

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



June 24, 2015

Advice Letter: 4741-G

Southern California Gas Company
Attention: Sid Newsom
555 West Fifth Street, GT14D6
Los Angeles, CA 90013-1011

SUBJECT: Proposed Revisions to the Self-Generation Incentive Program Handbook and Forms to Clarify Requirements for Residential Advanced Energy Storage Applications

Dear Mr. Newsom:

Advice Letter 4741-G is effective as of June 11, 2015.

Sincerely,

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

Edward Randolph
Director, Energy Division

January 20, 2015

Advice 3552-G/4563-E

(Pacific Gas and Electric Company ID U 39 M)

Advice 55

(Center for Sustainable EnergyTM)

Advice 3165-E

(Southern California Edison Company – U 338 E)

Advice 4741

(Southern California Gas Company – U 904 G)

Public Utilities Commission of the State of California Energy Division

Subject: Proposed Revisions to the Self-Generation Incentive Program Handbook and Forms to Clarify Requirements for Residential Advanced Energy Storage Applications

Purpose

Pacific Gas & Electric Company (PG&E) respectfully submits this Tier 2 Advice Letter on behalf of the Self-Generation Incentive Program (SGIP) Program Administrators (PAs)¹, to propose changes to the SGIP Handbook and supporting documentation clarifying eligibility requirements for residential Advanced Energy Storage (AES) applications. These changes will be effective for applications confirmed after the approval date of this Advice Filing.

According to Decision (D.) 11-09-015², filing a Tier 2 Advice Letter for this purpose is consistent with the authority previously granted to the PAs to modify the program and to promote the goals of implementing Senate Bill 412. This Advice Letter seeks to clarify and provide a mechanism for residential AES applications to demonstrate that they

¹ The SGIP PAs are PG&E, Southern California Edison Company (SCE), Southern California Gas Company (SoCalGas), and the Center for Sustainable Energy (CSE).

² Decision modifying the Self Generation Incentive Program and Implementing Senate Bill 412, filed September 8, 2011, pp. 4

meet the following SGIP eligibility requirement: “Diesel-fired DG resources and emergency or backup systems would not be eligible under the program.”³

Background

In D.01-03-073, the California Public Utilities Commission (Commission or CPUC) established the SGIP to encourage the development and commercialization of new distributed generation (DG) technologies. The SGIP provides funding to qualifying technologies and the incentives offered under the SGIP vary based on the technology and whether the DG facility uses renewable fuel. In 2008, D.08-11-044 incorporated Residential AES systems to qualify and receive SGIP incentives if Residential AES systems were coupled with an eligible SGIP technology. Subsequently, with the passage of Senate Bill (SB) 412, the Commission approved D.11-09-015, which extended the eligibility of AES systems to qualify for SGIP incentives as a stand-alone technology or paired with a renewable technology along with additional eligibility requirements.

Over the past two years, the Program has experienced an increase in SGIP applications for Residential AES projects. As the PAs have been reviewing and gaining a better understanding of how these AES systems are intended to operate, it has come to the attention of the PAs that many Residential AES systems have been marketed and installed solely as grid back-up systems⁴. This has caused the PAs to revisit the existing requirements for AES applications, particularly with respect to the provision that Residential AES systems eligible for participation in the SGIP cannot be “[b]ack-up systems intended solely for emergency purposes.”⁵ These new SGIP rules, to be explained below, provide a stronger method to confirm that SGIP incentivized Residential AES systems are used in a manner that meets the stated intention of SGIP: to “facilitate the integration of [incentivized] resources into the electrical grid, improve efficiency and reliability of the distribution and transmission system, and reduce emissions of greenhouse gases, peak demand, and ratepayer costs.”⁶

SGIP Rules: Current and Future

The PAs believe the operational requirements must support the intention of the SGIP, provide the PAs with useful data in order to continue to improve the program, and

³ D.01-03-073, p.10

⁴ Backup systems: Operate as short-term temporary replacement for electrical power during periods of Electric Utility power outages. In addition to emergency operation they ordinarily only operate for testing and maintenance. Backup generators do not produce power to be sold or otherwise supplied to the grid or provide power to loads that are simultaneously serviced by the Electric Utility grid. Backup generators only service customer loads that are isolated from the grid either by design or by manual or automatic transfer switch.

