#### BEFORE THE PUBLIC UTILITY COMMISSION

#### **OF OREGON**

AR 521

In the Matter of a Rulemaking to Adopt	)	
Rules Related to Small Generator	)	STAFF'S INITIAL COMMENTS
Interconnection.	)	

#### **General Background & Staff Perspective**

The Draft Small Generator Facility Interconnection Rules (Rules) are the culmination of a number of months of collaborative effort between the Public Utility Commission of Oregon's Staff (Staff), the Oregon Investor Owned Electric Utilities and a diverse group of Stakeholders representing the distributed generation community. These Rules are intended to apply to Oregon investor-owned electric utilities subject to the jurisdiction of the Public Utility Commission of Oregon (OPUC) and to Small Generator Facilities of 10 Megawatts or less in nameplate capacity that intend to interconnect to these utilities in Oregon and either operate in parallel or sell the electric output to the utility.

Staff originally had conceived of these Interconnection Rules as complementary to the recently adopted Division 039 Oregon Net Metering Rules, adopted in Commission Order No. 07-319. Staff attempted to accommodate Net Metering provisions in the original draft of the Rules as filed in this docket. After further review and consultation with legal counsel, Staff now believes it would be best to exclude net metering facilities from the rules that will ultimately be adopted at the conclusion of AR 521 (the new net metering rules are currently located in the Commission's Division 39, and the interconnection rules arising from Docket

AR 521 will be placed in proposed Division 82). This would eliminate the potential for conflicting rules (Division 39 and proposed Division 82) both applying to net metering facilities. However, to clarify, the rulemaking notice for AR 521 expressly references net metering facilities, and Staff intends to fully explore with the participants in Docket AR 521 whether any of the recently-adopted Division 39 rules need to be amended (or new ones added) as a consequence of the rules that come out of AR 521.

Staff is including, with these opening comments, an Attachment A which includes the standardized Forms that have been drafted along with the Rules. These forms include Interconnection Application Forms, Installation and Study forms and Interconnection Agreement Forms that are integral to the Rules.

This concludes Staff's Initial comments

Respectfully submitted,

/s/ Ed Durrenberger
Senior Utility Analyst
Electric & Natural Gas Division
Resource & Market Analysis

## **Small Generator Facility**

Level 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:				
City:				_ Zip Code:
Telephone (Daytime): _		_ (Evening):		
Facsimile Number:		_ E-Mail Add	dress:	
System Installer;			Check if Ow	ner Installed
Name:			_	
Mailing Address:				
City:		_ State:		_ Zip Code:
Telephone (Daytime): _		_ (Evening):		
Facsimile Number:		_ E-Mail Add	dress:	
Location (if different fro Electric Distribution Co				
Account Number (exist				
Proposed Operation Mo		QF 🗌		Other
Prime Mover Type		_	_	_
Inverter Manufacturer:_				
Inverter Electric Namer				
Inverter Electrical Conr	nection:(AC	C Volts), Pha	se: Single⊡ c	or Three⊡ Phase
System Design Capaci				
Prime Mover:	Photovoltaic	Reciproc	ating Engine	Fuel Cell
	Turbine 🗌	Other		
Energy Source:	Solar 🗌 Wi	nd 🗌 Hydro	o Diesel	Natural Gas
	Fuel Oil 🗌	Other		

# Level 1 Interconnection Request Application Form (continued)

Is the inverter lab certified? Yes No (If yes, attach manufacturer's cut sheet shorappropriate listing authority, e.g. UL 1741 list		abel information from the
Estimated Commissioning Date:		
Estimated Commissioning Date:		
Applicant Signature:		
I here-by attest that the information submitted of my knowledge and have included the nor Level 1 Interconnection Request:		
:	_ (Applicant Signature)	
Title:	Date:	
Application fee (\$100) included		
Interconnection Request Acknowledgem	ent:	
Receipt of the application and application fe	e is hereby ackn	owledged.
Approval for a Level 1 Small Generator Fac Applicant's Small Generator Facility passing review process set forth in PUC Rule )AR 8 EDC's signature on this Application Form	g the Level 1 scre	eens and completing the
EDC Representative Signature:		Date:
Printed Name:	Title:	
Indicate whether EDC plans to perform Witr	ness Test: Yes_	] No []

Note: The EDC 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 Level 2, Level 3 or Level 4 Interconnection

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

Name:		
Mailing Address:		
City:		
Telephone (Daytime):	(Evening):	
Facsimile Number:	E-Mail Address:	
Address of Customer Facility \	Vhere Small Generator Faci	lity will be Interconr
(if different from above)		
Street Address:		
City:		
Name:		
Mailing Address:		
Mailing Address: City:	State:	Zip Code:
Mailing Address: City: Telephone (Daytime):	State: (Evening):	Zip Code:
Mailing Address: City: Telephone (Daytime):	State: (Evening):	Zip Code:
Mailing Address: City: Telephone (Daytime): Facsimile Number:	State: (Evening): E-Mail Address:	Zip Code:
Mailing Address: City: Telephone (Daytime): Facsimile Number:  Electric Service Information fo	State: (Evening): E-Mail Address:	Zip Code:
Mailing Address: City: Telephone (Daytime): Facsimile Number:	State: (Evening): E-Mail Address:  r Applicant's Facility Where	Zip Code:

