
PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
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May 14, 2019

Advice Letter 5475-E and 5475-E-A

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

SUBJECT: 2018 Q4 Procurement Transaction Quarterly Compliance Submittal.

Dear Mr. Jacobson:

Advice Letter 5475-E and 5475-E-A are effective as of March 1, 2019.

Sincerely,

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

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



Erik Jacobson
Director
Regulatory Relations

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

Fax: 415-973-3582

January 30, 2019

Advice 5475-E

(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Procurement Transaction Quarterly Compliance Submittal (Q4, 2018)

Purpose

Pacific Gas and Electric Company (“PG&E”) hereby submits to the California Public Utilities Commission (“Commission” or “CPUC”) its compliance filing for the fourth quarter of 2018 in conformance with PG&E’s 2014 BPP approved in D.15-10-031. PG&E’s submittal of this Procurement Transaction Quarterly Compliance Report (“QCR”) for record period October 1, 2018 through December 31, 2018, (Q4, 2018) is in accordance with D.03-12-062, Ordering Paragraph 19, which requires that the Procurement Transaction Quarterly Compliance Reports be submitted within 30 days of the end of the quarter.

Background

In D.07-12-052, the Commission directed Energy Division and the Investor-Owned Utilities (“IOUs”) to continue the collaborative effort to develop a reformatted QCR. The Commission authorized Energy Division to implement a reformatted QCR and to make ministerial changes to the content and format of the report as needs arise. Energy Division and the IOUs finalized the QCR format in December 2008. This QCR is consistent with the final format authorized by Energy Division on December 15, 2008.

Compliance Items

Attachment 1 to this Advice Letter includes a narrative with supporting Confidential Attachments that conforms to the reformatted QCR. The public version of Attachment 1 includes the Narrative, which is not confidential. Attachments 2 and 3 include the public versions of Attachments G and H, respectively. The confidential version of the QCR includes the following supporting Confidential Attachments:

- Attachment A: Fourth Quarter 2018 Electric and Natural Gas Transactions
- Attachment B: Fourth Quarter 2018 Counterparty Information
- Attachment C: Fourth Quarter 2018 Electric Transactions Summary
- Attachment D: Fourth Quarter 2018 Natural Gas Transactions Summary

Attachment E:	Fourth Quarter 2018 Other Transactions
Attachment F:	Fourth Quarter 2018 Key Briefing Packages
Attachment G:	Fourth Quarter 2018 Independent Evaluator (IE) Reports
Attachment H:	Fourth Quarter 2018 New Contracts Executed/Contracts Amended
Attachment I:	Summary of Retained Generation Investments Completed During Fourth Quarter 2018
Attachment J:	System Load Requirements/Conditions
Attachment K:	Risk Management Strategy Communication and Management Disclosure
Attachment L:	Reasonable Number of Analyses Models, Description of Models, and How Models Operate
Attachment M:	Transactions Subject to Strong Showing for the Fourth Quarter

Attachment 4 to this Advice Letter includes confidentiality declarations and a matrix.

The public version of this QCR is provided to the service lists for Rulemakings (“R.”) 16-02-007. The confidential version of the QCR is provided to PG&E’s Procurement Review Group.

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

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than February 19, 2019, which is the first business day 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

In accordance with D.02-10-062, the requested effective date of this Tier 2 advice letter is March 1, 2019, which is 30 days after the date of filing.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter excluding the confidential appendices is being sent electronically and via U.S. mail to parties shown on the attached list and the service lists for R.16-02-007. Address changes to the General Order 96-B service list and all electronic approvals should be sent to e-mail 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. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs>.

/S/

Erik Jacobson
Director, Regulatory Relations

cc: Service List R.16-02-007 (Public Version)
PG&E's Procurement Review Group (Confidential Version)

Public Attachments:

Attachment 1: Narrative

Attachment 2: Attachment G (Public Version)

Attachment 3: Attachment H (Public Version)

Attachment 4: Confidentiality Declarations and Matrix



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: OXY1@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) #: 5475-E

Tier Designation: 2

Subject of AL: Procurement Transaction Quarterly Compliance Submittal (Q4, 2018)

Keywords (choose from CPUC listing): Compliance, Procurement

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 and D.03-12-062

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: See attached matrix that identifies all of the 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: Jay Bukowski (415) 973-1727, John Ulloa (415) 973-0535

Resolution required? Yes No Marianne Aikawa (415) 973-0375

Requested effective date: 3/1/19 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:

Advice 5475-E
January 30, 2019

Attachment 1

Narrative

PACIFIC GAS AND ELECTRIC COMPANY
PROCUREMENT TRANSACTION QUARTERLY COMPLIANCE REPORT
FOR THE FOURTH QUARTER OF 2018

January 30, 2019

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Summary of Attachments

- Public Attachment G: *Independent Evaluator Reports*, provides any relevant Independent Evaluator (IE) report(s) completed during the Quarter redacted to protect confidential information.
- Public Attachment H: *New Contracts Executed/Contracts Amended*, provides a summary of all agreements executed and/or amended during the Quarter redacted to protect confidential information.

Summary of Confidential Attachments

- Confidential Attachment A: *Transactions*, provides a summary of all transactions executed during the Quarter, which are less than five years in length and that have not been filed through a separate advice filing or application.
- Confidential Attachment B: *Counterparty Information*, provides a summary of (1) all non-investment grade counterparties with whom PG&E transacted; and (2) the top 10 counterparties by volume during the Quarter.
- Confidential Attachment C: *Electric Transactions Summary*, provides a summary of the electric transactions executed during the Quarter.
- Confidential Attachment D: *Natural Gas Transactions Summary*, provides a summary of the gas transactions executed during the Quarter.
- Confidential Attachment E: *Other Transactions*, provides the executed transactions resulting from non-energy-related products during the Quarter.
- Confidential Attachment F: *Key Briefing Packages*, provides a summary of all relevant Procurement Review Group (PRG) agendas and presentations presented.
- Confidential Attachment G: *Independent Evaluator Reports*, provides any relevant Independent Evaluator (IE) report(s) completed during the Quarter.
- Confidential Attachment H: *New Contracts Executed/Contracts Amended*, provides a summary of all agreements executed and/or amended during the Quarter.

Summary of Confidential Attachments
(Continued)

- Confidential Attachment I: *Summary of Retained Generation Investments Completed*, provides a summary of any investments related to retained generation facilities and multiple contracts for the same supplier, resource or facility, consistent with the requirements of D.07-01-039.
- Confidential Attachment J: *System Load Requirements/Conditions*, provides a summary of all information related to addressing PG&E's residual net open position.
- Confidential Attachment K: *Risk Management Strategy Communication and Management Disclosure*, provides a summary of all procurement-related risk strategies and issues communicated to PG&E's senior management.
- Confidential Attachment L: *Reasonable Number of Analyses Models, Description of Models, and How Models Operate*, provides a summary of any models related to the relevant transactions identified in this filing.
- Confidential Attachment M: *Transactions Subject to Strong Showing*, provides a summary and supporting documentation for strong showing transactions.

A. Introduction

As required by Ordering Paragraph (OP) 8 of Decision (D.) 02-10-062, and clarified in D.03-06-076, D.03-12-062, D.04-07-028, D.04-12-048 and D.07-12-052, Pacific Gas and Electric Company (PG&E) hereby provides its report demonstrating that its procurement-related transactions during the period October 1, 2018 through December 31, 2018, (Quarter) were in compliance with PG&E's Bundled Procurement Plan (BPP or Plan) approved by the California Public Utilities Commission (CPUC or Commission) in D.15-10-031.

B. Summary

During the Quarter, PG&E engaged in the following procurement activities in accordance with its BPP-approved procurement methods and practices:

1. **Competitive Solicitations (Approval Through the Quarterly Compliance Report (QCR))** –
 - a. None for the quarter.
2. **Other Competitive Solicitations (Approval Through Separate Advice Filing or Regulatory Process)** – PG&E is seeking approval through separate advice filings or other regulatory processes and are referenced here for informational purposes only:
 - a. Bioenergy Market Adjusting Tariff (bi-monthly auctions), ongoing
 - b. Renewable Market Adjusting Tariff (bi-monthly auctions)¹
 - c. 2018 Integrated Distributed Energy Resources Request for Offers (RFO) (issued November 14, 2018)
 - d. Winter Regional Renewable Choice RFO (issued November 13, 2018)
 - e. September 2018 Bundled RPS Energy Sale Solicitation (REC Solicitation) (issued September 20, 2018)
 - f. Regional Renewable Choice Summer 2018 RFO (issued August 24, 2018)
 - g. 2018 Oakland Clean Energy Initiative (issued April 13, 2018)

¹ The Removable Market Adjusting Tariff Program was suspended on December 15, 2017 by the Executive Director of the CPUC.

3. **Other Procurement Activities (Approval Through the QCR)** – PG&E also seeks approval of transactions executed from the following procurement activities, other than competitive solicitations, through the QCR:

a. Electric Transactions:

- i. California Independent System Operator (CAISO) Allocations and Auctions
 - a. CAISO Monthly Congestion Revenue Rights (CRR) Allocation and Auction Processes
 - b. CAISO’s 2019 Annual CRR Tier 1 Allocation, Long-Term Tier Allocation, Tier 2 Allocation, and Tier 3 Allocation Processes
- ii. CAISO Markets and Processes
 - a. Convergence Bidding
 - b. Capacity Procurement Mechanism (CPM)
- iii. Direct Bilateral Contracting for Short-Term Products
- iv. Bilateral Negotiated Contracts
- v. Electronic Solicitations
- vi. Market Request For Proposals (RFP): Load Serving Entity’s (LSEs) RFO
- vii. Transparent Exchange
 - a. Electric Hedges (in Compliance with D.15-10-031)

b. Gas Transactions:

- i. Transparent Exchanges
- ii. Direct Bilateral Contracting for Short-Term Products
- iii. Voice Brokers
- iv. Electronic Solicitations
- v. Cashouts

These procurement activities are described in greater detail in Section C.3, below.

4. **Other Procurement Activities (Approval Through Separate Advice Filing or Regulatory Process)** – During the Quarter, approval of contracts resulting from the following procurement activities was requested through separate advice filings or regulatory processes and are referenced here for informational purposes only:

- a. Bilaterally negotiated contracts or amendments executed pursuant to other regulatory requirements.
 - i. None for the quarter.

C. Master Data Request (MDR) Documentation

D.02-10-062, Appendix B, as clarified by D.03-06-076, sets forth specific elements to be addressed in this report. Each element is discussed below.

1. Identification of the ultimate decision maker(s) up to the Board level, approving the transactions.

All procurement-related activity during the Quarter was approved and executed either by, or under the direction of, Fong Wan, Senior Vice President, Energy Policy and Procurement; Gillian Clegg,² Director, Electric and Gas Acquisition; Martin Wyspianski, Senior Director, Renewable Energy; Marino Monardi, Director, Structured Energy Transactions; Joe Lawlor, Director, Portfolio Management; Chris McNeece, Director, Short-Term Electric Supply; and/or John Ulloa, Manager, Electric Gas Supply consistent with the delegation of authority effective for the period.

2. The briefing package provided to the ultimate decision maker.

The “decision-maker” for a particular contemplated transaction depends on many factors, such as term, volume, and notional value. For many of the transactions during the Quarter, the “decision-maker” was a gas or power trading employee executing transactions per an established plan or to achieve a particular objective (such as balancing the portfolio supply and demand). For such transactions, briefing packages are not prepared. Briefing packages prepared during the Quarter for transactions or procurement activities that required senior management approval are included in Confidential Attachment K. In addition, copies of presentations made by PG&E to its during the Quarter are included in Confidential Attachment F.

² Temporary Assignment for Aparna Narang – Senior Director, Energy Portfolio Commercial Operations.

3. Description of and justification for the procurement processes used to select the transactions.

a) Electric Procurement – Description

PG&E used BPP-approved electricity procurement transaction processes during the Quarter, including:

- CAISO Allocations and Auctions
 - CAISO’s Monthly CRR Allocations and Auctions
 - CAISO’s 2019 Annual CRR Tier 1 Allocation, Long-Term Tier Allocation, Tier 2 Allocation, and Tier 3 Allocation Processes
- CAISO Markets and Processes
 - Convergence Bidding
 - CPM
- Direct Bilateral Contracting for Short-Term Products
- Bilateral Negotiated Contracts
- Electronic Solicitations
- Market RFP: LSEs RFO
- Transparent Exchanges
 - Electric Hedges (in Compliance with D.15-10-031)
- Qualifying Facility/Combined Heat and Power (QF/CHP) Amendments Executed under the Combined Heat and Power (CHP) Settlement *(For informational purposes only)*
- Pro forma contracts executed under the CHP Feed-In Tariffs Program *(For informational purposes only)*

b) Electric Procurement – Justification

- i. For competitive solicitations held by PG&E, describe the process used to rank offers and select winning bid(s).*

PG&E did not execute any contracts during this Quarter through competitive solicitations for approval through this QCR.

- ii. For other transactional methods, provide the documentation supporting the selection of the chosen products.*

The approved procurement processes used during the Quarter and supporting documentation include the following:

- CAISO Allocations and Auctions

CAISO Monthly CRR Allocation and Auction Process

PG&E procures CRRs to narrow the distribution of PG&E's energy procurement costs due to expected electric transmission congestion. PG&E obtains CRRs, subject to risk assessment, for specific source/sink combinations as approved in its BPP.

PG&E acquires CRRs for any path (represented by a source-sink pair) connecting existing generation sources to existing loads (e.g., retail loads and Helms pumping load) or for any path that PG&E reasonably anticipates that 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 which are positively correlated in value with CRRs for paths that have limited availability. PG&E is also authorized to acquire CRRs for such positively correlated paths.

PG&E estimated that a portion of its generation, imports and load in the months of November 2018, December 2018, and January 2019, remained exposed to congestion risk, and, therefore, participated in the CAISO's monthly CRR allocation and auction process to obtain CRRs to mitigate this risk. In October 2018, November 2018, and December 2018, PG&E participated in the CAISO's monthly CRR allocation and auction processes to procure CRRs for November 2018, December 2018, and January 2019, respectively.

Relevant information for the Monthly CRR is included in Confidential Attachments F, J and L.

CAISO 2019 Annual CRR Allocation and Auction Processes

PG&E participated in the 2019 Tier 1 Allocation, Long-Term Tier Allocation, Tier 2 Allocation, and Tier 3 Allocation of the CAISO's 2019 Annual CRR Release Process. Awards from the Auction were posted on November 21, 2018. Combined results from the Tier 1, Tier 2, Tier 3, and Long-Term Allocations and Auction Processes are included in this QCR.

- CAISO Markets and Processes

Convergence Bidding

PG&E suspended Convergence Bidding activities after trade day May 26, 2018. As of December 31, 2018, all Convergence Bidding activities remain suspended. Relevant information is included in Confidential Attachments E, F and J.