⁵ Section 4.2.5, Page 44; 2014 SGIP Handbook

⁶ Senate Bill 861, Chapter 35 SEC 156 (a) (1) pp. 151, and Public Utilities Code (PUC) 379.6

facilitate market adoption. After a review of the Residential AES Applications received by the PAs in early 2014, the PAs grew concerned that some Residential AES systems were being installed solely for back-up power purposes, which is in violation of the Program rules. The PAs recognized a need for additional clarity on how to distinguish a back-up only installation, and measures that would ensure that Residential AES systems are used as more than just back-up. Due to this concern, the PAs reached out to the CPUC's Energy Division (ED) for guidance.

On October 17, 2014, Edward F. Randolph, the Director of CPUC's Energy Division (ED), responded to the SGIP PAs request with a guidance letter outlining three proposed requirements to be met by these Residential AES system owners in order to receive an SGIP incentive including:

1. [Host Customers] are on a Time of Use tariff (TOU) or a critical peak pricing rate (CPP), and;
2. Residential AES systems are certified in writing by the installer/SGIP applicant to be configured for regular (i.e. more than backup-only) operation, and;
3. Confirm either the customer served by the system or the system owner has the tools to control the usage of the Residential AES device to feed energy back to customer load and/or the grid at times of peak demand.

In line with this general guidance, the PAs have developed a Residential AES Eligibility Affidavit that defines operational requirements for Residential AES systems. In conformance with item #2 and #3 of Energy Division's guidance letter, the SGIP PAs recommend that all current unconfirmed, and future Residential AES projects seeking SGIP incentives must abide by the operational requirements outlined within the Affidavit, namely:

1. Be installed such that the Residential AES System Owner and/or Host Customer must have the tools to control the usage of the AES system when operating in parallel with the grid.
2. Provide usage/performance data for five (5) years. This current requirement will enable the PAs to learn about the performance of these systems, which will inform future program requirements. All projects must provide historical performance data (15-minute interval data) downloaded by the system owner into a zipped file and emailed to the PA for the first year after payment and/or upon request for five (5) years..
3. Pass the Residential AES Field Verification Inspection.. See Attachment B for a copy of the basic guidelines for Field Verification, which are subject to PA discretion to ensure systems meet Program Requirements. This process will involve equipment and configuration inspection and an operational performance

test during which systems must demonstrate they are installed as represented in the application, are operational, and conform to the eligibility criteria of the SGIP.

Additionally, in conformance with item #1 of Energy Division's guidance letter, Residential AES system owners must choose one of the compliance options outlined in the Residential AES Eligibility Affidavit:

1. Host Customer remains on a Time-of-Use (TOU) tariff or Demand Reduction Program for a period of five (5) years after receiving the SGIP incentive. OR,
2. System Owner/Host Customer agrees, for a minimum period of five (5) years, to discharge the Residential AES system in an amount equivalent to 52 complete cycles per year of the incentivized energy capacity, which is defined as two hours of discharge at the SGIP incentivized power capacity rating,⁷ with discharges occurring during peak hours, demand reduction hours, or in a manner that provides benefits as defined by the Host Customer's Electric Utility.

As stated above, the PAs will require that all System Owners and/or Host Customers of Residential AES applications confirmed after this Advice Letter is approved, sign the Residential AES Eligibility Affidavit agreeing to the requirements listed above. The concept of this affidavit is in response to the Energy Division letter requiring that Applications are "certified in writing by the installer/SGIP Applicant to be configured for regular (i.e. more than backup only) operation."

