60: The Utility shall install, own and maintain a kilowatt-hour meter, or meters as the installation may determine, capable of registering the bi-directional flow of electricity at the point of common coupling at a level of accuracy that meets all applicable standards, regulations and statutes. The meter(s) may measure such parameters as time of delivery, power factor, voltage and such other parameters as the Utility shall specify. The Applicant shall provide space for metering equipment. It will be the Applicant's responsibility to provide the current transformer enclosure (if required), meter socket(s) and junction box after the Applicant has submitted drawings and equipment specifications for the Utility approval. The Utility may approve other generating sources for net metering but is not required to do so. Net metering is available to Generating Facilities sized up to 100 kW only.
- 7.7.8.2 Production Metering: The Utility may require separate metering for production of electricity as required under applicable power purchase or credit programs. This meter will record all generation produced and may be billed separately from any net metering or customer usage metering. All costs associated with the installation of production metering will be paid by the Applicant.
- 7.7.9 Common labeling furnished or approved by the Utility and in accordance with NEC requirements must be posted on meter base, disconnects, and transformers informing working personnel that generation is operating at or is located on the premises.
- 7.7.10 As currently set forth for qualifying generation under RCW 80.60, for solar, wind, hydro or fuel cells no additional insurance will be necessary for Level 1 interconnection requests. For other Generating Facilities approved under these requirements but not contained within RCW 80.60, additional insurance, limitations of liability and indemnification may be required by the Utility. The general provisions and requirements

of the Small Generator Interconnection document list the recommended insurance fees for Level 2, 3, or 4 interconnection requests.

- 7.7.11 Prior to any future modification or expansion of the Generating Facility, the Generator will obtain Utility review and approval. The Utility reserves the right to require the Generator, at the Generator's expense, to provide corrections or additions to existing electrical devices in the event of modification of government or industry regulations and standards.
- 7.7.12 For the overall safety and protection of the utility system, RCW 80.60.020 currently limits interconnection of generation for net metering to 0.25% of the utility's peak demand during 1996. Additionally, interconnection of Generating Facilities to individual distribution feeders will be limited to 10% of the feeder's peak capacity. However, the Utility may, in its sole discretion, allow additional generation interconnection beyond these stated limits.
- 7.7.13 It is the responsibility of the Generator to protect its facilities, loads and equipment and comply with the requirements of all appropriate standards, codes, statutes and authorities.
- 7.7.14 Charges by the Utility to the Applicant or Generator in addition to the application fee, if any, will be cost-based and applied as appropriate. Such costs may include, but are not limited to, transformers, production meters, and utility testing, qualification, and approval of non UL 1741 listed equipment. The Generator shall be responsible for any costs associated with any future upgrade or modification to its interconnected system required by modifications to the Utility's Electrical Distribution System or Bulk Electrical System.
- 7.7.15 Generator may disconnect the Generating Facility at any time; provided that the Generator provides reasonable advance notice to the Utility, unless an emergency condition requires that the Generating Facility be disconnected.
- 7.7.16 Generator shall notify the Department at the time of the sale or transfer of the Generating Facility, the interconnection facilities or the premises upon which the facilities are located. The Applicant or Generator shall not assign its rights or obligations under any agreement entered into pursuant to these requirements without the prior written consent of the Utility, which consent shall not be unreasonably withheld.
- 7.7.17 All Generating Facilities must obtain required electrical permit(s) and pass electrical inspection by the proper authority before the Generating Facility will be connected or operated in parallel with the Utility's Electrical Distribution System. Generator shall provide notification to the Utility that the Generating Facility has been installed and inspected in compliance with the local building and/or electrical codes.

8.0 Required Filings

- 8.1 The Utility shall maintain on file for inspection at its place of business, the charges, terms and conditions for interconnections pursuant to these requirements. Such filing includes forms of the fully executed interconnection applications and interconnection agreements. In addition, the Utility will retain all applications and agreements for a minimum of three years, per North American Electric Reliability Corporation (NERC, Standard FAC-002) requirements.
- 8.2 Exceptions. The Utility may grant such exceptions to these requirements as may be appropriate in individual cases.

9.0 Appendix

- 9.1 Distribution: Posted online at <http://sclweb.light.ci.seattle.wa.us/dpp/>
- 9.2 Seattle City Light Electrical Distribution System, Interconnection Requirements, Procedures, Applications, and Agreements for Generating Facilities Not Greater Than 20 MW.
- 9.3 Flowcharts: Level 1, 2, 3, and 4 Interconnection Application Process.

10.0 Revision History

Version	Date	Changes Made	Author/Key Contact
4.0	11-17-2011	Level 4 worksheet added. Previously omitted inadvertently. Update Coordinated By: Jackie Kirn	Gary Colburn
3.0	9-15-2010	Formatting changes. Name change of appendix. Consistent use of "electrical distribution system." Removed requirements for connecting to transmission system. Verified title of DPP to include "distribution" Update Coordinated By: Jackie Kirn	Uzma Siddiqi
2.0	12-15-2009	Reformatted to match new DPP template; replaces current interconnection procedures, applications, and agreement process of 25 kW and raises it to up to 20 MW in size	George Grepo
1.0	05-24-2006		Jack Brautigam

Appendix

**Seattle City Light
Electrical Distribution System**

**Interconnection Requirements, Procedures,
Applications, and Agreements for
Generating Facilities Not Greater Than 20 MW**

Seattle City Light Small Generator Interconnection Requirements

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TABLE OF CONTENTS

- (A) Definitions**
 - (B) Scope**
 - (C) Applicable Standards**
 - (D) Order of Review**
 - (E) Level 1 Screening Criteria and Process for
Inverter-Based Generating Facilities Not Greater than 100 kW**
 - (F) Level 2 Screening Criteria and Process for
Generating Facilities Not Greater than 2 MW**
 - (G) Level 3 Screening Criteria and Process for
Non-Exporting Generating Facilities Not Greater than 20 MW**
 - (H) Level 4 Process for All Other Generating Facilities**
 - (I) Online Application Requirement**
 - (J) General Provisions and Requirements**
 - (K) Dispute Resolution**
- Attachment 1: Level 1 Interconnection Application and Agreement**
- Attachment 2: Interconnection Application for Levels 2, 3 and 4**
- Attachment 3: Interconnection Agreement for Levels 2, 3 and 4**
- Attachment 4: Certificate of Completion**
- Attachment 5: Feasibility, Impact and Facilities Study Agreements**

Seattle City Light Small Generator Interconnection Requirements

(A) Definitions:

1. "Applicant" means a person or entity that has filed an application to interconnect a Generating Facility to a Utility's Electrical Distribution System. For a Generating Facility that will offset part or the entire load of a Utility customer, the Applicant is that customer, regardless of whether the customer owns the Generating Facility or a third party owns the Generating Facility. For a Generating Facility selling electric power to a Utility, the owner of the Generating Facility is the Applicant.
2. "Area Network" means a section of the Utility's Electrical Distribution System served by multiple transformers interconnected in an electrical network circuit generally used in large, densely populated metropolitan areas in order to provide high reliability of service, and having the same definition as the term "secondary grid network" as defined in IEEE Standard 1547.
3. "Certified" has the meaning provided in Section C of these procedures, regarding IEEE and UL standards applicable to Generating Facility components.
4. "Days" means regular business days, i.e., Monday through Friday, excluding Federal holidays.
5. "Electrical Distribution System" means the equipment operated and maintained by a Utility to deliver electric service to end-users, including without limitation distribution lines, substations, transformers, Spot Networks and Area Networks.
6. "Fault Current" means electrical current that flows through a circuit and is produced by an electrical fault, such as to ground, double-phase to ground, three-phase to ground, phase-to-phase, and three-phase. A Fault Current is several times larger in magnitude than the current that normally flows through a circuit.
7. "FERC" means Federal Energy Regulatory Commission.
8. "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: 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.
9. "Generating Capacity" means the rated capacity of a Generating Facility in alternating current. For an inverter-based Generating Facility, the Generating Capacity is the rated capacity of the inverter.
10. "Generating Facility" means the equipment used by an Interconnection Customer to generate, store, manage, interconnect and monitor electricity. A Generating Facility includes an Interconnection Equipment Package.
11. "IEEE" means the Institute of Electrical and Electronic Engineers.
12. "IEEE Standards" means the standards published by the Institute of Electrical and Electronic Engineers, available at www.ieee.org.

Seattle City Light Small Generator Interconnection Requirements

13. "Interconnection Agreement" means a standard form agreement between an Interconnection Customer and a Utility governing the interconnection of a Generating Facility to a Utility's Electrical Distribution System, as well as the ongoing operation of the Generating Facility after it is interconnected. For Level 1, the standard form Interconnection Agreement is incorporated with the Level 1 application, provided in Attachment 1 to these rules. For Levels 2, 3 or 4, the standard form Interconnection Agreement is provided in Attachment 3 to these rules.
14. "Interconnection Customer" means an Applicant that has entered into an Interconnection Agreement with a Utility to interconnect a Generating Facility and has interconnected that Generating Facility.
15. "Interconnection Equipment Package" means a group of components connecting an electric generator with an Electrical Distribution System, and includes all interface equipment including switchgear, inverters or other interface devices. An Interconnection Equipment Package may include an integrated generator or electric source.
16. "Interconnection Requirements" means these rules and requirements including attachments.
17. "Minor System Modifications" means modifications to a Utility's Electrical Distribution System, including activities such as changing the fuse in a fuse holder cut-out, changing the settings on a circuit re-closer and other activities that usually entail less than four hours of work and \$1000 in materials.
18. "Parties" means the Applicant and the Utility in a particular Interconnection Agreement. "Either Party" refers to either the Applicant or the Utility.
19. "Point of Common Coupling" means the point in the interconnection of a Generating Facility with an Electrical Distribution System at which the harmonic limits are applied and shall have the same meaning as in IEEE Standard 1547.
20. "Spot Network" means a section of an Electrical Distribution System that uses two or more inter-tied transformers to supply an electrical network circuit. A Spot Network is generally used to supply power to a single Utility customer or to a small group of Utility customers, and has the same meaning as the term is used in IEEE Standard 1547.
21. "UL" means Underwriters Laboratories, which has established standards available at <http://ulstandardsinfont.com/> that relate to components of Generating Facilities.
22. "Utility" means Seattle City Light, or SCL.

(B) **Scope:** These Interconnection Requirements are applicable for all state-jurisdictional interconnections of Generating Facilities. There are four review paths:

Level 1. - For inverter-based Generating Facilities that pass specified screens and have a Generating Capacity of 100 kilowatts (kW) or less.

Level 2. - For Generating Facilities that pass specified screens and have a Generating Capacity of 2 megawatts (MW) or less.

Seattle City Light Small Generator Interconnection Requirements

Level 3. - For Generating Facilities that: (a) pass specified screens; (b) do not export power to the Utility; and (c) have a Generating Capacity of 20 MW or less.

Level 4. - For all Generating Facilities that do not qualify for Level 1, Level 2 or Level 3 interconnection review processes.

Capacity of the Generating Facility: If the Interconnection Request is for an increase in capacity for an existing Generating Facility, the Interconnection Request shall be evaluated on the basis of the new total capacity of the Generating Facility. If the Interconnection Request is for a Generating Facility that includes multiple energy production devices at a site for which the Applicant seeks a single Point of Interconnection, the Interconnection Request shall be evaluated on the basis of the aggregate capacity of the multiple devices. The Interconnection Request shall be evaluated using the maximum rated capacity of the Generating Facility.

(C) **Applicable Standards:** Unless waived by the Utility, a Generating Facility must comply with the following standards, as applicable:

1. IEEE Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems for Generating Facilities up to 10 MW in size,
2. IEEE Standard 1547.1 for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems, and
3. UL 1741 Standard for Inverters, Converters and Controllers for Use in Independent Power Systems. UL 1741 compliance must be recognized or Certified by a Nationally Recognized Testing Laboratory as designated by the U.S. Occupational Safety and Health Administration. Certification of a particular model or a specific piece of equipment is sufficient. It is also sufficient for an inverter built into a Generating Facility to be recognized as being UL 1741 compliant by a Nationally Recognized Testing Laboratory.
4. ANSI Standard C37.90: IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.
5. IEEE Std. 142-2007: Grounding of Industrial and Commercial Power Systems
6. ANSI/IEEE Std. 80: IEEE Guide for Safety in Substation Grounding
7. IEEE 81-1: Guide for Measuring Earth Resistivity Ground Impedance, Earth Potentials
8. IEEE 81-2: Measurement of Impedance and Safety Characteristics of Large, Extended or Interconnected Grounding Systems
9. ANSI/IEEE 665: Guide for Generating Station Grounding
10. IEEE 837: Qualifying Permanent Connections Used in Substation Grounding
11. IEEE 487: Protection of Wire-Line Communications Serving Electric Power Stations
12. ANSI/IEEE 367: Recommended Practice for Determining the Electric Power Station Ground Potential Rise and Induced Voltage from a Power Fault
13. Installations will be in compliance with all applicable standards including IEEE Standard 519-1992 Harmonic Limits.

