PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

Pacific Gas & Electric Company
ELC (Corp ID 39)
Status of Advice Letter 6822E
As of March 29, 2023

Subject: Clean-Up of Electric Form 79-1174-02H

Division Assigned: Energy

Date Filed: 01-12-2023

Date to Calendar: 01-23-2023

Authorizing Documents: None

Disposition:	**Accepted**
Effective Date:	**03-03-2023**

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

edtariffunit@cpuc.ca.gov

AL Certificate Contact Information:

Kimberly Loo
(415)973-4587
PGETariffs@pge.com

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

To: Energy Company Filing Advice Letter

From: Energy Division PAL Coordinator

Subject: Your Advice Letter Filing

The Energy Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

The AL status certificate indicates:

Advice Letter Number
Name of Filer
CPUC Corporate ID number of Filer
Subject of Filing
Date Filed
Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)
Effective Date of Filing
Other Miscellaneous Information (e.g., Resolution, if applicable, etc.)

The Energy Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

All inquiries to the California Public Utilities Commission on the status of your Advice Letter Filing will be answered by Energy Division staff based on the information contained in the Energy Division's PAL database from which the AL status certificate is generated. If you have any questions on this matter please contact the:

Energy Division's Tariff Unit by e-mail to
edtariffunit@cpuc.ca.gov

Pacific Gas and Electric Company

Sidney Bob Dietz II
Director
Regulatory Relations

Pacific Gas and Electric Company
77 Beale St., Mail Code B13U
P.O. Box 770000
San Francisco, CA 94177

Fax: 415-973-3582

January 12, 2023

Advice 6822-E
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: **Clean-Up of Electric Form 79-1174-02H**

Purpose

Pacific Gas and Electric Company (PG&E) hereby submits for revisions to Electric Form 79-1174-02H. The affected tariff sheets are listed on the enclosed Attachment 1.

Background

The purpose of this advice letter is to revise Electric Form 79-1174-02H in PG&E's tariff book to consolidate language that was approved in multiple advice letters.

On April 12, 2022, PG&E submitted Tier 2 supplemental advice letter 6539-E-A to revise Electric Form 79-1174-02H per Decision (D.) 20-09-035, with modifications pursuant to Resolution E-5165. On May 31, 2022, the California Public Utilities Commission (CPUC) issued a Disposition Letter approving advice letter 6539-E-A with an effective date of May 16, 2022.[1]

On April 29, 2022, PG&E submitted Tier 1 clean-up advice letter 4605-G/6476-E to combine changes that had been approved by the CPUC in separate advice letters. On May 31, 2022, the California Public Utilities Commission (CPUC or Commission) issued a Disposition Letter approving advice letter 4605-G/6476-E with an effective date of April 29, 2022.[2]

On July 11, 2022, PG&E submitted Tier 2 supplemental advice letter 6609-E-A to incorporate an exception option to the smart inverter requirements for interconnections participating in the Emergency Load Reduction Program. On November 4, 2022, the

[1] ELEC_6539-E-A.pdf (pge.com)
[2] ELEC_6576-E.pdf (pge.com)

CPUC issued a Disposition Letter approving advice letter 6609-E-A with an effective date of July 20, 2022.[3]

On September 15, 2022, PG&E submitted Tier 1 supplemental advice letter 6674-E-A to revise Electric Form 79-1174-02H per Resolution E-5172. On September 26, 2022, the Commission issued a Disposition Letter approving advice letter 6674-E-A with an effective date of September 26, 2022.[4]

On October 21, 2022, PG&E submitted Tier 2 advice letter 6744-E per D. 21-06-002. On December 6, 2022, the Commission issued a Disposition Letter approving advice letter 6744-E with an effective date of November 30, 2022.[5]

This advice letter does not propose any new modifications to Electric Form 79-1174-02H. PG&E is merely consolidating tariff language that has already been submitted with and approved by the Commission. For your convenience, PG&E has included redline revisions in Attachment 2.

The submittal would not increase any current rate or charge, cause the withdrawal of service, or conflict with any rate schedule or rule.

