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August 24, 2009

***VIA ELECTRONIC FILING  
AND OVERNIGHT DELIVERY***

Oregon Public Utility Commission  
550 Capitol Street NE, Suite 215  
Salem, OR 97310-2551

Attn: Filing Center

Re: **Docket AR 521** – PacifiCorp's Compliance with Order No. 09-196

Enclosed for filing by PacifiCorp, d.b.a. Pacific Power, are the final forms and agreements implementing Division 082 rules, in compliance with Order No. 09-196. These final forms and agreements were developed in consultation with Commission Staff.

Questions on this filing may be directed to Joelle Steward, Regulatory Manager, at (503) 813-5542.

Sincerely,

Andrea L. Kelly  
Vice President, Regulation

Enclosure

cc: AR 521 Service List

## CERTIFICATE OF SERVICE

I certify that I have cause to be served the foregoing document in OPUC Docket No. AR 521 by electronic mail and first class mail to the parties on the attached service list. Dated this 24<sup>th</sup> day of August, 2009.

### SERVICE LIST Docket No. AR 521

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\_\_\_\_\_  
Ariel Son  
Coordinator, Administrative Services

**Small Generator Facility  
Tier 1 Interconnection Request Application Form  
(Applies to Lab Certified, Inverter-based Small Generator Facilities  
With a Name Plate capacity of 25 kW or less)**

**Applicant Contact Information;**

Name \_\_\_\_\_

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

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

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

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

Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**System Installer/Consulting Engineer;**Check if Owner Installed 

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

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

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

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

Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Small Generator Facility Information:**Address of the Small Generator Facility for which interconnection is sought:

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

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

Public Utility to which the Small Generating Facility will interconnect: \_\_\_\_\_

Account Number (existing Public Utility customers): \_\_\_\_\_

**Tier 1 Interconnection Request Application Form**

(continued)

Proposed Operation Mode QF  Other   
If QF, has Applicant completed FERC " Notice of Self Certification" ? Yes  No   
Prime Mover Type \_\_\_\_\_  
Inverter Manufacturer: \_\_\_\_\_ Model \_\_\_\_\_  
Inverter Electric Nameplate Capacity: \_\_\_(kW) \_\_\_ (kVA) \_\_\_  
Inverter Electrical Connection: \_\_\_(AC Volts), Phase: Single  or Three  Phase  
System Design Capacity: \_\_\_\_\_ (kW) \_\_\_\_\_ (kVA)  
Customer-Site Load: \_\_\_\_\_(kW) (if none, so state)  
Maximum Physical Export Capability Requested: \_\_\_\_\_ (kW)

Prime Mover: Photovoltaic  Reciprocating Engine  Fuel Cell   
Turbine  Other \_\_\_\_\_  
Energy Source: Solar  Wind  Hydro  Diesel  Natural Gas  
Fuel Oil  Other \_\_\_\_\_

Individual Generator Power Factor

Rated Power Factor: Leading: \_\_\_\_\_ Lagging: \_\_\_\_\_

**Small Generating Facility Characteristic Data (for inverter-based machines):**

Max design fault contribution current: \_\_\_\_\_ Instantaneous \_\_\_ or RMS? \_

Harmonics Characteristics: \_\_\_\_\_

Start-up requirements: \_\_\_\_\_

Is the inverter lab certified? Yes  No 

(If yes, attach manufacturer' s cut sheet showing listing and label information from the appropriate listing authority, e.g. UL 1741 listing. If no, facility does not qualify for Tier 1 consideration. Refer to the PUC rules found in OAR 860, Division 082 for details)

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

Estimated Commissioning Cost: \_\_\_\_\_

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes.

**Tier 1 Interconnection Request Application Form**

(continued)

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map, distance from public utility facility number, other diagram or documentation).

Enclose copy of any documents that provide proof of site control.

**Applicant Signature:**

I here-by attest that the information submitted on this application is accurate to the best of my knowledge and have included the non-refundable application fee of \$100 with my Tier 1 Interconnection Request:

\_\_\_\_\_ (Applicant Signature)

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

Application fee (\$100) included

**Interconnection Request Acknowledgement:**

Receipt of the application and application fee is hereby acknowledged.

Approval for a Tier 1 Small Generator Facility interconnection is contingent upon the Applicant' s Small Generator Facility passing the Tier 1 screens and completing the review process set forth in PUC Rule OAR 860, Division 082 and is not granted by the Public Utility' s signature on this Application Form..

Public Utility Representative Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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

Indicate whether Public Utility plans to perform Witness Test: Yes  No

Note: The Public Utility shall retain a copy of this completed and signed form and return the original and any attachments to the Applicant.

**Application for Small Generator Facility Interconnection  
Tier 2, Tier 3 or Tier 4 Interconnection**

(For Small Generator Facilities with Electric Nameplate Capacities of 10 MW and less)

**Applicant Contact Information :**

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

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

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

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

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

Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Address of Customer Facility Where Small Generator Facility will be Interconnected :**

(if different from above)

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

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

**System Installer/Consulting Engineer :**

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

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

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

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

Facsimile Number: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Electric Service Information for Applicant' s Facility Where Generator Will Be Interconnected**

Capacity: \_\_\_\_\_(Amps) Voltage: \_\_\_\_\_(Volts)

Type of Service:  Single Phase  Three Phase

Will a transformer be used between the generator and the point of common coupling? \_\_\_Yes \_\_\_No

**Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):**

Is the transformer: \_\_\_single phase \_\_\_three phase? Size: \_\_\_\_\_kVA

Transformer Impedance: \_\_\_\_\_% on \_\_\_\_\_kVA Base



**Tier 2, Tier 3 or Tier 4 Interconnection Application**  
(cont.)

If Three Phase:

Transformer Primary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Secondary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

Transformer Tertiary: \_\_\_\_\_ Volts \_\_\_\_\_ Delta \_\_\_\_\_ Wye \_\_\_\_\_ Wye Grounded

**Requested Procedure Under Which to Evaluate Interconnection Request<sup>1</sup>** :

Please indicate below which review procedure applies to the interconnection request.

- Tier 2** - Certified interconnection equipment with an aggregate Electric Nameplate Capacity of 2 MW or less. Indicate type of certification below. The application fee amount is \$500.
  - Lab Tested - tested to IEEE 1547.1 and other specified standards by a nationally recognized testing laboratory and is appropriately labeled.
  - Field Tested – an identical small generator facility has been approved by the public utility under a Tier 4 study review process within the prior 36 months of the date of this interconnection request.
- Tier 3** – A Small Generator Facility connected to the T&D system that does not export power. The Electric Nameplate Capacity rating may be 50 kW or smaller, if connecting to area network or 10 MW or smaller, if connecting to a radial distribution feeder. The application fee amount is \$1000.
- Tier 4** – Electric Nameplate Capacity rating is 10 MW or smaller and the Small Generator Facility does not qualify for a Tier 1, Tier 2 or Tier 3 review or has been reviewed but not approved under a Tier 1, Tier 2 or Tier 3 review. Application fee amount is \$1000.

<sup>1</sup> **Note:** Descriptions for interconnection review categories do not list all criteria that must be satisfied. For a complete list of criteria, please refer to PUC Rule OAR 860, Division 082, (Rule).

**Field Tested Equipment:**

If the field tested equipment box is checked above, please include with the completed application the following information which will be required for review of Tier 2 field tested small generator facilities:

- A copy of the Certificate of Completion, signed by the public utility that has approved an identical small generator facility for parallel operation.
- A copy of all documentation submitted to the public utility that approved the Small Generator Facility for parallel operation under a Tier 4 study process.

**Tier 2, Tier 3 or Tier 4 Interconnection Application**  
(cont.)

- A written statement by the Applicant indicating that the small generator facility being proposed is identical, except for Minor Equipment Modification, to the one previously approved by the public utility for parallel operation.
- If a Tier 2 Application, utilizing Field Tested equipment, is proposed the remainder of the application will not be required to be completed.

**Small Generator Facility Information:**

**List interconnection components/system(s) to be used in the Small Generation Facility that is lab certified (required for Lab Tested, Tier 2 Interconnection requests only).**

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

*Please provide copies of manufacturer brochures or technical specifications*

**Energy Production Equipment/Inverter Information:**

Synchronous     Induction     Inverter     Other \_\_\_\_\_

Electric Nameplate Rating: \_\_\_\_\_ kW    \_\_\_\_\_ kVA

Rated Voltage: \_\_\_\_\_ Volts

Rated Current: \_\_\_\_\_ Amps

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

Customer-Site Load: \_\_\_\_\_ (kW) (if none, so state)

Maximum Physical Export Capability Requested: \_\_\_\_\_ (kW)

Individual Generator Power Factor

Rated Power Factor:

Leading: \_\_\_\_\_ Lagging: \_\_\_\_\_

**For Synchronous Machines:**

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

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

Submit copies of the Saturation Curve and the Vee Curve.

