

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE



June 5, 2019

Advice Letter 5473-E

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: Update to Pacific Gas and Electric Company's Bundled Procurement Plan - Greenhouse Gas Procurement Plan (Appendix G); Congestion Revenue Rights (Appendix I); Procurement Review Group, Cost Allocation Mechanism Group, & Independent Evaluator Administration (Appendix M); & Sales Framework (New Appendix S)

Dear Mr. Jacobson:

Advice Letter 5473-E is effective as of May 30, 2019 per Resolution E-4998 Ordering Paragraphs.

Sincerely,

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

Edward Randolph
Deputy Executive Director for Energy and Climate Policy/
Director, Energy Division

January 25, 2019

Advice 5473-E

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Update to Pacific Gas and Electric Company's Bundled Procurement Plan – Greenhouse Gas Procurement Plan (Appendix G); Congestion Revenue Rights (Appendix I); Procurement Review Group, Cost Allocation Mechanism Group, and Independent Evaluator Administration (Appendix M); and Sales Framework (New Appendix S)

Purpose

Pacific Gas and Electric Company (PG&E) requests California Public Utilities Commission (CPUC or Commission) approval to update its Bundled Procurement Plan (BPP) adopted in Commission Decision (D.) 15-10-031.¹ This BPP update includes revisions to Appendix G ("Greenhouse Gas (GHG) Procurement Plan"), Appendix I ("Congestion Revenue Rights" (CRR)), Appendix M ("Procurement Review Group, Cost Allocation Mechanism Group, and Independent Evaluator Administration") and adds a new Appendix S addressing sales of portfolio products ("Sales Framework").

Background

Decision 15-10-031, adopted the investor-owned utilities' proposed BPPs with modifications and required PG&E to submit a conformed copy of its BPP, which was submitted on December 10, 2015. Since then, PG&E has updated the BPP as needed when market conditions or electric portfolio changes necessitate modifying the BPP. Currently, the pending outcomes in the Power Charge Indifference Adjustment (PCIA) Order Instituting Rulemaking (OIR) and Resource Adequacy (RA) OIR have the potential to significantly change PG&E's portfolio positions.

¹ In D. 15-10-031, the Commission adopted PG&E's proposed 2014 BPP with modifications and required PG&E to conform the BPP to incorporate modifications made in the Decision no later than 90 days after the Decision. PG&E filed its conformed BPP on December 10, 2015, via Advice 4750-E, which was approved by the Commission on June 15, 2016.

Power Charge Indifference Adjustment OIR

In D.18-10-019, the Commission directed that a second phase of the PCIA OIR be opened to establish a working group process to enable parties to develop a number of proposals for future consideration by the Commission (“PCIA Phase 2”).² The purpose of PCIA Phase 2 is to “develop structures, processes, and rules governing portfolio optimization going forward.”³ Working groups will address a number of issues relevant to PG&E’s management of its portfolio, including “Portfolio Optimization and Cost Reduction” and “Allocation and Auction.”⁴ The Decision also articulates a goal of completing the working groups’ tasks by October 2019.⁵

Resource Adequacy OIR

In R.17-09-020, the Commission is considering a proposal to establish central procurement entities for local RA. If adopted, the proposed decision issued November 21, 2018, will require a central buyer to procure local RA on behalf of all load serving entities (LSEs) in their service areas for three-year forward periods, commencing in the 2020 RA year. Under the currently proposed central buyer framework, LSEs will no longer need to procure local RA, but instead a central buyer will procure local resources and allocate to LSEs, on a load-weighted share basis, the associated flexible and system resource adequacy credit from the local resources. PG&E, as a Utility, would bid all its local resources into the central buyer solicitation process and procurement by that buyer could have significant impacts on PG&E’s position.

Discussion

PG&E seeks revisions to its BPP addressing certain procurement activities until the PCIA Phase 2 and RA OIR proceedings can provide necessary longer term guidance for transactions. Specifically, PG&E proposes revisions to its GHG Procurement Plan and CRR appendices, and proposes a new appendix titled “Sales Framework” for sales of energy, and RA. Additionally, PG&E proposes revisions to Appendix M to conform Procurement Review Group and Independent Evaluator requirements to requests submitted in the new Sales Framework appendix.

PG&E’s proposed BPP revisions will provide clarity for PG&E and the market about PG&E’s activities and ensure actions taken now do not adversely impact future actions or regulatory requirements under consideration in the PCIA and RA OIRs. These OIRs may significantly alter PG&E’s energy, capacity, and Renewable Portfolio Standard RPS positions beyond 2020. PG&E’s BPP revisions will provide PG&E with the ability to consider, implement, and comply with prospective regulatory requirements developed in PCIA Phase 2 and the RA OIR.

² D.18-10-019, p. 164 (Ordering Paragraph 14).

³ *Id.*, p. 111.

⁴ *Id.*, p. 116.

⁵ *Id.*, p. 117.

PG&E's Sales Framework appendix describes the standards for PG&E to sell products while these future regulatory requirements are considered. This new appendix appears in Attachment E to this advice letter, and as Confidential Attachment A.

For RA, PG&E will (1) limit sales of certain RA products to delivery terms not to exceed two years forward unless offered to a central buyer; (2) require RA product sales to principally originate through PG&E-held solicitations; and (3) utilize standard contracting terms. PG&E's BPP update provides that, except CAISO transactions or solicitations held by a central buyer, PG&E will only transact for sales of RA using PG&E competitive solicitations and electronic solicitations. Centralizing sales through PG&E competitive solicitations and electronic solicitations also ensures PG&E is able to evaluate all bids for the product in a consolidated framework. Seeking standard RA contracting terms will increase administrative efficiency. As part of standardized terms, PG&E will (1) require non-CAISO counterparties to transact with PG&E pursuant to an Edison Energy Institute (EEI) enabling agreement; and (2) not post collateral to support PG&E's sales of RA. Updates proposed in Appendix M will also add the requirement that PG&E employ an independent evaluator to affirm each solicitation is fair and all market participants are treated equitably. Together, these revisions will result in increased transparency and standardized transactions.⁶

Attachments

Confidential Attachment A	Sales Framework (New Appendix S)
Confidential Attachment B	Redline Edits, BPP Sheets 127-137 (Appendix G), BPP Sheets 152-155 (Appendix I), and BPP Sheets 194-201 (Appendix M)
Confidential Attachment C	Clean BPP Sheets 127-137 (Appendix G), BPP Sheets 152-155 (Appendix I), BPP Sheets 194-201 (Appendix M)
Attachment D	Redline Edits, BPP Sheets 127-137 (Appendix G), BPP Sheets 152-155 (Appendix I), and BPP Sheets 194-201 (Appendix M) (Public Version)
Attachment E	Clean BPP Sheets 127-137 (Appendix G), BPP Sheets 152-155 (Appendix I), BPP Sheets 194-201 (Appendix M), and Sales Framework (New Appendix S) (Public Version)

⁶ Pursuant to D.17-12-007, PG&E currently transacts for the bilateral RPS sales utilizing a pro forma agreement facilitated by the EEI enabling agreement.

Attachment F

Declaration of Kimberly Chang Seeking Confidential Treatment Pursuant to D.06-06-066, D.14-10-033, and Public Utilities Code §454.5(g)

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 14, 2019, which is 20 days after the date of this filing. Protests must be submitted to:

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

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

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

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

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

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

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

Effective Date

PG&E requests that this Tier 3 advice filing become effective upon Commission approval, but no later than May 1, 2019.

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.16-02-007. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs/>.

/S/

Erik Jacobson
Director, Regulatory Relations

Attachments

cc: Service List R.16-02-007



ADVICE LETTER SUMMARY

ENERGY UTILITY



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

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

Utility type:

- ELC GAS WATER
 PLC HEAT

Contact Person: Yvonne Yang

Phone #: (415)973-2094

E-mail: PGETariffs@pge.com

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

EXPLANATION OF UTILITY TYPE

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

(Date Submitted / Received Stamp by CPUC)

Advice Letter (AL) #: 5473-E

Tier Designation: 3

Subject of AL: Update to Pacific Gas and Electric Company's Bundled Procurement Plan – Greenhouse Gas Procurement Plan (Appendix G); Congestion Revenue Rights (Appendix I); Procurement Review Group, Cost Allocation Mechanism Group, and Independent Evaluator Administration (Appendix M); and Sales Framework (New Appendix S)

Keywords (choose from CPUC listing): Compliance

AL Type: Monthly Quarterly Annual One-Time Other:

If AL submitted in compliance with a Commission order, indicate relevant Decision/Resolution #: D.15-10-031

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

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

Confidential treatment requested? Yes No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement. Name and contact information to request nondisclosure agreement/ access to confidential information: Chang, Kimberly, KWCC@pge.com,(415)972-5472

Resolution required? Yes No

Requested effective date:

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 proposed¹: N/A

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

¹Discuss in AL if more space is needed.

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

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

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

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

Confidential Attachment A

Sales Framework (New Appendix S)

Confidential Attachment B

**Redline Edits, BPP Sheets 127-137
(Appendix G), BPP Sheets 152-155 (Appendix
I), and BPP Sheets 194-201 (Appendix M)**

Confidential Attachment C

**Clean BPP Sheets 127-137 (Appendix G),
BPP Sheets 152-155 (Appendix I), BPP
Sheets 194-201 (Appendix M)**

Attachment D

**Redline Edits, BPP Sheets 127-137
(Appendix G), BPP Sheets 152-155 (Appendix
I), and BPP Sheets 194-201 (Appendix M)**

(Public Version)



Pacific Gas and Electric Company
San Francisco, California

Cal. P.U.C. Sheet No. 126
Pacific Gas and Electric Company
2014 Bundled Procurement Plan

APPENDIX G
GREENHOUSE GAS PROCUREMENT PLAN

Decision No. 15-10-031

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed December 10, 2015
Effective June 15, 2016
Resolution No. _____



A. Background

1. California Air Resource Board's Cap-and-Trade Regulations

Assembly Bill ("AB") 32 is California's ~~groundbreaking~~ Greenhouse Gas ("GHG") legislation that requires the reduction of statewide GHG emissions to 1990 levels by 2020. To this end, the California Air Resources Board ("CARB") proposed a statewide Cap-and-Trade regulation and other programmatic measures, including a Renewables Energy Standard, Customer Energy Efficiency, and Combined Heat and Power, to achieve these emissions reductions. The Cap-and-Trade regulation, which became effective on January 1, 2012, is intended to establish a market-based price for GHG emissions and, over time, provide market signals for efficient resource utilization and procurement activities to reduce GHG emissions.

Compliance with the emissions cap established in the CARB Cap-and-Trade regulation began in 2013 and is broken up into ~~three~~ compliance periods. The first compliance period—for the years 2013 through 2014—began on January 1, 2013. In 2017, AB398 extended the Cap-and-Trade program to cover emissions through 2030. Covered entities ~~in the first compliance period~~ include operators of any facility that annually emits at least 25,000 metric tons of carbon dioxide equivalent ("mtCO₂e").¹ Operators are required to obtain and surrender compliance instruments equivalent to the annual GHG emissions for each such facility. Importers of electricity into California are also responsible for obtaining and retiring compliance instruments for GHG emissions

¹ Units of GHG are typically measured in terms of mtCO₂e.



deemed to be associated with electricity imports for purposes of compliance with Cap-and-Trade.

~~The second compliance period for the years 2015 through 2017 is scheduled to commence on January 1, 2015. Beginning in the second compliance period, covered entities expand to include, among others, suppliers of natural gas that meet or exceed the 25,000 mtCO_{2e} threshold. A supplier of natural gas is required to obtain and surrender compliance instruments for every metric ton of CO_{2e} that would result from the full combustion or oxidation of all fuel delivered to end users in California, less the emissions associated with fuel that is delivered to its customers that are required to participate in the Cap and Trade Program (“covered entities”).~~

This plan only covers procurement activities necessary to comply with Pacific Gas and Electric Company’s (“PG&E”) direct obligations related to electric procurement. Additional procurement necessary to meet PG&E’s compliance obligations as a natural gas supplier and the associated cost recovery will be as is authorized through California Public Utilities Commission (“CPUC” or “Commission”) Order Instituting Rulemaking (“R.”) 14-03-003 or subsequent Commission proceedings.

