

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



October 15, 2013

Advice Letter 4263-E

Brian K. Cherry
Vice President, Regulation and Rates
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

Subject: Replacement of the NEM Interconnection Application and Agreement Form 79-1101 with Two New Forms to Streamline Handling and to Collect Post-CSI Project Data; and Modifications to Schedule NEM to Reflect these Changes

Dear Mr. Cherry:

Advice Letter 4263-E is effective December 1, 2013.

Sincerely,

A handwritten signature in cursive script that reads "Edward F. Randolph".

Edward F. Randolph, Director
Energy Division

July 31, 2013

Advice 4263-E

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Replacement of the NEM Interconnection Application and Agreement Form 79-1101 with Two New Forms to Streamline Handling and to collect Post-CSI¹ Project Data; and Modifications to Schedule NEM to reflect these changes.

Purpose

Pacific Gas and Electric Company (PG&E) hereby seeks approval to replace Electric Sample NEM Form 79-1101 – *Application and Interconnection Agreement for Customers with Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less* – with the following two new forms:

- 79-1151A - *Agreement and Customer Authorization - Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less*; and
- 79-1151B – *Application - Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less*.

PG&E proposes to create these new forms to help streamline the interconnection process. To reflect these changes, PG&E also makes modifications to Electric Schedule NEM – *Net Energy Metering Service*.

Background

Currently, PG&E uses filed Form 79-1101 for Electric Schedule NEM customers interconnecting solar and/or wind generators sized 30 kW and less with PG&E. With approval of this advice letter, PG&E will replace Form 79-1101 to achieve two goals: (1) to make interconnection process improvements and (2) to establish a post-CSI data collection process.

¹ California Solar Initiative

(1) Interconnection Process Improvements – Due to the relatively large number of Electric Schedule NEM solar (PV) and wind applications PG&E has received, PG&E has been working on ways to further streamline its interconnection process. To better understand the needs of the NEM community, PG&E has sought input from solar installers on how to improve the NEM application process. This advice letter accomplishes these goals by: (i) enhancing the Customer's experience to make the requisite forms easier to read and fill out, (ii) increasing PG&E's processing efficiency and shortening cycle times so the customer can be online sooner, (iii) facilitating the collection of equipment information after actual generator construction in order to improve asset registry data quality, and (iv) eliminating the request for insurance information.

Toward this end, PG&E will replace Form 79-1101, the current application and interconnection agreement with two new forms: a separate interconnection agreement ("Agreement and Customer Authorization") and a separate interconnection application ("Application").

The first form, the new Agreement and Customer Authorization (Form 79-1151A) will typically be completed by the NEM Applicant/PG&E Customer with a designated "Company's" assistance. It covers:

- Part I – collecting detailed Customer information and capturing the Generating Facility location. It also incorporates an authorization for PG&E to release Customer electric account information to a Company, which will typically be the contractor or installer. This information includes usage, operational characteristics, billing information, and Generating Facility information. Also newly added, it authorizes the Company to submit the Application on behalf of the Customer, at the Customer's option.
- Part II – NEM systems should be sized with an estimated annual production no larger than 100% (with an additional 10% allowance for year-to-year variation) of the Customer's total previous 12 months of usage (annual usage) – available on PG&E's "Greenbutton" website – and any projected future increase. If no usage history is available, a proxy for wind and/or solar calculation workspace is provided that allows the Customer to see the criteria PG&E will use to verify the Generating System is properly sized. If during the interconnection process it turns out the actual Generating Facility size on the Application is greater than that on the Agreement and Customer Authorization, the Customer will need to resubmit the latter form with the corrected information.
- Part III – presenting a rate section table to aid the Customer in selecting the appropriate rate schedule to be used with Electric Schedule NEM.

- Part IV – summarizing key NEM and interconnection agreement provisions to which the customer is required to agree.

Only the Agreement and Customer Authorization will require a Customer's signature.

The second form, the Application (Form 79-1151B) focuses on technical details and will typically be completed by the Company. It covers:

- Part I – the collection of Generating Facility information and the Customer's information (to link the Application to the Agreement and Customer Authorization).
- Part II – requesting a description of the technical details of the Generating Facilities, and interconnection equipment that will be used (e.g., photovoltaic modules, inverters, wind turbines, disconnect switches, etc.).
- Part III – summarizing key interconnection guidelines and documentation requirements.

To make sure the project has Customer approval to proceed, the Application will be accepted by PG&E only with a properly executed corresponding Agreement and Customer Authorization.

(2) In addition, PG&E incorporates in its Application three new data fields to collect the following information necessary to provide services to NEM customers:

1. Installing Contractor's information – name and California Contractor's State License Number (Part I, (E)).
2. If a third party owns the facility or the renewable energy credits associated with the facility, the name of third party (Part I, (D)).
3. The PV mounting method -- whether fixed or employing a tracking system (Part II (B.1)).

The data being collected in Items 1, 2, and 3 above is necessary for the interconnection of NEM projects and/or the administration of the NEM program. Item 1, the contractor's state license board number, is a standardized field that helps organize PG&E's contractor data to assure PG&E uses consistent spelling of contractor company names (e.g., SolarABC vs. Solar ABC, Inc.); Item 2 relates to the third party ownership – customers who have third party financing

arrangements often have relinquished renewable credit (REC) ownership to the financing agent, and knowledge of REC ownership is necessary in the administration of Assembly Bill (AB) 920 renewable adder attribute compensation²; and Item 3 relates to the nature of the solar mounting and is important in assuring the proper sizing of a solar Generating Facility, a requirement of the NEM program, as well as in analyzing system performance and how it might impact PG&E's grid.

PG&E also adds in this advice letter a Footnote 4 in Special Condition 3 of its Schedule NEM tariff, providing for the collection of the generating system cost data on a *voluntary* basis from customers. This cost data field is not necessary for interconnection purposes, but is useful for public policy and analytical purposes. This proposed specification is expressly included in Section D of the Agreement and Customer Authorization (Form 79-1151-A).