Seattle City Light Small Generator Interconnection Requirements

14. Applicants proposing such non-inverter based Generating Facilities may also be required to submit a power factor mitigation plan for utility review and approval.
 15. Applicant shall conform to all other applicable codes and standards for safe and reliable operation: including the National Electric Code (NEC), National Electric Safety Code (NESC), North American Electrical Reliability Corporation (NERC) Reliability Standards, applicable regional, sub-regional, and Power Pool requirements, and local, state and federal building codes. The generator shall be responsible to obtain all applicable permit(s) for the equipment installations on its property.
 16. Safety: All safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) Standard 29, CFR 1910.269, the National Electrical Code (NEC), Washington Administrative Code (WAC) rules, the Washington Industrial Safety and Health Administration (WISHA) Standard, and equipment manufacturer's safety and operating manuals.
- (D) **Order of Review:** If approval of a Generating Facility interconnection will determine whether any other proposed Generating Facility will fail a technical screen or one of the standards listed in Section (C), the Utility shall process the relevant Generating Facilities' applications in the order they were received. If an Applicant is denied approval for interconnection under one level and reapplies within ten business days under another level, the date of Utility receipt of the initial application shall be used for purposes of the order of review. No automatic extension of Utility review periods are allowed due to one proposed Generating Facility's impact on another proposed Generating Facility.
- (E) **Level 1 Screening Criteria and Process for Inverter-Based Generating Facilities Not Greater than 100 kW:**
1. Application: An Applicant must submit a Level 1 Interconnection Application using the standard form provided in Attachment 1 to these Interconnection Requirements, which may be sent electronically to a recipient designated by the Utility. Within three business days of receipt, the Utility shall acknowledge receipt of the application and notify Applicant whether or not the application is complete. If the application is incomplete, the Utility shall provide a written list detailing all information that must be provided to complete the application. The Applicant shall have ten business days after receipt of the list of incomplete material to submit the listed information, or to request an extension of time to provide such information. Otherwise, the application will be deemed withdrawn. The Utility shall notify the Applicant within three business days of receipt of a revised application whether the application is complete or incomplete. The Utility may deem the application withdrawn if it remains incomplete. An Applicant executes the standard Interconnection Agreement for Level 1 by submitting a Level 1 application.
 2. Applicable Screens:
 - i. For interconnection of a Generating Facility to a radial distribution circuit, the Generating Facility aggregated with all other generation capable of exporting energy on a line section will not exceed 15 percent of the line section's annual peak load as most recently measured at the substation or calculated for the line section. A line section is that portion of the radial distribution circuit to which the

Seattle City Light Small Generator Interconnection Requirements

Applicant seeks to interconnect and is bounded by automatic sectionalizing devices or the end of a distribution line.

- ii. If the Generating Facility is to be interconnected on single-phase shared secondary, then the aggregate generation capacity on the shared secondary, including the Generating Facility, will not exceed 20 kilovolt-amperes (kVA).
 - iii. If the Generating Facility is single-phase and is to be interconnected on a transformer center tap neutral of a 240-volt service, its addition will not create an imbalance between the two sides of the 240-volt service of more than 20 percent of nameplate rating of the service transformer.
 - iv. The Generating Facility's Generating Capacity cannot exceed the Applicant's existing electrical service entrance capacity.
 - v. No construction of facilities by the Utility on its own system shall be required to accommodate the Generating Facility. (Meters are not considered facilities.)
 - vi. For interconnection of a Generating Facility within a Spot Network or Area Network, the aggregate generating capacity including the Generating Facility may not exceed 50% of the Network's anticipated minimum load. If solar energy Generating Facilities are used exclusively, only the anticipated daytime minimum load shall be considered. The Utility may select any of the following methods to determine anticipated minimum load:
 - a) the Network's measured minimum load in the previous year, if available;
 - b) five percent of the Network's maximum load in the previous year;
 - c) the Applicant's good faith estimate, if provided; or
 - d) the Utility's good faith estimate if provided in writing to the Applicant along with the reasons why the Utility considered the other methods to estimate minimum load inadequate.
3. Time to process screens: Within seven business days after the Utility notifies the Applicant that the application is complete, the Utility shall notify the Applicant whether the Generating Facility meets all of the applicable Level 1 screens.
 4. Screens failure: Despite the failure of one or more screens, the Utility, at its sole option, may approve the interconnection provided such approval is consistent with safety and reliability. If the Generating Facility fails one or more of the Level 1 screens and the Utility denies interconnection, then the Utility shall provide the Applicant with detailed information on the reason(s) for failure. The Applicant may reapply for interconnection of the Generating Facility under Levels 2, 3 or 4 as appropriate with an application date based on the initial application date as provided in Section D.
 5. Approval: If a Generating Facility meets all of the applicable Level 1 screens, has been approved for connection by an electrical inspector, and is otherwise approved by the Utility, within three business days, the Utility shall send the Applicant a copy of the application form, signed by the Utility, forming the Level 1 Interconnection Agreement. If a Utility does not notify an Applicant in writing or by email within twenty business

Seattle City Light Small Generator Interconnection Requirements

days whether an application is approved or denied, the Interconnection Agreement signed by the Applicant as part of the Level 1 application shall be deemed effective.

6. Unless extended by mutual agreement of the Parties, within six months of formation of an Interconnection Agreement, the Applicant shall provide the Utility with at least ten business day's notice of the anticipated start date of the Generating Facility.
 7. Within five business days of the Applicant's notice of the anticipated start date, the Utility may contact the Applicant to schedule a Utility inspection of the Generating Facility at the Utility's expense. If the Utility does not contact an Applicant to schedule an inspection within five business days of the Applicant's notice of the anticipated start date, the Utility waives its right to inspect the Generating Facility prior to interconnection. Any inspection shall be scheduled to occur within ten business days of the Applicant's notice of the anticipated start date at a time mutually agreeable to the Parties. The Utility may not determine that a Generating Facility has failed the Utility's inspection unless there is evidence of a failure of a Level 1 screen or the Generating Facility does not comply with a standard listed in Section C. If a Generating Facility initially fails a Utility inspection, the Utility shall offer to redo the inspection at the Applicant's expense at a time mutually agreeable to the Parties.
 8. Upon delivery to the Utility of evidence of approval by an electrical code official with jurisdiction over the interconnection, an Applicant may begin interconnected operation of a Generating Facility, provided that there is an Interconnection Agreement in effect and that the Generating Facility has not failed an inspection required by the Utility. Evidence of approval by an electric code official includes a signed Certificate of Completion in the form of Attachment 4 or other inspector-provided documentation.
 9. The Utility will not charge any application fee for Level 1 review.
- (F) **Level 2 Screening Criteria and Process for Generating Facilities Not Greater than 2 MW:**
1. **Application:** An Applicant must submit a Level 2 Interconnection Application using the standard form provided in Attachment 2 to these Interconnection Requirements, which may be sent electronically to a recipient designated by the Utility. Within three business days of receipt, the Utility shall acknowledge receipt of the application and notify the Applicant whether or not the application is complete. If the application is incomplete, the Utility shall provide a written list detailing all information that must be provided to complete the application. The Applicant will have ten business days after receipt of the list to submit the listed information, or to request an extension of time to provide such information. Otherwise, the application will be deemed withdrawn. The Utility shall notify the Applicant within three business days of receipt of a revised application whether the application is complete or incomplete. The Utility may deem the application withdrawn if it remains incomplete.
 2. **Applicable screens:**
 - i. For interconnection of a Generating Facility to a radial distribution circuit, the Generating Facility aggregated with all other generation capable of exporting energy on a line section will not exceed 15 percent of the line section's annual

Seattle City Light Small Generator Interconnection Requirements

peak load as most recently measured at the substation or calculated for the line section. A line section is that portion of the radial distribution circuit to which the Applicant seeks to interconnect and is bounded by automatic sectionalizing devices or the end of a distribution line.

- ii. The Generating Facility, in aggregation with other generation on the distribution circuit, will not contribute more than 10 percent to the distribution circuit's maximum Fault Current at the point on the high-voltage (primary) level nearest the proposed Point of Common Coupling.
- iii. The Generating Facility, in aggregate with other generation on the distribution circuit, will not cause any distribution protective devices and equipment (including but not limited to substation breakers, fuse cutouts, and line re-closers), or Utility customer equipment on the system, to exceed 90 percent of the short circuit interrupting capability; nor is the interconnection proposed for a circuit that already exceeds 90 percent of the short circuit interrupting capability.
- iv. The Generating Facility is interconnected to the Utility's Electrical Distribution System as shown in the table below:

Primary Distribution Line Configuration	Interconnection to Primary Distribution Line
Three-phase, three-wire	If a three-phase or single-phase Generating Facility, interconnection must be phase-to-phase
Three-phase, four-wire	If a three-phase (effectively grounded) or single-phase Generating Facility, interconnection must be line-to-neutral

- v. If the Generating Facility is to be interconnected on single-phase shared secondary, then the aggregate generation capacity on the shared secondary, including the Generating Facility, will not exceed 20 kilovolt-amperes (kVA).
- vi. If the Generating Facility is single-phase and is to be interconnected on a transformer center tap neutral of a 240-volt service, its addition will not create an imbalance between the two sides of the 240-volt service of more than 20 percent of nameplate rating of the service transformer.
- vii. The Generating Facility, in aggregate with other generation interconnected to the distribution low-voltage side of the substation transformer feeding the distribution circuit where the Generating Facility proposes to interconnect, will not exceed 20 MW in an area where there are known or posted transient stability limitations to generating units located in the general electrical vicinity (e.g., three or four transmission voltage level busses from the Point of Common Coupling).
- viii. The Generating Facility's Point of Common Coupling will not be on a transmission line.
- ix. The Generating Facility's Generating Capacity cannot exceed the Applicant's existing electrical service entrance capacity.

Seattle City Light Small Generator Interconnection Requirements

- x. No construction of facilities by the Utility on its own system shall be required to accommodate the Generating Facility.
 - xi. For interconnection of a Generating Facility within a Spot Network or Area Network, the Generating Facility must be inverter-based and use a minimum import relay or other protective scheme that will ensure that power imported from the Utility to the network will, during normal Utility operations, remain above one percent of the network's maximum load over the past year or will remain above a point reasonably set by the Utility in good faith. At the Utility's discretion, the requirement for minimum import relays or other protective schemes may be waived.
3. Time to process under screens: Within fifteen business days after the Utility notifies the Applicant that the application is complete, the Utility shall notify the Applicant whether the Generating Facility meets all of the applicable Level 2 screens.
 4. Screens failure: Despite the failure of one or more screens, the Utility, at its sole option, may approve the interconnection provided such approval is consistent with safety and reliability. If the Generating Facility fails one or more of the applicable screens and the Utility denies interconnection, then the Utility shall provide the Applicant with detailed information on the reason or reasons for failure. The Applicant may request the application continue to be processed under Level 2 additional review, Level 3 or Level 4 based on the initial application date as provided in Section D.
 5. Approval: If a facility meets all of the applicable screens above or is otherwise approved by the Utility, within three business days the Utility shall send an executed Interconnection Agreement to the Applicant.
 6. An Applicant that receives an Interconnection Agreement executed by the Utility shall have ten business days to execute the agreement and return it to the Utility. An Applicant shall communicate with the Utility no less frequently than every six months regarding the status of a proposed Generating Facility to which an Interconnection Agreement refers. Within two years from an Applicant's execution of an Interconnection Agreement, the Applicant shall provide the Utility with at least ten business days notice of the anticipated start date of the Generating Facility.
 7. Within ten business days of the Applicant's notice of the anticipated start date, a Utility may require an inspection of the Generating Facility at a time mutually agreeable to the Parties at the Utility's expense. The Utility may determine that a Generating Facility has failed the Utility's inspection unless there is evidence that the interconnection fails a Level 2 screen or the Generating Facility does not comply with a standard listed in Section C. If a Generating Facility initially fails a Utility inspection, the Utility shall offer to redo the inspection at the Applicant's expense at a time mutually agreeable to the Parties.
 8. Upon delivery to the Utility of evidence of approval by an electrical code official with jurisdiction over the interconnection, an Applicant may begin interconnected operation of a Generating Facility, provided that there is an Interconnection Agreement in effect and that the Generating Facility has not failed an inspection required by the Utility. Evidence

Seattle City Light Small Generator Interconnection Requirements

of approval by an electric code official includes a signed Certificate of Completion in the form of Attachment 4 or other inspector-provided documentation.

9. Additional review: If a Generating Facility has failed to meet one or more of the Level 2 screens, but the initial review indicates that additional review may enable the Utility to determine that the Generating Facility can be interconnected consistent with safety, reliability and power quality, the Utility shall offer to perform additional review. The Utility shall determine through additional review whether Minor System Modifications would enable the interconnection to be made consistent with safety, reliability and power quality. The Utility shall provide to the Applicant a non-binding, good faith estimate of the costs of such additional review, and/or such Minor System Modifications. The Utility shall undertake the additional review or Minor System Modifications only after the Applicant consents to pay for the review and/or modifications.
10. A Utility may elect to charge an application fee of \$50 plus \$1 per kW of Generating Capacity for Level 2 review.

