



Sheet 1

ELECTRIC SAMPLE FORM 79-1151A
AGREEMENT AND CUSTOMER AUTHORIZATION
Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating
Facilities Of 30 Kilowatts Or Less

Please Refer to Attached
Sample Form

Advice Letter No: 4418-E
Decision No. 14-03-041

Issued by
Brian K. Cherry
Vice President
Regulatory Relations

Date Filed May 19, 2014
Effective June 18, 2014
Resolution No. _____



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities

Of 30 Kilowatts Or Less

Customers may not operate their Generating Facility while interconnected to the PG&E system until they receive written permission from PG&E.

City and County of San Francisco ("CCSF") owned generating facilities seeking Schedule NEMCCSF and participants in the Demand Response Programs below are not eligible to participate in NEM

- Peak Day Pricing (PDP)
- Scheduled Load Reduction Program (SLRP)
- SmartRate

Part I – Generating Facility Information and Responsible Parties

A. Customer and Generating Facility Information (*as it appears on the PG&E bill):

Please check this box if you intend to participate in NEM aggregation and continue to fill out Parts I, III, IV and the separate NEM Load Aggregation Appendix (Form 79-1153)

Please check the applicable box: Individual Company

Account Holder Name* (Individual or Company)	Electric Service Agreement ID *	Meter Number*
Generating Facility Street Address*	City*	CA State Zip*
Customer Phone Number	Email (if blank, Permission to Operate (PTO) letter will be mailed to mailing address on record)	

B. Meter Access Issues (if applicable, check all that apply and provide contact information to request access):

Meter in building or behind locked gate Unrestrained animal at meter or AC Disconnect Switch Other: _____

Contact Name to Request Access (if access issues exist)	Contact Phone
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C. Energy Service Provider (ESP) Customers, who have an ESP other than PG&E, must contact their ESP directly regarding the ESP's NEM program. (If applicable, check one):

Interconnection under Direct Access (DA) Interconnection under Community Choice Aggregation (CCA)

D. Application Contact Information (required if Customer is authorizing a third party to act on Customer's behalf):

Company Name	Contact Person
Contact Phone Number	Email

- By checking this box and signing this Agreement, I (Customer) authorize PG&E to release my PG&E Electric Account information to the Company above limited to kilowatt hour (kWh) usage, operational characteristics, and other information related to my Generating Facility application. Company is also authorized to submit Application Form 79-1151B and act on my behalf with regard to the interconnection and receive copies of this executed Interconnection Agreement and the Permission to Operate Letter when issued.
- By checking this box, I (Customer) voluntarily agree to provide PG&E the System Cost Paid by Customer (optional, not required.) I understand this information may also be provided to the CPUC and other third parties. \$ _____

Part II – NEM Generator System Size (skip this section if participating in NEM Aggregation)

A. Interconnection Study and Requirements

This Agreement covers the installed Generating Facility nameplate listed in the accompanying Application Form 79-1151B.

The interconnection study will use the nameplate to determine if Interconnection Facilities or Distribution or Network Upgrades are required and the responsible party for the associated costs. If upgrades are required, this will increase the time it will take for PG&E to approve your interconnection. PG&E will confirm the nameplate covered by this Agreement in the Permission to Operate Letter.



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Part II – NEM Generator System Size – Continued

In order for PG&E to approve your system, you will need to provide (1) this signed Agreement, (2) Application Form 79-1151B, and (3) a copy of the final signed jurisdiction approval (building permit) for your project.

NEM systems should be sized with an estimated annual production no larger than 110% of the Customer's total previous 12 months of usage (annual usage) and projected future increase. Customers can obtain their usage data from www.pge.com/greenbutton. System sizing eligibility will be reviewed using the criteria below.

B. Solar Generator System Sizing: The CEC-AC kW on the Application cannot exceed the CEC-AC kW listed below.

- Solar Systems \leq 5 kW (CEC-AC¹ kW) do not require review. Please only list your CEC-AC rating below in (1) and skip the rest of Section B.

- Solar Systems > 5 kW (CEC-AC kW), size is determined as below. Please fill out all of Section B.

Estimated Annual Production: (1) CEC-AC rating _____ (kW) X 1,664² = _____

Estimated Annual Energy Usage: (2) Recent annual usage _____ (kWh) X 1.1 = _____

OR (If 12 months usage not available) (3) Building size _____ (sq ft) X 3.32³ = _____

AND (4) I plan to increase my annual usage (kWh) by _____

(5) Total Energy Usage (2 or 3) + (4) = _____

Net Generation (Production – Usage): (1) – (5) = _____ *

*Positive number indicates that the system is estimated to generate more than the estimated usage

C. Wind Generator System Sizing: The nameplate on the Application cannot exceed the nameplate listed below.

- All Wind Turbines, size is determined as below.