Tariff Modifications

- 1) Replace Form 79-1101 – *Application and Interconnection Agreement for Customers with Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less* with the following new forms:
 - a) 79-1151A – *Agreement and Customer Authorization - Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less.*
 - b) 79-1151B – *Application - Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less.*
- 2) Modify Electric Sample NEM forms as follows:
 - a) Reformatted the forms table in Special Condition 3, *Interconnection*, on Sheet 11 to better indicate the forms required, and add the two new forms 79-1151A and 79-1151B, along with their names and descriptions.
 - b) Added Footnote 4 to the new forms' descriptions discussed in a) above with language to state:

“Both the Agreement and Customer Authorization (79-1151A) and Application (79-1151B) forms must have been submitted before PG&E will issue the Permission to Operate (PTO) letter, except that collection of customer-specific system cost information that previously was collected as a

² Pursuant to Decision 11-06-016, Ordering Paragraph 2.

http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/137431.PDF

condition of customer participation in the Residential PV CSI Program is voluntary. Information in the Agreement and Customer Authorization can be electronically signed and submitted by the Customer in an electronic format, subject to approval by PG&E. Information in the Application can be submitted by the Company or Customer in an electronic format, subject to approval by PG&E.”

c) Removed the following language from the Applicability section (Sheet 3) relating to a change in party:

“...2) keep in force the amount of property, commercial general liability and/or personal liability insurance the Change of party Customer has in place at the time they initiate service on this tariff;...”

d) Added “NEMV” to the list of rate schedules in the Applicability Section (sheet 1) to be included in determining the NEM Cap; NEMV was inadvertently omitted in this tariff:

“...until such time as the total rated generating capacity used by eligible customer-generators on Rate Schedule NEM, *NEMV* and NEMVMASH exceeds five (5) percent of PG&E’s aggregate customer peak demand.”

e) Added other minor changes and clarifications.

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than **August 20, 2013**, which is 20 days after the date of this filing. Protests should be mailed to:

CPUC Energy Division
ED Tariff Unit
505 Van Ness Avenue, 4th Floor
San Francisco, California 94102

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

Copies of protests also should be mailed to the attention of the Director, Energy Division, Room 4004, at the address shown above.

The protest shall also be sent to PG&E either via E-mail, or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

Brian K. Cherry
Vice President, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-7226
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter. (General Order 96-B, Rule 7.4.) The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Rule 3.11).

Effective Date

PG&E requests that this Tier 2 advice filing become effective on the first day of the month following 30 days from the date of approval.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and the parties on the service lists for Rulemaking (R.) 12-11-005 and R.08-12-009 (Phase 3). Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs>.

A handwritten signature in cursive script that reads "Brian Cherry /sw".

Vice President, Regulatory Relations

Advice 4263-E

- 7 -

July 31, 2013

Attachments

cc: Service Lists R.12-11-005 and R.08-12-009 (Phase 3)

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 E)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: **Shirley Wong**

Phone #: **(415) 972-5505**

E-mail: **slwb@pge.com and pgetariffs@pge.com**

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **4263-E**

Tier: **2**

Subject of AL: **Replacement of the NEM Interconnection Application and Agreement Form 79-1101 with Two New Forms to Streamline Handling and to collect Post-CSI Project Data; and Modifications to Schedule NEM to reflect these changes.**

Keywords (choose from CPUC listing): **Compliance, Forms, Text Change**

AL filing type: Monthly Quarterly Annual One-Time Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL:

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: No

Confidential information will be made available to those who have executed a nondisclosure agreement: N/A

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: _____

Resolution Required? Yes No

Requested effective date: **On the 1st of the month following 30 days from the date of approval** No. of tariff sheets: **13**

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: **Electric Schedule NEM – Net Energy Metering Service and Electric Forms 79-1101 (Net Energy Metering Application and Interconnection Agreement for Customers with Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less), 79-1151A (Agreement and Customer Authorization – Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less) and 79-1151B (Application – Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less)**

Service affected and changes proposed: **Retire Form 79-1101 and replace with Forms 79-1151A and 79-1151B, and reflect in Schedule NEM accordingly and as described in this advice letter.**

Protests, dispositions, and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
EDTariffUnit
505 Van Ness Ave., 4th Floor
San Francisco, CA 94102
E-mail: EDTariffUnit@cpuc.ca.gov

Pacific Gas and Electric Company
Attn: Brian K. Cherry, Vice President, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177
E-mail: PGETariffs@pge.com

**ATTACHMENT 1
Advice 4263-E**

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
32762-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 1	32067-E
32763-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 3	30773-E
32764-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 5	30775-E
32765-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 7	30777-E
32766-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 11	30781-E
32767-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 13	30783-E
32768-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 19	30789-E
32769-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 20	30790-E
32770-E	AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less Sheet 1	
32771-E	APPLICATION Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less Sheet 1	

**ATTACHMENT 1
Advice 4263-E**

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
32772-E	ELECTRIC TABLE OF CONTENTS Sheet 1	32760-E
32773-E	ELECTRIC TABLE OF CONTENTS RATE SCHEDULES Sheet 6	32640-E
32774-E	ELECTRIC TABLE OF CONTENTS SAMPLE FORMS Sheet 28	32534-E



ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE

Sheet 1

APPLICABILITY: This net energy-metering schedule is applicable to a customer who uses a Renewable Electrical Generation Facility as defined below with a capacity of not more than 1,000 kilowatts that is located on the customer's owned, leased, or rented premises, is interconnected and operates in parallel with PG&E's transmission and distribution systems, including wind energy co-metering customers as defined in California Public Utilities Code Section 2827.8, and is intended primarily to offset part or all of the customer's own electrical requirements (hereinafter "eligible customer-generator" or "customer"). Certain incremental billing and metering costs set forth in this schedule that are related to net energy metering are applicable to Energy Service Providers (ESPs) serving eligible customer-generators.

This service is not applicable to a Direct Access (DA) customer where the customer's ESP does not offer a net energy metering tariff. In addition, if an eligible customer-generator participates in direct transactions with an ESP that does not provide distribution service for the direct transactions, the ESP, and not PG&E, is obligated to provide net energy metering to the customer.

