



**Portland General Electric Company**  
121 SW Salmon Street • Portland, Oregon 97204  
PortlandGeneral.com

December 5, 2017

Public Utility Commission of Oregon  
Attn: Filing Center  
201 High Street, S.E.  
P.O. Box 1088  
Salem, OR 97308-1088

**RE: UM 1631 – Portland General Electric Net Metering Forms**

Portland General Electric Company (PGE) submits this filing in compliance following the November 21, 2017 public meeting. PGE hereby submits the application forms that are available on PGE's website in accordance with Oregon Administrative Rule 860-039-0025.

- **Net Energy Metering Level 1 Application**
- **Net Energy Metering Level 2 Application**
- **Net Energy Metering Level 3 Application**

If you have any questions, please contact Jacob Goodspeed at (503) 464-7806.

Please direct all formal correspondence and requests to the following email address:  
[pge.opuc.filings@pge.com](mailto:pge.opuc.filings@pge.com).

Sincerely,

A handwritten signature in blue ink, appearing to read "Karla Wenzel". The signature is fluid and cursive, written in a professional style.

Karla Wenzel  
Manager, Pricing and Tariffs

Enclosures

## Customer Checklist<sup>1</sup>, Level 1 Net Metering Process (Please keep this for your records)



- Prepare an Application for Net Metering Facility Interconnection.<sup>2</sup>
  - Include inverter specification sheet (“cut sheet”).
  - Your system may require a lockable, AC disconnect switch based on its Maximum AC Output. PGE requires 24 hour unrestricted access to this disconnect. Please reference the chart below to determine if a PGE disconnect is required.

Service Type	Max. AC Output Permitted without a Disconnect
240 Volts, Single-Phase, 3 Wire	7.2 kW
120/208 Volts, 3-Phase, 4 Wire	10.5 kW
120/240 Volts, 3-Phase 4 Wire	12.5 kW
277/480 Volts, 3-Phase 4 Wire	25.0 kW

If your site requires a PGE accessible disconnect, you will need to include:

- a) a one-line electrical diagram showing all protective devices between (and including) the net metering system and the PGE meter.
- b) a site plan showing the proposed location of the disconnect and providing the distance between this disconnect and the PGE meter. This distance is to not exceed ten feet (10’) unless other arrangements have been made with PGE.

- Email the completed application to [Netmetering@pgn.com](mailto:Netmetering@pgn.com), or mail the application to: *ATTN: Net Metering, Portland General Electric, 121 SW Salmon St., 3WTC-0402, Portland, OR 97204.*
- Construct the system and ensure it is ready for operation.
- Email (or mail) PGE an Agreement signed by a customer on the PGE account.
- After passing local (city/county) electrical inspection, provide a copy of the approved final permit to PGE via email ([netmetering@pgn.com](mailto:netmetering@pgn.com)). This will let PGE know you are ready for system approval and/or meter exchange.
- PGE will schedule an appointment to inspect the site and install a bidirectional meter (if not previously installed).
- PGE will issue permission to operate, and you may start generating power.

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<sup>1</sup> Many of the steps listed in this checklist may have been completed by your contractor for you. PGE works with both customers and contractors to see this interconnection application process to completion.

<sup>2</sup> To ensure that your planned system is capable of interconnecting with PGE, we recommend customers submit a Net Metering Application and wait for approval before beginning any construction.



# Application for Net Metering Facility Interconnection Level 1 Interconnection

(Applies to an inverter-based net metering facility with a capacity of 25 kW or less)

### **Applicant Information:**

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

Company Name (if applicable): \_\_\_\_\_

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

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

Daytime Telephone: \_\_\_\_\_ Cell/Evening: \_\_\_\_\_

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

### **System Installer Information:**

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

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

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

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

Office Telephone: \_\_\_\_\_ Cell: \_\_\_\_\_

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

### **Facility Information:**

PGE Account where interconnection will occur (from PGE bill): \_\_\_\_\_

Location (if different from Applicant's address listed above):

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

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

Service Voltage: \_\_\_\_\_ Volts  Single-Phase  3-Phase

Estimated Commissioning Date (when system will be ready for PGE Inspection): \_\_\_\_\_

Do you plan to aggregate?  Yes  No

Energy Source:  Solar  Wind  Hydro  Other (specify) \_\_\_\_\_

Generator Nameplate Capacity (if solar, STC kW total for all panels): \_\_\_\_\_ DC kW

If this is an upgrade to an existing system, please list the total of all components both old and new.

