



**Electric Sample Form No. 79-1174-03D**  
Interconnection Application, Attachment D, Solar (PV) Technology

Sheet 1

(N)

(N)

**Please Refer to Attached  
Sample Form**

*Advice* 6849-E  
*Decision* D.22-12-056

*Issued by*  
**Meredith Allen**  
*Vice President, Regulatory Affairs*

*Submitted* January 30, 2023  
*Effective* March 1, 2023  
*Resolution* \_\_\_\_\_



# INTERCONNECTION APPLICATION (Form 79-1174-03)

## ATTACHMENT D

### **SOLAR (PV) TECHNOLOGY**

**Part I - Describing the Generating Facility and Host Customer's Electrical Facilities**

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

Instructions				
Inverter	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>Please indicate the number of each <b>"type"</b> and <b>quantity</b> of Generator being installed</p> <p>Be sure all Generators classified as one "type" are identical in all respects.</p> <p>If only one type of Generator is to be used, only one column needs to be completed.</p>				
<p>A - Generator/Inverter Manufacturer</p> <p>Enter the brand name of the Generator.</p>				
<p>B - Generator/Inverter Model</p> <p>Enter the model name or number assigned by the manufacturer of the Generator.</p>				
<p>C - Generator/Inverter Software Version</p> <p>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.</p>				
<p>D - Is the Generator/Inverter certified?</p> <p>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&amp;E, has been verified by the customer as having safety certification from a nationally recognized testing laboratory.</p> <p>See PG&amp;E's Rule 21, Section L for additional information regarding Generator certification.</p> <p>For Net Billing Customers all major solar system components shall comply with Electric Rule 21 Section L.2-L.4 and Section L.7</p>	<p>___ Yes</p> <p>___ No</p>	<p>___ Yes</p> <p>___ No</p>	<p>___ Yes</p> <p>___ No</p>	<p>___ Yes</p> <p>___ No</p>

# INTERCONNECTION APPLICATION (Form 79-1174-03) ATTACHMENT D

## SOLAR (PV) TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p><b>E – Anti-Islanding Detection Method</b></p> <p>Please select an Anti-Islanding Detection Method</p> <p style="padding-left: 20px;">Group 1 – Frequency Shift with continuous positive frequency feedback</p> <p style="padding-left: 20px;">Group 2A – Frequency Shift with discontinuous or stepped positive frequency feedback</p> <p style="padding-left: 20px;">Group 2B – Frequency Shift similar to Group 2A except with a dead zone around 60Hz</p> <p style="padding-left: 20px;">Group 2C – Frequency shift with unidirectional frequency feedback</p> <p style="padding-left: 20px;">Group 3 – Monitors change of impedance</p> <p style="padding-left: 20px;">Group 4 – Monitors shift at a harmonic frequency (multiple of the fundamental)</p> <p style="padding-left: 20px;">Group 5 – Passive methods like rate of change of frequency, vector shift</p> <p style="padding-left: 20px;">Group 6 – Produces negative sequence current and monitor voltage</p>	<p>Group 1 _____</p> <p>Group 2A _____</p> <p>Group 2B _____</p> <p>Group 2C _____</p> <p>Group 3 _____</p> <p>Group 4 _____</p> <p>Group 5 _____</p> <p>Group 6 _____</p>	<p>Group 1 _____</p> <p>Group 2A _____</p> <p>Group 2B _____</p> <p>Group 2C _____</p> <p>Group 3 _____</p> <p>Group 4 _____</p> <p>Group 5 _____</p> <p>Group 6 _____</p>	<p>Group 1 _____</p> <p>Group 2A _____</p> <p>Group 2B _____</p> <p>Group 2C _____</p> <p>Group 3 _____</p> <p>Group 4 _____</p> <p>Group 5 _____</p> <p>Group 6 _____</p>	<p>Group 1 _____</p> <p>Group 2A _____</p> <p>Group 2B _____</p> <p>Group 2C _____</p> <p>Group 3 _____</p> <p>Group 4 _____</p> <p>Group 5 _____</p> <p>Group 6 _____</p>
<p><b>F–Volt-Var Smart Inverter Setting</b></p> <p><i>If proposing non-default inverter settings, please provide:</i></p> <p>Power Factor Value</p> <p>Inverter Power Factor</p> <p>Volt-Var Voltage Values</p> <p>Volt-Var Reactive Values</p> <p>Volt-Watt Real Power Values</p>	<p>V1 _____</p> <p>Q1 _____</p> <p>V1 _____</p> <p>Q1 _____</p> <p>P1 _____</p>	<p>V2 _____</p> <p>Q2 _____</p> <p>V2 _____</p> <p>Q2 _____</p> <p>P2 _____</p>	<p>V3 _____</p> <p>Q3 _____</p> <p>V3 _____</p> <p>Q3 _____</p> <p>P3 _____</p>	<p>V4 _____</p> <p>Q4 _____</p> <p>V4 _____</p> <p>Q4 _____</p> <p>P4 _____</p>