Salient     Non-Salient

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

**Tier 2, Tier 3 or Tier 4 Interconnection Application**  
(cont.)

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: (Xd) \_\_\_\_\_ ohms

Direct-axis Transient Reactance: (X'd) \_\_\_\_\_ ohms

Direct-axis Sub-transient Reactance: (X''d) \_\_\_\_\_ ohms

Negative Sequence Reactance, X<sub>2</sub>: \_\_\_\_\_ P.U.

Zero Sequence Reactance, X<sub>0</sub>: \_\_\_\_\_ P.U.

KVA Base: \_\_\_\_\_

Field Volts: \_\_\_\_\_

Field Amperes: \_\_\_\_\_

Provide appropriate IEEE model block diagram of excitation system and governor system in accordance with the regional reliability council criteria (WECC/NERC Reliability Standard MOD-012-0). A copy of the manufacturer's block diagram may not be substituted.

**For Induction Machines:**

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

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

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

Rotor Resistance: (Rr) \_\_\_\_\_ ohms Exciting Current: \_\_\_\_\_ Amps

Rotor Reactance: (Xr) \_\_\_\_\_ ohms Reactive Power Required: \_\_\_\_\_

Magnetizing Reactance: (Xm) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (No Load)

Stator Resistance: (Rs) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (Full Load)

Stator Reactance: (Xs) \_\_\_\_\_ ohms

Short Circuit Reactance: (X''d) \_\_\_\_\_ ohms

Phases:  Single  Three-Phase

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

**Tier 2, Tier 3 or Tier 4 Interconnection Application**  
(cont.)

**Reverse Power Relay Information: (This section applies to Tier 3 Review Only)**

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

Electric Nameplate Capacity rating: (kVA) \_\_\_\_\_

**Additional Information For Inverter Based Facilities:**

**Inverter Information:**

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

Type:  Forced Commutated  Line Commutated

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

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

**DC Source / Prime Mover:**

Solar  Wind  Hydro  Other \_\_\_\_\_

Electric Nameplate Capacity Rating: \_\_\_\_\_ kW Rating: \_\_\_\_\_ kVA

Rated Voltage: \_\_\_\_\_ Volts

Open Circuit Voltage (If applicable): \_\_\_\_\_ Volts

Rated Current: \_\_\_\_\_ Amps

Short Circuit Current (If applicable): \_\_\_\_\_ Amps

**Other Facility Information:**

Is Facility a QF? Yes  No

If yes, has Applicant completed FERC " Notice of Self Certification" ? Yes  No

Energy Source:  Solar  Wind  Hydro  Diesel  Natural Gas  
 Other \_\_\_\_\_

Prime Mover Type:  Photovoltaic  Reciprocating Engine  Fuel Cell  
 Turbine  Other \_\_\_\_\_

One Line Diagram attached:  Yes  No

Plot Plan attached:  Yes  No

Installation Test Plan attached:  Yes  No

Estimated Commissioning Date (if known): \_\_\_\_\_

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes.

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**Tier 2, Tier 3 or Tier 4 Interconnection Application**  
(cont.)

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map, distance from public utility facility number, other diagram or documentation).

Enclose copy of any documents that provide proof of site control.

**Applicant Signature:**

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

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

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

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

Application fee included

Amount \_\_\_\_\_

**Public Utility Acknowledgement:**

I hereby acknowledge the receipt of a Interconnection Request and Application Fee, Approval for a Tier 2, Tier 3 or Tier 4 Small Generator Facility interconnection is contingent upon the Applicant' s Small Generator Facility passing the screens and completing the review process set forth in the PUC rules found in OAR 860, Division 082 and is not granted by the EDC' s signature on this Application Form.

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

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

Note: The Public Utility shall retain a copy of this completed and signed form and return the original and any attachments to the Applicant.

**Interconnection Feasibility Study Form Agreement**

This 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 PacifiCorp, a Corporation existing under the laws of the State of Oregon, (‘ ‘ Public Utility’ ’ ). Applicant and Public Utility each may be referred to as a ‘ ‘ Party,’ ’ ’ or collectively as the ‘ ‘ Parties.’ ’

**Recitals:**

**Whereas**, The Applicant is proposing to develop a Small Generating Facility or adding generating capacity to an existing Small Generating Facility consistent with the Application completed by Interconnection Customer on \_\_\_\_\_; and

**Whereas**, Applicant desires to interconnect the Small Generating Facility with Public Utility’s Transmission System and/or Distribution System (“ T&D System” ); and

**Whereas**, Applicant has requested for the Public Utility to perform an Interconnection Feasibility Study to assess the feasibility of interconnecting the proposed Small Generating Facility to Public Utility’ s T&D System (including the effects on feasibility associated with Affected Systems);

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

1. When used in this Agreement, with initial capitalization, the terms specified shall have the meanings given in PUC Rule OAR 860-082-0005 through 860-082-0085.
2. Interconnection Customer elects and the Public Utility shall cause to be performed an Interconnection Feasibility Study consistent with OAR 860-082-0060(6).
3. The scope of the Interconnection Feasibility Study is detailed in Attachment B to this agreement and shall be subject to the assumptions set forth in the rule and in Attachment A to this agreement.
4. The Interconnection Feasibility Study shall be based on the technical information provided by the Applicant in their Application, as may be modified as the result of the Scoping Meeting. The Public 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 Interconnection Feasibility Study. If, in the course of the Study, the Applicant finds it necessary to modify the Application, the time to complete the Interconnection Feasibility Study may be extended by mutual agreement of the Parties.

### Interconnection Feasibility Study Form Agreement

5. In performing the study, the Public Utility will rely, to the extent reasonably practicable, on existing studies of recent vintage. The Applicant will not be charged for such existing studies. However, the Applicant agrees to pay, consistent with OAR 860-082-0035, for modifications to existing studies that are reasonably necessary to perform the Interconnection Feasibility Study.

6. The Interconnection 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,

6.3 Preliminary identification of grounding requirements and electric system protection, and

6.4 Preliminary description and non-binding estimated cost of facilities required to interconnect the Small Generating Facility to the Public Utility's T&D System and to address the identified short circuit and power flow issues.

7. As required by OAR 860-082-0060(6)(a), Attachment B to this agreement provides a scope for the Interconnection Feasibility Study, a reasonable schedule for completion of the study, and a good-faith, non-binding estimate of the cost to perform the Interconnection Feasibility Study. Barring unforeseen circumstances, the Interconnection Feasibility Study shall be completed and the results shall be transmitted to the Interconnection Customer within thirty Business Days after this agreement is signed by the Parties. Attachment B is incorporated as part of this agreement.

8. The Applicant agrees to pay the actual cost of the Interconnection Feasibility Study. Study fees will be based on actual costs and shall accord with the requirements of OAR 860-082-0035(1). For purposes of OAR 860-082-0030(b), this provision shall constitute the Applicant's written authorization for the Public Utility to incur and assess costs in excess of the initial application fee.

9. The Public Utility may require a study deposit in an amount permitted by OAR 860-082-0035(1) and the Public Utility shall have no obligation to begin the Feasibility Study until such time as the Applicant has paid such deposit.

**Interconnection Feasibility Study Form Agreement**

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:

PacifiCorp

Signed \_\_\_\_\_

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

[Insert name of Applicant]

Signed \_\_\_\_\_

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



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**Interconnection Feasibility Study Form Agreement****Attachment A: Interconnection Feasibility Study Agreement**  
**Assumptions Used in Conducting the Interconnection Feasibility Study**

The Interconnection Feasibility Study will be based upon the information set forth in the Application and agreed upon in the Scoping Meeting held on \_\_\_\_\_:

1. Designation of Point of Interconnection and configuration to be studied.

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2. Designation of alternative Points of Interconnection and configuration.

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3. Other Assumptions:

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Note: Information for section 1 and 2 to be provided by the Applicant, item 3, Other Assumptions may be provided by the Applicant or the Public Utility.