(G) Level 3 Screening Criteria and Process for Non-Exporting Generating Facilities Not Greater than 20 MW:

An Applicant may use the Level 3 Interconnection Application using the standard form provided in Attachment 2 to these Interconnection Requirements, which may be sent electronically to a recipient designated by the Utility, for a Generating Facility with a Generating Capacity no greater than 20 MW that uses reverse power relays, minimum import relays or other protective devices to assure that power may never be exported from the Generating Facility to the Utility. An Applicant proposing to interconnect a Generating Facility to a Spot Network or an Area Network may not use Level 3.

(H) Level 4 Process for All Other Generating Facilities:

1. Application: An Applicant must submit a Level 4 Interconnection Application using the standard form provided in Attachment 2 to these Interconnection Requirements, which may be sent electronically to a recipient designated by the Utility. An Applicant whose Level 2 or Level 3 application was denied may request that the Utility treat that existing application already in the Utility's possession as a new Level 4 application. Within three business days of receipt, the Utility shall acknowledge receipt of the application or transfer of an existing application to the Level 4 process and notify the Applicant whether or not the application is complete. If the application is incomplete, the Utility shall provide a written list detailing all information that must be provided to complete the application. The Applicant will have twenty business days after receipt of the list to submit the listed information, or to request an extension of time to provide such information. Otherwise, the application will be deemed withdrawn. The Utility shall notify the Applicant within three business days of receipt of the revised application whether the application is complete or incomplete. The Utility may deem the application withdrawn if it remains incomplete.
2. The Utility will conduct an initial review that includes a scoping meeting with the Applicant within ten days of determination that an application is complete. The scoping meeting shall take place in person or electronically by a means mutually agreeable to the

Seattle City Light Small Generator Interconnection Requirements

Parties. At the scoping meeting the Utility will provide pertinent information such as: the available Fault Current at the proposed location, the existing peak loading on the lines in the general vicinity of the proposed Generating Facility, and the configuration of the distribution lines at the proposed point of interconnection. By mutual agreement of the Parties, the feasibility study, impact study or facilities study may be waived.

3. If the Parties do not waive the feasibility study, the Utility will provide the Applicant with an agreement, in the form of the feasibility study agreement in Attachment 5 within five days of the scoping meeting. The feasibility study agreement shall include a good faith estimate of the cost and time to undertake the feasibility study to provide a preliminary review of the potential impacts on the distribution system from the proposed interconnection. The feasibility study will provide a preliminary review of short circuit currents, including contribution from the proposed Generating Facility, and coordination and potential overloading of distribution circuit protection devices. The feasibility study shall be completed within twenty business days of the Applicant's delivery of the executed feasibility study agreement and payment in accordance with that agreement, though the Utility may take longer when a proposed Generating Facility will impact other proposed Generating Facilities. Based on the findings in the feasibility study, the Utility may elect to waive the impact study or the facilities study, or both.
4. If the Parties do not waive the impact study, within five business days of the completion of the feasibility study, the Utility shall provide the Applicant with an agreement in the form of the impact study in Attachment 5, including a good faith estimate of the cost and time to undertake the impact study.
5. An impact study for a Generating Facility with a Generating Capacity of no more than ten MW shall include a review of the Generating Facility's protective devices for adherence to IEEE Standard 1547. An impact study for a Generating Facility with a Generating Capacity of more than ten MW shall use IEEE Standard 1547 for guidance. For Generating Facility components that are certified, the Utility may not charge the Applicant for review of those components in isolation.
6. The Utility shall include in its compliance tariff a description of the various elements of an impact study it would typically undertake pursuant to this section, including:
 - a. Connection Configuration
 - b. Power Flow, Short Circuit and Stability Analysis:
 - i. Reliability Studies – power flow analysis
 - ii. System Rating and Voltage Screening – power flow analysis
 - iii. Transfer Capability – power flow analysis
 - iv. Fault Duty – short circuit analysis
 - v. Stability – stability analysis
 - c. Protection
 - d. Power Quality, Reliability, and Environmental Concerns:
 - i. Voltage Unbalance
 - ii. Voltage Flicker

Seattle City Light Small Generator Interconnection Requirements

- iii. Harmonic Distortion
 - iv. Transient Over-voltage
 - v. Temporary Over-voltage
 - vi. Temporary Under-voltage
 - vii. Insulation Coordination
 - viii. Underground Network Balancing
 - ix. Environmental Review Process
 - e. Impact on System Operation
 - f. Voltage Collapse Study (and the conditions that would justify including this element in the Impact Study).
7. Once an Applicant delivers an executed impact study agreement and payment in accordance with that agreement, the Utility will conduct the impact study. The impact study shall be completed within forty business days of the Applicant's delivery of the executed impact study agreement, though the Utility may take longer when a proposed Generating Facility will impact other proposed Generating Facilities.
 8. If the Utility determines that its Electrical Distribution System modifications required to accommodate the proposed interconnection are not substantial, the impact study will identify the scope and cost of the modifications defined in the impact study results and no facilities study shall be required.
 9. If the Utility determines that necessary modifications to the Utility's Electrical Distribution System are substantial, the results of the impact study will include an estimate of the cost of the facilities study and an estimate of the modification costs. The detailed costs of any Utility's Electrical Distribution System modifications necessary to interconnect the Applicant's proposed Generating Facility will be identified in a facilities study to be completed by the Utility.
 10. If the Parties do not waive the facilities study, within five business days of the completion of the impact study, the Utility shall provide a facilities study agreement, in the form of the facilities study in Attachment 5, including a good faith estimate of the cost and time to undertake the facilities study.
 11. Once the Applicant executes the facilities study agreement and pays the Utility pursuant to the terms of that agreement, the Utility will conduct the facilities study. The facilities study shall include a detailed list of the Utilities' necessary Electrical Distribution System upgrades and a cost estimate for completing such upgrades, which may not be exceeded by 120% in any future Utility facilities installation. The work scope of the facilities study shall include (but not limited) to the following:
 - a. Supervisory Control and Data Acquisition (SCADA) requirements
 - b. Metering requirements
 - c. Relay modifications on the Utility's system
 - d. Equipment replacement
 - e. Re-conductoring or rebuild of transfer lines

Seattle City Light Small Generator Interconnection Requirements

- f. Transfer trip requirements
 - g. Other protection relaying needs
 - h. Gang-operated switches
 - i. New high voltage (HV) lines, re-conductoring or upgrading of lines
 - j. Dedicated primary feeders
 - k. Substation rebuild or building of new or additional switchgear(s)
 - l. Telecommunications including radio enhancements
 - m. A list of assumptions used in developing the scope
 - n. An estimated construction schedule, or project milestones
12. The facilities study shall be completed within sixty business days of the Applicant's delivery of the executed facilities study agreement, though the Utility may take longer when a proposed Generating Facility will impact other proposed Generating Facilities.
 13. Within five business days of completion of the last study that the Utility deems necessary, the Utility shall execute and send the Applicant an Interconnection Agreement using the standard form agreement provided in Attachment 3 of these Interconnection Requirements. The Interconnection Agreement shall include a quote for any required Electrical Distribution System modifications, subject to the cost limit set by the facilities study cost estimate. The facilities study shall indicate the milestones for completion of the Applicant's installation of its Generating Facility and the Utility completion of any Electrical Distribution System modifications, and the milestones from the facilities study (if any) shall be incorporated into the Interconnection Agreement.
 14. Within forty business days of the receipt of an Interconnection Agreement, the Applicant shall execute and return the Interconnection Agreement and notify the Utility of the anticipated start date of the Generating Facility. Unless the Utility agrees to a later date or requires more time for necessary modifications to its Electrical Distribution System, the Applicant shall identify an anticipated start date that is within two years of the Applicant's execution of the Interconnection Agreement.
 15. The Utility shall inspect the completed Generating Facility installation for compliance with requirements and shall attend any required commissioning tests pursuant to IEEE Standard 1547. For systems greater than 10 MW, IEEE Standard 1547 may be used as guidance. Provided that any required commissioning tests are satisfactory, the Utility shall notify the Applicant in writing that operation of the Generating Facility is approved.
 16. The Applicant shall notify the Utility if there is any anticipated change in the anticipated start date of interconnected operations of the Generating Facility. Upon approval by an electrical code official with jurisdiction over the interconnection and notification of approval from the Utility, the Applicant may commence interconnected operations.
 17. Fees: An application fee shall not exceed \$100 plus \$1 per kW of Generating Capacity, as well as charges for actual time spent on any interconnection study. Costs for Utility facilities necessary to accommodate the Applicant's Generating Facility interconnection shall be the responsibility of the Applicant.

Seattle City Light Small Generator Interconnection Requirements

(I) Online Application Requirement:

1. Each Utility shall allow interconnection applications to be submitted through the Utility's website.
2. The Utility shall dedicate a page on their website to interconnection requirements. The relevant website page shall include (i) these Interconnection Requirements and attachments in an electronically searchable format, (ii) the Utility's interconnection application forms in a format that allows for electronic entry of data, (iii) the Utility's interconnection agreements, and (iv) the Utility's point of contact for submission of interconnection applications including email and phone number.

(J) General Provisions and Requirements:

1. Applicant is responsible for construction of the Generating Facility and obtaining any necessary local code official approval (electrical, zoning, etc.).
2. Applicant conducts the commissioning test pursuant to the IEEE Standard 1547 and complies with all manufacturer requirements.
3. To assist Applicants in the interconnection process, a Utility shall designate an employee or office from which basic information on interconnections can be obtained. Upon request, the Utility shall provide interested Applicants with all relevant forms, documents and technical requirements for filing a complete application. Upon an Applicant's request, a Utility shall meet with an Applicant at the Utility's offices or by telephone prior to submission for up to one hour for Level 1 Applicants and two hours for other Applicants.
4. The authorized hourly rate for engineering review under additional review or Level 4 shall be the established City Light wage schedule at the time of the interconnection application.
5. A Utility shall not require an Applicant to install additional controls, or to perform or pay for additional tests to obtain approval to interconnect for a Level 1 Applicants. For Levels 2, 3, or 4 Applicants, however, a utility accessible disconnect switch for non-inverter-based Generating Facilities may be required. Scope and details of the isolation requirements are highlighted in Attachment 3: Level 2, 3, and 4 Interconnection Agreement.
6. A Utility may only require an Applicant to purchase insurance covering Utility damages, and then only in the following amounts:

i. For non-inverter-based Generating Facilities:

Generating Capacity > 5 MW	\$3,000,000
2 MW < Generating Capacity ≤ 5 MW	\$2,000,000
500 kW < Generating Capacity ≤ 2 MW	\$1,000,000
50 kW < Generating Capacity ≤ 500 kW	\$500,000
Generating Capacity ≤ 50 kW	no insurance

ii. For inverter-based Generating Facilities:

Generating Capacity > 5 MW	\$2,000,000
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Seattle City Light Small Generator Interconnection Requirements

2 MW < Generating Capacity ≤ 5 MW	\$1,000,000
Generating Capacity ≤ 1 MW	no insurance

7. Additional protection equipment not included with the Interconnection Equipment Package may be required at a Utility's discretion as long as the performance of an Applicant's Generating Facility is not negatively impacted and the Applicant is not charged for any equipment that provides protection that is already provided by interconnection equipment Certified in accordance with Section C.
8. Metering: Net Metering for Solar, Wind, Hydropower and Fuel Cells as set forth in RCW 80.60: the Utility shall install, own and maintain a kilowatt-hour meter, or meters as the installation may determine, capable of registering the bi-directional flow of electricity at the point of common coupling at a level of accuracy that meets all applicable standards, regulations and statutes. The meter(s) may measure such parameters as time of delivery, power factor, voltage and such other parameters as the utility shall specify. The Applicant shall provide space for metering equipment. It will be the Applicant's responsibility to provide the current transformer enclosure (if required), meter socket(s) and junction box after the applicant has submitted drawings and equipment specifications for the utility approval. The Utility may approve other generating sources for net metering but is not required to do so. Net metering is available to generating facilities sized up to 100 kW only.
9. Production Metering: The Utility may require separate metering for production of electricity as required under applicable power purchase or credit programs. This meter will record all generation produced and may be billed separately from any net metering or customer usage metering. All costs associated with the installation of production metering will be paid by the Applicant.
10. Once an interconnection has been approved under these procedures, a Utility shall not require an Interconnection Customer to test its Generating Facility except that the Utility may require any manufacturer-recommended testing and:
 - i. For Levels 2 and 3, an annual test in which the Interconnection Customer's Generating Facility is disconnected from the Utility's equipment to ensure that the Generating Facility stops delivering power to the Electrical Distribution System.
 - ii. For Level 4, all interconnection-related protective functions and associated batteries shall be periodically tested at intervals specified by the manufacturer, system integrator, or authority that has jurisdiction over the interconnection. Periodic test reports or a log for inspection shall be maintained.
11. A Utility shall have the right to inspect an Interconnection Customer's Generating Facility before and after interconnection approval is granted, at reasonable hours and with reasonable prior notice provided to the Interconnection Customer. If the Utility discovers an Interconnection Customer's Generating Facility is not in compliance with the requirements of IEEE Standard 1547, and the non-compliance adversely affects the safety or reliability of the electric system, the Utility may require disconnection of the Interconnection Customer's Generating Facility until the Generating Facility complies with IEEE Standard 1547.