This rate schedule is available on a first-come, first-served basis to customers that provide PG&E with: (a) a completed Net Energy Metering Application including all supporting documents and required payments; AND (b) a completed signed Net Energy Metering Interconnection Agreement; AND (c) evidence of the customer's final inspection clearance from the governmental authority having jurisdiction over the generating facility; until such time as the total rated generating capacity used by eligible customer-generators on Rate Schedules NEM, NEMV and NEMVMASH exceeds five (5) percent of PG&E's aggregate customer peak demand. Once this cap has been reached, Schedule NEM will be closed to new customers. PG&E is required to update its NEM cap, the amount of customer generating capacity eligible to participate in the program, annually on October 1st.¹

(N)(T)

The total rated generating capacity of eligible customer-generators will be calculated as the sum of all of the following:

- 1) For each PV generating facility, PG&E will use the California Energy Commission's (CEC) AC rating; or where the CEC AC rating is not available, PG&E will multiply the inverter AC nameplate rating by 0.86.
- 2) For all other Renewable Electrical Generation Facilities, PG&E will use the AC nameplate rating of the generating facility.

PG&E's aggregate customer peak demand is the sum of customers' non-coincident peak demands defined in D. 12-05-036². The methodology for calculating customer's non-coincident aggregate peak demand is detailed in the Assigned Commissioner's Ruling Providing Instructions on Calculation of Non-Coincident Aggregate Customer Peak Demand Pursuant to Ordering Paragraph 3 of Decision 12-05-036, dated September 4, 2012, which requires the following:

¹ Beginning October 1, 2013.

² D.12-05-036 requires the NEM program for new customers to be suspended at the end of calendar year 2014, pending the outcome of further Commission proceedings. Existing customers receiving service under this NEM service prior to January 1, 2015, will not be affected by this suspension. However, NEM will continue to be available to renewable customer-sited generation until the target for solar photovoltaic capacity under the California Solar Initiative has been reached.

(Continued)



**ELECTRIC SCHEDULE NEM
 NET ENERGY METERING SERVICE**

Sheet 3

APPLICABILITY:
 (Cont'd.)

Schedule NEM applies also to specified net energy metering eligible (NEM-eligible) generators in a generating facility comprised of multiple NEM- and non-NEM-eligible generators, served through the same Point of Common Coupling (PCC), where the NEM-eligible generating capacity is not more than 1 MW. Such facilities will be referred to as Multiple Tariff Facilities, and any group of generators within such a facility that is subject to the same tariff provisions for billing and metering purposes will be referred to as a Constituent Generator Group. In order to be eligible for this rate schedule in a Multiple Tariff Facility, the customer-generator must meet all the requirements of Special Condition 5 for the schedule NEM-eligible generator, and must also meet any other applicable tariffs.

Due to the complexity of Multiple Tariff Facilities NEM generating facilities interconnecting under the provisions of Special Condition 5 may require additional review and/or interconnection facilities and other equipment, and may incur interconnection costs, as provided for in electric Rule 21.

A Customer who owns, rents or leases a premises that includes solar and/or wind turbine electrical generating facilities, or a hybrid of both with a capacity of 30kW or less, that were previously approved by PG&E for NEM interconnection prior to the Customer moving in and/or taking electric service with PG&E (Change of party Customer) will take service on this tariff as long as the requirements of this section are met. To be eligible, the Change of party Customer must: 1) ensure that the generating facility is compliant with all applicable safety and performance standards as delineated in PG&E's Electric Rule 21 and other applicable tariffs; 2) understand that PG&E may from time to time release to the California Energy Commission and/or the California Public Utilities Commission, information regarding the Change of party Customer's facility, including Change of party Customer's name and Generating Facility location, capacity and operational characteristics. Any type of Renewable Electrical Generation Facility other than a solar and/or wind turbine electrical generating facilities, or a hybrid of both with a capacity of 30kW or less, may at PG&E's request be required to complete and submit to PG&E a new Interconnection Agreement (Form 79-1137) and/or Affidavit (Appendix C).

(D)

(T)

Change of party Customers making any modification to previously approved PG&E NEM solar and/or wind turbine electrical generating facilities or other Renewable Electrical Generation Facility are not eligible for this provision and must complete the interconnection process in Special Condition 3 of this tariff.

Change of party Customers also must agree to comply with all rules and requirements of PG&E's Net Energy Metering tariffs.

When the builder/developer of a subdivision sells a new home during the NEM application process, after the builder/developer completes the Net Energy Metering forms, Agreement and Customer Authorization – Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less (Form 79-1151A) and Application – Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less (Form 79-1151B), and otherwise meets all of PG&E's requirements for the NEM project, but prior to PG&E providing final written approval for Parallel Operation on Schedule NEM, PG&E may treat the new home owner/Customer as a Change of-party Customer, as defined above.

(T)

(T)

TERRITORY: The entire territory served.

(Continued)



ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE

Sheet 5

SUB-SCHEDULES:

Eligible customer-generators will be placed on the appropriate sub-schedule as described below:

1. NEMS – For Small Customer (as defined in Rule 1) customer-generators taking service with solar and/or wind generating facilities of 30 kilowatts or less. (T)
2. NEMEXP – For Small Customer (as defined in Rule 1) customer-generators with (i) solar and/or wind generating facilities or 1,000 kilowatts or less, other than facilities of 30 kilowatts or less, or (ii) any other Renewable Electrical Generation Facility of 1,000 kilowatts or less. (T)
|
(T)
3. NEMEXPM – For all other commercial, industrial customer-generators, and agricultural customers billed monthly under Special Condition 2 with (i) solar and/or wind generating facilities of 1,000 kilowatts or less, other than facilities of 30 kilowatts or less, (ii) or any other Renewable Electrical Generation Facility of 1,000 kilowatts or less. (T)
|
(T)
(D)
4. NEMMT – For customer-generators taking service as a Multiple Tariff Facility under Special Condition 5 of this tariff.