# Level 2, Level 3 or Level 4 Interconnection Application (cont.)

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

Please indicate below which review procedure applies to the interconnection request.
■ Level 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.
<u>Lab Tested</u> - 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 a Oregon utility under a Level 4 study review process within the prior 36 months of the date of this interconnection request.
■ Level 3 – A Small Generator Facility connected to the T&D system that does not export power. The Electric Nameplate Capacity rating may be up toof 50KW, if connecting to area network or up to 10 MW if connecting to a radial distribution feeder. The application fee amount is \$1000.
■ Level 4 – Electric Nameplate Capacity rating is up to 10 MW and the Small Generator Facility does not qualify for a Level 1, Level 2 or Level 3 review or has been reviewed but not approved under a Level 1, Level 2 or Level 3 review. Application fee amount is \$1000
Note: Descriptions for interconnection review categories do not list all criteria that must be

#### **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 Level 2 field tested small generator facilities:

- A copy of the Certificate of Completion, signed by an Oregon utility that has approved an identical small generator facility for parallel operation.
- A copy of all documentation submitted to the Oregon utility that approved the Small Generator Facility for parallel operation under a Level 4 study process.
- 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 an Oregon utility for parallel operation.
- If a Level 2 Application, utilizing Field Tested equipment, is proposed the remainder of the application will not be required to be completed.

<sup>&</sup>lt;sup>1</sup> <u>Note:</u> 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 XXX, (Rule).

# Level 2, Level 3 or Level 4 Interconnection Application (cont.)

#### **Small Generator Facility Information:**

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

Component/System	NRTL Providing Label & List	•
5		
Please provide copies of manufa	acturer brochures or technical specificat	tions
Energy Production Equipment/Inv	verter Information:	
☐ Synchronous ☐ Induction		
Electric Nameplate Rating:		
Rated Voltage:		
Rated Current:		
	: ☐ Yes ☐ No; (attach product litera	ture)
		,
For Synchronous Machines:		
Manufacturer:		
Model No.: Ver		
Submit copies of the Saturation Cur	ve and the Vee Curve.	
Salient Non-Salient		
Torque: lb-ft Rated RPM: _	- <u></u>	
Field Amperes: at rated g	enerator voltage and current and	% PF over-excited
Type of Exciter:		_
Output Power of Exciter:		_
Type of Voltage Regulator:		_
Locked Rotor Current: An	nps	
Synchronous Speed:RPM		
Winding Connection:		
Min. Operating Freq./Time:		
Generator Connection: Delta		
Direct-axis Synchronous Reactanc	•	

#### Level 2, Level 3 or Level 4 Interconnection Application

Direct-axis Transient Reactance: (X'd) \_\_\_\_ohms Direct-axis Sub-transient Reactance: (X"d) \_\_\_\_ohms **For Induction Machines:** Manufacturer: \_\_\_\_\_ Model No.: \_\_\_\_\_\_ Version No.: \_\_\_\_\_ Locked Rotor 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: \_\_\_\_\_\_oC. Reverse Power Relay Information: (This section applies to Level 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 \_\_\_\_\_ Rating: \_\_\_\_\_ kVA Electric Nameplate Capacity Rating: \_\_\_\_\_ kW Rated Voltage: \_\_\_\_\_\_Volts Open Circuit Voltage (If applicable): \_\_\_\_\_\_Volts Rated Current: \_\_\_\_\_Amps Short Circuit Current (If applicable): \_\_\_\_\_\_Amps

#### Level 2, Level 3 or Level 4 Interconnection Application

Other Facility Information:

One Line Diagram attached: Yes No
Plot Plan attached: No
Installation Test Plan attached: No
Estimated Commissioning Date (if known):

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

Applicant Signature: Date: Pate: 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 Amount

#### **EDC Acknowledgement:**

EDO 0:------

I hereby acknowledge the receipt of a Interconnection Request and Application Free,

Approval for a Level 2, Level 3 or Level 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 Rule )AR 860, Division XXX and is not granted by the EDC's signature on this Application Form.

