

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



January 2, 2019

**Advice Letter 5037-E
5037-E-A**

Erik Jacobson
Director, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177

SUBJECT: Pacific Gas and Electric Company's Proposed Dead Band Tolerance Range for Determining When a Change Would Trigger TOU Period Revisions More Frequently Than Five Year Intervals, in Compliance with Decision 17-01-006

Dear Mr. Jacobson:

Advice Letter 5037-E and supplemental 5037-E-A are effective as of January 2, 2019 per Resolution E-4948 Ordering Paragraphs.

Sincerely,

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

Edward Randolph
Director, Energy Division

March 30, 2017

Advice 5037-E

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Pacific Gas and Electric Company's Proposed Dead Band Tolerance Range for determining when a change would trigger TOU period Revisions More Frequently than Five Year Intervals, in Compliance with Decision 17-01-006

Purpose

This Tier 3 Advice Letter (AL) requests approval of Pacific Gas and Electric Company's (PG&E's) proposed dead band tolerance range for determining when a change in the time pattern of electricity costs would trigger time-of-use (TOU) period revisions more frequently than every two General Rate Case (GRC) cycles, coupled with a mechanism for implementation, in compliance with Decision (D.) 17-01-006 (Decision), *Decision on Adopting Policy Guidelines to Assess Time Periods for Future Time-of-Use Rates and Energy Resource Contract Payments*.¹

Background

On January 23, 2017, the California Public Utilities Commission (Commission or CPUC) issued D.17-01-006 requiring PG&E, Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (collectively the IOUs) to each submit Tier 3 advice letters setting forth their proposals for determining when a change in the time pattern of electricity costs would be sufficiently large to trigger a proposal to revise TOU periods more frequently than every two GRC cycles, along with a mechanism for implementation.² The general principles adopted in the Decision, with respect to development and implementation of changes in Base TOU periods, include general principle number 6, which states that:

[T]o evaluate whether a dead band tolerance range has been exceeded and to

¹ Also, on 2/16/2017 the CPUC issued Decision 17-02-017, titled "Order Correcting Errors in Decision 17-01-006".

² D.17-01-006, mimeo, p.78.

ensure that the Commission and the public are aware of the likelihood of future Base TOU period changes, Base TOU period analysis should be provided in each general rate case, even if the IOU does not propose a change in Base TOU periods. If such analysis shows that the dead band tolerance range has been exceeded, the IOU should propose revisions to Base TOU periods.³

This Tier 3 Advice Letter provides PG&E's dead band tolerance proposal, and a proposed mechanism for implementation.

Dead Band Tolerance Proposal

PG&E proposes a two-part test for a dead band tolerance range (or equivalently, threshold to exceed) as the trigger for whether revised TOU periods could be considered sooner than 5 years after the most recent change in TOU period. Specifically, PG&E proposes that TOU period definitions should remain constant for at least 5 years unless both of the following conditions 1 and 2 are met:

1. Changed cost data justify changing either (a) the start or ending time of the TOU period by at least one hour (in either direction), for the summer peak, winter peak, or spring super-off-peak (SOP), or (b) the months for which particular TOU period definitions apply;⁴ and
2. Using a forecast of marginal generation costs (MGC), with the forecast year set at least three years after the year the Base TOU period will go into effect, the "goodness of separation" (GOS) metrics pertaining to the summer peak period, the winter peak period or the super-off-peak (SOP) period increase under the new TOU period definition by at least three percentage points (3%) relative to the corresponding GOS metrics using the old TOU period definition.

Specifically, for the summer and winter peak period, the GOS metric is calculated as follows:

$$(1) \quad \text{Peak Period GOS Metric} = A * (1 - B).⁵$$

In equation (1), A represents the percent of high-cost hours correctly captured by the peak period definition, and B represents the percentage of low-cost hours incorrectly captured by the peak period definition (i.e., the "false positive" rate for

³ D.17-01-006, mimeo, p. 6.