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**Interconnection Feasibility Study Form Agreement**

**Attachment B: Interconnection Feasibility Study Agreement**

**Detailed Scope, Reasonable Schedule, and Good-Faith non-Binding Cost Estimate  
for Interconnection Feasibility Study**

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**Interconnection System Impact Study Form Agreement**

This 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 PacifiCorp, a Corporation existing under the laws of the State of Oregon, ( ‘ ‘ Public Utility” ). Applicant and Public Utility each may be referred to as a ‘ ‘ Party,’ ’ ’ or collectively as the ‘ ‘ Parties.’ ’

**Recitals:**

**Whereas**, The Applicant is proposing to develop a Small Generating Facility or adding generating capacity to an existing Small Generating Facility consistent with the Application completed on \_\_\_\_\_ and;

**Whereas**, The Applicant desires to interconnect the Small Generating Facility with the Public Utility’ s Transmission System and/or Distribution System ( “ T&D System” );

**Whereas**, The Public Utility has completed an Interconnection Feasibility Study and provided the results of said study to the Applicant (This recital to be omitted if the Parties have agreed to forego the Interconnection Feasibility Study.);

**Whereas**, The Applicant has requested the Public Utility perform an Interconnection System Impact Study to assess the impact of interconnecting the Small Generating Facility to the Public Utility’ s T&D System and on any Affected Systems;

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

1. When used in this agreement, with initial capitalization, the terms specified shall have the meanings given in OAR 860-082-0005 through 860-082-0085.
2. Applicant elects and Public Utility shall cause to be performed an Interconnection System Impact Study consistent with OAR 860-082-0060(7).
3. The Parties shall set out the assumptions to be used in conducting the System Impacts Study in Attachment A which is incorporated as part of this agreement.
4. The Interconnection System Impact Study will be based upon the results of the

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**Interconnection System Impact Study Form Agreement**

Interconnection Feasibility Study and the technical information provided by Applicant in the Application. The Public 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 Interconnection System Impact Study. If the Applicant modifies its designated Point of Interconnection, its Application, or the technical information provided therein is modified, the time to complete the Interconnection System Impact Study may be extended.

5. The Interconnection System Impact Study report 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 good faith non-binding, estimated cost of facilities required to interconnect the Generating Facility to Public Utility's T&D System and to address the identified short circuit, instability, and power flow issues.

6. As required by OAR 860-082-0060(7)(a), Attachment B to this agreement provides a scope for the Interconnection System Impacts Study, a reasonable schedule for completion of the study, and a good-faith, non-binding estimate of the cost to perform the Interconnection System Impacts Study. Barring unforeseen circumstances, the Interconnection System Impact Study shall be completed and the results transmitted to the Applicant within 30 Business Days after this agreement is signed by the Parties

7. The Public Utility may require a study deposit in an amount permitted by OAR 860-082-0035(1) and the Public Utility shall have no obligation to begin the Feasibility Study until such time as the Applicant has paid such deposit..

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**Interconnection System Impact Study Form Agreement**

8. The Applicant agrees to pay the actual cost of the Interconnection System Impacts Study. Study fees shall accord with OAR 860-082-0035(1) and will be based on actual costs. For purposes of OAR 860-082-0030(b), this provision shall constitute the Applicant's written authorization for the Public Utility to incur and assess costs in excess of the initial application fee.

9. Affected Systems may participate in the preparation of a system impact study, with a division of costs among such entities as they may agree. All Affected Systems shall be afforded an opportunity to review and comment upon a system impact study that covers potential adverse system impacts on their electric systems, and the Public Utility has 20 additional Business Days to complete a system impact study requiring review by Affected Systems.

In witness thereof, the Parties have caused this agreement to be duly executed by their duly authorized officers or agents on the day and year first above written:

PacifiCorp

Signed \_\_\_\_\_

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

[Insert name of Interconnection Customer]

Signed \_\_\_\_\_

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

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**Interconnection System Impact Study Form Agreement****Attachment A: Interconnection System Impact Study Agreement****Assumptions Used in Conducting the Interconnection System Impact Study**

The Interconnection System Impact Study shall be based upon the results of the Interconnection Feasibility Study, subject to any modifications in accordance with OAR 860-082-0005 through 860-082-0085, and the following assumptions:

1. Designation of Point of Interconnection and configuration to be studied.

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2. Designation of alternative Points of Interconnection and configuration.

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3. Other Assumptions:

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Note: Information for section 1 and 2 to be provided by the Applicant, item 3, Other Assumptions are to be provided by the Applicant or the Public Utility.

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**Interconnection System Impact Study Form Agreement**

**Attachment B: Interconnection System Impacts Study Agreement**  
**Detailed Scope, Reasonable Schedule, and Good-Faith non-Binding Cost Estimate**  
**for Interconnection System Impacts Study**

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**Interconnection Facilities Study Form Agreement**

This 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 PacifiCorp, a Corporation existing under the laws of the State of Oregon, (Public Utility). Applicant and Public Utility each may be referred to as a ‘ ‘ Party,’ ’ ’ or collectively as the ‘ ‘ Parties.’ ’

**Recitals:**

**Whereas**, Applicant is proposing to develop a Small Generating Facility or adding generating capacity to an existing Small Generating Facility consistent with the Application completed by the Applicant on \_\_\_\_\_; and

**Whereas**, The Applicant desires to interconnect the Small Generating Facility with the Public Utility’ s Transmission System and/or Distribution System (“ T&D System” );

**Whereas**, The Public Utility has completed an Interconnection System Impact Study and provided the results of said study to the Applicant; and

**Whereas**, The Applicant has requested the Public Utility to perform an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility to the Public Utility’ s T&D 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, with initial capitalization, the terms specified shall have the meanings given in the PUC’ s rules found at OAR 860-082-0005 through 860-082-0085.
2. Applicant elects and the Public Utility shall cause to be performed an Interconnection Facilities Study consistent with OAR 860-082-0060(8).
3. The Applicant will provide the data requested in Attachment A of this form agreement. The scope of the Interconnection Facilities Study is detailed in Attachment B to this agreement and shall be subject to the data set forth in Attachment A to this agreement.



**Interconnection Facilities Study Form Agreement**

4. An Interconnection Facilities Study report shall provide the following information:
  - 4.1 A description of the Interconnection Equipment, Interconnection Facilities, and/or System Upgrades required to interconnect the Small Generator Facility to the Public Utility' s T&D System (including a description of any facilities or upgrades necessary to address impacts to Affected Systems);
  - 4.2 A good-faith, non-binding estimate of the cost of the Interconnection Equipment, Interconnection Facilities, and/or System Upgrades required to interconnect the Small Generator Facility to the Public Utility' s T&D System (including the cost of any facilities or upgrades necessary to address impacts to Affected Systems);
  - 4.3 A reasonable schedule for the procurement, construction, installation and testing of the Interconnection Equipment, Interconnection Facilities, and/or System Upgrades required to interconnect the Small Generator Facility to the Public Utility' s T&D System (including the cost of any facilities or upgrades necessary to address impacts to Affected Systems); and
  - 4.4 A discussion of how the required Interconnection Equipment, Interconnection Facilities, and/or System Upgrades address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.
5. The Public Utility may require a study deposit in an amount permitted by OAR 860-082-0035(1) and the Public Utility shall have no obligation to begin the Facilities Study until such time as the Applicant has paid such deposit.
6. As required by OAR 860-082-0060(8)(a), Attachment B to this agreement provides a scope for the Interconnection Facilities Study, a reasonable schedule for completion of the study, and a good-faith, non-binding estimate of the cost to perform the Interconnection Facilities Study. In cases where no Upgrades are required, and barring unforeseen circumstances, the Interconnection Facilities Study shall be completed and the results will be transmitted to the Applicant within thirty Business Days after the facilities study scoping meeting has been held between the Parties or mutual agreement has been reached to skip the facilities study scoping meeting. Attachment B is incorporated as part of this agreement.
7. The Applicant agrees to pay the actual cost of the Interconnection Facilities Study. Study fees will be based on and shall accord with the requirements of OAR 860-082-0035(1) and will be based on actual costs. For purposes of OAR 860-082-0030(b), this provision shall constitute the Applicant' s written authorization for the Public Utility to incur and assess costs in excess of the initial application fee.