Seattle City Light Small Generator Interconnection Requirements

12. The Interconnection Customer may disconnect the Generating Facility at any time without notice to the Utility and may terminate the Interconnection Agreement at any time with one day's notice to the Utility.
13. An Applicant may designate a representative to process an application on Applicant's behalf, and an Interconnection Customer may designate a representative to meet some or all of the Interconnection Customer's responsibilities under the Interconnection Agreement.
14. For a Generating Facility offsetting part or the entire load of a utility customer at a given site, that customer is the Interconnection Customer and that customer may assign its Interconnection Agreement to a subsequent occupant of the site. For a Generating Facility providing energy directly to a Utility, the Interconnection Customer is the owner of the Generating Facility and may assign its Interconnection Agreement to a subsequent owner of the Generating Facility. Assignment is only effective after the assignee provides written notice of the assignment to the Utility and agrees to accept the Interconnection Customer's responsibilities under the Interconnection Agreement.
15. Prior to any future modification or expansion of the Generating Facility, the Interconnection Customer will obtain Utility review and approval. The Utility reserves the right to require the Interconnection Customer, at the Interconnection Customer's expense, to provide corrections or additions to existing electrical devices in the event of modification of government or industry regulations and standards.
16. For the overall safety and protection of the utility system, RCW 80.60 currently limits interconnection of generation for net metering to 0.1% of the utility's peak demand during 1996. Additionally, interconnection of generating facilities to individual distribution feeders will be limited to 10% of the feeder's peak capacity. However, the Utility may, in its sole discretion, allow additional generation interconnection beyond these stated limits.
17. Reasonable Efforts: The Utility shall make reasonable efforts to meet all time frames provided in these procedures unless the Utility and the Applicant agree to a different schedule. If the Utility cannot meet a deadline provided herein, it shall notify the Applicant, 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.

(K) Dispute Resolution:

1. For a dispute related to these rules, either Party may submit a written request to the other Party for an informal meeting by phone, electronic media, or in person to attempt to resolve the dispute. Following such a request, each Party shall make available a person with authority to resolve the dispute. A meeting shall be scheduled for at least one hour, but may be shorter at the option of the Party requesting the meeting. The meeting shall take place at a time and in a manner agreeable to the Party receiving the request within three business days of the Party's receipt of the request for a meeting. If a dispute involves technical issues, persons with sufficient technical expertise and familiarity with the issue in dispute from each Party shall also attend the informal meeting.

Seattle City Light Small Generator Interconnection Requirements

2. If an informal meeting of the Parties does not resolve a dispute, the Parties may mutually agree to further discussions or either Party may seek resolution of the dispute through the complaint or mediation procedures available in Seattle City Light's Departmental Policy and Procedures (DPP) Customer Dispute Resolution (DPP 500P III-425).

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Interconnection Application & Agreement For New or Modified Inverter-based Generating Systems – 100 kW or Less

Complete, sign and submit to SCL PRIOR TO INSTALLATION or MODIFICATION to an existing system.

Customer Information

Customer Name: _____ Day Phone _____

Email: _____ Evening Phone: _____

Service Facility Address: _____
(Street) (City) (State) (Zip)

Mailing Address: _____
(Street/PO Box) (City) (State) (Zip)

City Light Account #: _____ Electrical Permit #: _____

Contractor: _____ Office Phone: _____

Contact Person: _____ Cell Phone: _____

Email: _____

Generating System Information

Type of system: New Modification to an existing generation system

Other (describe) _____

Type of generator: PV Wind Other (describe) _____

Location of generating system on property: _____

Nameplate amperage of existing service (from label on circuit panel): _____

Voltage at point of interconnection: _____ Single Phase Three Phase

Generating capacity (kW – DC): _____ Battery backup? Yes No

Generator (qty, mfr, model, watts): _____

*Attachment 1
Level 1 Interconnection Application and Agreement*

Generator manufactured within the State of Washington? Yes No

Inverter (qty, mfr, model, volts, watts): _____

Inverter manufactured within the State of Washington? Yes No

Cost of system including installation (optional) _____

Applying for the WA Renewable Energy Production Incentive? Yes

No

If yes, a production meter installed by SCL is required. Please include an Application for Electric Service and check for \$59 payable to Seattle City Light. You must also apply separately for Certification by the WA State Department of Revenue (DOR) and provide Seattle City Light with a copy of the DOR approved Certification packet. All application forms are available on SCL's Solar Energy website: www.seattle.gov/light/conserves/cgen For more information call: 206-684-3800.

Terms and Conditions for a Level 1 Interconnection Agreement

1. CUSTOMER'S RESPONSIBILITIES

- 1.1. Customer shall design, install, inspect, operate, and maintain an electric generation system in accordance with all applicable laws and regulations, including, but not limited to, all safety, power quality, and interconnection requirements established by the National Electrical Code, National Electrical Safety Code, the Institute of Electrical and Electronics Engineers, and Underwriters Laboratories. Customer shall remain responsible for its electric generation system up through the point of common coupling, and Seattle City Light (the Utility) shall bear no liability or responsibility for the same.
- 1.2. Customer is responsible for obtaining all required permits & approvals for the Customer-owned and operated electric generation system and is responsible for the actions of contractors or other agents hired by the Customer for design and installation of the system.

2. INTERCONNECTION

A separate Application and Agreement shall be entered into for each electrical service location of the Customer. The Applicant may operate the Generating Facility and interconnect with the Utility's Electrical Distribution System once all of the following have occurred:

2.1 The Generating Facility has been inspected and approved by the appropriate local electrical code authority, and the Applicant has provided documentation of the approval to the Utility, and

2.2 The Utility has either:

2.2.1 Inspected the Generating Facility and has found that the Generating Facility complies with all Level 1 technical screens and applicable UL and IEEE standards; or

2.2.2 Waived its right to inspect the Generating Facility by not scheduling an inspection in the allotted time; or

2.2.3 Explicitly waived the right to inspect the Generating Facility.

Once the Customer's generation system is in operation, the Customer shall make no changes or modifications to the equipment, wiring, or the mode of operation without the prior approval of the Utility. To the extent a dispute arises out of any of the requirements under this Agreement, Customer agrees to use the Seattle City Light Dispute Resolution Process defined in Department Policies and Procedures (DPP 500 P III- 425).

3. SAFE OPERATIONS AND MAINTENANCE

The Interconnection Customer shall be fully responsible to operate, maintain, and repair the Generating Facility as required to ensure that it complies at all times with IEEE Standard 1547. The Utility reserves the right to review the Generating Facility's maintenance program.

Maintenance records of the Generating Facility's equipment pertinent to interconnected operation shall be made available to the Utility upon request.

4. NET METERING AND BILLING

- 4.1 The Utility shall measure the net electricity produced or consumed by the Customer during each billing period, in accordance with the Utility's normal metering practices.
- 4.2 If the electricity supplied by the Utility exceeds the electricity generated by the Customer, then the Customer shall be billed for the net electricity supplied by the Utility, at the rate and with the same customer charge(s) paid by other customers of the Utility in the same rate class.
- 4.3 If the electricity generated by the Customer exceeds electricity consumed by the Customer and is distributed back to the Utility during the billing period, then the Customer; (i) shall be billed for the same customer charge(s) paid by other customers of the Utility in the same rate class; and shall be credited for the net excess kilowatt-hours generated during the billing period, with this kilowatt-hour credit appearing on the Customer's bill for the following billing period; (ii) and agrees that in each new net metering fiscal year beginning May 1 of each year, any and all kilowatt-hour credits remaining in the Customer's account at the time of the Customer's first scheduled meter reading of the new fiscal year shall be set to zero.

5. PRODUCTION METERING

Installation of a Utility-owned production meter for the Customer-owned and operated electric generation system is required to apply for incentive payments through the Washington State Renewable Energy Production Incentive Program administered by the Utility. Customer is responsible for installing a meter base per the Utility's requirements. The Utility will provide and install the production meter at the Customer's sole cost and expense. The Utility will read the production meter according to Customer's regular revenue meter reading cycle.

6. INTERRUPTION OR REDUCTION OF DELIVERIES

The Utility may temporarily disconnect the Generating Facility upon the following conditions:

- a. For scheduled outages upon reasonable notice.
- b. For unscheduled outages or emergency conditions.
- c. If the Generating Facility does not operate in the manner consistent with these terms and conditions of the Agreement.

The Utility shall inform the Interconnection Customer in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

7. ACCESS TO PREMISES

The Utility shall have 24-hour access to the Generating Facility's premises and/or property, including the metering equipment. The Utility shall provide reasonable notice to the Interconnection Customer when possible prior to using its right of access.

8. INDEMNITY AND LIABILITY

8.1. The Customer hereby indemnifies and agrees to hold harmless and release the City and its elected officials, officers, employees and agents and each of the heirs, personal representatives, successors and assigns of any of the foregoing, (collectively, the "Indemnities") from and against any and all losses, claims, damages, costs, demands, fines, judgments, penalties, obligations, payments and liabilities, together with any costs and expenses (including without limitation attorneys' fees and out-of-pocket expenses and investigation expenses) incurred in connection with any of the foregoing, resulting from, relating to or arising out of or in connection with: (i) any failure or abnormality in the operation of the Customer's electrical generation system, interconnection facilities or any related equipment or wiring; (ii) any failure of the Customer to comply with the standards, specifications, or requirements referenced in this Agreement (including appendices hereto) which results in abnormal voltages or voltage fluctuations, abnormal changes in the harmonic content of its generating facility output, single phasing, or any other abnormality related to the quantity or quality of the power produced by Customer's electrical generation system, interconnection facilities or any related equipment or wiring; (iii) any failure of the Customer to duly perform or observe any term, provision, covenant, agreement or condition hereunder to be performed or by or on behalf of the Customer or (iv) any negligence or intentional misconduct of Customer related to operation of its electrical generation system, interconnection facilities or any related equipment or wiring.

8.2. As between the Parties and solely for the purpose of effectuating the indemnities contained in section 8.1, Customer expressly waives any immunity, defense or protection that may be granted to it under the Washington State Industrial Insurance Act, Revised Code of Washington Title 51 or any other industrial insurance, workers' compensation or similar laws of the State of Washington. This section shall not be interpreted or construed as a waiver of Customer's right to assert any such immunity, defense or protection directly against any of its own employees or such employee's estate or other representatives. The Parties have mutually negotiated this section 8.2.

Initialed by:

Customer _____

SCL _____

9. INSURANCE

The Interconnection Customer is not required to provide general liability insurance coverage as part of this Agreement, or through any other Utility requirement.

10. FORCE MAJEURE

5.1 Suspension of Obligations. Neither Party shall be liable to the other for, or be considered to be in breach of or default under this Agreement because of, any failure or delay in performance by such Party under this Agreement to the extent such failure or

delay is caused by or results from any such cause or condition which is beyond such Party's reasonable control, or which such Party is unable to prevent or overcome by exercise of reasonable diligence (any such cause or condition, a "Force Majeure"), including breach of contract or failure of performance by any person providing services to the Utility which the Department intended to use in its performance under this Agreement.

- 5.2 Notice; Required Efforts to Resume Performance. Any Party claiming Force Majeure shall give the other Party maximum practical advance notice of any failure or delay resulting from a Force Majeure, and shall use its reasonable best efforts to overcome the Force Majeure and to resume performance as soon as possible; provided however, that nothing in this Agreement shall be construed to require either Party to settle any labor dispute in which it may be involved.
- 5.3 No Excuse of Payment Obligations. Notwithstanding any other provision of this Agreement, in no event shall a Force Majeure excuse a Party's failure or delay to pay any amounts due and owing to the other Party under or pursuant to this Agreement.

11. ASSIGNMENT

The Customer shall notify the Utility within thirty (30) days of sale or transfer of the generating system to another owner. For a Generating Facility offsetting part or the entire load of a utility customer at a given site, that customer is the Interconnection Customer and that customer may assign its Interconnection Agreement to a subsequent occupant of the site. For a Generating Facility providing energy directly to a Utility, the Interconnection Customer is the owner of the Generating Facility and may assign its Interconnection Agreement to a subsequent owner of the Generating Facility. Assignment is only effective after the assignee provides written notice of the assignment to the Utility and agrees to accept the Interconnection Customer's responsibilities under the Interconnection Agreement.

12. ENTIRE AGREEMENT

This Agreement sets forth the entire agreement of the Parties, and the rights and obligations of the Parties hereunder shall be subject to and governed by this Agreement.

13. GOVERNING LAW; VENUE

This Agreement shall be governed by and construed in accordance with the laws of the State of Washington (regardless of the laws that might otherwise govern under applicable principles of conflicts of law of such state). Venue for any action arising under or in connection with this Agreement shall be in the Superior Court for King County, Washington, or in the United States District Court for the Western District of Washington.

14. AMENDMENT; MODIFICATIONS OR WAIVER

Any amendments or modifications to this Agreement shall be in writing and agreed to by both Parties. The failure of any Party at any time to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by

any Party of the breach of any term or covenant contained in this Agreement, whether by conduct or otherwise, shall be deemed to be construed as a further or continuing waiver of any such breach or waiver of the breach of any other term or covenant unless such waiver is in writing.