⁴ For example, if changing cost patterns justify modifying the months which are defined to be in the summer season or, as an alternative example, modifying the months which are considered to be spring season (in which low super-off-peak rates apply).

⁵ See Workpaper "2017 GRC Ph 2 Exh 2 Vol 1 Tables 12-2 to 12-4 12-6 to 12-8.xlsx", tabs "TESTIMONY TABLES-Summer" and "TESTIMONY TABLES-Winter" in PG&E's 2017 GRC Phase II Application.

the peak period). Mathematically, A and B are defined in equations (2) and (3) below:⁶

$$(2) \quad A = TP / (TP + FN), \text{ where}$$

TP = the number of high cost hours (95th percentile and above) falling within candidate period; and

FN = the number of high-cost hours falling in other periods.

$$(3) \quad B = FP / (FP + TN), \text{ where}$$

FP = the number of low-cost hours within the candidate period; and

TN = the number of low-cost hours falling in other periods.

For the spring SOP period, the GOS metric is calculated as:

$$(4) \quad \text{SOP Period GOS Metric} = A' * (1 - B').$$

In equation (4), A' represents the percent of very low cost hours captured by the SOP period definition, and B' represents the percentage of non-very low cost hours incorrectly captured by the SOP period definition (i.e., the "false positive" rate for the SOP period). Mathematically, A' and B' are defined in equations (5) and (6) below:

$$(5) \quad A' = TP' / (TP' + FN'), \text{ where}$$

TP' = the number of very low cost hours (i.e., hours with negative or zero MGCs) falling within the SOP period; and

FN' = the number of very low cost hours falling in other periods.

$$(6) \quad B' = FP' / (FP' + TN'), \text{ where}$$

FP' = the number of non-very-low-cost hours (i.e., hours with positive MGCs) within the SOP period; and

TN' = the number of non-very-low-cost hours falling in other periods.

⁶ See Exh. PG&E-2, p. 12-13 in PG&E's 2017 GRC Phase II Application

For example, suppose that, in PG&E's 2017 General Rate Case (GRC) Phase II proceeding, the Commission finds that the summer TOU peak period definition for PG&E's non-residential customers should be the hours from 4 p.m. through 10 p.m., based on a forecast three years after the new TOU periods would go into effect (i.e., 2022). Further suppose that, in preparing its 2020 GRC Phase II testimony, PG&E determines that the then-existing forecast data support a somewhat later Base summer TOU peak period, from 5 p.m. through 10 p.m., based on a forecast three years after any such new TOU periods could go into effect (presumably 2023 or 2024).

PG&E would then check whether the potential new Base summer TOU peak period meets both conditions, as follows.

For condition 1, the start time of the proposed peak period differs by (at least) 1 hour from the old peak, so condition 1 is satisfied.

For condition 2, we compute the GOS metric for the old 4-10 p.m. peak period (using the updated marginal cost forecast) and compare it to the GOS of the potential new 5-10 p.m. peak period to see whether the GOS increases by at least 3%.

As a hypothetical example, suppose the GOS metrics for the old and potential new peak periods using the updated marginal cost forecast turned out to be as follows:⁷

For Scenario S-17 (4-10 p.m.)

$$A = TP/(TP + FN) = 95\%$$

$$B = FP/(FP + TN) = 20\%$$

$$GOS = A*(1 - B) = 76\%$$

For Scenario S-26 (5-10 p.m.)

$$A = TP/(TP + FN) = 94\%$$

$$B = FP/(FP + TN) = 15\%$$

$$GOS = A*(1 - B) = 79.9\%$$

Because the GOS of the potential new 5-10 p.m. peak period is *at least 3% higher* than the GOS of the old 4-10 p.m. period, condition 2 is satisfied. In this example, *both criteria are met* so PG&E should propose the new Base summer TOU period in its 2020 GRC Phase II.

As a second example, suppose instead that for the old 4-10 p.m. period the GOS was the same as in the first example, but for the proposed 5-10 p.m. period the GOS turned out to be as follows:

⁷ These metrics are similar to the data displayed in Table 12-4 in Exh. PG&E-9 in PG&E's 2017 GRC Phase II Application, but are numerically different to show an illustrative example that might apply three years hence.