EDC Signature: _		Date:
Printed Name:	Title:	

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

ATTACHMENT A PAGE 8

## Small Generator Facility Interconnection Certificate of Completion Form<sup>1</sup>

Applicant information Name:			
City:			
Telephone (Daytime):		_ (Evening): _	
E-Mail Address/ Fax number:		_	
<b>Installer</b> Name:			Check if owner-installed
			Zip Code:
E-Mail Address/ Fax number:		_	
for operation until receipt of the f	final accept	ance an approv	at the Small Generator Facility is not ready wal by the EDC as provided below.
Signed(Signature of Application			Date
Printed Name:			
Check if copy of signed electric i	_		
Acceptance and Final Approva			allation(for EDC use only)
The interconnection installation i	s approved FPUC Rule	and the Small OAR 860, Di	Generator Facility is approved for operation vision XXX and a duly signed and executed
If not waived, date of successful	Witness Te	st:	Passed: (Initial) ()
EDC Signature: Printed Name:			Date: Title:
1 1111100 1 1aiii0			11110

<sup>&</sup>lt;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 EDC at the EDC's designated address.

# Interconnection Equipment Specifications, Initial Settings and Operating Requirements \*

## **Address of Facility**

Interconnection Customer: Facility Operator (if different than above			
Facility Location/ Name:	-		
Street Address:			
City:			
Revision Date:			
Energy Product	ion Equipment/In	verter Informa	ation_
Synchronous Induction	☐ Inverter ☐ C	Other	
Electric Nameplate Rating:	kW	kVA	
Rated Voltage:Vo	olts		
Rated Current:	Amps		
Phases: Single Three-Phase			
System Type Tested (Total System): [	☐ Yes ☐ No; a	ttach product li	terature
<u>For</u>	Synchronous Ma	<u>chines</u>	
Manufacturer:			
Model No.: Versi	on No.:		
Submit copies of the Saturation Curve	and the Vee Curv	/e ☐ Salient	□ Non-Salient
Field Amperes: at rated gene	erator voltage and	current and	% PF over-excited
Type of Exciter:			
Output Power of Exciter:			
Type of Voltage Regulator:			
Locked Rotor Current: Amp	os		
Synchronous Speed:RPM			
Winding Connection:			
Min. Operating Freq./Time:			
Generator Connection:   Delta   V	Wye 🗌 Wye Gro	ounded	
Direct-axis Synchronous Reactance	(Xd)o	hms	
Direct-axis Transient Reactance: (X'd	l)ohms		
Direct-axis Sub-transient Reactance:	(X"d)	nhme	

#### **For Induction Machines**

Manufacturer:	
Model No.: Version No.:	
Locked Rotor Current: Amps	
Rotor Resistance: (Rr)ohms Exciting Current:An	nps
Rotor Reactance: (Xr)ohms Reactive Power Required:	
Magnetizing Reactance: (Xm)ohmsVARs (No Lo	oad)
Stator Resistance: (Rs)ohmsVARs (Full Load)	
Stator Reactance: (Xs)ohms	
Short Circuit Reactance: (X"d)ohms	
Electric Nameplate Capacity rating: (kVA)	
For Inverter Based Facilitie	<u>!S</u>
Manufacturer: Model:	
Type:  Forced Commutated Line Commutated	
Electric Nameplate Capacity Rated Output: Amps	skW
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 F	
Rated Voltage:Volts	
Open Circuit Voltage (If applicable):Volts	
Rated Current:Amps	
Short Circuit Current (If applicable):	Amps
On a Line Diagram attached \( \sqrt{Var} \sqrt{Na} \)	
One Line Diagram attached: Yes No	
Plot Plan attached: Yes No	
Isolation Device Type/ Location:	
Grounding Configuration:	
Initial Commissioning Date:	

## **Switchgear/ Circuit Interruption Devices**

Switchgear type and control: (used to b	oring generator on line)
Circuit Breakers:  Closed-transition	☐ Open –transition ☐ Auto Transfer Switch
Nameplate:	
	Matarina
Location:	<u>Metering</u>
Metering Issues:	
Monitoring Provisions:	□ No
Monitoring Values:	
Monitoring Issues:	
	<u>Telemetry</u>
Telemetry Requirements:	
System Configuration:	
Data Scan Rate:	
Data Point List:	
Telemetry Data Delivery Location:	
Initial Set poi	nts at Point of Interconnection
Voltage: KVA	
Power factor:	
Other:	
Othor	

ATTACHMENT A PAGE 12

#### **Trip Re-start Protocol**

Reclosing Practice:	
Hold out time:	
Ramp Rate:	
Notification required:  Yes	□ No
<u>Operat</u>	ions and Maintenance Schedule
Operating Hours:	Availability (%):
Seasonal Effect:	
Routine and Annual Maintenance	Schedule:

<sup>\*</sup> Initial operating set points and as built equipment date is to be recorded on or about the time of the Witness Test. It shall remain part of the permanent interconnection record described in the Rule in Section 3. Parties may not deviate from initial settings and agreed upon operating parameters except as permitted by the Rule without written authorization of the EDC. The Interconnection Customer will furnish updated information to the EDC any time a special operating requirement initial set point or the Interconnection Equipment is materially changed.