Protests

Anyone wishing to protest this submittal may do so by letter sent electronically via E-mail, no later than February 1, 2023, which is 20 days after the date of this submittal. Protests must be submitted to:

CPUC Energy Division
ED Tariff Unit
E-mail: EDTariffUnit@cpuc.ca.gov

The protest shall also be electronically sent to PG&E via E-mail at the address shown below on the same date it is electronically delivered to the Commission:

Sidney Bob Dietz II
Director, Regulatory Relations
c/o Megan Lawson
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;

[3] ELEC_6609-E-A.pdf (pge.com)
[4] ELEC_6674-E-A.pdf (pge.com)
[5] ELEC_6744-E.pdf (pge.com)

supporting factual information or legal argument; name and 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

Pursuant to General Order (GO) 96-B, Rule 5.1, PG&E requests that this Tier 1 advice submittal become effective on January 12, 2023.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically to parties shown on the attached list. 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/

Sidney Bob Dietz II
Director, Regulatory Relations

Attachments
Attachment 1 – Tariffs
Attachment 2 – Redline Tariffs

California Public Utilities Commission

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 U39 E)

Utility type:
- [x] ELC
- [ ] GAS
- [ ] WATER
- [ ] PLC
- [ ] HEAT

Contact Person: Kimberly Loo
Phone #: (415)973-4587
E-mail: PGETariffs@pge.com
E-mail Disposition Notice to: KELM@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) #: 6822-E

Tier Designation: 1

Subject of AL: Clean-Up of Electric Form 79-1174-02H

Keywords (choose from CPUC listing): Form

AL Type: [ ] Monthly [ ] Quarterly [ ] Annual [x] One-Time [ ] Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #:

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

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

Confidential treatment requested? [ ] Yes [x] 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 [x] No

Requested effective date: 1/12/23

No. of tariff sheets: 3

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 proposed[1]: N/A

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

[1]Discuss in AL if more space is needed.

Clear Form

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

California Public Utilities Commission Energy Division Tariff Unit Email: EDTariffUnit@cpuc.ca.gov	Contact Name: Sidney Bob Dietz II, c/o Megan Lawson Title: Director, Regulatory Relations Utility/Entity Name: Pacific Gas and Electric Company Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email: PGETariffs@pge.com
	Contact Name: Title: Utility/Entity Name: Telephone (xxx) xxx-xxxx: Facsimile (xxx) xxx-xxxx: Email:

CPUC
Energy Division Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

Clear Form

Cal P.U.C. Sheet No.	Title of Sheet	Cancelling Cal P.U.C. Sheet No.
55098-E	Electric Sample Form No. 79-1174-02H Rule 21 Generator Interconnection Application - Attachment H Sheet 1	54488-E
55099-E	ELECTRIC TABLE OF CONTENTS Sheet 1	55096-E
55100-E	ELECTRIC TABLE OF CONTENTS Sheet 25	54835-E

Electric Sample Form No. 79-1174-02H Sheet 1
Rule 21 Generator Interconnection Application - Attachment H

Please Refer to Attached
Sample Form

(Continued)

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

ENERGY STORAGE TECHNOLOGY

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

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
G - Generator Design Please indicate the design of each Generator. Designate "Inverter" anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.	____ Synch ____ Induct. ____ Inverter	____ Synch ____ Induct. ____ Inverter	__ Synch ____ Induct. ____ Inverter	____ Synch ____ Induct. ____ Inverter
H - Gross Nameplate Rating (kVA) This is the capacity value normally supplied by the manufacturer and stamped on the Generator's nameplate. This value is not required where the manufacturer provides only a kW rating. However, where both kVA and kW values are available, please indicate both.				
I - Energy Storage Electrical Source Function (in addition, please complete section: "Additional Information Required for Energy Storage")	Max kWh Capacity: _____ Rated kW Discharge: _____	Max kWh Capacity: _____ Rated kW Discharge: _____	Max kWh Capacity: _____ Rated kW Discharge: _____	Max kWh Capacity: _____ Rated kW Discharge: _____
J - 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.				
K - 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.				
L - 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.				