Capacity Procurement Mechanism

Under the California ISO Tariff Section 43A, the CAISO is authorized to procure backstop capacity through a CPM Competitive

Solicitation Process (CSP) to maintain system and local reliability. The CAISO issued a CPM Significant Event for September and October 2018 in light of an alternate load forecast presented by California Energy Commission (CEC) staff. Following the September 2018 significant event, the CAISO extended the existing designations from September for an additional 60-day term. Relevant information is included in Confidential Attachments E and H.

- Direct Bilateral Contracting for Short-Term Products

Transmission capacity is purchased to relocate power from one point to another, often necessary outside a Regional Transmission Operator such as the CAISO. Relevant information is included in Confidential Attachment A.

- Bilateral Negotiated Contracts

Resource Adequacy – During the Quarter, PG&E executed a sale contract for Local and Other PG&E Area Resource Adequacy (RA) in an effort to eliminate its long position. RA sale transactions reduce PG&E’s long position resulting from load shift in its service territory and result in lower procurement costs for PG&E’s customers. Relevant information and supporting justifications are included in Confidential Attachments E, F, H and M.

- Electronic Solicitations

Resource Adequacy – During the Quarter, PG&E executed RA and Import Allocation Rights confirms in accordance with its BPP approved procurement methods and practices for the purchase of System and Local RA and the sale of System, Local, Flexible, Other PG&E Area, and Greater Bay Area RA capacity, as well as Import Allocation Rights. These transactions coincide with PG&E’s efforts to eliminate the long position resulting from load shift within PG&E’s service territory and to meet CAISO’s substitution requirements. Relevant information and supporting justification are included in Confidential Attachments E, F, H and L.

- Market Request for Proposal

Resource Adequacy – During the Quarter, PG&E executed confirms from other Load Serving Entities’ RFOs to sell excess System, Local, Flexible, Other PG&E Area, and Greater Bay Area RA capacity. RA sale transactions coincide with PG&E’s efforts to eliminate the long position resulting from load shift in its service territory. Relevant information is included in Confidential Attachments E, F and H.

Non-RPS Eligible Hydro – During the Quarter, PG&E executed a confirm from a LSE’s Market RFP to sell non RPS eligible hydro from

PG&E’s portfolio of non RPS eligible hydro resources. Relevant information is included in Confidential Attachments E and H.

- Transparent Exchange

Electric Hedges (in Compliance With D.15-10-031) – PG&E executed no electric hedges during the Quarter. Relevant information is included in Confidential Attachments A and L.

- QF/CHP Legacy Contracts (for Informational Purposes Only)

Under the QF/CHP Program, QF generators may enter into one of two pro forma PPAs (i.e., Public Utility Regulatory Policies Act (PURPA) PPA for QFs up to 20 megawatts (MW), and As-Available Power Purchase Agreement (PPA) for CHP greater than 20 MW and limited energy production under the Program) during the Quarter. In addition, many of the remaining legacy QF contracts are still active and may require amendments or letter agreements to help the generator meet the requirements of the Commission’s CHP Program (e.g., GHG administration and metering issues) that were not required under the former program. Relevant information is included in the “Informational Purposes Only” Section of Attachment H.

- CHP Feed-in Tariffs (for Informational Purposes Only)

Under the Waste Heat and Carbon Emissions Act, codified as California Public Utilities Code (Pub. Util. Code) Section 2840 et seq. (Stats. 2007, Ch. 713), the Commission established a standard tariff for the sale of electricity from efficient CHP systems under 20 MW, and directed the electrical corporations to purchase excess electricity from eligible CHP generators. A CHP generator that is certified by the California Energy Commission is eligible under the CEC’s legal and technical guidelines to obtain a CHP feed-in tariff. In D.09-12-042, the Commission approved three pro forma contracts for use with CHP systems (known as “AB 1613 PPAs”) that are applicable to generators of different sizes: a standard contract for CHP generators up to 20 MW, a simplified PPA for CHP generators less than 5 MW, and a further simplified PPA for smaller CHP systems under 500 kilowatts. Relevant information is included in the ‘Informational Purposes Only’ section of Attachment H.

c) Natural Gas Procurement – Description

PG&E procured natural gas during the Quarter using various BPP-approved procurement processes and methods, including:

- Competitive Solicitations
- Transparent Exchanges
- Direct Bilateral Contracting for Short-Term Products

- Voice and On-Line Brokers
- Electronic Solicitations
- Cashouts

d) *Natural Gas Procurement – Justification*

- i. *For competitive solicitations (RFOs), describe the process used to rank offers and select winning bid(s).*

PG&E did not execute any contracts during this Quarter through competitive solicitations for approval through this QCR.

- ii. *For other transactional methods, provide the documentation supporting the selection of the chosen products.*

- Transparent Exchanges: Electronic trading exchanges for transparent prices:

Commodity Purchases/Sales – PG&E buys and sells physical natural gas on Intercontinental Exchange (ICE) and the ICE Natural Gas Exchange (ICE/NGX) physical clearing service. ICE is an electronic system that matches buyers and sellers of natural gas products. Once buyer and seller are matched, ICE trades become bilateral trades. ICE/NGX trades are cleared by NGX, rather than bilaterally. Physical transactions in the Quarter include next-day and same-day transactions, for delivery periods of one to five days, and monthly transactions for deliveries each day of a calendar month. Relevant information of transactions executed via Transparent Exchanges during the QCR period is included in Confidential Attachment A.

Gas Hedges (in Compliance With D.15-10-031) – During the Quarter, PG&E conducts hedging activities in compliance with its approved Hedging Plan, and consistent with Advice Letter 5282-E. Hedge transactions are cleared through exchanges (ICE or the New York Mercantile Exchange (NYMEX)). ICE and NYMEX provide access to anonymous bids and offers establishing both a liquid and robust market for financial products, and a benchmark for over-the-counter products. These products include Henry Hub futures and options, and basis futures against the industry benchmark indices, including Canadian Gas Price Reporter (CGPR), Gas Daily, Natural Gas Intelligence (NGI) and Inside FERC (IFERC) Gas Market Report. Worksheets demonstrating PG&E’s compliance with D.15-10-031 during the QCR period are included in Confidential Attachment L.

- Direct Bilateral Contracting for Short-Term Products

Commodity Purchases/Sales – PG&E buys and sells physical gas directly with counterparties in the bilateral market. Spot gas (deliveries less than one month) is traded at fixed prices and daily index (Gas Daily or

CGPR). Prompt month supply (deliveries each day of the following month) and term gas (greater than one month forward or one month in duration) is traded at fixed price, daily index (Gas Daily or CGPR), or monthly or bi-week index (CGPR, NGI, or IFERC) prices. For any bilateral physical supply trades with a term of one month, PG&E concluded these transactions bilaterally, but also used electronic solicitation methods, such as instant messaging, e-mail, voice solicitation (telephone), Real-Time Market (RTM) prices, and/or broker quotes, to inform and conduct these transactions. Relevant information executed during the QCR period is included in Confidential Attachments A and M.

- Voice Brokers – Gas Hedges

PG&E executes natural gas hedges (futures) through voice brokers that resulted in exchange-cleared trades. Brokers provide access to anonymous bids and offers from both over-the-counter parties and cleared counterparties. After a broker matches a buyer and a seller in a trade, the parties will determine whether the trade will be settled over-the-counter or cleared through NYMEX or ICE. The broker market trades the same financial products as the exchanges. Relevant information of transactions executed via voice brokers during the QCR period is included in Confidential Attachment A.

- Voice Brokers – Commodity Purchases/Sales

PG&E executes physical gas supply transactions through voice brokers that resulted in transactions. Brokers provide access to anonymous bids and offers from both over-the-counter parties and cleared counterparties. After a broker matches a buyer and a seller in a trade, the parties will determine whether the trade will be settled over-the-counter or cleared through NGX. The broker market trades the same products as the bilateral market. Relevant information of transactions executed via voice brokers during the QCR period is included in Confidential Attachment A.

- Electronic Solicitations

Conducted via Instant Messaging and Telephone – PG&E conducts electronic solicitations for the purchase of physical gas supply, with delivery terms one month or longer, using instant messaging and telephone. In this way, PG&E is able to obtain robust price quotes from the marketplace, in real time, and may then execute with the counterparty with the best offer(s). Relevant information of transactions executed via electronic solicitation during the QCR period is included in Confidential Attachment A.

PG&E conducted an electronic solicitation for natural gas storage products in October. Prior to issuing the solicitation, PG&E issued a Notice of Intent to all storage providers connected to the PG&E natural

gas system. Four providers indicated intent to participate in the solicitation and all four providers submitted offers (PG&E's California Gas Transmission was not among these four providers). PG&E evaluated the four offers and selected one offer that better aligns with PG&E's portfolio needs. Relevant information is included in Confidential Attachments A, E, F, H, L and M.

- Cashouts: Commodity Purchases/Sales

Cashouts are used by gas pipelines, according to their tariff, to cure certain imbalances between supply and demand. When a pipeline applies a cashout, it results in a commodity transaction. Relevant information is included in Confidential Attachment A.

e) *GHG and Other Commodities*

i. For competitive solicitations, describe the process used to rank offers and select winning bid(s).

- PG&E did not execute any contracts during this Quarter through competitive solicitations for approval through this QCR.

ii. For other transactional methods, provide the documentation supporting the selection of the chosen products.

- PG&E received its annual allocation of Electric Distribution Utility (EDU) Current Vintage allowances for the 2018 year from the CARB in October 2017. All of the EDU allowances were consigned into the 2018 CARB Auctions as required by the regulations and consistent with PG&E's BPP. CARB and Québec's ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques held a joint allowance auction on November 14, 2018, for Current 2016, 2017, and 2018 Vintage and Advance 2021 Vintage allowances.
- PG&E is authorized to procure GHG products through CARB Auctions and other CPUC-approved procurement processes and methods. PG&E provided information regarding its bilateral market procurement strategy to the PRG.
- All relevant GHG transactional information and supporting justification is included in Confidential Attachments E, F and L.

4. Explanation/justification of the timing of the transactions

a) *Electric Transactions*

When selecting electric transactions, the best-priced bids/offers are selected first (merit-order selection) among those available for the required products at the time of the transaction, subject to credit and other limitations and operational

constraints. Detailed explanation/justification for the timing of the transactions is included in Confidential Attachment J.

b) Natural Gas Transactions

For daily physical gas transactions, timing of execution is primarily driven by the requirement to match fuel usage by utility-owned and contracted electric generating units and supply delivered on a daily and monthly basis, and by the availability of information impacting expectations for daily dispatch of these units. For transactions one month or longer, PG&E typically fills its forecast short gas positions in month-ahead, seasonal, or annual blocks, depending on the liquidity and prices available in each of these markets. Execution of term transactions was based on the PG&E Electric Portfolio Quarterly Position Update and Preview of Q4 -2018 Physical Gas Transactions, presented to the PRG on September 18, 2018. Documentation supporting the timing of transactions is included in Confidential Attachment J.

5. Discussion of the system load requirements/conditions underlying the need for the Quarter's transactions

a) PG&E Participation in the CAISO Markets

PG&E participates in the CAISO Day-Ahead and Real-Time markets. PG&E's day-ahead planning and procurement incorporates weather-adjusted load forecasts, resource availability, price forecasts, dispatch costs and current bilateral electric market and forecasts of the CAISO's Integrated Forward Market (IFM) prices. The results of this process allow PG&E to determine the incremental costs of dispatchable resources that are bid into the IFM and the RTM. It also determines the price upon which PG&E is willing to pay the CAISO for meeting its hourly load. The CAISO then assures least cost dispatch by considering all resources simultaneously with all transmission constraints.

In the RTM, similar to the day-ahead market, PG&E submits resource bids and schedules into CAISO markets and those resources that clear the market will be obligated to operate in real time.

b) PG&E-Owned Generation Conditions During Fourth Quarter 2018

PG&E received 80 percent of normal rainfall during the Quarter.

Helms Pumped Storage Facility (Helms) was used throughout the Quarter as system conditions and economics allowed. There were three planned outages at Helms during the Quarter for annual maintenance on Units 1, 2 and 3. There were no maintenance or forced outage events at Helms lasting longer than 72 and 24 hours during the Quarter, respectively.

Planned outages lasting longer than 72 hours on conventional hydro facilities greater than 30 MW during the Quarter included: Cresta Unit 1 and 2 (70 MW total), Drum 1 Units 1, 2, 3 and 4 (54 MW total), Drum 2 Unit 5 (49.5 MW), Electra Units 1, 2, and 3 (98 MW total), James B. Black Units 1 and 2 (172 MW total), Kerckhoff 2 Unit 1 (155 MW), Pit 1 Units 1 and 2 (61 MW total), Pit 3 Units 1, 2 and 3 (23.3 MW, each), Pit 5 Units 1, 2 and 3 (40 MW, each), Poe Unit 2 (60 MW), Rock Creek Unit 1 and 2 (126 MW total), Salt Springs Unit 1 and 2 (44 MW total), and Stanislaus Unit 1 (91 MW total). Ten of the planned outages started in the previous Quarter and four will continue into the next Quarter.

In addition, there were maintenance outages lasting longer than 72 hours at: Haas Units 1 and 2 (144 MW total) and Salt Springs Unit 1 (11 MW).

Forced outages lasting longer than 24 hours at conventional hydro facilities greater than 30 MW during the Quarter were incurred at the following facilities: Belden (125 MW), Bucks Creek Unit 1 (33 MW), Butt Valley (41 MW), Caribou 1 Unit 2 (25 MW), Caribou 2 Units 4 and 5 (120 MW total), Drum 1 Unit 1 (13.2 MW), Electra Units 1, 2, and 3 (98 MW total), Pit 1 Unit 2 (30.5 MW), Pit 3

Units 1 and 2 (23.3 MW, each), Pit 5 Unit 4 (40 MW), Poe Unit 1 (60 MW), and Salt Springs Unit 2 (33 MW).

At PG&E's fossil combined cycle facilities there were no planned or maintenance outages during the Quarter. There was one forced outage greater than 24 hours at Gateway Combined Cycle Facility lasting approximately 3.5 days starting November 18 due to clogged combustion turbine inlet filters from poor air quality caused by the Camp Fire.

At PG&E's Humboldt Bay Generating Station there were two planned outages on Unit 6 and Unit 7 during the Quarter for major engine maintenance. There were two maintenance outages lasting longer than 72 hours during the Quarter on Unit 9 and Unit 10. There were no forced outage events at Humboldt Bay Generating Station lasting longer than 24 hours during the Quarter.

During Fourth Quarter 2018, Diablo Canyon Power Plant Unit 1 operated at 95.7 percent capacity factor, experiencing 2 days curtailed to 55 percent power for storm seas and ocean cooling water system cleaning and 6 days curtailed to 55 percent power to investigate and resolve vibration in a main feedwater pump, located in the secondary, non-nuclear side of Unit 1 operation.

During Fourth Quarter 2018, Diablo Canyon Power Plant Unit 2 operated at 95.5 percent capacity factor, experiencing a 2.3-day automatic forced shutdown caused by a grid system protection problem and 1.8 days curtailed to 47 percent power for storm seas and ocean cooling water system cleaning.