A copy of the proposed affidavit is available in Attachment A.

Justification for Requiring Time of Use and Discharge Requirements:

This proposal is consistent with the requirement that AES not be used as back-up only, as well as the broader SGIP intention to reduce peak demand. TOU rates encourage customers to defer their energy consumption to times when the rate may offer a higher monetary benefit. Residential customers on a TOU rate with an AES system have an incentive to minimize usage during peak periods, when rates are typically higher, by shifting usage to off-peak periods, when rates are typically lower. As an alternative, the aforementioned discharge requirement standards for Residential AES systems ensure fulfillment of the SGIP goals in the absence of the economic driver embedded in a TOU

⁷ For instance, an AES system with an SGIP incentivized power capacity of 5 kW has an incentivized energy capacity of 10 kWh (5 kW x 2 hours); in such a case, 52 complete cycles per year would be equivalent to 520 kWh (52 x 10 kWh) of total annual discharged energy. System Owners/Host Customers may operate AES systems dynamically according to needs and price signals as long as the total annual discharged energy equates to 52 complete cycles of the SGIP incentivized energy capacity.

or demand rate. If the Host Customer opted against going on a TOU rate, the option of discharging the equivalent of 52 complete cycles per year during specified times would fulfill goals of the SGIP. In terms of energy discharged annually this is equivalent to the rated capacity of the Residential AES system in kW times two (2) hours times 52 (see footnote 7, above).

Upon request all Host Customers or System Owners will be required to email an electronic file with performance data, which will be used to assess compliance.

In sum, assuming all mandatory requirements for Residential AES projects are met, selecting either Option A or Option B will help the SGIP PAs ensure that Residential AES systems are being used for regular operation and will be meeting all the goals of the program.

SGIP Program Handbook Changes

This Advice Letter proposes the following Handbook changes:

1. Changes to Table 2.1 (updates in Red)

Table 2.1 Reservation Request Requirements **Required Materials**

- 1. Completed Reservation Request Form** (*All Projects*)
- 2. Application Fee** (*All Projects*)
- 3. Equipment Specifications** (*All Projects*)
- 4. Proof of Utility Service / Load Documentation** (*All Projects*)
- 5. Preliminary Monitoring Plan** (*All 3-Step Applications >=30 kW*)
- 6. Minimum Operating Efficiency Worksheet w/Back-up Documentation** (*Non-Renewable Fuel Projects Only*)
- 7. Proof of Adequate Fuel or Waste Energy Resource** (*Renewable Fuel, Waste Energy, Waste Gas Projects Only*)
- 8. Residential AES Eligibility Affidavit** (*Residential AES projects only*)

2. The following addition to section 2.3.1:

8. Residential AES Eligibility Affidavit (*Residential AES projects only*)
Residential AES Projects must include a signed affidavit, which is designed to ensure that SGIP-incentivized projects will “increase deployment of distributed generation and energy storage systems to facilitate the integration of those resources into the electrical grid, improve efficiency and reliability of the distribution and transmission system, and reduce emissions of greenhouse gases, peak demand, and ratepayer costs.”⁸

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

⁸ Senate Bill 861, Chapter 35 SEC 156 (a) (1) pp. 151, and Public Utilities Code (PUC) 379.6

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than February 9, 2015, 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:

For PG&E:
Meredith Allen
Senior Director, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, California 94177

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

For CSE:
Sachu Constantine
Director of Policy
Center for Sustainable Energy™
9325 Sky Park Court, Suite 100
San Diego, CA 92123
E-mail: sachu.constantine@energycenter.org

For SoCalGas:

Attn: Sid Newsom
Tariff Manager - GT14D6
555 West Fifth Street
Los Angeles, CA 90013-1011
E-mail: snewsom@SempraUtilities.com

For SCE:

Megan Scott-Kakures
Vice President of Regulatory Operations
Southern California Edison Company
8631 Rush Street
Rosemead, CA 91770
E-mail: AdviceTariffManager@sce.com

Michael R. Hoover
Director, State Regulatory Affairs
c/o Karyn Gansecki
Southern California Edison Company
601 Van Ness Avenue, Suite 2030
San Francisco, CA 94102
E-mail: Karyn.Gansecki@sce.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 advice filing become effective on regular notice, February 19, 2015 which is 30 calendar days after the date of filing.