15. NOTICES AND OTHER COMMUNICATIONS

Notice Methods and Addresses. All notices, requests, demands and other communications required or permitted to be given under this Agreement shall be given in writing (i) by personal delivery, (ii) by recognized overnight air courier service, (iii) by United States postal service, postage prepaid, registered or certified mail, return receipt requested, (iv) by facsimile transmission, using facsimile equipment providing written confirmation of successfully completed transmission to the receiving facsimile number, or (v) email. All notices to either Party shall be made to the addresses set forth below. Any notice shall be deemed to have been given on the date delivered, if delivered personally, by overnight air courier service or by facsimile transmission; or, if mailed, shall be deemed to have been given on the date shown on the return receipt as the date of delivery or the date on which the United States postal service certified that it was unable to deliver, whichever is applicable.

16. TERMINATION

16.1 This Agreement may be terminated under the following conditions:

16.1.1. By the Interconnection Customer: By providing written notice to the Utility.

16.2.1. By the Utility: If the Generating Facility fails to operate for any consecutive 12-month period or the Interconnection Customer fails to remedy a violation of these terms and conditions of the Agreement.

16.2 Permanent Disconnection: In the event the Agreement is terminated, the Utility shall have the right to disconnect its facilities or direct the Interconnection Customer to disconnect its Generating Facility.

16.3 Survival Rights: This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.

Applicant Signature:

I hereby certify that, to the best of my knowledge, the information provided in this application is true. I agree to abide by the terms and conditions for a Level 1 Interconnection Agreement, provided on the preceding pages.

Signed: _____

Date: _____

Title: _____

Attachment 1
Level 1 Interconnection Application and Agreement

Operation is contingent on Utility approval to interconnect the Generating Facility.

Utility Signature:

Interconnection of the Generating Facility is approved contingent upon the terms and conditions for a Level 1 Interconnection Agreement, provided on the proceeding pages ("Agreement").

Utility Signature: _____

Date: _____

Title: _____

Application Service Request #: _____

Utility waives inspection/witness test? Yes

No

Application Submittals Checklist

Be sure to include:

- Completed & signed Interconnection Application & Agreement (be sure to initial Section 7.2, page 4)
- One-Line Electrical Diagram
- Inverter Specification Sheet
- Completed & signed Application for Electric Service – to request a production meter (if applying for WA Renewable Energy Production Incentive)
- Check for \$59 payable to Seattle City Light for production meter (if applying for WA Renewable Energy Production Incentive)

Mail all documentation and check to:

Seattle City Light

ATTN: Intake Desk

1300 N 97th Street

Seattle, WA 98103-3320

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Interconnection Application

Level 2: Generating Systems Up to 2 MW
Level 3: Non-Exporting Generating Systems Up to 20 MW
Level 4: Process for All Generating Systems Up to 20 MW

Complete, sign and submit to SCL PRIOR TO INSTALLATION of the generating system.

Applicant Request Review under (select one):

Level 2

Level 3

Level 4

Customer Information

Customer Name: _____

Contact person: _____ Primary Phone _____

Email: _____ Secondary Phone: _____

Service Facility Address: _____
(Street) (City) (State) (Zip)

Mailing Address: _____
(Street/PO Box) (City) (State) (Zip)

City Light Account #: _____ Electrical Permit #: _____

Contractor: _____ Office Phone: _____

Contact Person: _____ Cell Phone: _____

Email: _____

Applying for the WA Renewable Energy Production Incentive? Yes No

No

If yes, a production meter installed by SCL is required. Please include an Application for Electric Service. An SCL representative will contact you with the cost of the meter. You must apply separately for Certification by the WA State Department of Revenue. All application forms are available on SCL's Solar Energy website: www.seattle.gov/light/consERVE/cgen For more information call: 206-684-3800.

Generating System Information

Type of system: New Modification to an existing generation system
 Other (describe) _____

Type of generator: Inverter Synchronous Induction

List components of the Interconnection Equipment Package that are UL or IEEE certified:

Equipment Type	Certifying Entity
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

Individual Generator Data

Location of generating system on property: _____

Generating Facility Nameplate Rating: _____ kW or _____ kVA

Is the prime mover compatible with the Interconnection Equipment Package? Yes No

Manufacturer, Model, Name, and Number _____

Nameplate Output Power Rating in kW: Summer _____ Winter _____

Nameplate Output Power rating in kVA: Summer _____ Winter _____

Rated Power factor: Leading _____ Lagging _____

Voltage at point of interconnection: _____

Generating capacity (kW-DC): _____ Battery backup? Yes No

Generator: Quantity _____ Mfr _____ Model _____ Watts _____

Typical Reactive Load (if known) _____ kVAR

Generator manufactured within the State of Washington? Yes No

Cost of system including installation (optional) _____

Inverter-based Generating Facilities

Inverter (if applicable) Qty _____ Mfr _____ Model _____ Volts _____ Watts _____

Generating capacity (kW – DC): _____ Battery backup? Yes No

Maximum design fault contribution current: Instantaneous _____ RMS _____

Harmonics Characteristics _____

Start-up requirements: _____

Inverter manufactured within the State of Washington? Yes No

Cost of system including installation (optional) _____

Rotating Machines (of any type)

RPM Frequency: _____

(*) Neutral Grounding Resistor (If Applicable): _____

Synchronous Generators

Direct Axis Synchronous Reactance, X_d : _____ P.U.

Direct Axis Transient Reactance, X'_d : _____ P.U.

Direct Axis Sub-transient Reactance, X''_d : _____ P.U.

Negative Sequence Reactance, X_2 : _____ P.U.

Zero Sequence Reactance, X_0 : _____ P.U.

KVA Base: _____

Field Volts: _____

Field Amperes: _____

For synchronous generators, provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

Induction Generators

Motoring Power (kW): _____

I^2t or K (Heating Time Constant): _____

Rotor Resistance, R_r : _____ Rotor Reactance, X_r : _____

Stator Resistance, R_s : _____ Stator Reactance, X_s : _____

Magnetizing Reactance, X_m : _____

Short Circuit Reactance, X_d : _____

Exciting Current: _____

Temperature Rise: _____

Frame Size: _____

Design Letter: _____
Reactive Power Required In Vars (No Load): _____
Reactive Power Required In Vars (Full Load): _____
Total Rotating Inertia, H: _____ Per Unit on kVA Base

Transformer and Protective Relay Specifications

Will a transformer be used between the generator and the Point of Common Coupling?

Yes No

Will the transformer be provided by the Interconnection Customer?

Yes No

Transformer Data (if applicable, for Interconnection Customer-Owned Transformer)

Is the transformer: single phase three phase Size: _____ kVA

Transformer Impedance: _____ percent on _____ kVA Base

For Three Phase Transformer

Transformer Primary: _____ Volts Delta Wye Wye-Grounded

Transformer Secondary: _____ Volts Delta Wye Wye-Grounded

Transformer Tertiary: _____ Volts Delta Wye Wye-Grounded

Transformer Fuse Data (if applicable, for Interconnection Customer-Owned Fuse)

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: _____ Type: _____ Size: _____ Speed: _____

Interconnecting Circuit Breaker: (if applicable)

Manufacturer: _____ Type: _____

Load Rating (Amps): _____ Interrupting Rating (Amps): _____ Trip Speed (Cycles): _____

Interconnection Protective Relays (if applicable)

If Microprocessor-Controlled:

List of Functions and Adjustable Set points for the protective equipment or software:

Set point Function	Minimum	Maximum
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____

Discrete Components (if applicable)

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____

Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____

Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____

Proposed Setting: _____

Current Transformer Data (if applicable)

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: _____

Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Potential Transformer Data (if applicable)

Manufacturer: _____

Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____

Applicant Signature

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Application is true and correct. I also agree to install a Warning Label provided by (utility) on or near my service meter location. Generating Facilities must be compliant with IEEE, NEC, ANSI, and UL standards, where applicable. By signing below, the Applicant also certifies that the installed generating equipment meets the appropriate preceding requirement(s) and can supply documentation that confirms compliance.

Signature of Applicant: _____ Date: _____

Title _____

NOTE: Operation is contingent on Utility approval to interconnect the Generating Facility.

Information Required Prior to Physical Interconnection

A Certificate of Completion in the form of Attachment 4 of the Interconnection Requirements must be provided to the Utility prior to interconnected operation. The Certificate of Completion must either be signed by an electrical inspector with the authority to approve the interconnection or be accompanied by the electrical inspector's own form authorizing interconnection of the Generating Facility.

Application Submittals Checklist

Be sure to include:

- One-Line Electrical Diagram (signed and stamped by a licensed Professional Engineer)
- Site Documentation Plan
- Protection and Control Scheme Documentation , including Schematic Drawings
- Completed & signed Application for Electric Service – to request a production meter (if applying for WA Renewable Energy Production Incentive)

Mail all documentation and check to: Seattle City Light, 1300 N 97th Street, ATTN: Intake Desk,
Seattle, WA 98103-3320

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Level 2, 3 and 4 Interconnection Agreement

This agreement ("Agreement") is made and entered into this _____ day of _____, 20____ ("Effective Date") by and between _____ ("Interconnection Customer"), a _____ organized and existing under the laws of the State of _____, and Seattle City Light ("Utility"), an Electric Utility existing under the laws of the State of Washington. Interconnection Customer and Utility each may be referred to as a "Party," or collectively as the "Parties."

Utility Contact Information

Seattle City Light
Asset Management Division
Attention: Manager, System Planning Department
700 Fifth Avenue, Suite 3200
P.O. Box 34023
Seattle, WA 98124-4023
Phone: (206) 684-3556 Fax: (206) 684-3040

Interconnection Customer Information

Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

Interconnection Customer Application No: _____

Recitals:

Whereas, Interconnection Customer, as an Applicant, is proposing to develop a Generating Facility, or generating capacity addition to an existing Generating Facility, consistent with the application completed by Interconnection Customer on _____; and

Whereas, Interconnection Customer desires to interconnect the Generating Facility with the Utility's Electrical Distribution System;

Now, therefore, in consideration of and subject to the mutual covenants contained herein, the Parties agree as follows:

Article 1. Scope and Limitations of Agreement

- 1.1 This Agreement shall be used for all approved Level 2, Level 3, and Level 4 Interconnection Applications according to the procedures set forth in the Interconnection Requirements. Capitalized terms in this Agreement if not defined in the Agreement have

the meanings set forth in the Interconnection Requirements.

- 1.2 This Agreement governs the terms and conditions under which the Generating Facility will interconnect to, and operate in parallel with, the Utility's Electrical Distribution System.
- 1.3 This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power.
- 1.4 Nothing in this Agreement is intended to affect any other agreement between Utility and Interconnection Customer.
- 1.5 Responsibilities of the Parties
 - 1.5.1 The Parties shall perform all obligations of this Agreement in accordance with all applicable laws and regulations, and operating requirements.
 - 1.5.2 The Interconnection Customer shall arrange for the construction, interconnection, operation and maintenance of the Generating Facility in accordance with the applicable manufacturer's recommended maintenance schedule, in accordance with this Agreement.
 - 1.5.3 The Utility shall construct, own, operate, and maintain its Electrical Distribution System and its facilities for interconnection ("Interconnection Facilities") in accordance with this Agreement.
 - 1.5.4 The Interconnection Customer agrees to arrange for the construction of the Generating Facility or systems in accordance with applicable specifications that meet or exceed the National Electrical Code, the American National Standards Institute, IEEE, Underwriters Laboratories, and any operating requirements.
 - 1.5.5 Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the Exhibits to this Agreement and shall do so in a manner so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the other Party.
 - 1.5.6 Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Common Coupling.
- 1.6 Regulatory Coordination and Approvals

Regional approval may be required for certain new projects. It is the responsibility of the Interconnection Customer to file for any approvals or licenses prior to construction and to meet any federal or regional regulatory requirements. Copies of licenses, letter of approval, and associated study material should be provided to the Utility. The Utility shall be made aware of any project modifications mandated by the regulatory agencies so that additional studies may be performed. If the Interconnection Customer believes that no regulatory approval is required, a written justification of that belief shall be provided to the Utility.
- 1.7 Regional Study Requirements

The Interconnection Customer may be required to file with the Western Electricity

Coordinating Council (WECC) Planning Coordination Committee (PCC) to initiate regional approval for a project that has regional significance. This procedure allows other regional entities to examine and study project plans and comment on potential operational and capacity issues, as noted in Section III of the PCC Handbook, as made available by WECC.

If the Interconnection Customer is not a regional entity as defined by WECC, and the project has an impact on the region, the Utility will file the required documentation with WECC and shepherd the project through this process. The Utility is not responsible for any project delays caused by this process.

Article 2. Inspection, Testing, Authorization, and Right of Access

2.1 Equipment Testing and Inspection

The Interconnection Customer shall arrange for the testing and inspection of the Generating Facility prior to interconnection in accordance with IEEE Standard 1547.

2.2 Certificate of Completion

Prior to commencing parallel operation, the Interconnection Customer shall provide the Utility with a Certificate of Completion substantially in the form of Attachment 4 of the Interconnection Requirements. The Certificate of Completion must either be signed by an electrical inspector with the authority to approve the interconnection or be accompanied by the electrical inspector's own form authorizing interconnection of the Generating Facility.

2.3 Authorization

The Interconnection Customer is authorized to commence parallel operation of the Generating Facility when there are no contingencies noted in this Agreement remaining.