(Continued)



**ELECTRIC SCHEDULE NEM
 NET ENERGY METERING SERVICE**

Sheet 7

SPECIAL
 CONDITIONS:
 (Cont'd.)

2. BILLING: Facilities qualifying under Multiple Tariff Facilities, see Special Condition 5. (T)

For customer-generators taking service on OAS's, any net monthly consumption or production shall be valued as follows:

- a. For an OAS with Baseline Rates

Any net consumption or production shall be valued monthly as follows:

If the eligible customer-generator is a net consumer, the eligible customer-generator will be billed in accordance with the eligible customer-generator's OAS.

If the eligible customer-generator is a net generator, the net kWh generated shall be valued at the rate for the kWh up to the baseline quantity, with any excess kWh generated, valued at the rate for the appropriate tier level in which the equivalent kWh of usage would fall.

If the eligible customer-generator is being served under DA or CCA Service, ESP or CCA charges will be specified by their ESP or CCA in accordance with the eligible customer-generator's OAS and PG&E's Direct Access or Community Choice Aggregation tariffs. Applicable PG&E charges or credits will be valued as described in this Section 2.

For a DA or CCA Service customer-generator, Generation Rate Component credits, if any, do not reduce the charges owed to PG&E for energy supplied to the eligible customer-generator.

- b. For an OAS with Time of Use (TOU):

If the eligible customer-generator is a net consumer during any discrete TOU period, the net kWh consumed shall be billed in accordance with that same TOU period in the eligible customer-generator's OAS.

If the eligible customer-generator is a net generator during any discrete TOU period, the net kWh produced shall be valued at the same price per kWh at the same TOU period in the eligible customer generator's OAS.

In the event that at the end of the monthly billing cycle, an eligible customer-generator's net usage for all TOU periods totals zero (i.e. net generation in one or more periods exactly offsets the net usage in all other periods), then the value of usage and/or generation will be calculated using Tier 1 rates (as set forth in the OAS).

If the eligible customer-generator is being served under DA or CCA Service, ESP or CCA charges will be specified by their ESP or CCA in accordance with the eligible customer-generator's OAS and PG&E's Direct Access or Community Choice Aggregation tariffs. Applicable PG&E charges or credits will be valued as described in this Section 2.

For an DA or CCA Service customer-generator, Generation Rate Component credits, if any, do not reduce the charges owed to PG&E for energy supplied to the eligible customer-generator.

(Continued)



**ELECTRIC SCHEDULE NEM
 NET ENERGY METERING SERVICE**

Sheet 11

SPECIAL
 CONDITIONS:
 (Cont'd.)

3. INTERCONNECTION: Prior to receiving approval for Parallel Operation, the customer-generator must submit a completed PG&E application form and interconnection agreement as follows:

Rate Option	Application	Interconnection Agreement	
NEMS	For Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less: <i>Application - Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less (Form 79-1151B)⁴</i>	<i>Agreement and Customer Authorization – Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less (Form 79-1151A)⁴</i>	(T)
NEMEXP	For Solar and/or Wind Net Energy Metering Generating Facilities of 1,000 Kilowatts or Less, other than Facilities of 30 Kilowatts or Less: <i>Generating Facility Interconnection Application, (Form 79-974)</i> <i>Expanded Net Energy Metering (NEM) Supplemental Application Form (Form 79-998)</i>	<i>Interconnection Agreement for Net Energy Metering of Solar or Wind Electric Generating Facilities of 1,000 Kilowatts or Less, other than Facilities of 30 Kilowatts or Less (Form 79-978)</i>	
	For Renewable Electrical Generating Facilities other than Solar and/or Wind Electric Generating Facilities of 1,000 Kilowatts or Less: <i>(same as for Solar and/or Wind NEMEXP)</i>	<i>Interconnection Agreement for Net Energy Metering For A Renewable Electrical Generation Facility Of 1,000 Kilowatts Or Less (Form 79-1137)</i>	
NEMEXPM	For all other commercial, industrial customer-generators, and agricultural customers billed monthly under Special Condition 2 with (i) Solar and/or Wind Generating Facilities of 1,000 Kilowatts or Less, other than Facilities of 30 Kilowatts or Less, (ii) or any other Renewable Electrical Generation Facility of 1,000 Kilowatts or Less: <i>(same as for NEMEXP)</i>	<i>(same as for NEMEXP)</i>	
NEMMT	For customer-generators taking service as a Multiple Tariff Facility under Special Condition 5 of this tariff: <i>Generating Facility Interconnection Application (Form 79-974)</i>	<i>Generating Facility Interconnection Agreement (Multiple Tariff) (Form 79-1069)</i>	
NEM Inspection Report	To accompany a new interconnection agreement, as required under Special Condition 7 of this tariff:	<i>NEM/NEMVMASH Inspection Report – (Form 79-1125)</i>	(T)

⁴ Both the Agreement and Customer Authorization (79-1151A) and Application (79-1151B) forms must have been submitted before PG&E will issue the Permission to Operation (PTO) letter, except that collection of customer-specific system cost information that previously was collected as a condition of customer participation in the Residential PV CSI Program is voluntary. Information in the Agreement and Customer Authorization can be electronically signed and submitted by the Customer in an electronic format, subject to approval by PG&E. Information in the Application can be submitted by the Company or Customer in an electronic format, subject to approval by PG&E.

(Continued)



ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE

Sheet 13

SPECIAL
 CONDITIONS:
 (Cont'd.)

5. MULTIPLE TARIFF FACILITIES:

Multiple Tariff Facilities have the following additional provisions:

- a. When Net Generation Output Metering (NGOM) is required, such NGOM must conform to the requirements set forth in Electric Rule 21, Section J. (T)
- b. A NEM-eligible Constituent Generator Group is defined as a constituent generator group that is eligible for service under the provisions of either schedule NEM, NEMBIO or NEMFC or their sub-schedules.
- c. A non-NEM-eligible Constituent Generator Group is defined as a constituent generator group that does not take service under the provisions of schedule NEM, NEMBIO or NEMFC, but interconnects under the non-NEM provisions of Electric Rule 21. (T)
(T)
- d. All metering for Multiple Tariff Facilities called for in this special condition must meet the requirements needed to bill under the customer-generator's OAS. All metering, equipment and Non Export relays necessary to implement the provisions in this section will be provided at the Customer-Generator's expense.
- e. Any generators eligible for tariff NEMBIOA (accounts with the loads from eligible accounts aggregated on the main NEMBIO account pursuant to Special Condition 4 of the NEMBIO tariff) will be treated as a separate Constituent Generator Group.