6. Discussion of how the Quarter's transactions meet the goals of the risk management strategy reflected in the Plan.

As described in Section 3.b. and 3.d. above, during the Quarter, PG&E executed transactions in accordance with its Hedging Plan. A list of relevant information regarding Consumer Risk Tolerance notifications and management disclosures is included in Confidential Attachments F and K.

7. Copy of each contract.

A list of transactional contracts executed and/or modified by PG&E during the Quarter is included in Confidential Attachment H. Copies of the contracts PG&E seeks approval of through this QCR are also included in this attachment.

8. The valuation results for the contract(s) (for contracts of three months or greater duration).

PG&E provides the valuation method and results for the contracts filed via this QCR in Confidential Attachment H.

9. An electronic copy of any data or forecasts used to analyze the transactions.

Because transaction personnel are continuously monitoring a wide range of market information on a 24-hour-per-day, 7-day-per-week basis, it is not feasible to provide all the data and forecasts used to analyze all potential and executed transactions. However, key analysis data utilized during the Quarter is in Confidential Attachment J.

10. Provide a reasonable number of analyses requested by the Commission or the PRG and provide the resulting outputs.

To the extent any analyses requested by the Commission or PRG during the Quarter were not already included as a part of PG&E's response to Items 1 through 9 above, such additional analyses would be contained in Confidential Attachment F.

11. Any other information sought by the Commission under the Pub. Util. Code.

To the extent that the Public Advocates Office has requested information for the Quarter as identified in its MDR, this information will be included in PG&E's MDR response and submitted to the Public Advocates Office 14 days after the filing of the QCR. In addition, the Commission's Energy Division has requested that PG&E provide transparent exchange traded prices. PG&E has included this information in Confidential Attachments A and E.

D. Additional Reporting Requirement Pursuant to D.07-01-039

As required by OP 12 of D.07-01-039, PG&E has included in Confidential Attachment I, investments in retained generation that were completed during the Quarter, as well as any multiple contracts of less than five years with the “same supplier, resource or facility” as required in D.07-01-039 on page 154. There were no transactions or investments to report during the Quarter.

E. Cost Allocation Mechanism

For the Quarter, PG&E executed a PURPA contract that qualifies as a Cost Allocation Mechanism (CAM) resource under the QF/CHP Settlement.

Advice 5475-E
January 30, 2019

Attachment 2

Attachment G (Public Version)

**Pacific Gas and Electric
Public Attachment G
Fourth Quarter 2018**

RFO Independent Evaluator Reports:

Contract Description/ Counterparty Name	Contract Term	Execution Date	IE Report Workpaper Citation
Independent Evaluator Report: 2019 Resource Adequacy E-Solicitation			2019 RA RFO IE Report _Jan2019 _Redacted Final.pdf
Independent Evaluator Report: February – December Resource Adequacy E-Solicitation January 2019			Feb-Dec 2019 RA E-Solicitation IE Report _Jan2019 _Redacted Final.pdf



PACIFIC GAS & ELECTRIC

Independent Evaluator Report: 2019 Resource Adequacy E-Solicitation

January 2019



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Version no: 1.0

Document reference: PGE RA19

EXECUTIVE SUMMARY

PA Consulting Group, Inc. (PA) served as the Independent Evaluator (IE) for the Pacific Gas & Electric (PG&E) 2019 Resource Adequacy Request for Offers (2019 RA E-Solicitation or the E-Solicitation or the Solicitation) solicitation. This report provides PA's evaluation of the process from the drafting of the 2019 RA E-Solicitation documents through to the recommendation of selected bids and negotiations of contracts submitted to the California Public Utilities Commission (CPUC or Commission).

Overview of solicitation

PG&E issued its 2019 RA E-Solicitation on September 14, 2018. The Solicitation was conducted as an "E-Solicitation", meaning that there was no typical Request for Offers released to the public, and no typical RFO website maintained by PG&E. The E-Solicitation was conducted entirely via email. Conducting an E-Solicitation is consistent with how counterparties seeking to procure RA have transacted for the product.

Through this solicitation, PG&E offered to sell and requested bids for the following types of Resource Adequacy (RA):

- System RA
- Local RA
- Flexible RA
- RA Import Allocation Rights

For all of the RA types listed above, PG&E solicited interest and offers to purchase RA in both annual and monthly transactions. [REDACTED]

PG&E did not specify the amounts of RA capacity it wished to sell. Ultimately, PG&E contracted for nearly [REDACTED] of RA capacity sales, including [REDACTED] with Flexible attributes, and [REDACTED] of RA Import Allocation Rights.

PA's IE Report

PA's IE report generally follows the CPUC's Solicitation Shortlist Report Templates. The main sections include:

- Section 1: Summary of PA's role as IE for this Solicitation
- Section 2: PG&E's outreach efforts
- Section 3: PG&E's methodology design

- Section 4: Fairness of the application of PG&E's Bid Evaluation Criteria
- Section 5: Merit of Solicitation shortlist
- Section 6: Fairness of negotiations
- Section 7: PA support for contract approval

Main IE activities during solicitation

PA's role in PG&E's 2019 RA E-Solicitation spanned from late August 2018 through early November 2018. The following provides a summary of PA's main activities during this solicitation:

- PA worked with PG&E prior to the issuance of the 2019 RA E-Solicitation to review all aspects of the protocol and methodologies for the E-Solicitation bid conformance, evaluation and selection process.
- PA reviewed and commented on drafts of the 2019 RA E-Solicitation bid documents prior to PG&E issuing the E-Solicitation.
- PA received all communications between PG&E and bidders through PG&E's email system. PA directly received all the emails, including bids that were sent to and received from bidders. PA also participated in the majority of, though not all, negotiation calls that PG&E had with individual bidders.
- PA reviewed all bids, prepared conformance checks, and reviewed conforming bids. PA compared our findings with PG&E's results and confirmed bidder rankings.
- PA reviewed PG&E's shortlisted bids and discussed with PG&E the reasons for bidders not being shortlisted, which primarily consisted of PG&E having insufficient RA length to sell in certain months, and of certain bidders' bid prices.
- PA was included in most of PG&E's contract negotiation meetings (via phone or in person) with selected bidders to ensure that the negotiation process was fair.
- PA participated in Procurement Review Group (PRG) meetings in August and October 2018.

High level summary of findings

Overall, PA confirms that PG&E conducted a fair and equitable 2019 RA E-Solicitation.

Some specific findings are noted below:

- PG&E in no way prevented PA from observing its process and analyzing its methods and did not interfere with PA's conducting the Independent Evaluation.
- PA finds that PG&E's outreach for this Solicitation was adequate, the E-Solicitation was clear and concise, and that PG&E further clarified its position in several follow-up bidder questions and direct phone calls.
- Based on our review of PG&E's analysis, our participation in calls and meetings and other IE activities, PA finds that PG&E conducted the 2019 RA E-Solicitation evaluation analysis fairly and selected appropriate offers in the Solicitation.

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1 DESCRIBE THE INDEPENDENT EVALUATOR'S ROLE

This section provides a description of the role of the Independent Evaluator (IE) throughout the solicitation and bid selection process, including PA's specific activities for the 2019 Resource Adequacy (RA) E-Solicitation.

1.1 Summary of the 2019 RA E-Solicitation

The PG&E issued its 2019 RA E-Solicitation on September 14, 2018. Through this solicitation, PG&E offered to sell RA products and requested bids for the following types of RA: System and Local, with or without the Flexible attribute; additionally, the Solicitation requested bids for RA Import Allocation Rights. Bids were originally due by September 25, 2018; a slight change to the solicitation resulting in the bid deadline extension to September 26, 2018.

PG&E received bids from [REDACTED] counterparties for RA and [REDACTED] counterparties for RA Import Allocation Rights. After bid compliance checks and evaluations, PG&E sent shortlist notifications to [REDACTED] and [REDACTED] on October 10, 2018.

PG&E ultimately transacted with [REDACTED] shortlisted RA bidders and the [REDACTED]. PG&E was forced to discontinue negotiations with [REDACTED] due to timing constraints.

1.2 IE's key roles and responsibilities

The role of the IE is to provide advice to the utility on the design, administration, and evaluation aspects of the E-Solicitation. The CPUC has clarified that the role of the IE is not to conduct or administer the solicitation, but to "separately evaluate and report on the IOU's entire solicitation, evaluation, and selection process."¹

Additionally, the IE is to ensure that PG&E treats all bidders fairly and equitably and that no counterparty is favored over another. The IE also ensures that the bid selection process is transparent and is aligned with the procurement requirements. PG&E can also call on the IE's advice as to various evaluation issues that may arise during the E-Solicitation process.

1.3 PA's role as IE

PA performed the role of IE for the 2019 RA E-Solicitation and was involved from PG&E's development of the E-Solicitation materials through the selection of the bids and the negotiation of contracts. PA ensured that the procedures followed by PG&E were aligned with the process it established in its E-Solicitation and provided fair and equitable treatment of all bids. PA was in regular contact with PG&E staff throughout the process, addressing PG&E's questions, identifying and resolving potential issues, and providing recommendations throughout the process.

¹ D. 06-05-039, p. 46.

1.3.1 Solicitation planning meetings

PA reviewed the E-Solicitation prior to its issuance and held discussions with PG&E regarding the development of the solicitation protocol, evaluation methodology, draft Confirmation Agreement, and other solicitation materials.

1.3.2 Solicitation materials

PG&E developed the solicitation materials to reflect the specifics of the 2019 RA E-Solicitation. This E-Solicitation was intended to be a simple and straightforward sale of RA, and PG&E kept the solicitation materials clear and concise. PG&E shared early copies of the draft solicitation materials and the final draft just prior to the E-Solicitation issuance with, and PA provided comments in a timely manner.

1.3.3 Bid submittal process

The E-Solicitation was issued on September 14, 2018 via emails sent to PG&E's wholesale RFO distribution list and PG&E's E-Solicitation RA list. Bidders were instructed to submit email bids consisting of the required bid documents in the electronic format specified in the E-Solicitation protocol.

The E-Solicitation Protocol included instructions that as IE, PA was to be copied on all bid submittal emails. PA was copied on all submittals and subsequent communications with bidders.

1.3.4 Communication with bidders

PG&E communicated with bidders primarily via email. PG&E provided E-Solicitation documents and update notices to bidders through email notifications. Bidders submitted clarifying questions to PG&E via email; PA was copied on these questions and their responses.

1.3.5 Initial bid review and conformance check

Once the bids were received, PG&E prepared its conformance check. PA independently reviewed the bids as well. Given the simplicity of the E-Solicitation, its products and its evaluation criteria, PG&E and PA did not find any of the bids to be non-conforming, excepting two incomplete bids and two late bids described below in sections 4.3 and 4.4.

PA also reviewed, participated in calls and provided comments to PG&E, as appropriate, related to PG&E's clarification of the E-Solicitation with the bid deadline extension. This process is described further in Section 4.5.

1.3.6 Evaluation process

PG&E prepared a ranking of all the bids offered according to the bid price. PA ranked the bids and found that ranking to be identical to PG&E's initial ranking. PA was able to verify our interpretation of the bids to confirm PG&E's results.

1.3.7 Shortlist determination

PG&E provided PA a copy of the proposed shortlist [REDACTED]

[REDACTED] PA reviewed this information and confirmed PG&E's interpretation of the bids, including their price ranking and PG&E's rationale for choosing each shortlisted bid.

PG&E sent shortlist notifications to [REDACTED] for RA transactions and [REDACTED] for RA Import Allocation Rights on October 10, 2018. At that time, PG&E also notified the remaining bidders that their bids had not been selected for transactions

1.3.8 Contract negotiation

PG&E began negotiations with the selected bidders immediately following the shortlisting notifications. PA monitored all email communications during negotiations and participated in most of the negotiation meetings via phone. More details of any negotiation observations and issues are discussed further in Section 6.

1.3.9 PG&E's Procurement Review Group meetings

PA participated in the August 28, 2018 and October 9, 2018 PRG meetings concerning this E-Solicitation. PA was available to answer questions and provide additional feedback during this meeting as appropriate.

2 ADEQUACY OF PG&E'S OUTREACH

This section addresses the adequacy of PG&E's outreach as well as the solicitation materials.

2.1 Notifications and announcements

PG&E's outreach included notifications to PG&E's E-Solicitation RA list. Because the E-Solicitation involved RA products, there was a limited number of counterparties who could be expected to participate in the E-Solicitation, as either load serving entities or their representatives.

Additionally, PG&E reached out to approximately 19 likely counterparty participants shortly after the solicitation was launched, to confirm they received the E-Solicitation, remind them of deadlines, and ask whether they have questions. PG&E provided PA with a log of these calls and their outcomes.

PA believes that PG&E extended adequate outreach for the 2019 RA E-Solicitation.

2.2 Solicitation material

PG&E created E-Solicitation materials for the four primary product types included in the 2019 RA E-Solicitation: System and Local, with or without the Flexible attribute, and RA Import Allocation Rights.

The solicitation materials were delivered via PG&E's E-Solicitation emails on September 14, 2018. Subsequent to the delivery of the E-Solicitation, PG&E also created informational material for potential bidders in the form of a Frequently Asked Questions ("FAQ") document. These FAQs addressed questions received from bidders and were provided to bidders on September 24, 2018.

In PA's opinion, PG&E provided appropriate E-Solicitation materials and provided prompt response to any questions received by potential bidders.

2.3 Feedback after solicitation

PA is not aware of any feedback that PG&E requested from bidders related to the solicitation. Having been copied on all email communications related to the E-Solicitation, PA believes that potential bidders, while having a small number of clarification questions, were fully able to understand the E-Solicitation documents and were satisfied with the level of information PG&E provided in the solicitation materials.

3 PG&E'S BID EVALUATION DESIGN

This section describes PG&E's bid evaluation methodology for fair offer evaluation.

3.1 Principles used to evaluate methodology

PA used the following principles to guide its evaluation:

- The procurement targets and objectives should be clearly defined in PG&E's solicitation materials;
- The evaluation should only be based on those criteria requested in the response form;
- The methodology should identify how quantitative measures will be considered and be consistent with an overall metric;
- The approach should not be biased for or against specific counterparties; and
- The methodology does not have to be the one that the IE would independently have selected but it needs to be "reasonable".

3.2 Amount and type of RA products

PG&E issued the 2019 RA E-Solicitation to sell a portion or all of its excess RA in 2019. PG&E did not specify the amount of RA it was seeking to sell in the E-Solicitation; rather, PG&E requested each bidder to identify the amounts of System, Local, Flexible RA and RA Import Allocation Rights it was seeking to purchase. PA believes this approach was fair and put all potential bidders on a "level playing field" while at the same time encouraging competitively priced bids which would maximize the value of the RA E-Solicitation to PG&E and its customers.