Estimated Annual Production: (1) Nameplate rating _____ (kW) X 2,190⁴ = _____

Estimated Annual Energy Usage: (2) Recent annual usage _____ (kWh) X 1.1 = _____

OR (If 12 months usage not available) (3) Building size _____ (sq ft) X 3.32⁵ = _____

AND (4) I plan to increase my annual usage (kWh) by _____

(5) Total Energy Usage (2 or 3) + (4) = _____

Net Generation (Production – Usage): (1) – (5) = _____ *

*Positive number indicates that the system is estimated to generate more than the estimated usage

Part III – Rate Selection

A. Otherwise Applicable Rate Schedule (OAS) for NEM Account: Select one rate from the category applicable to you. Visit www.pge.com/rateoptions or call (800)-PGE-5000 for rate information.

Residential Service Rate (Select one):

- E-1 – Non-Time-of-Use
- E-6 – Time-of-Use
- E-7⁶ – Time-of-Use
- E-8⁶ – Non-Time-of-Use
- E-9A⁶ – Time-of-Use for Customers with a single meter for Electric Vehicle (EV) recharging station and home
- E-9B⁶ – Time-of-Use for Customers with a separately metered EV recharging station
- EV-A⁷ – Time-of-Use for Customers with a single meter for Electric Vehicle (EV) recharging station and home
- EV-B⁷ – Time-of-Use for Customers with a separately metered EV recharging station
- Other (_____)

¹ CEC-AC (kW) = California Energy Commission Alternating Current, refers to inverter efficiency rating (Quantity of PV Modules x PTC Rating of PV Modules x CEC Inverter Efficiency Rating)/1000

² 8,760 hrs/yr X 0.19 solar capacity factor = 1,664

³ 2 watts/sq ft X 1/1,000 watts X 8,760 hrs/yr X 0.19 solar capacity factor = 3.32

⁴ 8,760 hrs/yr X 0.25 wind capacity factor = 2,190

⁵ 1.52 watts/sq ft X 1/1,000 watts X 8,760 hrs/yr X 0.25 wind capacity factor = 3.32

⁶ E-7, E-8, E-9A, E-9B, AG-R, and AG-V are closed to all new customers and are only available to Customers that are currently on the rate.

⁷ Rates effective August 1, 2013 for Customers with Electric Vehicles. Please visit www.pge.com/electricvehicles for more rate information.



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Part III – Rate Selection - Continued

Small and Medium Commercial Service Rate (Select one rate and primary or secondary service voltage):

	<u>Primary</u>	<u>Secondary</u>
<input type="checkbox"/> A-1 – Small General Service	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> A-6 – Small General Time-of-Use Service	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> A-10 – Medium General Demand-Metered Service	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> A-10 – Medium General Time-of-use Service	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other (_____)	<input type="checkbox"/>	<input type="checkbox"/>

Agricultural Power Service Rate: (Select one rate and rate option):

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<input type="checkbox"/> AG-1	<input type="checkbox"/>	<input type="checkbox"/>				
<input type="checkbox"/> AG-R ⁶ – Split-Week Time-of-Use	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> AG-V ⁶ – Short-Peak Time-of-Use	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> AG-4 – Time-of-Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> AG-5 – Time of Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Other (_____)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part IV – Interconnection Agreement Provisions

A. Purpose

The purpose of this Net Energy Metering (NEM) Application and Interconnection Agreement for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less (Agreement) is to allow Customer to interconnect with Pacific Gas and Electric Company's (PG&E) Distribution System, subject to the provisions of this Agreement and PG&E's Electric Schedule Net Energy Metering (NEM). Customer has elected to interconnect and operate its solar and/or wind electric Generating Facility in parallel with PG&E's Distribution System to offset part or all of the Customer's own electrical requirements at this service point. Customer shall comply at all times with this Agreement as well as with all applicable laws, tariffs and requirements of the California Public Utilities Commission (CPUC).

B. Applicability

This Agreement applies to Electric Schedule NEM Customer-Generators (Customer) who interconnect a solar and/or wind turbine electrical Generating Facility, or a hybrid system of both, with an aggregate capacity of 30 kilowatts or less that is located on Customer's premises and that operates in parallel with PG&E's Distribution System.

C. NEM Transition

Customers receiving service on the current NEM tariff prior to the date that PG&E reaches its NEM Cap or July 1, 2017, whichever is earlier, are subject to the NEM Transition Provisions outlined in Rate Schedule NEM. Please see Rate Schedule NEM at http://www.pge.com/tariffs/tm2/pdf/ELEC_SCHEDS_NEM.pdf for more details.

D. Permission to Operate

Customer may not operate their generator while interconnected to the PG&E system until receiving written permission from PG&E. Unauthorized Parallel Operation could result in injury to persons and/or damage to equipment and/or property for which the Customer may be liable.

E. Safety

Customer shall meet all applicable safety and performance standards established by the National Electrical Code, the Institute of Electrical and Electronics Engineers, accredited testing laboratories such as Underwriters Laboratories and, where applicable, PG&E's Electric Rule 21, and other rules approved by the CPUC regarding safety and reliability. A Customer with a solar or wind-turbine electrical generating system, or a hybrid system of both, that meets those standards and rules shall not be required to install additional controls, perform or pay for additional tests, or purchase additional liability insurance.