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 list for R.12-11-005. 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/

Meredith Allen
Senior Director, Regulatory Relations

Attachments

cc: Service List R.12-11-005

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

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

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

Utility type:

ELC

GAS

PLC

HEAT

WATER

Contact Person: Kingsley Cheng

Phone #: (415) 973-5265

E-mail: k2c0@pge.com and PGETariffs@pge.com

EXPLANATION OF UTILITY TYPE

(Date Filed/ Received Stamp by CPUC)

ELC = Electric

GAS = Gas

PLC = Pipeline

HEAT = Heat

WATER = Water

Advice Letter (AL) #: **3552-G/4563-E, et al.**

Tier: 2

Subject of AL: **Proposed Revisions to the Self-Generation Incentive Program Handbook and Forms to Clarify Requirements for Residential Advanced Energy Storage Applications**

Keywords (choose from CPUC listing): Self Generation

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

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

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

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

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

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

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

Resolution Required? Yes No

Requested effective date: **February 19, 2015**

No. of tariff sheets: N/A

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: N/A

Service affected and changes proposed: N/A

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

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

California Public Utilities Commission

Energy Division

EDTariffUnit

505 Van Ness Ave., 4th Flr.

San Francisco, CA 94102

E-mail: EDTariffUnit@cpuc.ca.gov

Pacific Gas and Electric Company

Attn: Meredith Allen

Senior Director, Regulatory Relations

77 Beale Street, Mail Code B10C

P.O. Box 770000

San Francisco, CA 94177

E-mail: PGETariffs@pge.com

Attachment A

Self-Generation Incentive Program Residential AES Eligibility Affidavit

The Self-Generation Incentive Program (SGIP) offers incentives for qualifying Advanced Energy Storage (AES) Projects that meet Program goals. This Affidavit is designed to ensure that SGIP-incentivized projects will “increase deployment of distributed generation and energy storage systems to facilitate the integration of those resources into the electrical grid, improve efficiency and reliability of the distribution and transmission system, and reduce emissions of greenhouse gases, peak demand, and ratepayer costs.”¹

Per Section 4.2.5 of the 2014 SGIP Handbook, “Back-up² systems intended solely for emergency purposes” are not eligible for SGIP incentives. The eligibility requirements in this Affidavit have been developed to ensure that all residential AES systems participating in the SGIP will be used for more than just back-up emergency purposes.

This Affidavit must be signed by both the Residential AES system Host Customer and Residential AES System Owner in order to receive an SGIP incentive. All Host Customers and System Owners must comply with the requirements in the first list. Then, applicants must select either Compliance Option A or Compliance Option B, below. Should a Host Customer or System Owner fail to operate 95% of all incentivized systems³ (or a single system if only one Project has been incentivized) according to the requirements outlined below, or fail to provide the required data to the Program Administrators, this may be considered an infraction, and both parties may be subject to the conditions described in Section 7 of the SGIP Handbook.

Requirements of Host Customers and System Owners:

- The AES system owner has the tools to control the usage of the AES system when operating in parallel with the grid..
- Provide performance data to the Program upon request (emailed, zipped file of 15 minute interval data) for a period of five (5) years.
- Pass the Residential AES Field Verification Inspection.

¹ Senate Bill 861, Chapter 35 SEC 156 (a) (1) pp. 151, and Public Utilities Code (PUC) 379.6

² **Backup Generators:** Operate as short-term temporary replacement for electrical power during periods of Electric Utility power outages. In addition to emergency operation they ordinarily only operate for testing and maintenance. Backup generators do not produce power to be sold or otherwise supplied to the grid or provide power to loads that are simultaneously serviced by the Electric Utility grid. Backup generators only service customer loads that are isolated from the grid either by design or by manual or automatic transfer switch.