2.4 Parallel Operation Obligations

The Interconnection Customer shall abide by all permissible written rules and procedures developed by the Utility which pertain to the parallel operation of the Generating Facility. In the event of conflicting provisions, the Interconnection Requirements shall take precedence over a Utility's rule or procedure, unless such Utility rule or procedure is contained in an approved tariff, in which case the provisions of the tariff shall apply. Copies of the Utility's rules and procedures for parallel operation are provided as an exhibit to this Agreement

2.4.1 Synchronization

The Interconnection Customer is responsible for synchronizing its equipment to the power system. During all other conditions, the Generating Facility shall operate within approved procedures when connecting to the system. For automatic or manual synchronization, voltage fluctuation shall meet IEEE standard 1547 and sync-checking shall be required to ensure that the unit properly synchronize to the power system.

2.4.2 Operational Requirements

All safety and operating procedures for joint use equipment shall be in compliance with the Occupational Safety and Health Administration (OSHA) standard 29

CFR 1910.269, the National Electrical Safety Code (NESC), Washington State Administrative Code (WAC rules), National Electrical Code (NEC), the Washington Industrial Safety and Health Administration (WISHA) standard, the Seattle City Light "System Operations Clearance Keep Open and Hold Open Procedures" brochure, and the Interconnection Customer's safety manuals.

2.4.3 Isolation Requirements

The Interconnection Customer shall not energize any of the Utility's system line or equipment unless the Utility's System Control Center (SCC) specifically approves energization. If, for any reason, a protective device operation separates the Generating Facility from the Utility's system, the Interconnection Customer shall contact the SCC before attempting to restore the connection to the system. Automatic re-closing is not allowed.

At the Connection Point, a disconnect switch shall be provided for the purpose of physically and visibly isolating the Generating Facility from the Utility's System. With the agreement between the Utility and the Interconnection Customer, the disconnect switch may be installed at another location other than the Connection Point, provided that the purpose described herein is satisfied. The device:

2.4.3.1 Shall be accessible by, and under the Utility's SCC jurisdiction & control.

2.4.3.2 Shall be gang-operated, and shall be lockable in the open position by the Utility.

2.4.3.3 Shall be suitable for safe operation under the conditions of use.

2.4.3.4 Shall not be operated without advance notice to either party, unless an emergency condition requires that the device be opened to isolate the Generating Facility.

2.5 Metering

The Interconnection Customer shall be responsible for the Utility's reasonable and necessary cost for the purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment specified in exhibits of this Agreement. The Interconnection Customer's metering (and data acquisition, as required) equipment shall conform to applicable industry rules and Operating Requirements.

2.6 Reactive Power

The Interconnection Customer shall design its Generating Facility to maintain a composite power delivery at continuous rated power output at the Point of Common Coupling at a power factor within the range of 0.95 leading to 0.95 lagging.

2.7 Right of Access

At reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, the Utility shall have reasonable access to the Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on the Utility under this Agreement, or as is necessary to meet a legal obligation to provide service to customers.

Article 3. Effective Date, Term, Termination, and Disconnection

3.1 Effective Date

This Agreement shall become effective upon execution by the Parties.

3.2 Term of Agreement

This Agreement shall remain in effect unless terminated earlier in accordance with Article 3.3 of this Agreement.

3.3 Termination

No termination shall become effective until the Parties have complied with all applicable laws and regulations applicable to such termination.

3.3.1 The Interconnection Customer may terminate this Agreement at any time by giving the Utility twenty business days' written notice.

3.3.2 Either Party may terminate this Agreement pursuant to Article 6.6.

3.3.3 Upon termination of this Agreement, the Generating Facility will be disconnected from the Utility's Electrical Distribution 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.

3.3.4 The provisions of this Article shall survive termination or expiration of this Agreement.

3.4 Temporary Disconnection

The Utility may temporarily disconnect the Generating Facility from the Electrical Distribution System for so long as reasonably necessary in the event one or more of the following conditions or events:

3.4.1 Emergency Conditions: "Emergency Condition" shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of Utility, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of the Utility's Interconnection Facilities or damage to the Utility's Electrical Distribution System, or (3) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility. Under emergency conditions, the Utility or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the Generating Facility. The Utility shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Generating Facility. The Interconnection Customer shall notify the Utility promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Utility's Electrical Distribution System. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and any necessary corrective action.

- 3.4.2 **Routine Maintenance, Construction, and Repair:** The Utility may interrupt interconnection service or curtail the output of the Generating Facility and temporarily disconnect the Generating Facility from the Utility's Electrical Distribution System when necessary for routine maintenance, construction, and repairs on the Utility's Electrical Distribution System. The Utility shall provide the Interconnection Customer with five business days notice prior to such interruption. The Utility shall use reasonable efforts to coordinate such repair or temporary disconnection with the Interconnection Customer.
- 3.4.3 **Forced Outages:** During any forced outage, the Utility may suspend interconnection service to effect immediate repairs on the Utility's Electrical Distribution System. The Utility shall use reasonable efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the Utility shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.
- 3.4.4 **Adverse Operating Effects:** The Utility shall provide the Interconnection Customer with a written notice of its intention to disconnect the Generating Facility if, based on good utility practice, the Utility determines that operation of the Generating Facility will likely cause unreasonable disruption or deterioration of service to other Utility customers served from the same electrical distribution system, or if operating the Generating Facility could cause damage to the Electrical Distribution System. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. The Utility may disconnect the Generating Facility if, after receipt of the notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time which shall be at least five business days from the date the Interconnection Customer receives the Utility's written notice supporting the decision to disconnect, unless emergency conditions exist in which case the provisions of Article 3.4.1 apply.
- 3.4.5 **Modification of the Generating Facility:** The Interconnection Customer must receive written authorization from Utility before making any change to the Generating Facility that may have a material impact on the safety or reliability of the Utility's Electrical Distribution System. Such authorization shall not be unreasonably withheld. Modifications shall be completed in accordance with good utility practice. If the Interconnection Customer makes such modification without the Utility's prior written authorization, the latter shall have the right to temporarily disconnect the Generating Facility. If disconnected, the Generating Facility will not be reconnected until the unauthorized modifications are authorized or removed.
- 3.4.5.1 **Changes to Interconnection Customer-Supplied Information**
If there are any changes in data previously supplied pursuant to these connection requirements, the Interconnection Customer shall notify the utility in writing prior to 30 days. This notification shall include:

- The time and date when the change that might impact Seattle City Light is expected to become effective, and
- If the change is only temporary, an estimate of the time and date at which the data shall revert to the previously supplied form.

A request for a change in Connection Point to the Utility's System and level of generation shall be submitted as a new request. A new completion date shall be negotiated with the Interconnection Customer when Project data is changed.

The Utility may request load growth projections after the initial connection is made. This will require an annual submittal by the Interconnection Customer detailing the load projections for each of next 5 to 10 years.

- 3.4.6 Reconnection: The Parties shall cooperate with each other to restore the Generating Facility, Interconnection Facilities, and the Utility's Electrical Distribution System to their normal operating state as soon as reasonably practicable following a temporary disconnection.

Article 4. Cost Responsibility for Interconnection Facilities and Distribution upgrades

4.1 Interconnection Facilities

- 4.1.1 The Interconnection Customer shall pay for the cost of the interconnection facilities itemized in the Exhibits to this Agreement ("Interconnection Facilities"). If a facilities study was performed, the Utility shall identify its Interconnection Facilities necessary to safely interconnect the Generating Facility with the Utility's Electrical Distribution System, the cost of those facilities, and the time required to build and install those facilities.
- 4.1.2 The Interconnection Customer shall be responsible for its share of all reasonable expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its Interconnection Equipment Package, and (2) operating, maintaining, repairing, and replacing the Utility's Interconnection Facilities as set forth in any exhibits to this Agreement.

4.2 Distribution upgrades

The Utility shall design, procure, construct, install, and own any Electrical Distribution System upgrades ("Utility Upgrades"). The actual cost of the Utility Upgrades, including overheads, shall be directly assigned to the Interconnection Customer.

Article 5. Billing, Payment, Milestones, and Financial Security

5.1 Billing and Payment Procedures and Final Accounting

- 5.1.1 The Utility shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of the Utility-provided Interconnection Facilities and Utility Upgrades contemplated by this Agreement as set forth in the exhibits to this Agreement, on a monthly basis, or as otherwise agreed by the

Parties. The Interconnection Customer shall pay each bill within thirty calendar days of receipt, or as otherwise agreed by the Parties.

- 5.1.2 Within ninety (90) calendar days of completing the construction and installation of the Utility's Interconnection Facilities and Utility Upgrades described in the exhibits to this Agreement, the Utility shall provide the Interconnection Customer with a final accounting report of any difference between (1) the actual cost incurred to complete the construction and installation and the budget estimate provided to the Interconnection Customer and (2) the Interconnection Customer's previous deposit and aggregate payments to the Utility for such Interconnection Facilities and Utility Upgrades. The Utility shall provide a written explanation for any actual cost exceeding a budget estimate by 20% or more. If the Interconnection Customer's cost responsibility exceeds its previous deposit and aggregate payments, the Utility shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the Utility within thirty calendar days. If the Interconnection Customer's previous deposit and aggregate payments exceed its cost responsibility under this Agreement, the Utility shall refund to the Interconnection Customer an amount equal to the difference within thirty (30) calendar days of the final accounting report.

5.2 Interconnection Customer Deposit

At least twenty business days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Utility's Interconnection Facilities and Utility Upgrades, the Interconnection Customer shall provide the Utility with a deposit equal to twenty (20) percent of the cost estimated for its Interconnection Facilities prior to its beginning design of such facilities.

5.3 Milestones

Both Parties shall agree on milestones for which each Party is responsible and list them in the exhibits of this Agreement. A Party's obligations under this provision may be extended by agreement. If a Party anticipates that it will be unable to meet a milestone for any reason other than a Force Majeure Event, it shall immediately notify the other Party of the reason(s) for not meeting the milestone and (1) propose the earliest reasonable alternate date by which it can attain this and future milestones, and (2) requesting appropriate amendments to the exhibit. The Party affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless it will suffer significant uncompensated economic or operational harm from the delay, (1) attainment of the same milestone has previously been delayed, or (2) it has reason to believe that the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstances explained by the Party proposing the amendment.

5.4 Financial Security Arrangements for Interconnection Sized 1 MW and Greater

At least 20 Business Days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Utility's Interconnection Facilities and Upgrades, the Interconnection Customer shall provide the Utility, at the Interconnection Customer's option, a guarantee, which is made by an entity that meets the creditworthiness requirements of the Utility, and contain terms and conditions that

guarantee payment of any amount that may be due from the Interconnection Customer up to an agreed-to maximum amount, a surety bond, or a letter of credit from a bank with at least an "A" credit rating from two or more major credit rating agencies (e.g., Moody's and S & P), or other form of security that is reasonably acceptable to the Utility and is consistent with the Uniform Commercial Code of the jurisdiction where the Point of Interconnection is located. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Utility's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Utility under this Agreement during its term. The Utility may draw on any such security to the extent that the Interconnection Customer fails to make any payments under this Agreement.

Article 6. Assignment, Liability, Indemnity, Force Majeure, Consequential Damages, and Default

6.1 Assignment

This Agreement may be assigned by either Party as provided below upon fifteen business days' prior written notice to the other Party.

6.1.1 Either Party may assign this Agreement without the consent of the other Party to any affiliate of the assigning Party and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement;

6.1.2 The Interconnection Customer shall have the right to assign this Agreement, without the consent of the Utility, for collateral security purposes to aid in providing financing for the Generating Facility;

6.1.3 For a Generating Facility offsetting part or all of the load of a utility customer at a given site, that customer is the Interconnection Customer and that customer may assign its Interconnection Agreement to a subsequent occupant of the site. For a Generating Facility providing energy directly to a Utility, the Interconnection Customer is the owner of the Generating Facility and may assign its Interconnection Agreement to a subsequent owner of the Generating Facility. Assignment is only effective after the assignee provides written notice of the assignment to the Utility and agrees to accept the Interconnection Customer's responsibilities under this Interconnection Agreement.

6.1.4 All other assignments shall require the prior written consent of the non-assigning Party, and such consent shall not be unreasonably withheld.

6.1.5 Any attempted assignment that violates this Article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same obligations as the Interconnection Customer.

6.2 Limitation of Liability

Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any

indirect, special, consequential, or punitive damages, except as specifically authorized by this Agreement.

6.3 Indemnity

- 6.3.1 This provision protects each Party from liability incurred to third Parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 6.2.
- 6.3.2 Each Party shall at all times indemnify, defend, and hold the other 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, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the indemnified Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.
- 6.3.3 If an indemnified Party is entitled to indemnification under this Article as a result of a claim by a third party, the indemnifying Party shall, after reasonable notice from the indemnified Party, assume the defence of such claim. If the indemnifying Party fails, after notice and reasonable opportunity to proceed under this Article, to assume the defense of such claim, the indemnified Party 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.
- 6.3.4 If the indemnifying Party is obligated to indemnify and hold the indemnified Party harmless under this Article, 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.
- 6.3.5 Promptly after receipt 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 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 such failure or delay is materially prejudicial to the indemnifying Party.