**Interconnection Facilities Study Form Agreement**

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:

PacifiCorp

Signed \_\_\_\_\_

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

[Insert name of the Applicant]

Signed \_\_\_\_\_

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

**Interconnection Facilities Study Form Agreement****Attachment A to the Interconnection Facilities Study Agreement****Data To Be Provided by Applicant With the Interconnection Facilities Study Agreement**

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

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

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

One set of metering is required for each generation connection to the new ring bus or existing Public Utility station.

Number of generation connections: \_\_\_\_\_

Will an alternate source of auxiliary power be available during CT/PT maintenance?

Yes \_\_\_\_ No \_\_\_\_\_.

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?

Yes \_\_\_\_\_ No \_\_\_\_\_ (Please indicate on the one-line diagram).

What type of control system or PLC will be located at the Generating Facility?

\_\_\_\_\_.

What protocol does the control system or PLC use? \_\_\_\_\_.

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

Physical dimensions of the proposed interconnection station: \_\_\_\_\_.

Bus length from generation to interconnection station: \_\_\_\_\_

Line length from interconnection station to the Public Utility' s T&D System:

\_\_\_\_\_.

**Interconnection Facilities Study Form Agreement**

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

Number of third party easements required for distribution lines\*: \_\_\_\_\_.\*

**To be completed in coordination with Public Utility.**

Is the Small Generating Facility located in Public Utility' s service area?

Facility Location: \_\_\_\_\_

Yes \_\_\_\_\_ No \_\_\_\_\_

If No, please provide name of local provider:

\_\_\_\_\_

Please provide the following proposed schedule dates:

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

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

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

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

**Interconnection Facilities Study Form Agreement**  
**Attachment B: Interconnection Facilities Study Agreement**  
**Detailed Scope, Reasonable Schedule, and Good-Faith non-Binding Cost Estimate**  
**for Interconnection Facilities Study**

**Small Generator Facility Interconnection  
Certificate of Completion Form<sup>1</sup>****Applicant Information**

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

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

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

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

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

**Installer**Check if owner-installed 

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

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

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

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

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

**Final Electric Inspection and Applicant Signature**

The Small Generator Facility is complete and has been approved by the local electric inspector having jurisdiction. A signed copy of the electric inspector's form indicating final approval is attached. The Interconnection Customer acknowledges that the Small Generator Facility is not ready for operation until receipt of the final acceptance and approval by the Public Utility as provided below.

Signed \_\_\_\_\_ Date \_\_\_\_\_  
(Signature of Applicant)

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

Check if copy of signed electric inspection form is attached **Acceptance and Final Approval of interconnection installation (for Public Utility use only)**

The interconnection installation is approved and the Small Generator Facility is approved for operation under the terms and conditions of the PUC rules found in OAR 860, Division 082 and a duly signed and executed Interconnection Agreement:

Public Utility waives Witness Test? (Initial) Yes (\_\_\_\_\_) No (\_\_\_\_\_) \_\_\_\_\_

If not waived, date of successful Witness Test: \_\_\_\_\_ Passed: (Initial) (\_\_\_\_\_) \_\_\_\_\_

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

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

<sup>1</sup> The interconnection shall not be deemed complete and ready for operation until the Applicant has complete this form, secured the necessary attachments and signatures and returned a copy to the Public Utility at the Public Utility's designated address.

**Interconnection Equipment As Built Specifications, Initial Settings and Operating Requirements \***

**Address of Facility**

Interconnection Customer: \_\_\_\_\_  
Facility Operator (if different than above): \_\_\_\_\_  
Facility Location/ Name: \_\_\_\_\_ Phone #: \_\_\_\_\_  
Street Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_  
Revision Date: \_\_\_\_\_

**Energy Production Equipment/Inverter Information**

Synchronous     Induction     Inverter     Other \_\_\_\_\_  
Electric Nameplate Rating: \_\_\_\_\_ kW    \_\_\_\_\_ kVA  
Rated Voltage: \_\_\_\_\_ Volts  
Rated Current: \_\_\_\_\_ Amps  
Phases:  Single  Three-Phase  
System Type Tested (Total System):  Yes     No; attach product literature

**For Synchronous Machines**

Manufacturer: \_\_\_\_\_  
Model No.: \_\_\_\_\_ Version No.: \_\_\_\_\_  
Submit copies of the Saturation Curve and the Vee Curve     Salient     Non-Salient  
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 (Xd) \_\_\_\_\_ ohms  
Direct-axis Transient Reactance: (X'd) \_\_\_\_\_ ohms  
Direct-axis Sub-transient Reactance: (X''d) \_\_\_\_\_ ohms

**Interconnection Equipment As Built Specifications, Initial Settings and  
Operating Requirements \*****For Induction Machines**

Manufacturer: \_\_\_\_\_  
Model No.: \_\_\_\_\_ Version No.: \_\_\_\_\_  
Locked Rotor Current: \_\_\_\_\_ Amps  
Rotor Resistance: (Rr) \_\_\_\_\_ ohms Exciting Current: \_\_\_\_\_ Amps  
Rotor Reactance: (Xr) \_\_\_\_\_ ohms Reactive Power Required: \_\_\_\_\_  
Magnetizing Reactance: (Xm) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (No Load)  
Stator Resistance: (Rs) \_\_\_\_\_ ohms \_\_\_\_\_ VARs (Full Load)  
Stator Reactance: (Xs) \_\_\_\_\_ ohms  
Short Circuit Reactance: (X"d) \_\_\_\_\_ ohms  
Electric Nameplate Capacity rating: (kVA) \_\_\_\_\_

**For Inverter Based Facilities**

Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_  
Type:  Forced Commutated  Line Commutated  
Electric Nameplate Capacity Rated Output: \_\_\_\_\_ Amps \_\_\_\_\_ Volts \_\_\_\_\_ kW  
Efficiency: \_\_\_\_\_ % Power Factor: \_\_\_\_\_ %  
Is Inverter Lab Tested?  Yes (attach product literature)  No

**DC Source / Prime Mover:**

Solar  Wind  Hydro  Other \_\_\_\_\_  
Electric Nameplate Capacity Rating: \_\_\_\_\_ kW Rating: \_\_\_\_\_ kVA  
Rated Voltage: \_\_\_\_\_ Volts  
Open Circuit Voltage (If applicable): \_\_\_\_\_ Volts  
Rated Current: \_\_\_\_\_ Amps  
Short Circuit Current (If applicable): \_\_\_\_\_ Amps

**Other Facility Information**

One Line Diagram attached:  Yes  No  
Plot Plan attached:  Yes  No  
Isolation Device Type/ Location: \_\_\_\_\_  
Grounding Configuration: \_\_\_\_\_  
Initial Commissioning Date: \_\_\_\_\_



**Interconnection Equipment As Built Specifications, Initial Settings and Operating Requirements \***

**Switchgear/ Circuit Interruption Devices**

Switchgear type and control: (used to bring generator on line)

Circuit Breakers:  Closed-transition  Open – transition  Auto Transfer Switch

Nameplate: \_\_\_\_\_

**Metering**

Location: \_\_\_\_\_

Metering Issues: \_\_\_\_\_

Monitoring Provisions:  Yes  No

Monitoring Values: \_\_\_\_\_

Monitoring Issues: \_\_\_\_\_

**Telemetry**

Telemetry Requirements: \_\_\_\_\_

System Configuration: \_\_\_\_\_

Data Scan Rate: \_\_\_\_\_

Data Point List: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Telemetry Data Delivery Location: \_\_\_\_\_

**Initial Set points at Point of Interconnection**

Voltage: \_\_\_\_\_ kVAR: \_\_\_\_\_

Power factor: \_\_\_\_\_

Other: \_\_\_\_\_

Other: \_\_\_\_\_

**Interconnection Equipment As Built Specifications, Initial Settings and  
Operating Requirements \*****Trip Re-start Protocol**

Reclosing Practice: \_\_\_\_\_

Hold out time: \_\_\_\_\_

Ramp Rate: \_\_\_\_\_

Notification required:  Yes  No**Operations and Maintenance Schedule**

Operating Hours: \_\_\_\_\_ Availability (%): \_\_\_\_\_

Seasonal Effect: \_\_\_\_\_

Routine and Annual Maintenance Schedule: \_\_\_\_\_

**Information Provided By**

[Insert name of Applicant]

Signed \_\_\_\_\_

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

\* Initial operating set points and 'as built' equipment data is to be recorded on or about the time of the Witness Test. It shall remain part of the permanent interconnection record described in OAR 860-082-0065. Parties may not deviate from initial settings and agreed upon operating parameters except as permitted by the Rule without written authorization of the Public Utility. The Interconnection Customer will furnish updated information to the Public Utility any time a special operating requirement initial set point or the Interconnection Equipment is materially changed.