# Interconnection Agreement for Small Generator Facility Level 1, 2, Level 3 or Level 4 Interconnection

(Small Generator Facilities with Electric Nameplate Capacities or 10 MW or smaller)

into this	_ day of by and between	, a	organized and
existing und	ler the laws of the State of	, (''Applicant'') and	, a
	, existing unde	er the laws of the State of	
	, ("EDC"). The A	Applicant and EDC each may be	referred to as a
"Party," or	collectively as the "Parties."		
Recitals:			
capaci	eas, the Applicant is proposing to deverty to an existing Small Generator Face;	<u>-</u>	
	eas, the Applicant desires to interconnum; and	nect the Small Generator Facility	with EDC's T&D
Applic Terms	eas, the Agreement shall be used for a cations according to the procedures se with initial capitalization, when used and, to the extent this Agreement conf	et forth in PUC Rule OAR 860, D I in this Agreement, shall have the	ivision XXX (Rule). e meanings given in the
	therefore, in consideration of and subsagree as follows:	oject to the mutual covenants con	tained herein, the
Articl	e 1. Scope and Limitations of	Agreement	
1.1	Scope The Agreement establishes standar under which the Small Generator I interconnect to, and operate in Par or changes to the standard terms at be permitted unless they are mutual Commission if required by the Ruiness and the standard terms are permitted unless they are mutual to the standard terms are permitted unless they are mutual terms.	Facility with a Name Plate Capac rallel with, the EDC's T&D Syste and conditions of an Interconnectionally agreed to by the Parties or ap	ity of up to 10MW will m. Additions, deletions on Agreement will not
1.2	Power Purchase		
	The Agreement does not constitute	an agreement to purchase or deli-	ver the Applicant's

The Agreement does not constitute an agreement to purchase or deliver the Applicant's power nor does it constitute a power service agreement.

#### 1.3 Other Agreements

Nothing in the Interconnection Agreement is intended to affect any other agreement between the EDC and the Applicant or another Interconnection Customer. However, in the event that the provisions of the Agreement are in conflict with the provisions of other EDC tariffs, the EDC tariff shall control.

#### 1.4 Responsibilities of the Parties

- 1.4.1 The Parties shall perform all obligations of the Agreement in accordance with all applicable laws.
- 1.4.2 The Applicant will construct, own, operate, and maintain its Small Generator Facility in accordance with the Agreement, IEEE Standard 1547(2003 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.

#### 1.5 Parallel Operation and Maintenance Obligations

Once the Small Generator Facility has been authorized to commence Parallel Operation by execution of the Interconnection Agreement, the Applicant will abide by all written provisions for operating and maintenance as required by the Rule and detailed by the EDC in Form 4, title "Specifications, Special Operating Requirements and Initial Settings" a copy of which is provided on the Commission's website.

#### 1.6 Metering

The Interconnection Customer will be responsible for metering as required by Section 3 of the Rule.

#### 1.7 Power Quality

The Applicant 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 EDC may, in some circumstances, also require Applicants to follow voltage or VAR schedules used by similarly situated, comparable generators in the control area. Any special operating requirements will be detailed in Form 4 provided on the Commission website and completed by the EDC as required by the Rule. Under no circumstances shall these additional requirements for voltage or reactive power support exceed the normal operating capabilities of the Small Generator Facility.

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

#### 2.1 Equipment Testing and Inspection

The Applicant will test and inspect its Small Generator Facility and Interconnection Facilities prior to interconnection in accordance with IEEE 1547 Standards as provided for in Section 3.5 of the Rule. The Interconnection will not be final until the Witness Test and Certificate of Completion provisions of either Section 4.5. 5.5, 6.6 or 7.8 of the Rule have been satisfied and such requirements for Interconnection Agreements and Power Purchase Agreements as required in Section 4.8, 5.8, 6.7 or 7.9 of the Rule are met.

To the extent that an Applicant decides to conduct interim testing of the Small Generator Facility prior to the Witness Test, it may request that the EDC observe these tests and that these tests be deleted from the final Witness Test. If the EDC sends qualified personnel to

the Small Generator Facility to observe such interim testing, it will be doing so at its own expense.

#### 2.2 Right of Access:

As provided in Section 3.6.8 of the Rule, the EDC will have access to the Applicant's premises for any reasonable purpose in connection with the Interconnection Application and any Interconnection Agreement that is entered in to pursuant to this 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.

#### 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 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 applicable laws and any clauses of the Rule or this Agreement applicable to such termination.

- 3.3.1 The Applicant may terminate this Agreement at any time by giving the EDC 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 EDC's T&D System at the Applicant'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 shall survive termination or expiration of this Agreement.