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
M - Wiring Configuration Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.				
N - (MP) 3-Phase Winding Configuration (Choose One) For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.	__3 Wire Delta __3 Wire Wye __4 Wire Wye	__3 Wire Delta __3 Wire Wye __4 Wire Wye	__3 Wire Delta __3 Wire Wye __4 Wire Wye	__3 Wire Delta __3 Wire Wye __4 Wire Wye
O - (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.	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms
P - Short Circuit Current Produced by Generator:	_____ (Amps)	_____ (Amps)	_____ (Amps)	_____ (Amps)
Q – 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
R - 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) ____ Yes ____ No	_____ Manufacturer _____ Model # _____ Rating (amps) ____ Yes ____ No	_____ Manufacturer _____ Model # _____ Rating (amps) ____ Yes ____ No	_____ Manufacturer _____ Model # _____ Rating (amps) ____ Yes ____ No

INTERCONNECTION APPLICATION (Form 79-1174-02)
ATTACHMENT H
ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
S - Energy Storage (ES) System (For important sizing information related to DC-Couple configurations, see sizing note below).	_____ Manufacturer _____ Model # _____ Quantity of Units	_____ Manufacturer _____ Model # _____ Quantity of Units	_____ Manufacturer _____ Model # _____ Quantity of Units	_____ Manufacturer _____ Model # _____ Quantity of Units
T - Lineside Tap Where is the point of interconnection in relation to the main breaker? PG&E has special requirements for a lineside tap. Contact PG&E at: Rule21Gen@PGE.com for more information.	____ Customer side ____ PG&E side	____ Customer side ____ PG&E side	____ Customer side ____ PG&E side	____ Customer side ____ PG&E side
U – 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
V - Distribution Interconnect Handbook (DIH) and Greenbook Requirements Does this interconnection meet the DIH and Greenbook Requirements	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
W - Gas Clearance Requirements Certify that this interconnection meets Greenbook Gas Clearance Requirements?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No

INTERCONNECTION APPLICATION (Form 79-1174-02)
ATTACHMENT H
ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
X - Basic Single Line Diagram (SLD) If the interconnection is eligible to use a Basic SLD, please include the requested information.	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)
Can this system be used as a back-up generator?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If so, please include the requested information for the back-up controller or other device.	_____ Manufacturer _____ Make _____ Model No.	_____ Manufacturer _____ Make _____ Model No.	_____ Manufacturer _____ Make _____ Model No.	_____ Manufacturer _____ Make _____ Model No.
Y - Back-up Generator Operation Will the generator be operated as a back-up?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If yes, please indicate control device.	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker
Z - Limited Export Will the generator export be limited?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If yes, please indicate how export will be limited.	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter

INTERCONNECTION APPLICATION (Form 79-1174-02)
ATTACHMENT H
ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
AA - Telemetry Will the Generating Facility Gross Nameplate Rating exceed 1 MW?	____ Yes ____ No			
If yes, please select a Telemetry Option.	_____ Customer-owned Telemetry - Gateway _____ Customer-owned Telemetry - Aggregator _____ Mini RTU			
If one of the Customer-owned Telemetry options is selected, please identify the preferred Site Metering Arrangement.	_____Customer-side net load metering _____Replace PG&E meter with a Mark V meter and terminal block _____Add terminal block to existing PG&E Mark V meter _____Replace meter socket with dual-socket meter cabinet for installation of customer-owned meter _____Install customer-owned meter in existing dual socket meter cabinet.			
AB - Vehicle to Grid Will the inverter be located in the Electric Vehicle Supply Equipment (EVSE) or in the Electric Vehicle (EV) itself?	_____ EVSE _____ EV	_____ EVSE _____ EV	_____ EVSE _____ EV	_____ EVSE _____ EV
If for the V2G AC Pilot, the EV includes the inverter, please provide EV details.	_____ EV Make _____ EV Model _____ EV Year	_____ EV Make _____ EV Model _____ EV Year	_____ EV Make _____ EV Model _____ EV Year	_____ EV Make _____ EV Model _____ EV Year
If inverter is in the EVSE, please provide EVSE model manufacture year.	_____ EVSE Model Year	_____ EVSE Model Year	_____ EVSE Model Year	_____ EVSE Model Year
If inverter is in the EVSE, is the EVSE newly installed?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If inverter is in the EVSE, will the Generator participate in the Emergency Load Reduction Program (ELRP)?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If yes, please provide ELRP Application Number.	_____ Application #	_____ Application #	_____ Application #	_____ Application #