(Continued)



**ELECTRIC SCHEDULE NEM
 NET ENERGY METERING SERVICE**

Sheet 19

SPECIAL
 CONDITIONS:
 (Cont'd.)

6. Net Surplus Electricity Compensation (NSC) (Cont'd):

(e) Options for receiving NSC – A NEM customer with NSC will automatically have their NSC applied to any amounts owed to PG&E and then may choose to:

- (1) take no action and roll any remaining NSC amounts forward to offset subsequent PG&E charges; or
- (2) request that PG&E issue a check if the remaining NSC amount is greater than one dollar (\$1). A customer can select this option by calling PG&E. If the customer is closing all their accounts with PG&E, PG&E will automatically send a check; or (T)
- (3) elect not to receive any NSC by completing and submitting Form 79-1130 (*Customer Request Form not to Receive Net Surplus Compensation*) to PG&E to confirm that they do not want to participate. In this case PG&E will zero out any NSC the NEM customer may be otherwise eligible to receive. (T)

(f) QF Status – Customers receiving net surplus compensation must first demonstrate to PG&E that they are Qualifying Facilities in order to receive NSC. Since all NEM customer-generators currently meet the requirements for a qualifying facility exempt from certification filing at the Federal Energy Regulatory Commission (FERC), no further documentation is required at this time.

(g) Generator Size – Nothing in this Special Condition alters the existing NEM system sizing requirement. Specifically, in order to be eligible for NSC, a system must be intended primarily to offset part or all of the customer's own electrical requirements. Systems that are sized larger than the customer's electrical requirements are not eligible for NEM and therefore, are not eligible for NSC either.

(Continued)



**ELECTRIC SCHEDULE NEM
 NET ENERGY METERING SERVICE**

Sheet 20

SPECIAL
 CONDITIONS:
 (Cont'd.)

7. Pursuant to Public Utilities Code Section 2827(c)(2), any customer with an existing electrical generating facility and meter who enters into a new net energy metering contract (for example, Sample Form 79-978, *Interconnection Agreement for Net Energy Metering of Solar and Wind Electric Generating Facilities of 1,000 Kilowatts or Less, other than Facilities of 30 Kilowatts or Less*) shall complete and submit a copy of form 79-1125 – *NEM / NEMVMASH Inspection Report* to PG&E, unless the electric generating facility and meter have been installed or inspected within the previous three years. The *NEM Inspection Report* shall be prepared by a California licensed contractor who is not the owner or operator of the facility and meter. A California licensed electrician shall perform the inspection of the electrical portion of the facility and meter and sign the *NEM / NEMVMASH Inspection Report*. If an inspection is required, the customer shall submit the fully completed *NEM / NEMVMASH Inspection Report* to PG&E within 90 days of the customer becoming the customer of record at this account, or else the customer agrees to disconnect their Generating Facility and inform PG&E it no longer will take service on schedule NEM or NEMVMASH. By signing the interconnection agreement, the *NEM / NEMVMASH Inspection Report* shall be incorporated into it.

(T)



ELECTRIC SAMPLE FORM 79-1151A Sheet 1 (N)
AGREEMENT AND CUSTOMER AUTHORIZATION (N)
Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating (N)
Facilities Of 30 Kilowatts Or Less

Please Refer to Attached
Sample Form



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.

Participants in the Demand Response Programs below are not eligible to participate in NEM

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

Part I – Generating Facility Information and Responsible Parties

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

Account Holder Name*	Electric Service ID Number*	Meter Number*
Generating Facility Street Address*	City*	<div style="text-align: center;">CA</div> 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
---	---------------

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

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.

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.



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less

Part II – NEM Generator System Size – Continued

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 ≤ 5 kW (CEC-AC¹ kW) do not require review. List CEC-AC rating below.
 - Solar Systems > 5 kW (CEC-AC kW), size is determined as below.

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-9A⁷ – Time-of-Use for Customers with a single meter for Electric Vehicle (EV) recharging station and home
- E-9B⁷ – 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, EL-7, E-8, AG-R, and AG-V are closed to all new customers and are only available to Customers that are currently on the rate.

⁷ Customers with Electric Vehicles, please visit www.pge.com/electricvehicles for more rate information



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less

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"/> Other (_____)	<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. 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.

D. 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.

E. 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.

AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less

Part IV – Interconnection Agreement Provisions – Continued

F. 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.

G. 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.

H. 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.

I. 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/nsoptout to complete Form 79-1130.

J. 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.

K. 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.

L. 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.

M. 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.



**AGREEMENT AND CUSTOMER AUTHORIZATION
Net Energy Metering Interconnection
For Solar And/Or Wind Electric Generating Facilities
Of 30 Kilowatts Or Less**

Part IV – Interconnection Agreement Provisions – Continued

N. Meter Access

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

O. 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)

(Signature)

(Company Name, if applicable)

(Title)

(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.

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.



ELECTRIC SAMPLE FORM 79-1151B
APPLICATION
Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating
Facilities Of 30 Kilowatts Or Less

Sheet 1 (N)
(N)
(N)

Please Refer to Attached
Sample Form



APPLICATION

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.

For a non-exporting Generating Facility, RES-BCT facility, or NEM Generating technologies other than 30 kW or less solar or wind, Customers must submit the online Form 79-974 available at www.pge.com/gen.

