

March 22, 2019

Advice 5501-E

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Update to Schedules NEM and NEM2 for Storage Devices Paired With Net Energy Metering Generating Facilities using Alternating or Direct Current Configurations Pursuant to Decision 19-01-030

Purpose

The purpose of this advice letter is to make changes to Pacific Gas and Electric Company's (PG&E's) Rate Schedules NEM and NEM2 for storage devices paired with net energy metering Generating Facilities using alternating or direct current (DC) configurations, pursuant to California Public Utilities Commission (Commission, CPUC) Decision (D.) 19-01-030.¹

Background

In July 2014, the Commission issued D.14-05-033,² addressing net energy metering and storage. In the decision the Commission adopted, it used the terminology of the Renewable Portfolio Standard program and noted³:

“Section III.G [of the California Energy Commission (CEC) adopted the seventh edition of the RPS Eligibility Guidebook (Guidebook⁴)] establishes two categories of energy storage that ‘may be considered an addition or enhancement to a renewable electrical generation facility’: ‘integrated’ and ‘directly connected.’”

Integrated energy storage is described as “[m]ethods of storing energy from a renewable energy resource that are integrated into the renewable electrical generating facility as part of the generation process...” For battery-based storage,

¹ [Decision 19-01-030](#) January 31, 2019 - *Decision Granting Petition For Modification Of Decision 14-05-033 Regarding Storage Devices Paired With Net Energy Metering Generating Facilities.*

² [Decision 14-05-033](#) May 15, 2014 - *Decision Regarding Net Energy Metering Interconnection Eligibility For Storage Devices Paired With Net Energy Metering Generation Facilities.*

³ D.14-05-033 at 4, 5.

⁴ The RPS Eligibility Guidebook (7th Edition, April 2013) is available at <http://www.energy.ca.gov/renewables/documents/#rps>.

the Guidebook further elaborates that “the storage device must only be capable of storing energy from the renewable generator” to be considered “integrated.”⁵

For a storage device to be deemed “**directly connected**,” it must be both directly connected to the renewable generator via an internal power line (i.e., power may not be transmitted from the renewable facility to the energy storage via an external distribution line) and the storage device must be operated as part of the RPS eligible facility.”⁶ (Note: emphasis and paragraph re-formatting added for clarity.)

Direct current (DC)-coupled solar plus storage systems, one possible configuration key to this advice letter, will utilize a single inverter instead of one each (i.e., a total of two inverters) for both the NEM-eligible Generating Facility and the NEM-Paired Storage device. Based on the description in D.14-05-033, DC-coupled solar plus storage systems may fall under either the definition of directly connected or integrated energy storage. Regardless, D.14-05-033 had suggested that one means to make sure the storage is eligible for net energy metering (i.e., the storage is only renewably charged) is to use direct current metering. However, since such metering is non-standard, the Commission declined in D.14-05-033 to consider a possible pathway for direct current configurations.⁷

In September 2017, the California Solar & Storage Association (CALSSA), formerly the California Solar Energy Industries Association (CALSEIA), filed a Petition for Modification of D.14-05-033 (Petition)⁸ in order to facilitate the interconnection of both direct current DC-coupled and AC-coupled solar plus storage systems.

The CALSSA/CALSEIA Petition described two use cases:

- 1) “no grid charging” (i.e., no grid charging to the storage device)
For the “no grid charging” use case, the Petition discussed a voltage-controlled configuration of DC-coupled solar plus storage, a virtual net energy metering (VNEM) configuration, a NEM Aggregation (NEM-A) configuration, other unspecified configurations, and related configurations for AC-coupled solar plus storage systems; and
- 2) “no storage export” (i.e., no storage exports to the grid)
For the “no storage export” use case, the Petition discussed using an inverter or charge controller “with functionality that prevents the storage device from discharging at times when the customer site is exporting power to the grid or

⁵ RPS Guidebook at 64.

⁶ RPS Guidebook at 65.

⁷ D.14.05-033 at 21, “Although we recognize that certain single inverter large GFs with NEM-paired storage devices may not be able to accommodate the metering requirements as described above, we choose not to provide an alternative metering solution for such configurations at this time.”

⁸ Petition of the California Solar Energy Industries Association for Modification of D.14-05-033 to Allow DC-Coupled Solar Plus Storage Systems, filed September 1, 2017 (Petition).

install an external relay that provides the same function.”

In January of this year, D.19-01-030 granted CALSSA/CALSEIA’s petition for modification of D. 14-05-033, approving “non-metering, power control-based options for ensuring net energy metering credit accrues only the net energy metering-eligible generation, as long as the control configuration is certified to a national standard or a utility-approved interim testing procedure. Power control-based options include the use of equipment, whether firmware-based or software-based, to prevent the storage device from charging from the grid or to prevent the storage device from exporting to the grid.”⁹

D.19-01-030 Ordering Paragraph 1.a grants this.¹⁰

CALSSA/CALSEIA’s Petition, as explained to D. 19-01-30, also requested three additional issues be addressed¹¹. It asked the Commission to, first:

clarify that storage system size for DC-coupled solar plus storage systems is based on the continuous output rating of the storage device, rather than the nameplate (AC) rating of the inverter to which the utilities currently refer to, in order to determine whether a NEM-PS arrangement meets the definition of a ‘small’ or ‘large’ system (i.e., whether the paired storage device exceeds 10 kW (AC) maximum discharge capacity).

On this, D.19-01-030 concluded “...it is reasonable to measure and determine storage system size in DC-coupled solar plus storage systems as the lesser of the shared inverter’s nameplate capacity and the storage device’s maximum continuous discharge capacity listed on the device’s technical specifications sheets. A storage device’s maximum continuous discharge capacity may be listed on technical specification sheets using different terminology; the electric IOUs shall use common sense to determine whether a device’s technical specification sheet includes the appropriate metric for purposes of determining system size consistent with the guidance provided here, regardless of the terminology used. If that metric is not

⁹ D.19-01-030 at 2

¹⁰ Ordering Paragraph 1. “The Petition for Modification is granted in the following respects:
a. We approve power control-based options for ensuring net energy metering (NEM) credit accrues only to NEM-eligible generation in large solar plus storage systems so long as the control configuration is certified to a national standard (upon publication of a Certification Requirements Decision) or utility-approved interim testing procedure. Power control-based options include using equipment that prevents electricity to be exported from the storage device to the grid, and using equipment that prevents electricity imported from the grid to charge the storage device.”

¹¹ D.19-01-030 at 6, Section 1.2.2

included, the electric IOUs may rely on the inverter nameplate rating.”¹² See also Ordering Paragraph 1.b.¹³

Ordering Paragraph 4 requires the IOU advice letters to “specify that direct current-coupled solar plus storage systems’ size will be determined as the lesser of the shared inverter’s nameplate capacity and the storage device’s maximum continuous discharge capacity listed on the device’s technical specifications sheets. The electric IOUs must use common sense to determine whether a device’s technical specification sheet includes the appropriate metric for purposes of determining system size consistent with this order. If that metric is not included, the electric IOUs may rely on the inverter nameplate rating.”

The second request was to “‘leave the door open’ for a use case in which NEM-PS systems can also participate in demand response programs.” On this, D.19-01-030 denied this request.¹⁴

The third request was to “explicitly permit the use of third party-owned metering in lieu of a utility-owned NGOM, in cases where eligible customer-generators opt to install an interval meter directly to the NEM-eligible generator.” On this, D.19-01-030 denied this request.¹⁵

As discussed in D. 14-05-033, the Commission at the time declined in D.14-05-033 to consider a possible pathway for direct current configurations, chiefly because the options available to ensure NEM integrity of storage were not available. However, in CALSSA/CALSEIA’s Petition to Modify, new means of ensuring the storage maintained NEM integrity were presented. These were partially contingent on the impending release of a new appendix to the UL 1741 standards regarding Power Control Systems that would discuss means to ensure non-export. In its comments on the D.19-01-03 proposed decision, PG&E recommended “delaying use of the Certification Requirements Document (CRD) until it is approved by the UL-1741 Standards Technical Panel.”

In its reply comments, CALSSA countered that “[d]elaying use of the CRD until review by the STP is not standard procedure,” explaining that “[o]nce approved by UL, a CRD may be used for product certification immediately upon publication...Normally the CRD is used for period of 12 to 24 months prior to incorporation into the encompassing

¹² D.19-01-030 at 20 Section 3.2

¹³ Ordering Paragraph 1.b states. “We approve the proposal of the California Solar & Storage Association, as modified in Section 3.2 of this decision, for specifying the way in which storage system size should be determined in direct current-coupled solar plus storage systems.”

¹⁴ D.19-01-030 at 21 Section 3.3.

¹⁵ D.19-02-030 at 21 Section 3.3.

Standard. This period is needed for manufacturers, testing labs, and other users to gain experience using the CRD.”¹⁶

In the issued final decision D.19-01-030, the Commission noted, “We agree it is reasonable to identify publication of the CRD, rather than approval by the Standards Technical Panel, as approval of the national certification standard.”¹⁷

In the time since D.19-01-030 was issued, the CRD for UL 1741 proposed Power Control Systems language¹⁸ for 2020 NEC 705.12¹⁹ was issued addressing both non-export and limited export. PG&E notes that having the CRD means that inverters have the capability of being certified as *capable* of non-export (cannot export to the grid) and non-import (cannot charge from the grid)—requirements to ensure that a storage unit paired with PV achieves net energy metering integrity in the two use-cases CALSSA/CALSEIA petitioned to qualify for net energy metering. However, PG&E is still concerned that just having the capability is not sufficient. Logistics about *how* the inverter is setup are just as important in order to ascertain that the storage is performing in a manner to make it eligible for net energy metering (i.e., no exports if it is not renewably charged). In addition, even with the release of the new UL 1741 standards, there are still questions concerning what is the proper amount of inadvertent export time permitted for a storage system to be non-export.

D.19-01-030 addressed this concern generally when it stated:

To ensure device settings are configured correctly at installation and not subsequently changed, we recommend the electric IOUs apply the same methods they use currently to ensure smart inverter settings (e.g., voltage and reactive power (volt/var)) are configured correctly at installation and not subsequently changed. For instance, the electric IOUs may require that the NEM-compliant control configuration appear in a device’s configuration file as a non-editable value, such that installers would have to select an entirely different configuration file (e.g., a configuration file applicable to Hawaii as opposed to the one applicable to California) in order to modify the NEM-compliant configuration^{20,21}.

The Commission above anticipates and acknowledges that PG&E and the other IOUs may need to review the setting requirements to conform to the UL CRD. However, the

¹⁶ Reply Comments of the CALSSA/CALSEIA on the Revised Proposed Decision on NEM Paired Storage, filed January 22, 2019, at 2, 3.

¹⁷ D.19-01-030 at p. 23.

¹⁸ PG&E was informed on a March 11, 2019 an Underwriters Laboratories Inc. (UL) Certification Requirement Decision (CRD) had recently been issued on UL 141 regarding Power Control Systems.

¹⁹ The relevant associated National Electric Code that will be updated.

²⁰ D.19-01-030 at p. 19.

²¹ The IOUs or Independently Owned Utilities are Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company.

UL CRD was only issued within the past few weeks and therefore PG&E has only had a limited chance to evaluate how to incorporate its requirements into our tariffs. To confirm, PG&E's experience with adding storage to the Virtual NEM tariffs took around 6 months of work with NEXTracker to develop the necessary requirements. This is not a trivial task and should not be underestimated. Furthermore, even if PG&E anticipates that there will only be a limited number of eligible devices that will be available (at least initially), additional time is still needed to set up the methodology to assure net energy metering integrity and to ensure that "the NEM-compliant control configuration appear in a device's configuration file as a non-editable value."

Finally, while the Commission recommends the electric IOUs apply the same methods they use currently to ensure smart inverter settings, there is a difference between smart inverters and NEM integrity. In this case, the requirement is necessary to ensure the storage satisfies the requirements for net energy metering integrity *from the start*, whereas with the smart inverter rollout, it was a staggered time for roll out in which for each new deadline, the utilities and stakeholders were given time to prepare.

For the above reasons, PG&E has not had a reasonable chance to fully develop language for net energy metering regarding the recently released standards to incorporate them in its tariffs, and therefore PG&E proposes to submit a supplement or follow-up AL to update Rule 21 regarding Ordering Paragraph 1.a. As with the filing that incorporated storage into the VNEM tariffs, PG&E intends to place this information in its Distribution Interconnection Handbook.

Finally, with regards to the impact of D.19-01-030 on NEMA (net energy metering aggregation as defined in Rate Schedules NEM and NEM2), D.19-01-30 notes "...that NEM-A is a special condition under the general NEM tariff; therefore, any changes to storage requirements under the NEM tariff that are adopted in this decision would necessarily apply to NEM-A because it is part of the NEM tariff."²²

This Advice letter is prepared pursuant to D.19-01-30 Ordering Paragraph 4, which requires by March 22, 2019²³ PG&E to "submit a Tier 2 advice letter modifying its respective net energy metering tariffs and interconnection agreement forms, as applicable, to implement the power control-based options as discussed in this decision and reflected in this decision's changes to Decision 14-05-033 for net energy metering generating facilities paired with energy storage devices."

²² D.19-01-030 at 20.

²³ D.19-01-030 Ordering Paragraph 4 requires within 45 days after the issue date of D.19-01-030, i.e., February 5, 2019.

Tariff Revisions

A. Changes to Schedules NEM and NEM2

General comment on NEM and NEM2 changes:

PG&E, in its proposed NEM and NEM2 tariffs, first incorporates definitions for AC-Coupled and DC-Coupled configurations based on D. 19-01-030. The new D. 19-01-030 sizing criteria for DC-Couple storage is included with its definition. Additionally, it adds definitions for the use cases, “No Grid Charging” and “No Storage Export”, based on D. 19-01-030.

PG&E, when it originally added the NEM paired storage language to the NEM and NEM2 tariffs²⁴, structured its section on NEM-paired storage following the original RPS breakout noted in D. 14-05-033 and included only sections for (i) integrated energy storage and (ii) directly connected storage. In this advice letter, PG&E maintains that structure, incorporating the use-cases for No Grid Charging and No Storage Export under each section, and also addresses the AC- and DC-coupled configurations.

When the storage can only be charged from a renewable generator and can export, it is considered integrated with the NEM generator and will be billed in the same manner as a NEM generating facility.

When the storage assurance confirms that it is non-export, it will be treated using the same modified NEMMT provisions that were in the NEM and NEM2 paired storage special condition prior to this advice letter.

Although D. 14-05-030 and D.19-01-033 ordering paragraphs refer to solar generation for NEM paired storage, D. 19-01-033 also included other NEM-eligible generation.²⁵ PG&E removed any restriction in its special condition to solar only and expanded the provisions to all NEM-eligible generation.

B. Changes to Interconnection Application and Agreement Forms

PG&E will be making changes to application forms 79-1174 and 79-1174-02, and to interconnection agreement forms 79-1193, 79-1193-02, 79-1069, and 79-1069-02.

²⁴ In Advice Letters 4940-E, 4940-E-A, and 4940-E-B, submitted in October and November of 2016.

²⁵ See Appendix A of D.19-01-030.

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than April 11, 2019, which is 20 days after the date of this filing. Protests must be submitted 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:

Erik Jacobson
Director, Regulatory Relations
c/o Megan Lawson
Pacific Gas and Electric Company
77 Beale Street, Mail Code B13U
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-3582
E-mail: PGETariffs@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Section 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, Section 3.11).

Effective Date

PG&E requests that this Tier 2 advice letter become effective on regular notice, April 21, 2019, which is 30 calendar days after the date of submittal.

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 R.14-07-002 and R.17-07-007. 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/>.

/S/

Erik Jacobson
Director, Regulatory Relations

Attachments

cc: Service Lists R.14-07-002, and R.17-07-007



ADVICE LETTER SUMMARY

ENERGY UTILITY



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

Company name/CPUC Utility No.: Pacific Gas and Electric Company (ID U39E)

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Yvonne Yang

Phone #: (415)973-2094

E-mail: PGETariffs@pge.com

E-mail Disposition Notice to: Yvonne.Yang@pge.com

EXPLANATION OF UTILITY TYPE

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 5501-E

Tier Designation: 2

Subject of AL: Update to Schedules NEM and NEM2 for Storage Devices Paired With Net Energy Metering Generating Facilities using Alternating or Direct Current Configurations Pursuant to Decision 19-01-030

Keywords (choose from CPUC listing): Compliance, Forms

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.19-01-030

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:

Confidential treatment requested? Yes No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information:

Resolution required? Yes No

Requested effective date: 4/21/19

No. of tariff sheets: 25

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: See attachment 1

Service affected and changes proposed¹: N/A

Pending advice letters that revise the same tariff sheets: N/A

¹Discuss in AL if more space is needed.

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

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102
Email: EDTariffUnit@cpuc.ca.gov

Name: Erik Jacobson, c/o Megan Lawson
Title: Director, Regulatory Relations
Utility Name: Pacific Gas and Electric Company
Address: 77 Beale Street, Mail Code B13U
City: San Francisco, CA 94177
State: California Zip: 94177
Telephone (xxx) xxx-xxxx: (415)973-2093
Facsimile (xxx) xxx-xxxx: (415)973-3582
Email: PGETariffs@pge.com

Name:
Title:
Utility Name:
Address:
City:
State: District of Columbia Zip:
Telephone (xxx) xxx-xxxx:
Facsimile (xxx) xxx-xxxx:
Email:

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
43964-E	Electric Sample Form No. 79-1069 Generating Facility Interconnection Agreement (Multiple Tariff) Sheet 1	41124-E
43965-E	Electric Sample Form No. 79-1069-02 Generating Facility Interconnection Agreement (Multiple Tariff NEM2MT) Sheet 1	41125-E
43966-E	Electric Sample Form No. 79-1174 Rule 21 Generator Interconnection Application Sheet 1	38215-E
43967-E	Electric Sample Form No. 79-1174-02 Rule 21 Generator Interconnection Application Sheet 1	41008-E*
43968-E	Electric Sample Form No. 79-1193 Agreement and Customer Authorization Net Energy Metering Interconnection for Solar and/or Wind Electric Generating Facilities of 30 Kilowatts or Less Paired with Energy Storage of 10 Kilowatts or Less Sheet 1	43282-E
43969-E	Electric Sample Form No. 79-1193-02 Agreement and Customer Authorization Net Energy Metering (NEM2) Interconnection for Solar and/or Wind Electric Generating Facilities of 30 kW or Less with Energy Storage of 10 kW or Less Sheet 1	43283-E
43970-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 26	37642-E
43971-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 27	
43972-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 28	
43973-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 29	
43974-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 30	
43975-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 31	

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
43976-E	ELECTRIC SCHEDULE NEM NET ENERGY METERING SERVICE Sheet 32	37645-E
43977-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 28	42944-E
43978-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 29	
43979-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 30	
43980-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 31	
43981-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 32	
43982-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 33	
43983-E	ELECTRIC SCHEDULE NEM2 NET ENERGY METERING SERVICE Sheet 34	40272-E
43984-E	ELECTRIC TABLE OF CONTENTS Sheet 1	43931-E
43985-E	ELECTRIC TABLE OF CONTENTS Sheet 6	43880-E
43986-E	ELECTRIC TABLE OF CONTENTS Sheet 24	43310-E
43987-E	ELECTRIC TABLE OF CONTENTS Sheet 27	43311-E
43988-E	ELECTRIC TABLE OF CONTENTS Sheet 28	43682-E



Electric Sample Form No. 79-1069
Generating Facility Interconnection Agreement (Multiple Tariff)

Sheet 1

**Please Refer to Attached
Sample Form**



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

This *Generating Facility Interconnection Agreement (Multiple Tariff)* (Agreement) is entered into by and between _____ (Producer), and Pacific Gas and Electric Company (PG&E) a California Corporation. Producer and PG&E are sometimes also referred to in this Agreement jointly as “Parties” or individually as “Party.” In consideration of the mutual promises and obligations stated in this Agreement and its attachments, the Parties agree as follows:

1. SCOPE AND PURPOSE

This Agreement provides for Producer to interconnect and operate a Generating Facility in parallel with PG&E’s Distribution System to serve the electrical loads at the location identified in Section 2.4 (or for the qualifying energy where permitted under Section 218 of the California Public Utilities Code (PUC). The Generating Facility may be any combination of generators, but must include at least one “Eligible customer-generator.” Eligible customer-generators consist of any Renewable Electrical Generation Facility(ies) (as defined in PG&E’s Schedule NEM) or Eligible Fuel Cell Electrical Generating Facility(ies) (as defined in PG&E’s Schedule NEMFC).

- 1.1. This Agreement provides for Producer to operate the Eligible Generator(s) pursuant to the provisions of Section 2827 et seq. of the PU Code and the applicable PG&E tariffs for net energy metering. This Agreement also provides for Producer to operate its Non-Eligible Generator(s). This Agreement does not provide for retail electrical service by PG&E to Producer. Such arrangements must be made separately between PG&E and Producer.
- 1.2. This Agreement does not address Producer’s account billing and payment for energy consumption. For the Generating Facility as specified in Section 2 of this Agreement, please refer to the applicable PG&E net-energy-metered (NEM) tariff schedules for billing and payment protocol.
- 1.3. 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.

2. SUMMARY AND DESCRIPTION OF PRODUCER’S GENERATING FACILITY

- 2.1 A description of the Generating Facility, including a summary of its significant components and a single-line diagram showing the general arrangement of how Producer’s Generating Facility and loads are interconnected with PG&E’s Distribution System, are attached to and made a part of this Agreement. (Supplied by Producer as Appendix A).



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

2.2 Generating Facility identification number: _____ (Assigned by PG&E).

2.3 Producer's electric service agreement ID number: _____ (Assigned by PG&E).

2.4 Name and address used by PG&E to locate the electric service account used to interconnect the Generating Facility with PG&E's Distribution System:

Name: _____

Address: _____

City/Zip Code: _____

2.5 The Gross Nameplate Rating of the Generating Facility is:

2.5.1 Eligible Generator(s):

Table with 2 columns and 7 rows listing generator types and their kW ratings: biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, small hydroelectric generation, digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current.

2.5.2 Non-Eligible Generator(s): _____ kW

2.5.3 Total Gross Nameplate Rating of the Generating Facility: _____ kW

2.6 The Net Nameplate Rating of the Generating Facility is:

2.6.1 Eligible Renewable Electrical Generation Facility Generator(s):



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

biomass _____ kW	digester gas _____ kW
solar thermal _____ kW	municipal solid waste _____ kW
photovoltaic _____ kW	landfill gas _____ kW
wind _____ kW	ocean wave _____ kW
geothermal _____ kW	ocean thermal _____ kW
fuel cell _____ kW	tidal current _____ kW
small hydroelectric generation _____ kW	

2.6.2 Non-Eligible Generator(s): _____ kW

2.6.3 **Total Net** Nameplate Rating of the Generating Facility: _____ kW

2.7 The maximum level of power that may be exported by the Generating Facility to PG&E's Distribution System is expected to be:

2.7.1 Eligible Generator(s):

biomass _____ kW	digester gas _____ kW
solar thermal _____ kW	municipal solid waste _____ kW
photovoltaic _____ kW	landfill gas _____ kW
wind _____ kW	ocean wave _____ kW
geothermal _____ kW	ocean thermal _____ kW
fuel cell _____ kW	tidal current _____ kW
small hydroelectric generation _____ kW	

2.7.2 Non-Eligible Generator(s): _____ kW

2.7.3 **Total maximum level of power** that may be exported by the Generating Facility: _____ kW



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

2.8 the purpose of securing the Competition Transition Charge exemption available under Section 372 of the California Public Utilities Code (PUC), Producer hereby declares that the portion of the Generating Facility that is generating in a combined heat and power mode
[] does / [] does not meet the requirements for Cogeneration as such term is used in Section 216.6 of the California Public Utilities Code.

2.9 The Generating Facility's expected date of Initial Operation is _____. The expected date of Initial Operation shall be within two years of the date of this Agreement.

2.10 For the purpose of securing certain tariff charge exemptions available under the PU Code, Producer hereby declares the following for each Generator technology of the Generating Facility:

Requirements for Distributed Energy Resource Generation as such term is used in Section 353.1 of the PU Code.

Table with 2 columns and 10 rows listing various generating technologies (biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, small hydroelectric generation, biomass digester, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current, other technology) and their compliance status (are met/not met) with checkboxes.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

2.11 What applicable rate schedule, known as the otherwise applicable schedule will be selected for the net-energy-metering account(s):

3. DOCUMENTS INCLUDED; DEFINED TERMS

3.1 This Agreement includes the following exhibits which are specifically incorporated herein and made a part of this Agreement.

Appendix A - Description of Generating Facility and Single-Line Diagram (Supplied by Producer).

Appendix B - Web-site references to Rules 2 and 21 and other selected rules and tariffs of PG&E (Supplied by PG&E).

Appendix C - A Copy of *PG&E's Agreement for Installation or Allocation of Special Facilities for Parallel Operation of Nonutility-Owned Generation and/or Electrical Standby Service* (Form 79-280) (Special Facility Agreement), if applicable, (Formed by the Parties).

Appendix D - Producer's warranty that the Generating Facility meets the requirements for a Cogeneration facility pursuant to Section 216.6 of the PU Code (when applicable).

Appendix E - Producer's warranty that the Generating Facility meets the requirements for Distributed Energy Resources Generation as defined in Section 353.1 of the PU Code (when applicable).

Appendix F - Listing of eligible service accounts, as defined in PG&E's Schedule NEMBIO and/or NEMFC to be included in Net Energy Metering calculations (when applicable).

Appendix G - Producer's warranty that it meets the requirements for an Eligible Biogas Digester Electrical Generating Facility, (applicable Generator(s) only) as defined in Section 2827.9 of the PU Code (when applicable).

Appendix H - Schedule NEM Customer-Generator Warranty that it Meets the Requirements for an Eligible Customer-Generator and is an Eligible Renewable Electrical Generation Facility Pursuant to Section 2827 of the California Public Utilities Code.

Appendix I -Operating Requirements for Energy Storage Device(s) (when applicable).



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

- 3.2 When initially capitalized, whether in the singular or in the plural, the terms used herein shall have the meanings assigned to them either in this Agreement or in PG&E's Rule 21 Section C.

4. TERM AND TERMINATION

- 4.1 This Agreement shall become effective as of the last date entered in Section 16, below. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:

- (a) The Parties agree in writing to terminate the Agreement, or
- (b) Unless otherwise agreed in writing by the Parties, at 12:01 A.M. on the day following the date the electric service account through which Producer's Generating Facility is interconnected to PG&E's Distribution System is closed or terminated, or
- (c) At 12:01 A.M. on the 61st day after Producer or PG&E provides written Notice pursuant to Section 9 below to the other Party of Producer's or PG&E's intent to terminate this Agreement.

- 4.2 Producer may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for any reason. PG&E may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for one or more of the following reasons:

- (a) A change in applicable rules, tariffs, and regulations, as approved or directed by the California Public Utilities Commission "Commission," or a change in any local, state or federal law, statute or regulation, either of which materially alters or otherwise affects PG&E's ability or obligation to perform PG&E's duties under this Agreement; or,
- (b) Unless otherwise agreed to in writing by the Parties, Producer fails to take all corrective actions specified in PG&E's Notice that Producer's Generating Facility is out of compliance with the terms of this Agreement within the time frame set forth in such Notice; or,
- (c) Producer fails to interconnect and operate the Generating Facility per the terms of this Agreement prior to 120 days after the date set forth in Section 2.9, above, as the Generating Facility's expected date of Initial Operation; or,
- (d) Producer abandons the Generating Facility. PG&E shall deem the Generating Facility to be abandoned if PG&E determines, in its reasonable opinion, the Generating Facility is non-operational and



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Producer does not provide a substantive response to PG&E Notice of its intent to terminate this Agreement as a result of Producer's apparent abandonment of the Generating Facility affirming Producer's intent and ability to continue to operate the Generating Facility.

- (e) Producer makes a change to the physical configuration of the Generating Facility, as declared in Section 2 and Appendix A of this Agreement.
- 4.3 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application to terminate this Agreement.
- 4.4 Any agreements attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. GENERATING FACILITY AND OPERATING REQUIREMENTS

- 5.1 Except for that energy delivered to PG&E's Distribution System, electric energy produced by Producer's Generating Facility shall be used solely to serve electrical loads connected to the electric service account that PG&E uses to interconnect Producer's Generating Facility (or, where permitted under Section 218 of the PUC, the electric loads of an on-site or neighboring party lawfully connected to Producer's Generating Facility through Producer's circuits). Producer shall not use the Generating Facility to serve electrical loads that will cause Producer to be considered an "electrical corporation" as such term is used in Section 218 of the California Public Utilities Code.
- 5.2 Unless otherwise agreed upon in writing by the Parties, this Agreement does not provide for, nor otherwise require PG&E to purchase, transmit, distribute, or store the electrical energy produced by Producer's Generating Facility.
- 5.3 Producer is responsible for operating the Generating Facility in compliance with all of PG&E's tariffs, including but not limited to PG&E's Rule 21 and applicable NEM tariff schedules, and applicable safety and performance standards established by the National Electric Code, Institute of Electrical and Electronic Engineers, accredited testing laboratories such as Underwriters Laboratories, rules of the Commission regarding safety and reliability, and any other regulations and laws governing the Interconnection of the Generating Facility.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

- 5.4 Producer shall: (a) maintain the Generating Facility and Interconnection Facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, Section 5.3, and (b) obtain any governmental authorizations and permits required for the construction and operation of the Generating Facility and Interconnection Facilities. Producer shall reimburse PG&E for any and all losses, damages, claims, penalties, or liability it incurs as a result of Producer's failure to obtain or maintain any governmental authorizations and permits required for construction and operation of Producer's Generating Facility.
- 5.5 Producer shall not commence parallel operation of the Generating Facility until PG&E has provided express written approval. Such approval shall normally be provided per the timelines established by the applicable PUC 2827 section, or by Rule 21. Such approval will be provided after PG&E's receipt of: (1) a completed Generating Facility Interconnection Application for Non-Export or Certain Net Energy Metered Generating Facilities (Between 30 KW and 1,000 KW) (Form 79-974), including all supporting documents and payments as described in the Application; (2) any required NEM supplemental application forms; (3) a signed and completed Generating Facility Interconnection Agreement (Multiple Tariff) (Form 79-1069); (4) a copy of the Producer's final inspection clearance from the governmental authority having jurisdiction over the Generating Facility; and (5) submission of all applicable payments for reviews, studies, Interconnection Facilities, and Distribution System Modifications. Such approval will not be unreasonably withheld. PG&E shall have the right to have representatives present at the Commissioning Test as defined in Rule 21. Producer shall notify PG&E at least five (5) business days prior to the initial testing.
- 5.6 In no event shall the delivery of the maximum electric power to PG&E's Distribution System exceed the amount or other limitations specified in Section 2 and Appendix A of this Agreement. If Producer does not regulate its Generating Facility in compliance with the limitations set forth in this Agreement, PG&E may require Producer to disconnect its Generating Facility from PG&E's Distribution System until Producer demonstrates to PG&E's reasonable satisfaction that Producer has taken adequate measures to regulate the output of its Generating Facility and control its deliveries of electric power to PG&E. Further, should PG&E determine that Producer's operation of the Generating Facility is causing an unsafe condition or is adversely affecting PG&E's ability to utilize its Distribution System in any manner, even if Producer's deliveries of electric power to PG&E's Distribution System are within the limitations specified in this Agreement, PG&E may require Producer to temporarily or permanently reduce or cease deliveries of electric power to PG&E's Distribution System. Alternatively, the Parties may agree to other corrective measures so as to mitigate the effect



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

of electric power flowing from the Generating Facility to PG&E's Distribution System. Producer's failure to comply with the terms of this Section shall constitute a material breach of this Agreement and PG&E may initiate termination in accordance with the terms of Section 4.2(b).

