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**Pacific Gas and
Electric Company®**

Oakland, California

Revised
Cancelling Revised

Cal. P.U.C. Sheet No. 59710-E
Cal. P.U.C. Sheet No. 57171-E

Electric Sample Form No. 79-1174-03E
Interconnection Application, Attachment E, Wind Turbine Technology

Sheet 1

**Please Refer to Attached
Sample Form**

(Continued)

Advice Decision	7618-E	Issued by Shilpa RamaIya Vice President Regulatory Proceedings and Rates	Submitted Effective Resolution	June 6, 2025 July 9, 2025 E-5296
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INTERCONNECTION APPLICATION (Form 79-1174-03)

ATTACHMENT E

WIND TURBINE TECHNOLOGY

Please complete the following table for the specific generator technology indicated.

Instructions				
Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
Please indicate the number of each "type" and quantity of Generator being installed Be sure all Generators classified as one "type" are identical in all respects. If only one type of Generator is to be used, only one column needs to be completed.	Type: _____ Qty.: _____	Type: _____ Qty.: _____	Type: _____ Qty.: _____	Type: _____ Qty.: _____
A - Generator/Inverter Manufacturer Enter the brand name of the Generator.				
B - Generator/Inverter Model Enter the model name or number assigned by the manufacturer of the Generator.				
C - Generator/Inverter Software Version If this Generator's control and or protective functions are dependent on a software program supplied by the manufacturer of the equipment, please provide the version or release number for the software that will be used.				
D - Is the Inverter certified? Applicant has verified that all major solar system components are on the verified equipment list maintained by the California Energy Commission and other equipment, as determined by PG&E, has been verified by the customer as having safety certification from a nationally recognized testing laboratory. See PG&E's Rule 21, Section L for additional information regarding Generator certification. For Net Billing Customers all major solar system components shall comply with Electric Rule 21 Section L.2-L.4 and Section L.7	<input type="checkbox"/> Yes <input type="checkbox"/> No			



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Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
E – Anti-Islanding Detection Method Please select an Anti-Islanding Detection Method				
Group 1 – Frequency Shift with continuous positive frequency feedback	Group 1 _____	Group 1 _____	Group 1 _____	Group 1 _____
Group 2A – Frequency Shift with discontinuous or stepped positive frequency feedback	Group 2A _____	Group 2A _____	Group 2A _____	Group 2A _____
Group 2B – Frequency Shift similar to Group 2A except with a dead zone around 60Hz	Group 2B _____	Group 2B _____	Group 2B _____	Group 2B _____
Group 2C – Frequency shift with unidirectional frequency feedback	Group 2C _____	Group 2C _____	Group 2C _____	Group 2C _____
Group 3 – Monitors change of impedance	Group 3 _____	Group 3 _____	Group 3 _____	Group 3 _____
Group 4 – Monitors shift at a harmonic frequency (multiple of the fundamental)	Group 4 _____	Group 4 _____	Group 4 _____	Group 4 _____
Group 5 – Passive methods like rate of change of frequency, vector shift	Group 5 _____	Group 5 _____	Group 5 _____	Group 5 _____
Group 6 – Produces negative sequence current and monitor voltage	Group 6 _____	Group 6 _____	Group 6 _____	Group 6 _____
F – Volt-Var Smart Inverter Setting <i>If proposing non-default inverter settings, please provide:</i>				
Power Factor Value	V1 _____	V2 _____	V3 _____	V4 _____
Inverter Power Factor	Q1 _____	Q2 _____	Q3 _____	Q4 _____
Volt-Var Voltage Values	V1 _____	V2 _____	V3 _____	V4 _____
Volt-Var Reactive Values	Q1 _____	Q2 _____	Q3 _____	Q4 _____
Volt-Watt Real Power Values	P1 _____	P2 _____	P3 _____	P4 _____



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Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
G - Generator Design Please indicate the design of each Generator. Designate "Inverter" anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.	<input type="checkbox"/> Synch <input type="checkbox"/> Induct. <input type="checkbox"/> Inverter			
H - Gross Nameplate Rating (kVA) This is the capacity value normally supplied by the manufacturer and stamped on the Generator's nameplate. This value is not required where the manufacturer provides only a kW rating. However, where both kVA and kW values are available, please indicate both.				
I - Operating Voltage This value should be the voltage rating designated by the manufacturer and used in this Generating Facility. Please indicate phase-to-phase voltages for 3-phase installations. See PG&E's Rule 21, Section H.2.b. and Table H.1., for additional information.				
J - Power Factor Rating This value should be the nominal power factor rating designated by the manufacturer for the Generator. See PG&E's Rule 21, Section H.2.i. for additional information.				
K - PF Adjustment Range Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values. See PG&E's Rule 21, Section H.2.i.				
L - Wiring Configuration Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.				