Part I – Generating Facility Information and Responsible Parties

A. Date of signature on accompanying Interconnection Agreement and Customer Authorization Form 79-1151A

Date: _____

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

Account Holder Name*	Electric Service ID Number*	Meter Number*
Generating Facility Street Address*	City*	CA State Zip*

The project is completed and the final, signed, jurisdiction approval (building permit) is attached.

C. Interconnection Application Type (check one):

- New NEM Generating Facility interconnection at an existing PG&E service.
- Modify existing PG&E approved Generating Facility interconnection (adding/removing/replacing equipment).
 - Must provide a Custom Single-Line Drawing (SLD) showing the original system and the modified system.
- New interconnection in combination with a new service.
 - An Application for Service must be completed. Additional fees may be required if a service or line extension is required in accordance with PG&E Electric Rules 15 and 16. Please contact PG&E at 1-800-PGE-5000.
 - If this account will be established in a new subdivision, attach a list of lots/addresses and provide the following:

Developer Name	Development Name
----------------	------------------

D. System Owner (check one):

- PG&E Customer owned Third Party ownership

List the third party's name if they own the renewable energy credits (RECs):

E. Contractor Information (List who is installing the system. Write "Self-Installed" if installed by Customer):

Company Name	California Contractors State License Number
--------------	---

F. Preparer of this Application (if not the PG&E Customer, the Preparer must be authorized to act on behalf of the Customer on the Interconnection Agreement and Customer Authorization Form 79-1151A):

Company Name	Preparer Name	Date Prepared
--------------	---------------	---------------



APPLICATION

Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less

Part II – Description of the Generating Facilities

A. Variances from Distribution Interconnection Handbook (DIH) and Greenbook Requirements (check one):
Generating Facilities must meet the DIH and Greenbook requirements, available at www.pge.com/dih and www.pge.com/greenbook. A Variance Request must be submitted with the application for deviations, i.e. line-side tap, AC Disconnect > 10 ft from PG&E meter. (See Part III Section B for information on submitting Variance Request)

- The project meets the DIH and Greenbook Requirements and does not require a Variance Request.
 The project deviates from the DIH and Greenbook Requirements and I will include a Variance Request.

Note: Customers with **Non-certified inverters** or whose aggregate Generating Facility capacity exceeds 15% of the peak load on the distribution line section (or do not meet other Initial Review screens as described in Electric Rule 21) require a Supplemental Review which may result in further study, additional equipment, and/or other requirements. Customers will be notified if a Supplemental Review is required.

B. Photovoltaic (PV) Generating Facility Information (use additional sheets if installing more than 2 inverter manufacturers or model numbers).

B.1. Identify PV Mounting Method(s): Fixed Tracking

B.2. Photovoltaic Generator 1:

Inverter Manufacturer	Model Number	Nameplate Rating kW/unit	CEC ¹ Rating kW/unit	Output Voltage	1 or 3 Phase	Qty
PV Panel Manufacturer	Model Number	Nameplate Rating kW/unit	PTC ² Rating kW/unit	Total Nameplate Capacity kW		Qty

B.3. Photovoltaic Generator 2:

Inverter Manufacturer	Model Number	Nameplate Rating kW/unit	CEC Rating kW/unit	Output Voltage	1 or 3 Phase	Qty
PV Panel Manufacturer	Model Number	Nameplate Rating kW/unit	PTC Rating kW/unit	Total Nameplate Capacity kW		Qty

C. Wind Turbine Generating Facility Information: If the inverter is incorporated in the wind turbine and no inverter is required, write "Incorporated" into the "Inverter Manufacturer" field and provide the Output Voltage and Phase type in to the Inverter row. Certified wind-turbine list available at www.consumerenergycenter.org/erprebate/equipment.html.

Inverter Manufacturer	Model Number	Nameplate Rating kW/unit	CEC Rating kW/unit	Output Voltage	1 or 3 Phase	Qty
Wind Turbine Manufacturer	Model Number	Nameplate Rating kW/unit	CEC Rating kW/unit	Total Nameplate Capacity kW		Qty

¹ California Energy Commission (CEC) ratings are available at www.consumerenergycenter.org
² PTC: PVUSA Test Conditions. PTC ratings are available at www.consumerenergycenter.org



APPLICATION

Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less

Part II – Description of the Generating Facilities – Continued

D. AC Disconnect Switch (Write “None” if not applicable. See Part III Section C for requirements):

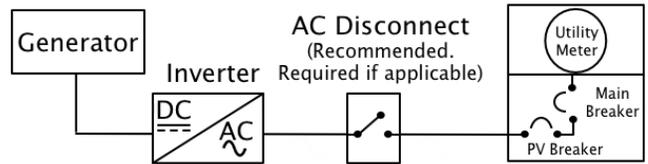
AC Disconnect Manufacturer	Model Number	Rating (amps)	Distance from Meter

E. Basic Single-Line Diagram (SLD) for Solar Projects (check one):

- I certify that the SLD below and the PV equipment information in Part II accurately represent the Customer’s service, the Generating Facility (there are no other Generator Facility(ies) connected to the service, and the project does not require a Variance Request.

Utility Service: (if using the SLD to the right)

Panel Voltage	Main Breaker	PV Breaker Size



- I will submit a custom SLD for one or more of the following reasons: there is/are existing Generating Facility(ies) connected to the service, I am modifying an existing Generating Facility, the Basic SLD does not accurately reflect the project, or I am submitting a Variance Request. (See Part III Section D for Custom SLD details.)

F. Service Panel Short Circuit Interrupting Rating (SCIR) (for systems larger than 11 kW):

SCIR of the service panel connected to this Generating Facility: _____

Part III – Interconnection Guidelines and Document Information

Note: Applications to interconnect systems located in San Francisco or Oakland may require additional analysis to determine whether or not their proposed installation is on PG&E’s networked secondary system. Networked secondary systems are in place to provide heightened levels of reliability in densely populated areas and may affect the ability of PG&E to interconnect NEM customers. Please contact Electric Generation Interconnection department at 415-972-5676 or email gen@pge.com if the proposed installation is in San Francisco where the zip code is 94102, 94103, 94104, 94105, 94107, 94108, 94109, 94111 or 94133 or in Oakland where the zip code is 94607 or 94612.