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 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:

_____

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 TABLE OF CONTENTS Sheet 1

TABLE OF CONTENTS

SCHEDULE	TITLE OF SHEET	CAL P.U.C. SHEET NO.	
Title Page		**55099**-E	(T)
Rate Schedules		55043,55044,55045,55046,55097,55048,55049,49654,55050-E	
Preliminary Statements		55051,48064,54807,41723,49327,54830,55078-E	
Preliminary Statements, Rules		55072-E	
Rules		54833,54834-E	
Maps, Contracts and Deviations		37960-E	
Sample Forms		47207,49743,49301,**55100**,49303,49304, 51241,54836,49307,54792,49309,49310,49311-E	(T)

(Continued)

ELECTRIC TABLE OF CONTENTS Sheet 25

FORM	TITLE OF SHEET	CAL P.U.C. SHEET NO.	
	Sample Forms		
	Rule 21 Generating Facility Interconnections (Cont'd)		
79-1174-02	Rule 21 Generator Interconnection Application	53865-E	
79-1174-02A	Rule 21 Generator Interconnection Application – Attachment A	54070-E	
79-1174-02B	Rule 21 Generator Interconnection Application – Attachment B	49268-E	
79-1174-02C	Rule 21 Generator Interconnection Application – Attachment C	49269-E	
79-1174-02D	Rule 21 Generator Interconnection Application – Attachment D	54484-E	
79-1174-02E	Rule 21 Generator Interconnection Application – Attachment E	54485-E	
79-1174-02F	Rule 21 Generator Interconnection Application – Attachment F	54486-E	
79-1174-02G	Rule 21 Generator Interconnection Application – Attachment G	54487-E	
79-1174-02H	Rule 21 Generator Interconnection Application – Attachment H	**55098**-E	(T)
79-1174-02I	Rule 21 Generator Interconnection Application – Attachment I	49275-E	
79-1174-02J	Rule 21 Generator Interconnection Application – Attachment J	49276-E	
79-1174-02K	Rule 21 Generator Interconnection Application – Attachment K	49277-E	
79-1174-02L	Rule 21 Generator Interconnection Application – Attachment L	49278-E	
79-1174-02M	Rule 21 Generator Interconnection Application – Attachment M	49279-E	
79-1174-02N	Rule 21 Generator Interconnection Application – Attachment N	49280-E	
79-1175	Rule 21 Consent to Assignment Form for Non-NEM Projects	48657-E	
79-1181	Rule 21 Pre-Application Report Request	54812-E	
79-1191	Generating Facility Interconnection Agreement For Local Government Renewable Energy Self-Generation Bill Credit Transfer (RES-BCT)	49295-E	
79-1197	Local Government Renewable Energy Self-Generation Bill Credit Transfer (RES-BCT) Re-Allocation Request	48676-E	
79-1198-02	Interconnection Agreement for Net Energy Metering (NEM2) and Renewable Electrical Generating Facility Sized Greater than 1,000 kW	50574-E	
79-1199	Agreement and Customer Authorization Non-Export Standalone Energy Storage of 30 Kilowatts or Less	48678-E	
79-1200	Rule 21 Generator Interconnection Agreement for Exporting Generating Facilities	48679-E	
79-1204	Pilot Pedestal Program Application	48680-E	
79-1211	Generating Facility Material Modification Notification Worksheet	50316-E	
79-1212	Rule 21 Non-Export Generator Interconnection Notification	51182-E	
79-1213	Agreement and Customer Authorization Non-Export Generating Facility Sized 30 Kilowatts or Less	51183-E	
79-1214	Notification-Only Pilot Program Developer Eligibility Application	51184-E	

(Continued)