3.3 Description of PG&E's bid evaluation methodology

PG&E's valuation and selection approach was intended to evaluate the different product types on as equal a footing as possible. The initial step included a conformance check of each offer. The conforming offers then went through a bid pricing analysis to rank the offers based on their proposed pricing to PG&E as well as their relative value in comparison to other offers. The methodology considered both quantitative as well as qualitative factors as described below.

3.3.1 Conformance check

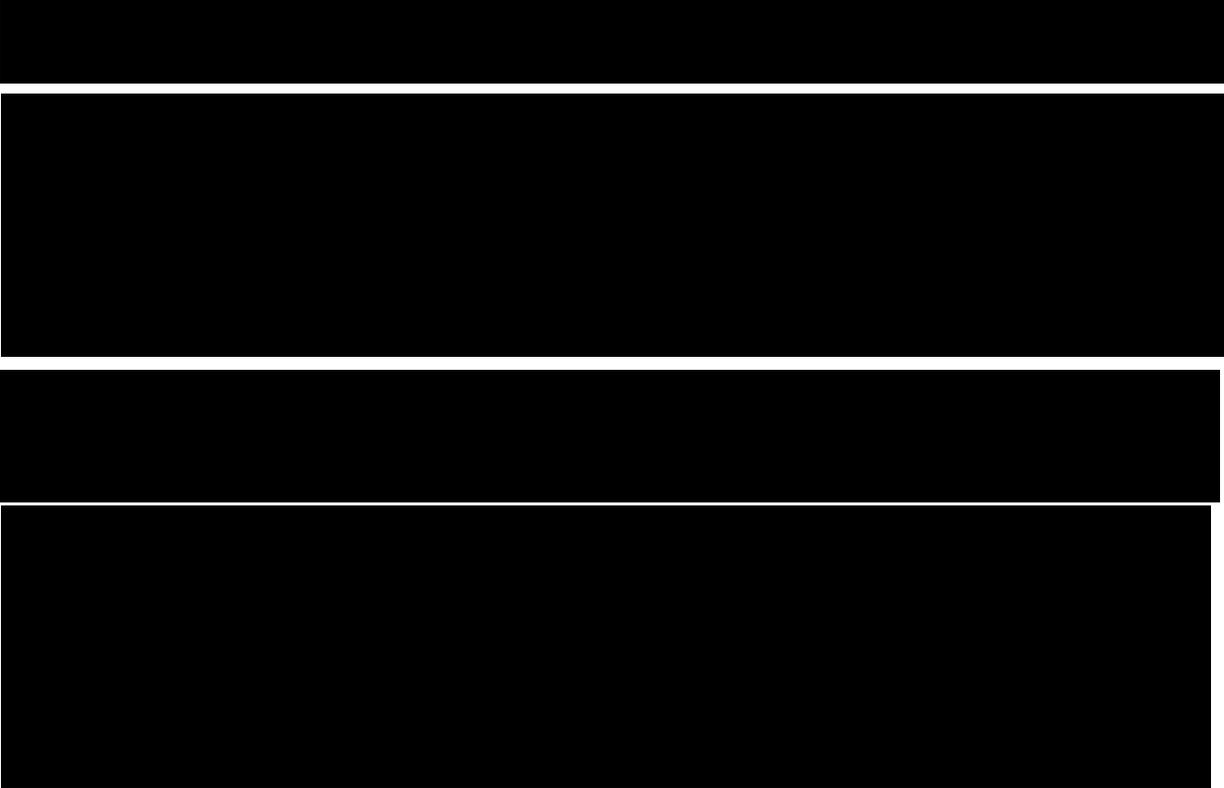
The initial analysis included an assessment of conformance. All offers needed to conform to the minimum participation criteria and eligibility. The RA E-Solicitation was less complex than other procurement processes in which the utility is seeking to acquire resources, and as such had more limited conformance requirements.

The conformance requirements were generally limited to the following required documents:

- A redline mark-up of the RA Confirmation or a statement that the bidder accepts PG&E's form RA Confirmation without change; and
- An RA Bid Form Template, indicating the types, delivery term, and volumes the bidder wished to purchase.

Bids were required to be submitted electronically to PG&E’s E-Solicitation email address, and were required to copy PA as the IE for this E-Solicitation on all submittals and subsequent communications.

3.3.2 Quantitative bid evaluation



RA confirm agreement

As part of the bid submittal, bidders were required to either provide a redlined copy of PG&E’s proposed RA Confirmation Agreement, identifying the degree to which a participant modified the RA Confirm. For those bidders who bid equal pricing, bids that made few or no material or substantive changes to the RA Confirm were considered to be stronger than bids that made multiple such changes; in this manner, the proposed edits to the RA Confirmation Agreement would serve as a “tiebreaker” between two or more equally priced bids.

3.4 Evaluation of PG&E’s methodology

Overall PA believes that PG&E’s methodology is reasonable. This judgment is within the context of the principles set forth in Section 3.1. This section addresses the application of PG&E methodology and the review of PG&E’s results is provided in Section 4.

4 FAIRNESS OF PG&E BID EVALUATION

This section addresses the application or administration of the methodology described in Section 3.

4.1 Principles IE used to evaluate evaluation methodology

As in the previous section, PA used the following principles to guide its evaluation, and in this case phrased as questions:

- Were bidder questions answered fairly and consistently and the answers made available to all?
- Did the utility ask for "clarifications" that provided the bidder an advantage over others?
- Were bids given equal credibility in the economic evaluation?
- Were qualitative factors used only to distinguish among substantially equal bids?

4.2 Administration of bid evaluation process

A description of PA's activities in its role as IE is provided in Section 1. Based on PA's participation and observations we believe that:

- Bidder questions were answered fairly and consistently
 - PA monitored all communications between bidders and PG&E including questions, and believes the questions posed were reasonably and fairly answered
 - PG&E provided an FAQ document via email to all prospective bidders
- PG&E's clarification questions were minimal and reasonable, and did not advantage any bidder
- PG&E applied conformance requirements fairly to all bids and consistent with bid documents
- All conforming bids were given equal credibility in the quantitative evaluation
- Bids were ranked and evaluated as consistently as possible
- PG&E's evaluation of bids and selection of short listed bids conformed to the E-Solicitation documents

4.3 IE's review of PG&E's conformance checks

Once the bids were submitted and the E-Solicitation closed, PG&E began an initial conformance check. PA also received a complete copy of all of the bids as they were submitted and prepared an independent assessment to determine if the bids conformed the E-Solicitation requirements. Given the E-Solicitation was relatively straightforward with few requirements, PA did not anticipate and in fact did not identify any non-conforming bids.

However, [REDACTED] bidders submitted unclear or incomplete bids prior to the bid submittal deadline. PG&E discussed the incomplete bids with PA prior to requesting clarification from the bidders; PA agreed it would be appropriate to seek clarification of the bids. PG&E requested clarification of the bids via email requests and received subsequent clarification submittals from the bidders, and PA was copied on all communications and received the clarification submittals.

4.4 Review of PG&E's Bid Rejections

█ bidders submitted bids after the submittal deadline. In both cases, the submittals were unsolicited revisions to the bidders' original bids. In both cases, PG&E discussed the post-deadline bids with PA, and PA agreed it would be inappropriate to accept the late bids. PG&E subsequently informed the bidders that PG&E could not accept the bids in question and would be evaluating the bidders' original submittals. With the exception of these █ late bids, PA is not aware of any bids which PG&E rejected for non-conformance.

4.5 Review of PG&E's E-Solicitation revision and bid deadline extension

During the E-Solicitation, PG&E determined that due to revisions of PG&E's RA positions, █ When PG&E determined this, it discussed the issue with PA and determined to notify all bidders and extend the bidding deadline. PA agreed with the decision and believes it was appropriate.

As a result, on September 24, 2018, PG&E informed all E-Solicitation recipients that for the purposes of the E-Solicitation, PG&E would not be considering bids █

To allow bidders to make any necessary adjustments to their bids, PG&E extended the deadline to submit bids to Wednesday, September 26, 2018. No other dates from the estimated timeline were impacted.

4.6 Review of PG&E's application of the bid evaluation methodology

PG&E ranked each bidders' proposal by month and by bid price.

4.6.1 Review of supply curves and general assumptions

PA reviewed the supply curves that PG&E developed to evaluate the bids and found them reasonable.

4.6.2 Review of evaluation of offers

PA reviewed PG&E's quantitative evaluation through a comparison of PG&E's ranking of the bids received with PA's own ranking. Through this process, PA was able to review and confirm PG&E's interpretation of the data as well as the application of the quantitative ranking. █

4.6.3 Selection of shortlist

PG&E created a summary table of all of the bids for each month for each of the conforming bids evaluated and sorted to determine the highest value bids. PG&E identified █ from the original bids and notified both the shortlisted and non-shortlisted bidders of their respective status on October 10, 2018.

4.7 Fairness of PG&E's evaluation

Based on PA's review of PG&E's analysis, participation in calls and meetings and other IE activities, PA believes that PG&E conducted the 2019 RA E-Solicitation evaluation analysis fairly. █

5 MERIT OF E-SOLICITATION SHORTLIST

Through the bid evaluation and selection process, PA believes that PG&E selected the best offers submitted for the 2019 RA E-Solicitation.

5.1 Did PG&E conduct the solicitation consistent with Commission decisions and PG&E's defined bid evaluation methodology?

It is PA's opinion that PG&E conducted a fair solicitation consistent with Commission decisions and PG&E's defined bid evaluation methodology.

5.2 Do selected shortlisted bids provide the best overall value to ratepayers?

PA believes PG&E fairly selected its shortlist of bids for the 2019 RA E-Solicitation.

5.3 Did the shortlist conform to PG&E's RA sales strategy?

The shortlist prepared by PG&E did conform to the RA sales strategy.

Primarily due to increasing CCA load-shifting, PG&E has seen an increasing surplus of RA in PG&E's Bundled Portfolio. PG&E's Bundled Procurement Plan provides for PG&E's goal of providing affordable electric service for its bundled customers. [REDACTED]

5.4 Reasonableness of the shortlist

In PA's opinion, PG&E's shortlist was reasonable.

6 FAIRNESS OF E-SOLICITATION NEGOTIATIONS

PA closely monitored the contract negotiations and PG&E gave PA the opportunity to join negotiation teleconferences, provided PA copies of contract drafts, included PA on e-mails, and instructed counterparties to include PA on all communications.

6.1 Principles PA used to evaluate fairness of negotiations

PA applied the following three principles to evaluate the fairness of negotiations:

- PG&E should not show favoritism toward any bidder by allowing contract conditions not offered to other bidders unless those conditions are balanced by comparable concessions by the bidder;
- PG&E should not negotiate harder or less hard with a bidder than with any other bidder; and
- PG&E should not attempt to impose contract conditions in the negotiation that significantly change the balance of the bargain, relative to what the bidder could have reasonably expected based on the E-Solicitation materials.

6.2 Describe fairness of negotiations

PA participated in most of the negotiation meetings and received copies of red-lined draft contract documents to review. The negotiations largely consisted of discussions related to collateral requirements, pre-payment terms, and minor other edits to PG&E's Standard RA confirm. PA believes that PG&E treated bidders consistently and fairly (the first two principles above).

6.3 Review of negotiations which were terminated

During the negotiation phase of the 2019 E-Solicitation, PG&E terminated negotiations with one shortlisted bidder, [REDACTED]. PG&E felt it was necessary to terminate negotiations with the bidder as the 2019 Annual Compliance showing deadline was nearing and PG&E required three days for management review of all negotiated transaction confirmation documents.

PG&E did not reach the decision to terminate negotiations lightly. The bidder accepted its shortlisted positions on Friday, October 12, and was provided a draft transaction confirmation document on Wednesday, October 17. The bidder initially asked if it would be possible to use the version of prior transaction confirmations which PG&E and the bidder had executed on previously. PG&E indicated that to achieve consistency across transactions and facilitate future transactions, PG&E management was requesting that all RA transactions be executed using its recently adopted Standard RA Confirmation.

From October 18 through October 22, PG&E requested updates on the status of the confirmation review from the bidder. On October 23, the bidder indicated that final redlines of the proposed confirmation would be forthcoming by the end of the day. On October 24, having received nothing, PG&E again requested an update from the bidder, stressing that it would need to have the confirmation document finalized by early morning on October 25 to have sufficient time for PG&E management review and finalization in time for the Annual

Compliance showing deadline. By late afternoon on October 25, having not heard from the bidder, PG&E discussed the situation with PA and indicated it would likely terminate negotiations by the end of that day. Before PG&E did so, the bidder responded with what it termed as a “non-exhaustive” list of issues it would like to discuss and indicated that it would need until the following day to provide PG&E with its full set of confirmation edits.

At this point, PG&E felt it was necessary to terminate negotiations, as it did not feel there would be sufficient time to finalize negotiations, conduct a PG&E management review of the final documents, and meet the Annual Compliance showing deadline.

PA monitored all email negotiations with this bidder and was notified by PG&E of all brief telephone conversations which occurred. PA agreed with PG&E that terminating negotiations with this bidder was appropriate and in the best interest to achieve the solicitation timeline.

6.4 What terms and conditions underwent significant changes during the course of negotiations?

PG&E provided bidders a draft RA confirm agreement with the initial E-Solicitation materials. Providing draft contracts prior to bid submittal is beneficial for both the bidders and PG&E. Draft contract documents provide bidders more clarity on the product, risk sharing, technical and other factors so that they are able to design and price their offers appropriately. It also can improve PG&E’s ability to evaluate the bids when the requirements and parameters are clearly identified as part of the bidding process.

6.4.1 Revised bid volumes

During the negotiation phase, [REDACTED] requested additional volumes which were incremental to its original shortlisted bid volumes. PG&E responded to the bidder that the solicitation was closed as of the bid submittal deadline, and that it was unable to increase the bidder’s volumes for this solicitation.

Additionally, several bidders requested to purchase additional RA after PG&E had issued its final shortlist notification and confirmed quantities with successful bidders. PG&E provided consistent responses to all such requests, indicating that bilateral transactions would not be pursued during the current solicitation, and that any subsequent solicitations would be announced shortly after the close of the 2019 RA E-Solicitation.

6.4.2 Collateral requirements

PG&E noted in its initial E-Solicitation documents that PG&E’s credit group would consider a bidder’s capability to perform all of its financial and other obligations which provides for the collateral requirements governing transactions executed as part of this E-Solicitation. PG&E further noted that it may consider alternatives for rate setting authorities who participate in the E-Solicitation.



6.5 Were similar information/options made available to other participants?

Overall PA believes that similar information/options were made available to each participant, including the opportunity for non-shortlisted bidders to refresh their bids and provide revised volume and pricing offers.

7 MERIT OF CONTRACT APPROVAL

PG&E negotiated and executed a total of [REDACTED] RA contracts through this E-Solicitation process. These contracts will involve System and Local RA sales of up to [REDACTED] [REDACTED], and Flexible RA sales of up to [REDACTED]. PG&E negotiated and executed [REDACTED] contracts involving [REDACTED] of RA Import Allocation Rights.