**Interconnection Agreement for Small Generator Facility  
Tier 1, Tier 2, Tier 3 or Tier 4 Interconnection  
(Small Generator Facilities with Electric Nameplate Capacities of 10MW or less)**

This Interconnection Agreement for Small Generator Facility (“ Agreement” ) is made and entered into this \_\_\_ day of \_\_\_\_\_ by and between \_\_\_\_\_, a \_\_\_\_\_ organized and existing under the laws of the State of \_\_\_\_\_, (‘ ‘ Interconnection Customer” ) and PacifiCorp, a Corporation, existing under the laws of the State of Oregon, (‘ ‘ Public Utility’ ’ ). The Interconnection Customer and Public Utility may be referred to hereinafter singly as a ‘ ‘ Party’ ’ or collectively as the ‘ ‘ Parties.’ ’

**Recitals:**

**Whereas**, the Interconnection Customer is proposing to develop a Small Generator Facility, or to add generating capacity to an existing Small Generator Facility, consistent with the Application completed on \_\_\_\_\_;

**Whereas**, the Interconnection Customer desires to interconnect the Small Generator Facility with Public Utility’ s Transmission System and/or Distribution System (“ T&D System” ) in the State of Oregon; and

**Whereas**, the interconnection of the Small Generator Facility and the Public Utility’ s T&D System is subject to the jurisdiction of the Public Utility Commission of Oregon (“ Commission” ) and governed by OPUC Rule OAR 860, Division 082 (the “ Rule” ).

**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      Scope**

This Agreement establishes the standard terms and conditions under which the Small Generator Facility with a Nameplate Capacity of no more than 10 megawatts (“ MW” ) will interconnect to, and operate in Parallel with, the Public Utility’ s T&D System. The Commission has approved standard terms and conditions governing this class of interconnection. Any additions, deletions or changes to the standard terms and conditions of interconnection approved by the Commission must be mutually agreed by the Parties or, if required by the Rule, any such changes must be approved by the Commission. Terms with initial capitalization, when used in this Agreement, shall have the meanings given in the Rule. This Agreement shall be construed where possible to be consistent with the Rules; to the extent this Agreement conflicts with the Rule, the Rule shall take precedence.

**1.2      No Agreement Regarding Power Purchase, Transmission, or Delivery**

This Agreement does not constitute an agreement to purchase, transmit, or deliver any power or capacity from the interconnected Small Generating Facility nor does it constitute an electric service agreement.

**Interconnection Agreement for Small Generator Facility  
Tier 1, Tier 2, Tier 3 or Tier 4 Interconnection  
(Small Generator Facilities with Electric Nameplate Capacities of 10MW or less)**

**1.3 Other Agreements**

Nothing in this Agreement is intended to affect any other agreement between the Public Utility and the Interconnection Customer or any other interconnected entity. If the provisions of this Agreement conflict with the provisions of any other Public Utility tariff, the Public Utility tariff shall control.

**1.4 Responsibilities of the Parties**

- 1.4.1 The Parties shall perform all obligations of this Agreement in accordance with all applicable laws.
- 1.4.2 The Interconnection Customer will construct, own, operate, and maintain its Small Generator Facility in accordance with this Agreement, IEEE Standard 1547 (2003 ed), IEEE Standard 1547.1 (2005 ed), the National Electrical Code (2005 ed) and applicable standards required by the Commission.
- 1.4.3 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 Interconnection. Each Party shall provide Interconnection Facilities that adequately protect the other Parties' facilities, personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of Interconnection Facilities is prescribed in the Rule and this Agreement and the attachments to this Agreement.

**1.5 Parallel Operation and Maintenance Obligations**

Once the Small Generator Facility has been authorized to commence Parallel Operation by execution of this Agreement and satisfaction of Article 2.1 of this Agreement, the Interconnection Customer will abide by all written provisions for operating and maintenance as required by this Agreement and any attachments to this Agreement as well as by the Rule and as detailed by the Public Utility in Form 7, title " Interconnection Equipment As-Built Specifications, Initial Settings and Operating Requirements" .

**1.6 Metering & Monitoring**

The Interconnection Customer will be responsible for metering and monitoring as required by OAR 860-082-0070 and as may be detailed in any attachments to this Agreement.

**1.7 Power Quality**

The Interconnection Customer will design its Small Generator Facility to maintain a composite power delivery at continuous rated power output at the Point of Interconnection that meets the requirements set forth in IEEE 1547. The Public Utility may, in some circumstances, also require the Interconnection Customer to follow voltage or VAR schedules used by similarly situated, comparable generators in the control area. Any special

**Interconnection Agreement for Small Generator Facility  
Tier 1, Tier 2, Tier 3 or Tier 4 Interconnection  
(Small Generator Facilities with Electric Nameplate Capacities of 10MW or less)**

operating requirements will be detailed in Form 7 and completed by the Public Utility as required by the Rule. The Public Utility shall not impose additional requirements for voltage or reactive power support outside of what may be required to mitigate impacts caused by interconnection of the Small Generator Facility to the Public Utility's system.

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

**2.1      Equipment Testing and Inspection**

The Interconnection Customer will test and inspect its Small Generator Facility and Interconnection Facilities prior to interconnection in accordance with IEEE 1547 Standards as provided for in the Rule. The Interconnection will not be final and the Small Generator Facility shall not be authorized to operate in parallel with the Public Utility's T&D System until the Witness Test and Certificate of Completion provisions in the Rule have been satisfied. The Interconnection Customer shall pay or reimburse the Public Utility for its costs to participate in the Witness Test. Operation of the Small Generator Facility requires an effective Interconnection Agreement; electricity sales require a Power Purchase Agreement.

To the extent that the Interconnection Customer decides to conduct interim testing of the Small Generator Facility prior to the Witness Test, it may request that the Public Utility observe these tests. If the Public Utility agrees to send qualified personnel to observe any interim testing proposed by the Interconnection Customer, the Interconnection Customer shall pay or reimburse the Public Utility for its cost to participate in the interim testing. If the Interconnection Customer conducts interim testing and such testing is observed by the Public Utility and the results of such interim testing are deemed acceptable by the Public Utility (hereinafter a "Public Utility-approved interim test"), then the Interconnection Customer may request that such Public Utility-approved interim test be deleted from the final Witness Testing. If the Public Utility elects to repeat any Public Utility-approved interim test as part of the final Witness Test, the Public Utility will bare its own expenses associated with participation in the repeated Public Utility-approved interim test.

**2.2      Right of Access:**

As provided in OAR 860-082-0030(5), the Public Utility will have access to the Interconnection Customer's premises for any reasonable purpose in connection with the Interconnection Application or any Interconnection Agreement that is entered in to pursuant to the Rule or if necessary to meet the legal obligation to provide service to its customers. Access will be requested at reasonable hours and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition.

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

**3.1      Effective Date**

The Agreement shall become effective upon execution by the Parties.

**Interconnection Agreement for Small Generator Facility  
Tier 1, Tier 2, Tier 3 or Tier 4 Interconnection  
(Small Generator Facilities with Electric Nameplate Capacities of 10MW or less)**

**3.2 Term of Agreement**

The Agreement will be effective on the Effective Date and will remain in effect for a period of twenty (20) years or the life of the Power Purchase agreement, whichever is shorter or a period mutually agreed to by the Parties, unless terminated earlier by the default or voluntary termination by the Interconnection Customer or by action of the Commission.

**3.3 Termination**

No termination will become effective until the Parties have complied with all provisions of OAR 860-082-0080 and this Agreement that apply to such termination.

3.3.1 The Interconnection Customer may terminate this Agreement at any time by giving the Public Utility twenty (20) Business Days written notice.

3.3.2 Either Party may terminate this Agreement after default pursuant to Article 5.6 of this Agreement.

3.3.3 The Commission may order termination of this Agreement.

3.3.4 Upon termination of this Agreement, the Small Generator Facility will be disconnected from the Public Utility's T&D System at the Interconnection Customer's expense. The termination of this Agreement will 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 3.3 shall survive termination or expiration of this Agreement.