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Part IV – Interconnection Agreement Provisions – Continued

F. Safe Operation of your Generating Facility

Notwithstanding any other provision of this Agreement, if at any time PG&E determines that the Customer's Facility, or its operation, may endanger (a) the public, (b) PG&E personnel, or (c) the safe and reliable operation of PG&E's electrical system, PG&E shall have the right to disconnect the Facility from PG&E's system. Customer's Facility shall remain disconnected until such time as PG&E is satisfied that the unsafe condition(s) have been corrected.

G. AC Disconnect Switch

PG&E recommends that a customer installing an inverter-based generator consider also installing an AC Disconnect Switch to facilitate maintenance of the Customer's equipment (i.e. inverter, PV arrays, etc.). If an AC Disconnect Switch is not installed, the revenue meter may be temporarily removed by PG&E due to an emergency or maintenance on PG&E's system to isolate the Customer's generator from the electric distribution system. Removal of the revenue meter will result in loss of electrical service to the Customer's facility or residence. AC Disconnect Switch requirements are available in PG&E's Greenbook www.pge.com/greenbook.

H. Rate

Customer has confirmed their otherwise applicable rate schedule (OAS), establishing how Customer's monthly usage or net generation will be charged/credited when submitting this Agreement. Further Customer-initiated rate changes are governed in accordance with PG&E's Electric Rule 12.

I. NEM Billing

PG&E installs a "net meter" on a customer's property that measures the net energy, defined as the difference between the amount of electricity supplied by PG&E and the amount of electricity exported to the grid over the course of a month. The Customer's account is enrolled in the NEM program and put on an annual (12- billing months) true-up cycle.

The meter is read monthly and an amount is calculated based on the net energy recorded in kilowatt hours (kWh). If a customer exported more electricity than they drew from PG&E in a given billing cycle, the amount is deemed a surplus. If a customer received more electricity from PG&E than they exported, the amount is deemed a charge. The rate at which the charge or surplus is calculated is based on the customer's OAS which is requested by the Customer in this Agreement.

After 12 billing cycles, the corresponding charges and surpluses are reconciled in the annual true-up bill. Any remaining charges must be paid and any excess surpluses are typically zeroed out. More information about NEM billing is available at www.pge.com/nembilling.

J. Net Surplus Compensation (NSC)

NSC payments are made to NEM customers who produce more electricity than they use during the Relevant Period. The payment rate is based on a rolling 12-month average of spot market prices and may fluctuate on a monthly basis. The historical range of the NSC rate at the time of this Advice Filing is approximately \$0.03 to \$0.04. A history of NSC rates is available at www.pge.com/nembilling. If a customer would like to opt out from receiving this payment, please visit www.pge.com/nscoptout to complete Form 79-1130.

K. Limitation of Liability

PG&E's and Customer's (Individually Party or together Parties) liability to the other Party for 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 this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever.

L. Governing Law

This Agreement shall be interpreted, governed, and construed under the laws of the State of California as if executed and to be performed wholly within the State of California.

Part IV – Interconnection Agreement Provisions – Continued



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M. Governing Authority

This Agreement shall at all times be subject to such changes or modification by the CPUC as said Commission may, from time to time, direct in the exercise of its jurisdiction.

N. Term of Agreement

This Agreement shall become effective as of the date of PG&E's issuance of the permission to operate letter after receipt of all applicable fees, required documents, and this completed Agreement. This Agreement shall continue in full force and effect until terminated by either Party providing 30-days prior written notice to the other Party, or when a new Customer takes service with PG&E operating this approved generating facility. This new Customer will be interconnected subject to the terms and conditions as set forth in Schedule NEM.

Part IV – Interconnection Agreement Provisions – Continued

O. Meter Access

The electric meter must be installed in a safe location easily accessible upon PG&E request.

P. Stale Agreements

If this agreement is still pending one year from the date it is received by PG&E and Customer has not met all of the requirements, PG&E will close this application and Customer will be required to submit a new Agreement and Application should Customer wish to take service on Schedule NEM.

By signing below, I declare under penalty of perjury under the laws of the State of California that:

- 1) **The information provided in this Agreement is true and correct.**
- 2) **By completing the fields and checking the box in Part I Section D, I authorize the identified third party (Company) to receive my information and act on my behalf, which includes submitting or revising my Interconnection Application.**
- 3) **I have completed and reviewed Part II to determine if my system is sized to meet no more than my projected energy usage.**
- 4) **I have read in its entirety and agree to all the terms and conditions in this Interconnection Agreement and agree to comply with PG&E's Electric Rule 21.**

(Print Customer Name as it appears on the PG&E Bill)

(Signature)

(Print name and title of signee, applicable if customer is a Company)
(e.g. John Doe, Manager)

(Date)

Note: PG&E will accept electronic signatures that are verified by qualified Third Parties such as, Adobe EchoSign, e-SignLive, and DocuSign for this Agreement if the Agreement is completed in its entirety before signing.

To confirm project approval, the Customer should retain a copy of this signed agreement and a copy of the Permission to Operate (PTO) letter from PG&E authorizing the Customer to operate the Generating Facility after PG&E deems satisfactory compliance with all NEM requirements.