Advice 6822-E
January 12, 2023

Attachment 2

Redline Tariff Revisions

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

ENERGY STORAGE TECHNOLOGY

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

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
G - Generator Design Please indicate the design of each Generator. Designate "Inverter" anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.	____ Synch ____ Induct. ____ Inverter	____ Synch ____ Induct. ____ Inverter	__ Synch ____ Induct. ____ Inverter	____ Synch ____ Induct. ____ Inverter
H - Gross Nameplate Rating (kVA) This is the capacity value normally supplied by the manufacturer and stamped on the Generator's nameplate. This value is not required where the manufacturer provides only a kW rating. However, where both kVA and kW values are available, please indicate both.				
I - Energy Storage Electrical Source Function (in addition, please complete section: "Additional Information Required for Energy Storage")	Max kWh Capacity: _____ Rated kW Discharge: _____	Max kWh Capacity: _____ Rated kW Discharge: _____	Max kWh Capacity: _____ Rated kW Discharge: _____	Max kWh Capacity: _____ Rated kW Discharge: _____
J - 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.				
K - 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.				
L - 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.				

ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
M - Wiring Configuration Please indicate whether the Generator is a single-phase or three-phase device. See PG&E's Rule 21, Section H.3.				
N - (MP) 3-Phase Winding Configuration (Choose One) For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.	__3 Wire Delta __3 Wire Wye __4 Wire Wye	__3 Wire Delta __3 Wire Wye __4 Wire Wye	__3 Wire Delta __3 Wire Wye __4 Wire Wye	__3 Wire Delta __3 Wire Wye __4 Wire Wye
O - (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.	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor __ Ohms
P - Short Circuit Current Produced by Generator:	_____ (Amps)	_____ (Amps)	_____ (Amps)	_____ (Amps)
Q – 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
R - 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) ____ Yes ____ No	_____ Manufacturer _____ Model # _____ Rating (amps) ____ Yes ____ No	_____ Manufacturer _____ Model # _____ Rating (amps) ____ Yes ____ No	_____ Manufacturer _____ Model # _____ Rating (amps) ____ Yes ____ No

INTERCONNECTION APPLICATION (Form 79-1174-02)
ATTACHMENT H
ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
S - Energy Storage (ES) System (For important sizing information related to DC-Couple configurations, see sizing note below).	_____ Manufacturer _____ Model # _____ Quantity of Units	_____ Manufacturer _____ Model # _____ Quantity of Units	_____ Manufacturer _____ Model # _____ Quantity of Units	_____ Manufacturer _____ Model # _____ Quantity of Units
T - Lineside Tap Where is the point of interconnection in relation to the main breaker? PG&E has special requirements for a lineside tap. Contact PG&E at: Rule21Gen@PGE.com for more information.	____ Customer side ____ PG&E side	____ Customer side ____ PG&E side	____ Customer side ____ PG&E side	____ Customer side ____ PG&E side
U – 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
V - Distribution Interconnect Handbook (DIH) and Greenbook Requirements Does this interconnection meet the DIH and Greenbook Requirements	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
W - Gas Clearance Requirements Certify that this interconnection meets Greenbook Gas Clearance Requirements?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No

INTERCONNECTION APPLICATION (Form 79-1174-02)
ATTACHMENT H
ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
X - Basic Single Line Diagram (SLD) If the interconnection is eligible to use a Basic SLD, please include the requested information.	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)	_____ Panel Voltage (Volts) _____ Main Breaker (Amps) _____ Storage Breaker Size (Amps)
Can this system be used as a back-up generator?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If so, please include the requested information for the back-up controller or other device.	_____ Manufacturer _____ Make _____ Model No.	_____ Manufacturer _____ Make _____ Model No.	_____ Manufacturer _____ Make _____ Model No.	_____ Manufacturer _____ Make _____ Model No.
Y - Back-up Generator Operation Will the generator be operated as a back-up?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If yes, please indicate control device.	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker	☐ Automatic Transfer Switch ☐ Contactor ☐ Breaker
Z - Limited Export Will the generator export be limited?	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No	____ Yes ____ No
If yes, please indicate how export will be limited.	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter	☐ Power Control System (PCS – Option 9) ☐ Relay ☐ Derated Inverter