For Scenario S-26 (5-10 p.m.)

$$A = TP/(TP + FN) = 94\%$$

$$B = FP/(FP + TN) = 18\%$$

$$GOS = A*(1 - B) = 77\%$$

In this second hypothetical example, the GOS of the proposed peak period is *less than* 3% higher than the GOS of the old period, *so condition 2 is not satisfied* and PG&E may not propose the new Base summer TOU period in its 2020 GRC Phase II.

A similar calculation would be made for the Winter Peak and the Super Off Peak separately; if the Summer Peak change satisfies both conditions but the Winter Peak and Super Off Peak do not, PG&E would only consider changes to the Summer Peak period definition.

PG&E believes its proposed dead band tolerance methodology is reasonable because of its requirement that the new TOU period must show at least a 3% improvement in Goodness of Separation, and must cause at least a full hour shift from the previously-adopted TOU Periods. PG&E's approach is relatively conservative, to address the CPUC's underlying concern, expressed in D.17-01-006, that "a degree of stability is needed after new TOU periods are adopted, with the significant marketing efforts needed to make customers aware of changes in TOU periods,"⁸ preferring the assumed time-frame to maintain newly adopted TOU periods be at least five years (i.e., two GRC cycles). However, the Decision also recognized that forecast assumptions underlying TOU time periods may deviate over time as more up-to-date data becomes available." To build in flexibility should the new data "deviate significantly," the Decision allowed for the possibility that an "adjustment in TOU time periods more frequently than once every five years may be warranted."⁹ Thus the CPUC stated that, in every GRC Phase II proceeding, it would review forecast data for Base TOU period development, using the dead band tolerance methodology to be adopted through this Advice Letter process.

PG&E believes its proposed dead band methodology's requirement of at least a 3% deviation, will reliably identify whether cost-data deviations are "significant" enough to warrant consideration of an interim revision in TOU time periods. Also, by requiring the deviation to cause at least a one-hour shift in the base TOU periods, PG&E's proposed dead band methodology would not cause proposed changes of less than an hour, which would be more difficult to communicate to customers. As the Decision noted, the several-hour shift shown in the CAISO's as well as PG&E's data – warranting moving the legacy Noon – 6pm peak period to the evening hours - reflects the steep increase in "deployment of grid-connected and behind-the-meter solar...[increasing] the availability of energy during the afternoon and decreased load on the grid." Because these solar installations are long-lived, and because the hours during which the sun shines still end in the evening, the multi-hour shift in updated TOU peak periods being considered and

⁸ D.17-01-006, mimeo, p. 46.

⁹ D.17-01-006, mimeo, p. 47.

adopted by the CPUC in proceedings like PG&E's 2015 RDW (D.15-11-013) and in PG&E's GRC Phase II (A.16-06-013) are unlikely to repeat.

Finally, even if the dead band were exceeded in a future GRC after the updated TOU peak periods are adopted, the Decision only *allows* parties to propose modifications to the TOU periods to align with costs, it does not require the IOUs to propose a change or for the CPUC to adopt it in that interim GRC. Therefore, if after considering a potential shift of one hour or more in an interim GRC Phase II the IOU or the CPUC still has concerns about stability, neither the Decision nor this dead band methodology requires the IOU to propose or the CPUC to actually adopt such a change sooner than "at least 5 years" after the last change.

For all of these reasons, the CPUC should approve PG&E's proposed dead band methodology.

Timing and Implementation

As discussed above, the Decision directs the IOUs to propose changes to the guidelines to clarify the mechanics and timing of the dead band tolerance trigger and that Base TOU period analysis should be provided in each general rate case (even if the IOU does not propose a change in Base TOU periods). Also, Appendix 3 of D.17-01-006 outlines an anticipated Schedule for TOU Period Implementation Based on Current Rate Case Plan.¹⁰

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 19, 2017, 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.