#### 3.4 Temporary Disconnection

The EDC or Applicant may temporarily disconnect the Small Generator Facility from its T&D System for so long as reasonably necessary, as provided in Section 3.6.11 of the Rule, in the event one or more of the following conditions or events occurs:

3.4.1 Under emergency conditions, the EDC or the Interconnection Customer may immediately suspend interconnection service and temporarily disconnect the Small Generator Facility. The EDC shall notify the Applicant promptly when it becomes aware of an emergency condition that may reasonably be expected to affect the Small Generator Facility operation. The Applicant will notify the EDC promptly when it becomes aware of an emergency condition that may reasonably be expected to affect the EDC's T&D System. To the extent information is known, the

- notification shall describe the emergency condition, the extent of the damage or deficiency, the expected effect on the operation of both Parties' facilities and operations, its anticipated duration, and 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 EDC's T&D system and shall use reasonable efforts to coordinate such interruption.
- 3.4.3 Forced outages of the T&D System, the EDC shall use reasonable efforts to provide the Applicant with prior notice of forced outages to effect immediate repairs to the T&D System. If prior notice is not given, the EDC shall, upon request, provide the Applicant written documentation after the fact explaining the circumstances of the disconnection.
- 3.4.4 For disruption or deterioration of service, where the EDC 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 EDC's T&D System, the EDC may disconnect the Small Generator Facility. The EDC will provide the Applicant upon request all supporting documentation used to reach the decision to disconnect. The EDC may disconnect the Small Generator Facility if, after receipt of the notice, the Applicant fails to remedy the adverse operating effect within a reasonable time which shall be at least five Business Days from the date the Applicant receives the EDC'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 Applicant makes any change other than Minor Equipment Modifications without prior written authorization of the EDC, the EDC will have the right to temporarily disconnect the Small Generator Facility.

#### **3.5** Restoration of interconnection:

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

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

The Applicant is responsible for the application fee and for such facilities, equipment, modifications and upgrades as required in the Rule.

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

Modifications to the existing T&D Systems identified by the EDC under a Level 2 or Level 3 review, such as changing meters, fuses or relay settings, are deemed Minor Modifications. It is the EDC's sole discretion to decide what constitutes a Minor Modification. The Applicant will bare the costs of making such Minor Modifications as may be necessary to gain approval of an Application.

#### **4.2** Interconnection Facilities:

The EDC will identify under the review procedures of a Level 2 review or under a Level 4 Facilities Study, the Interconnection Facilities necessary to safely interconnect the Small Generator Facility with the EDC. The EDC will itemize the Interconnection Facilities for the Applicant, including the cost of the facilities and the time required to build and install those facilities. The Applicant is responsible for the cost of the Interconnection Facilities.

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

#### **4.4** System Upgrades:

The EDC 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 Applicant. An Interconnection Customer may be entitled to financial compensation from other EDC 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.

#### 4.5 Adverse System Impact:

The EDC is responsible for identifying Adverse System Impacts on any Affected Systems and for determining what mitigation activities or upgrades may be required to accommodate a Small Generator Facility. The actual cost of any actions taken to address the Adverse System Impacts, including overheads, shall be directly assigned to the Applicant. The Applicant may be entitled to financial compensation from other EDCs, or other Interconnection Customers who, in the future, utilize the upgrades paid for by the Applicant, to the extent as allowed by the Commission.

#### 4.6 Billings:

The EDC may require a deposit of not more than 50% of the cost estimate, not to exceed \$1000, to be paid up front by the Applicant for studies or Interconnection Facilities necessary to complete an Application and to interconnect to the T&D System. Progress billing and final billing and payment schedules shall be agreed to by Parties prior to commencing work.

# 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, and with the opportunity to object by the other Party.

- 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 Applicant shall have the right to assign the Agreement, without the consent of the EDC, 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 Applicant.

#### 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 an Interconnection 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.

#### 5.3 Indemnity

- 5.3.1 This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of the Agreement. Liability under this provision 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 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, 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, 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 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.

#### **5.4** Consequential Damages

Neither Party shall be liable under any provision of the 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."
- If a Force Majeure Event prevents a Party from fulfilling any obligations under this 5.5.2 Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Party of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance, and if the initial notification was verbal, it should be promptly followed up with a written notification. The Affected Party shall keep the other Party informed on a continuing basis of developments relating to the Force Majeure Event until the event ends the Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be reasonably mitigated. 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 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 default, the non-defaulting Party shall give written notice of such default to the defaulting Party. Except as provided in Article 5.6.2, the defaulting Party shall have sixty (60) Calendar Days from receipt of the default notice within which to cure such default; provided however, if such default is not capable of cure within 60 Calendar Days, the defaulting Party shall commence such cure within twenty (20) Calendar Days after notice and continuously and diligently complete such cure within six months from receipt of the default notice; and, if cured within such time, the default specified in such notice shall cease to exist.
- 5.6.2 If a default is not cured as provided for in this Article, or if a default is not capable of being cured within the period provided for herein, the non-defaulting Party shall have the right to terminate the 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 the Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. Alternately, the non-defaulting Party shall have the right to seek dispute

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resolution with the Commission in lieu of default. The provisions of this Article will survive termination of the Agreement.