A. Documents

In addition to this NEM Interconnection Application, the documents listed below are needed to ensure safe and reliable operation of PG&E’s Distribution System and to confirm that Customer’s interconnection has been performed in accordance with PG&E’s tariffs. Additional forms are available on PG&E’s website at www.pge.com/standardnem.

Required Documents

- Net Energy Metering (NEM) Interconnection Agreement for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less and Customer Authorization Form 79-1151A.
- Copy of the final, signed, jurisdiction approval (building permit) for Customer’s Generating Facility.

Additional Documents (if applicable)

- Variance Request (if project deviates from requirements in Part III Section B).
- Custom Single-Line Diagram (SLD) (if project does not meet Part II Section E basic SLD requirements).

Documents and requirements other than those listed above and/or fees *may* be required depending on the specifics of the planned Generating Facility.



APPLICATION

Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less

Part III – Interconnection Guidelines and Document Information – Continued

B. Variance Request (if applicable)

The Customer or the Customer's Contractor can request a Variance Request review from PG&E if the project is unable to meet the requirements described in the Distribution Interconnection Handbook and Greenbook, available at www.pge.com/dih and www.pge.com/greenbook. The Variance Request must be submitted with the Interconnection Application and include the following.

1. Description of the proposal for which the Customer is requesting approval.
2. Customer name and project address.
3. Copy of the Custom Single Line Diagram or electrical drawings (Include the equipment, location, and/or distances for the proposed work).
4. Color photos of the Customer's area or section for the proposed work.
5. Manufacturer specification drawings for unapproved equipment that the Customer is requesting an approval.

C. AC Disconnect Switch Guidelines

PG&E recommends that customers 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.). The AC Disconnect Switch provides the additional benefit of allowing PG&E to isolate the Customer's generator from the utility's Distribution System without having to interrupt service to the customer's facility or residence.

Customers **are not required** to include an AC Disconnect Switch when the facility has a single-phase self-contained electric revenue meter (i.e. 0-320 amp panel). However, if the Customer does not install an AC Disconnect Switch, 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.

An AC Disconnect Switch **is required** for a Customer with:

- Inverter-based interconnections having a three-phase self-contained meter or a transformer-rated meter (i.e. all meter panels or switchboards employing the use of potential and current transformers).
- Non-inverter based generators, including rotating or machine-based generators - irrespective of whether the service meter configuration is transformer-rated or self-contained.
- Inverter and non-inverter based generators that do not have overcurrent protection at the point of interconnection.

D. Custom Single-line Diagram (SLD) (if applicable)

The Custom SLD must include the information below for identified equipment.

1. Manufacturer, model number, nameplate rating, quantity:
 - a) Inverter(s), PV or wind turbine generators, AC Disconnect Switch, generation output meter and instrument transformers.
2. Electrical rating and operating voltages:
 - a) Service panel, circuit breaker, and other Generating Facility protective devices
3. Location of:
 - a) Customer's loads relative to the Generating Facility, and the interconnection with PG&E's Distribution System.
 - b) AC Disconnect Switch.
4. Description of how the power output from the inverter is connected to the main service panel via a branch breaker. The ampere rating of this branch breaker and the main service panel breaker must be compatible with the output rating of the Generating Facility. The output rating is based on the total nameplate rating of the inverter.

Please submit the Application and Agreement via e-mail to gen@pge.com for faster delivery. E-mails successfully sent to gen@pge.com will receive an automatic reply confirming receipt. If the Customer does not receive an automatic reply, please resubmit the application. If necessary, the Application and Agreement package can be mailed to PG&E, Attn: Electric Generation Interconnection, 245 Market St, MC N7L, San Francisco, CA 94105.



ELECTRIC TABLE OF CONTENTS

Sheet 1

TABLE OF CONTENTS

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.	
	Title Page	32772-E	(T)
	Rate Schedules..... 32390, 32391, 32392, 32393, 32773 , 32402, 32705, 31541, 32396-E		(T)
	Preliminary Statements..... 32397, 32706, 30376, 32544, 32398, 30846, 32215, 32645-E		
	Rules..... 32424, 32425, 32761-E		
	Maps, Contracts and Deviations..... 32427-E		
	Sample Forms..... 32503, 32429, 32726, 32431, 32504, 32774 , 32505-32506, 32648, 32437, 32508, 32439-E		(T)

(Continued)



ELECTRIC TABLE OF CONTENTS
RATE SCHEDULES

Sheet 6

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.
Rate Schedules		
Other		
S	Standby Service	28399,28400, 32633,31125,28238-28243, 31126, 28245, 30291, 32386,28401-28404-E
E-CHP	Combined Heat and Power PPA.....	30809-30813-E
E-CHPS	Combined Heat and Power Simplified PPA.....	30814-30817-E
E-CHPSA	Combined Heat And Power Simplified 500 kW PPA.....	30825-30828-E
E-DCG	DCG Departing Customer Generation, CG	30168*,30169*,23667, 30697,30698,28954,28607,23252,23253,28405,23255-E
E-DEPART	Departing Customers	28859-E
E-NWDL	New WAPA Departing Load	28581,28582,28862,28863,27448-27452-E
E-NMDL	New Municipal Departing Load... ..	27453,32097,32098,32099, 29557,29558,29559,29560,29561,29562,29563,29564-E
E-LORMS	Limited Optional Remote Metering Services	20194-E
E-SDL	Split-Wheeling Departing Load.....	28588,28589,28867,28868,27459-27464-E
E-TMDL	Transferred Municipal Departing Load	27465,28869,28870, 25883,28961,28594,28608,25887,25888,25889,25890,25891-E
NEM	Net Energy Metering Service.....	32762 ,32068, 32763 , 30774, 32764 , 30776, 32765 , (T) 30778, 30779, 30780, 32766 , 30782, 32767 , 30784, (T) 30785, 30786, 30787, 30788, 32768 , 32769 -E (T)
NEMFC	Net Energy Metering Service For Fuel Cell Customer-Generators.....	32440-32448-E
NEMBIO	Net Energy Metering Service for Biogas Customer-Generators	27253-27255,26140,27256,26142,27257,26144,27258-E
NEMCCSF	Net Energy Metering Service for City and County of San Francisco	28176,28177,28178,28179-E
NEMV	Virtual Net Metering for a Multi-Tenant or Multi-Meter Property Served at the Same Service Delivery Point	31546-31568-E
NEMVMASH	Net Energy Metering – Virtual Net Energy Metering.....	30514–30522,30731-30736-E
E-ERA	Energy Rate Adjustments.....	32590-32593-E
RES-BCT	Schedule for Local Government Renewable Energy Self-Generation Bill Credit Transfer.....	30752,30753,29208,32216-32219,29213,32220-E
E-OBF	On-Bill Financing Balance Account (OBFA).....	29490-29492-E
E-SOP	Residential Electric SmartMeter™ Opt-Out Program.....	31330, 31454-E