¹⁰ D.17-01-006, mimeo, Appendix 3, pp.1-2.

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 B10C
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-1448
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 3 advice filing become effective upon Commission approval.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and the parties on the service list for R.15-12-012. 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

cc: Service List R.15-12-012

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

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

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

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Yvonne Yang

Phone #: (415) 973-2094

E-mail: Yvonne.Yang@pge.com and PGETariffs@pge.com

EXPLANATION OF UTILITY TYPE

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

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: **5037-E**

Tier: 3

Subject of AL: **Pacific Gas and Electric Company's Proposed Dead Band Tolerance Range for determining when a change would trigger TOU period Revisions More Frequently than Five Year Intervals, in Compliance with Decision 17-01-006**

Keywords (choose from CPUC listing): Compliance

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

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: D.17-01-006

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: **Upon Commission Approval**

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: Erik Jacobson

Director, Regulatory Relations

c/o Megan Lawson

77 Beale Street, Mail Code B10C

P.O. Box 770000

San Francisco, CA 94177

E-mail: PGETariffs@pge.com

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

AT&T	Division of Ratepayer Advocates	Office of Ratepayer Advocates, Electricity Planning and Policy B
Albion Power Company	Don Pickett & Associates, Inc.	OnGrid Solar
Alcantar & Kahl LLP	Douglass & Liddell	Pacific Gas and Electric Company
Anderson & Poole	Downey & Brand	Praxair
Atlas ReFuel	Ellison Schneider & Harris LLP	Regulatory & Cogeneration Service, Inc.
BART	Evaluation + Strategy for Social Innovation	SCD Energy Solutions
Barkovich & Yap, Inc.	G. A. Krause & Assoc.	SCE
Bartle Wells Associates	GenOn Energy Inc.	SDG&E and SoCalGas
Braun Blaising McLaughlin & Smith, P.C.	GenOn Energy, Inc.	SPURR
Braun Blaising McLaughlin, P.C.	Goodin, MacBride, Squeri, Schlotz & Ritchie	San Francisco Water Power and Sewer
CENERGY POWER	Green Charge Networks	Seattle City Light
CPUC	Green Power Institute	Sempra Energy (Socal Gas)
CalCom Solar	Hanna & Morton	Sempra Utilities
California Cotton Ginners & Growers Assn	ICF	SoCalGas
California Energy Commission	International Power Technology	Southern California Edison Company
California Public Utilities Commission	Intestate Gas Services, Inc.	Southern California Gas Company (SoCalGas)
California State Association of Counties	Kelly Group	Spark Energy
Calpine	Ken Bohn Consulting	Sun Light & Power
Casner, Steve	Leviton Manufacturing Co., Inc.	Sunshine Design
Center for Biological Diversity	Linde	Tecogen, Inc.
City of Palo Alto	Los Angeles County Integrated Waste Management Task Force	TerraVerde Renewable Partners
City of San Jose	Los Angeles Dept of Water & Power	TerraVerde Renewable Partners, LLC
Clean Power	MRW & Associates	Tiger Natural Gas, Inc.
Clean Power Research	Manatt Phelps Phillips	TransCanada
Coast Economic Consulting	Marin Energy Authority	Troutman Sanders LLP
Commercial Energy	McKenna Long & Aldridge LLP	Utility Cost Management
Cool Earth Solar, Inc.	McKenzie & Associates	Utility Power Solutions
County of Tehama - Department of Public Works	Modesto Irrigation District	Utility Specialists
Crossborder Energy	Morgan Stanley	Verizon
Crown Road Energy, LLC	NLine Energy, Inc.	Water and Energy Consulting
Davis Wright Tremaine LLP	NRG Solar	Wellhead Electric Company
Day Carter Murphy	Nexant, Inc.	Western Manufactured Housing Communities Association (WMA)
Defense Energy Support Center	ORA	YEP Energy
Dept of General Services	Office of Ratepayer Advocates	Yelp Energy