6.4 Consequential Damages

Neither Party shall 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 but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to the other Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

6.5 Force Majeure

- 6.5.1 As used in this Article, a Force Majeure Event shall mean any act of God, labor disturbance, act of the public enemy, war, acts of terrorism, insurrection, riot, fire,

storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing.

6.5.2 If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event ("Affected Party") shall promptly notify the other Party of the existence of the Force Majeure Event. The notification must 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, and if the initial notification was verbal, it should be promptly followed up with a written notification. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be reasonably mitigated by the Affected Party. The Affected Party shall use reasonable efforts to resume its performance as soon as possible.

6.6 Default

6.6.1 Default exists where a Party has materially breached any provision of this Agreement, except that no default shall exist where a failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement, or the result of an act or omission of the other Party.

6.6.2 Upon a default, the non-defaulting Party shall give written notice of such default to the defaulting Party. Except as provided in Article 6.6.3, the defaulting Party shall have 60 calendar days from receipt of the default notice within which to cure such default; provided however, if such default is not capable of cure within 60 calendar days, the defaulting Party shall commence efforts to cure within 20 calendar days after notice and continuously and diligently pursue such cure within six months from receipt of the default notice; and, if cured within such time, the default specified in such notice shall cease to exist.

6.6.3 If a default is not cured as provided in this Article, or if a default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not that Party terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this Agreement.

Article 7. Insurance

The Interconnection Customer is not required to provide insurance coverage for utility damages beyond the amounts listed in Section J of the Interconnection Requirements as part of this Agreement, nor is the Interconnection Customer required to carry general liability insurance as part of this Agreement or any other Utility requirement. It is, however, recommended that the Interconnection Customer protect itself with liability insurance.

Article 8. Dispute Resolution

Any dispute arising from or under the terms of this Agreement shall be subject to the dispute resolution procedures contained in section K of the Interconnection Requirements, under Dispute Resolution.

Article 9. Miscellaneous

9.1 Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the State of Washington (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Agreement is subject to all applicable laws and regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a governmental authority.

9.2 Amendment

The Parties may only amend this Agreement by a written instrument duly executed by both Parties.

9.3 No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest, and, where permitted, their assigns.

9.4 Waiver

9.4.1 The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

9.4.2 Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any failure to comply with any other obligation, right, or duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Utility. Any waiver of this Agreement shall, if requested, be provided in writing.

9.5 Entire Agreement

This Agreement, including all exhibits, constitutes the entire Agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

9.6 Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all of which constitute one and the same Agreement.

9.7 No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties nor to impose any partnership obligation or partnership liability upon either Party. Neither Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

9.8 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 or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore, insofar as practicable, the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

9.9 Environmental Releases

Each Party shall notify the other Party, first orally and then in writing, of the release any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Party copies of any publicly available reports filed with any governmental authorities addressing such events.

9.10 Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain liable for the performance of such subcontractor.

9.10.1 The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible

to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall Utility be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

9.10.2 The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

Article 10. Notices

10.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national carrier service, or sent by first class mail, postage prepaid, to the person specified below:

Interconnection Customer:

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail _____

Utility: Seattle City Light

Asset Management Division
Attention: Manager, System Planning Department
700 Fifth Avenue, Suite 3200
P.O. Box 34023
Seattle, WA 98124-4023
Phone: (206) 684-3556 Fax: (206) 684-3040
Email: SCLInterconnection@seattle.gov

10.2 Billing and Payment

Billings and payments to Interconnection Customer shall be sent to the address provided in Section 10.1 unless an alternative address is provided here:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

10.3 Designated Operating Representative

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's operating representative: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail: _____

Utility's Operating Representative:

System Control Center, Seattle City Light

Attention: Director, System Operations

Address: 614 NW 46th Street Seattle, WA 98107

Phone: (206) 706-0240 Fax: (206) 706-0144

E-mail: SCLSystemOperations@seattle.gov

Article 11. Signatures

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

For Seattle City Light:

Signature: _____ Date: _____

Name (printed): Phil West

Title: Customer Service and Energy Delivery Officer

For the Interconnection Customer:

Signature: _____ Date: _____

Name (printed): _____

Title: _____

Exhibits incorporated in this Agreement:

- One-line diagram and site maps
- Interconnection Facilities (upgrades to the Utility's distribution system required for Level 4 Generating Facilities or those approved under the "additional review" portion of Level 2) to be constructed by the Utility.
- Any milestones for both the Interconnection Customer and the Utility as well as cost responsibility and apportionments if there is more than one Generating Facility interconnecting and sharing in the Distribution Upgrade costs.
- Operational requirements or reference to Utility website with these requirements – this exhibit shall require the Interconnection Customer to operate within the bounds of IEEE Standard 1547 and associated standards
- Reimbursement of costs (Utility may, in its sole discretion, reimburse Interconnection Customer for Utility Upgrades that benefit future Generating Facilities)
- Operating restrictions (NOTE: no operating restrictions apply to Levels 1, 2 or 3 interconnections but may apply, in the discretion of the Utility, to Generating Facilities approved under Level 4)
- Copy of Feasibility Study Agreement (if applicable)
- Copy of Impact Study Agreement (if applicable)
- Copy of Facilities Study Agreement (if applicable)]

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Certificate of Completion

Installation Information

Check if owner-installed

Applicant: _____ Contact Person: _____

Mailing Address: _____

Location of Generating Facility (if different from above): _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Electrician:

Installing Electrician: _____ Firm: _____

License No.: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Daytime): _____ (Evening): _____

Facsimile Number: _____ E-Mail Address: _____

Installation Date: _____ Interconnection Date: _____

Electrical Inspection:

The system has been installed and inspected in compliance with the local Building/Electrical Code of _____ (appropriate governmental authority).

Local Electrical Wiring Inspector (*or attach signed electrical inspector's form*):

Signature: _____

Date: _____

Name (printed): _____

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Attachment 5: Feasibility, Impact and Facilities Study Agreements

As noted in the Interconnection Requirements, a Utility may require that a proposed Level 4 Generating Facility be subject to feasibility, impact and facilities Studies. At the Utility's discretion, any of these studies may be combined or foregone. Also at the Utility's discretion, for any study, the Applicant may be required to provide information beyond the contents of the Application. Sample study agreements are provided on the following pages.

Interconnection Feasibility Study Agreement

This agreement ("Agreement") is made and entered into this _____ day of _____ by and between _____, a _____ organized and existing under the laws of the State of _____, ("Applicant,") and _____, a _____ existing under the laws of the State of _____, ("Utility"). The Applicant and the Utility each may be referred to as a "Party," or collectively as the "Parties."

Recitals:

Whereas, Applicant is proposing to develop a Generating Facility or Generating Capacity addition to an existing Generating Facility consistent with the application completed by Applicant on _____; and

Whereas, Applicant desires to interconnect the Generating Facility with the Utility's Electrical Distribution System; and

Whereas, the Utility has determined that a "Feasibility Study" is necessary to assess the feasibility of interconnecting the proposed Generating Facility to the Utility's Electrical Distribution System;

Now, Therefore, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1. When used in this Agreement, capitalized terms shall have the meanings indicated. Capitalized terms that are not defined in this Agreement shall have the meanings specified in the Interconnection Requirements.
2. Applicant elects and the Utility shall cause to be performed a Feasibility Study consistent with Section H(3) of the Interconnection Requirements.
3. The scope of the Feasibility Study shall be based on information supplied in the Application and any other information or assumptions set forth in any attachment to this agreement.
4. The Utility reserves the right to request additional technical information from Applicant as may reasonably become necessary, consistent with good utility practice during the course of the Feasibility Study. If after signing this Agreement, Applicant modifies its Application or any of the information or assumptions in any attachment to this Agreement, the time to complete the Feasibility Study may be extended by agreement of the Parties.
5. In performing the Feasibility Study, the Utility shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Applicant will not be charged for such existing studies; however, Applicant 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. The Feasibility Study report shall provide the following information:
 - 6.1. Preliminary identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection,
 - 6.2. Preliminary identification of any thermal overload or voltage limit violations resulting from the interconnection, and
 - 6.3. Preliminary description and non-bonding estimated cost of facilities required to interconnect the Generating Facility to Utility's Electrical Distribution System and to address the identified short circuit and power flow issues.
7. The Utility may require a study deposit of the lesser of 50 percent of estimated non-binding good faith study costs or \$1,000.
8. The Feasibility Study shall be completed and the results shall be transmitted to Applicant within twenty

business days after this Agreement is signed by the Parties, unless the proposed Generating Facility will impact other proposed Generating Facilities.

9. Study fees shall be based on actual costs and will be invoiced to Applicant after the study is transmitted to Applicant. The invoice shall include an itemized listing of employee time and costs expended on the study.
10. Applicant shall pay any actual study costs that exceed the deposit without interest within thirty calendar days on receipt of the invoice. Utility shall refund any excess amount without interest within thirty calendar days of the invoice.

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.

For the Utility

Signature: _____ Date: _____

Name (printed): _____

Title: _____

For the Applicant

Signature: _____ Date: _____

Name (printed): _____

Title: _____

Are attachments included to supplement or modify information contained in the Application?

_____ Yes _____ No

Interconnection System Impact Study Agreement

This agreement ("Agreement") is made and entered into this _____ day of _____ by and between _____, a _____ organized and existing under the laws of the State of _____, ("Applicant,") and _____, a _____ existing under the laws of the State of _____, ("Utility"). The Applicant and the Utility each may be referred to as a "Party," or collectively as the "Parties."

Recitals:

Whereas, Applicant is proposing to develop a Generating Facility or Generating Capacity addition to an existing Generating Facility consistent with the Application completed by Applicant on _____ and;

Whereas, Applicant desires to interconnect the Generating Facility with the Utility's Electrical Distribution System;

Whereas, the Utility has completed or waived an interconnection feasibility study and provided the results, if any, of said study to Applicant;

Whereas, Applicant has requested the Utility to perform an impact study to assess the impact of interconnecting the Generating Facility to the Utility's Electrical Distribution System;

Now, therefore, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1. When used in this Agreement, Capitalized terms shall have the meanings indicated. Capitalized terms not defined in this Agreement shall have the meanings specified in the Interconnection Requirements.
2. Applicant elects and the Utility shall cause to be performed an impact study consistent with Sections H(5)-(8) of the Interconnection Requirements.
3. The scope of the impact study shall be based on information supplied in the Application, any feasibility study on the Generating Facility completed by the Utility, and any other information or assumptions set forth in any attachment to this Agreement.
4. The Utility reserves the right to request additional technical information from Applicant as may reasonably become necessary consistent with good utility practice during the course of the impact study. If after signing this Agreement, Applicant modifies its Application or any of the information or assumptions in any attachment to this Agreement, the time to complete the impact study may be extended.
5. The impact study shall provide the following information:
 - 5.1. Identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection,
 - 5.2. Identification of any thermal overload or voltage limit violations resulting from the interconnection,
 - 5.3. Identification of any instability or inadequately damped response to system disturbances resulting from the interconnection and
 - 5.4. Description and non-binding, good faith estimated cost of facilities required to interconnect the Generating Facility to the Utility's Electrical Distribution System and to address the identified short circuit, instability, and power flow issues.
6. The Utility may require a study deposit of the lesser of 50 percent of estimated non-binding good faith study costs or \$3,000.
7. The impact study shall be completed and the results transmitted to Applicant within forty (40) business days after this Agreement is signed by the Parties, unless the proposed Generating Facility will impact other proposed generating facilities.

8. Study fees shall be based on actual costs and will be invoiced to Applicant after the study is transmitted to Applicant. The invoice shall include an itemized listing of employee time and costs expended on the study.
9. Applicant shall pay any actual study costs that exceed the deposit without interest within thirty (30) calendar days on receipt of the invoice. The Utility shall refund any excess amount without interest within thirty calendar days of the invoice.

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.

For the Utility

Signature: _____ Date: _____

Name (printed): _____

Title: _____

For the Applicant

Signature: _____ Date: _____

Name (printed): _____

Title: _____

Are attachments included to supplement or modify information contained in the Application and the feasibility study (if performed)?

_____ Yes _____ No

Interconnection Facilities Study Agreement

This agreement ("Agreement") is made and entered into this _____ day of _____ by and between _____, a _____ organized and existing under the laws of the State of _____, ("Applicant,") and _____, a _____ existing under the laws of the State of _____, ("Utility"). The Applicant and the Utility each may be referred to as a "Party," or collectively as the "Parties."

Recitals:

Whereas, Applicant is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Application completed by Applicant on _____; and

Whereas, Applicant desires to interconnect the Generating Facility with the Utility's Electrical Distribution System;

Whereas, the Utility has completed or waived a feasibility study and an impact study and provided the results of said studies to Applicant; and

Whereas, Applicant has requested that Utility perform a facilities study to specify and estimate the cost of the engineering, procurement and construction work needed to physically and electrically connect the Generating Facility to the Utility's Electrical Distribution System in accordance with good utility practice.

