VERSANT POWER

Level 2, 3 and 4 Interconnection Application for Certified, Inverter-Based Generating Facilities 25KW and Greater

The Customer-Generator applicant ("Applicant") hereby makes application to the T & D Utility to install and operate a generating facility interconnected with the transmission and distribution utility system. This application will be considered as an application for interconnection of generators under Expedited interconnection review provided the generator is not greater than 10MW but shall serve as an Application for Standard interconnection review if greater than 10 MW or if Expedited review does not qualify the generator for interconnection.

An application is a Complete Application when it provides all applicable information required below. (Additional information to evaluate a request for interconnection may be required and will be so requested from the Interconnection Applicant by Utility after the application is deemed complete).

Once complete, please sign and include your ($)_____ application fee, plus a separate $40 Interconnection Ombudsman Fee per 65-407 C.M.R. ch. 328, § 2(B), and mail to the following address applicable for your service territory:

Versant Power
Distribution Interconnection Coordinator PO Box 932
Bangor, ME 04402-0932
Or Email at: dginterconnections@versantpower.com
Ensure file name and subject line are identified as per format below:
Developer Name – City – mm/dd/yyyy – Document Type
(Make checks payable to: Versant Power or Contact for Funds Transfer Instructions)

Example Document Types for filename

- ***Application***
- ***One Line Drawing***
- ***Schematic Drawings***
- ***Site Documentation***
- ***Site Control***

1. Project Name or Legal Name of Interconnecting Applicant (or, if an Individual /Individual's Name)

Name		Contact Person	
Company Name		Account Number (*Existing Account Number, if generator to be interconnected on the Customer side of a utility revenue meter.*)	
Proposed generation facility address			
City, State, ZIP		Telephone (Day)	
Email Address *(Please use email that is intended for use throughout the process)*		Telephone (Evening)	

Interconnect Service Type (Must Choose One) **Note* Review recent NEB qualifications and changes when making this selection**

- ☐ Network Resource
- ☐ Energy Only (Settlement Only)
- ☐ Load Response (no export)
- ☐ Net metering (NEB)
- ☐ Procurement

2. Contact (if different from Interconnection Customer)

Name		Contact Person	
Account Number		Owner of the facility *(include percent ownership by any electric utility)*	
Address		Telephone (Day)	
City, State, ZIP		Telephone (Evening)	
Email Address		Fax	

3. Installing Electrical Contractor Information

Company		Representative	
Title		Fax	
Address		Telephone (Day)	
City, State, ZIP		Email Address	

4. Timing	
Requested In-Service Date	

5. Generating Qualifications			
Inverter Manufacturer		Model Name/ Version No.	
PS-CAD Version No.		Quanity of Inverters	
PS-CAD Model attached *Applicable for Level 4 only*	☐ Yes ☐ No *(if **NO** is selected, please request manufacturer to provide ASAP)*		
Aggregate Nameplate Output Power Rating *(in KW or KVA)*	Summer	_____kW	_____kVA
	Winter	_____kW	_____kVA
Individual Generator Power Factor	Rated Power Factor	_____Leading	_____Lagging
Generating Facility/Inverter AC output voltage	_____ Volts		

Generating Facility Type							
Phase	☐ Single Phase ☐ Three Phase						
Facility Type	☐ Synchronous	☐ Induction	☐ Inverter	☐ Other			
Total Number of Generators in wind farm **(if applicable)** to be interconnected pursuant to this Interconnection							
Request		Elevation		Single Phase		Three Phase	

Please provide **Battery INVERTER** details, if different					
Manufacturer		Model		PS-CAD Version No	

Battery Storage Details (if applicable)			
Battery Storage rating (if applicable)	_____kW and _____ AH or KWH	BESS charge type	☐ Grid/Utility ☐ PV

Describe operating mode on the one-line diagram (attach with the application) *A short explanation on how BESS will be operated, such as ISO or utility controlled, frequency or voltage support, etc.*

List of adjustable set points for the protective equipment or software

Aggregate Rated system current	_____ (amps)
Generating facility Location *(Road Name, Town, and Digital GPS Coordinates or Pole No)*	
Interconnection Customer or Customer-Site Load	_____kW , if none, explain _____
Typical Reactive Load (if known)	
Maximum Physical Export Capability Requested:	_____ kW
Prime Mover: Photovoltaic/Reciprocating Engine/Fuel Cell/Turbine/Other (describe)	
Energy Source: Photovoltaic/Wind/Hydro/Diesel/	

Natural Gas/Fuel Oil/Reciprocating Engine Other (describe)	
Is the equipment **UL1741-SB** Listed? *If YES, attach any documentation provided by the generator manufacturer describing the SB listing for the generating facility to this application.*	☐ Yes ☐ No
Is the equipment **1547-2018** Compliant? *If YES, attach any documentation provided by the generator manufacturer describing the 1547-2018 listing for the generating facility to this application.*	☐ Yes ☐ No