Through the bid evaluation and selection process, PA believes that PG&E selected appropriate offers. Based on the analysis and assumptions described throughout this report, PA recommends approval of these transactions.



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PACIFIC GAS & ELECTRIC

Independent Evaluator Report: February-December Resource Adequacy E-Solicitation

January 2019



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EXECUTIVE SUMMARY

PA Consulting Group, Inc. (PA) served as the Independent Evaluator (IE) for the Pacific Gas & Electric (PG&E) February - December 2019 Resource Adequacy Request for Offers (Feb-Dec 2019 RA E-Solicitation or the E-Solicitation or the Solicitation) solicitation. This report provides PA's evaluation of the process from the drafting of the Feb-Dec 2019 RA E-Solicitation documents through to the recommendation of selected bids and negotiations of contracts submitted to the California Public Utilities Commission (CPUC or Commission).

Overview of solicitation

PG&E conducted a Multi-Year Resource Adequacy solicitation in the spring of 2018, followed by a 2019 RA solicitation in September 2018. During the 2019 RA solicitation, several counterparties indicated that they would be interested in purchasing additional 2019 RA after the 2019 RA solicitation was completed. These expressions of interest came from both shortlisted and non-shortlisted counterparties in the 2019 RA solicitation.

PG&E issued the Feb-Dec 2019 RA E-Solicitation on November 8, 2018. The Solicitation was conducted as an "E-Solicitation", meaning that there was no typical Request for Offers released to the public, and no typical RFO website maintained by PG&E; the E-Solicitation was conducted entirely via email. Conducting an E-Solicitation is consistent with how counterparties seeking to procure RA have transacted for the product, including PG&E's two most recent RA solicitations.

Through this Solicitation, PG&E offered to sell and requested bids for the following types of Resource Adequacy (RA):

- System RA
- Local RA
- Flexible RA
- RA Import Allocation Rights

For all of the RA types listed above, PG&E solicited interest and offers to purchase RA in monthly transactions. The E-Solicitation specified that PG&E was not accepting System, Local, or Flexible RA bids for the months of July, August or September. However, PG&E was accepting monthly Import Allocation Rights bids for all months February through December.

PG&E did not specify the amounts of RA capacity it wished to sell. Ultimately, PG&E contracted for nearly ██████ of RA capacity sales, including ██████ with Flexible attributes, and ██████ of RA Import Allocation Rights.

PA's IE Report

PA's IE report generally follows the CPUC's Solicitation Shortlist Report Templates. The main sections include:

- Section 1: Summary of PA's role as IE for this E-Solicitation
- Section 2: PG&E's outreach efforts
- Section 3: PG&E's methodology design
- Section 4: Fairness of the application of PG&E's Bid Evaluation Criteria
- Section 5: Merit of E-Solicitation shortlist
- Section 6: Fairness of negotiations
- Section 7: PA support for contract approval

Main IE activities during solicitation

PA's role in PG&E's 2019 RA E-Solicitation spanned from November 2018 through December 2018. The following provides a summary of PA's main activities during this solicitation:

- PA worked with PG&E prior to the issuance of the Feb-Dec 2019 RA E-Solicitation to review all aspects of the protocol and methodologies for the E-Solicitation bid conformance, evaluation and selection process.
- PA reviewed a draft of the Feb-Dec 2019 RA E-Solicitation bid documents prior to PG&E issuing the E-Solicitation.
- PA received all communications between PG&E and bidders through PG&E's email system. PA directly received all the emails, including bids that were sent to and received from bidders. PA also participated in the majority of, though not all, negotiation calls that PG&E had with individual bidders.
- PA reviewed all bids, prepared conformance checks, and reviewed conforming bids. PA compared our findings with PG&E's results and confirmed bidder rankings.
- PA reviewed PG&E's shortlisted bids and discussed with PG&E the reasons for bidders not being shortlisted, which primarily consisted of PG&E having insufficient RA length to sell in certain months, and certain bidders bid prices.
- PA was included in most of PG&E's contract negotiation meetings (via phone or in person) with selected bidders to ensure that the negotiation process was fair.
- PA participated in a Procurement Review Group (PRG) meeting in December 2018.

High level summary of findings

Overall, PA confirms that PG&E conducted a fair and equitable Feb-Dec 2019 RA E-Solicitation.

Some specific findings are noted below:

- PG&E in no way prevented PA from observing its process and analyzing its methods and did not interfere with PA's conducting the Independent Evaluation.

- PA finds that PG&E's outreach for this E-Solicitation was adequate, the E-Solicitation was clear and concise, and that PG&E further clarified its position in several follow-up bidder questions and direct phone calls.
- PA found that the shortlisted bids for the Solicitation were appropriate. PA also found that any non-shortlisted bids were not shortlisted for reasons of availability and pricing.
- Based on our review of PG&E's analysis, our participation in calls and meetings and other IE activities, PA finds that PG&E conducted the Feb-Dec 2019 RA E-Solicitation evaluation analysis fairly and selected appropriate offers in the E-Solicitation.

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1 DESCRIBE THE INDEPENDENT EVALUATOR'S ROLE

This section provides a description of the role of the Independent Evaluator (IE) throughout the solicitation and bid selection process, including PA's specific activities for the Feb-Dec 2019 Resource Adequacy (RA) E-Solicitation

1.1 Summary of the Feb-Dec 2019 RA E-Solicitation

The PG&E issued its Feb-Dec 2019 RA E-Solicitation on November 8, 2018. Through this solicitation, PG&E offered to sell RA products and requested bids for System and Local RA, with or without the Flexible attribute; additionally, the Solicitation requested bids for RA Import Allocation Rights. Bids were due by November 14, 2018.

PG&E received bids from [REDACTED] counterparties for RA and [REDACTED] counterparties for RA Import Allocation Rights. After bid compliance checks and evaluations, PG&E sent shortlist notifications to [REDACTED] and [REDACTED] on November 21, 2018.

PG&E ultimately transacted with [REDACTED] shortlisted RA bidders and the [REDACTED] [REDACTED] PG&E was unable to reach an agreement with [REDACTED] due to timing constraints.

1.2 IE's key roles and responsibilities

The role of the IE is to provide advice to the utility on the design, administration, and evaluation aspects of the E-Solicitation. The CPUC has clarified that the role of the IE is not to conduct or administer the solicitation, but to "separately evaluate and report on the IOU's entire solicitation, evaluation, and selection process."¹

Additionally, the IE is to ensure that PG&E treats all bidders fairly and equitably and that no counterparty is favored over another. The IE also ensures that the bid selection process is transparent and is aligned with the procurement requirements. PG&E can also call on the IE's advice as to various evaluation issues that may arise during the E-Solicitation process.

1.3 PA's role as IE

PA performed the role of IE for the Feb-Dec 2019 RA E-Solicitation and was involved from PG&E's development of the E-Solicitation materials through the selection of the bids and the negotiation of contracts. PA ensured that the procedures followed by PG&E were aligned with the process it established in its E-Solicitation and provided fair and equitable treatment of all bids. PA was in regular contact with PG&E staff throughout the process, addressing PG&E's questions, identifying and resolving potential issues, and providing recommendations throughout the process.

¹ D. 06-05-039, p. 46.

1.3.1 Solicitation planning meetings

PA reviewed the E-Solicitation prior to its issuance and held discussions with PG&E regarding the development of the solicitation protocol, evaluation methodology, draft Confirmation Agreements, and other solicitation materials.

1.3.2 Solicitation materials

PG&E developed the solicitation materials to reflect the specifics of the Feb-Dec 2019 RA E-Solicitation. This E-Solicitation was intended to be a simple and straightforward sale of RA, and PG&E kept the solicitation materials clear and concise. PG&E shared an early copy of the E-Solicitation with PA prior to issuance for PA's review.

1.3.3 Bid submittal process

The E-Solicitation was issued on November 8, 2018 via emails sent to PG&E's wholesale E-Solicitation distribution list and PG&E's E-Solicitation RA list. Bidders were instructed to submit email bids consisting of the required bid documents contained in the E-Solicitation.

The E-Solicitation included instructions that as IE, PA was to be copied on all bid submittal emails. PA was copied on all submittals and subsequent communications with bidders.

1.3.4 Communication with bidders

PG&E communicated with bidders primarily via email. PG&E provided the E-Solicitation and update notices to bidders through email notifications. Bidders submitted clarifying questions to PG&E via email; PA was copied on these questions and their responses.

1.3.5 Initial bid review and conformance check

Once the bids were received, PG&E prepared its conformance check. PA independently reviewed the bids as well. Given the simplicity of the E-Solicitation, its products and its evaluation criteria, PG&E and PA did not find any of the bids to be non-conforming.

1.3.6 Evaluation process

PG&E prepared a ranking of all the bids offered according to the bid price. PA ranked the bids and found that ranking to be identical to PG&E's initial ranking. PA was able to verify our interpretation of the bid prices to confirm PG&E's results. [REDACTED]

1.3.7 Shortlist determination

PG&E provided PA a copy of the proposed shortlist [REDACTED]

[REDACTED] PA reviewed this information and confirmed PG&E's interpretation of the bids, including their price ranking and PG&E's rationale for choosing each shortlisted bid.

PG&E sent shortlist notifications to [REDACTED] for RA transactions and [REDACTED] for RA Import Allocation Rights on November 21, 2018. At that time, PG&E also notified the remaining bidders that their bids had not been selected for shortlisting.

1.3.8 Contract negotiation

PG&E began negotiations with the selected bidders immediately following the shortlisting notifications. PA monitored all email communications during negotiations and participated in

most of the negotiation meetings via phone. More details of any negotiation observations and issues are discussed further in Section 6.

1.3.9 PG&E's Procurement Review Group meeting

PA participated in the December 18, 2018 PRG meeting concerning this Solicitation. PA was available to answer questions and provide additional feedback during this meeting as appropriate.

2 ADEQUACY OF PG&E'S OUTREACH

This section addresses the adequacy of PG&E's outreach as well as the solicitation materials.

2.1 Notifications and announcements

PG&E's outreach included notifications to PG&E's E-Solicitation RA list. Because the Solicitation involved RA products, there was a limited number of counterparties who could be expected to participate in the Solicitation, as either load serving entities or their representatives.

This Solicitation was conducted shortly after PG&E's 2019 RA E-Solicitation, and the outreach included at a minimum all of the same parties who had been notified of that E-Solicitation. PA believes that PG&E extended adequate outreach for the Feb-Dec 2019 RA E-Solicitation.

2.2 Solicitation material

PG&E created E-Solicitation materials for the four primary product types included in the Feb-Dec 2019 RA E-Solicitation: System and Local, with or without the Flexible attribute, and RA Import Allocation Rights.

The solicitation materials were delivered via PG&E's E-Solicitation emails on November 8, 2018. On November 13 and 14, PG&E addressed two questions received from bidders and provided the questions and answers to all prospective bidders.

In PA's opinion, PG&E provided appropriate E-Solicitation materials and provided prompt response to any questions received by potential bidders.

2.3 Feedback after solicitation

PA is not aware of any feedback that PG&E requested from bidders related to the solicitation. Having been copied on all email communications related to the E-Solicitation, PA believes that potential bidders, with only one clarification question, were fully able to understand the E-Solicitation documents and were satisfied with the level of information PG&E provided in the solicitation materials.

3 PG&E'S BID EVALUATION DESIGN

This section describes PG&E's bid evaluation methodology for fair offer evaluation.

3.1 Principles used to evaluate methodology

PA used the following principles to guide its evaluation:

- The procurement targets and objectives should be clearly defined in PG&E's solicitation materials;
- The evaluation should only be based on those criteria requested in the response form;
- The methodology should identify how quantitative measures will be considered and be consistent with an overall metric;
- The approach should not be biased for or against specific counterparties; and
- The methodology does not have to be the one that the IE would independently have selected but it needs to be "reasonable".

3.2 Amount and type of RA products

PG&E issued the Feb-Dec 2019 RA E-Solicitation to sell a portion or all of its excess RA in 2019. PG&E did not specify the amount of RA it was seeking to sell in the E-Solicitation; rather, PG&E requested each bidder to identify the amounts of System, Local, Flexible RA and RA Import Allocation Rights it was seeking to purchase. PA believes this approach was fair and put all potential bidders on a "level playing field" while at the same time encouraging competitively priced bids which would maximize the value of the Solicitation to PG&E and its customers.

3.3 Description of PG&E's bid evaluation methodology

PG&E's valuation and selection approach was intended to evaluate the different product types on as equal a footing as possible. The initial step included a conformance check of each offer. The conforming offers then went through a bid pricing analysis to rank the offers based on their proposed pricing to PG&E as well as their relative value in comparison to other offers. The methodology considered both quantitative as well as qualitative factors as described below.

3.3.1 Conformance check

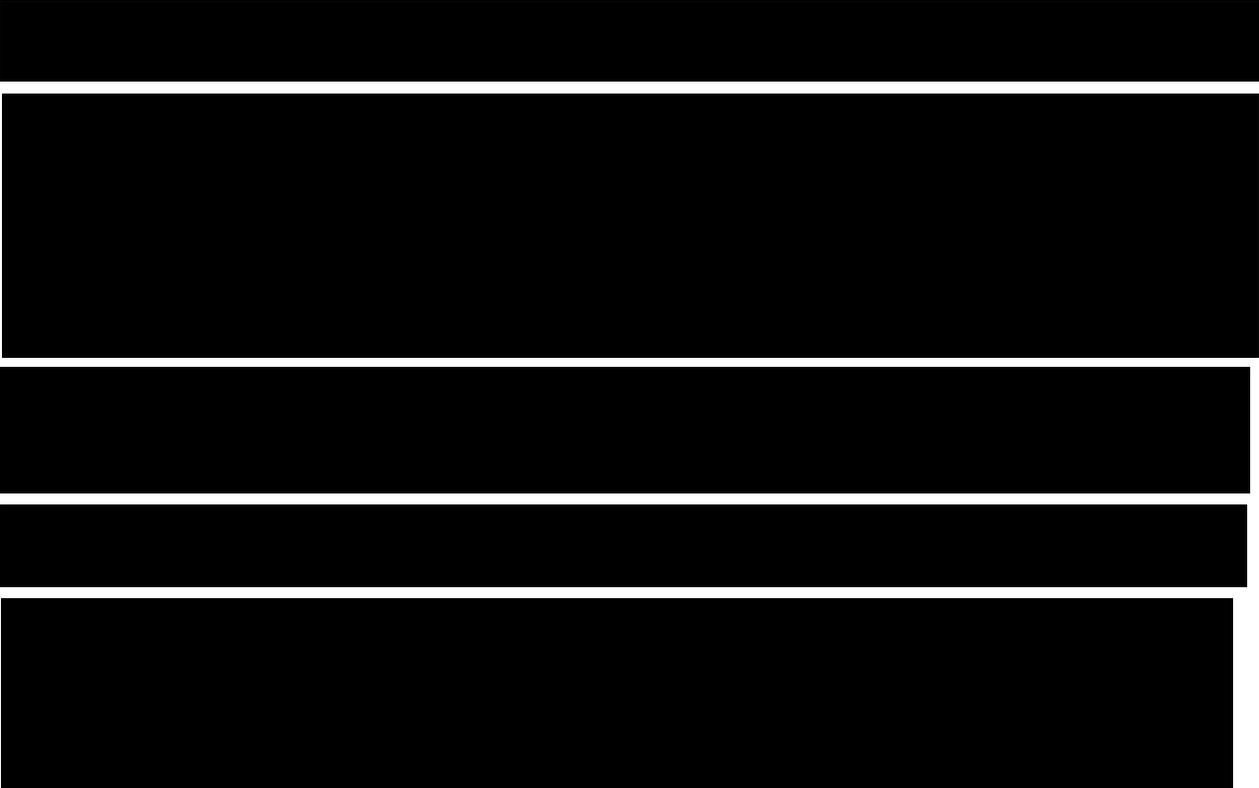
The initial analysis included an assessment of conformance. All offers needed to conform to the minimum participation criteria and eligibility. The RA E-Solicitation was less complex than other procurement processes in which the utility is seeking to acquire resources, and as such had more limited conformance requirements.