There are two types of compliance instruments:

- i. **Allowances** are limited tradable authorizations accepted by CARB to emit up to one mtCO_{2e}. Allowances are year-specific and can be used for an annual compliance filing for the year it was issued or for any subsequent compliance filing. An aAllowance can be bought, sold, transferred, or “banked” for use in a particular compliance period. Allowances are



available via direct allocation² by CARB, auctions conducted under the auspices of CARB, and the Allowance Price Containment Reserve³ (“APCR”) established by CARB. CARB auctions are held quarterly. Allowances are also available in the market.

- ii. **Offset Credits** (“Offsets”) are tradable compliance instruments accepted by CARB that represent verified reductions of one mtCO₂e from projects whose emissions or avoided emissions are not from a source covered under the Cap-and-Trade Program. For compliance purposes, an Offset and an ~~a~~Allowance are virtually interchangeable for the year issued, however, an entity can only use Offsets to meet up to a quantitative usage limit quantity⁴~~8 percent~~ of its compliance obligation in any compliance period. In addition, CARB’s Cap-and-Trade regulation allows CARB to invalidate an Offset for errors, regulatory violations or fraud. CARB has adopted specific rules for using Offsets for Cap-and-Trade compliance, including the types of projects that qualify and the process for Offset verification, issuance, and registration.

Allowances and Offsets may also be available from external GHG Emissions Trading Systems to which California has linked.⁵

PG&E’s actual Cap-and-Trade compliance obligation for a given year is determined by the GHG emissions reported annually to CARB per the Mandatory Reporting Rule.⁶ Annual reports are due to CARB ~~by April 10 of~~in the calendar year following the emission year for facility operators or suppliers, and ~~June 1 for~~ electric

² According to the Cap-and-Trade regulation, the Investor-Owned Utilities (“IOU”) are required to consign 100 percent of their Electric Distribution Utility (“EDU”) directly allocated ~~a~~Allowances to the auctions in the allocation year. An IOU cannot use ~~a~~directly allocated EDU ~~a~~Allowances to satisfy its compliance obligation.

³ The CARB APCR is populated with a finite quantity of ~~a~~Allowances available for purchase at fixed prices and only by covered entities.

⁴ Quantitative usage limit is based on and defined in the Cap-and-Trade regulation § 95854.

⁵ CARB’s Board-approved amendments allowing for the use of compliance instruments issued by linked jurisdictions on May 10, 2013. California is currently linked with Quebec.

⁶ Regulation for the Mandatory Reporting of GHG Emissions (Division 3, Chapter 1, Subchapter 10, Article 2, Sections 95100-95133, title 17, California Code of Regulations).



power entities. Cap-and-Trade compliance showings are made annually and at the end of each compliance period. In order to demonstrate compliance in a given year, PG&E must surrender enough compliance instruments to cover 30 percent of its qualifying emissions by November 1 of the following calendar year (“annual surrender date”). In addition, PG&E must surrender enough compliance instruments to cover the balance of its qualifying emissions over a multi-year compliance period by November 1 of the calendar year following the end of each compliance period (“compliance period surrender date”).

PG&E receives an allocation of ~~free-a~~ allowances associated with its business as an EDU directly from CARB annually; however, these ~~free-a~~ allowances cannot be used directly by PG&E to satisfy its compliance obligation.

All directly-allocated electric ~~a~~ allowances must be consigned by PG&E into one or more of the auctions. In each year, ~~a~~ allowances consigned at least 75 days prior to a quarterly auction will be offered for sale at that auction and each consigning entity agrees to accept the auction settlement price for ~~a~~ allowances sold at auction. ~~Until 2015, only IOUs and Publicly Owned Utilities can consign allowances to the auction, and beginning in 2015, natural gas suppliers can also consign allowances into the auction.~~

2. Greenhouse Gas Compliance Instruments and CARB Auctions

A description of the authorized GHG compliance instruments is provided in Appendix A. A description of the CARB Auction and APCR process is provided in Appendix B of the Bundled Procurement Plan (“BPP”).



B. PG&E’s Allowance Consignment

[Redacted text block]

C. PG&E’s Potential Greenhouse Gas Risks

1. Greenhouse Gas Obligations

PG&E is required by CARB’s Cap-and-Trade regulation to surrender compliance instruments for its qualifying Utility-Owned Generation (“UOG”) and imports ~~(collectively described as “physical” obligations)~~. PG&E also has contractual obligations associated with certain tolling agreements ~~that require it to either: (1) provide the counterparty with compliance instruments for the energy under contract; or (2) reimburse the counterparty for the Cap and Trade compliance costs associated with its facility’s operation under the contract.~~ (all obligations described in this paragraph are collectively described referred as “direct” obligations).

a. Tolling & other Power Purchase Agreements (PPAs)

PG&E has contractual obligations associated with certain power purchase agreements that require it to either: (1) provide the counterparty with compliance instruments corresponding to the facility’s operation under contract; or (2) reimburse the

⁷ The quantity that PG&E will consign in each quarterly auction will be [Redacted]



counterparty for the Cap-and-Trade compliance costs associated with its facility's operation under the contract ("financially settle").



2. Cap-and-Trade Penalties

PG&E could face CARB penalties for failure to surrender an adequate number of compliance instruments for which it has a compliance obligation. CARB's Cap-and-Trade rule imposes a four-time excess emissions penalty resulting from "untimely surrender" of ~~a~~ Allowances. This penalty would be assessed by requiring that additional compliance instruments be surrendered, rather than by cash payment. In addition, if an entity fails to surrender the required compliance instruments within five days of the first auction or reserve sale conducted by CARB following the applicable surrender date, whichever is the latter, and for which the registration deadline has not passed when the untimely surrender obligation is assessed, CARB's Cap-and-Trade rule would treat each ton of GHG emissions for which a compliance instrument was not surrendered as a separate violation for each day the violation continues.

3. Offset Credits

CARB's Cap-and-Trade regulation allows CARB to invalidate an Offset for errors, regulatory violations, or fraud. In the case where an Offset is used to meet a compliance requirement and is later invalidated, the complying entity must replace the invalidated Offset with a valid compliance instrument within six months of notification by CARB of the Offset's invalidation or be subject to compliance penalties. To mitigate these risks, PG&E will only purchase Offsets:



- if the purchase contract requires the seller to assume the risk of invalidation;

[REDACTED]

- [REDACTED]

[REDACTED]

~~post appropriate collateral. PG&E will assess the risk of invalidation for each Offset transaction.~~

D. PG&E’s GHG-Related Product Procurement

This GHG Procurement Plan addresses the GHG-related procurement authority necessary for PG&E to comply with the obligations associated with emissions from electricity sectors covered by Cap-and-Trade Program, namely facilities with GHG emissions greater than or equal to 25,000 mtCO_{2e} per year and imported electricity. As an entity that is required to comply with Cap-and-Trade, PG&E will need to procure compliance instruments to meet the compliance requirements associated with its own facilities and imports, as well as the GHG contractual obligations associated with Power Purchase Agreements with third parties that require PG&E to procure GHG compliance products or assume GHG compliance costs for such parties. Below, PG&E describes its GHG obligations and GHG procurement strategy. As noted below, Commission-approved GHG-related products (“GHG Products”), procurement processes, and GHG Procurement Limits are provided in Appendices A, B and C, respectively, of this BPP. The products, procurement processes, GHG Procurement Limits, and GHG procurement strategy establish the upfront achievable standards for PG&E’s procurement activities consistent with AB 57.



1. Greenhouse Gas Obligations

PG&E’s primary need to procure GHG compliance instruments and engage in GHG transactions arises in connection with the following:

- Utility-Owned Facilities: ~~Conventional~~ Generation facilities owned by PG&E that are either operating or under construction and that emit at least 25,000 mtCO₂e per year, such as the Humboldt Generating Station, Colusa Generating Station, and Gateway Generating Station, will have a compliance obligation under Cap-and-Trade.
- Certain Tolling Power Purchase Agreements: Contracts that allocate to PG&E or where PG&E ~~has~~ is contractually obligated to ~~assume~~ the GHG compliance instrument procurement responsibility ~~for such counterparties~~.
- Electricity Imports: PG&E is responsible for GHG emissions deemed to be associated with its electricity imports for purposes of compliance with Cap-and-Trade.

2. Greenhouse Gas-Related Products

GHG Products approved by the Commission are listed in Appendix A.

3. Greenhouse Gas-Related Processes

PG&E will procure GHG Products using the procurement methods and processes in accordance with Appendix B.

4. Greenhouse Gas Procurement Strategy

PG&E will procure sufficient GHG Products during each compliance period to meet its GHG obligations. PG&E’s procurement strategy includes the following key elements:

[REDACTED]

[REDACTED]

[REDACTED]



[Redacted text block]

h. GHG Procurement Limits

Each of these elements is described in more detail below.

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[Redacted content]



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8 [Redacted text block]

9 [Redacted text block]



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10. [Redacted text block]



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11. [Redacted text block]

12. [Redacted text block]



[Redacted text block]

[Redacted text block]

13 [Redacted text]

14 [Redacted text]



[Redacted content]



[Redacted content]



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

ih. GHG Procurement Limits

GHG Procurement limits are provided in Appendix C.

5. Procurement Review Group Consultation

PG&E's consultation with the PRG is addressed in Appendix M.

6. Cost Recovery

Cost recovery of GHG Products is discussed in Section IV.C of the BPP

7. Approval for Contract Term Duration

CPUC approval of transactions is discussed in Section V of the BPP

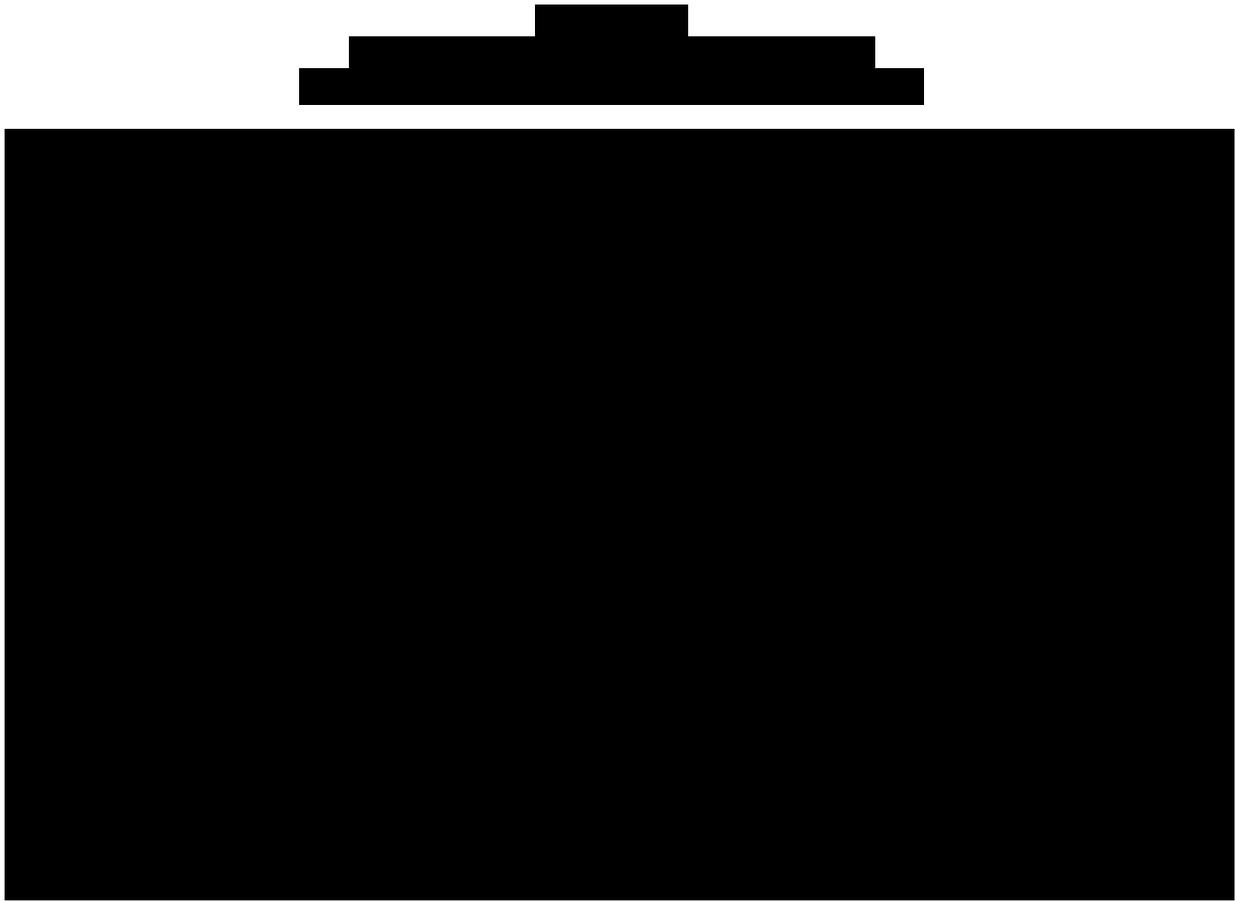
8. Independent Evaluator

Independent Evaluator requirements are discussed in Appendix M.