List components of the Small Generating Facility Equipment Package that are currently certified:

Equipment Type *(Major equipment) and Qty*	**Certifying Entity** *(UL, IEEE etc)*

Is the prime mover compatible with the certified protective relay package? *Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Application*	☐ Yes ☐ No

6. Small Generating Facility Characteristic Data (for inverter-based machines)

Max design fault current *% of rated current/total amps*		Instantaneous or RMS?	☐ Instantaneous ☐ RMS
Harmonics Characteristics: *(Maximum THD - Total harmonic distortion)*			
Start-up requirements:			

7. Small Generating Facility Characteristic Data (for rotating machines)

RPM Frequency		(*) Neutral Grounding Resistor (If Applicable):	

8. Synchronous Generators

Direct Axis Synchronous Reactance, X'd:	_____P.U.	KVA Base	
Direct Axis Transient Reactance, X'd	_____P.U.	Field Amperes	
Direct Axis Sub-Transient Reactance, X'd	_____P.U.	Field Volts	
Negative Sequence Reactance, X2	_____P.U.		
Zero Sequence Reactance, X0	_____P.U.		

9. Induction Generators

Motoring Power (kW)		Stator Resistance, Rs	
I 2t or K (Heating Time Constant)		Stator Reactance, Xs	
Rotor Resistance, Rr		Magnetizing Reactance, Xm	
Rotor Reactance, Xr		Short Circuit Reactance, Xd"	
Exciting Current		Temperature Rise	
Frame Size		Design Letter	
Reactive Power Required In Vars (No Load)		Reactive Power Required In Vars (Full Load):	
Total Rotating Inertia	H:_____Per Unit on kVA Base		

Note: Please contact the T & D Utility prior to submitting this Interconnection Application to determine if the specified information in Section 9 above is required.

10. Excitation and Governor System Data for Synchronous Generators Only Induction Generators

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

11. Interconnection Facilities Information

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

Will a transformer be used between the generator and the Point of Interconnection?	☐ Yes	☐ No
Will the transformer be provided by the Interconnection Customer?	☐ Yes	☐ No
Transformer Phasing and size	☐ Single phase ☐ Three phase	_____kVA (Size)
Transformer Impedance	_____ percent on _____kVA Base	

If Transformer is three Phase, please provide following details

	Transformer Primary	Transformer Secondary	Transformer Tertiary
Volts			
Delta			
Wye			
Wye Grounded			

Transformer Fuse Data
- ***If Applicable, for Interconnection Customer-Owned Fuse)***
- ***Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)***

Manufacturer		Type	
Size		Speed	

Interconnecting Circuit Breaker or Reclosure (if applicable):

Manufacturer		Type			
Load Rating (Amps):		Interrupting Rating (Amps):		Trip Speed (Cycles)	
Interconnection Protective Relays If applicable):		Microprocessor Manufacturer & Model			

If Microprocessor-Controlled, please provide following information
List of Functions and Adjustable Setpoints for the protective equipment or software

	Set-Point Function	Minimum	Maximum
1			
2			
3			
4			
5			
6			

If Discrete Components: (Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer	Type:	Style/Catalog No	Proposed Setting

Current Transformer Data (If Applicable): Enclose copy of Manufacturer Excitation and Ratio Correction Curves)			
Manufacturer	Type:	Accuracy Class	Proposed Ratio Connection

Potential Transformer Data (If Applicable):			
Manufacturer	Type:	Accuracy Class	Proposed Ratio Connection

General Information Checklist

Please select check box under "Reviewed Column" for each item listed below verifying that a complete package has been submitted and the Customer(s) are aware of all requirements

Checklist	Yes / No	Reviewed
Enclose a copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, Including conductor type, impedances, length between devices from the PCC to the invertor, current, potential circuits, and protection & control schemes. If the Small Generating Facility is larger than 50 kW, the one-line diagram must be signed and stamped by a licensed Professional Engineer. Is a One-Line Diagram Enclosed?	☐ Yes ☐ No	☐
Enclose a copy of any documentation that indicates the precise physical location of the proposed Small Generating Facility. Including device layout that corresponds with single line diagram (e.g., USGS topographic map or other diagram or documentation).	☐ Yes ☐ No	☐
Proposed location of interface equipment and interconnection is shown on the site plan *including address*	☐ Yes ☐ No	☐
Enclose a copy of any documentation that describes and details the operation of the protection and control schemes.	☐ Yes ☐ No	☐
Site Control (Please attach if applicable)	☐ Yes ☐ No	☐
Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable)	☐ Yes ☐ No	☐

Information Required Prior to Physical Interconnection

Installing Electrician					
Firm					
License No.					
Mailing Address				City	
State		Zip Code		Telephone	

Applicant's Signature

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

Signed		Date	