- 5.7 Producer shall not deliver reactive power to PG&E's Distribution System unless the Parties have agreed otherwise in writing.
- 5.8 The Generating Facility shall be operated with all of Producer's Protective Functions in service whenever the Generating Facility is operated in parallel with PG&E's Distribution System. Any deviation from these requirements may occur only when the Parties have agreed to such deviations in writing.
- 5.9 If Producer declares that its Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PUC (or any successor definition of Cogeneration (Cogeneration Requirements)), Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet such Cogeneration Requirements, per Appendix D of this Agreement.
- 5.10 If Producer's Generating Facility includes any energy storage device(s), Distribution Provider may provide requirements that must be met by the Producer prior to initiating Parallel Operation with PG&E's Distribution System and throughout the term of this Agreement, including but not limited to the requirements set forth in Appendix I of this Agreement.
- 5.11 Smart Inverters

For Producer applications received on or after September 9, 2017, the Producer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.

Distribution Provider may require a field verification of the Producer's inverter. Producer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Producer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Producer will need to cease operation of generating facility until verification is confirmed by Distribution Provider.

(Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at:

<http://www.gosolarcalifornia.org/equipment/inverters.php>.)



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Verification of compliance with such requirements shall be provided by the Producer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Producer has submitted the interconnection application prior to September 9, 2017,
- (c) the Producer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹ no later than March 31, 2018, or
- (d) the Producer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. Producer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
- (ii) a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

6. INTERCONNECTION FACILITIES

6.1 Producer and/or PG&E, as appropriate, shall provide Interconnection Facilities that adequately protect PG&E's Distribution System, personnel, and other persons from damage or injury, which may be caused by the operation of Producer's Generating Facility.

¹ A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments,
2. A completed signed Interconnection Agreement,
3. Evidence of the Producer final inspection clearance from the governmental authority having jurisdiction over the generating system.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

- 6.2 Producer shall be solely responsible for the costs, design, purchase, construction, operation, and maintenance of the Interconnection Facilities that Producer owns.
- 6.3 If the provisions of PG&E's Rule 21, or any other tariff or rule approved by the Commission, requires PG&E to own and operate a portion of the Interconnection Facilities, Producer and PG&E shall promptly execute a Special Facilities Agreement that establishes and allocates responsibility for the design, installation, operation, maintenance, and ownership of the Interconnection Facilities. This Special Facilities Agreement shall be attached to and made a part of this Agreement as Appendix C.
- 6.4 The Interconnection Facilities may include Net Generation Output Metering for determination of standby charges and applicable non-bypassable charges, and/or other meters required for PG&E's administration and billing pursuant to PG&E's tariffs for net energy metering.

7. LIMITATION OF LIABILITY

Each Party's 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.

8. INSURANCE

- 8.1 In connection with Producer's performance of its duties and obligations under this Agreement, Producer shall maintain, during the term of this Agreement, general liability insurance with a combined single limit of not less than:
- (a) Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than one hundred (100) kW;
 - (b) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
 - (c) Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is twenty (20) kW or less.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

- (d) Two hundred thousand dollars (\$200,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is ten (10) kW or less and Producer's Generating Facility is connected to an account receiving residential service from PG&E.

Such general liability insurance shall include coverage for "Premises-Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations."

- 8.2 The general liability insurance required in Section 8.1 shall, by endorsement to the policy or policies, (a) include PG&E as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that PG&E shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.3 If Producer's Generating Facility employs solely of Renewable Electrical Generation Facilities the requirements of Section 8.1 shall be waived. However, to the extent that Producer has currently in force Commercial General Liability or Personal (Homeowner's) Liability insurance, Producer agrees that it will maintain such insurance in force for the duration of this Agreement in no less than amounts currently in effect. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance prior to commencing operations. Such insurance shall provide for thirty (30) calendar days written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.4 Evidence of the insurance required in Section 8.2 shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by PG&E.
- 8.5 Producer agrees to furnish the required certificates and endorsements to PG&E prior to Initial Operation. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance.
- 8.6 If Producer is self-insured with an established record of self-insurance, Producer may comply with the following in lieu of Sections 8.1 through 8.4:
 - (a) Producer shall provide to, PG&E, at least thirty (30) calendar days prior to the date of Initial Operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under Section 8.1.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

(b) If Producer ceases to self-insure to the level required hereunder, or if Producer are unable to provide continuing evidence of Producer's ability to self-insure, Producer agrees to immediately obtain the coverage required under Section 8.1.

8.7 All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted via email or fax to the following:

Pacific Gas and Electric Company
c/o EXIGIS LLC
support@exigis.com
Fax: 646-755-3327

9. NOTICES

9.1 Any written notice, demand, or request required or authorized in connection with this Agreement (Notice) shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the address specified below:

If to PG&E:

[Contact information to be supplied]

If to Producer:

[Contact information to be supplied]

9.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 9.1.

9.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

10. REVIEW OF RECORDS AND DATA

- 10.1 PG&E shall have the right to review and obtain copies of Producer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Producer's Generating Facility or its interconnection with PG&E's Distribution System.
- 10.2 Producer authorizes to release to the California Energy Commission (CEC) information regarding Producer's facility, including customer name, location, size, and operational characteristics of the unit, as requested from time to time pursuant to the CEC's rules and regulations.

11. ASSIGNMENT

Producer shall not voluntarily assign its rights nor delegate its duties under this Agreement without PG&E's written consent. Any assignment or delegation Producer makes without PG&E's written consent shall not be valid. PG&E shall not unreasonably withhold its consent to Producer's assignment of this Agreement.

12. NON-WAIVER

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

13. GOVERNING LAW, JURISDICTION OF COMMISSION, INCLUSION OF PG&E'S TARIFF SCHEDULES AND RULES

- 13.1 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 without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 13.2 This Agreement shall, at all times, be subject to such changes or modifications by the Commission as it may from time to time direct in the exercise of its jurisdiction.
- 13.3 The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Tariff Schedules and Rules applicable to the electric service provided by, PG&E, which Tariff



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Schedules and Rules are hereby incorporated into this Agreement by this reference.

13.4 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application for change in rates, charges, classification, service, tariff or rule or any agreement relating thereto.

14. AMENDMENT AND MODIFICATION

This Agreement can only be amended or modified in writing, signed by both Parties.

15. ENTIRE AGREEMENT

This Agreement, including any incorporated Tariff Schedules and rules, contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated tariff schedules and rules.

16. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below.

PACIFIC GAS AND ELECTRIC COMPANY

Signature lines for both parties with labels: (Company Name), (Signature), (Print Name), (Title), (Date)

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix A**

APPENDIX A

**DESCRIPTION OF GENERATING FACILITY
AND SINGLE-LINE DIAGRAM
(Provided by Producer)**

(Note: The Description of the Generating Facility should include, but not limited to, for each of the technology types of generation: spatial configuration, net and gross nameplate ratings, manufacturer, if the generators are certified under Rule 21, protection equipment, and intended mode of operation [i.e. non-export: export up to 2 seconds; inadvertent export: export between 2 seconds and 60 seconds; and continuous export: export greater than 60 seconds]. Additionally points of interconnection with PG&E, as well as locations and type of protection equipment and disconnect switches should be identified.)

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix B**

APPENDIX B

RULES “2” AND “21”

(Note: PG&E's electric Rules “2” and “21” may be subject to such changes or modifications by the Commission as the Commission may, from time to time, direct in the exercise of its jurisdiction. PG&E's tariffs, including Rules “2” and “21” can be accessed via the PG&E website at www.pge.com/tariffs. Upon request, PG&E can provide copies to Producer of Rules “2” and “21.”)



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix C**

APPENDIX C (If Applicable)

**RULE 21 “SPECIAL FACILITIES” AGREEMENT
(Formed between the Parties)**

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix D**

APPENDIX D (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"COGENERATION FACILITY" PURSUANT TO SECTION 216.6 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the Competition Transition Charge exemption available under Section 372 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PU Code (Cogeneration Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, the Generating Facility shall continue to meet the Cogeneration Requirements. If Producer becomes aware that its Generating Facility has ceased to meet the Cogeneration Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Cogeneration Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Cogeneration Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Cogeneration Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Cogeneration Requirements, then the Cogeneration status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Cogeneration facility (the Cogeneration Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Cogeneration Status Change and provide Notice to Producer of the Cogeneration Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Cogeneration Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Cogeneration Requirements. PG&E shall invoice the Producer's electric service account through which the Generating Facility is Interconnected with PG&E's Distribution System for Competition Transition Charges (CTCs) that were not previously billed during the period between the effective date of the Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Cogeneration Requirements and therefore was eligible for the exemption from CTCs available under Section 372 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix E**

APPENDIX E (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"DISTRIBUTED ENERGY RESOURCES GENERATION" FACILITY
PURSUANT TO SECTION 353.1 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the tariff charge exemption available under Section 353.3 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Distributed Energy Resources Generation as such term is used in Section 353.1 of the PU Code (DERG Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the DERG Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the DERG Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the DERG Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the DERG Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the DERG Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the DERG Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the DERG Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the DERG Status Change and provide Notice to Producer of the DERG Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the DERG Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the DERG Requirements. PG&E shall invoice the Producer electric service account through which the Generating Facility is Interconnected with PG&E's Distribution System for any tariff charges that were not previously billed during the period between the effective date of the DERG Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the DERG Requirements and therefore was eligible for the exemption from tariff charges available under Section 353.3 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)**

Appendix G

APPENDIX G (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS AN
ELIGIBLE BIOGAS ELECTRICAL GENERATING FACILITY PURSUANT
TO SECTION 2827.9 OF THE CALIFORNIA PUBLIC UTILITIES CODE**

Producer has declared that the Generating Facility meets the requirements for an Eligible Biogas Electrical Generating Facility, as defined in Section 2827.9 of the California Public Utilities Code (Eligibility Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the Eligibility Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the Eligibility Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Eligibility Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Eligibility Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the Eligibility Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Producer of the Eligibility Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Eligibility Requirements. PG&E shall invoice the Producer for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM-BIO, Experimental Biogas Net Energy Metering.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)**

Appendix H

Appendix H

**SCHEDULE NEM CUSTOMER-GENERATOR WARRANTY THAT IT
MEETS THE REQUIREMENTS FOR AN ELIGIBLE CUSTOMER-
GENERATOR AND IS AN ELIGIBLE RENEWABLE ELECTRICAL
GENERATION FACILITY PURSUANT TO SECTION 2827 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

(This Affidavit needs to be completed and submitted to PG&E by the Customer-Generator every time a new NEM interconnection agreement for a Renewable Electrical Generation Facility is executed or whenever there is a change in ownership of the Generating Facility).

Circle Type of Renewable Electrical Generation Facility:

biomass	geothermal	municipal solid waste
solar thermal	fuel cell	landfill gas
small hydroelectric generation	ocean wave	digester gas
ocean thermal	tidal current	

NEM Customer-Generator (Customer) declares that

- (1) it meets the requirements to be an “Eligible Customer-Generator” and its Generating Facility.
- (2) (a) meets the requirements of an “Renewable Electrical Generation Facility”, as defined in Section 2827(b)(5) of the California Public Utilities Code and (b) satisfies the definitions of the renewable resource for the Renewable Electrical Generation Facility in the latest version of the California Energy Commission’s (CEC’s) Renewables Portfolio Standard (RPS) Eligibility Guidebook and the Overall Program Guidebook. ² (Eligibility Requirements).

² The RPS Guidebooks can be found at: <http://www.energy.ca.gov/renewables/documents/index.html#rps>

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Appendix H**

Included in these eligibility requirements (check as applicable) pursuant to Public Utilities Code section 2827(b)(5) and Public Resource Code Section 25741 paragraph 1(a):

- If the Renewable Electrical Generation Facility is a fuel cell, or otherwise uses renewable biogas or otherwise, Eligible Customer-Generator warrants that the fuel cell is powered solely with renewable fuel.
- If the Renewable Electrical Generation Facility is a Small hydroelectric generating facility, customer warrants that it will not cause an adverse impact on instream beneficial uses, nor cause a change in the volume or timing of streamflow).

If the Customer uses biogas or a renewable fuel as the fuel for their Renewable Electrical Generation Facility:

- Eligible Customer-Generator warrants that the Renewable Electrical Generation Facility is powered solely with renewable fuel.

Eligible Customer-Generator warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, Eligible Customer-Generator and the Generating Facility shall continue to meet the Eligibility Requirements. If Eligible Customer-Generator or the Generating Facility ceases to meet the Eligibility Requirements, Eligible Customer-Generator shall promptly provide PG&E with Notice of such change pursuant to Section 11 of this Agreement. If at any time during the term of this Agreement PG&E determines, at its reasonable discretion, that Eligible Customer-Generator or Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Eligible Customer-Generator to provide evidence, that Eligible Customer-Generator and/or Generating Facility continues to meet the Eligibility Requirements, within 20 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Eligible Customer-Generator to monitor the Generating Facility's compliance with the Eligibility Requirements – PG&E will provide a minimum of 10 business days notice to the Eligible Customer-Generator should PG&E decide an inspection is required. If PG&E determines in its reasonable judgment that Eligible Customer-Generator either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Eligibility Status shall be deemed ineffective until such time as Eligible Customer-Generator again demonstrates to PG&E's reasonable satisfaction that Eligible Customer-Generator meets the requirements for an Eligible Customer-Generator and/or the Generating Facility meets the requirements for a Eligible electrical generating facility (the Eligibility Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Eligible Customer-Generator of the Eligibility Status Change pursuant to Section 11 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Eligible Customer-Generator and/or Generating Facility first ceased to meet the



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Appendix H

Eligibility Requirements. PG&E shall invoice the Eligible Customer-Generator for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Eligible Customer-Generator's representations that Eligible Customer-Generator and/or Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM Net Energy Metering Service for Eligible Customer-Generators.

Any amounts to be paid or refunded by Eligible Customer-Generator, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Eligible Customer-Generator's receipt of such invoice.

Unless otherwise ordered by the CPUC, this Agreement at all times shall be subject to such modifications as the CPUC may direct from time to time in the exercise of its jurisdiction.

I certify the above is true and correct,

Customer-Generator Signature: _____

Name: _____

Title: _____

Date: _____



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Appendix I

APPENDIX I (If Applicable)

OPERATING REQUIREMENTS FOR ENERGY STORAGE DEVICE(S)

The following Operating Requirement(s) apply to the charging functions of the Generating Facility:

- Producers storage device(s) will not consume power from Distribution Provider's Distribution System at any time.
Producers storage device(s) will not cause the Host Load to exceed its normal peak demand.
To avoid upgrades or other technical mitigation items identified in the interconnection process, Producer has chosen the following Generating Facility operating constraint(s):

For the annual period between [Month/Day] and [Month/Day]
And during the hours of
The storage device(s) will consume no more than a total of kW from the Distribution System.
This operating constraint voids the need for the following specific mitigation scope:

Table with 6 empty rows for specifying mitigation scope.

No other charging function limitation is required for this Generating Facility except the requirements above. Producer will be responsible for the costs of the corresponding upgrades or other technical mitigations if at any time the Producer elects to forego or violates the operating requirement.

Consistent with current load service Rules, Distribution Provider is not required to reserve capacity for load. Producer is responsible to contact the utility for any modification to its equipment or change in operations that may result in increased load demand per Electric Rule 3.C.

If any operating requirement is specified above, Distribution Provider reserves the right to ask for data at the 15-minute interval level at any time to verify that the operating requirement is being met. Distribution Provider will make such request via a written notice no more than once per calendar quarter. Producer must provide such data within 30 Calendar Days of the written request.

If the Generating Facility fails to adhere to the operating requirements at any time, it will be disconnected immediately in accordance with Rule 21 Section D.9 and not reconnected until an approved mitigation (e.g., supervising controls) is in place as determined by Distribution Provider.



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Appendix J

**Interconnection Agreement for Net Energy Metering of
Solar or Wind Electric Generating Facilities of 1,000 KW or
Less, Other Than Facilities of 30 KW or Less**

APPENDIX J
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)



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Appendix J

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage **only capable** of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Appendix J

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ + _____ =. total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ + _____ =. total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



Electric Sample Form No. 79-1069-02
Generating Facility Interconnection Agreement (Multiple Tariff NEM2MT)

Sheet 1

**Please Refer to Attached
Sample Form**

GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

This *Generating Facility Interconnection Agreement (Multiple Tariff NEM2MT)* (Agreement) is entered into by and between _____ (Producer), and Pacific Gas and Electric Company (PG&E) a California Corporation. Producer and PG&E are sometimes also referred to in this Agreement jointly as “Parties” or individually as “Party.” In consideration of the mutual promises and obligations stated in this Agreement and its attachments, the Parties agree as follows:

1. SCOPE AND PURPOSE

This Agreement provides for Producer to interconnect and operate a Generating Facility in parallel with PG&E’s Electric System to serve the electrical loads at the location identified in Section 2.4 (or for the qualifying energy where permitted under Section 218 of the California Public Utilities Code (PUC). The Generating Facility must be a combination of generators, but must include at least one NEM2 “Eligible customer-generator.” (as defined in PG&E’s Schedule NEM2). “Eligible customer-generator” may also include other eligible customer-generators such as NEM2 Renewable Electrical Generation Facility(ies), Renewable Electrical Generation Facility(ies) (as defined in PG&E’s Schedule NEM) or Eligible Fuel Cell Electrical Generating Facility(ies) (as defined in PG&E’s Schedule NEMFC), as allowed under Special Condition 4 of Schedule NEM2.

- 1.1. This Agreement provides for Producer to operate the Eligible Generator(s) pursuant to the provisions of Section 2827.1 et seq. of the PU Code and the applicable PG&E tariffs for net energy metering. This Agreement also provides for Producer to operate its Non-Eligible Generator(s). This Agreement does not provide for retail electrical service by PG&E to Producer. Such arrangements must be made separately between PG&E and Producer.
- 1.2. This Agreement does not address Producer’s account billing and payment for energy consumption. For the Generating Facility as specified in Section 2 of this Agreement, please refer to the applicable PG&E net-energy-metered (NEM and/or NEM2) tariff schedules for billing and payment protocol.

2. SUMMARY AND DESCRIPTION OF PRODUCER’S GENERATING FACILITY

- 2.1 A description of the Generating Facility, including a summary of its significant components and a single-line diagram showing the general arrangement of how Producer’s Generating Facility and loads are interconnected with PG&E’s Electric System, are attached to and made a part of this Agreement. (Supplied by Producer as Appendix A).



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

2.2 Generating Facility identification number: _____ (Assigned by PG&E).

2.3 Producer's electric service agreement ID number: _____ (Assigned by PG&E).

2.4 Name and address used by PG&E to locate the electric service account used to interconnect the Generating Facility with PG&E's Electric System:

Name: _____

Address: _____

City/Zip Code: _____

2.5 The Gross Nameplate Rating of the Generating Facility is:

2.5.1 Eligible Generator(s):

Table with 2 columns and 7 rows listing generator types and their kW ratings, including biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current, and small hydroelectric generation with storage/batteries details.

2.5.2 Non-Eligible Generator(s): _____ kW

2.5.3 Total Gross Nameplate Rating of the Generating Facility: _____ kW

2.6 The Net Nameplate Rating of the Generating Facility is:



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

2.6.1 Eligible Renewable Electrical Generation Facility Generator(s):

Table with 2 columns and 7 rows listing eligible renewable energy sources like biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, and small hydroelectric generation with associated kW ratings.

2.6.2 Non-Eligible Generator(s): _____ kW

2.6.3 Total Net Nameplate Rating of the Generating Facility: _____ kW

2.7 The maximum level of power that may be exported by the Generating Facility to PG&E’s Electric System is expected to be:

2.7.1 Eligible Generator(s):

Table with 2 columns and 7 rows listing eligible renewable energy sources like biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, and small hydroelectric generation with associated kW ratings.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

2.7.2 Non-Eligible Generator(s): _____ kW

2.7.3 Total maximum level of power that may be exported by the Generating Facility: _____ kW

2.8 the purpose of securing the Competition Transition Charge exemption available under Section 372 of the California Public Utilities Code (PUC), Producer hereby declares that the portion of the Generating Facility that is generating in a combined heat and power mode

☐ does / ☐ does not meet the requirements for Cogeneration as such term is used in Section 216.6 of the California Public Utilities Code.

2.9 The Generating Facility's expected date of Initial Operation is _____. The expected date of Initial Operation shall be within two years of the date of this Agreement.

2.10 For the purpose of securing certain tariff charge exemptions available under the PU Code, Producer hereby declares the following for each Generator technology of the Generating Facility:

Requirements for Distributed Energy Resource Generation as such term is used in Section 353.1 of the PU Code.

Table with 2 columns and 8 rows listing generator technologies (biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, small hydroelectric generation, fuel cell (under NEMFC), digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current, biogas digester (under NEMBIO), other technology) and their compliance status (are met / are not met) with checkboxes.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

2.11 Customer-Generator's otherwise-applicable-rate schedule as of the execution of this Agreement is: _____

3. DOCUMENTS INCLUDED; DEFINED TERMS

3.1 This Agreement includes the following exhibits which are specifically incorporated herein and made a part of this Agreement.

Appendix A - Description of Generating Facility and Single-Line Diagram (Supplied by Producer).

Appendix B - Web-site references to Rules 2 and 21 and other selected rules and tariffs of PG&E (Supplied by PG&E).

Appendix C - A Copy of *PG&E's Agreement for Installation or Allocation of Special Facilities for Parallel Operation of Nonutility-Owned Generation and/or Electrical Standby Service* (Form 79-280) (Special Facility Agreement), if applicable, (Formed by the Parties).

Appendix D - Producer's warranty that the Generating Facility meets the requirements for a Cogeneration facility pursuant to Section 216.6 of the PU Code (when applicable).

Appendix E - Producer's warranty that the Generating Facility meets the requirements for Distributed Energy Resources Generation as defined in Section 353.1 of the PU Code (when applicable).

Appendix F - NEM2 Load Aggregation Customer-Generator Declaration Warranting NEM2 Aggregation Is Located On Same or Adjacent or Contiguous Property to Generator Parcel

Appendix G - Producer's warranty that it meets the requirements for an Eligible Biogas Digester Electrical Generating Facility, (applicable Generator(s) only) as defined in Section 2827.9 of the PU Code (when applicable).

Appendix H - Schedule NEM and/or NEM2 Customer-Generator Warranty that it Meets the Requirements for an Eligible Customer-Generator and is an Eligible Renewable Electrical Generation Facility Pursuant to Section 2827.1 of the California Public Utilities Code.

Appendix I -Operating Requirements for Energy Storage Device(s) (when applicable).

Appendix J - NEMFC Customer Agreement Starting January 1, 2017 Until California Air Resources Board Emission Standard is Established.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

3.2 When initially capitalized, whether in the singular or in the plural, the terms used herein shall have the meanings assigned to them either in this Agreement or in PG&E's Rule 21 Section C.

4. TERM AND TERMINATION

4.1 This Agreement shall become effective as of the last date entered in Section 16, below. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:

- (a) The Parties agree in writing to terminate the Agreement, or
- (b) Unless otherwise agreed in writing by the Parties, at 12:01 A.M. on the day following the date the electric service account through which Producer's Generating Facility is interconnected to PG&E's Electric System is closed or terminated, or
- (c) At 12:01 A.M. on the 61st day after Producer or PG&E provides written Notice pursuant to Section 9 below to the other Party of Producer's or PG&E's intent to terminate this Agreement.

4.2 Producer may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for any reason. PG&E may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for one or more of the following reasons:

- (a) A change in applicable rules, tariffs, and regulations, as approved or directed by the California Public Utilities Commission "Commission," or a change in any local, state or federal law, statute or regulation, either of which materially alters or otherwise affects PG&E's ability or obligation to perform PG&E's duties under this Agreement; or,
- (b) Unless otherwise agreed to in writing by the Parties, Producer fails to take all corrective actions specified in PG&E's Notice that Producer's Generating Facility is out of compliance with the terms of this Agreement within the time frame set forth in such Notice; or,
- (c) Producer fails to interconnect and operate the Generating Facility per the terms of this Agreement prior to 120 days after the date set forth in Section 2.9, above, as the Generating Facility's expected date of Initial Operation; or,
- (d) Producer abandons the Generating Facility. PG&E shall deem the Generating Facility to be abandoned if PG&E determines, in its reasonable opinion, the Generating Facility is non-operational and Producer does not provide a substantive response to PG&E Notice of its intent to terminate this Agreement as a result of Producer's apparent abandonment of the Generating Facility affirming Producer's intent and ability to continue to operate the Generating Facility.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

- (e) Producer makes a change to the physical configuration of the Generating Facility, as declared in Section 2 and Appendix A of this Agreement.
- 4.3 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application to terminate this Agreement.
- 4.4 Any agreements attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. GENERATING FACILITY AND OPERATING REQUIREMENTS

- 5.1 Except for that energy delivered to PG&E's Electric System, electric energy produced by Producer's Generating Facility shall be used solely to serve electrical loads connected to the electric service account that PG&E uses to interconnect Producer's Generating Facility (or, where permitted under Section 218 of the PUC, the electric loads of an on-site or neighboring party lawfully connected to Producer's Generating Facility through Producer's circuits). Producer shall not use the Generating Facility to serve electrical loads that will cause Producer to be considered an "electrical corporation" as such term is used in Section 218 of the California Public Utilities Code.
- 5.2 Unless otherwise agreed upon in writing by the Parties, this Agreement does not provide for, nor otherwise require PG&E to purchase, transmit, distribute, or store the electrical energy produced by Producer's Generating Facility.
- 5.3 Producer is responsible for operating the Generating Facility in compliance with all of PG&E's tariffs, including but not limited to PG&E's Rule 21 and applicable NEM-2 tariff schedules, and applicable safety and performance standards established by the National Electric Code, Institute of Electrical and Electronic Engineers, accredited testing laboratories such as Underwriters Laboratories, rules of the Commission regarding safety and reliability, and any other regulations and laws governing the Interconnection of the Generating Facility.
- 5.4 Producer shall: (a) maintain the Generating Facility and Interconnection Facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, Section 5.3, and (b) obtain any governmental authorizations and permits required for the construction and operation of the Generating Facility and Interconnection Facilities. Producer shall reimburse PG&E for any and all losses, damages, claims, penalties, or liability it incurs as a result of Producer's failure to obtain or maintain any governmental authorizations and permits required for construction and operation of Producer's Generating Facility.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

- 5.5 Producer shall not commence parallel operation of the Generating Facility until PG&E has provided express written approval. Such approval shall normally be provided per the timelines established by the applicable PUC 2827 section, or by Rule 21. Such approval will be provided after PG&E's receipt of: (1) a completed Generating Facility Interconnection Application (Form 79-1174-02), including all supporting documents and payments as described in the Application; (2) any required NEM supplemental application forms; (3) a signed and completed Generating Facility Interconnection Agreement (Multiple Tariff NEM2MT) (Form 79-1069-02); (4) a copy of the Producer's final inspection clearance from the governmental authority having jurisdiction over the Generating Facility; and (5) submission of all applicable payments for reviews, studies, Interconnection Facilities, and Electric System Modifications. Such approval will not be unreasonably withheld. PG&E shall have the right to have representatives present at the Commissioning Test as defined in Rule 21. Producer shall notify PG&E at least five (5) business days prior to the initial testing.
- 5.6 In no event shall the delivery of the maximum electric power to PG&E's Electric System exceed the amount or other limitations specified in Section 2 and Appendix A of this Agreement. If Producer does not regulate its Generating Facility in compliance with the limitations set forth in this Agreement, PG&E may require Producer to disconnect its Generating Facility from PG&E's Electric System until Producer demonstrates to PG&E's reasonable satisfaction that Producer has taken adequate measures to regulate the output of its Generating Facility and control its deliveries of electric power to PG&E. Further, should PG&E determine that Producer's operation of the Generating Facility is causing an unsafe condition or is adversely affecting PG&E's ability to utilize its Electric System in any manner, even if Producer's deliveries of electric power to PG&E's Electric System are within the limitations specified in this Agreement, PG&E may require Producer to temporarily or permanently reduce or cease deliveries of electric power to PG&E's Electric System. Alternatively, the Parties may agree to other corrective measures so as to mitigate the effect of electric power flowing from the Generating Facility to PG&E's Electric System. Producer's failure to comply with the terms of this Section shall constitute a material breach of this Agreement and PG&E may initiate termination in accordance with the terms of Section 4.2(b).
- 5.7 Producer shall not deliver reactive power to PG&E's Electric System unless the Parties have agreed otherwise in writing.
- 5.8 The Generating Facility shall be operated with all of Producer's Protective Functions in service whenever the Generating Facility is operated in parallel with PG&E's Electric System. Any deviation from these requirements may occur only when the Parties have agreed to such deviations in writing.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

- 5.9 If Producer declares that its Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PUC (or any successor definition of Cogeneration (Cogeneration Requirements), Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet such Cogeneration Requirements, per Appendix D of this Agreement.
- 5.10 In order to promote the safety and reliability of the customer Generating Facility, the applicant certifies that as a part of each interconnection request for a NEM and/or NEM2 Generating Facility, that all major solar system components (if any) are on the verified equipment list maintained by the California Energy Commission and certifies that other equipment, as determined by PG&E, has safety certification from a nationally recognized testing laboratory.
- 5.11 Producer certifies as a part of each interconnection request for a NEM and/or NEM2 Eligible Generating Facility that
- (i) a warranty of at least 10 years has been provided on all equipment and on its installation, or
 - (ii) a 10-year service warranty or executed “agreement” has been provided ensuring proper maintenance and continued system performance.
- 5.12 Producer rs on this tariff must pay for the interconnection of their NEM2 Generation Facilities as provided in Electric Rule 21, pursuant to Decision 16-01-044.
- 5.13 If Producer’s Generating Facility includes any energy storage device(s), Distribution Provider may provide requirements that must be met by the Producer prior to initiating Parallel Operation with PG&E’s Distribution System and throughout the term of this Agreement, including but not limited to the requirements set forth in Appendix I of this Agreement.
- 5.14 Smart Inverters
- For Producer applications received on or after September 9, 2017, the Producer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.
- Distribution Provider may require a field verification of the Producer’s inverter. Producer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Producer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Producer will need to cease operation of generating facility until verification is confirmed by Distribution



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

Provider.

(Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at:

<http://www.gosolarcalifornia.org/equipment/inverters.php>.)

Verification of compliance with such requirements shall be provided by the Producer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Producer has submitted the interconnection application prior to September 9, 2017,
- (c) the Producer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹¹ no later than March 31, 2018, or
- (d) the Producer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. Producer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
- (ii) a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

6. INTERCONNECTION FACILITIES

6.1 Producer and/or PG&E, as appropriate, shall provide Interconnection Facilities that adequately protect PG&E's Electric System, personnel, and

¹ A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments,
2. A completed signed Interconnection Agreement,
3. Evidence of the Producer final inspection clearance from the governmental authority having jurisdiction over the generating system.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

other persons from damage or injury, which may be caused by the operation of Producer's Generating Facility.

- 6.2 Producer shall be solely responsible for the costs, design, purchase, construction, operation, and maintenance of the Interconnection Facilities that Producer owns.
- 6.3 If the provisions of PG&E's Rule 21, or any other tariff or rule approved by the Commission, requires PG&E to own and operate a portion of the Interconnection Facilities, Producer and PG&E shall promptly execute a Special Facilities Agreement that establishes and allocates responsibility for the design, installation, operation, maintenance, and ownership of the Interconnection Facilities. This Special Facilities Agreement shall be attached to and made a part of this Agreement as Appendix C.
- 6.4 The Interconnection Facilities may include Net Generation Output Metering for determination of standby charges and applicable non-bypassable charges, and/or other meters required for PG&E's administration and billing pursuant to PG&E's tariffs for net energy metering.

7. LIMITATION OF LIABILITY

Each Party's 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.

8. INSURANCE

- 8.1 In connection with Producer's performance of its duties and obligations under this Agreement, Producer shall maintain, during the term of this Agreement, general liability insurance with a combined single limit of not less than:
 - (a) Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than one hundred (100) kW;
 - (b) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
 - (c) Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is twenty (20) kW or less.
 - (d) Two hundred thousand dollars (\$200,000) for each occurrence if the



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

Gross Nameplate Rating of Producer's Generating Facility is ten (10) kW or less and Producer's Generating Facility is connected to an account receiving residential service from PG&E.

Such general liability insurance shall include coverage for "Premises-Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations."

- 8.2 The general liability insurance required in Section 8.1 shall, by endorsement to the policy or policies, (a) include PG&E as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that PG&E shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.3 If Producer's Generating Facility employs solely of Renewable Electrical Generation Facilities the requirements of Section 8.1 shall be waived. However, to the extent that Producer has currently in force Commercial General Liability or Personal (Homeowner's) Liability insurance, Producer agrees that it will maintain such insurance in force for the duration of this Agreement in no less than amounts currently in effect. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance prior to commencing operations. Such insurance shall provide for thirty (30) calendar days written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.4 Evidence of the insurance required in Section 8.2 shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by PG&E.
- 8.5 Producer agrees to furnish the required certificates and endorsements to PG&E prior to Initial Operation. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance.
- 8.6 If Producer is self-insured with an established record of self-insurance, Producer may comply with the following in lieu of Sections 8.1 through 8.4:
- (a) Producer shall provide to, PG&E, at least thirty (30) calendar days prior to the date of Initial Operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under Section 8.1.
 - (b) If Producer ceases to self-insure to the level required hereunder, or if Producer are unable to provide continuing evidence of Producer's ability to self-insure, Producer agrees to immediately obtain the



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(MULTIPLE TARIFF NEM2MT)**

coverage required under Section 8.1.

- 8.7 All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted via email or fax to the following:

Pacific Gas and Electric Company
c/o EXIGIS LLC
support@exigis.com
Fax: 646-755-3327

9. NOTICES

- 9.1 Any written notice, demand, or request required or authorized in connection with this Agreement (Notice) shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the address specified below:

If to PG&E:

Pacific Gas and Electric Company
Attention: Electric Generation Interconnection - Contract Management
245 Market Street
Mail Code N7L
San Francisco, California 94105-1702

If to Producer:

Customer-Generator Name: _____
Address: _____
City: _____
Phone: (____) _____
FAX: (____) _____

- 9.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 9.1.
- 9.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.



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10. REVIEW OF RECORDS AND DATA

- 10.1 PG&E shall have the right to review and obtain copies of Producer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Producer's Generating Facility or its interconnection with PG&E's Electric System.
- 10.2 Producer authorizes to release to the California Energy Commission (CEC) information regarding Producer's facility, including customer name, location, size, and operational characteristics of the unit, as requested from time to time pursuant to the CEC's rules and regulations.

11. ASSIGNMENT

Producer shall not voluntarily assign its rights nor delegate its duties under this Agreement without PG&E's written consent. Any assignment or delegation Producer makes without PG&E's written consent shall not be valid. PG&E shall not unreasonably withhold its consent to Producer's assignment of this Agreement.

12. NON-WAIVER

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

13. GOVERNING LAW, JURISDICTION OF COMMISSION, INCLUSION OF PG&E'S TARIFF SCHEDULES AND RULES

- 13.1 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 without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 13.2 This Agreement shall, at all times, be subject to such changes or modifications by the Commission as it may from time to time direct in the exercise of its jurisdiction.
- 13.3 The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Tariff Schedules and Rules applicable to the electric service provided by, PG&E, which Tariff Schedules and Rules are hereby incorporated into this Agreement by this reference.



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13.4 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application for change in rates, charges, classification, service, tariff or rule or any agreement relating thereto.

14. AMENDMENT AND MODIFICATION

This Agreement can only be amended or modified in writing, signed by both Parties.

15. ENTIRE AGREEMENT

This Agreement, including any incorporated Tariff Schedules and rules, contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated tariff schedules and rules.

16. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below.

_____	PACIFIC GAS AND ELECTRIC COMPANY
(Company Name)	_____
_____	_____
(Signature)	(Signature)
_____	_____
(Print Name)	(Print Name)
_____	_____
(Title)	(Title)
_____	_____
(Date)	(Date)

**GENERATING FACILITY
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(MULTIPLE TARIFF NEM2MT)
Appendix A**

APPENDIX A

**DESCRIPTION OF GENERATING FACILITY
AND SINGLE-LINE DIAGRAM
(Provided by Producer)**

(Note: The Description of the Generating Facility should include, but not limited to, for each of the technology types of generation: spatial configuration, net and gross nameplate ratings, manufacturer, if the generators are certified under Rule 21, protection equipment, and intended mode of operation [i.e. non-export: export up to 2 seconds; inadvertent export: export between 2 seconds and 60 seconds; and continuous export: export greater than 60 seconds]. Additionally points of interconnection with PG&E, as well as locations and type of protection equipment and disconnect switches should be identified.)

**GENERATING FACILITY
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(MULTIPLE TARIFF NEM2MT)
Appendix B**

APPENDIX B

RULES “2” AND “21”

(Note: PG&E’s electric Rules “2” and “21” may be subject to such changes or modifications by the Commission as the Commission may, from time to time, direct in the exercise of its jurisdiction. PG&E’s tariffs, including Rules “2” and “21” can be accessed via the PG&E website at www.pge.com/tariffs. Upon request, PG&E can provide copies to Producer of Rules “2” and “21.”)



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Appendix C**

APPENDIX C (If Applicable)

**RULE 21 “SPECIAL FACILITIES” AGREEMENT
(Formed between the Parties)**

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(MULTIPLE TARIFF NEM2MT)
Appendix D**

APPENDIX D (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"COGENERATION FACILITY" PURSUANT TO SECTION 216.6 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the Competition Transition Charge exemption available under Section 372 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PU Code (Cogeneration Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, the Generating Facility shall continue to meet the Cogeneration Requirements. If Producer becomes aware that its Generating Facility has ceased to meet the Cogeneration Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Cogeneration Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Cogeneration Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Cogeneration Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Cogeneration Requirements, then the Cogeneration status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Cogeneration facility (the Cogeneration Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Cogeneration Status Change and provide Notice to Producer of the Cogeneration Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Cogeneration Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Cogeneration Requirements. PG&E shall invoice the Producer's electric service account through which the Generating Facility is Interconnected with PG&E's Electric System for Competition Transition Charges (CTCs) that were not previously billed during the period between the effective date of the Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Cogeneration Requirements and therefore was eligible for the exemption from CTCs available under Section 372 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
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(MULTIPLE TARIFF NEM2MT)
Appendix E**

APPENDIX E (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"DISTRIBUTED ENERGY RESOURCES GENERATION" FACILITY
PURSUANT TO SECTION 353.1 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the tariff charge exemption available under Section 353.3 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Distributed Energy Resources Generation as such term is used in Section 353.1 of the PU Code (DERG Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the DERG Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the DERG Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the DERG Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the DERG Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the DERG Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the DERG Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the DERG Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the DERG Status Change and provide Notice to Producer of the DERG Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the DERG Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the DERG Requirements. PG&E shall invoice the Producer electric service account through which the Generating Facility is Interconnected with PG&E's Electric System for any tariff charges that were not previously billed during the period between the effective date of the DERG Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the DERG Requirements and therefore was eligible for the exemption from tariff charges available under Section 353.3 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

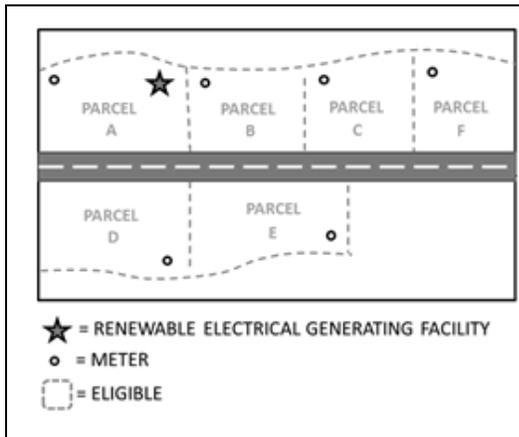
Appendix F

APPENDIX F (When applicable)

NEM2 LOAD AGGREGATION APPENDIX (If Applicable) CUSTOMER-GENERATOR DECLARATION WARRANTING NEM2 AGGREGATION IS LOCATED ON SAME OR ADJACENT OR CONTIGUOUS PROPERTY TO GENERATOR PARCEL

In accordance with Schedule NEM2, I, Customer-Generator represent and warrant under penalty of perjury that:

- 1) The total annual output in kWh of the generator is less than or equal to 110% (for solar and/or wind systems equal to or less than 30 kW) or 100% (for all other technologies and solar and/or wind systems greater than 30 kW) of the annual aggregated electrical load in kWh of the meters associated with the generator account, including the load on the generating account itself (before being offset by the generator); and
- 2) Each of the aggregated account meters associated with this NEM2 generator account are located either:
 - (i) on the property where the renewable electrical generation facility is located, or
 - (ii) are located within an unbroken chain of contiguous parcels that are all solely owned, leased or rented by the customer-generator. For purposes of Load Aggregation, parcels that are divided by a street, highway, or public thoroughfare are considered contiguous, provided they are within an unbroken chain of otherwise contiguous parcels that are all solely owned leased or rented by the customer-generator.



For example, assume there are five parcels (A, B, C, D, E, and F) that form a cluster of contiguous parcels and D and E are separated from A, B, C and F by a street, highway, or public thoroughfare. For the purposes of participating in Load Aggregation, all five parcels are considered contiguous, provided they are otherwise contiguous and all are solely owned, leased or rented by the customer-generator. Refer to the diagram at left (for illustrative purposes only.)

- 3) PG&E reserves the right to request a parcel map to confirm the property meets the requirements of 2) above; and
- 4) Customer-Generator agrees to notify PG&E if there is any change of status that makes any of the participating meters ineligible for meter aggregation to ensure that only eligible meters are participating; PG&E will require an updated Appendix and Declaration form; and
- 5) Upon request by PG&E, I agree to provide documentation that all aggregated meters meet the requirements of Rate Schedule NEM2 Special Condition 6 including but not limited to parcel maps and ownership records.

Customer Generator's Name

Signature

Date

Type/Print Name

Title

**GENERATING FACILITY
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Appendix G**

APPENDIX G (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS AN
ELIGIBLE BIOGAS ELECTRICAL GENERATING FACILITY PURSUANT
TO SECTION 2827.9 OF THE CALIFORNIA PUBLIC UTILITIES CODE**

Producer has declared that the Generating Facility meets the requirements for an Eligible Biogas Electrical Generating Facility, as defined in Section 2827.9 of the California Public Utilities Code (Eligibility Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the Eligibility Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the Eligibility Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Eligibility Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Eligibility Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the Eligibility Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Producer of the Eligibility Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Eligibility Requirements. PG&E shall invoice the Producer for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM-BIO, Experimental Biogas Net Energy Metering.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.



**GENERATING FACILITY
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(MULTIPLE TARIFF NEM2MT)
Appendix H**

Appendix H

**SCHEDULE NEM2 CUSTOMER-GENERATOR WARRANTY THAT IT
MEETS THE REQUIREMENTS FOR AN ELIGIBLE CUSTOMER-
GENERATOR AND IS AN ELIGIBLE RENEWABLE ELECTRICAL
GENERATION FACILITY PURSUANT TO SECTION 2827.1 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

(This Affidavit needs to be completed and submitted to PG&E by the Customer-Generator every time a new NEM2 interconnection agreement for a Renewable Electrical Generation Facility is executed or whenever there is a change in ownership of the Generating Facility).

Check Type of Renewable Electrical Generation Facility:

<input type="checkbox"/> biomass	<input type="checkbox"/> geothermal	<input type="checkbox"/> municipal solid waste
<input type="checkbox"/> solar thermal	<input type="checkbox"/> fuel cell	<input type="checkbox"/> landfill gas
<input type="checkbox"/> small hydroelectric generation	<input type="checkbox"/> ocean wave	<input type="checkbox"/> digester gas
<input type="checkbox"/> ocean thermal	<input type="checkbox"/> tidal current	<input type="checkbox"/> Storage/Batteries _____ amp hours _____ inverter kWh

NEM2 Customer-Generator (Customer) declares that

- (1) it meets the requirements to be an “Eligible Customer-Generator” and its Generating Facility.
- (2) (a) meets the requirements of an “Renewable Electrical Generation Facility”, as defined in Section 2827(b)(5) of the California Public Utilities Code and (b) satisfies the definitions of the renewable resource for the Renewable Electrical Generation Facility in the latest version of the California Energy Commission’s (CEC’s) Renewables Portfolio Standard (RPS) Eligibility Guidebook and the Overall Program Guidebook. ² (Eligibility Requirements).

² The RPS Guidebooks can be found at: <http://www.energy.ca.gov/renewables/documents/index.html#rps>

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Appendix H**

Included in these eligibility requirements (check as applicable) pursuant to Public Utilities Code section 2827(b)(5) and Public Resource Code Section 25741 paragraph 1(a):

- If the Renewable Electrical Generation Facility is a fuel cell, or otherwise uses renewable biogas or otherwise, Eligible Customer-Generator warrants that the fuel cell is powered solely with renewable fuel.
- If the Renewable Electrical Generation Facility is a Small hydroelectric generating facility, customer warrants that it will not cause an adverse impact on instream beneficial uses, nor cause a change in the volume or timing of streamflow).

If the Customer uses biogas or a renewable fuel as the fuel for their Renewable Electrical Generation Facility:

- Eligible Customer-Generator warrants that the Renewable Electrical Generation Facility is powered solely with renewable fuel.

Eligible Customer-Generator warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, Eligible Customer-Generator and the Generating Facility shall continue to meet the Eligibility Requirements. If Eligible Customer-Generator or the Generating Facility ceases to meet the Eligibility Requirements, Eligible Customer-Generator shall promptly provide PG&E with Notice of such change pursuant to Section 11 of this Agreement. If at any time during the term of this Agreement PG&E determines, at its reasonable discretion, that Eligible Customer-Generator or Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Eligible Customer-Generator to provide evidence, that Eligible Customer-Generator and/or Generating Facility continues to meet the Eligibility Requirements, within 20 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Eligible Customer-Generator to monitor the Generating Facility's compliance with the Eligibility Requirements – PG&E will provide a minimum of 10 business days notice to the Eligible Customer-Generator should PG&E decide an inspection is required. If PG&E determines in its reasonable judgment that Eligible Customer-Generator either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Eligibility Status shall be deemed ineffective until such time as Eligible Customer-Generator again demonstrates to PG&E's reasonable satisfaction that Eligible Customer-Generator meets the requirements for an Eligible Customer-Generator and/or the Generating Facility meets the requirements for a Eligible electrical generating facility (the Eligibility Status Change).



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)
Appendix H**

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Eligible Customer-Generator of the Eligibility Status Change pursuant to Section 11 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Eligible Customer-Generator and/or Generating Facility first ceased to meet the Eligibility Requirements. PG&E shall invoice the Eligible Customer-Generator for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Eligible Customer-Generator's representations that Eligible Customer-Generator and/or Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM2 Net Energy Metering Service for Eligible Customer-Generators.

Any amounts to be paid or refunded by Eligible Customer-Generator, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Eligible Customer-Generator's receipt of such invoice.

Unless otherwise ordered by the CPUC, this Agreement at all times shall be subject to such modifications as the CPUC may direct from time to time in the exercise of its jurisdiction.

I certify the above is true and correct,

Customer-Generator Signature: _____

Name: _____

Title: _____

Date: _____

**GENERATING FACILITY
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Appendix I**

**APPENDIX I
(If Applicable)**

**OPERATING REQUIREMENTS FOR ENERGY STORAGE
DEVICE(S)**

The following Operating Requirement(s) apply to the charging functions of the Generating Facility:

- Producer's storage device(s) will not consume power from Distribution Provider's Distribution System at any time.
- Producer's storage device(s) will not cause the Host Load to exceed its normal peak demand. Normal peak demand is defined as the highest amount of power required from the Distribution System by Producer's complete facilities without the influence or use of the energy storage device(s).
- To avoid upgrades or other technical mitigation items identified in the interconnection process, Producer has chosen the following Generating Facility operating constraint(s):

For the annual period between _____ [Month/Day] and _____ [Month/Day]

And during the hours of _____

The storage device(s) will consume no more than a total of ____ kW from the Distribution System.

This operating constraint voids the need for the following specific mitigation scope:

No other charging function limitation is required for this Generating Facility except the requirements above. Producer will be responsible for the costs of the corresponding upgrades or other technical mitigations if at any time the Producer elects to forego or violates the operating requirement.

Consistent with current load service Rules, Distribution Provider is not required to reserve capacity for load. Producer is responsible to contact the utility for any modification to its equipment or change in operations that may result in increased load demand per Electric Rule 3.C.

If any operating requirement is specified above, Distribution Provider reserves the right to ask for data at the 15-minute interval level at any time to verify that the operating requirement is being met. Distribution Provider will make such request via a written notice no more than once per calendar quarter. Producer must provide such data within



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
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Appendix I**

30 Calendar Days of the written request.

If the Generating Facility fails to adhere to the operating requirements at any time, it will be disconnected immediately in accordance with Rule 21 Section D.9 and not reconnected until an approved mitigation (e.g., supervising controls) is in place as determined by Distribution Provider.



**GENERATING FACILITY
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Appendix J**

NEMFC Customer Agreement Starting January 1, 2017 Until California Air Resources Board Emission Standard is Established and Approved by the CPUC as Needed.

Starting January 1, 2017, Customer applying for Schedule NEMFC, as revised pursuant to Assembly Bill 1637 (2016), agree as follows:

That their Eligible Fuel Cell Electrical Generating Facility must meet the reduction in greenhouse gas emissions standard to be established as required by the California Public Utilities (PU) Code Section 2827.10.

Since the applicable standards are not yet released by the California Air Resources Board (ARB) and/or approved as may be needed by the California Public Utilities Commission (CPUC), Customer agrees and understands that their approval for participation in NEMFC is contingent on their system meeting the new standard within three months of when the new standard becomes available. Specifically, I, Customer, understand and agree that if my fuel cell generator does not meet the ARB emission standard I will not be eligible for NEMFC.

Specifically, I will be responsible for the following:

1. Payment of all interconnection costs, including fees, studies, system upgrades, and any other pertinent interconnection costs.
2. Payment of the following nonbypassable charges on all departed load served by the fuel cell installed at my premises including but not limited to,
 - a. Public Purpose Program Charges;
 - b. Nuclear Decommissioning;
 - c. Department of Water Resources Bond Charges; and
 - d. Competition Transition Charge;
 - e. Other charges that the CPUC determines are to be charged on departed load and for which there is no exception for fuel cells pursuant to Schedule E-DCG.
3. I understand that I may be required to take service on standby tariff pursuant to Schedule S and pursuant to PU Code Section 2827.10(f)(2)(A).
4. I further understand that I will not be eligible for Rate Schedule NEMFC and will no longer receive any credit for any exports to the grid.

(Company Name)

(Signature)

(Print Name)

(Title)

(Date)

**GENERATING FACILITY
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Appendix K**

**Interconnection Agreement for Net Energy Metering of Solar
or Wind Electric Generating Facilities of 1,000 KW or Less,
Other Than Facilities of 30 KW or Less**

APPENDIX K
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)
Appendix K**

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage **only capable** of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)

GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT) Appendix K

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ + _____ =.
total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ + _____ =.
total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



Electric Sample Form No. 79-1174
Rule 21 Generator Interconnection Application

Sheet 1

**Please Refer to Attached
Sample Form**



INTERCONNECTION APPLICATION (Form 79-1174) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

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

Instructions				
Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p># Please indicate the number of each “type” and quantity 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>Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21? Answer “Yes” only if the Generator manufacturer can or has provided certification data.</p> <p>See PG&E’s Rule 21, Section L for additional information regarding Generator certification.</p>	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No



INTERCONNECTION APPLICATION (Form 79-1174) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
I - Power Factor Rating This value should be the nominal power factor rating designated by the manufacturer for the Generator. See PG&E's Rule 21, Section H.2.i. for additional information.				
J - PF Adjustment Range Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values. See PG&E's Rule 21, Section H.2.i.				
K - Wiring Configuration Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.				
L - (MP) 3-Phase Winding Configuration (Choose One) For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye
M - (MP) Neutral Grounding System Used (Choose One) Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected. If the grounding method used at this facility is not listed, please attach additional descriptive information.	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms
N - Short Circuit Current Produced by Generator	_____ (Amps)	_____ (Amps)	_____ (Amps)	_____ (Amps)
O – Prime Mover Type Please indicate the type and fuel used as the prime mover or source of energy for the Generator. 1 = Natural Gas 2 = Diesel Fueled 3 = Other Fuel	1 2 3	1 2 3	1 2 3	1 2 3



INTERCONNECTION APPLICATION (Form 79-1174) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>P - AC Disconnect</p> <p>For systems requiring an AC Disconnect only, please include the requested information about the AC Disconnect.</p> <p>See PG&E's Rule 21, Section H.1.d</p> <p>Located within 10 feet of the PG&E meter?</p>	<p>_____ Manufacturer</p> <p>_____ Model #</p> <p>_____ Rating (amps)</p> <p>____ Yes ____ No</p>	<p>_____ Manufacturer</p> <p>_____ Model #</p> <p>_____ Rating (amps)</p> <p>____ Yes ____ No</p>	<p>_____ Manufacturer</p> <p>_____ Model #</p> <p>_____ Rating (amps)</p> <p>____ Yes ____ No</p>	<p>_____ Manufacturer</p> <p>_____ Model #</p> <p>_____ Rating (amps)</p> <p>____ Yes ____ No</p>
<p>Q - Energy Storage (ES) System</p> <p>(For important sizing information related to DC-Couple configurations, see sizing note below).</p>	<p>_____ Manufacturer</p> <p>_____ Model #</p> <p>_____ Quantity of Units</p>			
<p>R - Lineside Tap</p> <p>PG&E has special requirements for a lineside tap.</p> <p>Contact PG&E at: Rule21Gen@PGE.Com for more information.</p>	<p>____ Yes ____ No</p>	<p>____ Yes ____ No</p>	<p>____ Yes ____ No</p>	<p>____ Yes ____ No</p>



INTERCONNECTION APPLICATION (Form 79-1174)

ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Energy Storage Charging Function:

Rated Charge Demand (Load): _____ kW

Estimated annual Net Energy Usage* of the energy storage device(s): _____ kWh

*Net Energy usage = (kWh input, including charging, storage device auxiliary loads and losses) – (kWh output including discharging)

Will the Distribution System be used to charge the storage device: Yes No

If no: Provide technical description of control systems including (e.g. Nationally-certified piece of equipment, Relays/metering):

Source of energy for Charging: _____

Mechanism to prevent charging from the Distribution System: _____

If Yes: Will charging the storage device(s) increase the host facility's existing peak load demand:

Yes No

If Yes: Provide the following loading information:

Amount of added peak demand: _____ kW

If no: Provide technical description of controls systems including:

Charging periods: _____

Mechanism to prevent charging from the Distribution System during host facility peak:

Expedited Interconnection Process Selection for Non-Export Energy Storage:

This project meets the requirements identified in Rule 21 Section N and this process is being selected for expedited interconnection.

Note on Sizing (DC-Coupled Configurations)

The size of the storage system in DC-coupled NEM-eligible generator plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

For example:

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ + _____ =
total _____

- What is each inverter's nameplate rating?

_____ + _____ + _____ + _____ + _____ =
total _____



Electric Sample Form No. 79-1174-02
Rule 21 Generator Interconnection Application

Sheet 1

**Please Refer to Attached
Sample Form**



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

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

Instructions				
Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>Please indicate the number of each “type” and quantity 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&E, has been verified by the customer as having safety certification from a nationally recognized testing laboratory.</p> <p>See PG&E’s Rule 21, Section L for additional information regarding Generator certification.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No			
<p>E - Generator Design</p> <p>Please indicate the design of each Generator.</p> <p>Designate “Inverter” anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.</p>	<input type="checkbox"/> Synch <input type="checkbox"/> Induct. <input type="checkbox"/> Inverter			



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>F - Gross Nameplate Rating (kVA)</p> <p>This is the capacity value normally supplied by the manufacturer and stamped on the Generator's nameplate.</p> <p>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.</p>				
<p>G - Energy Storage Electrical Source Function (in addition, please complete section: "Additional Information Required for Energy Storage")</p>	Max kWh Capacity:	Max kWh Capacity:	Max kWh Capacity:	Max kWh Capacity:
	Rated kW Discharge:	Rated kW Discharge:	Rated kW Discharge:	Rated kW Discharge:
<p>H - Operating Voltage</p> <p>This value should be the voltage rating designated by the manufacturer and used in this Generating Facility.</p> <p>Please indicate phase-to-phase voltages for 3-phase installations.</p> <p>See PG&E's Rule 21, Section H.2.b. and Table H.1., for additional information.</p>				
<p>I - Power Factor Rating</p> <p>This value should be the nominal power factor rating designated by the manufacturer for the Generator.</p> <p>See PG&E's Rule 21, Section H.2.i. for additional information.</p>				
<p>J - PF Adjustment Range</p> <p>Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values.</p> <p>See PG&E's Rule 21, Section H.2.i.</p>				
<p>K - Wiring Configuration</p> <p>Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.</p>				



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
L - (MP) 3-Phase Winding Configuration (Choose One) For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye
M - (MP) Neutral Grounding System Used (Choose One) Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected. If the grounding method used at this facility is not listed, please attach additional descriptive information.	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms
N - Short Circuit Current Produced by Generator:	_____ (Amps)	_____ (Amps)	_____ (Amps)	_____ (Amps)
O – Prime Mover Type Please indicate the type and fuel used as the prime mover or source of energy for the Generator. 1 = Natural Gas 2 = Diesel Fueled 3 = Other Fuel	1 2 3	1 2 3	1 2 3	1 2 3
P - AC Disconnect For systems requiring an AC Disconnect only, please include the requested information about the AC Disconnect. See PG&E's Rule 21, Section H.1.d Located within 10 feet of the PG&E meter?	_____ Manufacturer _____ Model # _____ Rating (amps) <input type="checkbox"/> Yes <input type="checkbox"/> No			



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
Q - Energy Storage (ES) System (For important sizing information related to DC-Coupled configurations, see sizing note below).	_____ Manufacturer _____ Model # _____ Quantity of Units			
R - Lineside Tap PG&E has special requirements for a lineside tap. Contact PG&E at: Rule21Gen@PGE.Com for more information.	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
S – Warranty or Service Agreement Applicant has verified that (i) a warranty of at least 10 years has been provided on all equipment and on its installation, or (ii) have a 10-year service warranty or executed “agreement” ensuring proper maintenance and continued system performance.	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No

Energy Storage Charging Function:

Rated Charge Demand (Load): _____ kW

Estimated annual Net Energy Usage* of the energy storage device(s): _____ kWh

*Net Energy usage = (kWh input, including charging, storage device auxiliary loads and losses) – (kWh output including discharging)

Will the Distribution Grid be used to charge the storage device: Yes No

If no: Provide technical description of control systems including (e.g. Nationally-certified piece of equipment, Relays/metering):
 Source of energy for Charging: _____
 Mechanism to prevent charging from the Distribution System: _____

If Yes: Will charging the storage device(s) increase the host facility’s existing peak load demand:
 Yes No

If Yes: Provide the following loading information:
 Amount of added peak demand: _____ kW

If no: Provide technical description of controls systems including:
 Charging periods: _____
 Mechanism to prevent charging from the Distribution System during host facility peak:



INTERCONNECTION APPLICATION (Form 79-1174-02)

ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Expedited Interconnection Process Selection for Non-Export Energy Storage:

- This project meets the requirements identified in Rule 21 Section N and this process is being selected for expedited interconnection.

Note on Sizing (DC-Coupled Configurations)

The size of the storage system in DC-coupled NEM-eligible generator plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

For example:

- What is the maximum continuous discharge capability for each storage unit?
_____ + _____ + _____ + _____ + _____ =. total _____
- What is each inverter's nameplate rating?
_____ + _____ + _____ + _____ + _____ =. total _____



Electric Sample Form No. 79-1193

Sheet 1

Agreement and Customer Authorization Net Energy Metering Interconnection for Solar and/or
Wind Electric Generating Facilities of 30 Kilowatts or Less Paired with Energy Storage of 10 Kilowatts or
Less

**Please Refer to Attached
Sample Form**

(Continued)

Advice 5501-E
Decision 19-01-030

Issued by
Robert S. Kenney
Vice President, Regulatory Affairs

Submitted March 22, 2019
Effective _____
Resolution _____



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less Paired with Energy Storage of 10 Kilowatts Or Less

IMPORTANT NOTES:

- 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.
 - Scheduled Load Reduction Program (SLRP)
 - SmartRate
- Customers who participate in Direct Access and Community Choice Aggregation must contact their Energy Service Provider directly regarding their NEM program.