Pacific Gas and Electric Company
San Francisco, California

Cal. P.U.C. Sheet No. 144A
Pacific Gas and Electric Company
2014 Bundled Procurement Plan



Decision No. 15-10-031

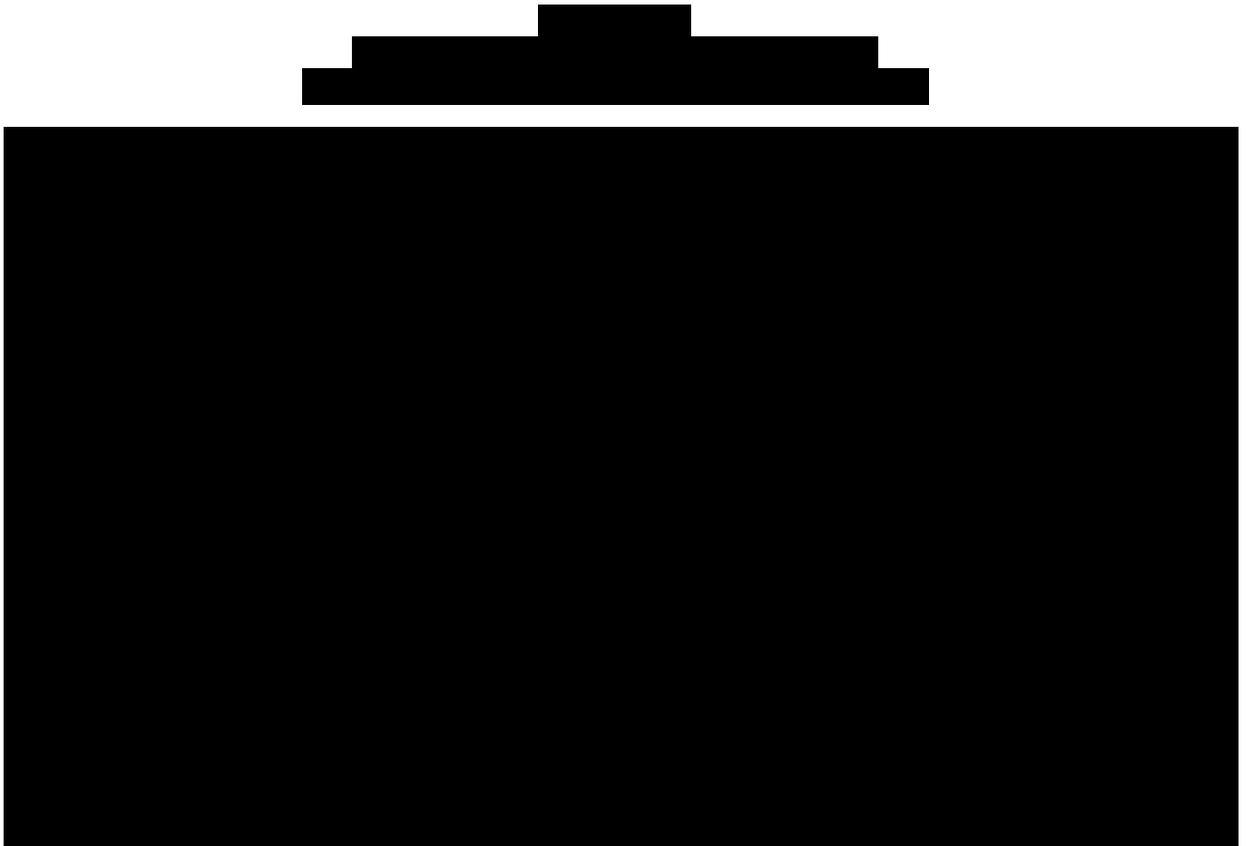
Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed December 10, 2015
Effective June 15, 2016
Resolution No. _____



Pacific Gas and Electric Company
San Francisco, California

Cal. P.U.C. Sheet No. 144B
Pacific Gas and Electric Company
2014 Bundled Procurement Plan



Decision No. 15-10-031

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed December 10, 2015
Effective June 15, 2016
Resolution No. _____



APPENDIX I
CONGESTION REVENUE RIGHTS



A. Introduction

Pacific Gas and Electric Company (“PG&E”) is authorized to procure Congestion Revenue Rights (“CRR”) under two California Public Utilities Commission (“CPUC” or “Commission”) resolutions. CRRs are financial instruments issued by the California Independent System Operator (“CAISO”). Resolution E-4135 authorized PG&E to procure CRRs in the CAISO’s monthly and annual processes. Resolution E-4122 authorized PG&E to procure Long-Term Congestion Revenue Rights (“LT-CRR”) in the CAISO’s long-term process. Both resolutions authorized PG&E to purchase and sell CRRs in the secondary markets.

The monthly and annual CRR processes consist of up to three allocation tiers and an auction. In the allocation tiers, only Load Serving Entities (“LSE”) such as PG&E can nominate CRRs that they wish to obtain at no direct cost. LSEs can procure CRRs up to an amount determined by their historical or forecasted load. In the auctions, which are open to all market participants, PG&E can purchase or sell CRRs at market-based prices determined through the competitive auction. The Annual CRR process releases CRRs with calendar quarter delivery periods that occur over the next year. The monthly CRR process releases CRRs with monthly delivery periods for the next month.

The LT-CRR process consists of one allocation tier each year and is performed as part of the annual CRR process. In this Long Term Tier, quarterly-term CRRs previously acquired from the annual Tier 1 allocation can be nominated for conversion to LT-CRRs with same quarter deliveries for the subsequent nine years.



B. Congestion Revenue Rights and Long-Term Congestion Revenue Rights Procurement Objectives

As the Commission determined in Resolutions E-4135 and E-4122, PG&E uses CRRs and LT-CRRs to hedge against expected congestion costs. PG&E does not use CRRs and LT-CRRs for financial speculation.

C. Congestion Revenue Rights Procurement

1. Congestion Revenue Rights Source-Sink Pairs and Paths

PG&E is authorized to acquire CRRs and LT-CRRs for any path (represented by a source-sink pair) connecting existing generation sources to existing loads (retail loads, Helms pumping load, and wholesale load obligations) or for any path that PG&E reasonably anticipates it might need to flow energy in the future due to the addition of new contracts, resources, or load obligations. Additionally, there may be CRRs or LT-CRRs which are positively correlated in value with CRRs or LT-CRRs for paths that have limited availability. PG&E is authorized to acquire CRRs and LT-CRRs for such positively correlated paths as well. Therefore, PG&E will obtain any CRRs and LT-CRRs that are determined to be valuable as hedges against congestion costs at the time they are offered, subject to selection criteria regarding the specific source/sink combinations as described in Section E of this Appendix.

2. Procurement Review Group Consultation

PG&E consults with its Procurement Review Group (“PRG”) regarding CRRs and LT-CRRs. PRG consultation is described in more detail in Appendix M.



D. Volume Limits

PG&E’s CRR and LT-CRR procurement is subject to source-specific volume limits. That is, PG&E will limit the “net” volume¹ that it could procure at each source node to the maximum non-coincident capacity of the sources (existing, potential, planned, or “positively correlated”) at that node for that delivery period. There are separate source-specific volume limits for the on-peak and off-peak hours in the delivery period.

[Redacted]

[Redacted] Overall or total CRR volume limits are unnecessary because PG&E is already limited by CAISO rules, and to hedging no more than its total expected or anticipated grid use.

[Redacted]

¹ “Net” volume refers to the result of netting CRRs in one direction with CRRs in the counter-flow direction.



[Redacted text block]

2 [Redacted text block]



F. Congestion Revenue Rights Auction Participation

[Redacted text block]

- [Redacted list item]

[Redacted text block]



G. Transactions in Secondary Congestion Revenue Rights Market

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



APPENDIX M
PROCUREMENT REVIEW GROUP,
COST ALLOCATION MECHANISM GROUP,
AND INDEPENDENT EVALUATOR ADMINISTRATION



A. Procurement Review Group and Cost Allocation Mechanism Group

1. Membership

Procurement Review Group (“PRG”) membership includes both organizations and individuals. The California Public Utilities Commission’s (“CPUC” or “Commission”) Energy Division (“ED”) employees are *ex-officio* participants in the PRG. All PRG members must be nominated and then evaluated for participation in the PRG by Pacific Gas and Electric Company (“PG&E”), and then PG&E may recommend the organization(s) and individual(s) to ED for approval.

When procuring or potentially procuring Cost Allocation Mechanism (“CAM”) resources pursuant to Commission Decisions (“D.”) 06-07-029 and 07-09-044, or Combined Heat and Power (“CHP”) resources under D.10-12-035, where the costs are allocated to all “benefitting customers” (*e.g.*, bundled, direct access, and community choice aggregation customers), PG&E will utilize an advisory CAM Group consistent with the proposal adopted in D.07-12-052, Attachment D. Organizations and/or individuals must be nominated and then evaluated for participation in the CAM Group by PG&E, and then PG&E may recommend the organization(s) and individual(s) to ED for approval. PRG members are automatically part of the CAM Group.

Organizations and/or individuals on the PRG and/or CAM Group must be non-market participants and are required to execute a Non-Disclosure Agreement (“NDA”).



2. PG&E's Use of the PRG and CAM Group

PG&E consults with the PRG on a wide range of transactions generally on a monthly basis, and sometimes more often as necessary. Although the PRG only acts in an advisory capacity, PG&E actively solicits feedback from PRG members and may incorporate that feedback into its procurement processes.

Consultation with the CAM Group occurs for transactions in which the costs may be allocated to all benefitting customers, or for CHP resources procured under the settlement approved in D.10-12-035.

3. Scope of PRG and CAM Group Review

The tables below provide a more detailed discussion of specific Commission requirements for consultation with the PRG and/or CAM group. Table M-1 describes the procurement transactions and solicitations that require PRG review. Table M-2 details procurement-related activity and reporting requirements that require consultation with the PRG pursuant to the cited Commission decisions, resolutions, and directives.