Inverter Manufacturer: \_\_\_\_\_ Model \_\_\_\_\_

Total Number of Inverters: \_\_\_\_\_ Max Capacity per Inverter: \_\_\_\_\_ kW

Phase:  Single  Three Inverter Output Voltage: \_\_\_\_\_ AC Volts

Inverter specifications sheet (manufacturer's cut sheet).

Note: If generator is not lab certified, then a Level 3 Interconnection Application is required.

Is a lockable disconnect required?

Yes

No

Service Type	Max. AC Output Permitted without a Disconnect
240 Volts, Single-Phase, 3 Wire:	7.2 kW
120/208 Volts, 3-Phase, 4 Wire:	10.5 kW
120/240 Volts, 3-Phase 4 Wire:	12.5 kW
277/480 Volts, 3-Phase 4 Wire:	25.0 kW

Will this system include a backup battery?  Yes  No

If yes, please include a battery specifications sheet from the manufacturer, a one line and site plan showing where the battery will connect, and a signed letter from the applicant stating they will not allow the battery to back feed power to the utility.

**Applicant Signature:**

I hereby attest that the information submitted on this application is accurate to the best of my knowledge.

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title (if applicable): \_\_\_\_\_

**Mail Completed Interconnection Application to:**

ATTN: Net Metering  
Portland General Electric  
121 SW Salmon, 3WTC-0402  
Portland, OR 97204

**Interconnection Application Receipt Acknowledgement:**

Receipt of a completed application is hereby acknowledged.

Approval for a Level 1 Net Metering Facility interconnection is contingent upon the Applicant's Generator Facility passing the Level 1 screens and completing the review process set forth in OPUC Rule AR 860, Division 01 1 and is not granted by the utility's receipt acknowledgement signature on this Application Form. The applicant will be notified within ten (10) business days of receipt of this acknowledgement whether the interconnection application will be approved or denied.

Utility Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

**Interconnection Application Approval:**

Utility Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



## Customer Checklist<sup>1</sup>, Level 2 Net Metering Process

(to keep for your records)

- Prepare an Application for Net Metering Facility Interconnection.<sup>2</sup> Include the following items:
  - Specification sheets (“cut sheets”) for all generation equipment (e.g. solar panels, turbines, inverters, controllers, etc.).
  - One-line electrical diagram showing all protective devices between the net metering system and the PGE meter.
  - Site plan showing the proposed location of the 24-hour accessible, PGE-lockable, AC disconnect switch and providing the distance between this disconnect and the PGE meter. This distance is to not exceed ten feet (10’) unless other arrangements have been made with PGE.
  - A check payable to *Portland General Electric* for application fee (\$50 base plus \$1 per kW of Generator Nameplate Capacity).
- Email the completed application to [Netmetering@pgn.com](mailto:Netmetering@pgn.com), or mail the application to: *ATTN: Net Metering, Portland General Electric, 121 SW Salmon St., 3WTC-0402, Portland, OR 97204.*
- Construct the system and ensure it is ready for operation.
- Email (or mail) PGE an Agreement signed by a customer on the PGE account.
- After passing local (city/county) electrical inspection, provide a copy of the approved final permit to PGE via email ([netmetering@pgn.com](mailto:netmetering@pgn.com)). This will let PGE know you are ready for system approval and/or meter exchange.
- PGE will schedule an appointment to inspect the site and install a bidirectional meter (if not previously installed).
- PGE will issue permission to operate, and you may start generating power.