(Continued)



ELECTRIC TABLE OF CONTENTS
SAMPLE FORMS

Sheet 28

FORM	TITLE OF SHEET	CAL P.U.C. SHEET NO.
Sample Forms		
Net Energy Metering		
79-854	Interconnection Agreement for Net Energy Metering for Residential and Small Commercial Solar or Wind Electric Generating Facilities of 10 kW or Less.....	22694-E
79-978	Interconnection Agreement for Net Energy Metering of Solar or Wind Electric Generating Facilities 1,000 Kilowatts or less, other than Residential or Small Commercial Facilities of 10 kW or Less.....	32039-E*
79-994	Interconnection Application for Net Energy Metering (E-NET) for Residential or Small Commercial Customers with Solar or Wind Generating Facilities of 10 Kilowatts or Less.....	25580-E
79-997	Interconnection Agreement for Net Energy Metering of Biogas Digester Generating Facilities.....	32121-E
79-998	Expanded Net Energy Metering (E-Net) Supplemental Application.....	32122-E
79-999	Agreement for Limited Optional Remote Metering Service.....	32123-E
79-1010	Interconnection Agreement for Net Energy Metering of Fuel Cell Generating Facilities...	32449-E
79-1069	Generating Facility Interconnection Agreement (Eligible/Non-Eligible Net Generating Facility Export)	32450-E
79-1151A	Agreement and Customer Authorization – Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less.....	32770-E (D)
79-1151B	Application – Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less.....	32771-E (N)
79-1109	Net Energy Metering Application and Interconnection Agreement for the Building Owner of a Multifamily Affordable Solar Housing Facility with a Solar Generating Facility of 1 Megawatt or Less.....	32045-E* (N)
79-1112	Local Government Application for an Arrangement to Take Service on Rate Schedule RES-BCT With Interconnection Eligible Renewable Generation of Not More Than 5 Megawatt.....	32221-E
79-1114	NEM 2010 Early True-up Request Form.....	28929-E
79-1124	Eligible Low Income Development Virtual Net Energy Metering Application and Interconnection Agreement for Multi-Family Affordable Housing with Solar Generation Totaling 1 Megawatt or Less.....	32046-E*
79-1125	NEM / NEMVMASH Inspection Report.....	32047-E*
79-1130	Customer Request Form not to Receive Net Surplus Compensation	30639-E
79-1131	NEMV Application and Interconnection Agreement for an Eligible Generating Facility of 1MW or Less Serving Multiple Tenants	32048-E*
79-1137	Interconnection Agreement for Net Metering for a Renewable Electrical Generation Facility of 1,000 Kilowatts or Less	32049-E*
79-1142	NEMV Interconnection Application for a Renewable Electrical Generation Facility of 1 Megawatt or Less	32050-E*

(Continued)

**PG&E Gas and Electric
Advice Filing List
General Order 96-B, Section IV**

1st Light Energy	Division of Ratepayer Advocates	Occidental Energy Marketing, Inc.
AT&T	Douglass & Liddell	OnGrid Solar
Alcantar & Kahl LLP	Downey & Brand	Pacific Gas and Electric Company
Anderson & Poole	Ellison Schneider & Harris LLP	Praxair
BART	G. A. Krause & Assoc.	Regulatory & Cogeneration Service, Inc.
Barkovich & Yap, Inc.	GenOn Energy Inc.	SCD Energy Solutions
Bartle Wells Associates	GenOn Energy, Inc.	SCE
Bear Valley Electric Service	Goodin, MacBride, Squeri, Schlotz & Ritchie	SDG&E and SoCalGas
Braun Blaising McLaughlin, P.C.	Green Power Institute	SPURR
CENERGY POWER	Hanna & Morton	San Francisco Public Utilities Commission
California Cotton Ginners & Growers Assn	In House Energy	Seattle City Light
California Energy Commission	International Power Technology	Sempra Utilities
California Public Utilities Commission	Intestate Gas Services, Inc.	SoCalGas
California State Association of Counties	Kelly Group	Southern California Edison Company
Calpine	Linde	Spark Energy
Casner, Steve	Los Angeles Dept of Water & Power	Sun Light & Power
Center for Biological Diversity	MAC Lighting Consulting	Sunshine Design
City of Palo Alto	MRW & Associates	Tecogen, Inc.
City of San Jose	Manatt Phelps Phillips	Tiger Natural Gas, Inc.
Clean Power	Marin Energy Authority	TransCanada
Coast Economic Consulting	McKenna Long & Aldridge LLP	Utility Cost Management
Commercial Energy	McKenzie & Associates	Utility Power Solutions
County of Tehama - Department of Public Works	Modesto Irrigation District	Utility Specialists
Crossborder Energy	Morgan Stanley	Verizon
Davis Wright Tremaine LLP	NLine Energy, Inc.	Water and Energy Consulting
Day Carter Murphy	NRG Solar	Wellhead Electric Company
Defense Energy Support Center	Nexant, Inc.	Western Manufactured Housing Communities Association (WMA)
Dept of General Services	North America Power Partners	