**TABLE M-1
PACIFIC GAS AND ELECTRIC COMPANY
TRANSACTIONS AND SOLICITATIONS REQUIRING PRG REVIEW**

Line No.	Topic	Description	CPUC Decision and/or BPP Requirement
1	Transactions greater than three (3) months	<p>Transactions with delivery terms of greater than three calendar (3) months, or one quarter in duration. PG&E will discuss how transactions meet portfolio needs, the solicitation or other procurement processes, evaluation methods, negotiation, and contract/transactions selection process.</p> <p>PRG consultation is not required for transactions greater than three months in duration which: (1) cannot wait for PRG consultation; (2) are in keeping with a strategy or plan already discussed with and reviewed by the PRG; and (3) which involve transparent exchanges, brokers, or electronic solicitations.</p> <p>Delivery term is defined by the duration of the contract, regardless of execution date and when the deliveries begin.</p>	<p>D.04-12-048, Finding of Fact (“FOF”) 73 and Ordering Paragraph (“OP”) 15; D.07-12-052, Appendix E at p. 1.</p> <p>D.07-12-052, p. 171.</p> <p>D.15-10-031, OP 1(h)</p> <p>D.16-01-015</p>
2	LTRFOs	Design, drafting of bid documents, administration, evaluation and offer selection criteria, ranking, shortlist and resulting executed transactions.	D.07-12-052, pp. 149-150 and OPs 15 and 16.
3	CHP Request for Offers (“RFO”)	PG&E consults with the PRG and CAM Group regarding CHP RFOs.	Qualifying Facility and CHP Settlement Term Sheet, Section 4.2.5.8 approved in D.10-12-035.
4	Renewable Portfolio Standard (“RPS”) RFOs	PG&E consults with the PRG regarding RPS RFO issuance, evaluation, selection and short-listing, and decisions regarding offers.	D.06-05-039, FOF 20.
5	RPS transactions arising from RFOs	PG&E reviews RPS-eligible contracts arising from an RFO with the PRG before filing an Advice Letter seeking approval.	D.09-06-050, pp. 23-24.
6	RPS transactions arising from bilateral negotiations	PG&E reviews RPS-eligible contracts arising from bilateral negotiations with the PRG before filing an Advice Letter seeking approval.	D.09-06-050, p. 29 and OP 7.
7	Short-term RPS transactions	Short-term RPS transactions that satisfy certain criteria are reviewed with the PRG or an explanation is provided in the Advice Letter as to why PRG review was not possible.	D.09-06-050, p. 24 and OP 1.
8	Greenhouse Gas (“GHG”) Products	<p>PG&E consults with the PRG regarding (1) GHG RFOs and (2) prior to transacting for any GHG Product in the market with a vintage year more than three years in the future beyond the current calendar year.</p> <p>PG&E will report to the PRG any GHG Product sales.</p>	D.12-04-046 at pp. 53, 55 and OP 8(g), 8(i) and PG&E’s 2010 BPP, Sheet Nos. 51 and 305.



Line No.	Topic	Description	CPUC Decision and/or BPP Requirement
9	Congestion Revenue Rights (“CRR”) (annual and monthly CRRs) and Long-Term CRRs (“LT-CRR”)	<p>PG&E consults with its PRG prior to the start of the annual CRR process regarding its CRR position and the procurement approach and strategy for the upcoming allocation and auction tiers. This consultation does not require PG&E to provide all of the specific proposed nominations (including LT-CRR nominations) for the annual process prior to the allocation tiers and auction.</p> <p>PG&E also consults with the PRG prior to transacting for any CRR having a term greater than one calendar quarter. PG&E is not required to consult with the PRG prior to each monthly CRR allocation/auction process.</p> <p>Within five business days after the final posting of each annual and monthly process, PG&E will provide the PRG a listing of every CRR and LT-CRR awarded in the process, including the source, sink, MW quantity, term, expected value, past performance (if applicable), price (if applicable) and a description of the underlying arrangement that the CRR will hedge (or, in the case of a sale of a CRR, no longer hedge). The same information will be provided to the PRG within five business days of a transaction in the secondary market.</p>	<p>Resolution E-4135, p. 11-13, Finding 14, and OP 4.</p> <p>Resolution E-4122, p. 9-10, Findings 13-14 and OP 4.</p>
10	Third-party Request for Bids	If PG&E elects to participate in RFOs issued by other market participants (including other load serving entities), then existing procurement oversight rules apply (i.e., PRG consultation/communication).	D.12-01-033, OP 17
11	Energy Storage RFO	PG&E is required to present the design of each energy storage RFO plan and the results of each energy storage RFO to its PRG, including the evaluation methodology applied to the bids received in response to the RFO.	D.13-10-040, Appendix A Section 3.g.
12	CAM-Eligible Procurement	PG&E is required to consult with the CAM Group regarding all CAM-eligible procurement.	D.07-12-052, pp. 129-130, OP 8, and Appendix D and Appendix E, p. 1.
13	Retention of Independent Evaluators (“IE”)	PG&E consults with the PRG regarding the retention and review of IEs.	D.04-12-048 at p. 136
<u>14</u>	<u>Solicitations to sell RA products</u>	<u>PG&E consults with the PRG on a quarterly basis in regard to objectives, evaluation methodology, pricing, bids, and execution of transactions. Scope to include recently closed soliciations, current solicitations, and upcoming solicitations.</u>	<u>TBD</u>



**TABLE M-2
PACIFIC GAS AND ELECTRIC COMPANY
PROCUREMENT AND REPORTING ITEMS REQUIRING PRG REVIEW**

Line No	Topic	Description	CPUC Decision and/or BPP Requirement
1	Market Conditions	Electric market conditions and fuel and power price forecasts (quarterly).	D.03-12-062, FOF 24.
2	Procurement Limits	Current position relative to approved procurement limits on a rolling 24-month forward basis, compared to previous quarter.	D.12-01-033, p. 15.
3	Hedging Plan	Prior to filing an advice letter seeking minor modifications to PG&E's Hedging Plan, PG&E will present the proposed modifications to the PRG.	Resolution E-3951, p. 6.
4	Hedging Plan – Liquidity Management Strategy	Updates required by the Hedging Plan, need for a transition plan, suspension or resumption of Hedging Plan, [REDACTED]	D.07-12-052, Resolution E-4362 PG&E's 2010 BPP, Sheet Nos. 50 and 176 PG&E's 2014 BPP Table E-4.
5	Nuclear Fuel Plan	Nuclear Fuel Plan updates and revisions.	D.07-12-052 PG&E's 2010 BPP, Sheet Nos. 135-146
6	Renewable Net Short	Update regarding PG&E's Renewable Net Short position (quarterly basis, in annual RPS procurement plans, and in RPS compliance reports).	<i>Administrative Law Judge Ruling Adopting Renewable Net Short Calculation Methodology</i> , issued in Rulemaking 11-05-005 on August 2, 2012, Appendix A, pp. 3, 5.
7	GHG Compliance Forecast	GHG compliance forecast and procurement limit updates and GHG Product transactions (quarterly).	D.12-04-046, pp. 57, 59.
8	GHG Auction Bidding Strategy	Annual review of PG&E's California Air Resources Board ("CARB") auction bidding strategy.	D.07-12-045, Resolution E-4544 PG&E's 2010 BPP, Sheet No. 305
9	CHP Targets	PG&E advises the PRG if it will be unable to meet CHP Targets.	Qualifying Facility and CHP Settlement Term Sheet, Section 9.2.2 approved in D.10-12-035.
10	Convergence Bidding	PG&E provides quarterly presentations to the PRG regarding its convergence bidding strategies, performance and market analysis. In the event that the 365-day rolling net-loss exceeds or is expected to exceed \$20 million,	D.10-12-034, OP 7-8. D.15-10-031, OP 1(d)



Line No	Topic	Description	CPUC Decision and/or BPP Requirement
		PG&E will cease implementation of all convergence bidding strategies and confer with the PRG within three days.	
11	Customer Risk Tolerance (“CRT”) and TeVaR	PG&E provides a monthly update of its portfolio position and risk, including CRT and TeVaR. If the CRT is expected to be hit or exceeded within the next quarter, PG&E informs and confers with the PRG to discuss the underlying risk drivers and factors affecting the change in portfolio risk, and to determine whether specific hedging strategies and/or plan modifications are needed to reduce portfolio risk to within the CRT threshold.	D.03-12-062, p. 16 and OP 5, D.07-12-052 and D.12-01-033.
12	CRRs and LT-CRRs	PG&E is required to review its CRR position with the PRG periodically, at least once per year. PG&E provides the PRG quarterly updates on how each of its previously obtained LT-CRRs are performing, including but not limited to source, sink, term, relation to grid use, expected value, and past performance.	Resolution E-4135, p. 11-13, Findings 13-14, and OP 4. Resolution E-4122, p. 9-10, Findings 13-14 and OP 4.
13	Low-Carbon Fuel Standard credits	PG&E reports sales of Low-Carbon Fuel Standard credits to the PRG at least quarterly.	D.14-05-21 at p. 17
14	Economic Curtailment	PG&E reports on a regular basis to the PRG regarding the frequency of economic curtailment, temporal (annual and daily) trends, locational trends, costs, etc.	D.14-11-042 at p.43
15	Convergence Bidding Investigations and Suspensions	PG&E is required to notify the PRG within three business days under any one of the following circumstances: (1) Notice from the CAISO or its Department of Market Monitoring that PG&E or its scheduling coordinator is subject of an investigation pursuant to the CAISO Tariff; (2) Notice from the CAISO that the conduct of PG&E or its scheduling coordinator has been referred to the Federal Energy Regulatory Commission by CAISO pursuant to the CAISO Tariff; or (3) Notice from the CAISO that PG&E or its scheduling coordinator is subject of an investigation pursuant to the CAISO Tariff	D.15-10-031, OP 1(d)
16	Non-compliant Transactions	In the event non-compliant transactions are discovered, PG&E shall schedule a PRG meeting as soon as practicable after discovery of any non-compliant transaction(s) to discuss the nature of the non-compliance and how the utility plans to resolve the issue to prevent recurrence.	D.15-10-031, OP 2
17	Implied Market Heat Rate	Provide a report by December 31, 2016 to Energy Division and the PRG showing the effect of the change in implied market heat rate on the first applicable year.	D.15-10-031, OP 1(i)



Line No	Topic	Description	CPUC Decision and/or BPP Requirement
18	Natural Gas GHG Reporting	Natural gas utilities to report to the PRG the re-sale of GHG compliance instruments and to periodically review recent and prospective transactions.	D.14-12-040 at pp. 11, 13

4. Meeting and Notification Requirements

Agendas: PG&E will provide PRG members with final meeting agendas and materials at a minimum of 48 business hours in advance of the PRG meeting, unless there are unusual, extenuating circumstances where PG&E communicates to PRG members in an e-mail announcing a meeting or distributing meeting materials on a tighter timeframe.¹

Summaries: PG&E will provide confidential meeting summaries to PRG members that include a list of attending PRG members (including the organizations represented), a summary of topics presented and discussed, and a list of information requested or offered to be supplied after the meeting, and the identity of the requesting party.² PG&E will distribute meeting summaries on the earlier of: (a) 14 days after the PRG meeting; or (b) 48 business hours before the next regularly scheduled PRG meeting. If, due to unusual circumstances the aforementioned timeframe is deemed unreasonable, then PG&E may distribute the summary 21 days after the PRG meeting, but may do so only if PG&E notifies the PRG members (via email) informing them of the delay in distribution.

Web-Based Calendar: PG&E maintains a web-based PRG calendar. PG&E will provide the following information to the public through a web-based forum: date, meeting time, and duration of the meeting; the individuals participating in the meeting

¹ D.07-12-052, Appendix E, p. 1.

² *Id.*



and the organization represented by the individual; and a list of non-confidential items discussed or a summary of general topics discussed.³

Notifications to the PRG: In addition to the agenda, presentations, and meeting summaries, PG&E may provide notification to the PRG in-between scheduled meetings.

