

Delaware Electric Cooperative
Generator Interconnection Application –Long Form

(For Use with Generators Greater than 25 kW and have Aggregated Meters)

An applicant (Generator Owner) makes application to Delaware Electric Cooperative to install and operate a generating facility greater than 25kW interconnected with the Delaware Electric Cooperative utility system.

Section 1, Applicant Information Directly Interconnected to the Generating System

Name: _____

Mailing Address: _____

City: _____ State: _____ ZipCode: _____

Facility Location (if different from above): _____

Telephone (Daytime): Area Code _____ Number _____ (Evening) Area Code _____ Number _____

Delaware Electric Cooperative Account No.: _____

Rate Code: _____

Section 2, Aggregated Meter Information

The following aggregated accounts shall be ranked according to the order in which credits shall be applied

1 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

2 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

3 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

4 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

5 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

Section 2, Aggregated Meter Information (continued)

6 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

7 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

8 - DEC Member Name _____ Rate Code: _____

DEC Account No.: _____ kWh Credit Amt: _____ Capacity (DEC): _____

Any additional meters associated with this aggregated system must be supplied on a separate sheet in the same format.

Section 3, Generator Type

Is Generator powered from a Renewable Energy Source: Yes No

Type of Energy Source (if applicable): Solar Wind Hydro

Other generator energy source: Diesel, Natural Gas Diesel, Fuel Oil Other: _____

Will excess power be exported to Delaware Electric Cooperative? Yes No

Total Aggregated Maximum Load: _____ kW (Typical) Maximum Export: _____ kW

Section 4, Generator Technical Information

Type of Generator: Synchronous Induction DC Generator or Solar with Inverter

Generator (or solar collector) Manufacturer, Model Name & Number: _____

(A copy of Generator Nameplate and Manufacturer's Specification Sheet may be substituted)

_____ Output Power Rating in kW: _____

Inverter Manufacturer, Model Name & Number (if used): _____

(A copy of Inverter Nameplate and Manufacturer's Specification Sheet may be substituted)

_____ Rating in kW: _____

Generator Characteristic Data (for rotating machines):

(Not needed if Generator Nameplate and Manufacture's Specification Sheet is provided)

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

Ddirect Axis Transient Reactance, X'_d : _____ P.U. Zero Sequence Reactance: _____ P.U.

Direct Axis Subtransient Reactance, X''_d : _____ P.U. KVA Base: _____

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Section 5, Interconnecting Equipment Technical Data

Will an interposing transformer be used between the generator and the point of interconnection?
 Yes No

Transformer Data (if applicable, for Customer Owned Transformer):
(A copy of transformer Nameplate and Manufacturer's Test Report may be substituted)

Size: _____ KVA . Transformer Primary : _____ Volts Delta Wye Wye Grounded

Transformer Secondary: _____ Volts Delta Wye Wye Grounded

Transformer Impedance: _____ % on _____ KVA Base

Transformer Fuse Data (if applicable, for Customer Owned Fuse):
(Attach copy of fuse manufacturer's Minimum Melt & Total Clearing Time-Current Curves)

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

Interconnecting Circuit Breaker (if applicable):
(A copy of breaker's Nameplate and Specification Sheet may be substituted)

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

Circuit Breaker Protective Relays (if applicable):
(Enclose copy of any proposed Time-Overcurrent Coordination Curves)

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

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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 & Ratio Correction Curves)

Manufacturer: _____ Type: _____ Accuracy Class: _____ Proposed Ratio Connection: _____/5

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Generator Disconnect Switch:

A lockable disconnect device shall be installed within 3 feet of the DEC meter and accessible at all times by DEC personnel, by and at the cost of the owner.

Manufacturer: _____ Type: _____ Catalog No.: _____ Rated Volts: _____ Rated Amps: _____

Single or 3 Phase: _____ Mounting Location: _____

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Section 6, General Technical Information

Enclose copy of site One-Line Diagram showing configuration and interconnection of all equipment, current and potential circuits and protection and control schemes. Is One-Line Diagram Enclosed?: Yes

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Any Available Documentation Enclosed?: Yes

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits. Are Schematic Drawings Enclosed?: Yes

Section 7, PJM Interconnection Queue

The Generator Owner must submit a Generation Interconnection Request directly to PJM if: any Generation is designated in whole or in part as a Capacity Resource to PJM or, if generator intends to sell output to another entity at another electrical location. Generation which is operating "behind the meter" in isolation from the PJM bulk power transmission system and which does not intend to participate in the PJM wholesale energy market may not need to apply to the PJM interconnection queue. PJM has sole discretion on interconnection queue requirements.

Prior to installation send the completed Pages 1-3 to Delaware Electric Cooperative, Attn: Troy Dickerson, Manager of Engineering: Phone: (302) 349-3125 Email: tdickerson@decoop.com or mail to P.O. Box 600 Greenwood, DE 19950

Section 8, Preliminary Approval to Proceed with Interconnection

Delaware Electric Cooperative: Has Approved Has Not Approved this Preliminary Application.

Name : _____ Date: _____

Signature: _____

Reason of Not Approving: _____

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Section 9, Installation Details

Generating System will be installed by: Owner State Licensed Electrician

Installing Electrician: _____ Firm: _____ License No.: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Telephone with Area Code: _____

Installation Date: _____ Interconnection Date: _____

Supply certification that the generating system has been installed and inspected in compliance with the local Building/Electrical code of the municipality of _____

Signed (Inspector): _____ Date: _____
(In lieu of signature of Inspector, a copy of the final inspection certificate may be attached)

Section 10, Generator/Equipment Certification

Generating systems that utilize inverter technology must be compliant with *IEEE 1547* and *Underwriters Lab. UL 1741*. Generating systems must be compliant with Delaware Electric Cooperative's "*Technical Requirements for Parallel Operation of Member Owned Generation*" document. **The Applicant must certify that the installed generating equipment meets the appropriate preceding requirement(s) and can supply documentation that confirms compliance. Generation cannot be turned on until a Delaware Electric Cooperative representative has performed a site visit, installed a warning label near the service meter, and has authorized the system for interconnection.**

Section 11, Applicant Signature

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

Name of Applicant (Printed): _____ Date: _____

Signature of Applicant: _____

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Section 12, Approval or Non-Approval

Delaware Electric Cooperative: Has Approved Has Not Approved this Interconnection Application.

Name : _____ Date: _____

Signature: _____

Reason of Not Approving: _____

Approval to connect to the Company system indicates only that the minimum requirements for a safe proper interconnection have been satisfied. Such approval does not imply that the Generator Owner's facility meets all federal, state and local standards or regulations.

Section 13, Internal Checks and Notifications

- DEC has performed a site visit and approved the system: Yes
- DEC has installed a Warning Label on or near the service meter: Yes
- Notify Billing Dept. of Interconnected Generation: Yes
- Notify Mapping Dept. of Interconnected Generation: Yes
- Notify Metering Dept. of Interconnected Generation: Yes
- Notify System Protection of Interconnected Generation: Yes

At completion send Pages 5 - 6 to Delaware Electric Cooperative, Attn: Troy Dickerson, Manager of Engineering; Phone: (302) 349-3125 Email: tdickerson@decoop.com or mail to P.O. Box 600 Greenwood, DE 19950