The conformance requirements were generally limited to the following required documents:

- A redline mark-up of the RA Confirmation or a statement that the bidder accepts PG&E's form RA Confirmation without change; and
- The Bid Form Template, indicating the types, delivery term, and volumes the bidder wished to purchase.

Bids were required to be submitted electronically to PG&E’s Solicitation email address and were required to copy PA as the IE for this Solicitation on all submittals and subsequent communications.

3.3.2 Quantitative bid evaluation



RA confirm agreement

As part of the bid submittal, bidders were required to either provide a redlined copy of PG&E’s proposed RA Confirmation Agreement, identifying the degree to which a participant modified the RA Confirm. PG&E management has determined that PG&E will enter into new RA transactions using only the EEI Master and the accompanying EEI Confirm Agreements. As a result, PG&E was unable to reach an agreement with one of the shortlisted bidders, as discussed below in Section 6.3.

3.4 Evaluation of PG&E’s methodology

Overall PA believes that PG&E’s methodology is reasonable. This judgment is within the context of the principles set forth in Section 3.1. This section addresses the application of PG&E methodology and the review of PG&E’s results is provided in Section 4.

4 FAIRNESS OF PG&E BID EVALUATION

This section addresses the application or administration of the methodology described in Section 3.

4.1 Principles IE used to evaluate evaluation methodology

As in the previous section, PA used the following principles to guide its evaluation, and in this case phrased as questions:

- Were bidder questions answered fairly and consistently and the answers made available to all?
- Did the utility ask for "clarifications" that provided the bidder an advantage over others?
- Were bids given equal credibility in the economic evaluation?
- Were qualitative factors used only to distinguish among substantially equal bids?

4.2 Administration of bid evaluation process

A description of PA's activities in its role as IE is provided in Section 1. Based on PA's participation and observations we believe that:

- Bidder questions were answered fairly and consistently. PA monitored all communications between bidders and PG&E including questions; there was only two questions related to the E-Solicitation and PA believes the questions were reasonably and fairly answered;
- PG&E applied conformance requirements fairly to all bids and consistent with bid documents;
- All conforming bids were given equal credibility in the quantitative evaluation;
- Bids were ranked and evaluated as consistently as possible; and
- PG&E's evaluation of bids and selection of shortlisted bids conformed to the E-Solicitation documents.

4.3 IE's review of PG&E's conformance checks

Once the bids were submitted and the Solicitation closed, PG&E began an initial conformance check. PA also received a complete copy of all the bids as they were submitted and prepared an independent assessment to determine if the bids conformed the E-Solicitation requirements. Given the Solicitation was relatively straightforward with few requirements, PA did not anticipate and in fact did not identify any non-conforming bids. There were [REDACTED] bids which were slightly incomplete; PG&E clarified these with the bidders immediately and the bids were deemed compliant.

4.4 Review of PG&E's Bid Rejections

[REDACTED] bidders submitted additional volume requests after shortlisting notifications. [REDACTED]
[REDACTED] In all cases, PG&E discussed the post-deadline bids with PA, and PA agreed it would be inappropriate to accept the late bids. PG&E subsequently informed the bidders that PG&E could not accept

the bids in question and would be evaluating the bidders' original submittals. Excepting those [REDACTED] late bids, PA is not aware of any bids which PG&E rejected for non-conformance.

4.5 Review of PG&E's application of the bid evaluation methodology

PG&E ranked each bidders' proposal by month and by bid price.

4.5.1 Review of supply curves and general assumptions

PA reviewed the supply curves that PG&E developed to evaluate the bids and found them reasonable.

4.5.2 Review of evaluation of offers

PA reviewed PG&E's quantitative evaluation through a comparison of PG&E's ranking of the bids received with PA's own ranking. Through this process, PA was able to review and confirm PG&E's interpretation of the data as well as the application of the quantitative ranking. [REDACTED]

4.5.3 Selection of shortlist

PG&E created a summary table of the bids for each month for each of the conforming bids evaluated and determined the highest value bids. PG&E identified [REDACTED] and notified both the shortlisted and non-shortlisted bidders of their respective status on November 21, 2018.

4.6 Fairness of PG&E's evaluation

Based on PA's review of PG&E's analysis, participation in calls and meetings and other IE activities, PA believes that PG&E conducted the Feb-Dec 2019 RA E-Solicitation evaluation analysis fairly.

5 MERIT OF E-SOLICITATION SHORTLIST

Through the bid evaluation and selection process, PA believes that PG&E selected the best offers submitted for the Feb-Dec 2019 RA E-Solicitation.

5.1 Did PG&E conduct the solicitation consistent with Commission decisions and PG&E's defined bid evaluation methodology?

It is PA's opinion that PG&E conducted a fair solicitation consistent with Commission decisions and PG&E's defined bid evaluation methodology.

5.2 Do selected shortlisted bids provide the best overall value to ratepayers?

PA believes PG&E fairly selected its shortlist of bids for the Feb-Dec 2019 RA E-Solicitation in order to maximize value to PG&E ratepayers.

5.3 Did the shortlist conform to PG&E's RA sales strategy?

The shortlist prepared by PG&E did conform to the RA sales strategy.

Primarily due to increasing CCA load-shifting, PG&E has seen an increasing surplus of RA in PG&E's Bundled Portfolio. PG&E's Bundled Procurement Plan provides for PG&E's goal of providing affordable electric service for its bundled customers. [REDACTED]

5.4 Reasonableness of the shortlist

In PA's opinion, PG&E's shortlist was reasonable.

6 FAIRNESS OF E-SOLICITATION NEGOTIATIONS

PA closely monitored the contract negotiations and PG&E gave PA the opportunity to join negotiation teleconferences, provided PA copies of contract drafts, included PA on e-mails, and instructed counterparties to include PA on all communications.

6.1 Principles PA used to evaluate fairness of negotiations

PA applied the following three principles to evaluate the fairness of negotiations:

- PG&E should not show favoritism toward any bidder by allowing contract conditions not offered to other bidders unless those conditions are balanced by comparable concessions by the bidder;
- PG&E should not negotiate harder or less hard with a bidder than with any other bidder; and
- PG&E should not attempt to impose contract conditions in the negotiation that significantly change the balance of the bargain, relative to what the bidder could have reasonably expected based on the Solicitation materials.

6.2 Describe fairness of negotiations

PA participated in most of the negotiation meetings and received copies of red-lined draft contract documents to review. The negotiations largely consisted of discussions related to collateral requirements, pre-payment terms, and minor other edits to PG&E's Standard RA confirm. PA believes that PG&E treated bidders consistently and fairly (the first two principles above).

6.3 Review of negotiations which were terminated

During the negotiation phase of the Feb-Dec 2019 E-Solicitation, PG&E was not able to reach an agreement with one shortlisted bidder, [REDACTED]

The bidder has a WSPP enabling agreement in place with PG&E. During the negotiations, PG&E informed the bidder that PG&E management instructions were to enter into only EEI Master and Confirm Agreements. PG&E management is seeking to achieve consistency across its RA agreements to the best extent possible, including executing transactions using only the EEI form of agreements. PG&E expressed a desire to this bidder to continue to negotiate an EEI Master Agreement with the bidder and have that executed prior to the next solicitation to avoid any issues in the future.

6.4 What terms and conditions underwent significant changes during the course of negotiations?

With the exception of minor terms and conditions which did not materially impact the Agreements, there were no changes to PG&E's standard terms and conditions related to RA sales. PG&E provided bidders a draft RA confirm agreement with the initial E-Solicitation materials. Providing draft contracts prior to bid submittal is beneficial for both the bidders and PG&E. Draft contract documents provide bidders more clarity on the product, risk sharing, technical and other factors so that they are able to design and price their offers appropriately.

It also can improve PG&E's ability to evaluate the bids when the requirements and parameters are clearly identified as part of the bidding process.

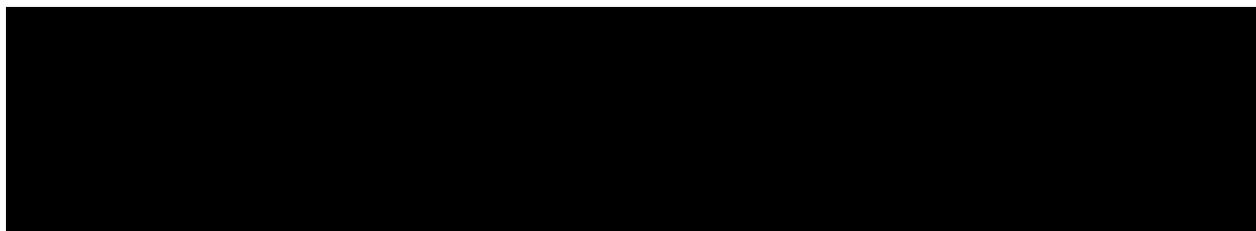
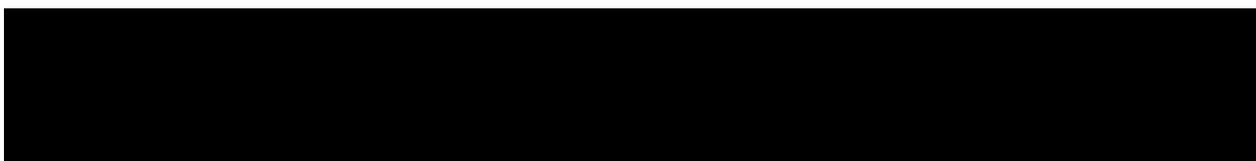
6.4.1 Revised bid volumes

During the negotiation phase, [REDACTED] requested additional volumes which were incremental to their original shortlisted bid volumes. PG&E responded to the bidders that the solicitation was closed as of the bid submittal deadline, and that PG&E was unable to increase the bidders' volumes for this solicitation.

As described above, the Feb-Dec 2019 RA E-Solicitation was issued in response to several counterparties requesting additional volumes in the prior solicitation, the 2019 RA E-Solicitation. During the course of this Solicitation, PG&E noted that several bidders had bid prices in this Solicitation which, had they bid those prices in the prior solicitation, would have been awarded those volumes and prices in that prior solicitation.

6.4.2 Collateral requirements

PG&E noted in its initial E-Solicitation documents that PG&E's credit group would consider a bidder's capability to perform all of its financial and other obligations which provides for the collateral requirements governing transactions executed as part of this E-Solicitation. PG&E further noted that it may consider alternatives for rate setting authorities who participate in the solicitation.



6.5 Were similar information/options made available to other participants?

Overall PA believes that similar information and options were made available to each potential counterparty.

7 MERIT OF CONTRACT APPROVAL

PG&E negotiated and executed a total of [REDACTED] RA contracts through this E-Solicitation process. These contracts will involve System and Local RA sales of up to [REDACTED], and Flexible RA sales of up to [REDACTED]. PG&E negotiated and executed [REDACTED] contracts involving [REDACTED] of RA Import Allocation Rights [REDACTED].

Through the bid evaluation and selection process, PA believes that PG&E selected appropriate offers. Based on the analysis and assumptions described throughout this report, PA agrees PG&E ran a fair solicitation.



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Attachment 3

Attachment H (Public Version)

**Pacific Gas and Electric
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New Contracts Executed and Amended During the Quarter

The table below provides a summary of Request for Offer (RFO) and Competitive Solicitation contracts executed during this Quarter and filed for CPUC approval via this Procurement Transaction Quarterly Compliance Report (QCR) advice letter. A copy of the contract(s) is included.

Workpapers providing the method for valuation results calculations are included in Confidential Attachment L - Reasonable Number of Analyses Models, Description of Models, and How Models Operate.

Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$)	Confirm File Name
None for the Quarter							

The table below provides a summary of e-solicitation and/or Market RFP contracts executed through competitive processes during the Quarter and filed for CPUC approval via this QCR advice letter. A copy of contracts subject to this QCR filing is included.

Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$)¹	Confirm File Name
Clean Power Alliance of Southern California (33B240Q02) ²	10/05/2018	System RA (Purchase)		47 MW			Q4 2018 e-solicitation folder
EDF Trading North America, LLC (33B200Q05) ²	10/05/2018	Local RA (Purchase)		92.96 MW			Q4 2018 e-solicitation folder

¹ Rounded to the nearest whole dollar.

² PG&E purchased System RA to fulfill CAISO substitution requirements.