Part I – Generating Facility Information and Responsible Parties

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

NEM 30 kilowatts or Less Paired with Energy Storage: Single Account Multiple Aggregated Accounts

Note: Net Energy Metering Aggregation (NEMA) is a program that allows customers with multiple meters to use the renewable energy generated at one meter (up to 1MW) to be credited against other meters that are located on parcel(s) that is/are contiguous or adjacent to the parcel that has the renewable generator. Energy Storage system must be 10 kilowatts or less.

Customer Sector (check only one):

<input type="checkbox"/> Residential	<input type="checkbox"/> Educational
<input type="checkbox"/> Commercial	<input type="checkbox"/> Military
<input type="checkbox"/> Industrial	<input type="checkbox"/> Other Government
<input type="checkbox"/> Non-Profit	

Account Holder Name* (Individual or Company)	Electric Service Agreement ID *	Meter Number*
Service Address*	City*	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. Authorized Contact Information (required if Customer is authorizing a third party to act on Customer’s behalf):

Company Name	Contact Person
Contact Phone Number	Email



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

- 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 an Interconnection Request 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.

Part II – NEM Generator System Size

A. Interconnection Study and Requirements

This Agreement covers the installed Generating Facility nameplate listed in the associated Interconnection Request.

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.

In order for PG&E to approve your system, you will need to provide (1) this signed Agreement, (2) a valid Interconnection Request, 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. For customers on a Time-of-Use rate, sizing your system to offset 80%-85% of your average electricity usage could be an effective way to minimize your electricity bill. For customer who are not on a Time-of-Use rate, you might want to size your system larger (90-95% of your annual load), in order to minimize your electricity bill. Of course, individual circumstances may vary. Customers can obtain their usage data from www.pge.com/greenbutton. System sizing eligibility will be reviewed using the criteria below.

B. Generator System Sizing

Generator System Type: Solar Wind Both

Estimated Annual Production:

- Please complete this section only if installing a new Solar or Wind system or modifying an existing Solar or Wind system. This section is not applicable if only adding energy storage to an existing previously interconnected Solar or Wind system.
- Solar Systems > 5 kW (CEC-AC kW) or any system with wind, size is determined below. Please continue to fill out all of Section B.
- The Solar CEC-AC kW calculated from the Application cannot exceed 5% of the CEC-AC kW listed above



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

	(1) Solar CEC-AC rating ^A	_____ (kW) X 1,664 ^B	=	_____ (kWh)
AND/OR	(2) Wind Nameplate rating	_____ (kW) X 2,190 ^C		_____ (kWh)
	(3) Total Energy Production	(1) + (2)		<u>_____ (kWh)</u>
Estimated Annual Energy Usage:				
	(4) Recent annual usage	_____ (kWh) X 1.1	=	_____ (kWh)
OR (If 12 months usage not available)	(5) Building size	_____ (sq ft) X 3.32 ^D	=	_____ (kWh)
AND	(6) I plan to increase my annual usage (kWh) by			_____ (kWh)
	(7) Total Energy Usage	(2 or 3) + (4)	=	<u>_____ (kWh)</u>
Net Generation:				
	(8) Production - Usage		(3) - (7) =	<u>_____ (kWh)*</u>

*Positive number indicates that the system is estimated to generate more than the estimated usage. Please refer to Part IV, Section J to read the provisions around Net Surplus Compensation (NSC).

Non-NEM Eligible Energy Storage System:

Energy Storage System Rating _____ kW

Does the energy storage system share an inverter with the NEM system? Yes No

If not, please provide:

Energy Storage Inverter Rating _____ kW

Part III – Rate Selection

A. Current Rate: Please identify your existing rate by reviewing your PG&E energy statement or by calling the phone number listed below.

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.

^A CEC-AC (kW) =California Energy Commission Alternating Current, refers to the inverter efficiency rating (Quantity of PV Modules x PTC Rating of PV Modules x CEC Inverter Efficiency Rating)/1000
^B 8,760 hrs/yr x 0.19 solar capacity factor = 1,664
^C 8,760 hrs/yr x 0.25 wind capacity factor = 2,190
^D 2 watts/ sq ft x 1/1,000 watts x 8,760 hrs/yr x 0.19 solar capacity factor = 3.32



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

Residential Service Rate (Select one):

- E-1 – Non-Time-of-Use
- E-6 – Time-of-Use
- E-7^E – Time-of-Use
- E-8^F – Non-Time-of-Use
- E-9A^F – Time-of-Use for Customers with a single meter for Electric Vehicle (EV) recharging station and home
- E-9B^F – Time-of-Use for Customers with a separately metered EV recharging station
- EV-A^F – Time-of-Use for Customers with a single meter for Electric Vehicle (EV) recharging station and home
- EV-B^G – Time-of-Use for Customers with a separately metered EV recharging station
- Other (_____)

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 ^F – Split-Week Time-of-Use | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | |
| <input type="checkbox"/> AG-V ^F – 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"/> AG-5 – Time of Use | <input type="checkbox"/> |
| <input type="checkbox"/> Other (_____) | <input type="checkbox"/> |

If your current rate is a closed rate, as identified in Footnote F, and you are now opting to move to a non-closed rate per the Otherwise Applicable Rate Schedule (OAS) for NEM Account, please check the box below acknowledging that you are leaving the closed rate and will not be able to select the closed rate in the future.

- I acknowledge and consent to leaving my current rate that is a closed rate

^E 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
^F Rates effective August 1, 2013 for 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 with Energy Storage of 10 Kilowatts Or Less

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.

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.



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/OR Wind Electric Generating

Facilities Of 30 Kilowatts Or Less with Energy

Storage of 10 Kilowatts Or Less

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](#). Participants in NEMA, please see provisions in Form 79-1153.

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.

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



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

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.

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.

Q. Smart Inverters

For Customer applications received on or after September 9, 2017, the Customer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.

Distribution Provider may require a field verification of the Customer's inverter. Customer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Customer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Customer will need to cease operation of generating facility until verification is confirmed by Distribution Provider.

Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at <http://www.gosolarcalifornia.org/equipment/inverters.php>.

Verification of compliance with such requirements shall be provided by the Customer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Customer has submitted the interconnection application prior to September 9, 2017,
- (c) the Customer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹ no later than March 31, 2018, or
- (d) the Customer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. Customer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
- (ii) a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

¹A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments
2. A completed signed Interconnection Agreement
3. Evidence of the Customer final inspection clearance from the governmental authority having jurisdiction over the generating system.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering Interconnection For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

R. Signature

IMPORTANT INFORMATION FOR CUSTOMERS – BE SURE TO READ THIS ENTIRE DOCUMENT BEFORE SIGNING – THIS IS A LEGALLY BINDING CONTRACT – READ IT CAREFULLY.

THIS FORM MUST BE SIGNED BY AN EXISTING PG&E CUSTOMER.

Under Pacific Gas and Electric Company’s (PG&E’s) privacy policies, which can be found at [www.pge.com/about/company/privacy/customer], PG&E generally does not sell or disclose personal information about you, such as your name, address, phone number, or electric account and billing information, to third parties unless you expressly authorize us to do so. The purpose of this form is to allow you, the customer, to exercise your right to choose whether to disclose your personal electricity usage data and other personal information to a third party. Once you authorize a third party to access personal information about you, you are responsible for ensuring that the third party safeguards the personal information from further disclosure without your consent.

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 C, 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.



**AGREEMENT AND CUSTOMER AUTHORIZATION
Net Energy Metering Interconnection
For Solar And/Or Wind Electric Generating
Facilities Of 30 Kilowatts Or Less with Energy
Storage of 10 Kilowatts Or Less**

APPENDIX A

**Interconnection Agreement for Net Energy Metering of Solar or Wind
Electric Generating Facilities of 1,000 KW or Less, Other Than
Facilities of 30 KW or Less**

APPENDIX A
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

APPENDIX A

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage only capable of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)

AGREEMENT AND CUSTOMER AUTHORIZATION
Net Energy Metering Interconnection
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APPENDIX A

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ + _____ =. total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ + _____ =. total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



Electric Sample Form No. 79-1193-02

Sheet 1

Agreement and Customer Authorization Net Energy Metering (NEM2) Interconnection for Solar and/or Wind Electric Generating Facilities of 30 kW or Less with Energy Storage of 10 kW or Less

Please Refer to Attached Sample Form

(Continued)

Advice 5501-E
Decision 19-01-030

Issued by
Robert S. Kenney
Vice President, Regulatory Affairs

Submitted March 22, 2019
Effective _____
Resolution _____



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering (NEM2) Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

IMPORTANT NOTES:

- 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 or participants in the Demand Response Programs below are not eligible to participate in NEM2.
 - Scheduled Load Reduction Program (SLRP)
 - SmartRate
- Customers who participate in Direct Access and Community Choice Aggregation must contact their Energy Service Provider directly regarding their NEM2 program.

Part I – Generating Facility Information and Responsible Parties

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

Standard NEM2 Agreement Type: Single Account Multiple Aggregated Accounts

Note: Net Energy Metering Aggregation 2 (NEM2A) is a program that allows customers with multiple meters to use the renewable energy generated at one meter to be credited against other meters that are located on parcel(s) that is/are contiguous or adjacent to the parcel that has the renewable generator.

Customer Sector (check only one):

<input type="checkbox"/> Residential	<input type="checkbox"/> Educational
<input type="checkbox"/> Commercial	<input type="checkbox"/> Military
<input type="checkbox"/> Industrial	<input type="checkbox"/> Other Government
<input type="checkbox"/> Non-Profit	

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

Is there an electric vehicle charging on site at the above service address? Yes No
 If yes, please indicate how many electric vehicles _____

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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AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

C. Authorized 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 an Interconnection Request 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.

Part II – NEM2 Generator System Size

A. Interconnection Study and Requirements

This Agreement covers the installed Generating Facility nameplate listed in the associated Interconnection Request. 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.

In order for PG&E to approve your system, you will need to provide (1) this signed Agreement, (2) **a valid Interconnection Request**, and (3) a copy of the final signed jurisdiction approval (building permit) for your project.

NEM2 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. All NEM2 customers must take service on a Time-of-Use rate schedule and sizing your system to offset 80%-85% of your average electricity usage could be an effective way to minimize your electricity bill^A. Of course, individual circumstances may vary. Customers can obtain their usage data from www.pge.com/greenbutton.

^A Customers on rate schedules such as ET, ES, and ESR, which do not have a corresponding TOU Rate, are not required to switch to TOU rates, unless and until such a rate becomes available.



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering (NEM2) Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

B. Generator System Sizing

Please complete this section only if installing a new Solar or Wind system or modifying an existing Solar or Wind system. This section is not applicable if only adding energy storage to an existing previously interconnected Solar or Wind system.

Generator System Type: Solar Wind Both

	(1) Solar CEC-AC rating ^B	_____ (kW) X 1,664 ^C	=	_____ (kWh)
AND/OR	(2) Wind Nameplate rating	_____ (kW) X 2,190 ^D		_____ (kWh)
	(3) Total Energy Production	(1) + (2)		<u>_____ (kWh)</u>

Estimated Annual Energy Usage:

(Solar systems ≤ 5 kW (CEC-AC) do not need to complete this section)

	(4) Recent annual usage	_____ (kWh) X 1.1	=	_____ (kWh)
OR (If 12 months usage not available)	(5) Building size	_____ (sq ft) X 3.32 ^E		_____ (kWh)
AND	(6) I plan to increase my annual usage (kWh) by			_____ (kWh)
	(7) Total Energy Usage	(4 or 5) + (6)	=	<u>_____ (kWh)</u>

Net Generation:

	(8) Production – Usage	(3) – (7)	=	<u>_____ (kWh)*</u>
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*Positive number indicates that the system is estimated to generate more than the estimated usage. Please refer to Part IV, Section H to read the provisions around Net Surplus Compensation (NSC).

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

^C 8,760 hrs/yr x 0. solar 19 capacity factor = 1,664

^D 8,760 hrs/yr x 0.25 wind capacity factor = 2,190

^E 2 watts/ sq ft x 1/1,000 watts x 8,760 hrs/yr x 0.19 solar capacity factor = 3.32



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

Non-NEM Eligible Energy Storage System:

Energy Storage Rating _____ kW

Does the energy storage system share an inverter with the NEM system? Yes No

If not, please provide:

Energy Storage Inverter Rating _____ kW

Part III – Rate Selection

A. Current Rate: Please identify your existing rate by reviewing your PG&E energy statement or by calling the phone number listed below.

Otherwise Applicable Rate Schedule (OAS) for NEM2 Account: Select one rate from the category applicable to you. NEM2 residential customers must be an applicable time-of-use rate^F schedule. If you are currently on a rate that is no longer open to new customers and are opting to move to a different rate, by signing this Agreement and Customer Authorization you are acknowledging that you are leaving the current rate and will not be able to return to this rate in the future. Visit www.pge.com/rateoptions or call (800)-PGE-5000 for rate information.

- Stay on existing rate
- Requested new rate _____

Part IV – Interconnection Agreement Provisions

A. Applicability

This Agreement applies to Electric Schedule NEM2 Customer-Generators (Customer) who interconnect a solar and/or wind turbine electric 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.

B. 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.

^F Schedules such as ES, ESR or ET, which have no available corresponding time-of-use rate, are not required to switch to time-of-use rates, unless and until such a rate becomes available.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

C. 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 electric 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.

D. 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 electric 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.

E. 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.

F. Rate

Customer has confirmed their otherwise applicable rate schedule (OAS) to establish how the 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.

G. NEM2 Billing

The Customer's meter separately measures exports and imports.

The meter is read monthly and an amount is calculated based on the net energy (kWh) and total energy(kWh) exports 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.

Additionally, the Customer will be billed for non-bypassable charges on all imports from the grid, as describe in Schedule NEM2 Special Condition 2.

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 NEM2 billing is available at www.pge.com/nembilling.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

H. Net Surplus Compensation (NSC)

NSC payments are made to NEM2 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. Participants in NEM2A, please see provisions in *NEM2 Load Aggregation Appendix (Form 79-1153)*.

I. 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.

J. 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.

K. 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.

L. 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 NEM2.

M. Meter Access

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

N. 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 NEM2.

O. CEC Listed

In order to promote the safety and reliability of the customer's Generating Facility, the applicant certifies that as a part its request for NEM2, that all major solar system components are on the verified equipment list maintained by the California Energy Commission and certifies that other equipment, as determined by PG&E, has safety certification from a nationally recognized testing laboratory.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

P. Warranties or Service Agreements

Applicant certifies as a part of its interconnection request for NEM2 that:

- (i) a warranty of at least 10 years has been provided on all equipment and on its installation, or
- (ii) a 10-year service warranty or executed "agreement" has been provided ensuring proper maintenance and continued system performance.

Q. Smart Inverters

For Customer applications received on or after September 9, 2017, the Customer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.

Distribution Provider may require a field verification of the Customer's inverter. Customer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Customer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Customer will need to cease operation of generating facility until verification is confirmed by Distribution Provider.

Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at <http://www.gosolarcalifornia.org/equipment/inverters.php>.

Verification of compliance with such requirements shall be provided by the Customer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Customer has submitted the interconnection application prior to September 9, 2017,
- (c) the Customer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹ no later than March 31, 2018, or
- (d) the Customer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. A Customer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

¹A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments
2. A completed signed Interconnection Agreement
3. Evidence of the Customer final inspection clearance from the governmental authority having jurisdiction over the generating system.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

R. Signature

IMPORTANT INFORMATION FOR CUSTOMERS – BE SURE TO READ THE FULLY POPULATED DOCUMENT BEFORE SIGNING – THIS IS A LEGALLY BINDING CONTRACT – READ IT CAREFULLY. THIS FORM MUST BE SIGNED BY THE EXISTING PG&E CUSTOMER LISTED IN PART I.

Under Pacific Gas and Electric Company’s (PG&E’s) privacy policies, which can be found at [www.pge.com/about/company/privacy/customer], PG&E generally does not sell or disclose personal information about you, such as your name, address, phone number, or electric account and billing information, to third parties unless you expressly authorize us to do so. The purpose of this form is to allow you, the customer, to exercise your right to choose whether to disclose your personal electricity usage data and other personal information to a third party. Once you authorize a third party to access personal information about you, you are responsible for ensuring that the third party safeguards the personal information from further disclosure without your consent.

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 C, 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 can request additional documentation to verify the authenticity of the externally signed Agreement and Customer Authorization.

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 NEM2 requirements.



**AGREEMENT AND CUSTOMER AUTHORIZATION
Net Energy Metering (NEM2) Interconnection
For Solar And/Or Wind Electric Generating
Facilities Of 30 Kilowatts Or Less with Energy
Storage of 10 Kilowatts Or Less**

APPENDIX A

**Interconnection Agreement for Net Energy Metering of Solar or Wind
Electric Generating Facilities of 1,000 KW or Less, Other Than
Facilities of 30 KW or Less**

APPENDIX A
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

APPENDIX A

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage **only capable** of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)

Please complete this agreement in its entirety

Automated Document, Preliminary Statement, Part A.

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Form 79-1193-02
Advice 5501-E
March 2019



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering (NEM2) Interconnection

For Solar And/Or Wind Electric Generating

Facilities Of 30 Kilowatts Or Less with Energy

Storage of 10 Kilowatts Or Less

APPENDIX A

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ + _____ =. total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ + _____ =. total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE

Sheet 26

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage

a. **Definitions**

NEM Paired Storage:

NEM Paired Storage is defined as qualifying energy storage devices paired with a REGF that either:

(i) meets the **Renewables Portfolio Standard Guidebook**⁵ requirements as an "addition or enhancement" as described in Section c. below, or

(ii) is eligible to receive certain benefits as is described below by virtue of the fact that it is paired with a REGF although it is not exclusively renewable charged, pursuant to California Public Utilities Commission (CPUC) Decision (D.) 14-04-033 and D.19-01-030.

AC-Coupled:

The REGF has its own inverter or set of inverters; and separately, the storage system has its own inverter or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system in AC-coupled REGF plus storage systems is the inverters (or inverters') nameplate capacity (capacities summed).

DC-Coupled:

The REGF and the storage share the same inverter, or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology; PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E will rely on the inverter's nameplate rating.

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ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE

Sheet 27

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage

a. Definitions (Cont'd.)

No Grid Charging:

A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system cannot be charged from the PG&E grid.

No Storage Export:

A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system cannot export to PG&E's grid.

b. Interconnection

NEM Paired Storage will have the same interconnection cost responsibility as the NEM generator that it is paired with, including charges related to the:

- interconnection application,
- supplemental review, and/or
- distribution upgrade.

See Section c.5 below for additional information

c. Types of NEM Paired Storage

The Renewables Portfolio Standard Guidebook establishes two categories of energy storage that may be considered an addition or enhancement to a renewable electrical generation facility: "integrated" and "directly connected" storage.

1) Integrated Storage:

Integrated Energy Storage is defined in the RPS guidelines⁸ as methods of storing energy from a renewable energy resource that are integrated into the REGF as part of the generation process.

Note that, for battery-based storage, the storage device must **only** be capable of storing energy from the REGF to be considered Integrated Storage.

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(L)

⁸ The RPS Guidebook 7th edition can be found at:
<http://www.energy.ca.gov/renewables/documents/index.html#rps>

(Continued)



**ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE**

Sheet 28

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage

(N)

c. Types of NEM Paired Storage

1) Integrated Storage: (Cont'd.)

Integrated Storage apply to both AC-Coupled and DC-Coupled storage systems that satisfy the definition of "No Grid Charging" above. The verification testing procedure is outlined in the PG&E Distribution Generation Interconnection Handbook (DIH).

A REGF with a storage system fulfilling the requirements of "No Grid Charging" must apply with 79-1174, and either complete interconnection agreement Form 79-1193 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069 (all other REGF with a storage system configurations fulling the requirements of "No Grid Charging"). All configurations that meet the definition of Integrated Storage will billed in the same manner as is if storage device were not present (e.g. NEMS).

For a REGF with a storage system that meets the requirement of "No Grid Charging", there are no restrictions on the storage system size (kW). However, when determining whether the generating facility exceeds 1MW, at which point the system would be responsible for all interconnection costs, the following methodology applies:

- a) AC-Coupled: the combined sizes⁹ of the REGF and storage system (AC nameplate)
- b) DC-Coupled: the lesser of the shared inverter's nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheet.

(N)

2) Directly Connected:

(T)/(L)

Directly Connected NEM Paired Storage is defined in the RPS guidelines as meeting the following requirements:

(i) The storage device is directly connected to the REGF via an internal power line (i.e., power may not be transmitted from the renewable facility to the energy storage via an external distribution line) and

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(L)

(ii) The storage device must be operated as part of the NEM eligible facility.

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Note that the storage device is **not** required to be exclusively charged by the REGF.

(N)
(N)

⁹ As defined in Special Condition 3.

(Continued)



**ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE**

Sheet 29

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage

(N)

c. Types of NEM Paired Storage

2) Directly Connected: (Cont'd.)

Directly Connected Cases:

(i) DC-Coupled storage system sized 10kW or smaller

DC-Coupled storage systems sized 10kW or smaller are not required to meet either the "No Grid Charging" or "No Storage Export" requirements, must apply with 79-1174, complete interconnection agreement Form 79-1193 (solar and/or wind electric facilities of 30kW or less), and will be billed using the estimation methodology as described in Section 3)(i) of this special condition when no additional metering is installed as described in "Large NEM-Eligible GFs" below.

(ii) DC-Coupled storage system sized greater than 10kW

The DC-Coupled storage systems sized greater than 10kW must satisfy the definition of "No Storage Export", apply with 79-1174, complete Form 79-1069, and will be billed as described for Large NEM paired Storage in Section 3)(ii) of this special condition.

For this case, there are no restrictions on the storage system size (kW).

(iii) Large AC Coupled storage system ("Large NEM-eligible GFs")

Large NEM-eligible Generating Facilities (GFs) are NEM-eligible GFs paired with storage sized larger than 10 kW. For Large NEM-eligible GFs, the storage system shall have a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.

Large NEM-eligible GFs are required to select one of the following:

- a) install a non-export relay on the storage device(s);
- b) install an interval meter for the NEM-eligible generation, meter the load, and meter total energy flows at the point of common coupling; or
- c) install an interval meter directly to the NEM-eligible generator(s).

(N)

(Continued)



**ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE**

Sheet 31

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage

c. Types of NEM Paired Storage

3) Billing for NEM Paired Storage

(i) Estimation Methodology For Small NEM-eligible GFs

Small NEM-eligible GFs without metering installed (as required for Large NEM-eligible GFs) will use an estimation methodology, which caps maximum allowable NEM bill credits based on a monthly output profile.

- a. California Solar Initiative Expected Performance-Based Buydown (CSI EPBB) calculator, PG&E will establish a maximum cap for NEM-eligible exports for each monthly billing period based on the EPBB production estimate for the customer's NEM-eligible generator.

The monthly output estimation should align with a customer's billing period (e.g., if the customer's billing date is January 15, the maximum allowed NEM export should be based on a January output estimation.)

- b. Any export exceeding this limit would not be eligible for NEM credit and would be forfeited. Peak period exports would be reduced first, followed by partial peak and then off peak as necessary.

For example, if there was an export to the grid of 150 kWh and the EPBB-based limit for the month was set at 100 kWh, then the excess 50 kWh would be deducted from the actual exports recorded, beginning with exports that occurred during peak periods.

- c. In the event the Small NEM-eligible GF is combined with other generation facilities pursuant to Special Condition 4, the billing provision of Special Condition 4 will apply, not this billing estimation methodology.

Should a customer decide to opt-out of using this estimation methodology, the customer must install one of the metering requirements described in the Large NEM-eligible GFs section, and the customer may only switch at the start of a new NEM Relevant Period.

- (ii) Large NEM-eligible GFs are billed consistent with Special Condition 4 with the storage treated as a non-NEM eligible generator.

(Continued)



**ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE**

Sheet 32

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage

c. Types of NEM Paired Storage

4) NEM Paired Storage Output Metering Costs

PG&E will install standard metering equipment whenever possible while interconnecting NEM Paired Storage systems. Standard metering equipment for this purpose comprises a single meter which is a self-contained, single phase, SmartMeter. The fee for installation of standard metering equipment is no more than \$600.00.

However, this fee cap does not apply to NEM Paired Storage requiring complex metering solutions. Complex metering solutions include any configuration other than the standard equipment described above. The cost for complex metering varies and is based on actual costs which will be described in the customer's invoice.

5) NEM Paired Storage Interconnection Cost Responsibility

The storage will have the same interconnection cost responsibility as the NEM-eligible GF that it is paired with. In the event the storage is added at a later date after the permission to operate of the NEM-eligible GF it is subsequently paired with, the storage applicant will be required to pay the same interconnection fees and costs that the NEM-eligible GF would be required to pay, as provided in Electric Rule 21.

For the purpose of determining if a NEM Paired Storage REGF exceeds 1 MW criterion, refer to the sizing definition included in the AC-Coupled and DC-Coupled definition at the beginning of this special condition.

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**ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE**

Sheet 28

SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage

a. Definitions

NEM Paired Storage:

NEM Paired Storage is defined as qualifying energy storage devices ("storage system") paired with a REGF that either:

(i) meets the Renewables Portfolio Standard Guidebook⁵ requirements as an "addition or enhancement" as described in Section c. below, or

(ii) is eligible to received certain benefits as described below by virtue of the fact that it is paired with a REGF although it is not exclusively renewable charged, pursuant to California Public Utilities Commission (CPUC) Decision (D.) 14-04-033 and D.19-01-030.

AC-Coupled:

The REGF has its own inverter or set of inverters; and separately, the storage system has its own inverter or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system in AC-coupled REGF plus storage systems is the inverters (or inverters') nameplate capacity (capacities summed).

DC-Coupled:

The REGF and the storage share the same inverter, or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology; PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E will rely on the inverter's nameplate rating.

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(L)

⁵ The RPS Guidebooks can be found at: <http://www.energy.ca.gov/renewables/documents/index.html#rps>

(Continued)



**ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE**

Sheet 29

SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage

a. Definitions (Cont'd.)

No Grid Charging:

A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system cannot be charged from the PG&E grid.

No Storage Export:

A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system cannot export to PG&E's grid.

b. Interconnection

NEM Paired Storage will have the same interconnection cost responsibility as the NEM generator that it is paired with, including charges related to the:

- interconnection application,
- supplemental review, and/or
- distribution upgrade.

See Section c.5. below for additional information

c. Types of NEM Paired Storage

The Renewables Portfolio Standard Guidebook establishes two categories of energy storage that may be considered an addition or enhancement to a renewable electrical generation facility: "integrated" and "directly connected" storage.

1) Integrated Storage:

Integrated Energy Storage is defined in the RPS guidelines⁸ as methods of storing energy from a renewable energy resource that are integrated into the REGF as part of the generation process.

Note that, for battery-based storage, the storage device must **only** be capable of storing energy from the REGF to be considered Integrated Storage.

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⁸ The RPS Guidebook 7th edition can be found at:
<http://www.energy.ca.gov/renewables/documents/index.html#rps>

(Continued)



ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE

Sheet 30

SPECIAL CONDITIONS: (Cont'd.)

9. NEM Paired Storage

c. Types of NEM Paired Storage

1) Integrated Storage: (Cont'd.)

Integrated Storage apply to both AC-Coupled and DC-Coupled storage systems that satisfy the definition of "No Grid Charging" above. The verification testing procedure is outlined in the PG&E Distribution Generation Interconnection Handbook (DIH).

A REGF with a storage system fulfilling the requirements of "No Grid Charging" must apply with 79-1174-02, and either complete interconnection agreement Form 79-1193-02 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069-02 (all other REGF with a storage system configurations fulling the requirements of "No Grid Charging"). All configurations that meet the definition of Integrated Storage will billed in the same manner as is if storage device were not present (e.g. NEM2S).

For a REGF with a storage system that meets the requirement of "No Grid Charging", there are no restrictions on the storage system size (kW). However, when determining whether the generating facility exceeds 1MW, at which point the system would be responsible for all interconnection costs, the following methodology applies:

- a) AC-Coupled: the combined sizes of the REGF and storage system (AC nameplate)
b) DC-Coupled: the lesser of the shared inverter's nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheet.

2) Directly Connected:

Directly Connected NEM Paired Storage is defined in the RPS guidelines as meeting the following requirements:

- (i) The storage device is directly connected to the REGF via an internal power line (i.e., power may not be transmitted from the renewable facility to the energy storage via an external distribution line) and
(ii) The storage device must be operated as part of the NEM eligible facility.

Note that the storage device is not required to be exclusively charged by the REGF.

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9 As defined in Special Condition 3.

(Continued)



**ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE**

Sheet 31

SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage

(N)

c. Types of NEM Paired Storage

2) Directly Connected: (Cont'd.)

Directly Connected Cases:

(i) DC-Coupled storage system sized 10kW or smaller

DC-Coupled storage systems sized 10kW or smaller are not required to meet either the "No Grid Charging" or "No Storage Export" requirements, must apply with 79-1174-02, complete interconnection agreement Form 79-1193-02 (solar and/or wind electric facilities of 30kW or less), and will be billed using the estimation methodology as described in Section 3) (i) of this special condition when no additional metering is installed as described in "Large NEM-Eligible GFs" below.

(ii) DC-Coupled storage system sized greater than 10kW

The DC-Coupled storage systems sized greater than 10kW must satisfy the definition of "No Storage Export", apply with 79-1174-02, complete Form 79-1069-02 and will be billed as described for Large NEM paired Storage in Section 3)(ii) of this special condition.

For this case, there are no restrictions on the storage system size (kW).

(iii) Large AC Coupled storage system ("Large NEM-eligible GFs")

Large NEM-eligible Generating Facilities (GFs) are NEM-eligible GFs paired with storage sized larger than 10 kW. For Large NEM-eligible GFs, the storage system shall have a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.

Large NEM-eligible GFs are required to select one of the following:

- a) install a non-export relay on the storage device(s);
- b) install an interval meter for the NEM-eligible generation, meter the load, and meter total energy flows at the point of common coupling; or
- c) install an interval meter directly to the NEM-eligible generator(s).

(N)

(Continued)



**ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE**

Sheet 32

SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage

c. Types of NEM Paired Storage

2) Directly Connected: (Cont'd.)