#### **Article 6.** Insurance

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 Rule or the Interconnection Agreement entered into pursuant to this Rule. General liability insurance is not required for approval of an interconnection Application, or for the related Interconnection Agreement, for a Small Generator Facility with an Electric Nameplate Capacity of 200 KW or smaller, or for a Net Metering Facility as provided for in ORS 757.300(4)(c). All other Interconnection Customers are required to obtain prudent amounts of general liability insurance in an amount sufficient to protect other Parties from any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of the provisions of this Rule or the Interconnection Agreement entered into pursuant to this Rule. Neither Party will seek redress from the other Party in an amount greater than the amount of direct damage actually incurred.

#### **Article 7. Dispute Resolution**

Parties will adhere to the dispute resolution provisions in Section 3.6.17 of the Rule

#### 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 as provided in Section 3.6.16 of 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

The Interconnection 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 the Agreement.

#### **8.6** Multiple Counterparts

The 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

The 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 the 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 the Agreement shall remain in full force and effect.

#### 8.10 Subcontractors

Nothing in the 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 the Agreement (collectively subcontractors), as it deems appropriate to perform its obligations under the Agreement; provided, however, that each Party will require its subcontractors to comply with all applicable terms and conditions of the Agreement in providing such services and each Party will remain primarily liable to the other Party for the performance of such subcontractor.

- 8.10.1 The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under the 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 the Agreement upon the hiring Party shall be equally binding upon, and will be construed as having application to, any subcontractor of such Party.
- 8.10.2 The obligations under this Article will not be limited in any way by any limitation of subcontractor's insurance.

#### 8.11 Reservation of Rights

Either Party will have the right to make a unilateral filing with the Commission to modify the Interconnection Agreement. This reservation of rights provision will includes but is not limited to modifications with respect to any rates terms and conditions, charges,

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classification of service, rule or regulation under tariff rates or any applicable State or Federal law or 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 the Agreement, any written notice, demand, or request required or authorized in connection with the 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

**If to the Applicant:** 

The 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 Section 3.6.3.2 of the Rule. The utility will provide a copy of these records to the Applicant or Interconnection Customer within 15 Business Days if a request is made in writing.

Applicant:			
City:	State	e: Zip:	<del></del> :
	Fax:		
If to EDC:			
EDC			
Attention: _			
Address:			
City:	State:	Zip:	
Phone:	Fax:	E-mail	
9.3	Billing and Payment Billings and payments shall be sen than article 9.2 above)	t to the addresses set	out below: (complete if differen
If to the Ap	<u>plicant</u>		
Applicant: _			
Address:			
City:	State	:Zi	p:

	_	
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If to EDC					
EDC:					
Attention: _					
Address:					_
City:		State:		Zip:	_
9.4	The Parties will designa may be necessary or cor	te operating re evenient for th will also serv	epresentative administre as the poi	ation of the open	he communications which erations provisions of the rith respect to operations nan article 9.2 above)
Applicant's Operating	<u>representative</u> :				
Attention: _					
Address:					<del>_</del> .
City:		State:		Zip:	
Phone:	Fax:		_E-Mail		_
Attention: _ Address:	Representative:				_
Phone:	Fax:	State		Zıp	
Eithe to th  Article 10.  IN WITNE	Changes to the Notice or Party may change this not e effective date of the change signatures  SS WHEREOF, the Partie zed representatives.	otice informati ge.		J	•
<u>For</u>	EDC:				
Nam	e:				
Title	:				
Date	:				
<b>For</b>	the Applicant:				

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End

#### **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 Stat	te	
of, ("Applicant,")	)	
and, a		
existing under the	he laws of the State of	f
, (''EDC). A		
referred to as a "Party," or collectively as the "		·
Recitals:		
Whereas, Applicant is proposing to develop a Signerating capacity to an existing Small Generat Application completed by the Applicant on	•	•
; an	d	
Whereas, The Applicant desires to interconnect	the Small Generating	Facility with the
EDC's T&D System;		

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

Whereas, The Applicant has requested the EDC 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 EDC'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 PUC Rule OAR 860-XXX-YYYY (Rule).
- 2. Interconnection Customer elects and Electric Distribution Company shall cause an Interconnection Facilities Study consistent with OAR 860-XXX-YYYY.
- 3. The Applicant will provide the data requested in Section 2 of this Form. The scope of the Interconnection Facilities Study shall be subject to this data..

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[Insert name of the EDC]

- 4. An Interconnection Facilities Study report (1) shall provide a description, estimated cost of (consistent with Section 2), schedule for required facilities to interconnect the Small Generator Facility to the EDC's T&D System and (2) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.
- 5. The EDC will may require a study deposit as described in Section 3 of the Rule.
- 6. In cases where no Upgrades are required, the Interconnection Facilities Study shall be completed and the results will be transmitted to the Applicant within thirty Calendar Days after this agreement is signed by the Parties.
- 7. Study fees will be detailed in Section 3 of the Rule and will be based on actual costs.
- 8. The Cost Responsibility for Studies is detailed in Section 3 of the Rule.