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$) ¹	Confirm File Name
City of San Jose (San Jose Clean Energy) (33B247R01)	10/10/2018	System RA (Sale)		108 MW 211 MW 387 MW 441 MW 22 MW			Q4 2018 Market RFP
		System and Flexible RA (Sale)		79 MW 145 MW 169 MW 115 MW 130 MW 284 MW 315 MW			
		Local and Greater Bay Area RA (Sale)		40 MW			
		Local and Other PG&E Area RA (Sale)		46 MW 148 MW 148 MW 148 MW 160 MW			
		Local, Flexible and Other PG&E Area RA (Sale)		114 MW			
East Bay Community Energy Authority (33B238CA01)	10/17/2018	Non RPS Eligible Hydro Energy (Sale)		535,000 MWh			Q4 2018 Market RFP
3 Phases Renewables, Inc. (33B113R03)	10/24/2018	Local and Other PG&E Area RA (Sale)		2 MW			Q4 2018 e-solicitation folder
Silicon Valley Clean Energy Authority (33B230R02)	10/24/2018	Local and Other PG&E Area RA (Sale)		8 MW 8 MW 5 MW 8 MW 8 MW			Q4 2018 e-solicitation folder

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$)¹	Confirm File Name
Direct Energy Business Marketing, LLC (33B241R02)	10/25/2018	Local and Other PG&E Area RA (Sale)		31 MW			Q4 2018 e-solicitation folder
CleanPower SF (33B243R01)	10/25/2018	Local, Flexible and Greater Bay Area RA (Sale)		12 MW			Q4 2018 e-solicitation folder
		Local, Flexible and Other PG&E Area RA (Sale)		28 MW 23 MW 22 MW			
Pioneer Community Energy (33B245R02)	10/26/2018	System RA (Sale)		13 MW			Q4 2018 e-solicitation folder
EDF Trading North America, LLC (33B200R02)	10/26/2018	System RA (Sale)		3 MW 3 MW 10 MW			Q4 2018 e-solicitation folder
Shell Energy North America (US), L.P. (33B022R02)	10/29/2018	System RA (Sale)		60 MW 10 MW			Q4 2018 Market RFP
East Bay Community Energy Authority (33B238R03)	10/29/2018	System RA (Sale)		112 MW			Q4 2018 e-solicitation folder
		Local and Greater Bay Area RA (Sale)		5 MW 7.7 MW 5 MW			
		Local and Other PG&E Area RA (Sale)		48 MW 78.9 MW 59 MW			

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$)¹	Confirm File Name
Marin Clean Energy (33B235R02)	10/29/2018	Local and Other PG&E Area RA (Sale)		26 MW 24 MW 19 MW 10 MW 7 MW 23 MW 3 MW			Q4 2018 e-solicitation folder
Peninsula Clean Energy Authority (33B232R02)	10/29/2018	Local and Other PG&E Area RA (Sale)		93 MW 48.1 MW 83 MW			Q4 2018 e-solicitation folder
City of San Jose (San Jose Clean Energy) (33B247R02)	10/30/2018	Local and Greater Bay Area RA (Sale)		12 MW 9 MW			Q4 2018 e-solicitation folder
		Local and Other PG&E Area RA (Sale)		152.9 MW 10.2 MW 7 MW			
Southern California Edison (SCE) (33B217R01)	11/14/2018	Import Allocation Rights (Sale)		100 MW			Q4 2018 e-solicitation folder
Southern California Edison (SCE) (33B217R02)	11/14/2018	Import Allocation Rights (Sale)		200 MW			Q4 2018 e-solicitation folder
Shell Energy North America (US), L.P. (33B022R03)	11/30/2018	Local and Other PG&E Area RA (Sale)		12 MW			Q4 2018 e-solicitation folder
Direct Energy Business Marketing, LLC (33B241R03)	12/4/2018	Local and Other PG&E Area RA (Sale)		31 MW			Q4 2018 e-solicitation folder
Peninsula Clean Energy Authority (33B232R03)	12/11/2018	Local and Other PG&E Area RA (Sale)		54.49 MW 76.46 MW 35.46 MW			Q4 2018 e-solicitation folder

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$) ¹	Confirm File Name
Commercial Energy of Montana Inc. (33B202R01)	12/13/2018	Local, Flexible and Greater Bay Area RA (Sale)		3 MW			Q4 2018 e-solicitation folder
		Local and Greater Bay Area RA (Sale)		3 MW			
		Local and Other PG&E Area RA (Sale)		2 MW			
		System RA (Sale)		8 MW			
Sacramento Municipal Utility District (SMUD) (33B248R01)	12/13/2018	Local, Flexible and Other PG&E Area RA (Sale)		7 MW 10 MW 3 MW 1 MW 10 MW			Q4 2018 e-solicitation folder
		Local and Other PG&E Area RA (Sale)		9 MW 16 MW 6 MW 13 MW 15 MW 16 MW 6 MW			
City of San Jose (San Jose Clean Energy) (33B247R03)	12/13/2018	System RA (Sale)		23.82 MW			Q4 2018 e-solicitation folder
		System and Flexible RA (Sale)		8 MW			
East Bay Community Energy Authority (33B238R04)	12/13/2018	System RA (Sale)		50.3 MW			Q4 2018 e-solicitation folder

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$)¹	Confirm File Name
East Bay Community Energy Authority (33B238R05)	12/13/2018	Import Allocation Rights (Sale)		132.10 MW 100 MW 141.27 MW			Q4 2018 e-solicitation folder
Sonoma Clean Power Authority (33B226R02)	12/18/2018	Import Allocation Rights (Sale)		68 MW 32 MW 26 MW 84 MW			Q4 2018 e-solicitation folder
Clean Power Alliance of Southern California (33B240R02)	12/28/2018	System RA (Sale)		231 MW			Q4 2018 e-solicitation folder
Clean Power Alliance of Southern California (33B240R01)	12/28/2018	Import Allocation Rights (Sale)		157 MW			Q4 2018 e-solicitation folder

The table below provides a summary of Natural Gas Storage e-solicitation contract executed through competitive processes during the Quarter and filed for CPUC approval via this QCR advice letter. A copy of the contract subject to this QCR filing is included.

Contract/ Counterparty Name	Trade Date	Product	Term	Cmpt.	Volume	Price	Notional Value (\$)	Confirm File Name
Central Valley Gas Storage (CVGS)	10/19/2018	Gas Storage Services	Apr 2019 through Mar 2021	Inventory				Q4 2018 Gas Storage e-solicitation folder
				Injection ¹				
				Withdrawal ¹				

¹ Since the injection and withdrawal charges are variable charges they are not included in the notional value.

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The table below provides a summary of intra-monthly Capacity Procurement Mechanism (CPM) capacity that PG&E offered to and procured by the CAISO during the Quarter and filed for CPUC approval via this QCR advice letter. A copy of the tariff and market notice is subject to this QCR filing is included.

Contract/ Counterparty Name	Trade Date	Product	Term	Volume	Price	Notional Value (\$)¹	File Name
CAISO September 2018 Intra-Monthly CPM – Extension November	8/30/2018 ²	RA System (Sale)	October 31, 2018	2.3 MW 2 MW 8 MW 28 MW 39 MW	\$5.50/kW-mo	\$14,538	2018 CPM folder
			Nov1-Nov 29, 2018	84 MW 2 MW 39 MW 28 MW 8 MW	\$5.50/kW-mo	\$855,968	

¹ Notional Value is estimated based on the bid designation MW and Price. Notional is subject to CAISO payment provisions as set forth in the CAISO CPM Tariff Section 43A. Rounded to the nearest whole dollar.

² September intra-monthly designation was extended for 60 days on 9/21/2018, effective 10/1/2018. November volumes were posted on October 22, 2018 for the term of October 31 – November 29, 2018.

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The table below provides a summary of bilateral contracts, including GHG offsets transactions facilitated by brokers, and significant exchange-placed trades executed during the Quarter and filed for CPUC approval via this QCR advice letter. A copy of contracts subject to this QCR filing is included.

Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Volume	Price	Notional Value (\$)	Confirm File Name
3 Phases Renewables, Inc. (33B113R02)	10/2/2018	Local and Other PG&E Area RA (Sale)		1 MW 2 MW 2 MW 1 MW			Q4 2018 Bilateral Folder
							Q4 2018 GHG Materials in Attch. E
							GHG Materials in Attch. E
							GHG Materials in Attch. E
							GHG Materials in Attch. E
							GHG Materials in Attch. E

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Informational purposes only: A summary of QF contracts executed and/or amended during the Quarter filed via separate application, advice letter or other approval mechanisms:

Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Type of Transaction	Date Filed	Regulatory Reporting or Approval Process
Greenleaf Energy Unit #1, LLC (12C020)	10/26/2018	QF	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Greenleaf Energy Unit #1, LLC (12C020)	10/26/2018	QF	N/A	Amendment to Existing Agreement	N/A	2018 ERRA Compliance
EI Dorado Hydro (Montgomery Creek) (13H001QPA)	10/29/2018	PURPA	1 Year	Extension Agreement	N/A	2018 ERRA Compliance

Informational purposes only: A summary of the contracts executed and/or amended during the Quarter (non-QF) filed via separate application, advice letter or other approval mechanisms:

Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Type of Transaction	Date Filed	Regulatory Reporting or Approval Process
Dynegy Marketing and Trade, LLC (40S013)	10/11/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Hummingbird Energy Storage, LLC (40S014)	10/11/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
mNOC AERS LLC (40S012)	10/11/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
City of San Jose (San Jose Clean Energy (SJCE)) (33R450)	10/11/2018	RPS Energy REC Sales	1 Year	Contract	11/2/2018	Advice Letter Filing 5422-E
Shiloh II Wind Project Amended & Restated (33R033-AR)	10/19/2018	RPS	N/A	Consent to Assignment - Financing	N/A	2018 ERRA Compliance

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Type of Transaction	Date Filed	Regulatory Reporting or Approval Process
AV Solar Ranch One (33R073)	10/22/2018	RPS	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Diamond H Dairy Power (33R459BIO)	10/22/2018	BioMAT	15 Years	Contract	N/A	2018 ERRA Compliance
Shell Energy North America (US), L.P. (33R451)	10/24/2018	RPS Energy REC Sales	2 Years	Contract	11/2/2018	Advice Letter Filing 5422-E
The Energy Authority, Inc (33R452)	10/24/2018	RPS Energy REC Sales	1 Year	Contract	11/2/2018	Advice Letter Filing 5422-E
Direct Energy Business Marketing, LLC (33R453)	10/24/2018	RPS Energy REC Sales	2 Years	Contract	11/2/2018	Advice Letter Filing 5422-E
Clean Power Alliance of Southern California (33R454)	10/24/2018	RPS Energy REC Sales	2 Years	Contract	11/2/2018	Advice Letter Filing 5422-E
Monterey Bay Community Power Authority (33R455)	10/24/2018	RPS Energy REC Sales	2 Years	Contract	11/2/2018	Advice Letter Filing 5422-E
EDF Trading North America, LLC (33R458)	10/24/2018	RPS Energy REC Sales	1 Year	Contract	11/2/2018	Advice Letter Filing 5422-E
Calpine Energy Services, L.P. (33R456)	10/25/2018	RPS Energy REC Sales	2 Years	Contract	11/2/2018	Advice Letter Filing 5422-E
Powerex Energy Corp. (33R457)	10/25/2018	RPS Energy REC Sales	2 Years	Contract	11/2/2018	Advice Letter Filing 5422-E
Sacramento Municipal Utility District (33R460)	10/31/2018	RPS Energy REC Sales	2 Years	Contract	11/2/2018	Advice Letter Filing 5422-E
High Plains Ranch III (33R088)	11/2/2018	RPS	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
High Plains Ranch II (33R052)	11/2/2018	RPS	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Alta Gas San Joaquin Henrietta Facility (33B109)	11/13/2018	Tolling	N/A	Consent to Assignment - Financing	N/A	2018 ERRA Compliance
AltaGas Tracy Repowering PPA (33B101)	11/13/2018	Tolling	N/A	Consent to Assignment - Financing	N/A	2018 ERRA Compliance

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Type of Transaction	Date Filed	Regulatory Reporting or Approval Process
Alta Gas San Joaquin Hanford Facility (33B108)	11/13/2018	Tolling	N/A	Consent to Assignment - Financing	N/A	2018 ERRA Compliance
Alta Gas San Joaquin Henrietta Facility (33B109)	11/13/2018	Tolling	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
AltaGas Tracy Repowering PPA (33B101)	11/13/2018	Tolling	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Alta Gas San Joaquin Hanford Facility (33B108)	11/13/2018	Tolling	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
mNOC AERS LLC (40S012)	11/27/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Dynegy Marketing and Trade, LLC (40S013)	11/27/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Hummingbird Energy Storage, LLC (40S014)	11/27/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
California Flats Solar Project (33R344)	11/29/2018	RPS	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
High Plains Ranch II (33R052)	12/17/2018	RPS	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
High Plains Ranch III (33R088)	12/17/2018	RPS	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Sacramento Municipal Utility District (SMUD) (33B248)	12/13/2018	EEl Master	N/A	Contract	N/A	2018 ERRA Compliance
Sierra Energy Storage (40S008)	12/19/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Cascade Energy Storage (40S009)	12/19/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance

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Contract/ Counterparty Name	Executed/ Signed Date	Product	Term	Type of Transaction	Date Filed	Regulatory Reporting or Approval Process
Kingston Energy Storage (40S010)	12/19/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Diablo Energy Storage (40S011)	12/19/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Open Sky Dairy Digester #2 (33R434BIO)	12/20/2018	BioMAT	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance
Hummingbird Energy Storage, LLC (40S014)	12/26/2018	Energy Storage	N/A	Routine Amendment to Existing Agreement	N/A	2018 ERRA Compliance

Informational purposes only: A summary of the contracts terminated/expired during the Quarter:

Contract/ Counterparty Name	Termination or Expiration ¹	Date	Product	Volume (MW)
Santa Clara Valley Water Dist. (08H013)	Expiration	11/30/2018	QF	0.8 MW
Nelson Creek Power Inc. (AKA Grasshopper Flats) (13H042)	Expiration	12/18/2018	OF	1.1 MW
EDF Renewable Windfarm V, Inc. (70 MW - C) (06W146C)	Expiration	12/31/2018	QF	6.5 MW
EDF Renewable Windfarm V, Inc. (70 MW - D) (06W146D)	Expiration	12/31/2018	QF	1.5 MW
Direct Energy Business Marketing, LLC (33R448)	Expiration	12/31/2018	RPS Energy REC Sales	0 MW
Peninsula Clean Energy Authority (33R449)	Expiration	12/31/2018	RPS Energy REC Sales	0 MW

¹ A terminated contract is ended before its original expiration date. An expiration date is the natural end of the contract.

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January 30, 2019

Attachment 4

Confidentiality Declarations and Matrix

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
 QUARTERLY COMPLIANCE REPORT ADVICE LETTER 5475-E
 PROCUREMENT TRANSACTION QUARTERLY COMPLIANCE REPORT OF QUARTER FOUR 2018
 JANUARY 30, 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
Document: Quarterly Compliance Report			
Attachment A – Physical and Financial Electric Transactions	Item XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings)	This information reveals actual electric quantities and cost, as well as procurement cost categorized by transaction type, which is provided to Energy Division and is confidential for three years.	3 Years
	Item XIII) Energy Division Monthly Data Request (AB 57)	This information is provided to Energy Division on a confidential basis per AB 57 and must be protected here to preserve confidentiality of the AB 57 report.	3 years
Attachment A – Physical and Financial Natural Gas Transactions	Item I) A) 4) Long-term fuel (gas) buying and hedging plans	Each financial transaction is a factor in PG&E's long term buying and hedging strategies. With the entire set of transactions PG&E's counterparties could reconstruct PG&E's gas buying and hedging plans.	Financial transactions are confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)
	Item I) B) 2) Utility recorded gas procurement and cost information	Actual quantity and cost of procured physical gas are protected.	Utility recorded physical gas procurement and cost information is confidential for one year.
	Item XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings)	These analyses are the basis of the monthly variable cost of energy and utility operation, which must be protected to preserve the confidentiality of ERRA documentation	Monthly procurement costs (ERRA Filings) are confidential for 3 years.