(iii) Large AC Coupled storage system ("Large NEM-eligible GFs")
(Cont'd.)

Large NEM-eligible GFs must apply with 79-1174-02, either complete interconnection agreement Form 79-1193-02 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069-02 (all other REGF with a storage system configurations), and will be billed as described in Section 3.)(ii) of this special condition.

(iv) Small AC-Coupled storage systems ("Small NEM-eligible GFs")

Small NEM-eligible Generating Facilities (GFs) are NEM-eligible GFs paired with storage sized 10 kW or smaller. For small NEM-eligible GFs, the storage device is not required to be sized to the customer's demand or the NEM generator. Small NEM-eligible GFs have the option to install metering as required for Large NEM-eligible GFs to be billed as described in Section 3.)(ii) of this special condition. Otherwise, it will be billed using the estimation methodology describe in Section 3.)(i) of this special condition.

Small NEM-eligible GFs must apply with 79-1174-02, either complete interconnection agreement Form 79-1193-02 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069-02 (all other REGF with a storage system configurations), and will be billed as described in Section 3.)(ii) of this special condition.

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(Continued)



**ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE**

Sheet 33

SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage

c. Types of NEM Paired Storage

3) Billing for NEM Paired Storage

(i) Estimation Methodology For Small NEM-eligible GFs

Small NEM-eligible GFs without metering installed (as required for Large NEM-eligible GFs) will use an estimation methodology, which caps maximum allowable NEM bill credits based on a monthly output profile.

- a. California Solar Initiative Expected Performance-Based Buydown (CSI EPBB) calculator, PG&E will establish a maximum cap for NEM-eligible exports for each monthly billing period based on the EPBB production estimate for the customer's NEM-eligible generator.

The monthly output estimation should align with a customer's billing period (e.g., if the customer's billing date is January 15, the maximum allowed NEM export should be based on a January output estimation.)

- b. Any export exceeding this limit would not be eligible for NEM credit and would be forfeited. Peak period exports would be reduced first, followed by partial peak and then off peak as necessary.

For example, if there was an export to the grid of 150 kWh and the EPBB-based limit for the month was set at 100 kWh, then the excess 50 kWh would be deducted from the actual exports recorded, beginning with exports that occurred during peak periods.

- c. In the event the Small NEM-eligible GF is combined with other generation facilities pursuant to Special Condition 4, the billing provision of Special Condition 4 will apply, not this billing estimation methodology.

Should a customer decide to opt-out of using this estimation methodology, the customer must install one of the metering requirements described in the Large NEM-eligible GFs section, and the customer may only switch at the start of a new NEM Relevant Period.

- (ii) Large NEM-eligible GFs are billed consistent with Special Condition 4 with the storage treated as a non-NEM eligible generator.

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**ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE**

Sheet 34

SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage

(L)

c. Types of NEM Paired Storage

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4) NEM Paired Storage Output Metering Costs

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PG&E will install standard metering equipment whenever possible while interconnecting NEM Paired Storage systems. Standard metering equipment for this purpose comprises a single meter which is a self-contained, single phase, SmartMeter. The fee for installation of standard metering equipment is no more than \$600.00.

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However, this fee cap does not apply to NEM Paired Storage requiring complex metering solutions. Complex metering solutions include any configuration other than the standard equipment described above. The cost for complex metering varies and is based on actual costs which will be described in the customer's invoice.

5) NEM Paired Storage Interconnection Cost Responsibility

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The storage will have the same interconnection cost responsibility as the NEM-eligible GF that it is paired with. In the event the storage is added at a later date after the permission to operate of the NEM-eligible GF it is subsequently paired with, the storage applicant will be required to pay the same interconnection fees and costs that the NEM-eligible GF would be required to pay, as provided in Electric Rule 21.

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For the purpose of determining if a NEM Paired Storage REGF exceeds 1 MW criterion, refer to the sizing definition included in the AC-Coupled and DC-Coupled definition at the beginning of this special condition.

(N)

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Advice 5501-E
Decision 19-01-030

Issued by
Robert S. Kenney
Vice President, Regulatory Affairs

Submitted March 22, 2019
Effective _____
Resolution _____



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Advice 5502-E
March 22, 2019

Attachment 2
Redlined Tariffs



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

This *Generating Facility Interconnection Agreement (Multiple Tariff)* (Agreement) is entered into by and between _____ (Producer), and Pacific Gas and Electric Company (PG&E) a California Corporation. Producer and PG&E are sometimes also referred to in this Agreement jointly as “Parties” or individually as “Party.” In consideration of the mutual promises and obligations stated in this Agreement and its attachments, the Parties agree as follows:

1. SCOPE AND PURPOSE

This Agreement provides for Producer to interconnect and operate a Generating Facility in parallel with PG&E’s Distribution System to serve the electrical loads at the location identified in Section 2.4 (or for the qualifying energy where permitted under Section 218 of the California Public Utilities Code (PUC). The Generating Facility may be any combination of generators, but must include at least one “Eligible customer-generator.” Eligible customer-generators consist of any Renewable Electrical Generation Facility(ies) (as defined in PG&E’s Schedule NEM) or Eligible Fuel Cell Electrical Generating Facility(ies) (as defined in PG&E’s Schedule NEMFC).

- 1.1. This Agreement provides for Producer to operate the Eligible Generator(s) pursuant to the provisions of Section 2827 et seq. of the PU Code and the applicable PG&E tariffs for net energy metering. This Agreement also provides for Producer to operate its Non-Eligible Generator(s). This Agreement does not provide for retail electrical service by PG&E to Producer. Such arrangements must be made separately between PG&E and Producer.
- 1.2. This Agreement does not address Producer’s account billing and payment for energy consumption. For the Generating Facility as specified in Section 2 of this Agreement, please refer to the applicable PG&E net-energy-metered (NEM) tariff schedules for billing and payment protocol.
- 1.3. 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.

2. SUMMARY AND DESCRIPTION OF PRODUCER’S GENERATING FACILITY

- 2.1 A description of the Generating Facility, including a summary of its significant components and a single-line diagram showing the general arrangement of how Producer’s Generating Facility and loads are interconnected with PG&E’s Distribution System, are attached to and made a part of this Agreement. (Supplied by Producer as Appendix A).



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

2.2 Generating Facility identification number: _____ (Assigned by PG&E).

2.3 Producer's electric service agreement ID number: _____ (Assigned by PG&E).

2.4 Name and address used by PG&E to locate the electric service account used to interconnect the Generating Facility with PG&E's Distribution System:

Name: _____

Address: _____

City/Zip Code: _____

2.5 The Gross Nameplate Rating of the Generating Facility is:

2.5.1 Eligible Generator(s):

biomass _____ kW	digester gas _____ kW
solar thermal _____ kW	municipal solid waste _____ kW
photovoltaic _____ kW	landfill gas _____ kW
wind _____ kW	ocean wave _____ kW
geothermal _____ kW	ocean thermal _____ kW
fuel cell _____ kW	tidal current _____ kW
small hydroelectric generation _____ kW	

2.5.2 Non-Eligible Generator(s): _____ kW

2.5.3 **Total Gross** Nameplate Rating of the Generating Facility: _____ kW

2.6 The Net Nameplate Rating of the Generating Facility is:

2.6.1 Eligible Renewable Electrical Generation Facility Generator(s):



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Table with 2 columns and 8 rows listing generating facility types and their kW ratings: biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, small hydroelectric generation, digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current.

2.6.2 Non-Eligible Generator(s): _____ kW

2.6.3 Total Net Nameplate Rating of the Generating Facility: _____ kW

2.7 The maximum level of power that may be exported by the Generating Facility to PG&E’s Distribution System is expected to be:

2.7.1 Eligible Generator(s):

Table with 2 columns and 8 rows listing eligible generating facility types and their kW ratings: biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, small hydroelectric generation, digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current.

2.7.2 Non-Eligible Generator(s): _____ kW

2.7.3 Total maximum level of power that may be exported by the Generating Facility: _____ kW



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

2.8 the purpose of securing the Competition Transition Charge exemption available under Section 372 of the California Public Utilities Code (PUC), Producer hereby declares that the portion of the Generating Facility that is generating in a combined heat and power mode
[] does / [] does not meet the requirements for Cogeneration as such term is used in Section 216.6 of the California Public Utilities Code.

2.9 The Generating Facility's expected date of Initial Operation is _____. The expected date of Initial Operation shall be within two years of the date of this Agreement.

2.10 For the purpose of securing certain tariff charge exemptions available under the PU Code, Producer hereby declares the following for each Generator technology of the Generating Facility:

Requirements for Distributed Energy Resource Generation as such term is used in Section 353.1 of the PU Code.

Table with 2 columns and 10 rows listing various energy technologies (biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, small hydroelectric generation, biomass, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current, biogas digester, other technology) and their compliance status (are met / are not met) with checkboxes.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

2.11 What applicable rate schedule, known as the otherwise applicable schedule will be selected for the net-energy-metering account(s):

3. DOCUMENTS INCLUDED; DEFINED TERMS

3.1 This Agreement includes the following exhibits which are specifically incorporated herein and made a part of this Agreement.

Appendix A - Description of Generating Facility and Single-Line Diagram (Supplied by Producer).

Appendix B - Web-site references to Rules 2 and 21 and other selected rules and tariffs of PG&E (Supplied by PG&E).

Appendix C - A Copy of *PG&E's Agreement for Installation or Allocation of Special Facilities for Parallel Operation of Nonutility-Owned Generation and/or Electrical Standby Service* (Form 79-280) (Special Facility Agreement), if applicable, (Formed by the Parties).

Appendix D - Producer's warranty that the Generating Facility meets the requirements for a Cogeneration facility pursuant to Section 216.6 of the PU Code (when applicable).

Appendix E - Producer's warranty that the Generating Facility meets the requirements for Distributed Energy Resources Generation as defined in Section 353.1 of the PU Code (when applicable).

Appendix F - Listing of eligible service accounts, as defined in PG&E's Schedule NEMBIO and/or NEMFC to be included in Net Energy Metering calculations (when applicable).

Appendix G - Producer's warranty that it meets the requirements for an Eligible Biogas Digester Electrical Generating Facility, (applicable Generator(s) only) as defined in Section 2827.9 of the PU Code (when applicable).

Appendix H - Schedule NEM Customer-Generator Warranty that it Meets the Requirements for an Eligible Customer-Generator and is an Eligible Renewable Electrical Generation Facility Pursuant to Section 2827 of the California Public Utilities Code.

Appendix I -Operating Requirements for Energy Storage Device(s) (when applicable).



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- 3.2 When initially capitalized, whether in the singular or in the plural, the terms used herein shall have the meanings assigned to them either in this Agreement or in PG&E's Rule 21 Section C.

4. TERM AND TERMINATION

- 4.1 This Agreement shall become effective as of the last date entered in Section 16, below. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:
- (a) The Parties agree in writing to terminate the Agreement, or
 - (b) Unless otherwise agreed in writing by the Parties, at 12:01 A.M. on the day following the date the electric service account through which Producer's Generating Facility is interconnected to PG&E's Distribution System is closed or terminated, or
 - (c) At 12:01 A.M. on the 61st day after Producer or PG&E provides written Notice pursuant to Section 9 below to the other Party of Producer's or PG&E's intent to terminate this Agreement.
- 4.2 Producer may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for any reason. PG&E may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for one or more of the following reasons:
- (a) A change in applicable rules, tariffs, and regulations, as approved or directed by the California Public Utilities Commission "Commission," or a change in any local, state or federal law, statute or regulation, either of which materially alters or otherwise affects PG&E's ability or obligation to perform PG&E's duties under this Agreement; or,
 - (b) Unless otherwise agreed to in writing by the Parties, Producer fails to take all corrective actions specified in PG&E's Notice that Producer's Generating Facility is out of compliance with the terms of this Agreement within the time frame set forth in such Notice; or,
 - (c) Producer fails to interconnect and operate the Generating Facility per the terms of this Agreement prior to 120 days after the date set forth in Section 2.9, above, as the Generating Facility's expected date of Initial Operation; or,
 - (d) Producer abandons the Generating Facility. PG&E shall deem the Generating Facility to be abandoned if PG&E determines, in its reasonable opinion, the Generating Facility is non-operational and



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Producer does not provide a substantive response to PG&E Notice of its intent to terminate this Agreement as a result of Producer's apparent abandonment of the Generating Facility affirming Producer's intent and ability to continue to operate the Generating Facility.

- (e) Producer makes a change to the physical configuration of the Generating Facility, as declared in Section 2 and Appendix A of this Agreement.
- 4.3 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application to terminate this Agreement.
- 4.4 Any agreements attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. GENERATING FACILITY AND OPERATING REQUIREMENTS

- 5.1 Except for that energy delivered to PG&E's Distribution System, electric energy produced by Producer's Generating Facility shall be used solely to serve electrical loads connected to the electric service account that PG&E uses to interconnect Producer's Generating Facility (or, where permitted under Section 218 of the PUC, the electric loads of an on-site or neighboring party lawfully connected to Producer's Generating Facility through Producer's circuits). Producer shall not use the Generating Facility to serve electrical loads that will cause Producer to be considered an "electrical corporation" as such term is used in Section 218 of the California Public Utilities Code.
- 5.2 Unless otherwise agreed upon in writing by the Parties, this Agreement does not provide for, nor otherwise require PG&E to purchase, transmit, distribute, or store the electrical energy produced by Producer's Generating Facility.
- 5.3 Producer is responsible for operating the Generating Facility in compliance with all of PG&E's tariffs, including but not limited to PG&E's Rule 21 and applicable NEM tariff schedules, and applicable safety and performance standards established by the National Electric Code, Institute of Electrical and Electronic Engineers, accredited testing laboratories such as Underwriters Laboratories, rules of the Commission regarding safety and reliability, and any other regulations and laws governing the Interconnection of the Generating Facility.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

- 5.4 Producer shall: (a) maintain the Generating Facility and Interconnection Facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, Section 5.3, and (b) obtain any governmental authorizations and permits required for the construction and operation of the Generating Facility and Interconnection Facilities. Producer shall reimburse PG&E for any and all losses, damages, claims, penalties, or liability it incurs as a result of Producer's failure to obtain or maintain any governmental authorizations and permits required for construction and operation of Producer's Generating Facility.
- 5.5 Producer shall not commence parallel operation of the Generating Facility until PG&E has provided express written approval. Such approval shall normally be provided per the timelines established by the applicable PUC 2827 section, or by Rule 21. Such approval will be provided after PG&E's receipt of: (1) a completed Generating Facility Interconnection Application for Non-Export or Certain Net Energy Metered Generating Facilities (Between 30 KW and 1,000 KW) (Form 79-974), including all supporting documents and payments as described in the Application; (2) any required NEM supplemental application forms; (3) a signed and completed Generating Facility Interconnection Agreement (Multiple Tariff) (Form 79-1069); (4) a copy of the Producer's final inspection clearance from the governmental authority having jurisdiction over the Generating Facility; and (5) submission of all applicable payments for reviews, studies, Interconnection Facilities, and Distribution System Modifications. Such approval will not be unreasonably withheld. PG&E shall have the right to have representatives present at the Commissioning Test as defined in Rule 21. Producer shall notify PG&E at least five (5) business days prior to the initial testing.
- 5.6 In no event shall the delivery of the maximum electric power to PG&E's Distribution System exceed the amount or other limitations specified in Section 2 and Appendix A of this Agreement. If Producer does not regulate its Generating Facility in compliance with the limitations set forth in this Agreement, PG&E may require Producer to disconnect its Generating Facility from PG&E's Distribution System until Producer demonstrates to PG&E's reasonable satisfaction that Producer has taken adequate measures to regulate the output of its Generating Facility and control its deliveries of electric power to PG&E. Further, should PG&E determine that Producer's operation of the Generating Facility is causing an unsafe condition or is adversely affecting PG&E's ability to utilize its Distribution System in any manner, even if Producer's deliveries of electric power to PG&E's Distribution System are within the limitations specified in this Agreement, PG&E may require Producer to temporarily or permanently reduce or cease deliveries of electric power to PG&E's Distribution System. Alternatively, the Parties may agree to other corrective measures so as to mitigate the effect



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

of electric power flowing from the Generating Facility to PG&E's Distribution System. Producer's failure to comply with the terms of this Section shall constitute a material breach of this Agreement and PG&E may initiate termination in accordance with the terms of Section 4.2(b).

- 5.7 Producer shall not deliver reactive power to PG&E's Distribution System unless the Parties have agreed otherwise in writing.
- 5.8 The Generating Facility shall be operated with all of Producer's Protective Functions in service whenever the Generating Facility is operated in parallel with PG&E's Distribution System. Any deviation from these requirements may occur only when the Parties have agreed to such deviations in writing.
- 5.9 If Producer declares that its Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PUC (or any successor definition of Cogeneration (Cogeneration Requirements), Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet such Cogeneration Requirements, per Appendix D of this Agreement.
- 5.10 If Producer's Generating Facility includes any energy storage device(s), Distribution Provider may provide requirements that must be met by the Producer prior to initiating Parallel Operation with PG&E's Distribution System and throughout the term of this Agreement, including but not limited to the requirements set forth in Appendix I of this Agreement.
- 5.11 Smart Inverters

For Producer applications received on or after September 9, 2017, the Producer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.

Distribution Provider may require a field verification of the Producer's inverter. Producer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Producer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Producer will need to cease operation of generating facility until verification is confirmed by Distribution Provider.

(Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at:

<http://www.gosolarcalifornia.org/equipment/inverters.php>.)



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Verification of compliance with such requirements shall be provided by the Producer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Producer has submitted the interconnection application prior to September 9, 2017,
- (c) the Producer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹ no later than March 31, 2018, or
- (d) the Producer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. Producer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
- (ii) a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

6. INTERCONNECTION FACILITIES

6.1 Producer and/or PG&E, as appropriate, shall provide Interconnection Facilities that adequately protect PG&E's Distribution System, personnel, and other persons from damage or injury, which may be caused by the operation of Producer's Generating Facility.

¹ A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments,
2. A completed signed Interconnection Agreement,
3. Evidence of the Producer final inspection clearance from the governmental authority having jurisdiction over the generating system.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

- 6.2 Producer shall be solely responsible for the costs, design, purchase, construction, operation, and maintenance of the Interconnection Facilities that Producer owns.
- 6.3 If the provisions of PG&E's Rule 21, or any other tariff or rule approved by the Commission, requires PG&E to own and operate a portion of the Interconnection Facilities, Producer and PG&E shall promptly execute a Special Facilities Agreement that establishes and allocates responsibility for the design, installation, operation, maintenance, and ownership of the Interconnection Facilities. This Special Facilities Agreement shall be attached to and made a part of this Agreement as Appendix C.
- 6.4 The Interconnection Facilities may include Net Generation Output Metering for determination of standby charges and applicable non-bypassable charges, and/or other meters required for PG&E's administration and billing pursuant to PG&E's tariffs for net energy metering.

7. LIMITATION OF LIABILITY

Each Party's 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.

8. INSURANCE

- 8.1 In connection with Producer's performance of its duties and obligations under this Agreement, Producer shall maintain, during the term of this Agreement, general liability insurance with a combined single limit of not less than:
- (a) Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than one hundred (100) kW;
 - (b) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
 - (c) Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is twenty (20) kW or less.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

- (d) Two hundred thousand dollars (\$200,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is ten (10) kW or less and Producer's Generating Facility is connected to an account receiving residential service from PG&E.

Such general liability insurance shall include coverage for "Premises-Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations."

- 8.2 The general liability insurance required in Section 8.1 shall, by endorsement to the policy or policies, (a) include PG&E as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that PG&E shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.3 If Producer's Generating Facility employs solely of Renewable Electrical Generation Facilities the requirements of Section 8.1 shall be waived. However, to the extent that Producer has currently in force Commercial General Liability or Personal (Homeowner's) Liability insurance, Producer agrees that it will maintain such insurance in force for the duration of this Agreement in no less than amounts currently in effect. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance prior to commencing operations. Such insurance shall provide for thirty (30) calendar days written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.4 Evidence of the insurance required in Section 8.2 shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by PG&E.
- 8.5 Producer agrees to furnish the required certificates and endorsements to PG&E prior to Initial Operation. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance.
- 8.6 If Producer is self-insured with an established record of self-insurance, Producer may comply with the following in lieu of Sections 8.1 through 8.4:
 - (a) Producer shall provide to, PG&E, at least thirty (30) calendar days prior to the date of Initial Operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under Section 8.1.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

(b) If Producer ceases to self-insure to the level required hereunder, or if Producer are unable to provide continuing evidence of Producer's ability to self-insure, Producer agrees to immediately obtain the coverage required under Section 8.1.

8.7 All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted via email or fax to the following:

Pacific Gas and Electric Company
c/o EXIGIS LLC
support@exigis.com
Fax: 646-755-3327

9. NOTICES

9.1 Any written notice, demand, or request required or authorized in connection with this Agreement (Notice) shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the address specified below:

If to PG&E:

[Contact information to be supplied]

If to Producer:

[Contact information to be supplied]

9.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 9.1.

9.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

10. REVIEW OF RECORDS AND DATA

- 10.1 PG&E shall have the right to review and obtain copies of Producer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Producer's Generating Facility or its interconnection with PG&E's Distribution System.
- 10.2 Producer authorizes to release to the California Energy Commission (CEC) information regarding Producer's facility, including customer name, location, size, and operational characteristics of the unit, as requested from time to time pursuant to the CEC's rules and regulations.

11. ASSIGNMENT

Producer shall not voluntarily assign its rights nor delegate its duties under this Agreement without PG&E's written consent. Any assignment or delegation Producer makes without PG&E's written consent shall not be valid. PG&E shall not unreasonably withhold its consent to Producer's assignment of this Agreement.

12. NON-WAIVER

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

13. GOVERNING LAW, JURISDICTION OF COMMISSION, INCLUSION OF PG&E'S TARIFF SCHEDULES AND RULES

- 13.1 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 without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 13.2 This Agreement shall, at all times, be subject to such changes or modifications by the Commission as it may from time to time direct in the exercise of its jurisdiction.
- 13.3 The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Tariff Schedules and Rules applicable to the electric service provided by, PG&E, which Tariff



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)**

Schedules and Rules are hereby incorporated into this Agreement by this reference.

13.4 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission’s rules and regulations, an application for change in rates, charges, classification, service, tariff or rule or any agreement relating thereto.

14. AMENDMENT AND MODIFICATION

This Agreement can only be amended or modified in writing, signed by both Parties.

15. ENTIRE AGREEMENT

This Agreement, including any incorporated Tariff Schedules and rules, contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated tariff schedules and rules.

16. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below.

**PACIFIC GAS AND ELECTRIC
COMPANY**

(Company Name)

(Signature)

(Signature)

(Print Name)

(Print Name)

(Title)

(Title)

(Date)

(Date)

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix A**

APPENDIX A

**DESCRIPTION OF GENERATING FACILITY
AND SINGLE-LINE DIAGRAM
(Provided by Producer)**

(Note: The Description of the Generating Facility should include, but not limited to, for each of the technology types of generation: spatial configuration, net and gross nameplate ratings, manufacturer, if the generators are certified under Rule 21, protection equipment, and intended mode of operation [i.e. non-export: export up to 2 seconds; inadvertent export: export between 2 seconds and 60 seconds; and continuous export: export greater than 60 seconds]. Additionally points of interconnection with PG&E, as well as locations and type of protection equipment and disconnect switches should be identified.)

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix B**

APPENDIX B

RULES “2” AND “21”

(Note: PG&E’s electric Rules “2” and “21” may be subject to such changes or modifications by the Commission as the Commission may, from time to time, direct in the exercise of its jurisdiction. PG&E’s tariffs, including Rules “2” and “21” can be accessed via the PG&E website at www.pge.com/tariffs. Upon request, PG&E can provide copies to Producer of Rules “2” and “21.”)



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix C**

APPENDIX C (If Applicable)

**RULE 21 "SPECIAL FACILITIES" AGREEMENT
(Formed between the Parties)**

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix D**

APPENDIX D (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"COGENERATION FACILITY" PURSUANT TO SECTION 216.6 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the Competition Transition Charge exemption available under Section 372 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PU Code (Cogeneration Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, the Generating Facility shall continue to meet the Cogeneration Requirements. If Producer becomes aware that its Generating Facility has ceased to meet the Cogeneration Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Cogeneration Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Cogeneration Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Cogeneration Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Cogeneration Requirements, then the Cogeneration status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Cogeneration facility (the Cogeneration Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Cogeneration Status Change and provide Notice to Producer of the Cogeneration Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Cogeneration Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Cogeneration Requirements. PG&E shall invoice the Producer's electric service account through which the Generating Facility is Interconnected with PG&E's Distribution System for Competition Transition Charges (CTCs) that were not previously billed during the period between the effective date of the Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Cogeneration Requirements and therefore was eligible for the exemption from CTCs available under Section 372 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix E**

APPENDIX E (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"DISTRIBUTED ENERGY RESOURCES GENERATION" FACILITY
PURSUANT TO SECTION 353.1 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the tariff charge exemption available under Section 353.3 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Distributed Energy Resources Generation as such term is used in Section 353.1 of the PU Code (DERG Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the DERG Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the DERG Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the DERG Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the DERG Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the DERG Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the DERG Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the DERG Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the DERG Status Change and provide Notice to Producer of the DERG Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the DERG Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the DERG Requirements. PG&E shall invoice the Producer electric service account through which the Generating Facility is Interconnected with PG&E's Distribution System for any tariff charges that were not previously billed during the period between the effective date of the DERG Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the DERG Requirements and therefore was eligible for the exemption from tariff charges available under Section 353.3 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)**

Appendix G

APPENDIX G (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS AN
ELIGIBLE BIOGAS ELECTRICAL GENERATING FACILITY PURSUANT
TO SECTION 2827.9 OF THE CALIFORNIA PUBLIC UTILITIES CODE**

Producer has declared that the Generating Facility meets the requirements for an Eligible Biogas Electrical Generating Facility, as defined in Section 2827.9 of the California Public Utilities Code (Eligibility Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the Eligibility Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the Eligibility Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Eligibility Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Eligibility Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the Eligibility Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Producer of the Eligibility Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Eligibility Requirements. PG&E shall invoice the Producer for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM-BIO, Experimental Biogas Net Energy Metering.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)**

Appendix H

Appendix H

**SCHEDULE NEM CUSTOMER-GENERATOR WARRANTY THAT IT
MEETS THE REQUIREMENTS FOR AN ELIGIBLE CUSTOMER-
GENERATOR AND IS AN ELIGIBLE RENEWABLE ELECTRICAL
GENERATION FACILITY PURSUANT TO SECTION 2827 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

(This Affidavit needs to be completed and submitted to PG&E by the Customer-Generator every time a new NEM interconnection agreement for a Renewable Electrical Generation Facility is executed or whenever there is a change in ownership of the Generating Facility).

Circle Type of Renewable Electrical Generation Facility:

biomass	geothermal	municipal solid waste
solar thermal	fuel cell	landfill gas
small hydroelectric generation	ocean wave	digester gas
ocean thermal	tidal current	

NEM Customer-Generator (Customer) declares that

- (1) it meets the requirements to be an “Eligible Customer-Generator” and its Generating Facility.
- (2) (a) meets the requirements of an “Renewable Electrical Generation Facility”, as defined in Section 2827(b)(5) of the California Public Utilities Code and (b) satisfies the definitions of the renewable resource for the Renewable Electrical Generation Facility in the latest version of the California Energy Commission’s (CEC’s) Renewables Portfolio Standard (RPS) Eligibility Guidebook and the Overall Program Guidebook. ² (Eligibility Requirements).

² The RPS Guidebooks can be found at: <http://www.energy.ca.gov/renewables/documents/index.html#rps>

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)
Appendix H**

Included in these eligibility requirements (check as applicable) pursuant to Public Utilities Code section 2827(b)(5) and Public Resource Code Section 25741 paragraph 1(a):

- If the Renewable Electrical Generation Facility is a fuel cell, or otherwise uses renewable biogas or otherwise, Eligible Customer-Generator warrants that the fuel cell is powered solely with renewable fuel.
- If the Renewable Electrical Generation Facility is a Small hydroelectric generating facility, customer warrants that it will not cause an adverse impact on instream beneficial uses, nor cause a change in the volume or timing of streamflow).

If the Customer uses biogas or a renewable fuel as the fuel for their Renewable Electrical Generation Facility:

- Eligible Customer-Generator warrants that the Renewable Electrical Generation Facility is powered solely with renewable fuel.

Eligible Customer-Generator warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, Eligible Customer-Generator and the Generating Facility shall continue to meet the Eligibility Requirements. If Eligible Customer-Generator or the Generating Facility ceases to meet the Eligibility Requirements, Eligible Customer-Generator shall promptly provide PG&E with Notice of such change pursuant to Section 11 of this Agreement. If at any time during the term of this Agreement PG&E determines, at its reasonable discretion, that Eligible Customer-Generator or Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Eligible Customer-Generator to provide evidence, that Eligible Customer-Generator and/or Generating Facility continues to meet the Eligibility Requirements, within 20 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Eligible Customer-Generator to monitor the Generating Facility's compliance with the Eligibility Requirements – PG&E will provide a minimum of 10 business days notice to the Eligible Customer-Generator should PG&E decide an inspection is required. If PG&E determines in its reasonable judgment that Eligible Customer-Generator either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Eligibility Status shall be deemed ineffective until such time as Eligible Customer-Generator again demonstrates to PG&E's reasonable satisfaction that Eligible Customer-Generator meets the requirements for an Eligible Customer-Generator and/or the Generating Facility meets the requirements for a Eligible electrical generating facility (the Eligibility Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Eligible Customer-Generator of the Eligibility Status Change pursuant to Section 11 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Eligible Customer-Generator and/or Generating Facility first ceased to meet the



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)**

Appendix H

Eligibility Requirements. PG&E shall invoice the Eligible Customer-Generator for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Eligible Customer-Generator's representations that Eligible Customer-Generator and/or Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM Net Energy Metering Service for Eligible Customer-Generators.

Any amounts to be paid or refunded by Eligible Customer-Generator, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Eligible Customer-Generator's receipt of such invoice.

Unless otherwise ordered by the CPUC, this Agreement at all times shall be subject to such modifications as the CPUC may direct from time to time in the exercise of its jurisdiction.

I certify the above is true and correct,

Customer-Generator Signature: _____

Name: _____

Title: _____

Date: _____



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Appendix I

APPENDIX I (If Applicable)

OPERATING REQUIREMENTS FOR ENERGY STORAGE DEVICE(S)

The following Operating Requirement(s) apply to the charging functions of the Generating Facility:

- Producers storage device(s) will not consume power from Distribution Provider's Distribution System at any time.
Producers storage device(s) will not cause the Host Load to exceed its normal peak demand.
To avoid upgrades or other technical mitigation items identified in the interconnection process, Producer has chosen the following Generating Facility operating constraint(s):

For the annual period between [Month/Day] and [Month/Day]
And during the hours of
The storage device(s) will consume no more than a total of kW from the Distribution System.
This operating constraint voids the need for the following specific mitigation scope:

Table with 6 empty rows for specifying mitigation scope.