**3.4 Temporary Disconnection**

The Public Utility or Interconnection Customer may temporarily disconnect the Small Generator Facility from the Public Utility's T&D System for so long as reasonably necessary, as provided in OAR 860-082-0075 of the Rule, in the event one or more of the following conditions or events occurs:

3.4.1 Under emergency conditions, the Public Utility or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the Small Generator Facility without advance notice to the other Party. The Public Utility shall notify the Interconnection Customer promptly when it becomes aware of an emergency condition that may reasonably be expected to affect the Small Generator Facility operation. The Interconnection Customer will notify the Public Utility promptly when it becomes aware of an emergency condition that may reasonably be expected to affect the Public Utility's T&D System. To the extent

**Interconnection Agreement for Small Generator Facility  
Tier 1, Tier 2, Tier 3 or Tier 4 Interconnection  
(Small Generator Facilities with Electric Nameplate Capacities of 10MW or less)**

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 the necessary corrective action.

- 3.4.2 For routine Maintenance, Parties will make reasonable efforts to provide five Business Days notice prior to interruption caused by routine maintenance or construction and repair to the Small Generator Facility or Public Utility' s T&D system and shall use reasonable efforts to coordinate such interruption.
- 3.4.3 The Public Utility shall use reasonable efforts to provide the Interconnection Customer with prior notice of forced outages of the T&D System. If prior notice is not given, the Public Utility shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection.
- 3.4.4 For disruption or deterioration of service, where the Public Utility determines that operation of the Small Generator Facility will likely cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generator Facility could cause damage to the Public Utility' s T&D System, the Public Utility may disconnect the Small Generator Facility. The Public Utility will provide the Interconnection Customer upon request all supporting documentation used to reach the decision to disconnect. The Public Utility may disconnect the Small Generator 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 Public Utility' s written notice supporting the decision to disconnect, unless emergency conditions exist, in which case the provisions of 3.4.1 of the agreement apply.
- 3.4.5 If the Interconnection Customer makes any change to the Small Generating Facility, the Interconnection Equipment, the Interconnection Facilities, or to any other aspect of the interconnection, other than Minor Equipment Modifications, without prior written authorization of the Public Utility, the Public Utility will have the right to disconnect the Small Generator Facility until such time as the impact of the change has been studied by the Public Utility and any reasonable requirements or additional equipment or facilities required by the Public Utility to address any impacts from the changes have been implemented by the Parties and approved in writing by the Public Utility. The requirement to apply to the Public Utility for study and approve of modifications is governed by OAR 860-082-0005 (b).

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**3.5 Restoration of interconnection:**

The Parties shall cooperate with each other to restore the Small Generator Facility, Interconnection Facilities, and Public Utility' s T&D System to their normal operating state as soon as reasonably practicable following any disconnection pursuant to Article 3.4.

**Article 4. Cost Responsibility and Billing:**

As provided in OAR 860-082-0035, the Interconnection Customer is responsible for the cost of all facilities, equipment, modifications and upgrades needed to facilitate the interconnection of the Small Generator Facility to the Public Utility' s T&D System.

**4.1 Minor T&D System Modifications:**

As provided in the Rule addressing Tier 2 review (OAR 860-082-0050) and in the Rule addressing Tier 3 review (OAR 860-082-0055), it may be necessary for the Parties to construct certain Minor Modifications in order to interconnect under Tier 2 or Tier 3 review. The Public Utility has itemize any required Minor Modifications in the attachments to this Agreement, including a good-faith estimate of the cost of such Minor Modifications and the time required to build and install such Minor Modifications. The Interconnection Customer agrees to pay the costs of such Minor Modifications.

**4.2 Interconnection Facilities:**

The Public Utility has identified under the review procedures of a Tier 2 review or under a Tier 4 Facilities Study, the Interconnection Facilities necessary to safely interconnect the Small Generator Facility with the Public Utility. The Public Utility has itemized the required Interconnection Facilities in the attachments to this Agreement, including a good-faith estimate of the cost of the facilities and the time required to build and install those facilities. The Interconnection Customer is responsible for the cost of the Interconnection Facilities.

**4.3 Interconnection Equipment:**

The Interconnection Customer is responsible for all reasonable expenses, including overheads, associated with owning, operating, maintaining, repairing, and replacing its Interconnection Equipment.

**4.4 System Upgrades:**

The Public Utility will design, procure, construct, install, and own any System Upgrades. The actual cost of the System Upgrades, including overheads, will be directly assigned to the Interconnection Customer. An Interconnection Customer may be entitled to financial compensation from other Public Utility Interconnection Customers who, in the future, benefit from the System Upgrades paid for by the Interconnection Customer. Such compensation will be governed by separate rules promulgated by the Commission or by terms of a tariff filed and approved by the Commission. Such compensation will only be available to the extent provided for in the separate rules or tariff.



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**4.5 Adverse System Impact:**

The Public Utility is responsible for identifying the possible Affected Systems and coordinating with those identified Affected Systems, to the extent reasonably practicable, to allow the Affected System owner an opportunity to identify Adverse System Impacts on its Affected System, and to identify what mitigation activities or upgrades may be required on the Public Utility's system or on the Affected System to address impacts on Affected Systems and accommodate a Small Generator Facility. Such coordination with Affected System owners shall include inviting Affected System owners to scoping meetings between the Public Utility and the Interconnection Customer and providing the Affected System owner with study results and other information reasonably required and requested by the Affected System owner to allow the Affected System owner to assess impacts to its system and determine required mitigation, if any, for such impacts. The Parties acknowledge that the Public Utility cannot compel the participation of the Affected System owner and that the Public Utility is not itself responsible for identifying impacts or mitigation associated with an Affected System. The actual cost of any actions taken to address the Adverse System Impacts, including overheads, shall be directly assigned to the Interconnection Customer. The Interconnection Customer may be entitled to financial compensation from other Public Utilities or other Interconnection Customers who, in the future, utilize the upgrades paid for by the Interconnection Customer, to the extent allowed or required by the Commission. Such compensation will only be available to the extent provided for in the separate rules, Commission order or tariff. If the Parties have actual knowledge of an Adverse System Impact on an Affected System, the Interconnection Customer shall not interconnect and operate its Small Generator Facility in parallel with the Public Utility's system, and the Public Utility shall not authorize or allow the continued interconnection or parallel operation of the Small Generator Facility, unless and until such Adverse System Impact has been addressed to the reasonable satisfaction of the Affected System owner.

**4.6 Deposit and Billings:**

The Interconnection Customer agrees to pay to the Public Utility a deposit toward the cost to construct and install any required Interconnection Facilities and/or System Upgrades. The amount of the deposit shall be (select one of the following):

The Parties have not agreed to a schedule of progress payments and the Interconnection Customer shall pay a deposit equal to 100 percent of the estimated cost of the Interconnection Facilities and System Upgrades – the amount of the deposit shall be \$ \_\_\_\_\_; or

The Parties have agreed to progress payments and final payment under the schedule of payments attached to this Agreement; the Interconnection Customer shall pay a deposit equal to the lesser of (a) 25 percent of the estimated cost of the Interconnection Facilities and System Upgrades, or (b) \$10,000 – the amount of the deposit shall be \$ \_\_\_\_\_.

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If the actual costs of Interconnection Facilities and/or System Upgrades are different than the deposit amounts and/or progress and final payments provided for above, then the Interconnection Customer shall pay the Public Utility any balance owing or the Public Utility shall refund any excess deposit or progress payment within 20 days of the date actual costs are determined

**Article 5. Assignment, Liability, Indemnity, Force Majeure, Consequential Damages, and Default**

**5.1 Assignment**

The Interconnection Agreement may be assigned by either Party upon fifteen (15) Business Days prior written notice. Except as provided in Articles 5.1.1 and 5.1.2, said assignment shall only be valid upon the prior written consent of the non-assigning Party, which consent shall not be unreasonably withheld.

- 5.1.1 Either Party may assign the Agreement without the consent of the other Party to any affiliate (which shall include a merger of the Party with another entity), of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement;
- 5.1.2 The Interconnection Customer shall have the right to assign the Agreement, without the consent of the Public Utility, for collateral security purposes to aid in providing financing for the Small Generator Facility. For Small Generator systems that are integrated into a building facility, the sale of the building or property will result in an automatic transfer of this agreement to the new owner who shall be responsible for complying with the terms and conditions of this Agreement.
- 5.1.3 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 assigning Interconnection Customer.