Now, therefore, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1. When used in this agreement, capitalized terms shall have the meanings indicated. Capitalized terms not defined in this agreement shall have the meanings specified in the Interconnection Requirements.
2. Applicant elects and the Utility shall cause to be performed a facilities study consistent with Sections H(9)-(11) of the Interconnection Requirements.
3. The scope of the facilities study shall be subject to information supplied in the Application, and any feasibility study or impact study performed by the Utility for the Generating Facility and any other information or assumptions set forth in any attachment to this agreement.
4. The Utility reserves the right to request additional technical information from Applicant as may reasonably become necessary consistent with good utility practice during the course of the Facilities Study.
5. A Facilities Study report (1) shall provide a description, estimated cost of (consistent with Attachment A), schedule for required facilities to interconnect the Generating Facility to the Utility's Electrical Distribution System and (2) shall address the short circuit, instability, and power flow issues identified in the Impact Study.
6. The Utility may require a study deposit of the lesser of 50 percent of estimated non-binding good faith study costs or \$10,000.
7. The Facilities Study shall be completed and the results shall be transmitted to Applicant within sixty (60) business days after this agreement is signed by the Parties, unless the proposed Generating Facility will impact other proposed generating facilities.
8. Study fees shall be based on actual costs and will be invoiced to Applicant after the study is transmitted to Applicant. The invoice shall include an itemized listing of employee time and costs expended on the study.
9. Applicant shall pay any actual study costs that exceed the deposit without interest within thirty (30) calendar days on receipt of the invoice. The Utility shall refund any excess amount without interest within thirty (30) calendar days of the invoice.

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.

For the Utility

Signature: _____ Date: _____

Name (printed): _____

Title: _____

For the Applicant

Signature: _____ Date: _____

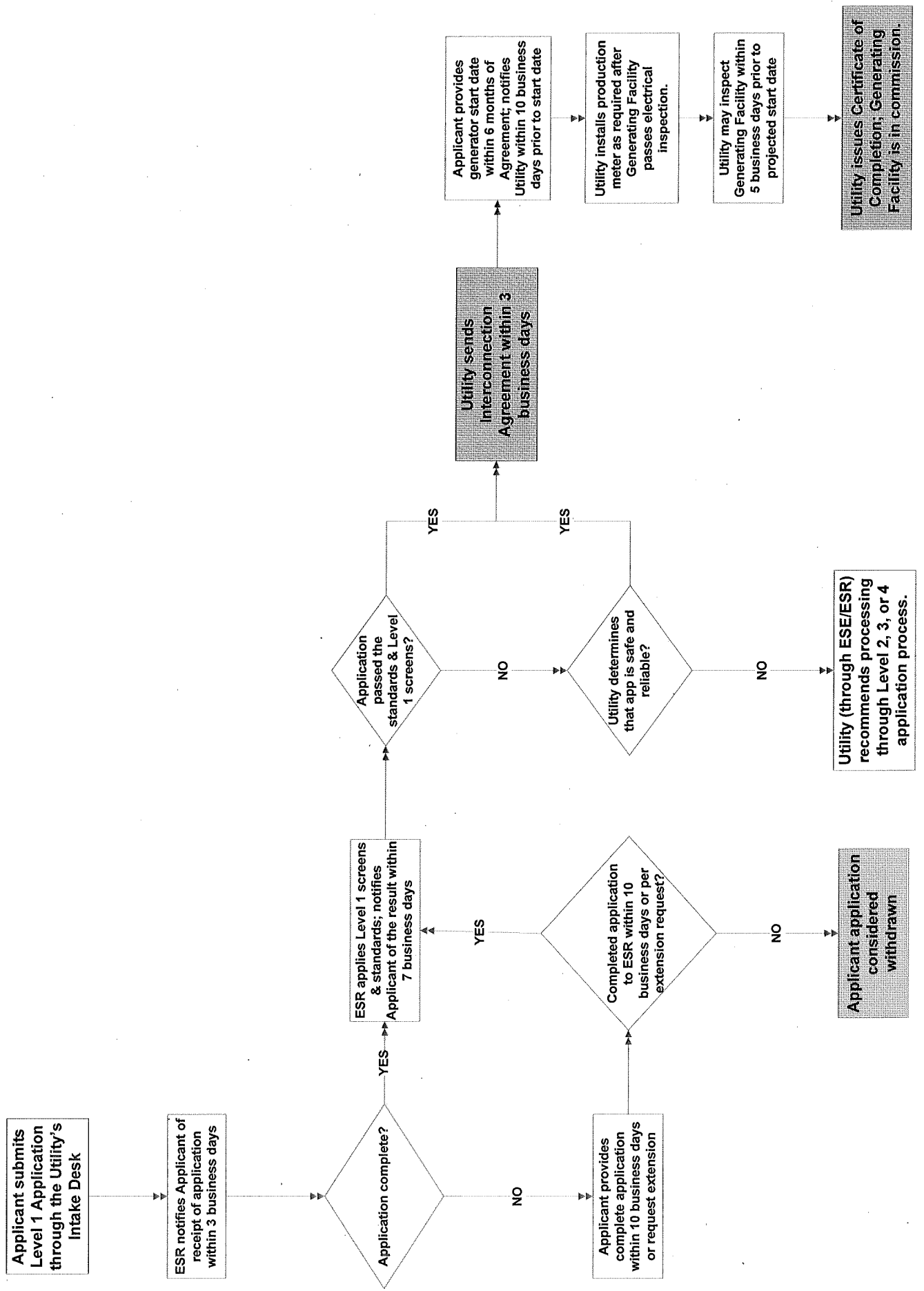
Name (printed): _____

Title: _____

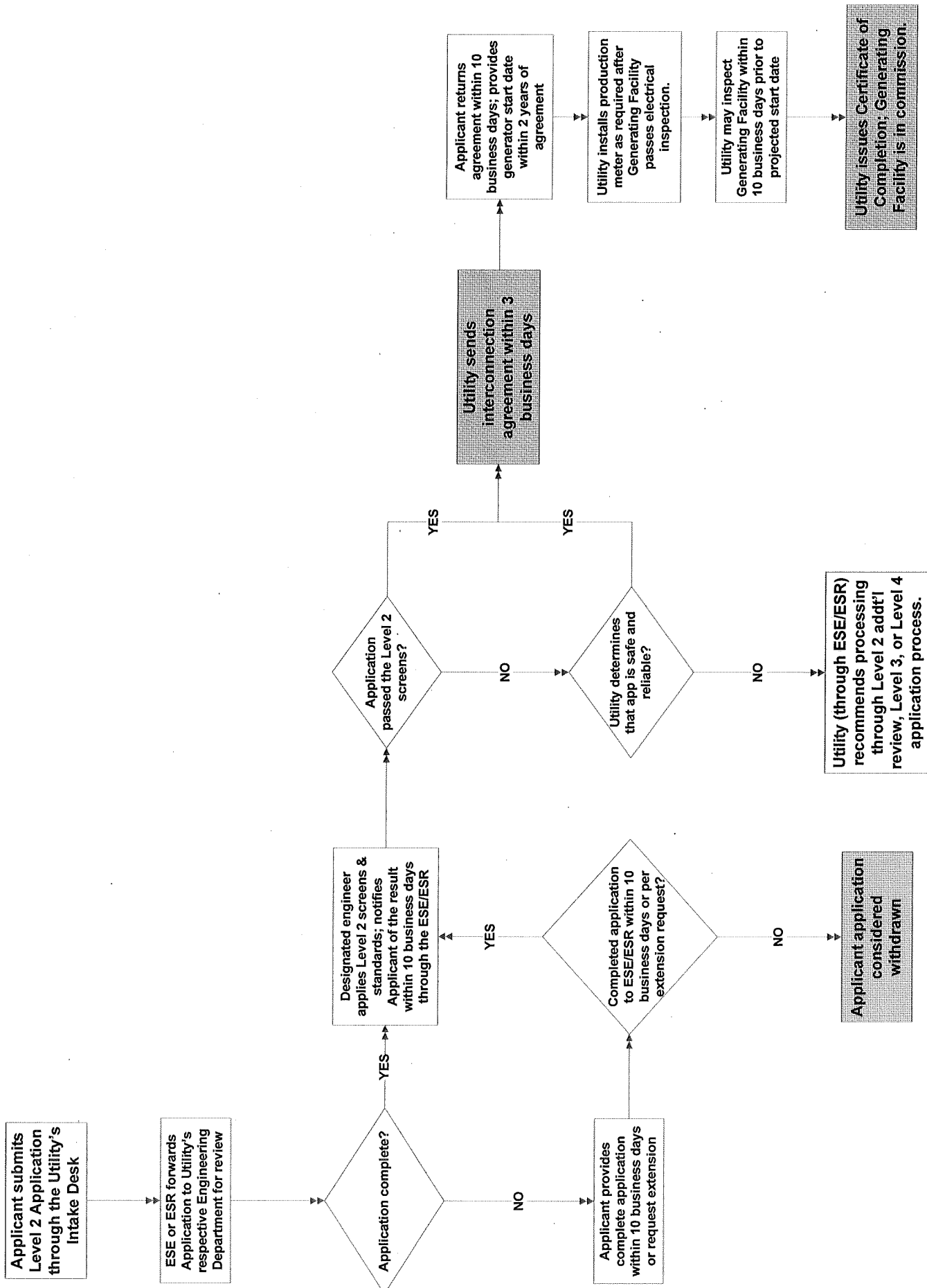
Are attachments included to supplement or modify information contained in the Application, the feasibility study (if performed) and the impact study (if performed)?

_____ Yes _____ No

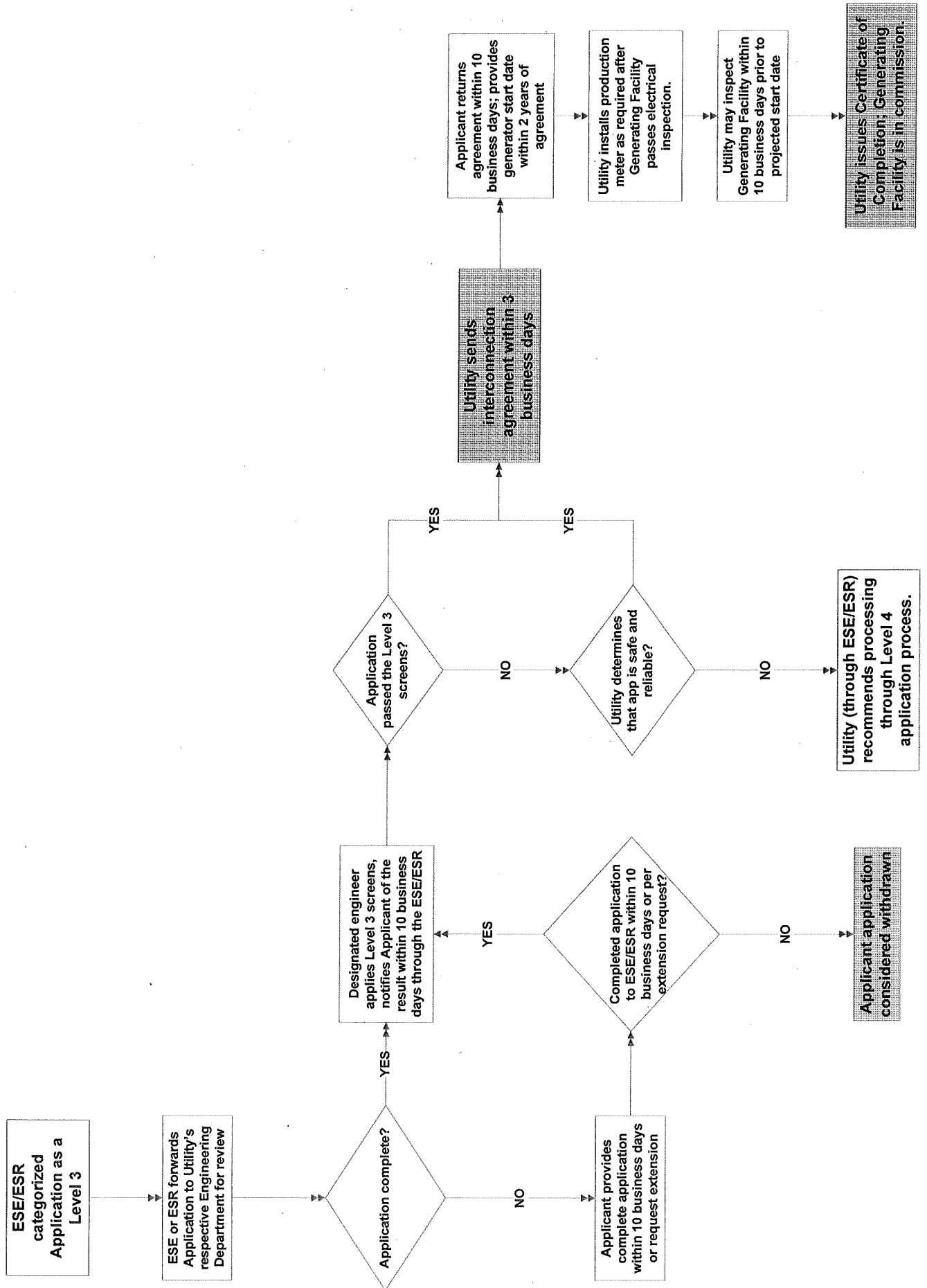
Level 1 Application Process



Level 2 Application Process



Level 3 Application Process



Level 4 Application Process