No other charging function limitation is required for this Generating Facility except the requirements above. Producer will be responsible for the costs of the corresponding upgrades or other technical mitigations if at any time the Producer elects to forego or violates the operating requirement.

Consistent with current load service Rules, Distribution Provider is not required to reserve capacity for load. Producer is responsible to contact the utility for any modification to its equipment or change in operations that may result in increased load demand per Electric Rule 3.C.

If any operating requirement is specified above, Distribution Provider reserves the right to ask for data at the 15-minute interval level at any time to verify that the operating requirement is being met. Distribution Provider will make such request via a written notice no more than once per calendar quarter. Producer must provide such data within 30 Calendar Days of the written request.

If the Generating Facility fails to adhere to the operating requirements at any time, it will be disconnected immediately in accordance with Rule 21 Section D.9 and not reconnected until an approved mitigation (e.g., supervising controls) is in place as determined by Distribution Provider.



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF)**

Appendix J

**Interconnection Agreement for Net Energy Metering of
Solar or Wind Electric Generating Facilities of 1,000 KW or
Less, Other Than Facilities of 30 KW or Less**

APPENDIX J
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Appendix J

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage **only capable** of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF)

Appendix J

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ =.
total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ =.
total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

This *Generating Facility Interconnection Agreement (Multiple Tariff NEM2MT)* (Agreement) is entered into by and between _____ (Producer), and Pacific Gas and Electric Company (PG&E) a California Corporation. Producer and PG&E are sometimes also referred to in this Agreement jointly as “Parties” or individually as “Party.” In consideration of the mutual promises and obligations stated in this Agreement and its attachments, the Parties agree as follows:

1. SCOPE AND PURPOSE

This Agreement provides for Producer to interconnect and operate a Generating Facility in parallel with PG&E’s Electric System to serve the electrical loads at the location identified in Section 2.4 (or for the qualifying energy where permitted under Section 218 of the California Public Utilities Code (PUC). The Generating Facility must be a combination of generators, but must include at least one NEM2 “Eligible customer-generator.” (as defined in PG&E’s Schedule NEM2). “Eligible customer-generator” may also include other eligible customer-generators such as NEM2 Renewable Electrical Generation Facility(ies), Renewable Electrical Generation Facility(ies) (as defined in PG&E’s Schedule NEM) or Eligible Fuel Cell Electrical Generating Facility(ies) (as defined in PG&E’s Schedule NEMFC), as allowed under Special Condition 4 of Schedule NEM2.

- 1.1. This Agreement provides for Producer to operate the Eligible Generator(s) pursuant to the provisions of Section 2827.1 et seq. of the PU Code and the applicable PG&E tariffs for net energy metering. This Agreement also provides for Producer to operate its Non-Eligible Generator(s). This Agreement does not provide for retail electrical service by PG&E to Producer. Such arrangements must be made separately between PG&E and Producer.
- 1.2. This Agreement does not address Producer’s account billing and payment for energy consumption. For the Generating Facility as specified in Section 2 of this Agreement, please refer to the applicable PG&E net-energy-metered (NEM and/or NEM2) tariff schedules for billing and payment protocol.

2. SUMMARY AND DESCRIPTION OF PRODUCER’S GENERATING FACILITY

- 2.1 A description of the Generating Facility, including a summary of its significant components and a single-line diagram showing the general arrangement of how Producer’s Generating Facility and loads are interconnected with PG&E’s Electric System, are attached to and made a part of this Agreement. (Supplied by Producer as Appendix A).



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2.2 Generating Facility identification number: _____ (Assigned by PG&E).

2.3 Producer's electric service agreement ID number: _____ (Assigned by PG&E).

2.4 Name and address used by PG&E to locate the electric service account used to interconnect the Generating Facility with PG&E's Electric System:

Name: _____

Address: _____

City/Zip Code: _____

2.5 The Gross Nameplate Rating of the Generating Facility is:

2.5.1 Eligible Generator(s):

Table with 2 columns and 7 rows listing generator types and their kW ratings, including biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current, and small hydroelectric generation with storage/batteries details.

2.5.2 Non-Eligible Generator(s): _____ kW

2.5.3 Total Gross Nameplate Rating of the Generating Facility: _____ kW

2.6 The Net Nameplate Rating of the Generating Facility is:



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

2.6.1 Eligible Renewable Electrical Generation Facility Generator(s):

Table with 2 columns and 7 rows listing eligible renewable energy sources like biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, and small hydroelectric generation with associated kW ratings.

2.6.2 Non-Eligible Generator(s): _____ kW

2.6.3 Total Net Nameplate Rating of the Generating Facility: _____ kW

2.7 The maximum level of power that may be exported by the Generating Facility to PG&E’s Electric System is expected to be:

2.7.1 Eligible Generator(s):

Table with 2 columns and 7 rows listing eligible renewable energy sources like biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, and small hydroelectric generation with associated kW ratings.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

2.7.2 Non-Eligible Generator(s): _____ kW

2.7.3 Total maximum level of power that may be exported by the Generating Facility: _____ kW

2.8 the purpose of securing the Competition Transition Charge exemption available under Section 372 of the California Public Utilities Code (PUC), Producer hereby declares that the portion of the Generating Facility that is generating in a combined heat and power mode
[] does / [] does not meet the requirements for Cogeneration as such term is used in Section 216.6 of the California Public Utilities Code.

2.9 The Generating Facility's expected date of Initial Operation is _____. The expected date of Initial Operation shall be within two years of the date of this Agreement.

2.10 For the purpose of securing certain tariff charge exemptions available under the PU Code, Producer hereby declares the following for each Generator technology of the Generating Facility:

Requirements for Distributed Energy Resource Generation as such term is used in Section 353.1 of the PU Code.

Table with 2 columns and 8 rows listing generator technologies (biomass, solar thermal, photovoltaic, wind, geothermal, fuel cell, small hydroelectric generation, fuel cell (under NEMFC), digester gas, municipal solid waste, landfill gas, ocean wave, ocean thermal, tidal current, biogas digester (under NEMBIO), other technology) and their compliance status (are met / are not met) with checkboxes.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

2.11 Customer-Generator's otherwise-applicable-rate schedule as of the execution of this Agreement is: _____

3. DOCUMENTS INCLUDED; DEFINED TERMS

3.1 This Agreement includes the following exhibits which are specifically incorporated herein and made a part of this Agreement.

Appendix A - Description of Generating Facility and Single-Line Diagram (Supplied by Producer).

Appendix B - Web-site references to Rules 2 and 21 and other selected rules and tariffs of PG&E (Supplied by PG&E).

Appendix C - A Copy of *PG&E's Agreement for Installation or Allocation of Special Facilities for Parallel Operation of Nonutility-Owned Generation and/or Electrical Standby Service* (Form 79-280) (Special Facility Agreement), if applicable, (Formed by the Parties).

Appendix D - Producer's warranty that the Generating Facility meets the requirements for a Cogeneration facility pursuant to Section 216.6 of the PU Code (when applicable).

Appendix E - Producer's warranty that the Generating Facility meets the requirements for Distributed Energy Resources Generation as defined in Section 353.1 of the PU Code (when applicable).

Appendix F - NEM2 Load Aggregation Customer-Generator Declaration Warranting NEM2 Aggregation Is Located On Same or Adjacent or Contiguous Property to Generator Parcel

Appendix G - Producer's warranty that it meets the requirements for an Eligible Biogas Digester Electrical Generating Facility, (applicable Generator(s) only) as defined in Section 2827.9 of the PU Code (when applicable).

Appendix H - Schedule NEM and/or NEM2 Customer-Generator Warranty that it Meets the Requirements for an Eligible Customer-Generator and is an Eligible Renewable Electrical Generation Facility Pursuant to Section 2827.1 of the California Public Utilities Code.

Appendix I -Operating Requirements for Energy Storage Device(s) (when applicable).

Appendix J - NEMFC Customer Agreement Starting January 1, 2017 Until California Air Resources Board Emission Standard is Established.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

3.2 When initially capitalized, whether in the singular or in the plural, the terms used herein shall have the meanings assigned to them either in this Agreement or in PG&E's Rule 21 Section C.

4. TERM AND TERMINATION

4.1 This Agreement shall become effective as of the last date entered in Section 16, below. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:

- (a) The Parties agree in writing to terminate the Agreement, or
- (b) Unless otherwise agreed in writing by the Parties, at 12:01 A.M. on the day following the date the electric service account through which Producer's Generating Facility is interconnected to PG&E's Electric System is closed or terminated, or
- (c) At 12:01 A.M. on the 61st day after Producer or PG&E provides written Notice pursuant to Section 9 below to the other Party of Producer's or PG&E's intent to terminate this Agreement.

4.2 Producer may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for any reason. PG&E may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for one or more of the following reasons:

- (a) A change in applicable rules, tariffs, and regulations, as approved or directed by the California Public Utilities Commission "Commission," or a change in any local, state or federal law, statute or regulation, either of which materially alters or otherwise affects PG&E's ability or obligation to perform PG&E's duties under this Agreement; or,
- (b) Unless otherwise agreed to in writing by the Parties, Producer fails to take all corrective actions specified in PG&E's Notice that Producer's Generating Facility is out of compliance with the terms of this Agreement within the time frame set forth in such Notice; or,
- (c) Producer fails to interconnect and operate the Generating Facility per the terms of this Agreement prior to 120 days after the date set forth in Section 2.9, above, as the Generating Facility's expected date of Initial Operation; or,
- (d) Producer abandons the Generating Facility. PG&E shall deem the Generating Facility to be abandoned if PG&E determines, in its reasonable opinion, the Generating Facility is non-operational and Producer does not provide a substantive response to PG&E Notice of its intent to terminate this Agreement as a result of Producer's apparent abandonment of the Generating Facility affirming Producer's intent and ability to continue to operate the Generating Facility.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

- (e) Producer makes a change to the physical configuration of the Generating Facility, as declared in Section 2 and Appendix A of this Agreement.
- 4.3 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application to terminate this Agreement.
- 4.4 Any agreements attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. GENERATING FACILITY AND OPERATING REQUIREMENTS

- 5.1 Except for that energy delivered to PG&E's Electric System, electric energy produced by Producer's Generating Facility shall be used solely to serve electrical loads connected to the electric service account that PG&E uses to interconnect Producer's Generating Facility (or, where permitted under Section 218 of the PUC, the electric loads of an on-site or neighboring party lawfully connected to Producer's Generating Facility through Producer's circuits). Producer shall not use the Generating Facility to serve electrical loads that will cause Producer to be considered an "electrical corporation" as such term is used in Section 218 of the California Public Utilities Code.
- 5.2 Unless otherwise agreed upon in writing by the Parties, this Agreement does not provide for, nor otherwise require PG&E to purchase, transmit, distribute, or store the electrical energy produced by Producer's Generating Facility.
- 5.3 Producer is responsible for operating the Generating Facility in compliance with all of PG&E's tariffs, including but not limited to PG&E's Rule 21 and applicable NEM-2 tariff schedules, and applicable safety and performance standards established by the National Electric Code, Institute of Electrical and Electronic Engineers, accredited testing laboratories such as Underwriters Laboratories, rules of the Commission regarding safety and reliability, and any other regulations and laws governing the Interconnection of the Generating Facility.
- 5.4 Producer shall: (a) maintain the Generating Facility and Interconnection Facilities in a safe and prudent manner and in conformance with all applicable laws and regulations including, but not limited to, Section 5.3, and (b) obtain any governmental authorizations and permits required for the construction and operation of the Generating Facility and Interconnection Facilities. Producer shall reimburse PG&E for any and all losses, damages, claims, penalties, or liability it incurs as a result of Producer's failure to obtain or maintain any governmental authorizations and permits required for construction and operation of Producer's Generating Facility.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

- 5.5 Producer shall not commence parallel operation of the Generating Facility until PG&E has provided express written approval. Such approval shall normally be provided per the timelines established by the applicable PUC 2827 section, or by Rule 21. Such approval will be provided after PG&E's receipt of: (1) a completed Generating Facility Interconnection Application (Form 79-1174-02), including all supporting documents and payments as described in the Application; (2) any required NEM supplemental application forms; (3) a signed and completed Generating Facility Interconnection Agreement (Multiple Tariff NEM2MT) (Form 79-1069-02); (4) a copy of the Producer's final inspection clearance from the governmental authority having jurisdiction over the Generating Facility; and (5) submission of all applicable payments for reviews, studies, Interconnection Facilities, and Electric System Modifications. Such approval will not be unreasonably withheld. PG&E shall have the right to have representatives present at the Commissioning Test as defined in Rule 21. Producer shall notify PG&E at least five (5) business days prior to the initial testing.
- 5.6 In no event shall the delivery of the maximum electric power to PG&E's Electric System exceed the amount or other limitations specified in Section 2 and Appendix A of this Agreement. If Producer does not regulate its Generating Facility in compliance with the limitations set forth in this Agreement, PG&E may require Producer to disconnect its Generating Facility from PG&E's Electric System until Producer demonstrates to PG&E's reasonable satisfaction that Producer has taken adequate measures to regulate the output of its Generating Facility and control its deliveries of electric power to PG&E. Further, should PG&E determine that Producer's operation of the Generating Facility is causing an unsafe condition or is adversely affecting PG&E's ability to utilize its Electric System in any manner, even if Producer's deliveries of electric power to PG&E's Electric System are within the limitations specified in this Agreement, PG&E may require Producer to temporarily or permanently reduce or cease deliveries of electric power to PG&E's Electric System. Alternatively, the Parties may agree to other corrective measures so as to mitigate the effect of electric power flowing from the Generating Facility to PG&E's Electric System. Producer's failure to comply with the terms of this Section shall constitute a material breach of this Agreement and PG&E may initiate termination in accordance with the terms of Section 4.2(b).
- 5.7 Producer shall not deliver reactive power to PG&E's Electric System unless the Parties have agreed otherwise in writing.
- 5.8 The Generating Facility shall be operated with all of Producer's Protective Functions in service whenever the Generating Facility is operated in parallel with PG&E's Electric System. Any deviation from these requirements may occur only when the Parties have agreed to such deviations in writing.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

- 5.9 If Producer declares that its Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PUC (or any successor definition of Cogeneration (Cogeneration Requirements), Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet such Cogeneration Requirements, per Appendix D of this Agreement.
- 5.10 In order to promote the safety and reliability of the customer Generating Facility, the applicant certifies that as a part of each interconnection request for a NEM and/or NEM2 Generating Facility, that all major solar system components (if any) are on the verified equipment list maintained by the California Energy Commission and certifies that other equipment, as determined by PG&E, has safety certification from a nationally recognized testing laboratory.
- 5.11 Producer certifies as a part of each interconnection request for a NEM and/or NEM2 Eligible Generating Facility that
- (i) a warranty of at least 10 years has been provided on all equipment and on its installation, or
 - (ii) a 10-year service warranty or executed “agreement” has been provided ensuring proper maintenance and continued system performance.
- 5.12 Producer rs on this tariff must pay for the interconnection of their NEM2 Generation Facilities as provided in Electric Rule 21, pursuant to Decision 16-01-044.
- 5.13 If Producer’s Generating Facility includes any energy storage device(s), Distribution Provider may provide requirements that must be met by the Producer prior to initiating Parallel Operation with PG&E’s Distribution System and throughout the term of this Agreement, including but not limited to the requirements set forth in Appendix I of this Agreement.
- 5.14 Smart Inverters
- For Producer applications received on or after September 9, 2017, the Producer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.
- Distribution Provider may require a field verification of the Producer’s inverter. Producer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Producer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Producer will need to cease operation of generating facility until verification is confirmed by Distribution



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

Provider.

(Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at:

<http://www.gosolarcalifornia.org/equipment/inverters.php>.)

Verification of compliance with such requirements shall be provided by the Producer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Producer has submitted the interconnection application prior to September 9, 2017,
- (c) the Producer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹¹ no later than March 31, 2018, or
- (d) the Producer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. Producer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
- (ii) a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

6. INTERCONNECTION FACILITIES

6.1 Producer and/or PG&E, as appropriate, shall provide Interconnection Facilities that adequately protect PG&E's Electric System, personnel, and

¹ A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments,
2. A completed signed Interconnection Agreement,
3. Evidence of the Producer final inspection clearance from the governmental authority having jurisdiction over the generating system.



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

other persons from damage or injury, which may be caused by the operation of Producer's Generating Facility.

- 6.2 Producer shall be solely responsible for the costs, design, purchase, construction, operation, and maintenance of the Interconnection Facilities that Producer owns.
- 6.3 If the provisions of PG&E's Rule 21, or any other tariff or rule approved by the Commission, requires PG&E to own and operate a portion of the Interconnection Facilities, Producer and PG&E shall promptly execute a Special Facilities Agreement that establishes and allocates responsibility for the design, installation, operation, maintenance, and ownership of the Interconnection Facilities. This Special Facilities Agreement shall be attached to and made a part of this Agreement as Appendix C.
- 6.4 The Interconnection Facilities may include Net Generation Output Metering for determination of standby charges and applicable non-bypassable charges, and/or other meters required for PG&E's administration and billing pursuant to PG&E's tariffs for net energy metering.

7. LIMITATION OF LIABILITY

Each Party's 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.

8. INSURANCE

- 8.1 In connection with Producer's performance of its duties and obligations under this Agreement, Producer shall maintain, during the term of this Agreement, general liability insurance with a combined single limit of not less than:
 - (a) Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than one hundred (100) kW;
 - (b) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
 - (c) Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is twenty (20) kW or less.
 - (d) Two hundred thousand dollars (\$200,000) for each occurrence if the



GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

Gross Nameplate Rating of Producer's Generating Facility is ten (10) kW or less and Producer's Generating Facility is connected to an account receiving residential service from PG&E.

Such general liability insurance shall include coverage for "Premises-Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations."

- 8.2 The general liability insurance required in Section 8.1 shall, by endorsement to the policy or policies, (a) include PG&E as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that PG&E shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.3 If Producer's Generating Facility employs solely of Renewable Electrical Generation Facilities the requirements of Section 8.1 shall be waived. However, to the extent that Producer has currently in force Commercial General Liability or Personal (Homeowner's) Liability insurance, Producer agrees that it will maintain such insurance in force for the duration of this Agreement in no less than amounts currently in effect. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance prior to commencing operations. Such insurance shall provide for thirty (30) calendar days written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.4 Evidence of the insurance required in Section 8.2 shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by PG&E.
- 8.5 Producer agrees to furnish the required certificates and endorsements to PG&E prior to Initial Operation. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance.
- 8.6 If Producer is self-insured with an established record of self-insurance, Producer may comply with the following in lieu of Sections 8.1 through 8.4:
- (a) Producer shall provide to, PG&E, at least thirty (30) calendar days prior to the date of Initial Operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under Section 8.1.
 - (b) If Producer ceases to self-insure to the level required hereunder, or if Producer are unable to provide continuing evidence of Producer's ability to self-insure, Producer agrees to immediately obtain the



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)**

coverage required under Section 8.1.

- 8.7 All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted via email or fax to the following:

Pacific Gas and Electric Company
c/o EXIGIS LLC
support@exigis.com
Fax: 646-755-3327

9. NOTICES

- 9.1 Any written notice, demand, or request required or authorized in connection with this Agreement (Notice) shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the address specified below:

If to PG&E:

Pacific Gas and Electric Company
Attention: Electric Generation Interconnection - Contract Management
245 Market Street
Mail Code N7L
San Francisco, California 94105-1702

If to Producer:

Customer-Generator Name: _____
Address: _____
City: _____
Phone: (____) _____
FAX: (____) _____

- 9.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 9.1.
- 9.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone numbers may be communicated or revised by one Party's Notice to the other.



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10. REVIEW OF RECORDS AND DATA

- 10.1 PG&E shall have the right to review and obtain copies of Producer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Producer's Generating Facility or its interconnection with PG&E's Electric System.
- 10.2 Producer authorizes to release to the California Energy Commission (CEC) information regarding Producer's facility, including customer name, location, size, and operational characteristics of the unit, as requested from time to time pursuant to the CEC's rules and regulations.

11. ASSIGNMENT

Producer shall not voluntarily assign its rights nor delegate its duties under this Agreement without PG&E's written consent. Any assignment or delegation Producer makes without PG&E's written consent shall not be valid. PG&E shall not unreasonably withhold its consent to Producer's assignment of this Agreement.

12. NON-WAIVER

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

13. GOVERNING LAW, JURISDICTION OF COMMISSION, INCLUSION OF PG&E's TARIFF SCHEDULES AND RULES

- 13.1 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 without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.
- 13.2 This Agreement shall, at all times, be subject to such changes or modifications by the Commission as it may from time to time direct in the exercise of its jurisdiction.
- 13.3 The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Tariff Schedules and Rules applicable to the electric service provided by, PG&E, which Tariff Schedules and Rules are hereby incorporated into this Agreement by this reference.



**GENERATING FACILITY
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13.4 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application for change in rates, charges, classification, service, tariff or rule or any agreement relating thereto.

14. AMENDMENT AND MODIFICATION

This Agreement can only be amended or modified in writing, signed by both Parties.

15. ENTIRE AGREEMENT

This Agreement, including any incorporated Tariff Schedules and rules, contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated tariff schedules and rules.

16. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below.

_____	PACIFIC GAS AND ELECTRIC COMPANY
(Company Name)	_____
_____	_____
(Signature)	(Signature)
_____	_____
(Print Name)	(Print Name)
_____	_____
(Title)	(Title)
_____	_____
(Date)	(Date)

**GENERATING FACILITY
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(MULTIPLE TARIFF NEM2MT)
Appendix A**

APPENDIX A

**DESCRIPTION OF GENERATING FACILITY
AND SINGLE-LINE DIAGRAM
(Provided by Producer)**

(Note: The Description of the Generating Facility should include, but not limited to, for each of the technology types of generation: spatial configuration, net and gross nameplate ratings, manufacturer, if the generators are certified under Rule 21, protection equipment, and intended mode of operation [i.e. non-export: export up to 2 seconds; inadvertent export: export between 2 seconds and 60 seconds; and continuous export: export greater than 60 seconds]. Additionally points of interconnection with PG&E, as well as locations and type of protection equipment and disconnect switches should be identified.)

**GENERATING FACILITY
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Appendix B**

APPENDIX B

RULES “2” AND “21”

(Note: PG&E’s electric Rules “2” and “21” may be subject to such changes or modifications by the Commission as the Commission may, from time to time, direct in the exercise of its jurisdiction. PG&E’s tariffs, including Rules “2” and “21” can be accessed via the PG&E website at www.pge.com/tariffs. Upon request, PG&E can provide copies to Producer of Rules “2” and “21.”)



**GENERATING FACILITY
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Appendix C**

APPENDIX C (If Applicable)

**RULE 21 “SPECIAL FACILITIES” AGREEMENT
(Formed between the Parties)**

**GENERATING FACILITY
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Appendix D**

APPENDIX D (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"COGENERATION FACILITY" PURSUANT TO SECTION 216.6 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the Competition Transition Charge exemption available under Section 372 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PU Code (Cogeneration Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, the Generating Facility shall continue to meet the Cogeneration Requirements. If Producer becomes aware that its Generating Facility has ceased to meet the Cogeneration Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Cogeneration Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Cogeneration Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Cogeneration Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Cogeneration Requirements, then the Cogeneration status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Cogeneration facility (the Cogeneration Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Cogeneration Status Change and provide Notice to Producer of the Cogeneration Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Cogeneration Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Cogeneration Requirements. PG&E shall invoice the Producer's electric service account through which the Generating Facility is Interconnected with PG&E's Electric System for Competition Transition Charges (CTCs) that were not previously billed during the period between the effective date of the Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Cogeneration Requirements and therefore was eligible for the exemption from CTCs available under Section 372 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)
Appendix E**

APPENDIX E (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS A
"DISTRIBUTED ENERGY RESOURCES GENERATION" FACILITY
PURSUANT TO SECTION 353.1 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

For the purpose of securing the tariff charge exemption available under Section 353.3 of the PU Code, Producer hereby declares that the Generating Facility meets the requirements for Distributed Energy Resources Generation as such term is used in Section 353.1 of the PU Code (DERG Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the DERG Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the DERG Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the DERG Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the DERG Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the DERG Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the DERG Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the DERG Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the DERG Status Change and provide Notice to Producer of the DERG Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the DERG Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the DERG Requirements. PG&E shall invoice the Producer electric service account through which the Generating Facility is Interconnected with PG&E's Electric System for any tariff charges that were not previously billed during the period between the effective date of the DERG Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the DERG Requirements and therefore was eligible for the exemption from tariff charges available under Section 353.3 of the PU Code.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

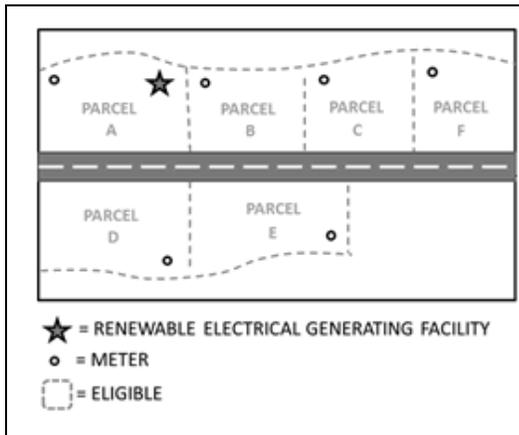
Appendix F

APPENDIX F (When applicable)

NEM2 LOAD AGGREGATION APPENDIX (If Applicable) CUSTOMER-GENERATOR DECLARATION WARRANTING NEM2 AGGREGATION IS LOCATED ON SAME OR ADJACENT OR CONTIGUOUS PROPERTY TO GENERATOR PARCEL

In accordance with Schedule NEM2, I, Customer-Generator represent and warrant under penalty of perjury that:

- 1) The total annual output in kWh of the generator is less than or equal to 110% (for solar and/or wind systems equal to or less than 30 kW) or 100% (for all other technologies and solar and/or wind systems greater than 30 kW) of the annual aggregated electrical load in kWh of the meters associated with the generator account, including the load on the generating account itself (before being offset by the generator); and
- 2) Each of the aggregated account meters associated with this NEM2 generator account are located either:
 - (i) on the property where the renewable electrical generation facility is located, or
 - (ii) are located within an unbroken chain of contiguous parcels that are all solely owned, leased or rented by the customer-generator. For purposes of Load Aggregation, parcels that are divided by a street, highway, or public thoroughfare are considered contiguous, provided they are within an unbroken chain of otherwise contiguous parcels that are all solely owned leased or rented by the customer-generator.



For example, assume there are five parcels (A, B, C, D, E, and F) that form a cluster of contiguous parcels and D and E are separated from A, B, C and F by a street, highway, or public thoroughfare. For the purposes of participating in Load Aggregation, all five parcels are considered contiguous, provided they are otherwise contiguous and all are solely owned, leased or rented by the customer-generator. Refer to the diagram at left (for illustrative purposes only.)

- 3) PG&E reserves the right to request a parcel map to confirm the property meets the requirements of 2) above; and
- 4) Customer-Generator agrees to notify PG&E if there is any change of status that makes any of the participating meters ineligible for meter aggregation to ensure that only eligible meters are participating; PG&E will require an updated Appendix and Declaration form; and
- 5) Upon request by PG&E, I agree to provide documentation that all aggregated meters meet the requirements of Rate Schedule NEM2 Special Condition 6 including but not limited to parcel maps and ownership records.

Customer Generator's Name

Signature

Date

Type/Print Name

Title

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)
Appendix G**

APPENDIX G (When applicable)

**PRODUCER'S WARRANTY THAT THE GENERATING FACILITY IS AN
ELIGIBLE BIOGAS ELECTRICAL GENERATING FACILITY PURSUANT
TO SECTION 2827.9 OF THE CALIFORNIA PUBLIC UTILITIES CODE**

Producer has declared that the Generating Facility meets the requirements for an Eligible Biogas Electrical Generating Facility, as defined in Section 2827.9 of the California Public Utilities Code (Eligibility Requirements).

Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet the Eligibility Requirements. If Producer becomes aware that the Generating Facility has ceased to meet the Eligibility Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 of the Agreement. If at any time during the term of this Agreement PG&E determines in its reasonable discretion that Producer's Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Producer to provide evidence that the Generating Facility continues to meet the Eligibility Requirements within 15 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with the Eligibility Requirements. If PG&E determines in its reasonable judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Distributed Energy Resources Generation status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Distributed Energy Resources Generation facility (the Eligibility Status Change).

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Producer of the Eligibility Status Change pursuant to Section 9.1 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Generating Facility first ceased to meet the Eligibility Requirements. PG&E shall invoice the Producer for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM-BIO, Experimental Biogas Net Energy Metering.

Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)
Appendix H**

Appendix H

**SCHEDULE NEM2 CUSTOMER-GENERATOR WARRANTY THAT IT
MEETS THE REQUIREMENTS FOR AN ELIGIBLE CUSTOMER-
GENERATOR AND IS AN ELIGIBLE RENEWABLE ELECTRICAL
GENERATION FACILITY PURSUANT TO SECTION 2827.1 OF THE
CALIFORNIA PUBLIC UTILITIES CODE**

(This Affidavit needs to be completed and submitted to PG&E by the Customer-Generator every time a new NEM2 interconnection agreement for a Renewable Electrical Generation Facility is executed or whenever there is a change in ownership of the Generating Facility).

Check Type of Renewable Electrical Generation Facility:

<input type="checkbox"/> biomass	<input type="checkbox"/> geothermal	<input type="checkbox"/> municipal solid waste
<input type="checkbox"/> solar thermal	<input type="checkbox"/> fuel cell	<input type="checkbox"/> landfill gas
<input type="checkbox"/> small hydroelectric generation	<input type="checkbox"/> ocean wave	<input type="checkbox"/> digester gas
<input type="checkbox"/> ocean thermal	<input type="checkbox"/> tidal current	<input type="checkbox"/> Storage/Batteries _____ amp hours _____ inverter kWh

NEM2 Customer-Generator (Customer) declares that

- (1) it meets the requirements to be an “Eligible Customer-Generator” and its Generating Facility.
- (2) (a) meets the requirements of an “Renewable Electrical Generation Facility”, as defined in Section 2827(b)(5) of the California Public Utilities Code and (b) satisfies the definitions of the renewable resource for the Renewable Electrical Generation Facility in the latest version of the California Energy Commission’s (CEC’s) Renewables Portfolio Standard (RPS) Eligibility Guidebook and the Overall Program Guidebook. ² (Eligibility Requirements).