B. Independent Evaluators

1. Independent Evaluator Pool

PG&E, in consultation with its PRG, shall develop a pool of at least three, but preferably more IEs. PG&E will develop and periodically add to its IE pool as follows:

- 1) PG&E shall develop a list of prospective IEs via industry contacts, literature searches, PRG recommendations, and similar methods. PG&E will solicit information from the prospective IEs and circulate the list of candidates and their “resumes” to the PRG and ED for feedback. All individuals who perform the specific IE responsibilities and duties are covered under the IE organization or company.
- 2) PG&E shall rely on the guidance regarding IE expertise and qualifications provided in D.04-12-048, D.07-12-052 and D.12-01-033. However, these qualifications should represent the minimum threshold necessary for an IE to be effective, and PG&E and the PRG will evaluate all relevant, energy procurement-related knowledge, skill, and experience as part of the IE selection process.
- 3) PG&E and its PRG shall identify and interview a subset of prospective candidates that PG&E, the PRG and ED staff deem most suitable for the role.
- 4) PG&E shall coordinate materials and submit its recommendations to the PRG regarding each prospective candidate (including the general consensus and any opposition to the consensus). PG&E shall submit a written list of qualified IEs to ED to add to the contracting pool. The list will contain the recommendations of the PRG that were submitted to the PRG. ED will evaluate the proposed IE’s competencies based on the guidelines in

³ *Id.*



D.04-12-048 as well as evaluating the IE’s independence, including any conflicts of interest. ED shall give final approval for inclusion of an IE in the IE pool by letter to PG&E. ED will also have the right to final approval of the use of a particular IE for each RFO.

- 5) Beyond the development of the initial IE pool, additional IEs may be added to the pool by following the same procedures listed above.
- 6) An IE may remain in the IE pool for three (3) consecutive years, within which they must go through a re-evaluation process based upon the inclusion criteria to assure continued compliance. The re-evaluation process will involve additional reviews of the IE candidate by PG&E, the PRG, and ED staff, including additional interviews, or the use of other evaluation tools, if necessary. The re-evaluation of an IE is based on both the organization and the individuals who have participated as an IE within that organization. The conclusions may include the inclusion of an organization and specific IEs in that organization. The resulting conclusions may also identify the specific IEs that will not continue in the pool for the next successive three years.
- 7) PG&E has developed a pro forma master contract to be used each time it contracts with an IE. If deviations from the pro forma contract are necessary, then the modifications must be approved by the ED.⁴

PG&E will provide to the PRG the name of the IE to be used in a specific procurement solicitation, along with the estimated and actual IE costs before and after the solicitation takes place.⁵

2. Independent Evaluator Requirements

Line No.	Topic	Description	CPUC Decision and/or BPP Requirement
1	RFOs	An IE will be retained for all competitive solicitations that involve: (1) a utility affiliate or utility-owned generation bids; and (2) RFOs seeking supply-side resources issued to satisfy the service area need, seeking products greater than two years in duration.	D.04-12-048, pp. 135-136; D.07-12-052, p. 140 and Appendix E, p. 3 D.08-11-008, OP 2.
2	LTRFOs	An IE will be retained to review the design, drafting of	D.04-12-048, p. 136;

⁴ *Id.*, pp. 137-138 and Appendix E, pp. 2-3, as affirmed and modified in D.14-02-040, p. 68.

⁵ *Id.*, Appendix E, p. 3.



		documents, administration, evaluation aspects, and offer selection or rejection of LTRFOs for long-term procurement (<i>i.e.</i> , transactions five years or greater in duration).	D.07-12-052, pp. 149-150 and OP 15.
3	CHP RFOs	PG&E utilizes IEs for CHP RFOs to review the evaluation process.	Qualifying Facility and CHP Settlement Term Sheet, Section 4.2.5.8, approved in D.10-12-035.
4	RPS RFOs	An IE will be retained for all RFOs for RPS-eligible resources, and report on the solicitation, evaluation and selection processes.	D.06-05-039, pp. 46-47, FOF 20 and OP 8; D.09-06-050, p. 24.
5	RPS Transactions arising from bilateral negotiations	IEs provide reports on RPS-eligible contracts arising from bilateral negotiations with advice letters seeking approval.	D.09-06-050, p. 29 and OP 7.
6	Short-Term RPS Transactions	IEs review short-term RPS transactions, if applicable.	D.09-06-050, p. 24 and OP 1.
7	RPS Contract Amendments	Review of RPS contract amendments affecting contract price, including developer cash flow models.	Resolution E-4199, pp. 27-28.
8	CAM Resources	Any RFO or bilateral contract that produces a CAM-eligible resource must be overseen by an IE.	D.06-07-029, OP 1.
9	Affiliate Transactions, Not Associated with an RFO	IEs to be retained for all negotiated utility affiliate or utility-owned generation non-RFO related bids, greater than two years in duration.	D.04-12-048, pp. 135-136; D.07-12-052, p. 140 and Appendix E, p. 3 D.08-11-008, OP 2.
10	Energy Storage RFOs	An IE will be retained for all Energy Storage RFOs, and report on the solicitation, evaluation and selection processes.	D.13-10-040, pp. 10-11, 26-27, OP 8.
<u>11</u>	<u>Solicitations to sell RA products</u>	<u>An IE will be retained to monitor each solicitation to sell RA products. The IE will report on the solicitation, evaluation, and selection processes.</u>	<u>TBD</u>

3. Independent Evaluator Reports

Any required IE Report shall be included with the Quarterly Compliance Report (“QCR”), Advice Letter or Application seeking approval for the specific transaction. IEs shall use the template(s) approved by the ED. The template(s) may be modified by ED or the Commission as appropriate. Public versions of IE reports shall be identical to the corresponding confidential versions, except for the redaction of confidential material.



4. Independent Evaluator Disclosure Requirements

PG&E has developed a comprehensive conflict-of-interest disclosure requirement for IEs. An IE may be disqualified from participating in an RFO process if there are particular egregious conflicts-of-interest that arise during the RFO review process or during the contract negotiation process. An IE may also be disqualified from the IE pool if there are particular egregious conflicts-of-interests not disclosed during the evaluation process. In addition, PG&E requires that all IEs sign an NDA, which addresses potential conflicts of interest, including, but not limited to, establishing business relationships between the IE and the parties to the transaction (of which they are evaluating).

Attachment E

**Clean BPP Sheets 127-137 (Appendix G),
BPP Sheets 152-155 (Appendix I),
BPP Sheets 194-201 (Appendix M),
and Sales Framework (New Appendix S)**

(Public Version)



APPENDIX G
GREENHOUSE GAS PROCUREMENT PLAN



A. Background

1. California Air Resource Board’s Cap-and-Trade Regulations

Assembly Bill (“AB”) 32 is California’s Greenhouse Gas (“GHG”) legislation that requires the reduction of statewide GHG emissions to 1990 levels by 2020. To this end, the California Air Resources Board (“CARB”) proposed a statewide Cap-and-Trade regulation and other programmatic measures, including a Renewables Energy Standard, Customer Energy Efficiency, and Combined Heat and Power, to achieve these emissions reductions. The Cap-and-Trade regulation, which became effective on January 1, 2012, is intended to establish a market-based price for GHG emissions and, over time, provide market signals for efficient resource utilization and procurement activities to reduce GHG emissions.

Compliance with the emissions cap established in the CARB Cap-and-Trade regulation began in 2013 and is broken up into compliance periods. The first compliance period—for the years 2013 through 2014—began on January 1, 2013. In 2017, AB398 extended the Cap-and-Trade program to cover emissions through 2030. Covered entities include operators of any facility that annually emits at least 25,000 metric tons of carbon dioxide equivalent (“mtCO_{2e}”).¹ Operators are required to obtain and surrender compliance instruments equivalent to the annual GHG emissions for each such facility. Importers of electricity into California are also responsible for obtaining and retiring compliance instruments for GHG emissions deemed to be associated with electricity imports for purposes of compliance with Cap-and-Trade.

¹ Units of GHG are typically measured in terms of mtCO_{2e}.



This plan only covers procurement activities necessary to comply with Pacific Gas and Electric Company's ("PG&E") direct obligations related to electric procurement. Additional procurement necessary to meet PG&E's compliance obligations as a natural gas supplier and the associated cost recovery is authorized through California Public Utilities Commission ("CPUC" or "Commission") Order Instituting Rulemaking ("R.") 14-03-003 or subsequent Commission proceedings.

There are two types of compliance instruments:

- i. **Allowances** are limited tradable authorizations accepted by CARB to emit up to one mtCO_{2e}. Allowances are year-specific and can be used for an annual compliance filing for the year it was issued or for any subsequent compliance filing. An Allowance can be bought, sold, transferred, or "banked" for use in a particular compliance period. Allowances are available via direct allocation² by CARB, auctions conducted under the auspices of CARB, and the Allowance Price Containment Reserve³ ("APCR") established by CARB. CARB auctions are held quarterly. Allowances are also available in the market.
- ii. **Offset Credits** ("Offsets") are tradable compliance instruments accepted by CARB that represent verified reductions of one mtCO_{2e} from projects whose emissions or avoided emissions are not from a source covered under the Cap-and-Trade Program. For compliance purposes, an Offset and an Allowance are virtually interchangeable for the year issued, however, an entity can only use Offsets to meet up to a quantitative usage limit quantity⁴ of its compliance obligation in any compliance period. In addition, CARB's Cap-and-Trade regulation allows CARB to invalidate an Offset for errors, regulatory violations or fraud. CARB has adopted specific rules for

² According to the Cap-and-Trade regulation, the Investor-Owned Utilities ("IOU") are required to consign 100 percent of their Electric Distribution Utility ("EDU") directly allocated Allowances to the auctions in the allocation year. An IOU cannot use directly allocated EDU Allowances to satisfy its compliance obligation.

³ The CARB APCR is populated with a finite quantity of Allowances available for purchase at fixed prices and only by covered entities.

⁴ Quantitative usage limit is based on and defined in the Cap-and-Trade regulation § 95854.



using Offsets for Cap-and-Trade compliance, including the types of projects that qualify and the process for Offset verification, issuance, and registration.

Allowances and Offsets may also be available from external GHG Emissions Trading Systems to which California has linked.⁵

PG&E's actual Cap-and-Trade compliance obligation for a given year is determined by the GHG emissions reported annually to CARB per the Mandatory Reporting Rule.⁶ Annual reports are due to CARB in the calendar year following the emission year for facility operators or suppliers and electric power entities.

Cap-and-Trade compliance showings are made annually and at the end of each compliance period. In order to demonstrate compliance in a given year, PG&E must surrender enough compliance instruments to cover 30 percent of its qualifying emissions by November 1 of the following calendar year ("annual surrender date"). In addition, PG&E must surrender enough compliance instruments to cover the balance of its qualifying emissions over a multi-year compliance period by November 1 of the calendar year following the end of each compliance period ("compliance period surrender date").

PG&E receives an allocation of Allowances associated with its business as an EDU directly from CARB annually; however, these Allowances cannot be used directly by PG&E to satisfy its compliance obligation.

All directly-allocated electric Allowances must be consigned by PG&E into one or more of the auctions. In each year, Allowances consigned at least 75 days prior to a

⁵ CARB's Board-approved amendments allowing for the use of compliance instruments issued by linked jurisdictions on May 10, 2013. California is currently linked with Quebec.

⁶ Regulation for the Mandatory Reporting of GHG Emissions (Division 3, Chapter 1, Subchapter 10, Article 2, Sections 95100-95133, title 17, California Code of Regulations).



quarterly auction will be offered for sale at that auction and each consigning entity agrees to accept the auction settlement price for Allowances sold at auction.

2. Greenhouse Gas Compliance Instruments and CARB Auctions

A description of the authorized GHG compliance instruments is provided in Appendix A. A description of the CARB Auction and APCR process is provided in Appendix B of the Bundled Procurement Plan (“BPP”).

B. PG&E’s Allowance Consignment

[REDACTED]

C. PG&E’s Potential Greenhouse Gas Risks

1. Greenhouse Gas Obligations

PG&E is required by CARB’s Cap-and-Trade regulation to surrender compliance instruments for its qualifying Utility-Owned Generation (“UOG”) and imports. PG&E also has contractual obligations associated with certain tolling agreements (all obligations described in this paragraph are collectively referred as “direct” obligations).

a. Tolling & other Power Purchase Agreements (PPAs)

PG&E has contractual obligations associated with certain power purchase agreements that require it to either: (1) provide the counterparty with compliance

⁷ The quantity that PG&E will consign in each quarterly auction will be [REDACTED]



instruments corresponding to the facility's operation under contract; or (2) reimburse the counterparty for the Cap-and-Trade compliance costs associated with its facility's operation under the contract ("financially settle").