**Send attached Application. Retain this sheet for your records.**

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<sup>1</sup> Many of the steps listed in this checklist may have been completed by your contractor for you. PGE gladly works with both customers and contractors to see this interconnection application process to completion.

<sup>2</sup> To ensure that your planned system is capable of interconnecting with PGE, we recommend customers submit a Net Metering Application before beginning any construction.



## Application for Net Metering Facility Interconnection Level 2 Interconnection

*(Applies to commercial net metering facilities between 25 kW and 2 MW capacity. May also apply to net metering facilities of 25 kW or less not meeting Level 1 requirements)*

### 1) **Applicant:**

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

Company Name (if applicable): \_\_\_\_\_

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

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

Telephone: \_\_\_\_\_ Cell/Evening: \_\_\_\_\_

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

### 2) **System Installer:**

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

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

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

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

Office Telephone: \_\_\_\_\_ Cell: \_\_\_\_\_

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

### 3) **Consulting Engineer (if applicable):**

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

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

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

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

Office Telephone: \_\_\_\_\_ Cell: \_\_\_\_\_

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

### 4) **Facility Information:**

PGE Account where interconnection will occur (from PGE bill): \_\_\_\_\_

Estimated Commissioning Date: \_\_\_\_\_

Do you plan to aggregate?  Yes  No

Will this system include a battery?  Yes  No

*If yes, please include a battery specifications sheet from the manufacturer, a one line and site plan showing where the battery will connect, and a signed letter from the applicant stating they will not allow the battery to backfeed power to the utility.*

Location (if different from Applicant's address listed above):

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

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

**5) Required Facility Information to be Attached:**

- Electrical One-Line Diagram Attached (*showing all protective devices, PGE meter, etc.*)
- Site Plan Attached (*documenting PGE meter location, system disconnect location, etc.*)

**6) Electric Service Information for Where Net Metering Facility Will be Interconnected:**

Main Service Entrance Rating: \_\_\_\_\_ Amps

Service Voltage: \_\_\_\_\_ Volts

Type of Service:

- Single-Phase     3-Phase Wye     3-Phase Delta

**7) Net Metering Facility Information:**

List interconnection components/system(s) to be used in the Net Metering Facility that are lab certified by a Nationally Recognized Testing Laboratory (NRTL).

Component/System	NRTL Providing Label & Listing
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

*Please attach copies of manufacturer brochures or technical specifications.*

**8) Energy Source:**

- Solar     Wind     Hydro     Other (*specify*) \_\_\_\_\_

Generator Nameplate Capacity: \_\_\_\_\_ DC kW    \_\_\_\_\_ kVA  
*(total for all solar arrays, wind turbines, etc. or AC generator capacity if not inverter-based)*

**9) Facility Generation is:**

- a)  **Inverter-Based (DC to AC)**
- b)  **Synchronous Generator (AC only)**
- c)  **Induction Generator (AC only)**

**a) Inverter-Based Facility:**

***DC Source Rating of panels:***

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

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

Quantity (*number of solar panels, fuel cells, etc.*): \_\_\_\_\_

Rated Voltage (*individual unit*): \_\_\_\_\_ Volts

Open Circuit Voltage (*if applicable*): \_\_\_\_\_ Volts

Rated Current (*individual unit*): \_\_\_\_\_ Amps

Short Circuit Current (*if applicable*): \_\_\_\_\_ Amps

***Inverter Information:***

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

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

Quantity \_\_\_\_\_

Nameplate Capacity Rated Output: \_\_\_\_\_ Amps \_\_\_\_\_ Volts \_\_\_\_\_ kW

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

System Type Tested (Total System):  Yes  No; attach product literature.