² The RPS Guidebooks can be found at: <http://www.energy.ca.gov/renewables/documents/index.html#rps>

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)
Appendix H**

Included in these eligibility requirements (check as applicable) pursuant to Public Utilities Code section 2827(b)(5) and Public Resource Code Section 25741 paragraph 1(a):

- If the Renewable Electrical Generation Facility is a fuel cell, or otherwise uses renewable biogas or otherwise, Eligible Customer-Generator warrants that the fuel cell is powered solely with renewable fuel.

- If the Renewable Electrical Generation Facility is a Small hydroelectric generating facility, customer warrants that it will not cause an adverse impact on instream beneficial uses, nor cause a change in the volume or timing of streamflow).

If the Customer uses biogas or a renewable fuel as the fuel for their Renewable Electrical Generation Facility:

- Eligible Customer-Generator warrants that the Renewable Electrical Generation Facility is powered solely with renewable fuel.

Eligible Customer-Generator warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, Eligible Customer-Generator and the Generating Facility shall continue to meet the Eligibility Requirements. If Eligible Customer-Generator or the Generating Facility ceases to meet the Eligibility Requirements, Eligible Customer-Generator shall promptly provide PG&E with Notice of such change pursuant to Section 11 of this Agreement. If at any time during the term of this Agreement PG&E determines, at its reasonable discretion, that Eligible Customer-Generator or Generating Facility may no longer meet the Eligibility Requirements, PG&E may require Eligible Customer-Generator to provide evidence, that Eligible Customer-Generator and/or Generating Facility continues to meet the Eligibility Requirements, within 20 business days of PG&E's request for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Eligible Customer-Generator to monitor the Generating Facility's compliance with the Eligibility Requirements – PG&E will provide a minimum of 10 business days notice to the Eligible Customer-Generator should PG&E decide an inspection is required. If PG&E determines in its reasonable judgment that Eligible Customer-Generator either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Eligibility Requirements, then the Eligibility Status shall be deemed ineffective until such time as Eligible Customer-Generator again demonstrates to PG&E's reasonable satisfaction that Eligible Customer-Generator meets the requirements for an Eligible Customer-Generator and/or the Generating Facility meets the requirements for a Eligible electrical generating facility (the Eligibility Status Change).



**GENERATING FACILITY
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(MULTIPLE TARIFF NEM2MT)
Appendix H**

PG&E shall revise its records and the administration of this Agreement to reflect the Eligibility Status Change and provide Notice to Eligible Customer-Generator of the Eligibility Status Change pursuant to Section 11 of this Agreement. Such Notice shall specify the effective date of the Eligibility Status Change. This date shall be the first day of the calendar year for which PG&E determines in its reasonable discretion that the Eligible Customer-Generator and/or Generating Facility first ceased to meet the Eligibility Requirements. PG&E shall invoice the Eligible Customer-Generator for any tariff charges that were not previously billed during the period between the effective date of the Eligibility Status Change and the date of the Notice in reliance upon Eligible Customer-Generator's representations that Eligible Customer-Generator and/or Generating Facility complied with the Eligibility Requirements and therefore was eligible for the rate treatment available under the Net Energy Metering provisions of PG&E's Schedule NEM2 Net Energy Metering Service for Eligible Customer-Generators.

Any amounts to be paid or refunded by Eligible Customer-Generator, as may be invoiced by PG&E pursuant to the terms of this warranty, shall be paid to PG&E within 30 days of Eligible Customer-Generator's receipt of such invoice.

Unless otherwise ordered by the CPUC, this Agreement at all times shall be subject to such modifications as the CPUC may direct from time to time in the exercise of its jurisdiction.

I certify the above is true and correct,

Customer-Generator Signature: _____

Name: _____

Title: _____

Date: _____

**GENERATING FACILITY
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(MULTIPLE TARIFF NEM2MT)
Appendix I**

APPENDIX I
(If Applicable)

**OPERATING REQUIREMENTS FOR ENERGY STORAGE
DEVICE(S)**

The following Operating Requirement(s) apply to the charging functions of the Generating Facility:

- Producer's storage device(s) will not consume power from Distribution Provider's Distribution System at any time.
- Producer's storage device(s) will not cause the Host Load to exceed its normal peak demand. Normal peak demand is defined as the highest amount of power required from the Distribution System by Producer's complete facilities without the influence or use of the energy storage device(s).
- To avoid upgrades or other technical mitigation items identified in the interconnection process, Producer has chosen the following Generating Facility operating constraint(s):

For the annual period between _____ [Month/Day] and _____ [Month/Day]

And during the hours of _____

The storage device(s) will consume no more than a total of ____ kW from the Distribution System.

This operating constraint voids the need for the following specific mitigation scope:

No other charging function limitation is required for this Generating Facility except the requirements above. Producer will be responsible for the costs of the corresponding upgrades or other technical mitigations if at any time the Producer elects to forego or violates the operating requirement.

Consistent with current load service Rules, Distribution Provider is not required to reserve capacity for load. Producer is responsible to contact the utility for any modification to its equipment or change in operations that may result in increased load demand per Electric Rule 3.C.

If any operating requirement is specified above, Distribution Provider reserves the right to ask for data at the 15-minute interval level at any time to verify that the operating requirement is being met. Distribution Provider will make such request via a written notice no more than once per calendar quarter. Producer must provide such data within



**GENERATING FACILITY
INTERCONNECTION AGREEMENT
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Appendix I**

30 Calendar Days of the written request.

If the Generating Facility fails to adhere to the operating requirements at any time, it will be disconnected immediately in accordance with Rule 21 Section D.9 and not reconnected until an approved mitigation (e.g., supervising controls) is in place as determined by Distribution Provider.



**GENERATING FACILITY
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Appendix J**

NEMFC Customer Agreement Starting January 1, 2017 Until California Air Resources Board Emission Standard is Established and Approved by the CPUC as Needed.

Starting January 1, 2017, Customer applying for Schedule NEMFC, as revised pursuant to Assembly Bill 1637 (2016), agree as follows:

That their Eligible Fuel Cell Electrical Generating Facility must meet the reduction in greenhouse gas emissions standard to be established as required by the California Public Utilities (PU) Code Section 2827.10.

Since the applicable standards are not yet released by the California Air Resources Board (ARB) and/or approved as may be needed by the California Public Utilities Commission (CPUC), Customer agrees and understands that their approval for participation in NEMFC is contingent on their system meeting the new standard within three months of when the new standard becomes available. Specifically, I, Customer, understand and agree that if my fuel cell generator does not meet the ARB emission standard I will not be eligible for NEMFC.

Specifically, I will be responsible for the following:

1. Payment of all interconnection costs, including fees, studies, system upgrades, and any other pertinent interconnection costs.
2. Payment of the following nonbypassable charges on all departed load served by the fuel cell installed at my premises including but not limited to,
 - a. Public Purpose Program Charges;
 - b. Nuclear Decommissioning;
 - c. Department of Water Resources Bond Charges; and
 - d. Competition Transition Charge;
 - e. Other charges that the CPUC determines are to be charged on departed load and for which there is no exception for fuel cells pursuant to Schedule E-DCG.
3. I understand that I may be required to take service on standby tariff pursuant to Schedule S and pursuant to PU Code Section 2827.10(f)(2)(A).
4. I further understand that I will not be eligible for Rate Schedule NEMFC and will no longer receive any credit for any exports to the grid.

(Company Name)

(Signature)

(Title)

(Print Name)

(Date)

**GENERATING FACILITY
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Appendix K

**Interconnection Agreement for Net Energy Metering of Solar
or Wind Electric Generating Facilities of 1,000 KW or Less,
Other Than Facilities of 30 KW or Less**

APPENDIX K
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)

**GENERATING FACILITY
INTERCONNECTION AGREEMENT
(MULTIPLE TARIFF NEM2MT)**

Appendix K

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage **only capable** of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)

GENERATING FACILITY INTERCONNECTION AGREEMENT (MULTIPLE TARIFF NEM2MT)

Appendix K

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ =
 total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ =
 total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



INTERCONNECTION APPLICATION (Form 79-1174)

ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

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

Instructions				
Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p># Please indicate the number of each “type” and quantity 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>Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21? Answer “Yes” only if the Generator manufacturer can or has provided certification data.</p> <p>See PG&E’s Rule 21, Section L for additional information regarding Generator certification.</p>	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No



INTERCONNECTION APPLICATION (Form 79-1174)

ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
E - Generator Design Please indicate the design of each Generator. Designate "Inverter" anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.	___ Synch ___ Induct. ___ Inverter			
F - 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.				
G - Energy Storage Electrical Source Function (in addition, please complete section: "Additional Information Required for Energy Storage") List (if any) device(s) used to limit discharge (Inverter, Power Control, etc.)	Max kWh Capacity: <hr/> Rated kW Discharge: <hr/> Max kW Discharge: <hr/> <hr/> <hr/> <hr/> <hr/>			
H - 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.				



INTERCONNECTION APPLICATION (Form 79-1174)

ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
I - Power Factor Rating This value should be the nominal power factor rating designated by the manufacturer for the Generator. See PG&E's Rule 21, Section H.2.i. for additional information.				
J - PF Adjustment Range Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values. See PG&E's Rule 21, Section H.2.i.				
K - Wiring Configuration Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.				
L - (MP) 3-Phase Winding Configuration (Choose One) For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye
M - (MP) Neutral Grounding System Used (Choose One) Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected. If the grounding method used at this facility is not listed, please attach additional descriptive information.	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms
N - Short Circuit Current Produced by Generator	<input type="text"/> (Amps)	<input type="text"/> (Amps)	<input type="text"/> (Amps)	<input type="text"/> (Amps)
O – Prime Mover Type Please indicate the type and fuel used as the prime mover or source of energy for the Generator. 1 = Natural Gas 2 = Diesel Fueled 3 = Other Fuel	1 2 3	1 2 3	1 2 3	1 2 3



INTERCONNECTION APPLICATION (Form 79-1174)

ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
P - AC Disconnect For systems requiring an AC Disconnect only, please include the requested information about the AC Disconnect. See PG&E's Rule 21, Section H.1.d Located within 10 feet of the PG&E meter?	_____ Manufacturer _____ Model # _____ Rating (amps)	_____ Manufacturer _____ Model # _____ Rating (amps)	_____ Manufacturer _____ Model # _____ Rating (amps)	_____ Manufacturer _____ Model # _____ Rating (amps)
	___ Yes ___ No	___ Yes ___ No	___ Yes ___ No	___ Yes ___ No
Q - Energy Storage (ES) System (For important sizing information related to DC-Coupled configurations, see sizing note below).	_____ Manufacturer _____ Model # _____ Quantity of Units			
R - Lineside Tap PG&E has special requirements for a lineside tap. Contact PG&E at: Rule21Gen@PGE.Com for more information.	___ Yes ___ No	___ Yes ___ No	___ Yes ___ No	___ Yes ___ No



INTERCONNECTION APPLICATION (Form 79-1174)

ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Energy Storage Charging Function:

Rated Charge Demand (Load): _____ kW

Estimated annual Net Energy Usage* of the energy storage device(s): _____ kWh

*Net Energy usage = (kWh input, including charging, storage device auxiliary loads and losses) – (kWh output including discharging)

Will the Distribution System be used to charge the storage device: Yes No

If no: Provide technical description of control systems including (e.g. Nationally-certified piece of equipment, Relays/metering):

Source of energy for Charging: _____

Mechanism to prevent charging from the Distribution System: _____

If Yes: Will charging the storage device(s) increase the host facility's existing peak load demand:

Yes No

If Yes: Provide the following loading information:

Amount of added peak demand: _____ kW

If no: Provide technical description of controls systems including:

Charging periods: _____

Mechanism to prevent charging from the Distribution System during host facility peak:

Expedited Interconnection Process Selection for Non-Export Energy Storage:

This project meets the requirements identified in Rule 21 Section N and this process is being selected for expedited interconnection.

Note on Sizing (DC-Coupled Configurations)

The size of the storage system in DC-coupled NEM-eligible generator plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

For example:

- What is the maximum continuous discharge capability for each storage unit?
 _____ + _____ + _____ + _____ + _____ =
 total _____
- What is each inverter's nameplate rating?
 _____ + _____ + _____ + _____ + _____ =
 total _____



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

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

Instructions				
Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>Please indicate the number of each “type” and quantity 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&E, has been verified by the customer as having safety certification from a nationally recognized testing laboratory.</p> <p>See PG&E’s Rule 21, Section L for additional information regarding Generator certification.</p>	<input type="checkbox"/> Yes <input type="checkbox"/> No			
<p>E - Generator Design</p> <p>Please indicate the design of each Generator.</p> <p>Designate “Inverter” anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.</p>	<input type="checkbox"/> Synch <input type="checkbox"/> Induct. <input type="checkbox"/> Inverter			



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>F - Gross Nameplate Rating (kVA)</p> <p>This is the capacity value normally supplied by the manufacturer and stamped on the Generator's nameplate.</p> <p>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.</p>				
<p>G - Energy Storage Electrical Source Function (in addition, please complete section: "Additional Information Required for Energy Storage")</p>	Max kWh Capacity:	Max kWh Capacity:	Max kWh Capacity:	Max kWh Capacity:
	Rated kW Discharge:	Rated kW Discharge:	Rated kW Discharge:	Rated kW Discharge:
<p>H - Operating Voltage</p> <p>This value should be the voltage rating designated by the manufacturer and used in this Generating Facility.</p> <p>Please indicate phase-to-phase voltages for 3-phase installations.</p> <p>See PG&E's Rule 21, Section H.2.b. and Table H.1., for additional information.</p>				
<p>I - Power Factor Rating</p> <p>This value should be the nominal power factor rating designated by the manufacturer for the Generator.</p> <p>See PG&E's Rule 21, Section H.2.i. for additional information.</p>				
<p>J - PF Adjustment Range</p> <p>Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values.</p> <p>See PG&E's Rule 21, Section H.2.i.</p>				
<p>K - Wiring Configuration</p> <p>Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.</p>				



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
<p>L - (MP) 3-Phase Winding Configuration (Choose One)</p> <p>For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.</p>	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye	<input type="checkbox"/> 3 Wire Delta <input type="checkbox"/> 3 Wire Wye <input type="checkbox"/> 4 Wire Wye
<p>M - (MP) Neutral Grounding System Used (Choose One)</p> <p>Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected.</p> <p>If the grounding method used at this facility is not listed, please attach additional descriptive information.</p>	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms	<input type="checkbox"/> Ungrounded <input type="checkbox"/> Solidly Grounded <input type="checkbox"/> Ground Resistor <input type="checkbox"/> Ohms
<p>N - Short Circuit Current Produced by Generator:</p>	_____ (Amps)	_____ (Amps)	_____ (Amps)	_____ (Amps)
<p>O – Prime Mover Type</p> <p>Please indicate the type and fuel used as the prime mover or source of energy for the Generator.</p> <p>1 = Natural Gas 2 = Diesel Fueled 3 = Other Fuel</p>	1 2 3	1 2 3	1 2 3	1 2 3
<p>P - AC Disconnect</p> <p>For systems requiring an AC Disconnect only, please include the requested information about the AC Disconnect.</p> <p>See PG&E's Rule 21, Section H.1.d</p> <p>Located within 10 feet of the PG&E meter?</p>	_____ Manufacturer _____ Model # _____ Rating (amps)	_____ Manufacturer _____ Model # _____ Rating (amps)	_____ Manufacturer _____ Model # _____ Rating (amps)	_____ Manufacturer _____ Model # _____ Rating (amps)
	<input type="checkbox"/> Yes <input type="checkbox"/> No			



INTERCONNECTION APPLICATION (Form 79-1174-02) ATTACHMENT T5

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
Q - Energy Storage (ES) System <i>(For important sizing information related to DC-Coupled configurations, see sizing note below).</i>	_____ Manufacturer _____ Model # _____ Quantity of Units			
R - Lineside Tap PG&E has special requirements for a lineside tap. Contact PG&E at: Rule21Gen@PGE.Com for more information.	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
S – Warranty or Service Agreement Applicant has verified that (i) a warranty of at least 10 years has been provided on all equipment and on its installation, or (ii) have a 10-year service warranty or executed “agreement” ensuring proper maintenance and continued system performance.	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No

Energy Storage Charging Function:

Rated Charge Demand (Load): _____ kW

Estimated annual Net Energy Usage* of the energy storage device(s): _____ kWh

*Net Energy usage = (kWh input, including charging, storage device auxiliary loads and losses) – (kWh output including discharging)

Will the Distribution Grid be used to charge the storage device: Yes No

If no: Provide technical description of control systems including (e.g. Nationally-certified piece of equipment, Relays/metering); ~~If no: Provide technical description of control systems including:~~

Source of energy for Charging: _____

Mechanism to prevent charging from the Distribution System: _____

If Yes: Will charging the storage device(s) increase the host facility’s existing peak load demand:

Yes No

If Yes: Provide the following loading information:

Amount of added peak demand: _____ kW

If no: Provide technical description of controls systems including:

Charging periods: _____

Mechanism to prevent charging from the Distribution System during host facility peak:



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less Paired with Energy Storage of 10 Kilowatts Or Less

IMPORTANT NOTES:

- 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.
 - Scheduled Load Reduction Program (SLRP)
 - SmartRate
- Customers who participate in Direct Access and Community Choice Aggregation must contact their Energy Service Provider directly regarding their NEM program.

Part I – Generating Facility Information and Responsible Parties

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

NEM 30 kilowatts or Less Paired with Energy Storage: Single Account Multiple Aggregated Accounts

Note: Net Energy Metering Aggregation (NEMA) is a program that allows customers with multiple meters to use the renewable energy generated at one meter (up to 1MW) to be credited against other meters that are located on parcel(s) that is/are contiguous or adjacent to the parcel that has the renewable generator. Energy Storage system must be 10 kilowatts or less.

Customer Sector (check only one):

<input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Non-Profit	<input type="checkbox"/> Educational <input type="checkbox"/> Military <input type="checkbox"/> Other Government
---	--

Account Holder Name* (Individual or Company)	Electric Service Agreement ID *	Meter Number*
Service Address*	City*	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. Authorized Contact Information (required if Customer is authorizing a third party to act on Customer’s behalf):

Company Name	Contact Person
Contact Phone Number	Email



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

- 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 an Interconnection Request 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.

Part II – NEM Generator System Size

A. Interconnection Study and Requirements

This Agreement covers the installed Generating Facility nameplate listed in the associated Interconnection Request.

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.

In order for PG&E to approve your system, you will need to provide (1) this signed Agreement, (2) a valid Interconnection Request, 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. For customers on a Time-of-Use rate, sizing your system to offset 80%-85% of your average electricity usage could be an effective way to minimize your electricity bill. For customer who are not on a Time-of-Use rate, you might want to size your system larger (90-95% of your annual load), in order to minimize your electricity bill. Of course, individual circumstances may vary. Customers can obtain their usage data from www.pge.com/greenbutton. System sizing eligibility will be reviewed using the criteria below.

B. Generator System Sizing

Generator System Type: Solar Wind Both

Estimated Annual Production:

- Please complete this section only if installing a new Solar or Wind system or modifying an existing Solar or Wind system. This section is not applicable if only adding energy storage to an existing previously interconnected Solar or Wind system.
- Solar Systems > 5 kW (CEC-AC kW) or any system with wind, size is determined below. Please continue to fill out all of Section B.
- The Solar CEC-AC kW calculated from the Application cannot exceed 5% of the CEC-AC kW listed above



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

	(1) Solar CEC-AC rating ^A	_____ (kW) X 1,664 ^B	= _____ (kWh)
AND/OR	(2) Wind Nameplate rating	_____ (kW) X 2,190 ^C	_____ (kWh)
	(3) Total Energy Production	(1) + (2)	<u>_____ (kWh)</u>
Estimated Annual Energy Usage:			
	(4) Recent annual usage	_____ (kWh) X 1.1	= _____ (kWh)
OR (If 12 months usage not available)	(5) Building size	_____ (sq ft) X 3.32 ^D	= _____ (kWh)
AND	(6) I plan to increase my annual usage (kWh) by		_____ (kWh)
	(7) Total Energy Usage	(2 or 3) + (4)	= <u>_____ (kWh)</u>
Net Generation:			
	(8) Production - Usage	(3) - (7)	= <u>_____ (kWh)*</u>

*Positive number indicates that the system is estimated to generate more than the estimated usage. Please refer to Part IV, Section J to read the provisions around Net Surplus Compensation (NSC).

Non-NEM Eligible Energy Storage System:

Energy Storage System Rating _____ kW

Does the energy storage system share an inverter with the NEM system? Yes No

If not, please provide:

Energy Storage Inverter Rating _____ kW

Part III – Rate Selection

- A. Current Rate:** Please identify your existing rate by reviewing your PG&E energy statement or by calling the phone number listed below.
- 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.

^A CEC-AC (kW) =California Energy Commission Alternating Current, refers to the inverter efficiency rating (Quantity of PV Modules x PTC Rating of PV Modules x CEC Inverter Efficiency Rating)/1000
^B 8,760 hrs/yr x 0.19 solar capacity factor = 1,664
^C 8,760 hrs/yr x 0.25 wind capacity factor = 2,190
^D 2 watts/ sq ft x 1/1,000 watts x 8,760 hrs/yr x 0.19 solar capacity factor = 3.32



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

Residential Service Rate (Select one):

- E-1 – Non-Time-of-Use
- E-6 – Time-of-Use
- E-7^E – Time-of-Use
- E-8^F – Non-Time-of-Use
- E-9A^F – Time-of-Use for Customers with a single meter for Electric Vehicle (EV) recharging station and home
- E-9B^F – Time-of-Use for Customers with a separately metered EV recharging station
- EV-A^F – Time-of-Use for Customers with a single meter for Electric Vehicle (EV) recharging station and home
- EV-B^G – Time-of-Use for Customers with a separately metered EV recharging station
- Other (_____)

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 ^F – Split-Week Time-of-Use | <input type="checkbox"/> | <input type="checkbox"/> | | <input type="checkbox"/> | <input type="checkbox"/> | |
| <input type="checkbox"/> AG-V ^F – 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"/> AG-5 – Time of Use | <input type="checkbox"/> |
| <input type="checkbox"/> Other (_____) | <input type="checkbox"/> |

If your current rate is a closed rate, as identified in Footnote F, and you are now opting to move to a non-closed rate per the Otherwise Applicable Rate Schedule (OAS) for NEM Account, please check the box below acknowledging that you are leaving the closed rate and will not be able to select the closed rate in the future.

- I acknowledge and consent to leaving my current rate that is a closed rate

^E 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
^F Rates effective August 1, 2013 for 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 with Energy Storage of 10 Kilowatts Or Less

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.

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.



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/OR Wind Electric Generating

Facilities Of 30 Kilowatts Or Less with Energy

Storage of 10 Kilowatts Or Less

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. Participants in NEMA, please see provisions in Form 79-1153.

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.

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



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

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.

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.

Q. Smart Inverters

For Customer applications received on or after September 9, 2017, the Customer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.

Distribution Provider may require a field verification of the Customer's inverter. Customer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Customer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Customer will need to cease operation of generating facility until verification is confirmed by Distribution Provider.

Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at <http://www.gosolarcalifornia.org/equipment/inverters.php>.

Verification of compliance with such requirements shall be provided by the Customer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Customer has submitted the interconnection application prior to September 9, 2017,
- (c) the Customer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹ no later than March 31, 2018, or
- (d) the Customer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. Customer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
- (ii) a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

¹A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments
2. A completed signed Interconnection Agreement
3. Evidence of the Customer final inspection clearance from the governmental authority having jurisdiction over the generating system.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

R. Signature

IMPORTANT INFORMATION FOR CUSTOMERS – BE SURE TO READ THIS ENTIRE DOCUMENT BEFORE SIGNING – THIS IS A LEGALLY BINDING CONTRACT – READ IT CAREFULLY.

THIS FORM MUST BE SIGNED BY AN EXISTING PG&E CUSTOMER.

Under Pacific Gas and Electric Company’s (PG&E’s) privacy policies, which can be found at [www.pge.com/about/company/privacy/customer], PG&E generally does not sell or disclose personal information about you, such as your name, address, phone number, or electric account and billing information, to third parties unless you expressly authorize us to do so. The purpose of this form is to allow you, the customer, to exercise your right to choose whether to disclose your personal electricity usage data and other personal information to a third party. Once you authorize a third party to access personal information about you, you are responsible for ensuring that the third party safeguards the personal information from further disclosure without your consent.

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 C, 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.



**AGREEMENT AND CUSTOMER AUTHORIZATION
Net Energy Metering Interconnection
For Solar And/Or Wind Electric Generating
Facilities Of 30 Kilowatts Or Less with Energy
Storage of 10 Kilowatts Or Less**

APPENDIX A

**Interconnection Agreement for Net Energy Metering of Solar or Wind
Electric Generating Facilities of 1,000 KW or Less, Other Than
Facilities of 30 KW or Less**

**APPENDIX A
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)**



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

APPENDIX A

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage only capable of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)

AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less



APPENDIX A

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specification sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ =. total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ =. total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering (NEM2) Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

IMPORTANT NOTES:

- 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 or participants in the Demand Response Programs below are not eligible to participate in NEM2.
 - Scheduled Load Reduction Program (SLRP)
 - SmartRate
- Customers who participate in Direct Access and Community Choice Aggregation must contact their Energy Service Provider directly regarding their NEM2 program.

Part I – Generating Facility Information and Responsible Parties

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

Standard NEM2 Agreement Type: Single Account Multiple Aggregated Accounts

Note: Net Energy Metering Aggregation 2 (NEM2A) is a program that allows customers with multiple meters to use the renewable energy generated at one meter to be credited against other meters that are located on parcel(s) that is/are contiguous or adjacent to the parcel that has the renewable generator.

Customer Sector (check only one):

<input type="checkbox"/> Residential	<input type="checkbox"/> Educational
<input type="checkbox"/> Commercial	<input type="checkbox"/> Military
<input type="checkbox"/> Industrial	<input type="checkbox"/> Other Government
<input type="checkbox"/> Non-Profit	

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

Is there an electric vehicle charging on site at the above service address? Yes No
 If yes, please indicate how many electric vehicles _____

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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AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

C. Authorized 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 an Interconnection Request 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.

Part II – NEM2 Generator System Size

A. Interconnection Study and Requirements

This Agreement covers the installed Generating Facility nameplate listed in the associated Interconnection Request. 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.

In order for PG&E to approve your system, you will need to provide (1) this signed Agreement, (2) **a valid Interconnection Request**, and (3) a copy of the final signed jurisdiction approval (building permit) for your project.

NEM2 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. All NEM2 customers must take service on a Time-of-Use rate schedule and sizing your system to offset 80%-85% of your average electricity usage could be an effective way to minimize your electricity bill^A. Of course, individual circumstances may vary. Customers can obtain their usage data from www.pge.com/greenbutton.

^A Customers on rate schedules such as ET, ES, and ESR, which do not have a corresponding TOU Rate, are not required to switch to TOU rates, unless and until such a rate becomes available.



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering (NEM2) Interconnection

For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

B. Generator System Sizing

Please complete this section only if installing a new Solar or Wind system or modifying an existing Solar or Wind system. This section is not applicable if only adding energy storage to an existing previously interconnected Solar or Wind system.

Generator System Type: Solar Wind Both

	(1) Solar CEC-AC rating ^B	_____ (kW) X 1,664 ^C	=	_____ (kWh)
AND/OR	(2) Wind Nameplate rating	_____ (kW) X 2,190 ^D		_____ (kWh)
	(3) Total Energy Production	(1) + (2)		<u>_____ (kWh)</u>

Estimated Annual Energy Usage:

(Solar systems ≤ 5 kW (CEC-AC) do not need to complete this section)

	(4) Recent annual usage	_____ (kWh) X 1.1	=	_____ (kWh)
OR (If 12 months usage not available)	(5) Building size	_____ (sq ft) X 3.32 ^E		_____ (kWh)
AND	(6) I plan to increase my annual usage (kWh) by			_____ (kWh)
	(7) Total Energy Usage	(4 or 5) + (6)	=	<u>_____ (kWh)</u>

Net Generation:

	(8) Production – Usage	(3) – (7)	=	<u>_____ (kWh)*</u>
--	------------------------	-----------	---	---------------------

*Positive number indicates that the system is estimated to generate more than the estimated usage. Please refer to Part IV, Section H to read the provisions around Net Surplus Compensation (NSC).

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

^C 8,760 hrs/yr x 0. solar 19 capacity factor = 1,664

^D 8,760 hrs/yr x 0.25 wind capacity factor = 2,190

^E 2 watts/ sq ft x 1/1,000 watts x 8,760 hrs/yr x 0.19 solar capacity factor = 3.32



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

Non-NEM Eligible Energy Storage System:

Energy Storage Rating _____ kW

Does the energy storage system share an inverter with the NEM system? Yes No

If not, please provide:

Energy Storage Inverter Rating _____ kW

Part III – Rate Selection

A. Current Rate: Please identify your existing rate by reviewing your PG&E energy statement or by calling the phone number listed below.

Otherwise Applicable Rate Schedule (OAS) for NEM2 Account: Select one rate from the category applicable to you. NEM2 residential customers must be an applicable time-of-use rate^F schedule. If you are currently on a rate that is no longer open to new customers and are opting to move to a different rate, by signing this Agreement and Customer Authorization you are acknowledging that you are leaving the current rate and will not be able to return to this rate in the future. Visit www.pge.com/rateoptions or call (800)-PGE-5000 for rate information.

Stay on existing rate

Requested new rate _____

Part IV – Interconnection Agreement Provisions

A. Applicability

This Agreement applies to Electric Schedule NEM2 Customer-Generators (Customer) who interconnect a solar and/or wind turbine electric 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.

B. 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.

^F Schedules such as ES, ESR or ET, which have no available corresponding time-of-use rate, are not required to switch to time-of-use rates, unless and until such a rate becomes available.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/OR Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

C. 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 electric 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.

D. 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 electric 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.

E. 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.

F. Rate

Customer has confirmed their otherwise applicable rate schedule (OAS) to establish how the 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.

G. NEM2 Billing

The Customer's meter separately measures exports and imports.

The meter is read monthly and an amount is calculated based on the net energy (kWh) and total energy(kWh) exports 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.

Additionally, the Customer will be billed for non-bypassable charges on all imports from the grid, as describe in Schedule NEM2 Special Condition 2.

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 NEM2 billing is available at www.pge.com/nembilling.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

H. Net Surplus Compensation (NSC)

NSC payments are made to NEM2 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. Participants in NEM2A, please see provisions in *NEM2 Load Aggregation Appendix (Form 79-1153)*.