# INTERCONNECTION APPLICATION (Form 79-1174-03) ATTACHMENT D

## SOLAR (PV) TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
G - Modules	<u>Manufacturer</u>  <u>Model #.</u>  <u>Quantity</u>	<u>Manufacturer</u>  <u>Model #.</u>  <u>Quantity</u>	<u>Manufacturer</u>  <u>Model #.</u>  <u>Quantity</u>	<u>Manufacturer</u>  <u>Model #.</u>  <u>Quantity</u>
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.				



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## SOLAR (PV) TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<b>J - Power Factor Rating</b> 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.				
<b>K - PF Adjustment Range</b> 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.				
<b>L - Wiring Configuration</b> Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.				
<b>M - AC Disconnect</b> 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?	<u>          </u> Manufacturer <u>          </u> Model # <u>          </u> Rating (amps)  <input type="checkbox"/> Yes <input type="checkbox"/> No	<u>          </u> Manufacturer <u>          </u> Model # <u>          </u> Rating (amps)  <input type="checkbox"/> Yes <input type="checkbox"/> No	<u>          </u> Manufacturer <u>          </u> Model # <u>          </u> Rating (amps)  <input type="checkbox"/> Yes <input type="checkbox"/> No	<u>          </u> Manufacturer <u>          </u> Model # <u>          </u> Rating (amps)  <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>N - Lineside Tap</b> 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: <a href="mailto:Rule21Gen@PGE.com">Rule21Gen@PGE.com</a> for more information.	<u>          </u> Customer side  <input type="checkbox"/> PG&E side	<u>          </u> Customer side  <input type="checkbox"/> PG&E side	<u>          </u> Customer side  <input type="checkbox"/> PG&E side	<u>          </u> Customer side  <input type="checkbox"/> PG&E side
<b>O - Warranty or Service Agreement</b> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No



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## SOLAR (PV) TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<b>P - Solar Ready Electric Panel</b> Is the Generating Facility connecting to a circuit breaker on the supply side of the main breaker?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>Q - Green Meter Adapter (GMA)</b> Will a GMA be installed?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>R - Distribution Interconnect Handbook (DIH) and Greenbook Requirements</b> Does this interconnection meet the DIH and Greenbook Requirements	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>S - Gas Clearance Requirements</b> Certify that this interconnection meets Greenbook Gas Clearance Requirements?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>T - Basic Single Line Diagram (SLD)</b> If the interconnection is eligible to use a Basic SLD, please include the requested information.	_____ Panel Voltage (Volts)  _____ Main Breaker (Amps)  _____ PV Breaker Size (Amps)	_____ Panel Voltage (Volts)  _____ Main Breaker (Amps)  _____ PV Breaker Size (Amps)	_____ Panel Voltage (Volts)  _____ Main Breaker (Amps)  _____ PV Breaker Size (Amps)	_____ Panel Voltage (Volts)  _____ Main Breaker (Amps)  _____ PV Breaker Size (Amps)
<b>U - Back-up Generator Operation</b> Will the generator be operated as a back-up?  If yes, please indicate the control device that will be used.	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Automatic Transfer Switch  <input type="checkbox"/> Contactor  <input type="checkbox"/> Breaker	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Automatic Transfer Switch  <input type="checkbox"/> Contactor  <input type="checkbox"/> Breaker	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Automatic Transfer Switch  <input type="checkbox"/> Contactor  <input type="checkbox"/> Breaker	<input type="checkbox"/> Yes <input type="checkbox"/> No  <input type="checkbox"/> Automatic Transfer Switch  <input type="checkbox"/> Contactor  <input type="checkbox"/> Breaker