**b) Synchronous Generator Information:**

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

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

Saturation Curve and the Vee Curve (*submit copies*):  Salient  Non-Salient

Torque: \_\_\_\_\_ lb-ft Rated RPM: \_\_\_\_\_

Field Amperes: \_\_\_\_\_ at rated generator voltage and current and \_\_\_\_\_ PF over-excited

Type of Exciter: \_\_\_\_\_

Output Power of Exciter: \_\_\_\_\_

Type of Voltage Regulator: \_\_\_\_\_

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

Synchronous Speed: \_\_\_\_\_ RPM

Winding Connection: \_\_\_\_\_

Min. Operating Freq./Time: \_\_\_\_\_

Generator Connection:  Delta  Wye  Wye Grounded

Direct-axis Synchronous Reactance ( $X_d$ ): \_\_\_\_\_  ohms  pu (per unit)

Direct-axis Transient Reactance ( $X'_d$ ): \_\_\_\_\_  ohms  pu

Direct-axis Sub-Transient Reactance ( $X''_d$ ): \_\_\_\_\_  ohms  pu

Armature Resistance ( $r_a$ ): \_\_\_\_\_  ohms  pu

Zero-Sequence Reactance ( $X_0$ ): \_\_\_\_\_  ohms  pu

Negative-Sequence Reactance ( $X_2$ ): \_\_\_\_\_  ohms  pu

**c) Induction Generator Information:**

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

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

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

Rotor Resistance ( $R_r$ ): \_\_\_\_\_  ohms  pu Exciting Current \_\_\_\_\_ Amps

Rotor Reactance ( $X_r$ ): \_\_\_\_\_  ohms  pu Reactive Power Required: \_\_\_\_\_

Magnetizing Reactance ( $X_m$ ): \_\_\_\_\_  ohms  pu \_\_\_\_\_ VARs (No Load)

Stator Resistance ( $R_s$ ): \_\_\_\_\_  ohms  pu \_\_\_\_\_ VARs (Full Load)

Stator Reactance ( $X_s$ ): \_\_\_\_\_  ohms  pu

Short Circuit Reactance ( $X''_d$ ): \_\_\_\_\_  ohms  pu

Phases:  Single  3-Phase

Frame Size: \_\_\_\_\_ Design Letter: \_\_\_\_\_ Temp. Rise: \_\_\_\_\_ °C

**10) Applicant Signature:**

I hereby certify that all of the information provided in this application request form is correct.

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title (if applicable): \_\_\_\_\_

*An application fee is required before the application can be processed. Please verify that the appropriate fee is included with the application request form:*

Application fee payable to **Portland General Electric** included.

Amount: \$ \_\_\_\_\_ (*\$50 base plus \$1 per kW of Generator Nameplate Capacity*)

**11) Mail Completed Interconnection Application with Application Fee to:**

ATTN: Net Metering  
Portland General Electric  
121 SW Salmon, 3WTC-0402  
Portland, OR 97204

**12) Utility Receipt Acknowledgement:**

Receipt of this Net Metering Interconnection Request and Application Fee is hereby acknowledged.

Approval for a Level 2 Net Metering Facility interconnection is contingent upon the Applicant's Net Metering Facility passing the screens and completing the review process set forth in OPUC Rule AR 860, Division 011 and is not granted by the utility's signature on this Application Form.

Utility Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

**13) Utility Interconnection Application Approval:**

Utility Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_



## Customer Checklist<sup>1</sup>, Level 3 Net Metering Process

(to keep for your records)