2. Cap-and-Trade Penalties

PG&E could face CARB penalties for failure to surrender an adequate number of compliance instruments for which it has a compliance obligation. CARB's Cap-and-Trade rule imposes a four-time excess emissions penalty resulting from "untimely surrender" of Allowances. This penalty would be assessed by requiring that additional compliance instruments be surrendered, rather than by cash payment. In addition, if an entity fails to surrender the required compliance instruments within five days of the first auction or reserve sale conducted by CARB following the applicable surrender date, whichever is the latter, and for which the registration deadline has not passed when the untimely surrender obligation is assessed, CARB's Cap-and-Trade rule would treat each ton of GHG emissions for which a compliance instrument was not surrendered as a separate violation for each day the violation continues.

3. Offset Credits

CARB's Cap-and-Trade regulation allows CARB to invalidate an Offset for errors, regulatory violations, or fraud. In the case where an Offset is used to meet a compliance requirement and is later invalidated, the complying entity must replace the invalidated Offset with a valid compliance instrument within six months of notification by CARB of



the Offset’s invalidation or be subject to compliance penalties. To mitigate these risks, PG&E will only purchase Offsets:

- if the purchase contract requires the seller to assume the risk of invalidation;

[REDACTED]

- [REDACTED]

[REDACTED]

D. PG&E’s GHG-Related Product Procurement

This GHG Procurement Plan addresses the GHG-related procurement authority necessary for PG&E to comply with the obligations associated with emissions from electricity sectors covered by Cap-and-Trade Program, namely facilities with GHG emissions greater than or equal to 25,000 mtCO_{2e} per year and imported electricity. As an entity that is required to comply with Cap-and-Trade, PG&E will need to procure compliance instruments to meet the compliance requirements associated with its own facilities and imports, as well as the GHG contractual obligations associated with Power Purchase Agreements with third parties that require PG&E to procure GHG compliance products or assume GHG compliance costs for such parties. Below, PG&E describes its GHG obligations and GHG procurement strategy. As noted below, Commission-approved GHG-related products (“GHG Products”), procurement processes, and GHG Procurement Limits are provided in Appendices A, B and C, respectively, of this BPP. The products, procurement processes, GHG Procurement Limits, and GHG procurement strategy establish the upfront achievable standards for PG&E’s procurement activities consistent with AB 57.



1. Greenhouse Gas Obligations

PG&E's primary need to procure GHG compliance instruments and engage in GHG transactions arises in connection with the following:

- Utility-Owned Facilities: Generation facilities owned by PG&E that are either operating or under construction and that emit at least 25,000 mtCO_{2e} per year, such as the Humboldt Generating Station, Colusa Generating Station, and Gateway Generating Station, will have a compliance obligation under Cap-and-Trade.
- Certain Power Purchase Agreements: Contracts that allocate to PG&E or where PG&E is contractually obligated to assume the GHG compliance instrument procurement responsibility.
- Electricity Imports: PG&E is responsible for GHG emissions deemed to be associated with its electricity imports for purposes of compliance with Cap-and-Trade.

2. Greenhouse Gas-Related Products

GHG Products approved by the Commission are listed in Appendix A.

3. Greenhouse Gas-Related Processes

PG&E will procure GHG Products using the procurement methods and processes in accordance with Appendix B.

4. Greenhouse Gas Procurement Strategy

PG&E will procure sufficient GHG Products during each compliance period to meet its GHG obligations. PG&E's procurement strategy includes the following key elements:

[REDACTED]

[REDACTED]

[REDACTED]



[Redacted text block]

h. GHG Procurement Limits

Each of these elements is described in more detail below.

[Redacted text block]



[Redacted content]



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[REDACTED]

h. GHG Procurement Limits

GHG Procurement limits are provided in Appendix C.

5. Procurement Review Group Consultation

PG&E's consultation with the PRG is addressed in Appendix M.

6. Cost Recovery

Cost recovery of GHG Products is discussed in Section IV.C of the BPP

7. Approval for Contract Term Duration

CPUC approval of transactions is discussed in Section V of the BPP

8. Independent Evaluator

Independent Evaluator requirements are discussed in Appendix M.



Pacific Gas and Electric Company
San Francisco, California

Cal. P.U.C. Sheet No. 151
Pacific Gas and Electric Company
2014 Bundled Procurement Plan

APPENDIX I
CONGESTION REVENUE RIGHTS

Decision No. 15-10-031

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed December 10, 2015
Effective _____
Resolution No. _____



A. Introduction

Pacific Gas and Electric Company (“PG&E”) is authorized to procure Congestion Revenue Rights (“CRR”) under two California Public Utilities Commission (“CPUC” or “Commission”) resolutions. CRRs are financial instruments issued by the California Independent System Operator (“CAISO”). Resolution E-4135 authorized PG&E to procure CRRs in the CAISO’s monthly and annual processes. Resolution E-4122 authorized PG&E to procure Long-Term Congestion Revenue Rights (“LT-CRR”) in the CAISO’s long-term process. Both resolutions authorized PG&E to purchase and sell CRRs in the secondary markets.

The monthly and annual CRR processes consist of up to three allocation tiers and an auction. In the allocation tiers, only Load Serving Entities (“LSE”) such as PG&E can nominate CRRs that they wish to obtain at no direct cost. LSEs can procure CRRs up to an amount determined by their historical or forecasted load. In the auctions, which are open to all market participants, PG&E can purchase or sell CRRs at market-based prices determined through the competitive auction. The Annual CRR process releases CRRs with calendar quarter delivery periods that occur over the next year. The monthly CRR process releases CRRs with monthly delivery periods for the next month.

The LT-CRR process consists of one allocation tier each year and is performed as part of the annual CRR process. In this Long Term Tier, quarterly-term CRRs previously acquired from the annual Tier 1 allocation can be nominated for conversion to LT-CRRs with same quarter deliveries for the subsequent nine years.



B. Congestion Revenue Rights and Long-Term Congestion Revenue Rights Procurement Objectives

As the Commission determined in Resolutions E-4135 and E-4122, PG&E uses CRRs and LT-CRRs to hedge against expected congestion costs. PG&E does not use CRRs and LT-CRRs for financial speculation.

C. Congestion Revenue Rights Procurement

1. Congestion Revenue Rights Source-Sink Pairs and Paths

PG&E is authorized to acquire CRRs and LT-CRRs for any path (represented by a source-sink pair) connecting existing generation sources to existing loads (retail loads, Helms pumping load, and wholesale load obligations) or for any path that PG&E reasonably anticipates it might need to flow energy in the future due to the addition of new contracts, resources, or load obligations. Additionally, there may be CRRs or LT-CRRs which are positively correlated in value with CRRs or LT-CRRs for paths that have limited availability. PG&E is authorized to acquire CRRs and LT-CRRs for such positively correlated paths as well. Therefore, PG&E will obtain any CRRs and LT-CRRs that are determined to be valuable as hedges against congestion costs at the time they are offered, subject to selection criteria regarding the specific source/sink combinations as described in Section E of this Appendix.

2. Procurement Review Group Consultation

PG&E consults with its Procurement Review Group (“PRG”) regarding CRRs and LT-CRRs. PRG consultation is described in more detail in Appendix M.



D. Volume Limits

PG&E’s CRR and LT-CRR procurement is subject to source-specific volume limits. That is, PG&E will limit the “net” volume¹ that it could procure at each source node to the maximum non-coincident capacity of the sources (existing, potential, planned, or “positively correlated”) at that node for that delivery period. There are separate source-specific volume limits for the on-peak and off-peak hours in the delivery period.

[REDACTED]

[REDACTED] Overall or total CRR volume limits are unnecessary because PG&E is already limited by CAISO rules, and to hedging no more than its total expected or anticipated grid use.

[REDACTED]

¹ “Net” volume refers to the result of netting CRRs in one direction with CRRs in the counter-flow direction.



[Redacted]

[Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

- [Redacted]

F. Congestion Revenue Rights Auction Participation

[Redacted]

G. Transactions in Secondary Congestion Revenue Rights Market

[Redacted]



Pacific Gas and Electric Company
San Francisco, California

Cal. P.U.C. Sheet No. 190
Pacific Gas and Electric Company
2014 Bundled Procurement Plan

APPENDIX M

PROCUREMENT REVIEW GROUP,

COST ALLOCATION MECHANISM GROUP,

AND INDEPENDENT EVALUATOR ADMINISTRATION

Decision No. 15-10-031

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed December 10, 2015
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A. Procurement Review Group and Cost Allocation Mechanism Group

1. Membership

Procurement Review Group (“PRG”) membership includes both organizations and individuals. The California Public Utilities Commission’s (“CPUC” or “Commission”) Energy Division (“ED”) employees are *ex-officio* participants in the PRG. All PRG members must be nominated and then evaluated for participation in the PRG by Pacific Gas and Electric Company (“PG&E”), and then PG&E may recommend the organization(s) and individual(s) to ED for approval.

When procuring or potentially procuring Cost Allocation Mechanism (“CAM”) resources pursuant to Commission Decisions (“D.”) 06-07-029 and 07-09-044, or Combined Heat and Power (“CHP”) resources under D.10-12-035, where the costs are allocated to all “benefitting customers” (*e.g.*, bundled, direct access, and community choice aggregation customers), PG&E will utilize an advisory CAM Group consistent with the proposal adopted in D.07-12-052, Attachment D. Organizations and/or individuals must be nominated and then evaluated for participation in the CAM Group by PG&E, and then PG&E may recommend the organization(s) and individual(s) to ED for approval. PRG members are automatically part of the CAM Group.

Organizations and/or individuals on the PRG and/or CAM Group must be non-market participants and are required to execute a Non-Disclosure Agreement (“NDA”).



2. PG&E's Use of the PRG and CAM Group

PG&E consults with the PRG on a wide range of transactions generally on a monthly basis, and sometimes more often as necessary. Although the PRG only acts in an advisory capacity, PG&E actively solicits feedback from PRG members and may incorporate that feedback into its procurement processes.

Consultation with the CAM Group occurs for transactions in which the costs may be allocated to all benefitting customers, or for CHP resources procured under the settlement approved in D.10-12-035.

3. Scope of PRG and CAM Group Review

The tables below provide a more detailed discussion of specific Commission requirements for consultation with the PRG and/or CAM group. Table M-1 describes the procurement transactions and solicitations that require PRG review. Table M-2 details procurement-related activity and reporting requirements that require consultation with the PRG pursuant to the cited Commission decisions, resolutions, and directives.