³ 95% of systems within any Program Administrator’s territory and calculated on an ongoing basis

Compliance Option A – Host Customer on TOU tariff or Demand Reduction Program

- The Host Customer is on TOU tariff or Demand Reduction Program prior to receiving the SGIP incentive and for five (5) years thereafter.

Note: In the event that the Host Customer changes to a non-TOU tariff or is no longer enrolled in a demand reduction program, the AES System Owner is required to notify the Program Administrator within 30 days of change, and will be subject to Compliance Option B for the required five year period.

Compliance Option B – Host Customer without TOU Tariff or Demand Reduction Program

- Host Customer and/or System Owner agrees, for a minimum period of five (5) years, to discharge the AES system in an amount equivalent to 52 complete cycles per year of the incentivized energy capacity, which is defined as two hours of discharge at the SGIP incentivized power capacity rating, with discharges occurring during peak hours, demand reduction hours, or in a manner that provides benefits as defined by the Host Customer's Utility.

Data Provision Requirements for AES Projects

System owners and host customers agree to participate in Measurement and Evaluation (M&E) activities as required by the CPUC for five (5) years. These activities will be performed by the Program Administrator (PA) or the PAs' independent third-party consultant and include, but are not limited to the development of an M&E monitoring plan, installation of metering equipment or review/inspection of metering equipment installed by the project developer or host Site, collection and transfer of data from installed system monitoring equipment, whether installed by Host Customer, System Owner, a third party, or the PA.

Data requirements for AES project eligibility consist of the following:

- Data shall be provided to SGIP PAs within fifteen (15) days of the request of the PA
- Data reports shall include:
 - Identification of date and time period associated with each charge and discharge event during the requested reporting period.
 - Measured power and energy, metered on the AC side of the installed system, for each charge and discharge event.

Host Customer Address_____

System Owner_____

Signature _____

Date _____

Host Customer (if not System Owner)_____

Signature _____

Date _____

Attachment B

Residential AES Field Verification Protocols

During the field verification site visit the inspector will confirm the following:

1. Equipment & Configuration.
 - Installed AES system matches system specifications in SGIP application.
 - AES system is configured for Parallel Operation as defined in the SGIP Handbook.
 - If SGIP/CSI eligible generator is located on Project Site:
 - Verify rated system size of SGIP eligible generator.
 - Verify CEC-AC rated system size of CSI eligible generator.
2. Operation & Performance
 1. Verify AES system operating modes (standby, charging, discharging)
3. AES System Discharge Testing

This requirement can be met by completing the first item below or by completing both items II and III.

- I. Two hour continuous discharge test at the incentivized rated capacity. AES system output can be measured to native load, grid, artificial load, or a combination thereof (depending on what is practical at the installation).
 - a. Native load
 - i. Load must be available for two hour duration discharge
 - b. Grid
 - i. Export to grid must be possible based upon Interconnection Agreement
 - c. Artificial load
 - i. Power electronics may need to be self - commutated (most inverters are self - commutated)
- II. A test report provided by the manufacturer and/or system integrator that demonstrates that the AES system can discharge at its incentivized rated capacity for a minimum of two hours. The test report must include:
 - a. Description of testing approach methodology
 - b. Load type
 - c. Ambient temperature
 - d. Discharge current
 - e. Discharge voltage
 - f. Inverter efficiency
 - g. Rated power discharge for complete two hour period

- III. Discharge the AES system at or above its incentivized rated capacity, and record the output to native load, grid or artificial load (depending on what is practical at the installation) for a period of 30 minutes using a logger that measures voltage and current (such as Dent or Powersight). The time of the test, the type of load served by the AES, the state of charge at the start of the test and the ambient temperature must also be reported.

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

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