**5.2 Limitation of Liability and Consequential Damages**

A Party is liable for any loss, cost claim, injury, or expense including reasonable attorney's fees related to or arising from any act or omission in its performance of the provisions of this Agreement entered into pursuant to the Rule except as provided for in ORS 757.300(4)(c). Neither Party will seek redress from the other Party in an amount greater than the amount of direct damage actually incurred.

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**5.3 Indemnity**

- 5.3.1 Liability under this Article 5.3 is exempt from the general limitations on liability found in Article 5.2.
- 5.3.2 The Parties 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 other 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.
- 5.3.3 If an indemnified person is entitled to indemnification under this Article 5.3 as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this Article 5.3, to assume the defense of such a claim, such indemnified person may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.
- 5.3.4 If an indemnifying party is obligated to indemnify and hold any indemnified person harmless under this Article 5.3, the amount owing to the indemnified person shall be the amount of such indemnified person' s actual loss, net of any insurance or other recovery.
- 5.3.5 Promptly after receipt by an indemnified person 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 5.3 may apply, the indemnified person 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.
- 5.3.6 The indemnifying Party shall have the right to assume the defense thereof with counsel designated by such indemnifying Party and reasonably satisfactory to the indemnified person. If the defendants in any such action include one or more indemnified persons and the indemnifying Party and if the indemnified person reasonably concludes that there may be legal defenses available to it and/or other indemnified persons which are different from or additional to those available to the indemnifying Party, the indemnified person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an

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indemnified person or indemnified persons having such differing or additional legal defenses.

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

**5.4 Consequential Damages**

Neither Party shall be liable to the other Party, 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.

**5.5 Force Majeure**

- 5.5.1 As used in this Agreement, 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 through no direct, indirect, or contributory act of a Party, 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.”
- 5.5.2 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

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Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event. Until the Force Majeure 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. The Affected Party will use reasonable efforts to resume its performance as soon as possible. The Parties shall immediately report to the Commission should a Force Majeure Event prevent performance of an action required by the Rule that the Rule does not permit the Parties to mutually waive.

## **5.6 Default**

- 5.6.1 No default shall exist where such 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. Upon a breach, the non-breaching Party shall give written notice of such breach to the breaching Party. Except as provided in Article 5.6.2, the breaching Party shall have sixty (60) Calendar Days from receipt of the beach notice within which to cure such breach; provided however, if such breach is not capable of cure within 60 Calendar Days, the breaching Party shall commence such cure within twenty (20) Calendar Days after notice and continuously and diligently complete such cure within six months from receipt of the breach notice; and, if cured within such time, the breach specified in such notice shall cease to exist.
- 5.6.2 If a breach is not cured as provided for in this Article 5.6, or if a breach is not capable of being cured within the period provided for herein, the non-breaching Party shall have the right to declare a default and 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 breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. Alternatively, the non-breaching Party shall have the right to seek dispute resolution with the Commission in lieu of default. The provisions of this Article 5.6 will survive termination of the Agreement.

## **Article 6. Insurance**

- 6.1 Pursuant to the Rule adopted by the Commission, the Public Utility may not require the Interconnection Customer to maintain general liability insurance in relation to the interconnection of a Small Generator Facility with an Electric Nameplate Capacity of 200 KW or less. With regard to the interconnection of a Small Generator Facility with an Electric Nameplate Capacity equal to or less than 10 MW but in excess of 200 KW, the

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Interconnection Customer shall, at its own expense, maintain in force throughout the period of this Agreement general liability insurance sufficient to protect any person (including the Public Utility) who may be affected by the Interconnection Customer's Small Generation Facility and its operation and such insurance shall be sufficient to satisfy the Interconnection Customer's indemnification responsibilities under Article 5.3 of this Agreement.

- 6.2** Within ten (10) days following execution of this Agreement, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) days thereafter, the Interconnection Customer shall provide the Public Utility with certification of all insurance required in this Agreement, executed by each insurer or by an authorized representative of each insurer.
- 6.3** All insurance required by this Article 6 shall name the Public, its parent, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition. The Interconnection Customer's insurance shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. The insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this Agreement, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.
- 6.4** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this Agreement.
- 6.5** The requirements contained herein as to insurance are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this Agreement.

**Article 7.**

**Dispute Resolution**

Parties will adhere to the dispute resolution provisions in OAR 860-082-0080.

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**Article 8. Miscellaneous**

**8.1 Governing Law, Regulatory Authority, and Rules**

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

**8.2 Amendment**

The Parties may mutually agree to amend the Agreement by a written instrument duly executed by both Parties in accordance with provisions of the Rule and applicable Commission Orders and provisions of the laws if the State of Oregon.

**8.3 No Third-Party Beneficiaries**

The 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.

**8.4 Waiver**

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

8.4.2 The Parties may agree to mutually waive a section of this Agreement so long as prior Commission approval of the waiver is not required by the Rule.

8.4.3 Any waiver at any time by either Party of its rights with respect to the Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of the Agreement. Any waiver of the Agreement shall, if requested, be provided in writing.

**8.5 Entire Agreement**

This Agreement, including any supplementary Form attachments that may be necessary, 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 the Agreement. There are no other agreements, representations, warranties, or covenants that constitute any part of the consideration for, or any condition to, either Party's compliance with its obligations under this Agreement.

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**8.6 Multiple Counterparts**

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

**8.7 No Partnership**

This Agreement will not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or 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.

**8.8 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.

**8.9 Subcontractors**

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor, or designating a third party agent as one responsible for a specific obligation or act required in this Agreement (collectively subcontractors), as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party will require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party will remain primarily liable to the other Party for the performance of such subcontractor.

8.9.1 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. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and will be construed as having application to, any subcontractor of such Party.

8.9.2 The obligations under this Article 8.9 will not be limited in any way by any limitation of subcontractor's insurance.

**8.10 Reservation of Rights**

Either Party will have the right to make a unilateral filing with the Commission to modify this Agreement. This reservation of rights provision will include but is not limited to modifications with respect to any rates terms and conditions, charges, classification of service, rule or regulation under tariff rates or any applicable State or Federal law or



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regulation. Each Party shall have the right to protest any such filing and to participate fully in any proceeding before the Commission in which such modifications may be considered.

**Article 9. Notices and Records**

**9.1 General**

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

**9.2 Records**

The Public Utility will maintain a record of all Interconnection Agreements and related Form attachments for as long as the interconnection is in place as required by OAR 860-082-0065. The Public Utility will provide a copy of these records to the Interconnection Customer within 15 Business Days if a request is made in writing.

**If to the Interconnection Customer:**

Interconnection Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-mail \_\_\_\_\_

**If to Public Utility:**

Public Utility: PacifiCorp  
Attention: Director, Transmission Services  
Address: 825 N.E. Multnomah Street, Suite 1600  
City: Portland State: OR Zip: 97232  
Phone: (503) 813-6079 Fax: (503) 813-6893

**9.3 Billing and Payment**

Billings and payments shall be sent to the addresses set out below: (complete if different than article 9.2 above)

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**If to the Interconnection Customer**

Interconnection Customer: \_\_\_\_\_  
Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**If to Public Utility**

Public Utility: PacifiCorp Transmission  
Attention: Central Cashiers  
Address: P.O. Box 2757  
City: Portland State: OR Zip: 97232

**9.4 Designated Operating Representative**

The Parties will designate operating representatives to conduct the communications which may be necessary or convenient for the administration of the operations provisions of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party' s facilities (complete if different than article 9.2 above)

**Interconnection Customer' s Operating Representative:** \_\_\_\_\_

Attention: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_ E-Mail \_\_\_\_\_

**Public Utility' s Operating Representative** PacifiCorp

Attention: Grid Operations  
Address: 9915 S.E. Ankeny Street  
City: Portland State: OR Zip: 97216  
Phone: (503) 251-5197 Fax: (503) 251-5228

**9.5 Changes to the Notice Information**

Either Party may change this notice information by giving five Business Days written notice prior to the effective date of the change.

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**Article 10. Signatures**

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

**For Public Utility:**

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

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

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

**For the Interconnection Customer:**

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

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

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

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**Attachment 1**

**Description of Interconnection Facilities  
And Metering Equipment Operated or Maintained by the Public Utility**

Equipment, including the Small Generator Facility, Interconnection Facilities, and metering equipment shall be itemized and identified as being owned by the Interconnection Customer, the Public Utility, or the Transmission Owner. The Public Utility will provide a best estimate itemized cost, including overheads, of its Interconnection Facilities and metering equipment, and a best estimate itemized cost of the annual operation and maintenance expenses associated with its Interconnection Facilities and metering equipment.