**TABLE M-1
PACIFIC GAS AND ELECTRIC COMPANY
TRANSACTIONS AND SOLICITATIONS REQUIRING PRG REVIEW**

Line No.	Topic	Description	CPUC Decision and/or BPP Requirement
1	Transactions greater than three (3) months	<p>Transactions with delivery terms of greater than three calendar (3) months, or one quarter in duration. PG&E will discuss how transactions meet portfolio needs, the solicitation or other procurement processes, evaluation methods, negotiation, and contract/transactions selection process.</p> <p>PRG consultation is not required for transactions greater than three months in duration which: (1) cannot wait for PRG consultation; (2) are in keeping with a strategy or plan already discussed with and reviewed by the PRG; and (3) which involve transparent exchanges, brokers, or electronic solicitations.</p> <p>Delivery term is defined by the duration of the contract, regardless of execution date and when the deliveries begin.</p>	<p>D.04-12-048, Finding of Fact (“FOF”) 73 and Ordering Paragraph (“OP”) 15; D.07-12-052, Appendix E at p. 1.</p> <p>D.07-12-052, p. 171.</p> <p>D.15-10-031, OP 1(h)</p> <p>D.16-01-015</p>
2	LTRFOs	Design, drafting of bid documents, administration, evaluation and offer selection criteria, ranking, shortlist and resulting executed transactions.	D.07-12-052, pp. 149-150 and OPs 15 and 16.
3	CHP Request for Offers (“RFO”)	PG&E consults with the PRG and CAM Group regarding CHP RFOs.	Qualifying Facility and CHP Settlement Term Sheet, Section 4.2.5.8 approved in D.10-12-035.
4	Renewable Portfolio Standard (“RPS”) RFOs	PG&E consults with the PRG regarding RPS RFO issuance, evaluation, selection and short-listing, and decisions regarding offers.	D.06-05-039, FOF 20.
5	RPS transactions arising from RFOs	PG&E reviews RPS-eligible contracts arising from an RFO with the PRG before filing an Advice Letter seeking approval.	D.09-06-050, pp. 23-24.
6	RPS transactions arising from bilateral negotiations	PG&E reviews RPS-eligible contracts arising from bilateral negotiations with the PRG before filing an Advice Letter seeking approval.	D.09-06-050, p. 29 and OP 7.
7	Short-term RPS transactions	Short-term RPS transactions that satisfy certain criteria are reviewed with the PRG or an explanation is provided in the Advice Letter as to why PRG review was not possible.	D.09-06-050, p. 24 and OP 1.
8	Greenhouse Gas (“GHG”) Products	<p>PG&E consults with the PRG regarding (1) GHG RFOs and (2) prior to transacting for any GHG Product in the market with a vintage year more than three years in the future beyond the current calendar year.</p> <p>PG&E will report to the PRG any GHG Product sales.</p>	D.12-04-046 at pp. 53, 55 and OP 8(g), 8(i) and PG&E’s 2010 BPP, Sheet Nos. 51 and 305.



Line No.	Topic	Description	CPUC Decision and/or BPP Requirement
9	Congestion Revenue Rights (“CRR”) (annual and monthly CRRs) and Long-Term CRRs (“LT-CRR”)	<p>PG&E consults with its PRG prior to the start of the annual CRR process regarding its CRR position and the procurement approach and strategy for the upcoming allocation and auction tiers. This consultation does not require PG&E to provide all of the specific proposed nominations (including LT-CRR nominations) for the annual process prior to the allocation tiers. PG&E also consults with the PRG prior to transacting for any CRR having a term greater than one calendar quarter. PG&E is not required to consult with the PRG prior to each monthly CRR allocation/auction process.</p> <p>Within five business days after the final posting of each annual and monthly process, PG&E will provide the PRG a listing of every CRR and LT-CRR awarded in the process, including the source, sink, MW quantity, term, expected value, past performance (if applicable), price (if applicable) and a description of the underlying arrangement that the CRR will hedge (or, in the case of a sale of a CRR, no longer hedge). The same information will be provided to the PRG within five business days of a transaction in the secondary market.</p>	<p>Resolution E-4135, p. 11-13, Finding 14, and OP 4.</p> <p>Resolution E-4122, p. 9-10, Findings 13-14 and OP 4.</p>
10	Third-party Request for Bids	If PG&E elects to participate in RFOs issued by other market participants (including other load serving entities), then existing procurement oversight rules apply (i.e., PRG consultation/communication).	D.12-01-033, OP 17
11	Energy Storage RFO	PG&E is required to present the design of each energy storage RFO plan and the results of each energy storage RFO to its PRG, including the evaluation methodology applied to the bids received in response to the RFO.	D.13-10-040, Appendix A Section 3.g.
12	CAM-Eligible Procurement	PG&E is required to consult with the CAM Group regarding all CAM-eligible procurement.	D.07-12-052, pp. 129-130, OP 8, and Appendix D and Appendix E, p. 1.
13	Retention of Independent Evaluators (“IE”)	PG&E consults with the PRG regarding the retention and review of IEs.	D.04-12-048 at p. 136
14	Solicitations to sell RA products	PG&E consults with the PRG on a quarterly basis in regard to objectives, evaluation methodology, pricing, bids, and execution of transactions. Scope to include recently closed solicitations, current solicitations, and upcoming solicitations.	TBD



**TABLE M-2
PACIFIC GAS AND ELECTRIC COMPANY
PROCUREMENT AND REPORTING ITEMS REQUIRING PRG REVIEW**

Line No	Topic	Description	CPUC Decision and/or BPP Requirement
1	Market Conditions	Electric market conditions and fuel and power price forecasts (quarterly).	D.03-12-062, FOF 24.
2	Procurement Limits	Current position relative to approved procurement limits on a rolling 24-month forward basis, compared to previous quarter.	D.12-01-033, p. 15.
3	Hedging Plan	Prior to filing an advice letter seeking minor modifications to PG&E's Hedging Plan, PG&E will present the proposed modifications to the PRG.	Resolution E-3951, p. 6.
4	Hedging Plan – Liquidity Management Strategy	Updates required by the Hedging Plan, need for a transition plan, suspension or resumption of Hedging Plan, [REDACTED]	D.07-12-052, Resolution E-4362 PG&E's 2014 BPP Table E-4.
5	Nuclear Fuel Plan	Nuclear Fuel Plan updates and revisions.	D.07-12-052 PG&E's 2010 BPP, Sheet Nos. 135-146
6	Renewable Net Short	Update regarding PG&E's Renewable Net Short position (quarterly basis, in annual RPS procurement plans, and in RPS compliance reports).	<i>Administrative Law Judge Ruling Adopting Renewable Net Short Calculation Methodology</i> , issued in Rulemaking 11-05-005 on August 2, 2012, Appendix A, pp. 3, 5.
7	GHG Compliance Forecast	GHG compliance forecast and procurement limit updates and GHG Product transactions (quarterly).	D.12-04-046, pp. 57, 59.
8	GHG Auction Bidding Strategy	Annual review of PG&E's California Air Resources Board ("CARB") auction bidding strategy.	D.07-12-045, Resolution E-4544 PG&E's 2010 BPP, Sheet No. 305
9	CHP Targets	PG&E advises the PRG if it will be unable to meet CHP Targets.	Qualifying Facility and CHP Settlement Term Sheet, Section 9.2.2 approved in D.10-12-035.
10	Convergence Bidding	PG&E provides quarterly presentations to the PRG regarding its convergence bidding strategies, performance and market analysis. In the event that the 365-day rolling net-loss exceeds or is expected to exceed \$20 million, PG&E will cease implementation of all convergence bidding strategies and confer with the PRG within three days.	D.10-12-034, OP 7-8. D.15-10-031, OP 1(d)



Line No	Topic	Description	CPUC Decision and/or BPP Requirement
11	Customer Risk Tolerance ("CRT") and TeVaR	PG&E provides a monthly update of its portfolio position and risk, including CRT and TeVaR. If the CRT is expected to be hit or exceeded within the next quarter, PG&E informs and confers with the PRG to discuss the underlying risk drivers and factors affecting the change in portfolio risk, and to determine whether specific hedging strategies and/or plan modifications are needed to reduce portfolio risk to within the CRT threshold.	D.03-12-062, p. 16 and OP 5, D.07-12-052 and D.12-01-033.
12	CRRs and LT-CRRs	PG&E is required to review its CRR position with the PRG periodically, at least once per year. PG&E provides the PRG quarterly updates on how each of its previously obtained LT-CRRs are performing, including but not limited to source, sink, term, relation to grid use, expected value, and past performance.	Resolution E-4135, p. 11-13, Findings 13-14. and OP 4. Resolution E-4122, p. 9-10, Findings 13-14 and OP 4.
13	Low-Carbon Fuel Standard credits	PG&E reports sales of Low-Carbon Fuel Standard credits to the PRG at least quarterly.	D.14-05-21 at p. 17
14	Economic Curtailment	PG&E reports on a regular basis to the PRG regarding the frequency of economic curtailment, temporal (annual and daily) trends, locational trends, costs, etc.	D.14-11-042 at p.43
15	Convergence Bidding Investigations and Suspensions	PG&E is required to notify the PRG within three business days under any one of the following circumstances: (1) Notice from the CAISO or its Department of Market Monitoring that PG&E or its scheduling coordinator is subject of an investigation pursuant to the CAISO Tariff; (2) Notice from the CAISO that the conduct of PG&E or its scheduling coordinator has been referred to the Federal Energy Regulatory Commission by CAISO pursuant to the CAISO Tariff; or (3) Notice from the CAISO that PG&E or its scheduling coordinator is subject of an investigation pursuant to the CAISO Tariff	D.15-10-031, OP 1(d)
16	Non-compliant Transactions	In the event non-compliant transactions are discovered, PG&E shall schedule a PRG meeting as soon as practicable after discovery of any non-compliant transaction(s) to discuss the nature of the non-compliance and how the utility plans to resolve the issue to prevent recurrence.	D.15-10-031, OP 2
17	Implied Market Heat Rate	Provide a report by December 31, 2016 to Energy Division and the PRG showing the effect of the change in implied market heat rate on the first applicable year.	D.15-10-031, OP 1(i)
18	Natural Gas GHG Reporting	Natural gas utilities to report to the PRG the re-sale of GHG compliance instruments and to periodically review recent and prospective transactions.	D.14-12-040 at pp. 11, 13



4. Meeting and Notification Requirements

Agendas: PG&E will provide PRG members with final meeting agendas and materials at a minimum of 48 business hours in advance of the PRG meeting, unless there are unusual, extenuating circumstances where PG&E communicates to PRG members in an e-mail announcing a meeting or distributing meeting materials on a tighter timeframe.¹

Summaries: PG&E will provide confidential meeting summaries to PRG members that include a list of attending PRG members (including the organizations represented), a summary of topics presented and discussed, and a list of information requested or offered to be supplied after the meeting, and the identity of the requesting party.² PG&E will distribute meeting summaries on the earlier of: (a) 14 days after the PRG meeting; or (b) 48 business hours before the next regularly scheduled PRG meeting. If, due to unusual circumstances the aforementioned timeframe is deemed unreasonable, then PG&E may distribute the summary 21 days after the PRG meeting, but may do so only if PG&E notifies the PRG members (via email) informing them of the delay in distribution.

Web-Based Calendar: PG&E maintains a web-based PRG calendar. PG&E will provide the following information to the public through a web-based forum: date, meeting time, and duration of the meeting; the individuals participating in the meeting and the organization represented by the individual; and a list of non-confidential items discussed or a summary of general topics discussed.³

¹ D.07-12-052, Appendix E, p. 1.

² *Id.*

³ *Id.*



Notifications to the PRG: In addition to the agenda, presentations, and meeting summaries, PG&E may provide notification to the PRG in-between scheduled meetings.

B. Independent Evaluators

1. Independent Evaluator Pool

PG&E, in consultation with its PRG, shall develop a pool of at least three, but preferably more IEs. PG&E will develop and periodically add to its IE pool as follows:

- 1) PG&E shall develop a list of prospective IEs via industry contacts, literature searches, PRG recommendations, and similar methods. PG&E will solicit information from the prospective IEs and circulate the list of candidates and their “resumes” to the PRG and ED for feedback. All individuals who perform the specific IE responsibilities and duties are covered under the IE organization or company.
- 2) PG&E shall rely on the guidance regarding IE expertise and qualifications provided in D.04-12-048, D.07-12-052 and D.12-01-033. However, these qualifications should represent the minimum threshold necessary for an IE to be effective, and PG&E and the PRG will evaluate all relevant, energy procurement-related knowledge, skill, and experience as part of the IE selection process.
- 3) PG&E and its PRG shall identify and interview a subset of prospective candidates that PG&E, the PRG and ED staff deem most suitable for the role.
- 4) PG&E shall coordinate materials and submit its recommendations to the PRG regarding each prospective candidate (including the general consensus and any opposition to the consensus). PG&E shall submit a written list of qualified IEs to ED to add to the contracting pool. The list will contain the recommendations of the PRG that were submitted to the PRG. ED will evaluate the proposed IE’s competencies based on the guidelines in D.04-12-048 as well as evaluating the IE’s independence, including any conflicts of interest. ED shall give final approval for inclusion of an IE in the IE pool by letter to PG&E. ED will also have the right to final approval of the use of a particular IE for each RFO.