- Prepare an Application for Net Metering Facility Interconnection.<sup>2</sup> Include the following items:
  - Specification sheets (“cut sheets”) for all generation equipment (e.g. solar panels, turbines, inverters, controllers, etc.).
  - One-line electrical diagram showing all protective devices between the net metering system and the PGE meter.
  - Your system may require a lockable, AC disconnect switch based on its Maximum AC Output. If one is required, please submit a site plan showing the proposed location of the 24-hour accessible, PGE-lockable, AC disconnect switch and provide the distance between this disconnect and the PGE meter. This distance is not exceed ten feet (10’) unless other arrangements have been made with PGE.
  - A check payable to *Portland General Electric* for application fee (\$100 base plus \$2 per kW of Generator Nameplate Capacity).
- Email the completed application to [Netmetering@pgn.com](mailto:Netmetering@pgn.com), or mail the application to: *ATTN: Net Metering, Portland General Electric, 121 SW Salmon St., 3WTC-0402, Portland, OR 97204.*
- Construct the system and ensure it is ready for operation.
- Email (or mail) PGE an Agreement signed by a customer on the PGE account.
- After passing local (city/county) electrical inspection, provide a copy of the approved final permit to PGE via email ([netmetering@pgn.com](mailto:netmetering@pgn.com)). This will let PGE know you are ready for system approval and/or meter exchange.
- PGE will schedule an appointment to inspect the site and install a bidirectional meter (if not previously installed).
- PGE will issue permission to operate, and you may start generating power.

**Send attached Application. Retain this sheet for your records.**

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<sup>1</sup> Many of the steps listed in this checklist may have been completed by your contractor for you. PGE gladly works with both customers and contractors to see this interconnection application process to completion.

<sup>2</sup> To ensure that your planned system is capable of interconnecting with PGE, we recommend customers submit a Net Metering Application before beginning any construction.



## Application for Net Metering Facility Interconnection Level 3 Interconnection

*(Applies to net metering facilities of 2 MW or less not meeting Level 1 or Level 2 requirements)*

### **1) Applicant:**

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

Company Name (if applicable): \_\_\_\_\_

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

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

Telephone: \_\_\_\_\_ Cell/Evening: \_\_\_\_\_

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

### **2) System Installer:**

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

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

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

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

Office Telephone: \_\_\_\_\_ Cell: \_\_\_\_\_

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

### **3) Consulting Engineer (if applicable):**

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

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

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

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

Office Telephone: \_\_\_\_\_ Cell: \_\_\_\_\_

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

### **4) Facility Information:**

PGE Account where interconnection will occur (from PGE bill): \_\_\_\_\_

Estimated Commissioning Date: \_\_\_\_\_

Do you plan to aggregate?  Yes  No

Will this system include a battery?  Yes  No

*If yes, please include a battery specifications sheet from the manufacturer, a one line and site plan showing where the battery will connect, and a signed letter from the applicant stating they will not allow the battery to backfeed power to the utility.*

Location (if different from Applicant's address listed above):

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

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

**5) Required Facility Information to be Attached:**

- One-Line Diagram Attached (*showing all protective devices, PGE meter, etc.*)
- Site Plan Attached (*documenting PGE meter location, system disconnect location, etc.*)
- Installation Test Plan Attached (*listing procedures to verify system is properly installed, operating normally, and responding properly to system disturbances and utility outages*)

**6) Electric Service Information for Where Net Metering Facility Will be Interconnected:**

Main Service Entrance Rating: \_\_\_\_\_ Amps

Service Voltage: \_\_\_\_\_ Volts

Type of Service:

- Single-Phase     3-Phase Wye     3-Phase Delta

**7) Net Metering Facility Information:**

List interconnection components/system(s) to be used in the Net Metering facility that are lab certified by a Nationally Recognized Testing Laboratory (NRTL).

Component/System	NRTL Providing Label & Listing
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

*Please attach copies of manufacturer brochures or technical specifications.*

**8) Energy Source:**

- Solar     Wind     Hydro     Other (*specify*) \_\_\_\_\_

Generator Nameplate Capacity: \_\_\_\_\_ DC kW    \_\_\_\_\_ kVA

(total for all solar arrays, wind turbines, etc. or AC generator capacity if not inverter-based)

**9) Facility Generation is:**

- a)  **Inverter-Based (DC to AC)**
- b)  **Synchronous Generator (AC only)**
- c)  **Induction Generator (AC only)**

**a) Inverter-Based Facility:**

***DC Source Rating of panels:***

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

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

Quantity (*number of solar panels, fuel cells, etc.*): \_\_\_\_\_

Rated Voltage (*individual unit*): \_\_\_\_\_ Volts

Open Circuit Voltage (*if applicable*): \_\_\_\_\_ Volts

Rated Current (*individual unit*): \_\_\_\_\_ Amps

Short Circuit Current (*if applicable*): \_\_\_\_\_ Amps

***Inverter Information:***

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

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

Quantity \_\_\_\_\_

Nameplate Capacity Rated Output: \_\_\_\_\_ Amps \_\_\_\_\_ Volts \_\_\_\_\_ kW

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

System Type Tested (Total System):  Yes  No; attach product literature.