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:

Signed			
Name (Printed):	Title		
[Insert name of the Applicant]			
Signed		_	
Name (Printed):		Title	

# Section 2 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 Electric Distribution Company station.

Number of generation connections:
Will an alternate source of auxiliary power be available during CT/PT maintenance?
YesNo
Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation?
YesNo
(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 EDC's T&D  System:
Towar number observed in the field (Painted on towar leg)*:

Number of third party easements required for distribution lines*:	_·*
To be completed in coordination with Electric Distribution Company.	
Is the Small Generating Facility located in EDC's service area?	
YesNo	
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:	

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#### **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	, a	
existing under	the laws of the State of	f
, ("EDC"	). Applicant and EDC e	each may be
referred to as a "Party," or collectively as the	"Parties."	
Recitals:		
Whereas, The Applicant is proposing to devel adding generating capacity to an existing Small Application completed by Interconnection Customark.	Il Generating Facility co	
on; a	nd	
Whereas, Applicant desires to interconnect the T&D System; and	e Small Generating Fac	ility with EDCs

Whereas, Applicant has requested for the EDC to perform an Interconnection Feasibility Study to assess the feasibility of interconnecting the proposed Small Generating Facility to EDC'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 PUC Rule OAR 860-XXX-YYYY ("Rule").
- 2. Interconnection Customer elects and Electric Distribution Company shall cause to be performed an Interconnection Feasibility Study consistent with OAR 860-XXX-YYYY.
- 3. The scope of the Interconnection Feasibility Study shall be subject to the assumptions set in the rule and detailed in Section 2 to this agreement form.
- 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 EDC reserves the right to request additional technical information from Interconnection Customer 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.

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5. In performing the study, the EDC will rely, to the extent reasonably practicable, on existing studies of recent vintage. The Applicant will not be charged for such existing studies Section 3 of the Rule details cost responsibility associated with any new study or 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, and
- 6.3 Preliminary description and non-bonding estimated cost of facilities required to interconnect the Small Generating Facility to the EDC's T&D System and to address the identified short circuit and power flow issues.
- 7. The Interconnection Feasibility Study shall be completed and the results shall be transmitted to Interconnection Customer within thirty Calendar Days after this agreement is signed by the Parties.
- 8. Study fees will be based on actual costs in accordance with the provisions of Section 3 of the Rule

[Insert name of Electric Distribution Company]

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:

Signed			
SignedName (Printed):			
	Title		 
[Insert name of Applicant]			
Signed		_	
Name (Printed):		Title	

# Section 2: 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:
Designation of Point of Interconnection and configuration to be studied.
Designation of alternative Points of Interconnection and configuration.
Note: 1 and 2 are to be completed by the Applicant. Any other assumptions (listed below) are to be provided by the Applicant and/ or the EDC.

#### **Interconnection System Impact Study Form Agreement**

This agreement is made and entered into thisday ofby
and between, a
organized and existing under the laws of the State of, ("Applicant,")
nd, a
existing under the laws of the State of
, ("EDC"). Applicant and EDC 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 EDC's T&D System;

Whereas, The EDC 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 ED perform an Interconnection System Impact Study to assess the impact of interconnecting the Small Generating Facility to the EDC'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 OAR 860-XXX-YYYY (Rule).
- 2. Applicant elects and EDC shall cause to be performed an Interconnection System Impact Study consistent with OAR 860-XXX\_YYYY.
- 3. The scope of the Interconnection System Impact Study shall be subject to the assumptions set forth below in Section 2 to this agreement.
- 4. The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study and the technical information provided by Applicant in the Application. The E D C reserves the right to request additional technical information from Interconnection Customer 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, Application, or the technical information provided therein is modified, the time to complete the Interconnection System Impact Study may be (mutually?) 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 Electric Distribution Company's Electric Transmission and Distribution System and to address the identified short circuit, instability, and power flow issues.
- 6. The Interconnection System Impact Study, if required, shall be completed and the results transmitted to the Applicant within thirty Calendar Days after this agreement is signed by the Parties or in accordance with the EDC's queuing procedures.
- 7. Electric Distribution Company may require a study deposit as prescribed Section 3 of the Rule.
- 8. Study fees are described in Section 3 of the Rule and will be based on actual costs.
- 9. Cost responsibility is described in Section 3 of the rule.

[Insert name of Electric Distribution Company]

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:

[	7.1
Signed	
Name (Printed):	
Title	
[Insert name of Interconnection Customer]	
Signed	
Name (Printed):	Title

# Section 2: 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-XXX-YYYY, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.
2. Designation of alternative Points of Interconnection and configuration.
Note: 1 and 2 are to be completed by the Interconnection Customer. Any other assumptions (listed below) are to be provided by the Applicant and/ or the EDC.

End

## CERTIFICATE OF SERVICE

## AR 521

I certify that on September 20, 2007, I served the foregoing document upon all persons on the attached lists by delivering a copy by electronic mail to those who provided electronic mail addresses and by mailing a copy by postage prepaid first class mail or by hand delivery/shuttle mail to the persons who have not provided electronic mail addresses.