- 5) Beyond the development of the initial IE pool, additional IEs may be added to the pool by following the same procedures listed above.
- 6) An IE may remain in the IE pool for three (3) consecutive years, within which they must go through a re-evaluation process based upon the inclusion criteria to assure continued compliance. The re-evaluation process will involve additional reviews of the IE candidate by PG&E, the PRG, and ED staff, including additional interviews, or the use of other evaluation tools, if necessary. The re-evaluation of an IE is based on both the organization and the individuals who have participated as an IE within that organization. The conclusions may include the inclusion of an organization and specific IEs in that organization. The resulting conclusions may also identify the specific IEs that will not continue in the pool for the next successive three years.
- 7) PG&E has developed a pro forma master contract to be used each time it contracts with an IE. If deviations from the pro forma contract are necessary, then the modifications must be approved by the ED.⁴

PG&E will provide to the PRG the name of the IE to be used in a specific procurement solicitation, along with the estimated and actual IE costs before and after the solicitation takes place.⁵

2. Independent Evaluator Requirements

Line No.	Topic	Description	CPUC Decision and/or BPP Requirement
1	RFOs	An IE will be retained for all competitive solicitations that involve: (1) a utility affiliate or utility-owned generation bids; and (2) RFOs seeking supply-side resources issued to satisfy the service area need, seeking products greater than two years in duration.	D.04-12-048, pp. 135-136; D.07-12-052, p. 140 and Appendix E, p. 3 D.08-11-008, OP 2.
2	LTRFOs	An IE will be retained to review the design, drafting of documents, administration, evaluation aspects, and offer selection or rejection of LTRFOs for long-term procurement (<i>i.e.</i> , transactions five years or greater in duration).	D.04-12-048, p. 136; D.07-12-052, pp. 149-150 and OP 15.
3	CHP RFOs	PG&E utilizes IEs for CHP RFOs to review the evaluation process.	Qualifying Facility and CHP Settlement Term Sheet, Section 4.2.5.8,

⁴ *Id.*, pp. 137-138 and Appendix E, pp. 2-3, as affirmed and modified in D.14-02-040, p. 68.

⁵ *Id.*, Appendix E, p. 3.



			approved in D.10-12-035.
4	RPS RFOs	An IE will be retained for all RFOs for RPS-eligible resources, and report on the solicitation, evaluation and selection processes.	D.06-05-039, pp. 46-47, FOF 20 and OP 8; D.09-06-050, p. 24.
5	RPS Transactions arising from bilateral negotiations	IEs provide reports on RPS-eligible contracts arising from bilateral negotiations with advice letters seeking approval.	D.09-06-050, p. 29 and OP 7.
6	Short-Term RPS Transactions	IEs review short-term RPS transactions, if applicable.	D.09-06-050, p. 24 and OP 1.
7	RPS Contract Amendments	Review of RPS contract amendments affecting contract price, including developer cash flow models.	Resolution E-4199, pp. 27-28.
8	CAM Resources	Any RFO or bilateral contract that produces a CAM-eligible resource must be overseen by an IE.	D.06-07-029, OP 1.
9	Affiliate Transactions, Not Associated with an RFO	IEs to be retained for all negotiated utility affiliate or utility-owned generation non-RFO related bids, greater than two years in duration.	D.04-12-048, pp. 135-136; D.07-12-052, p. 140 and Appendix E, p. 3 D.08-11-008, OP 2.
10	Energy Storage RFOs	An IE will be retained for all Energy Storage RFOs, and report on the solicitation, evaluation and selection processes.	D.13-10-040, pp. 10-11, 26-27, OP 8.
11	Solicitations to sell RA products	An IE will be retained to monitor each solicitation to sell RA products. The IE will report on the solicitation, evaluation, and selection processes.	TBD

3. Independent Evaluator Reports

Any required IE Report shall be included with the Quarterly Compliance Report (“QCR”), Advice Letter or Application seeking approval for the specific transaction. IEs shall use the template(s) approved by the ED. The template(s) may be modified by ED or the Commission as appropriate. Public versions of IE reports shall be identical to the corresponding confidential versions, except for the redaction of confidential material.

4. Independent Evaluator Disclosure Requirements

PG&E has developed a comprehensive conflict-of-interest disclosure requirement for IEs. An IE may be disqualified from participating in an RFO process if there are



particular egregious conflicts-of-interest that arise during the RFO review process or during the contract negotiation process. An IE may also be disqualified from the IE pool if there are particular egregious conflicts-of-interests not disclosed during the evaluation process. In addition, PG&E requires that all IEs sign an NDA, which addresses potential conflicts of interest, including, but not limited to, establishing business relationships between the IE and the parties to the transaction (of which they are evaluating).



APPENDIX S
SALES FRAMEWORK

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed _____
Effective _____
Resolution No. _____



A. Introduction/Background

This Appendix describes the standards and criteria for Pacific Gas and Electric Company's (PG&E's) management and sales of physical energy-only products, Forward Energy from non-Renewables Portfolio Standard (non-RPS) eligible hydro resources or nuclear resources (Carbon Free Energy), Resource Adequacy (RA) Products, and Import Capacity Counting Rights. Due to customer load departure, PG&E may encounter scenarios in which portfolio products exceed the requirements of the portfolio. In these situations, the Sales Framework guides actions PG&E will take. In addition, any transactions under this Sales Framework Appendix will be filed for approval through the Quarterly Compliance Reports (QCR), as required by the Bundled Procurement Plan (BPP).

B. Overview of Sales Framework

This section provides a description of the commercial processes and activities that PG&E will pursue to manage any sales of its portfolio of physical energy, carbon free energy, RA Product, and Import Capacity Counting Rights. These processes and activities include: (1) product terms and volumes; (2) commercial processes; and (3) evaluation methodologies.

1. Physical Energy-only Sales

[Redacted]

[Redacted]

[Redacted]



[Redacted]

[Redacted]

2. Carbon Free Energy

[Redacted]



3. RA Product and Import Capacity Counting Right

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Regulatory Affairs

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Resolution No. _____



[REDACTED]

c. Contract Terms

PG&E will only sell RA products using an Edison Energy Institute (EEI) enabling agreement and a PG&E RA confirmation agreement. Sale transactions of RA products will not be facilitated through a Western Systems Power Pool (WSPP) enabling agreement. Additionally, PG&E will not post collateral or performance assurance for any RA product sales.

d. Commercial Process

[REDACTED]



The table below outlines the schedule in which PG&E solicitations will be issued. Updates to the table will be posted to PG&E’s website and submitted to the CPUC via Tier 1 Advice Letter, at least annually.

PG&E’s RA SOLICATION SCHEDULE

Solicitation ³	Delivery Term ⁴	Products	Anticipated Date
May through Balance of Year 2019	Monthly, through December 2019	System RA with/without Flex Local RA with/without Flex Import Capacity Counting Rights RA Swaps	January/February 2019
Q3 through Balance of Year 2019	Monthly, through December 2019	System RA with/without Flex Local RA with/without Flex Import Capacity Counting Rights RA Swaps	April/May 2019
Q4 through Balance of Year 2019	Monthly, through December 2019	System RA with/without Flex Local RA with/without Flex Import Capacity Counting Rights RA Swaps	July/August 2019
Annual 2020	Annual 2020 Strips, January through December 2020	System RA with/without Flex Import Capacity Counting Rights Local RA with/without Flex (if and only if implementation of central buyer is deferred) RA Swaps	September/October 2019
Next Q1 through Balance of Year 2020	Monthly, through December 2020	System RA with/without Flex Import Capacity Counting Right Local RA with/without Flex (if and only if implementation of central buyer is deferred) RA Swaps	October/November 2019

³ If PG&E does not have available products to sell, PG&E will not issue a solicitation.

⁴ This table does not guarantee availability of product for the delivery period offered. Quantity is subject to meeting the requirements as described in this Appendix.



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Decision No. _____

Issued by
Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed _____
Effective _____
Resolution No. _____



Decision No. _____

Issued by
Steven Malnight
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Regulatory Affairs

Date Filed _____
Effective _____
Resolution No. _____



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Decision No. _____

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Senior Vice President
Regulatory Affairs

Date Filed _____
Effective _____
Resolution No. _____



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Decision No. _____

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Steven Malnight
Senior Vice President
Regulatory Affairs

Date Filed _____
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Decision No. _____

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Regulatory Affairs

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Resolution No. _____

Attachment F

**Declaration of Kimberly Chang Seeking
Confidential Treatment Pursuant to D.06-06-
066, D.14-10-033, and Public Utilities Code
§454.5(g)**

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

**DECLARATION OF KIMBERLY CHANG
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION CONTAINED IN PG&E'S PROPOSED
UPDATES TO THE BUNDLED PROCUREMENT PLAN
(ADVICE LETTER 5473-E)**

I, Kimberly Chang, declare:

1. I am a Manager in the Portfolio Management group within the Energy Policy and Procurement organization at Pacific Gas and Electric Company (PG&E). In this position, my responsibilities include overseeing various commercial and compliance activities including but not limited to, resource adequacy and greenhouse gas compliance instrument procurement.

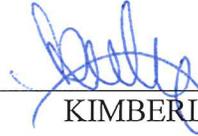
This declaration is based on my personal knowledge of PG&E's practices and my understanding of the Commission's decisions protecting the confidentiality of market-sensitive procurement information.

2. Based on my knowledge and experience, and in accordance with the "Administrative Law Judge's Ruling Clarifying Interim Procedures For Complying With Decision ("D") 06-06-066," issued in Rulemaking 05-06-040 on August 22, 2006, and D.14-10-033, I make this declaration seeking confidential treatment of Appendices G, I, M, and S contained in PG&E's Advice Letter 5473-E submitted on January 25, 2019.

3. Attached to this declaration is a matrix identifying the data and information for which PG&E is seeking confidential treatment. The matrix specifies that the material PG&E is seeking to protect constitutes data and information covered by D.14-10-033 and by General Order (GO) 66-C, Section 2.2b, which would place PG&E in an unfair business disadvantage if disclosed; and Public Utilities Code Section 454.5(g), which would reveal market sensitive information. The matrix also specifies why confidential protection is justified. Finally, the matrix specifies that: (1) the information is not already public; and (2) the data cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure.

By this reference, I am incorporating into this declaration all of the explanatory text that is pertinent to my testimony in the attached matrix.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct. Executed on January 25, 2019 at San Francisco, California.



KIMBERLY CHANG

PACIFIC GAS AND ELECTRIC COMPANY (U 39 E)
ADVICE LETTER 5473-E
JANUARY 25, 2019

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order that Data Corresponds To	Justification for Confidential Treatment	Length of Time Date To Be Kept Confidential
Confidential Appendix G	D.14-10-033 Pub. Util. Code § 454.5(g)	This information includes confidential greenhouse gas (GHG) compliance instrument procurement strategy and/or activities. The release of this commercially sensitive information could cause harm to PG&E's customers and put PG&E at an unfair business advantage by the disclosure of a GHG procurement strategy. This information could be used by other market participants to gain a commercial advantage. . The disclosure of GHG information is prohibited according to Title 17 of the California Code of Regulations.	Indefinite
Confidential Appendix I	Pub. Util. Code § 454.5(g)	This information includes confidential PG&E's strategy related to its hedging of congestion risk and participation in the Congestion Revenue Rights (CRR) allocation and procurement processes. Disclosure of the redacted CRR information would reveal to market participants PG&E's strategy for managing its congestion risk, which would harm ratepayers because suppliers could adjust either the availability or pricing of supply (CRRs) available to PG&E.	Indefinite
Confidential Appendix M	Pub. Util. Code § 454.5(g)	This information relays components of PG&E's confidential hedging strategy. Any discussion of PG&E's strategy is market sensitive, and if released, this information could cause harm to PG&E's customers and put PG&E at an unfair business advantage.	Indefinite
Confidential Appendix S	Pub. Util. Code § 454.5(g)	This information includes PG&E's confidential sales framework. Any discussion of PG&E's sales strategies is market sensitive, and if released, this information could cause harm to PG&E's customers and put PG&E at an unfair business advantage.	Indefinite

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

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