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**Attachment 2**

**One-line Diagram Depicting the Generating Facility, Interconnection Facilities, Metering  
Equipment, and Upgrades**

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**Attachment 3**

**Milestones**

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

Critical milestones and responsibility as agreed to by the Parties:

	<b>Milestone/Date</b>	<b>Responsible Party</b>
(1)	_____	_____
(2)	_____	_____
(3)	_____	_____
(4)	_____	_____
(5)	_____	_____
(6)	_____	_____
(7)	_____	_____
(8)	_____	_____
(9)	_____	_____
(10)	_____	_____

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**Attachment 4**

**Additional Operating Requirements for the Public Utility's  
Transmission System and/or Distribution System and Affected Systems Needed to Support the  
Interconnection Customer's Needs**

The interconnection of the Small Generator Facility is subject to the rules contained within in OAR 860 division 82. The interconnection of the Small Generator Facility to the Public Utility's Distribution System shall be subject to, and the Interconnection Customer shall operate the Small Generating Facility in accordance with, the Public Utility's policies governing interconnection of generation facilities to the distribution system entitled "Facility Connection (Interconnection) Requirements for Distribution Systems (34.5 kV and below)" which policy document is available upon request from the Public Utility and is incorporated by this reference as part of the Interconnection Agreement between the Parties. The interconnection of the Small Generator Facility to the Public Utility's Transmission System shall be subject to, and the Interconnection Customer shall operate the Small Generating Facility in accordance with, the Public Utility's policies governing interconnection of generation facilities to the transmission system entitled "Facility Connection (Interconnection) Requirements for Transmission Systems (46 kV and above)" which policy document is available upon request from the Public Utility and is incorporated by this reference as part of the Interconnection Agreement between the Parties. In the event of a conflict between any aspect of this Attachment 4 (including without limitation the Public Utility's policies governing interconnection of generation facilities to the distribution system or the transmission system) and the rules contained in OAR 860, division 82, the rules shall prevail.

Parallel Operation. Interconnection Customer may operate the Generating Facility in parallel with the Public Utility's Transmission System or Distribution System (collectively the "T&D System"), but subject at all times to any operating instructions that the Public Utility's dispatch operators may issue and in accordance with all the provisions of this Interconnection Agreement and Good Utility Practice, and any other conditions imposed by the Public Utility in its sole discretion.

Generating Facility Operation Shall Not Adversely Affect the Public Utility's T&D System.

Interconnection Customer shall operate the Generating Facility in such a manner as not to adversely affect the Public Utility's T&D System or any other element of the Public Utility's electrical system.

Interconnection Customer's Generating Facility shall deliver not more than the Design Capacity of kW. Except as otherwise required by this Interconnection Agreement, Interconnection Customer shall operate the Generating Facility in a manner compatible with the Public Utility's applicable voltage level and fluctuating voltage guidelines, entitled Facility Connection (Interconnection) Requirements for Distribution Systems (34.5 kV and below) or \_\_\_\_\_, as it may be amended or superseded from time to time in the Public Utility's reasonable discretion at the Point of Interconnection during all times that the Generating Facility is connected and operating in parallel with the Public Utility's T&D System. In its sole discretion, the Public Utility may specify rates of change in Interconnection Customer's deliveries to the Public Utility's T&D System during any start-up of the Generating Facility, during reconnection to the

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Public Utility's T&D System, and during normal operations to assure that such rates of change are compatible with the operation of the Public Utility's voltage regulation equipment.

Maximum Authorized Power Flow. The Generating Facility shall not be operated in a manner that results in the flow of electric power onto the Public Utility's T&D System during any fifteen (15) minute interval at levels in excess of \_\_\_\_\_ kVA from the Generating Facility. If this provision is violated, the Public Utility may terminate this Interconnection Agreement or lock the Interconnection Customer Disconnect Switch in the open position until such time as: (a) the Public Utility has studied the impact of additional generation on the T&D System (at Interconnection Customer's cost and pursuant to a new study agreement between the Public Utility and Interconnection Customer) and the interconnection has been upgraded (at Interconnection Customer's cost and pursuant to a new or amended Facilities Construction Agreement and a new or amended Interconnection Agreement if deemed necessary by the Public Utility) in any manner necessary to accommodate the additional generation; or (b) the Interconnection Customer has modified the Generating Facility or Interconnection Customer's Interconnection Facilities in such manner as to insure to the Public Utility's satisfaction that the Generating Facility will no longer cause electric power to flow onto the Public Utility's T&D System at a level in excess of \_\_\_\_\_ kVA.

Harmonic Distortion or Voltage Flicker. Notwithstanding the Study Results, upon notice from the Public Utility that operation of the Generating Facility is producing unacceptable harmonic distortions or voltage flicker on the Public Utility's T&D System, Interconnection Customer shall at its sole cost remedy such harmonic distortions or voltage flicker within a reasonable time.

Reactive Power. Interconnection Customer shall at all times control the flow of reactive power between the Generating Facility and the Public Utility's T&D System within limits established by the Public Utility. The Public Utility shall not be obligated to pay Interconnection Customer for any Kvar or Kvar Hours flowing into the Public Utility's T&D System.

Islanding. If at any time during the term of this Interconnection Agreement the interconnection of the Generating Facility to the Public Utility's T&D System results in a risk of electrical islanding, or actual occurrences of electrical islanding, which the Public Utility reasonably concludes are incompatible with Good Utility Practice, the Parties shall (as necessary) study the issue and implement a solution that will eliminate or mitigate the risk of electrical islanding to a level deemed acceptable by the Public Utility. All costs associated with addressing any electrical islanding problems as required by this paragraph shall be paid by the Interconnection Customer, including without limitation any study costs, engineering costs, design costs, or costs to procure, install, operate and/or maintain required interconnection facilities or protective devices.

Voltage Regulation. The Interconnection Customer agrees to operate at a  $\pm 95\%$  leading or lagging power factor. Prior to installation, Interconnection Customer shall provide the Public Utility with written notice of the device and/or operational constraints selected to satisfy this requirement and shall obtain the Public Utility's written approval of such device and/or operational constraints, which approval shall not be unreasonably withheld. In the event Interconnection Customer fails to operate the Generating Facility



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within the voltage regulation constraints of this requirement, the Public Utility may disconnect the Generating Facility.

Modification of Nominal Operating Voltage Level. By providing Interconnection Customer with a one hundred and eighty (180) day notice, the Public Utility may at its sole discretion change the Public Utility' s nominal operating voltage level at the Point of Interconnection. In the event of such change in voltage level Interconnection Customer shall, at Interconnection Customer' s sole expense, modify Interconnection Customer' s Interconnection Facilities as necessary to accommodate the modified nominal operating voltage level. Interconnection Customer has been informed that initial use of a dual voltage Interconnection Customer may ameliorate the cost of accommodating a change in nominal operating voltage level.

Equipment Failure. Interconnection Customer acknowledges that it is responsible for repair or replacement of Interconnection Customer' s primary transformer and for any and all other components of the Generating Facility and the Interconnection Customer' s Interconnection Facilities. Interconnection Customer is aware that it' s inability to timely repair or replace its transformer or any other component of the Generating Facility or Interconnection Customer' s Interconnection Facility could result in Interconnection Customer' s inability to comply with its responsibilities under this Interconnection Agreement and could lead to disconnection of the Generating Facility from the Public Utility' s T&D System and/or termination of this Interconnection Agreement pursuant to the terms of this Interconnection Agreement. Interconnection Customer acknowledges that the risk of this result is born solely by Interconnection Customer and may be substantially ameliorated by Interconnection Customer' s elective maintenance of adequate reserve or spare components including but not limited to the Interconnection Customer' s primary transformer.

Operation and Maintenance of Facilities Not Owned by the Public Utility. Interconnection Customer shall maintain, test, repair, keep accounts current on, or provide for the proper operation of any and all interconnection facilities, including but not limited to telemetry and communication equipment, not owned by the Public Utility.

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**Attachment 5**

**Public Utility' s Description of its Upgrades and Best Estimate of Upgrade Costs**

The Public Utility shall describe the System Upgrades required and provide an itemized good-faith, non-binding estimate of the cost, including overheads, of the upgrades and annual operation and maintenance expenses associated with such upgrades (including an list of the system upgrade items that will be the subject of operation and maintenance expenses).



Form 8

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**Attachment 6**

**Scope of Work**