I. 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.

J. 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.

K. 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.

L. 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 NEM2.

M. Meter Access

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

N. 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 NEM2.

O. CEC Listed

In order to promote the safety and reliability of the customer's Generating Facility, the applicant certifies that as a part its request for NEM2, that all major solar system components are on the verified equipment list maintained by the California Energy Commission and certifies that other equipment, as determined by PG&E, has safety certification from a nationally recognized testing laboratory.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

P. Warranties or Service Agreements

Applicant certifies as a part of its interconnection request for NEM2 that:

- (i) a warranty of at least 10 years has been provided on all equipment and on its installation, or
- (ii) a 10-year service warranty or executed "agreement" has been provided ensuring proper maintenance and continued system performance.

Q. Smart Inverters

For Customer applications received on or after September 9, 2017, the Customer certifies that their inverter-based Generating Facilities fully comply with Section Hh of Rule 21, including configuration of protective settings and default settings, in accordance with the specifications therein.

Distribution Provider may require a field verification of the Customer's inverter. Customer further agrees to cooperate fully with any such request and make their inverter available to the Distribution Provider for such verification. Customer understands that in the event the inverter is not set in accordance with Section Hh of Rule 21, Customer will need to cease operation of generating facility until verification is confirmed by Distribution Provider.

Solar inverter models and firmware versions that comply with Rule 21 Section Hh can be found at <http://www.gosolarcalifornia.org/equipment/inverters.php>.

Verification of compliance with such requirements shall be provided by the Customer upon request by PG&E in accordance with PG&E's Electric Rule 21.

An "existing inverter" is defined as an inverter that is a component of an existing Generating Facility that meets one or more of the following conditions:

- (a) it is already approved by PG&E for interconnection prior to September 9, 2017
- (b) the Customer has submitted the interconnection application prior to September 9, 2017,
- (c) the Customer provides evidence of having applied for an electrical permit for the Generating Facility installation that is dated prior to September 9, 2017 and submitted a complete interconnection application¹ no later than March 31, 2018, or
- (d) the Customer provides evidence of a final inspection clearance from the governmental authority having jurisdiction over the Generating Facility prior to September 9, 2017.

All "existing inverters" are not required to be Smart Inverters and are only subject to Section H of Rule 21. A Customer replacing an "existing inverter" certifies it is being replaced with either:

- (i) inverter equipment that complies with Section Hh of Rule 21, (encouraged); or
a conventional inverter that is of the same size and equivalent ability to that of the inverter being replaced, as allowed in Rule 21 Section H.3.d.ii.

¹A complete application consists all of the following without deficiencies:

1. A completed Interconnection Application including all supporting documents and required payments
2. A completed signed Interconnection Agreement
3. Evidence of the Customer final inspection clearance from the governmental authority having jurisdiction over the generating system.



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

R. Signature

IMPORTANT INFORMATION FOR CUSTOMERS – BE SURE TO READ THE FULLY POPULATED DOCUMENT BEFORE SIGNING – THIS IS A LEGALLY BINDING CONTRACT – READ IT CAREFULLY. THIS FORM MUST BE SIGNED BY THE EXISTING PG&E CUSTOMER LISTED IN PART I.

Under Pacific Gas and Electric Company’s (PG&E’s) privacy policies, which can be found at [www.pge.com/about/company/privacy/customer], PG&E generally does not sell or disclose personal information about you, such as your name, address, phone number, or electric account and billing information, to third parties unless you expressly authorize us to do so. The purpose of this form is to allow you, the customer, to exercise your right to choose whether to disclose your personal electricity usage data and other personal information to a third party. Once you authorize a third party to access personal information about you, you are responsible for ensuring that the third party safeguards the personal information from further disclosure without your consent.

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 C, 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 can request additional documentation to verify the authenticity of the externally signed Agreement and Customer Authorization.

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 NEM2 requirements.



**AGREEMENT AND CUSTOMER AUTHORIZATION
Net Energy Metering (NEM2) Interconnection
For Solar And/Or Wind Electric Generating
Facilities Of 30 Kilowatts Or Less with Energy
Storage of 10 Kilowatts Or Less**

APPENDIX A

**Interconnection Agreement for Net Energy Metering of Solar or Wind
Electric Generating Facilities of 1,000 KW or Less, Other Than
Facilities of 30 KW or Less**

**APPENDIX A
(If Applicable)
NEM PAIRED STORAGE
(Formed between the Parties)**



AGREEMENT AND CUSTOMER AUTHORIZATION Net Energy Metering (NEM2) Interconnection For Solar And/Or Wind Electric Generating Facilities Of 30 Kilowatts Or Less with Energy Storage of 10 Kilowatts Or Less

APPENDIX A

NEM Paired Storage (For AC-Coupled and DC-Coupled Configurations)

1) This battery/storage device(s) shares the inverter(s) (i.e. DC-coupled only) with: (check one)

- a) A solar Generator
- b) Another type of NEM-eligible generator
- c) non-NEM generator
- d) No other generation – the storage has its own dedicated inverter (or set of inverters)

2) If for question 1, a) or b) is selected, is the battery/storage **only capable** of storing energy from the solar or other NEM-eligible generator?

- Yes
- No

3) If Yes to Question 2, select the appropriate method for the storage system: (check one)

a) Prevents the storage from Grid Charging via:

- A PG&E-approved method
- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or Metering
- Other _____

b) Prevents the storage from exporting to the PG&E's grid via

A PG&E approved method

- A Nationally-certified piece of equipment (provide equipment model and specs)
- Relays or metering
- Other _____

4) Are there any other generators behind the same PG&E meter with the NEM-eligible generator and storage?

- a) Yes – Please describe the generator: _____
- b) No

(continued on page 2)

Please complete this agreement in its entirety



AGREEMENT AND CUSTOMER AUTHORIZATION

Net Energy Metering (NEM2) Interconnection

For Solar And/Or Wind Electric Generating

Facilities Of 30 Kilowatts Or Less with Energy

Storage of 10 Kilowatts Or Less

APPENDIX A

5) Sizing

If answer to question 1 is either a) or b), the size of the storage system in DC-coupled solar plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology. Note: PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E may rely on the inverter's nameplate rating.

- What is the maximum continuous discharge capability for each storage unit?

_____ + _____ + _____ + _____ =. total _____

- What is the each inverter's nameplate rating?

_____ + _____ + _____ + _____ =. total _____

If answer to question 1 is d) The size of the AC-coupled storage system must meet one of the following criteria to be eligible for NEM-Paired Storage. Please select the one that applies.

- The AC Nameplate of the storage device is 10kW or less
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.
- The AC Nameplate of the storage device is greater than 10kW and has a maximum output power larger than 150% of the NEM-eligible generator's maximum output capacity.



**ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE**

Sheet 26

(N)
(N)

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage

(N)

a. **Definitions:** ~~of~~

NEM Paired Storage:

NEM Paired Storage is defined as qualifying energy storage devices paired with a ~~REFG-REGF~~ that either:

(i) meets the **Renewables Portfolio Standard Guidebook**⁵ requirements as an "addition or enhancement" as described in Section c. below, ~~or-~~

(ii) is eligible to received certain benefits as is described below by virtue of the fact that it is paired with a REGF although it is not exclusively renewable charged, , pursuant to California Public Utilities Commission (CPUC) Decision (D.) 14-04-033 and D.19-01-030.

AC-Coupled:

The REGF has its own inverter or set of inverters; and separately, the storage system has its own inverter or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system in AC-coupled REGF plus storage systems is the inverters (or inverters') nameplate capacity (capacities summed).

DC-Coupled:

The REGF and the storage share the same inverter, or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system in DC-coupled plus storage systems is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology; the PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E will rely on the inverter's nameplate rating.

No Grid Charging:

A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system cannot be charged from the PG&E grid.

No Storage Export:

A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system

(N)

(Continued)

Advice 4940-E
Decision 14-05-033 & 16-04-020

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed October 18, 2016
Effective February 22, 2017
Resolution _____



**ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE**

Sheet 26

(N)
(N)

cannot export to PG&E's grid.

b. Interconnection

NEM Paired Storage ~~shall~~will have the same interconnection cost responsibility as the NEM generator that it is paired with be exempt from including charges ~~for~~ related to the:

- interconnection application,
- supplemental review, and/or
- ~~distribution upgrade, and~~
- standby.

~~for systems under this NEM tariff. See Section c.5 below for additional information.~~

c. Types of NEM Paired Storage

The Renewables Portfolio Standard Guidebook establishes two categories of energy storage that may be considered an addition or enhancement to a renewable electrical generation facility: "integrated" and "directly connected" storage.

(i) Integrated Storage

Integrated Energy Storage is defined in the RPS guidelines as methods of storing energy from a renewable energy resource that are integrated into the REFGF as part of the generation process.

~~For example~~Note that, for battery-based storage, the storage device must **only** be capable of storing energy from the REFGF to be considered Integrated Energy Storage.

Integrated Storage applies to both AC-Coupled and DC-Coupled storage systems that satisfy the definition of "No Grid Charging" above. The verification testing procedure is outlined in the PG&E Distribution Generation Interconnection Handbook (DIH).

A REGF with a storage system fulfilling the requirements of "No Grid Charging" must apply with 79-1174, and either complete interconnection agreement Form 79-1193 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069 (all other REGF with a storage system configurations fulfilling the requirements of "No Grid Charging"). All configurations that meet the definition of Integrated Storage will billed in the same manner as is if storage device were not present (e.g. NEMS).

For a REGF with a storage system that meets the requirement of "No Grid Charging", there are no restrictions on the storage system size (kW). However, when determining whether the generating facility exceeds 1MW, at which point the system would be responsible for all interconnection costs, the following methodology applies:

- a) AC-Coupled: the combined sizes⁹ of the REGF and storage system (AC nameplate)
- b) DC-Coupled: the lesser of the shared inverter's nameplate

(Continued)

Advice 4940-E
Decision 14-05-033 & 16-04-020

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

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Resolution



**ELECTRIC SCHEDULE NEM
NET ENERGY METERING SERVICE**

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(N)
(N)

capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheet.

⁹. As defined in Special Condition 3.

(2#). Directly Connected

Directly Connected NEM Paired Storage is defined in the RPS guidelines⁸ as ~~being both~~ meeting the following requirements:

- (i) The storage device is directly connected to the REFGF via an internal power line (i.e., power may not be transmitted from the renewable facility to the energy storage via an external distribution line) and
- (ii) ~~the-The~~ storage device must be operated as part of the NEM eligible facility.

Note that the storage device is not required to be exclusively charged by the REFGF.

Directly Connected Cases: NEM Paired Storage must meet all the requirements in Sections d., e. and f., as applicable in this special condition.

(i) DC-Coupled storage system sized 10kW or smaller

DC-Coupled storage systems sized 10kW or smaller are not required to meet either the "No Grid Charging" or "No Storage Export" requirements, must complete interconnection agreement Form 79-1193 (solar and/or wind electric facilities of 30kW or less) and will be billed as described in Section 3)(i) of this special condition when no additional metering is installed as described in "Large NEM-Eligible GFs" below.

(ii) DC-Coupled storage system sized greater than 10kW

The DC-Coupled storage systems sized greater than 10kW must satisfy the definition of "No Storage Export", apply with 79-1174, complete Form 79-1069, and will be billed as described for Large NEM paired Storage in Section 3.)(ii) of this special condition.

For this case, there are no restrictions on the storage system size (kW).

⁵ The RPS Guidebooks 7th Edition can be found at: w.energy.ca.gov/renewables/documents/index.html#rps

(Continued)

Advice 4940-E
Decision 14-05-033 & 16-04-020

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SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage (Cont'd)

(N)

~~d.~~ (iii) Large AC Coupled storage system ("Large NEM-eligible GFs")

e. Large NEM-eligible Generating Facilities (GFs) are NEM-eligible GFs paired with storage sized larger than 10 kW. For Large NEM-eligible GFs, the storage system shall have a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.

(iv) Large NEM-eligible GFs are required to select one of the following:

(a) install a non-export relay on the storage device(s);

(b) install an interval meter for the NEM-eligible generation, meter the load, and meter total energy flows at the point of common coupling; or

(c) install an interval meter directly to the NEM-eligible generator(s).

Large NEM-eligible GFs must apply with 79-11742, either complete interconnection agreement Form 79-1193 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069 (all other REGF with a storage system configurations), and will be billed as described in Section 3.(ii) of this special condition..

(iv) Small AC-Coupled NEM Paired Storage ("Small NEM eligible GFs")

Small NEM-eligible Generating Facilities (GFs) are NEM-eligible GFs paired with storage sized 10kw or smaller. For small NEM-eligible GFs, the storage device Paired Storage is not required to be sized to the customer demand or the NEM generator. Small NEM-eligible GFs Paired Storage has have the option to install metering as required for Large NEM-eligible GFs Paired Storage or may chose the estimation methodology describe in Section g to be billed as described in Section 3.(ii) of this special condition. Otherwise, it will be billed using the estimation methodology describe in Section 3.(i) of this special condition.-

(N)

Small NEM-eligible GFs must apply with 79-1174, either complete interconnection agreement Form 79-1193 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069 (all other REGF with a storage system configurations), and will be billed as described in Section 3.(ii) of this special condition..

(Continued)

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(N)
(N)

SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage (Cont'd)

(N)

~~3)g~~ **Billing for NEM Paired Storage**

(i) Estimation Methodology For Small NEM-eligible ~~Paired Storage~~ GFs

~~Once implemented in PG&E's billing system,~~ Small NEM-eligible GFs ~~Paired Storage without metering installed (as is required for Large NEM-eligible GFs)~~ may will use an estimation methodology, which caps maximum allowable NEM bill credits based on a monthly output profile.

~~(a.A)~~ California Solar Initiative Expected Performance-Based Buydown (CSI EPBB) calculator, PG&E will establish a maximum cap for NEM-eligible exports for each monthly billing period based on the EPBB production estimate for the customer's NEM-eligible generator.

The monthly output estimation should align with a customer's billing period (e.g., if the customer's billing date is January 15, the maximum allowed NEM export should be based on a January output estimation.)

~~(Bb.)~~ Any export exceeding this limit would not be eligible for NEM credit and would be forfeited. Peak period exports would be reduced first, followed by partial peak and then off peak as necessary.

For example, if there was an export to the grid of 150 kWh and the EPBB-based limit for the month was set at 100 kWh, then the excess 50 kWh would be deducted from the actual exports recorded, beginning with exports that occurred during peak periods.

~~c.(C)~~ In the event the Small NEM-eligible GF ~~Paired Storage~~ is combined with other generation facilities pursuant to Special Condition 4, the billing provision of Special Condition 4 will apply, not this billing estimation methodology.

Should a customer decide to opt-out of using this estimation methodology, the customer metering must install one of the metering requirements described in the Large NEM-eligible GFs section, be as provided in Section e. ii. above, and the customer may only switch at the start of a new NEM Relevant Period.

(N)

ii) Large NEM-eligible ~~GFs are Paired Storage is are~~ billed consistent with Special Condition 4 with the storage treated as a non-NEM eligible generator.

(Continued)

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(N)
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SPECIAL
CONDITIONS:
(Cont'd.)

11. NEM Paired Storage (Cont'd)

(N)

4) ~~h~~- NEM Paired Storage Output Metering Costs

PG&E will install standard metering equipment whenever possible while interconnecting NEM Paired Storage systems. Standard metering equipment for this purpose comprises a single meter which is a self-contained, single phase, SmartMeter. The fee for installation of standard metering equipment is no more than \$600.00.

However, this fee cap does not apply to NEM Paired Storage requiring complex metering solutions. Complex metering solutions include any configuration other than the standard equipment described above. The cost for complex metering varies and is based on actual costs which will be described in the customer's invoice.

5) ~~i~~- NEM Paired Storage Interconnection Cost Responsibility

- The storage will have the same interconnection cost responsibility as the NEM generator that it is paired with. In the event the storage is added at a later date after the permission to operate of the NEM generator it is subsequently paired with, the storage applicant will be required to pay the same interconnection fees and costs that the NEM generator would be required to pay, as provided for in Electric Rule 21.

(N)

For the purpose of determining if a NEM Paired Storage REGF exceeds 1 MW criterion, refer to the sizing definition included in the AC-Coupled and DC-Coupled definition at the beginning of this Special Condition.



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SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage

(T)/(L)

a. Definitions

~~of~~ NEM Paired Storage:

NEM Paired Storage is defined as qualifying energy storage devices ("storage system") paired with a REFGREGF that either:

(i) meets the Renewables Portfolio Standard Guidebook⁵ requirements as an "addition or enhancement" as described in Section c. below, or-

(ii) is eligible to received certain benefits as is described below by virtue of the fact that it is paired with a REGF although it is not exclusively renewable charged, , pursuant to California Public Utilities Commission (CPUC) Decision (D.) 14-04-033 and D.19-01-030.

AC-Coupled:

The REGF has its own inverter or set of inverters; and separately, the storage system has its own inverter or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system in AC-coupled REGF plus storage systems is the inverters (or inverters') nameplate capacity (capacities summed).

DC-Coupled:

The REGF and the storage share the same inverter, or set of inverters, pursuant to CPUC D.19-01-030.

The size of the storage system in is the lesser of the shared inverter's (or inverters') nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheets. A storage device's maximum continuous discharge capacity may be listed on technical specification sheets using different terminology; PG&E will use common sense to determine whether a device's technical specification sheet includes the appropriate metric for purposes of determining system size, regardless of the terminology used. If that metric is not included, PG&E will rely on the inverter's nameplate rating.

No Grid Charging:

A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system cannot be charged from the PG&E grid.

No Storage Export:

(Continued)



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A storage system that uses a control configuration that is either certified to a national standard or to a utility-approved interim testing procedure, which ensures that the storage system cannot export to PG&E's grid.

b. Interconnection

NEM Paired Storage will have the same interconnection cost responsibility as the NEM generator that it is paired with ~~which it is paired~~, including charges related to the

- interconnection application,
- supplemental review, and/or
- distribution upgrade.

See Section c.5-i. below for additional information

c. Types of NEM Paired Storage

The Renewables Portfolio Standard Guidebook establishes two categories of energy storage that may be considered an addition or enhancement to a renewable electrical generation facility: "integrated" and "directly connected" storage.

1) Integrated Storage:

Integrated Energy Storage is defined in the RPS guidelines⁸ as methods of storing energy from a renewable energy resource that are integrated into the REFGREGF as part of the generation process.

For example, Note that for battery-based storage, the storage device must only be capable of storing energy from the

⁸ The RPS Guidebook 7th edition can be found at: <http://www.energy.ca.gov/renewables/documents/index.html#rps>

(Continued)



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~~REFGREGF~~ to be considered Integrated Energy Storage.

Integrated Storage apply to both AC-Coupled and DC-Coupled storage systems that satisfy the definition of "No Grid Charging" above. The verification testing procedure is outlined in the PG&E Distribution Generation Interconnection Handbook (DIH).

A REGF with a storage system fulfilling the requirements of "No Grid Charging" must apply with 79-1174-02, and either complete interconnection agreement Form 79-1193-02 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069-02 (all other REGF with a storage system configurations fulling the requirements of "No Grid Charging"). All configurations that meet the definition of Integrated Storage will ~~must utilize Form 79-973 for interconnection and will be billed in the same manner as is if storage device were not present (e.g. NEM2S).~~

For a REGF with a storage system that meets the requirement of "No Grid Charging", there are no restrictions on the storage system size (kW). However, when determining whether the generating facility exceeds 1MW, at which point the system would be responsible for all interconnection costs, the following methodology applies:

- a) AC-Coupled: the combined sizes⁹ of the REGF and storage system (AC nameplate)
- b) DC-Coupled: the lesser of the shared inverter's nameplate capacity (capacities summed) and the storage device's (devices') maximum continuous discharge capacity (capacities summed) listed on the device's (devices') technical specifications sheet.

2) Directly Connected:

Directly Connected NEM Paired Storage is defined in the RPS guidelines⁵⁸ -as- meeting the following requirements:

(i) a) The storage device is directly connected to the ~~REFGREGF~~ via an internal power line (i.e., power may not be transmitted from the renewable facility to the energy storage via an external distribution line) and

(ii) b) The storage device must be operated as part of the NEM eligible facility.

Note that the storage device is **not** required to be exclusively

⁹ As defined in Special Condition 3.

(Continued)



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charged by the REGF.

Directly Connected Cases:

(i) ~~(i)~~ A-DC--Coupled storage system sized 10kW or smaller

DC-Coupled storage systems sized 10kW or smaller are not required to meet either the "No Grid Charging" or "No Storage Export" requirements must apply with 79-1174-02, and either complete interconnection agreement Form 79-1193-02 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069-02 (all other REGF with a storage system configurations fulfilling the requirements of "No Grid Charging"). All configurations that meet the definition of Integrated Storage will and will be billed using the estimation methodology as described in Section g.1) of this special condition when no additional metering is installed as described in "Large NEM-Eligible GFs" below .

~~d. storage size depend requirements~~

~~Requirements differ....nameplate rating.~~

(ii) DC-Coupled storage system sized greater than 10kW

The DC-Coupled storage systems sized greater than 10kW must satisfy the definition of "No Storage Export", apply with 79-1174-02, complete Form 79-1069-02, and will be billed as described for Large NEM paired Storage in Section ~~g-23.~~(ii) of this special condition.

For this case, there are no restrictions on the storage system size (kW).-!

Large AC Coupled storage system ("Large NEM-eligible GFs") Requirements for Large NEM Paired Storage (i.e., All NEM Paired Storage Devices except Solar NEM paired with Storage Sized 10-KW and Smaller)

Large NEM-eligible Generating Facilities (GFs) are NEM-eligible GFs paired with storage sized larger than 10 kW. For Large NEM-eligible GFs, the storage system shall have a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity. _____

Large NEM-eligible GFs are required to select one of the following:

- a) install a non-export relay on the storage device(s);
- ~~(i)~~b) install an interval meter for the NEM-eligible generation, meter the load, and meter total energy

(Continued)



**ELECTRIC SCHEDULE NEM2
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flows at the point of common coupling; or

- c) install an interval meter directly to the NEM-eligible generator(s).

Large NEM-eligible GFs must complete must apply with 79-1174-02, either complete interconnection agreement Form 79-1193-02 (solar and/or wind electric facilities of 30kW or less) or Form 79-1069-02 (all other REGF with a storage system configurations), and will be billed as described in Section 3.)(ii) of this special condition.

- (ii)(iii) Small AC-Coupled storage systems (“Small NEM-eligible GFs”)

Small NEM-eligible Generating Facilities (GFs) are NEM-eligible GFs paired with storage sized 10 kW or smaller. For small NEM-eligible GFs, the storage device is not required to be sized to the customer’s demand or the NEM generator. Small NEM-eligible GFs have the option to install metering as required for Large NEM-eligible GFs to be billed as described in Section 3.)(ii) of this special condition. Otherwise, it will be billed using the estimation methodology describe in Section 3.)(i) of this special condition.

Small NEM-eligible GFs must apply with the 79-1174-02 (NEM2) and complete the 79-1193-02 (NEM2) when the NEM-Eligible GF is sized 30kW or less or apply with the 79-1174-02 (NEM2) and complete the 79-1069-02 (NEM2) when the NEM-eligible GF exceeds 30kW.

3) Billing for NEM Paired Storage

- (i) Estimation Methodology For Small NEM-eligible GFs

Once implemented in PG&E’s billing system Small NEM-eligible GFs without metering installed (as required for Large NEM-eligible GFs) will use an estimation methodology, which caps maximum allowable NEM bill credits based on a monthly output profile.

- a. California Solar Initiative Expected Performance-Based Buydown (CSI EPBB) calculator, PG&E will establish a maximum cap for NEM-eligible exports for each monthly billing period based on the EPBB production estimate for the customer’s NEM-eligible generator.

The monthly output estimation should align with a customer’s billing period (e.g., if the customer’s billing date is January 15, the maximum allowed NEM export should be based on a January output estimation.)

- b. Any export exceeding this limit would not be eligible for NEM credit and would be forfeited. Peak period
(Continued)



**ELECTRIC SCHEDULE NEM2
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exports would be reduced first, followed by partial peak and then off peak as necessary.

For example, if there was an export to the grid of 150 kWh and the EPBB-based limit for the month was set at 100 kWh, then the excess 50 kWh would be deducted from the actual exports recorded, beginning with exports that occurred during peak periods.

c. In the event the Small NEM-eligible GF is combined with other generation facilities pursuant to Special Condition 4, the billing provision of Special Condition 4 will apply, not this billing estimation methodology.

h) Should a customer decide to opt-out of using this estimation methodology, the customer must install one of the metering requirements described in the Large NEM-eligible GFs section, and the customer may only switch at the start of a new NEM Relevant Period.

(ii) Large NEM-eligible GFs are billed consistent with Special Condition 4 with the storage treated as a non-NEM eligible generator.

4) NEM Paired Storage Output Metering Costs

PG&E will install standard metering equipment whenever possible while interconnecting NEM Paired Storage systems. Standard metering equipment for this purpose comprises a single meter which is a self-contained, single phase, SmartMeter. The fee for installation of standard metering equipment is no more than \$600.00.

However, this fee cap does not apply to NEM Paired Storage requiring complex metering solutions. Complex metering solutions include any configuration other than the standard equipment described above. The cost for complex metering varies and is based on actual costs which will be described in the customer's invoice.

5) NEM Paired Storage Interconnection Cost Responsibility

The storage will have the same interconnection cost responsibility as the NEM-eligible GF that it is paired with. In the event the storage is added at a later date after the permission to operate of the NEM-eligible GF it is subsequently paired with, the storage applicant will be required to pay the same interconnection fees and costs that the NEM-eligible GF would be required to pay, as provided for in Electric Rule 21.

e) For the purpose of determining if a NEM Paired Storage REGF exceeds 1 MW criterion, refer to the sizing definition included in the AC-Coupled and DC-Coupled definition at the beginning of this Special Condition.

(Continued)



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CONDITIONS:
(Cont'd.)

9. NEM Paired Storage (Cont'd.)

(T)/(L)

d. Storage Size Dependent Requirements

Requirements differ depending on the size of the NEM Paired Storage and whether it is paired with a solar generator or not. The storage device size is determined by the inverter alternating current nameplate rating.

e. Requirements for Large NEM Paired Storage (i.e., All NEM Paired Storage Devices except Solar NEM paired with Storage Sized 10 KW and Smaller)

For NEM-paired storage systems with storage devices larger than 10 kW, the NEM Paired Storage shall have a maximum output power no larger than 150% of the NEM-eligible generator's maximum output capacity.

Large NEM Paired Storage systems are required to either:

- 1) install a non-export relay on the storage device(s);
- 2) install an interval meter for the NEM-eligible generation, meter the load, and meter total energy flows at the point of common coupling; or
- 3) install an interval meter directly to the NEM-eligible generator(s).

f. Requirements for Small NEM Paired Storage (i.e., Solar NEM Paired with Storage Devices Sized 10 KW or Smaller)

Small NEM Paired Storage is not required to be sized to the customer demand or the NEM generator. Small NEM Paired Storage has the option to install metering as required for Large NEM Paired Storage or may chose the estimation methodology describe in Section g.

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(Continued)



**ELECTRIC SCHEDULE NEM2
NET ENERGY METERING SERVICE**

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SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage (Cont'd.)

(T)/(L)

g. Billing for NEM Paired Storage

1) Estimation Methodology For Small NEM Paired Storage

Once implemented in PG&E's billing system, Small NEM Paired Storage may use an estimation methodology, which caps maximum allowable NEM bill credits based on a monthly output profile.

- a) California Solar Initiative Expected Performance-Based Buydown (CSI EPBB) calculator, PG&E will establish a maximum cap for NEM-eligible exports for each monthly billing period based on the EPBB production estimate for the customer's NEM-eligible generator.

The monthly output estimation should align with a customer's billing period (e.g., if the customer's billing date is January 15, the maximum allowed NEM export should be based on a January output estimation.)

- b) Any export exceeding this limit would not be eligible for NEM credit and would be forfeited. Peak period exports would be reduced first, followed by partial peak and then off peak as necessary.

For example, if there was an export to the grid of 150 kWh and the EPBB-based limit for the month was set at 100 kWh, then the excess 50 kWh would be deducted from the actual exports recorded, beginning with exports that occurred during peak periods.

- c) In the event the Small NEM Paired Storage is combined with other generation facilities pursuant to Special Condition 4, the billing provision of Special Condition 4 will apply, not this billing estimation methodology.

Should a customer decide to opt-out of using this estimation methodology, the customer metering must be as provided in Section e. ii. above, and the customer may only switch at the start of a new NEM Relevant Period.

- 2) Large NEM Paired Storage is billed consistent with Special Condition 4 with the storage treated as a non-NEM eligible generator.

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(Continued)



**ELECTRIC SCHEDULE NEM2
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SPECIAL
CONDITIONS:
(Cont'd.)

9. NEM Paired Storage (Cont'd.)

(T)/(L)

~~h. NEM Paired Storage Output Metering Costs~~

~~PG&E will install standard metering equipment whenever possible while interconnecting NEM Paired Storage systems. Standard metering equipment for this purpose comprises a single meter which is a self-contained, single phase, SmartMeter. The fee for installation of standard metering equipment is no more than \$600.00.~~

~~However, this fee cap does not apply to NEM Paired Storage requiring complex metering solutions. Complex metering solutions include any configuration other than the standard equipment described above. The cost for complex metering varies and is based on actual costs which will be described in the customer's invoice.~~

~~i. NEM Paired Storage Interconnection Cost Responsibility~~

~~The storage will have the same interconnection cost responsibility as the NEM generator that it is paired with. In the event the storage is added at a later date after the permission to operate of the NEM generator it is subsequently paired with, the storage applicant will be required to pay the same interconnection fees and costs that the NEM generator would be required to pay, as provided for in Electric Rule 21.~~

(L)



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SPECIAL
CONDITIONS:
(Cont'd.)

10. NEM Paired Storage (Cont'd.)

(T)

~~h. NEM Paired Storage Output Metering Costs~~

~~PG&E will install standard metering equipment whenever possible while interconnecting NEM Paired Storage systems. Standard metering equipment for this purpose comprises a single meter which is a self-contained, single phase, SmartMeter. The fee for installation of standard metering equipment is no more than \$600.00.~~

~~However, this fee cap does not apply to NEM Paired Storage requiring complex metering solutions. Complex metering solutions include any configuration other than the standard equipment described above. The cost for complex metering varies and is based on actual costs which will be described in the customer's invoice.~~

~~i. NEM Paired Storage Interconnection Cost Responsibility~~

~~The storage will have the same interconnection cost responsibility as the NEM generator that it is paired with. In the event the storage is added at a later date after the permission to operate of the NEM generator it is subsequently paired with, the storage applicant will be required to pay the same interconnection fees and costs that the NEM generator would be required to pay, as provided for in Electric Rule 21.~~

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

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