INTERCONNECTION APPLICATION (Form 79-1174-02)
ATTACHMENT H
ENERGY STORAGE TECHNOLOGY

Generator Information	Existing Generator type 1	Existing Generator type 2	New Generator type 1	New Generator type 2
AA - Telemetry Will the Generating Facility Gross Nameplate Rating exceed 1 MW?	____ Yes ____ No			
If yes, please select a Telemetry Option.	_____ Customer-owned Telemetry - Gateway _____ Customer-owned Telemetry - Aggregator _____ Mini RTU			
If one of the Customer-owned Telemetry options is selected, please identify the preferred Site Metering Arrangement.	_____Customer-side net load metering _____Replace PG&E meter with a Mark V meter and terminal block _____Add terminal block to existing PG&E Mark V meter _____Replace meter socket with dual-socket meter cabinet for installation of customer-owned meter _____Install customer-owned meter in existing dual socket meter cabinet.			
AB - Vehicle to Grid Will the inverter be located in the Electric Vehicle Supply Equipment (EVSE) or in the Electric Vehicle (EV) itself?	_____EVSE _____EV	_____EVSE _____EV	_____EVSE _____EV	_____EVSE _____EV
If for the V2G AC Pilot, the EV includes the inverter, please provide EV details.	_____EV Make _____EV Model _____EV Year	_____EV Make _____EV Model _____EV Year	_____EV Make _____EV Model _____EV Year	_____EV Make _____EV Model _____EV Year
If inverter is in the EVSE, please provide EVSE model manufacture year.	_____EVSE Model Year	_____EVSE Model Year	_____EVSE Model Year	_____EVSE Model Year
If inverter is in the EVSE, is the EVSE newly installed?	____Yes ____No	____Yes ____No	____Yes ____No	____Yes ____No
If inverter is in the EVSE, will the Generator participate in the Emergency Load Reduction Program (ELRP)?	____Yes ____No	____Yes ____No	____Yes ____No	____Yes ____No
If yes, please provide ELRP Application Number.	_____Application #	_____Application #	_____Application #	_____Application #

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 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:

_____

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_____

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

AT&T
Albion Power Company

Alta Power Group, LLC
Anderson & Poole

Atlas ReFuel
BART

Barkovich & Yap, Inc.
Braun Blaising Smith Wynne, P.C.
California Cotton Ginners & Growers Assn
California Energy Commission

California Hub for Energy Efficiency Financing

California Alternative Energy and Advanced Transportation Financing Authority
California Public Utilities Commission
Calpine

Cameron-Daniel, P.C.
Casner, Steve
Center for Biological Diversity

Chevron Pipeline and Power
City of Palo Alto

City of San Jose
Clean Power Research
Coast Economic Consulting
Commercial Energy
Crossborder Energy
Crown Road Energy, LLC
Davis Wright Tremaine LLP
Day Carter Murphy

Dept of General Services
Don Pickett & Associates, Inc.
Douglass & Liddell
Dish Wireless L.L.C.

East Bay Community Energy Ellison Schneider & Harris LLP
Engineers and Scientists of California

GenOn Energy, Inc.
Goodin, MacBride, Squeri, Schlotz & Ritchie
Green Power Institute
Hanna & Morton
ICF
iCommLaw
International Power Technology
Intertie

Intestate Gas Services, Inc.

Johnston, Kevin
Kelly Group
Ken Bohn Consulting
Keyes & Fox LLP
Leviton Manufacturing Co., Inc.

Los Angeles County Integrated Waste Management Task Force
MRW & Associates
Manatt Phelps Phillips
Marin Energy Authority
McClintock IP
McKenzie & Associates

Modesto Irrigation District
NLine Energy, Inc.
NRG Solar

OnGrid Solar
Pacific Gas and Electric Company
Peninsula Clean Energy

Pioneer Community Energy

Public Advocates Office

Redwood Coast Energy Authority
Regulatory & Cogeneration Service, Inc.

Resource Innovations

SCD Energy Solutions
San Diego Gas & Electric Company

SPURR
San Francisco Water Power and Sewer
Sempra Utilities

Sierra Telephone Company, Inc.
Southern California Edison Company
Southern California Gas Company
Spark Energy
Sun Light & Power
Sunshine Design
Stoel Rives LLP

Tecogen, Inc.
TerraVerde Renewable Partners
Tiger Natural Gas, Inc.

TransCanada
Utility Cost Management
Utility Power Solutions
Water and Energy Consulting Wellhead Electric Company
Western Manufactured Housing Communities Association (WMA)
Yep Energy