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Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
M - (MP) 3-Phase Winding Configuration (Choose One)	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye
For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.				
N - (MP) Neutral Grounding System Used (Choose One) Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected. If the grounding method used at this facility is not listed, please attach additional descriptive information.	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms
O - Induction Generators Only: Locked Rotor Current: Stator Resistance: <input type="checkbox"/> (%) Stator Leakage Reactance: <input type="checkbox"/> (%) Rotor Resistance: <input type="checkbox"/> (%) Rotor Leakage Reactance: <input type="checkbox"/> (%) If the Generator is of an induction design, please provide the "locked rotor current" value supplied by the manufacturer. If this value is not available, the stator resistance, stator leakage reactance, rotor resistance, rotor leakage reactance values supplied by the manufacturer may be used to determine the locked rotor current. If the Generator's Gross Nameplate Capacity is 10 MW or greater, PG&E may request additional data to better model the nature and behavior of the Generator with relation to its Electric System.	(Amps) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%)	(Amps) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%)	(Amps) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%)	(Amps) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%) <input type="checkbox"/> (%)
P - Short Circuit Current Produced by Generator:	<input type="checkbox"/> (Amps)	<input type="checkbox"/> (Amps)	<input type="checkbox"/> (Amps)	<input type="checkbox"/> (Amps)
Q - AC Disconnect For systems requiring an AC Disconnect only, please include the requested information about the AC Disconnect. See PG&E's Rule 21, Section H.1.d Located within 10 feet of the PG&E meter?	Manufacturer <input type="checkbox"/> Model # <input type="checkbox"/> Rating (amps) <input type="checkbox"/> Yes <input type="checkbox"/> No	Manufacturer <input type="checkbox"/> Model # <input type="checkbox"/> Rating (amps) <input type="checkbox"/> Yes <input type="checkbox"/> No	Manufacturer <input type="checkbox"/> Model # <input type="checkbox"/> Rating (amps) <input type="checkbox"/> Yes <input type="checkbox"/> No	Manufacturer <input type="checkbox"/> Model # <input type="checkbox"/> Rating (amps) <input type="checkbox"/> Yes <input type="checkbox"/> No

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ATTACHMENT E

WIND TURBINE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
R - Lineside Tap Where is the point of interconnection in relation to the main breaker? PG&E has special requirements for a lineside tap. Contact PG&E at: Rule21Gen@PGE.com for more information.	Customer side PG&E side	Customer side PG&E side	Customer side PG&E side	Customer side PG&E side
S – Warranty or Service Agreement Applicant has verified that (i) a warranty of at least 10 years has been provided on all equipment and on its installation, or (ii) have a 10-year service warranty or executed "agreement" ensuring proper maintenance and continued system performance.	<input type="checkbox"/> Yes <input type="checkbox"/> No			
T - Distribution Interconnect Handbook (DIH) and Greenbook Requirements Does this interconnection meet the DIH and Greenbook Requirements	<input type="checkbox"/> Yes <input type="checkbox"/> No			
U - Gas Clearance Requirements Certify that this interconnection meets Greenbook Gas Clearance Requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No			
V - Back-up Generator Operation Will the generator be operated as a back-up? If yes, please indicate control device.	<input type="checkbox"/> Yes <input type="checkbox"/> No			
W - Limited Export Will the generator export be limited? If yes, please indicate how export will be limited.	<input type="checkbox"/> Yes <input type="checkbox"/> No			
	<input type="checkbox"/> Power Control System (PCS – Option 9)	<input type="checkbox"/> Power Control System (PCS – Option 9)	<input type="checkbox"/> Power Control System (PCS – Option 9)	<input type="checkbox"/> Power Control System (PCS – Option 9)
	<input type="checkbox"/> Relay	<input type="checkbox"/> Relay	<input type="checkbox"/> Relay	<input type="checkbox"/> Relay
	<input type="checkbox"/> Derated Inverter			



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Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
X – PCS with Limited Generation Profile If project is using a Limited Generation Profile Select the proposed PCS make/model: If equipment is not listed in Distribution Provider's list of certified PCS, upload UL3141 certificates of compliance from the NRTL identifying that the proposed PCS has been certified under UL3141 with PEL:	<u>(Select from Utility's UL3141 PEL PCS approved list)</u>	<u>(Select from Utility's UL3141 PEL PCS approved list)</u>	<u>(Select from Utility's UL3141 PEL PCS approved list)</u>	<u>(Select from Utility's UL3141 PEL PCS approved list)</u>
Indicate the PCS's controlled nameplate capacity (as provided in the NRTL testing reports)	_____ kW	_____ kW	_____ kW	_____ kW
Indicate the PCS's Maximum Steady State percentage (as provided in the NRTL testing reports)	_____ %	_____ %	_____ %	_____ %
Y - Telemetry Will the Generating Facility Gross Nameplate Rating exceed 1 MW? If yes, please select a Telemetry Option. If one of the Customer-owned Telemetry options is selected, please identify the preferred Site Metering Arrangement.	<p>_____ Yes _____ No</p> <p>_____ Customer-owned Telemetry - Gateway _____ Customer-owned Telemetry - Aggregator _____ Mini RTU</p> <p>_____ Customer-side net load metering _____ Replace PG&E meter with a Mark V meter and terminal block _____ Add terminal block to existing PG&E Mark V meter _____ Replace meter socket with dual-socket meter cabinet for installation of customer-owned meter _____ Install customer-owned meter in existing dual socket meter cabinet.</p>			