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
 QUARTERLY COMPLIANCE REPORT ADVICE LETTER 5475-E
 PROCUREMENT TRANSACTION QUARTERLY COMPLIANCE REPORT OF QUARTER FOUR 2018
 JANUARY 30, 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
Attachment B – in its entirety: Counterparty Information, including non-investment grade counterparties table: List of Non-Investment Grade Counterparties (Electric and Natural Gas Transactions)	Public Utilities Code Section 454.5(g)	The information contains confidential counterparty information. Release of this commercially market sensitive information could impact market prices because it would release financing terms to other market participants and impact future negotiations. This could cause harm to PG&E's customers, and put PG&E at an unfair business advantage by the disclosure of counterparty information. This information could be used by other market participants to gain a commercial advantage.	3 Years
Attachment C – in its entirety: Electric Transactions	XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings)	This information reveals actual electric quantities and cost, as well as procurement cost categorized by transaction type, which is provided to Energy Division and is confidential for three years.	3 Years
	Item XIII) Energy Division Monthly Data Request (AB 57)	This information is provided to Energy Division on a confidential basis per AB 57 and must be protected here to preserve confidentiality of the AB 57 report.	3 Years

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
 QUARTERLY COMPLIANCE REPORT ADVICE LETTER 5475-E
 PROCUREMENT TRANSACTION QUARTERLY COMPLIANCE REPORT OF QUARTER FOUR 2018
 JANUARY 30, 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
Attachment D – in its entirety: Natural Gas Transactions	Item I) A) 4) Long-term fuel (gas) buying and hedging plans	Each financial transaction is a factor in PG&E's long term buying and hedging strategies. With the entire set of transactions PG&E's counterparties could reconstruct PG&E's gas buying and hedging plans.	Financial transactions are confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)
	Item I) B) 2) Utility recorded gas procurement and cost information	Actual quantity and cost of procured physical gas are protected.	Utility recorded physical gas procurement and cost information is confidential for one year.
	XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings)	These analyses are the basis of the monthly variable cost of energy and utility operation, which must be protected to preserve the confidentiality of ERRA documentation	Monthly procurement costs (ERRA Filings) are confidential for 3 years.
Attachment E – Physical and Financial Natural Gas Transactions	Item I) A) 4) Long-term fuel (gas) buying and hedging plans	Each financial transaction is a factor in PG&E's long term buying and hedging strategies. With the entire set of transactions PG&E's counterparties could reconstruct PG&E's gas buying and hedging plans.	Financial transactions are confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)
	Item I) B) 2) Utility recorded gas procurement and cost information	Actual quantity and cost of procured physical gas are protected.	Utility recorded physical gas procurement and cost information is confidential for one year.
	Item XI) Monthly Procurement Costs	These analyses are the basis of the monthly variable cost of energy and utility operation, which must be protected to preserve the confidentiality of ERRA documentation	Monthly procurement costs (ERRA Filings) are confidential for 3

**PACIFIC GAS AND ELECTRIC COMPANY’S (U 39 E)
 QUARTERLY COMPLIANCE REPORT ADVICE LETTER 5475-E
 PROCUREMENT TRANSACTION QUARTERLY COMPLIANCE REPORT OF QUARTER FOUR 2018
 JANUARY 30, 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
	(Energy Resource Recovery Account [ERRA] Filings)		years.
Attachment E – in its entirety: Other Transactions (Electric Information) (Except Greenhouse Gas (“GHG”) Information, which is presented separately below)	Item VI) E) and F) Utility Planning Area Matrix Net Open (Electric)	Disclosure of information in these executed contracts could provide market participants regarding PG&E’s net open position.	3 Years
	Item VII) B) Bilateral Contract Terms and Conditions – contracts and power purchase agreements between utilities and non-affiliated third parties;	Disclosure of bid term, price and notional value information would provide market sensitive information regarding PG&E bid strategy and selection. This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E’s customers.	3 Years
	Items VIII) A) Bid Information and VIII) B) Specific quantitative analysis involved in scoring and evaluation of participating bids	This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E’s customers.	3 Years

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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
Attachment E – in its entirety: Other Transactions- (GHG Information)	D.14-10-033 Public Utilities Code Section 454.5(g)	<p>This information includes confidential GHG information, the disclosure of which is prohibited according to Title 17 of the California Code of Regulations.</p> <p>Information concerning 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. In addition, this information may reveal whether or not PG&E participated in California Air Resources Board ("CARB") auctions and PG&E's net open position for GHG compliance.</p>	Indefinite
Attachment F – in its entirety: PRG Material	D.06-06-066 and Public Utilities Code Section 454.5(g)	<p>Presentations to the PRG include a variety of confidential commercially market sensitive information, including information about e-solicitation, bilateral contracts, pricing information, strategy discussions, recently issued RFO's, etc.</p> <p>Release of this commercially market sensitive information could impact market prices, cause harm to PG&E's customers, and put PG&E at an unfair business advantage by the disclosing this information. This information could be used by other market participants to gain a commercial advantage.</p> <p>For each PRG material confidential matrix and declaration has been appended. Please see the specific matrices within Attachment F.</p>	Length of Time for Specific Items identified in D.06-06-066 Matrix or Indefinite (for GHG information)
Attachment F – in its entirety: PRG Material- GHG Information	D.14-10-033	<p>Presentations to the PRG include confidential GHG information, the disclosure of which is prohibited according to Title 17 of the California Code of Regulations.</p> <p>For each PRG material confidential matrix and declaration has been appended. Please see the specific matrices within Attachment F.</p>	Indefinite

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
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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
Attachment G - Independent Evaluator (IE) Report	<p>VII) B) Bilateral Contract Terms and Conditions – contracts and power purchase agreements between utilities and non-affiliated third parties;</p> <p>VIII) A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids</p> <p>Item VI) E) and F) Utility Planning Area Matrix Net Open (Electric)</p>	<p>Disclosure of information would provide market sensitive information regarding bid strategy and selection.</p> <p>Disclosure of bid term, price and notional value information would provide market sensitive information regarding PG&E bid strategy and selection. This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E's customers.</p> <p>This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E's customers.</p>	<p>3 Years</p> <p>Bid information</p>
Attachment H - Executed Contracts	<p>Item VI) E) and F) Utility Planning Area Matrix Net Open (Electric)</p> <p>Item VII) B) Bilateral Contract Terms and Conditions – contracts and power purchase agreements between</p>	<p>Disclosure of information in these executed contracts could provide market participants regarding PG&E's net open position.</p> <p>Disclosure of bid term, price and notional value information would provide market sensitive information regarding PG&E bid strategy and selection. This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E's customers.</p>	<p>3 Years</p> <p>3 Years</p>

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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
	utilities and non-affiliated third parties; Item VIII) A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids	This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E's customers.	3 Years
Attachment J – System Conditions	Item VI) E) and F) Utility Planning Area Net Open for Energy and Capacity (Electric) Item XIII) Energy Division Monthly Data Request (AB 57) Public Utilities Code Section 454.5(g)	Residual net short/long is key input to PG&E's confidential forecast of net open position. The residual net short/long is information provided to Energy Division on a confidential basis per AB 57 and must be protected here to preserve confidentiality of the AB 57 report. This information is provided to Energy Division on a confidential basis per AB 57 and must be protected here to preserve confidentiality of the AB 57 report. In addition, this attachment contains market sensitive information and addresses PG&E's energy procurement trading strategies.	3 Years 3 Years Indefinite
Attachment J - Gas Transaction, Natural Gas Documents	Item I) A) 3) Gas Demand Forecasts and 4) Long-term fuel (gas) buying and hedging plans	This information includes detailed information on PG&E's implementation of its fuel buying and hedging plans and must remain confidential to avoid disclosing PG&E's market strategy.	Physical gas information is confidential for 3 Years; Financial gas information is confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)

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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
Attachment K – Risk Management	Item XII – Monthly Portfolio Risk Assessment of Appendix 1 of D.06-06-066 for three years.	Value at Risk (VaR) or electric and gas for electric generation is deemed confidential the matrix. Public disclosure of TeVaR results would be detrimental for PG&E and its electric customers. Such disclosure would release confidential, sensitive market intelligence that would place PG&E at an unfair disadvantage in the energy and financial markets.	3 years
	Public Utilities Code 454.5(g)	Risk and Strategy papers are proprietary company information that if publicly could cause harm to PG&E's customers and put PG&E at an unfair business disadvantage.	Indefinite
Attachment L – In its entirety: Reasonable Number of Analyses – Natural Gas	Item I) A) 4) Long-term fuel (gas) buying and hedging plans	This information includes detailed information on PG&E's hedging plan, and must remain confidential to avoid disclosing PG&E's market strategy.	Financial gas information is confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)
Attachment L - Reasonable Number of Analyses – Electric	Item VI) E) and F) Utility Planning Area Net Open for Energy and Capacity (Electric)	These analyses are the basis of the monthly variable cost of energy and utility operation, which must be protected to preserve details which would reveal PG&E's position in the market place.	3 Years
	VII) B) Bilateral Contract Terms and Conditions – contracts and power purchase agreements between utilities and non-affiliated third parties;	Disclosure of bid term, price and notional value information would provide market sensitive information regarding PG&E bid strategy and selection. This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E's customers.	3 Years

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
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 JANUARY 30, 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
	VIII) A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids	This is commercially market sensitive information because it could be used by other market participants to gain a commercial advantage and could impact market prices and cause harm to PG&E's customers.	3 years
Attachment L - Reasonable Number of Analyses – Electric (continued)	Item XIII) Energy Division Monthly Data Request (AB 57)	This information is provided to Energy Division on a confidential basis per AB 57 and must be protected here to preserve confidentiality of the AB 57 report.	3 Years
	Item XI) Monthly Procurement Costs (Energy Resource Recover Accounts [ERRA] Filings)	These analyses are the basis of the monthly variable cost of energy and utility operation, which must be protected to preserve the confidentiality of ERRA documentation	Monthly procurement costs (ERRA Filings) are confidential for 3 years
	D-14-10-033	This information includes confidential GHG information, the disclosure of which is prohibited according to Title 17 of the California Code of Regulations	Indefinite

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
 QUARTERLY COMPLIANCE REPORT ADVICE LETTER 5475-E
 PROCUREMENT TRANSACTION QUARTERLY COMPLIANCE REPORT OF QUARTER FOUR 2018
 JANUARY 30, 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
Attachment M – Executed Contracts	Item VII) B) Bilateral Contract Terms and Conditions – contracts and power purchase agreements between utilities and non-affiliated third parties;	Disclosure of information would provide market sensitive information regarding bid strategy and selection.	3 Years

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

**PACIFIC GAS AND ELECTRIC COMPANY
QUARTERLY COMPLIANCE REPORT FILING ADVICE LETTER 5475-E**

**DECLARATION OF MARIANNE AIKAWA
SEEKING CONFIDENTIAL TREATMENT OF CERTAIN DATA AND
INFORMATION CONTAINED IN
CONFIDENTIAL ATTACHMENTS A, B, C, E, G, H, J, L AND M**

I, Marianne Aikawa, declare:

1. I am presently employed by Pacific Gas and Electric Company (“PG&E”), and have been an employee at PG&E since 1989. My current title is Senior Manager within PG&E’s Energy Policy and Procurement organization. In this position my responsibilities include reviewing regulatory reports. In carrying out these responsibilities, I have acquired knowledge of PG&E’s regulatory reporting and have also gained knowledge of electric energy procurement data, processes, and practices. 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 information.
2. Based on my knowledge and experience, and in accordance with Decisions (“D.”) 06-06-066, 14-10-033 and relevant Commission rules, I make this declaration seeking confidential treatment of PG&E’s January 30, 2019 Advice Letter 5475-E, Confidential Attachments A, B, C, E, G, H, J, L and M.
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 confidential market sensitive data and information covered by D.06-06-066, 14-10-033 and/or Public Utilities Code Section 454.5(g). The matrix also specifies why

confidential protection is justified. Further, the data and information: (1) is not already public; and (2) 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 in the attached matrix that is pertinent to this submittal.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed on January 30, 2019, at San Francisco, California.

/s/

Marianne Aikawa

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

**PACIFIC GAS AND ELECTRIC COMPANY
QUARTERLY COMPLIANCE REPORT FILING ADVICE LETTER 5475-E**

**DECLARATION OF JOHN ULLOA
SEEKING CONFIDENTIAL TREATMENT OF CERTAIN DATA AND INFORMATION
CONTAINED IN CONFIDENTIAL ATTACHMENTS A, B, D, E, H, J, L, AND M**

I, John Ulloa, declare:

1. I am presently employed by Pacific Gas and Electric Company (“PG&E”) and have been an employee since 1998. My current title is Manager, Electric Gas Supply in the Energy Supply Management Department, which is part of the Energy Policy and Procurement Department. I am responsible for physical and financial trading of gas in support of PG&E’s utility-owned generation plants and PG&E’s tolling agreements. In carrying out these responsibilities, I have acquired knowledge of gas supply and gas hedging for electric generation, the markets for physical and financial products for gas supply and hedging, and the various types of transactions involved. 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 information.

2. Based on my knowledge and experience, and in accordance with Decisions (“D.”) 06-06-066, 14-10-033 and relevant Commission rules, I make this declaration seeking confidential treatment of PG&E’s January 30, 2019 Advice Letter 5475-E, Confidential Attachments A, B, D, E, H, J,L, and M..

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 confidential market sensitive data and information covered by D.06-06-

066, 14-10-033 and Public Utilities Code Section 454.5(g). The matrix also specifies why confidential protection is justified. Further, the data and information: (1) is not already public; and (2) 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 in the attached matrix that is pertinent to this submittal.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed on January 30, 2019, at San Francisco, California.

/s/
John Ulloa

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

**PACIFIC GAS AND ELECTRIC COMPANY
QUARTERLY COMPLIANCE REPORT FILING ADVICE LETTER 5475-E**

**DECLARATION OF JAY BUKOWSKI
SEEKING CONFIDENTIAL TREATMENT OF CERTAIN DATA AND
INFORMATION CONTAINED IN PG&E'S
CONFIDENTIAL ATTACHMENTS F AND K**

I, Jay Bukowski, declare:

1. I am presently employed by Pacific Gas and Electric Company ("PG&E"), and have been an employee at PG&E since October 1998. My current title is Manager within PG&E's Energy Policy and Procurement organization. In this position, my responsibilities include review of regulatory reports and managing PG&E's Procurement Review Group and Independent Evaluator program. In carrying out these responsibilities, I have acquired knowledge of PG&E's regulatory reporting and have also gained knowledge of electric energy procurement data, processes, and practices. 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 information.
2. Based on my knowledge and experience, and in accordance with Decisions ("D.") 06-06-066, 14-10-033 and relevant Commission rules, I make this declaration seeking confidential treatment of PG&E's January 30, 2019 Advice Letter 5475-E, Confidential Attachments F and K.
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 confidential market sensitive data and information covered by D.06-06-

066, 14-10-033, and/or Public Utilities Code Section 454.5(g). The matrix also specifies why confidential protection is justified. Further, the data and information: (1) is not already public; and (2) 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 in the attached matrix that is pertinent to this submittal.

I declare under penalty of perjury, under the laws of the State of California, that the foregoing is true and correct.

Executed on January 30, 2019, at San Francisco, California.

/s/
Jay Bukowski

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