Diane Davis

On Behalf of the Staff of the Oregon Public Utility Commission 550 Capitol Street NE Suite 215 Salem, OR 97301

(Lists AR 521, Interconnection and AdminRule Electric)

List: DIANE'S MERGE AR 521 - ADMINRULE ELECTRIC -INTERCONNECTION

Printed: 9/20/2007

**BOB BEAL** CENTRAL OREGON IRRIGATION DISTRICT

EMail bobb@coid.org

DIANE BROAD

EMail dbroad@triaxiseng.com

**ALAN COWAN ENERGY TRUST** 

EMail alan.cowan@energytrust.org

LINDA HARRIS-PROCTOR BONNEVILLE POWER ADMINISTRATION

EMail Ilharris@bpa.gov

MARL KANE **COLUMBIA ENERGY PARTNERS** 

EMail <u>mkane@columbiaep.com</u>

JOHN LOWE

EMail <u>iravene@comcast.net</u>

STEPHANIE MANZO SUNLIGHT SOLAR ENERGY INC

EMail stephanie.manzo@sunlightsolar.com

JESSICA MORRISON DAVID EVANS AND ASSOCIATES

EMail jsmo@deainc.com

**CARLOS V PINEDA** ORION ENERGY LLC

EMail cpineda@orion-energy.com

**RHYS ROTH** 

**CLIMATE SOLUTIONS** 

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RICK STERLING IDAHO PUBLIC UTILITIES COMMISSION

EMail rick.sterling@puc.idaho.gov

List: DIANE'S MERGE AR 521 - ADMINRULE ELECTRIC -INTERCONNECTION

WAYNE SHIRLEY THE REGULATORY ASSISTANCE PROJECT 177 WATER ST GARDINER ME 04011

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**BRAD JOHNSON ACN ENERGY VENTURES** 2122 NATAHOA CT FALLS CHURCH VA 22043

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**DOUGLAS L ANDERSON** CALENERGY COMPANY 1111 S 103RD ST OMAHA NE 68124-1072

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**RICK GILLIAM** SUNEDISON 590 REDSTONE DR BROOMFIELD CO 80020

EMail rgilliam@sunedison.com

THOMAS S BASSO NATIONAL RENEWABLE ENERGY LABORATORY 1617 COLE BLVD MS1614 GOLDEN CO 80401-3393

EMail thomas basso@nrel.gov

AR 521

List: DIANE'S MERGE AR 521 - ADMINRULE ELECTRIC -INTERCONNECTION

**RIC GALE** IDAHO POWER COMPANY PO BOX 70 **BOISE ID 83707** 

EMail rgale@idahopower.com

PETER J RICHARDSON RICHARDSON & O'LEARY PO BOX 7218 **BOISE ID 83707** 

EMail peter@richardsonandoleary.com

MICHAEL YOUNGBLOOD **IDAHO POWER COMPANY** PO BOX 70 **BOISE ID 83707** 

EMail myoungblood@idahopower.com

RANDY ALLPHIN **IDAHO POWER COMPANY** PO BOX 70 BOISE ID 83707-0070

EMail rallphin@idahopower.com

DAVE ANGELL IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070

EMail daveangell@idahopower.com

MAGGIE BRILZ **IDAHO POWER COMPANY** PO BOX 70 BOISE ID 83707-0070

EMail mbrilz@idahopower.com

JOHN R GALE IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070

EMail rgale@idahopower.com

List: DIANE'S MERGE AR 521 AR 521 - ADMINRULE ELECTRIC - INTERCONNECTION

SANDRA D HOLMES IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070

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BARTON L KLINE IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070

EMail bkline@idahopower.com

LISA D NORDSTROM IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070

EMail Inordstrom@idahopower.com

DAVID SIKES IDAHO POWER COMPANY PO BOX 70 BOISE ID 83707-0070

EMail dsikes@idahopower.com

STEVEN G LINS GLENDALE CITY OF 613 E BROADWAY STE 220 GLENDALE CA 91206-4394

EMail slins@ci.glendale.ca.us

RANDY MINNIER 17065 CAMINO SAN BERNARDO STE 200 SAN DIEGO CA 92127

EMail randy@mpeconsulting.com

DAVID L HAYWARD RW BECK INC 15373 INNOVATION DR STE 390 SAN DIEGO CA 92128-3425

List: DIANE'S MERGE AR 521

AR 521 - ADMINRULE ELECTRIC - INTERCONNECTION

PAUL OSHIDERI AOL UTILITY CORP 12752 BARRETT LANE SANTA ANA CA 92705

KEVIN D BEST REALENERGY LLC 6712 WASHINGTON ST YOUNTVILLE CA 94599

EMail kbest@realenergy.com

ROBIN LUKE REALENERGY LLC 6712 WASHINGTON ST YOUNTVILLE CA 94599

EMail <u>rluke@realenergy.com</u>

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