**b) Synchronous Generator Information:**

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

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

Saturation Curve and the Vee Curve (*submit copies*):  Salient  Non-Salient

Torque: \_\_\_\_\_ lb-ft Rated RPM: \_\_\_\_\_

Field Amperes: \_\_\_\_\_ at rated generator voltage and current and \_\_\_\_\_ PF over-excited

Type of Exciter: \_\_\_\_\_

Output Power of Exciter: \_\_\_\_\_

Type of Voltage Regulator: \_\_\_\_\_

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

Synchronous Speed: \_\_\_\_\_ RPM

Winding Connection: \_\_\_\_\_

Min. Operating Freq./Time: \_\_\_\_\_

Generator Connection:  Delta  Wye  Wye Grounded

Direct-axis Synchronous Reactance ( $X_d$ ): \_\_\_\_\_  ohms  pu (per unit)

Direct-axis Transient Reactance ( $X'_d$ ): \_\_\_\_\_  ohms  pu

Direct-axis Sub-Transient Reactance ( $X''_d$ ): \_\_\_\_\_  ohms  pu

Armature Resistance ( $r_a$ ): \_\_\_\_\_  ohms  pu

Zero-Sequence Reactance ( $X_0$ ): \_\_\_\_\_  ohms  pu

Negative-Sequence Reactance ( $X_2$ ): \_\_\_\_\_  ohms  pu

**c) Induction Generator Information:**

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

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

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

Rotor Resistance ( $R_r$ ): \_\_\_\_\_  ohms  pu Exciting Current \_\_\_\_\_ Amps

Rotor Reactance ( $X_r$ ): \_\_\_\_\_  ohms  pu Reactive Power Required: \_\_\_\_\_

Magnetizing Reactance ( $X_m$ ): \_\_\_\_\_  ohms  pu \_\_\_\_\_ VARs (No Load)

Stator Resistance ( $R_s$ ): \_\_\_\_\_  ohms  pu \_\_\_\_\_ VARs (Full Load)

Stator Reactance ( $X_s$ ): \_\_\_\_\_  ohms  pu

Short Circuit Reactance ( $X''_d$ ): \_\_\_\_\_  ohms  pu

Phases:  Single  3-Phase

Frame Size: \_\_\_\_\_ Design Letter: \_\_\_\_\_ Temp. Rise: \_\_\_\_\_ °C

**10) Applicant Signature:**

I hereby certify that all of the information provided in this application request form is correct.

Applicant Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title (if applicable): \_\_\_\_\_

*An application fee is required before the application can be processed. Please verify that the appropriate fee is included with the application request form:*

Application fee payable to **Portland General Electric** included.

Amount: \$ \_\_\_\_\_ (*\$100 base plus \$2 per kW of Generator Nameplate Capacity*)

**11) Mail Completed Interconnection Application with Application Fee to:**

ATTN: Net Metering  
Portland General Electric  
121 SW Salmon, 3WTC-0402  
Portland, OR 97204

**12) Utility Receipt Acknowledgement:**

Receipt of this Net Metering Interconnection Request and Application Fee is hereby acknowledged.

Approval for a Level 3 Net Metering Facility interconnection is contingent upon the Applicant's Net Metering Facility passing the screens and completing the review process set forth in OPUC Rule AR 860, Division 011 and is not granted by the utility's signature on this Application Form.

Utility Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

**13) Utility Interconnection Application Approval:**

Utility Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_