# INTERCONNECTION APPLICATION (Form 79-1174-03) ATTACHMENT D

## SOLAR (PV) TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>V - Limited Export</p> <p>Will the generator export be limited?</p> <p>If yes, please indicate how export will be limited.</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Power Control System (PCS – Option 9)</p> <p><input type="checkbox"/> Relay</p> <p><input type="checkbox"/> Derated Inverter</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Power Control System (PCS – Option 9)</p> <p><input type="checkbox"/> Relay</p> <p><input type="checkbox"/> Derated Inverter</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Power Control System (PCS – Option 9)</p> <p><input type="checkbox"/> Relay</p> <p><input type="checkbox"/> Derated Inverter</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Power Control System (PCS – Option 9)</p> <p><input type="checkbox"/> Relay</p> <p><input type="checkbox"/> Derated Inverter</p>
<p>W – Telemetry</p> <p>Will the Generating Facility Gross Nameplate Rating exceed 1 MW?</p> <p>If yes, please select a Telemetry Option.</p> <p>If one of the Customer-owned Telemetry options is selected, please identify the preferred Site Metering Arrangement.</p>	<p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p><input type="checkbox"/> Customer-owned Telemetry - Gateway</p> <p><input type="checkbox"/> Customer-owned Telemetry - Aggregator</p> <p><input type="checkbox"/> Mini RTU</p> <p><input type="checkbox"/> Customer-side net load metering</p> <p><input type="checkbox"/> Replace PG&amp;E meter with a Mark V meter and terminal block</p> <p><input type="checkbox"/> Add terminal block to existing PG&amp;E Mark V meter</p> <p><input type="checkbox"/> Replace meter socket with dual-socket meter cabinet for installation of customer-owned meter</p> <p><input type="checkbox"/> Install customer-owned meter in existing dual socket meter cabinet.</p>			



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## ATTACHMENT D

### SOLAR (PV) TECHNOLOGY

#### Part II Solar Statistics Data Fields

Per Appendix A of CPUC D. 14-11-001, the following data fields must all be completed, in their entirety, in order to initiate PG&E's interconnection review of the proposed Generating Facility. *Only complete Part II if the solar generating facility is serving as part of a Net Energy Metering (NEM/NEM2) or Net Billing Tariff (NBT) arrangement.*

**A. Customer Sector** (Check one)

- Residential
- Commercial
- Other Government
- Educational
- Military
- Industrial
- Non-Profit

**B. Are Performance Monitoring and Reporting Services (PMRS) being utilized?**

- Yes
- No

If yes, please indicate who is receiving the data? (check all that apply)

- Customer
- 3<sup>rd</sup> Party (list name) \_\_\_\_\_

**C. Are there electric vehicles charging on site at the above generating facility address?**

- Yes
- No

If yes, please indicate how many electric vehicles \_\_\_\_\_

**D. System Ownership and Financing**

**i. System Owner** (check one):

- PG&E Customer Owned

If PG&E Customer Owned, please answer the following:

Indicate the System Cost paid by Customer: \$ \_\_\_\_\_

Property Assessed Clean Energy (PACE) Financed?

- Yes
- No

If Yes, PACE financed by which entity? \_\_\_\_\_

If you have non-PACE financing or a lease, please fill in the information below

\_\_\_\_\_  
Financial Institution/Lessor Name

\_\_\_\_\_  
Financial Institution/Lessor Address

\_\_\_\_\_  
City

\_\_\_\_\_  
State

\_\_\_\_\_  
Zip

- Third Party Owned

If Third Party Owned, please answer the following:

Claimed Federal Investment Tax Credit (ITC) Cost Basis: \$ \_\_\_\_\_

Name of Developer at the time of sale: \_\_\_\_\_





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ATTACHMENT D

SOLAR (PV) TECHNOLOGY

Contract Type: [ ] PPA [ ] Lease [ ] Pre-Paid Lease [ ] Other

ii. Rebate Information:

Did you participate in a California rebate program? [ ] Yes [ ] No

Please indicate the rebate program that you participated in:

Rebate Amount: \$

If you are participating in the Single-family Affordable Solar Home (SASH) program, please provide SASH project number:

E. Additional Generating Facility Information (Solar PV Only)

i. Mounting Method: [ ] Rooftop [ ] Ground [ ] Mixed

ii. Tracking Type: [ ] Fixed [ ] Single-Axis [ ] Dual-Axis [ ] Mixed

If fixed, please indicate: Tilt: degrees Azimuth: degrees

F. Installer's/Vendor's California State Contractor License Number:

G. CPUC Consumer Protection Requirements Pursuant to Decision 21-06-026

a. Home Improvement Salesperson (HIS) Registration Number

Was a Home Improvement Salesperson (HIS) involved in the development of your project?

[ ] Yes [ ] No

California Public Utilities Commission (CPUC) Decision 21-02-026 requires "the Home Improvement Salesperson (HIS) registration number of solar providers who are required to have a HIS registration number, while enabling solar providers who are not required to have a HIS registration number to indicate they are exempt and to instead provide the applicable contractor's license."

If you checked "Yes" above:

Please provide the Home Improvement Salesperson (HIS) registration number below.

Home Improvement Salesperson (HIS) registration number:

\_\_\_\_\_