December 17, 2015

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

SUBJECT: Procurement Transaction Quarterly Compliance Filing (Q2, 2015)

Dear Mr. Jacobson:

Advice Letter 4676-E is effective as of August 29, 2015.

Sincerely,

Edward Randolph
Director, Energy Division
July 30, 2015

Advice 4676-E  
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Procurement Transaction Quarterly Compliance Filing (Q2, 2015)

Purpose

Pacific Gas and Electric Company ("PG&E") hereby submits to the California Public Utilities Commission ("Commission" or "CPUC") its compliance filing for the second quarter of 2015 in conformance with PG&E’s Bundled Procurement Plan ("BPP") approved by the Commission in Decision ("D.")12-01-033 and D.12-04-046. PG&E’s submittal of this Procurement Transaction Quarterly Compliance Report ("QCR") for record period April 1, 2015 through June 30, 2015, (Q2-2015) is in accordance with D.03-12-062, Ordering Paragraph 19, which requires that the Quarterly Procurement Plan 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 QCR 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 this QCR includes the following supporting Confidential Attachments:

Attachment A: Second Quarter 2015 Electric and Natural Gas Transactions
Attachment B: Second Quarter 2015 Counter-Party Information
Attachment C: Second Quarter 2015 Electric Transactions Summary
Attachment D: Second Quarter 2015 Natural Gas Transactions Summary
Attachment E: Second Quarter 2015 Other Transactions
Attachment F: Second Quarter 2015 Key Briefing Packages
Attachment G: Second Quarter 2015 Independent Evaluator (IE) Report
Attachment H: Second Quarter 2015 New Contracts Executed/Contracts Amended
Attachment I: Summary of Retained Generation Investments Completed During Second Quarter 2015
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 Second Quarter

Attachment 4 to this QCR includes a confidentiality declaration and matrix.

The public version of this QCR is provided to the service lists for Rulemakings (“R.”) R.10-05-006 and R.13-12-010. The confidential version of this QCR is provided to PG&E’s Procurement Review Group.

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

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than August 19, 2015, which is 20 days after the date of this filing. Protests must be submitted to:

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

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

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

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

Erik Jacobson
Director, Regulatory Relations
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 August 29, 2015, 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.10-05-006 and R.13-12-010. 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.10-05-006 and R.13-12-010 (Public Version)
    PG&E’s Procurement Review Group (Confidential Version)

**Public Attachments:**
Attachment 1: Narrative
Attachment 2: Attachment H (Public Version)
Attachment 3: Attachment G, IE Report (Public Version)
Attachment 4: Confidentiality Declarations and Matrix
**CALIFORNIA PUBLIC UTILITIES COMMISSION**
**ADVICE LETTER FILING SUMMARY**
**ENERGY UTILITY**

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

<table>
<thead>
<tr>
<th>Utility type:</th>
<th>Contact Person: Jennifer Wirowek</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ ELC  ☑ GAS</td>
<td>Phone #: (415) 973-1419</td>
</tr>
<tr>
<td>☐ PLC  ☐ HEAT  ☐ WATER</td>
<td>E-mail: <a href="mailto:J6ws@pge.com">J6ws@pge.com</a> and <a href="mailto:PGETariffs@pge.com">PGETariffs@pge.com</a></td>
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**EXPLANATION OF UTILITY TYPE**

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**Advice Letter (AL) #: 4676-E**

| Tier: | 2 |

| Subject of AL: | Procurement Transaction Quarterly Compliance Filing (Q2, 2015) |

| Keywords (choose from CPUC listing): | Compliance, Procurement |

| AL filing type: | Monthly ☑ Quarterly ☐ Annual ☐ One-Time ☐ Other |

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #: D.12-01-033, D.12-04-046 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: ____________________

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: Yes. Please see attached Confidentiality Declarations and Matrix.

Confidential information will be made available to those who have executed a nondisclosure agreement: ☑ Yes ☐ No

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: Jay Bukowski, (415) 973-1727 / Peter Koszalka (415) 973-3818 / Marianne Aikawa (415) 973-0375

Resolution Required? ☐ Yes ☑ No

Requested effective date: **August 29, 2015**

No. of tariff sheets: N/A

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed: N/A

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

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

<table>
<thead>
<tr>
<th>California Public Utilities Commission</th>
<th>Pacific Gas and Electric Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Division</td>
<td>Attn: Erik Jacobson</td>
</tr>
<tr>
<td>EDTariffUnit</td>
<td>Director, Regulatory Relations</td>
</tr>
<tr>
<td>505 Van Ness Ave., 4th Flr.</td>
<td>77 Beale Street, Mail Code B10C</td>
</tr>
<tr>
<td>San Francisco, CA 94102</td>
<td>P.O. Box 770000</td>
</tr>
<tr>
<td>E-mail: <a href="mailto:EDTariffUnit@cpuc.ca.gov">EDTariffUnit@cpuc.ca.gov</a></td>
<td>San Francisco, CA 94177</td>
</tr>
<tr>
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</table>
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Summary of Public 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 April 1, 2015 through June 30, 2015 (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.12-01-033 and D.12-04-046.

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. GHG Offset Credit RFO, as described in Section C.3(e)(i), below.

2. **Other Competitive Solicitation Activity During the Quarter** (are referenced here for informational purposes only) –
   a. 2014 Energy Storage RFO (issued December 1, 2014)
   b. 2015 RPS RFO (issued January 5, 2015)

3. **Other Procurement Activities, Approval Through the QCR** – PG&E also seeks approval of the following transactions executed from procurement activities, other than competitive solicitations, through this QCR:
   a. Electric Transactions:
      ii. Convergence Bidding
      iii. Direct Bilateral Contracting for Short-Term Products
      iv. Electronic Solicitations
   
   These procurement activities are described in greater detail in Section C.3, below.
b. Gas Transactions:
   i. Transparent Exchanges
   ii. Direct Bilateral Contracting for Short-Term Products
   iii. Voice Brokers
   iv. Electronic Solicitations
   v. Market Request for Proposals

   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 regulatory processes, and are referenced here for informational purposes only:
   a. Bilaterally negotiated contracts or amendments executed pursuant to other regulatory requirements.

C. Master Data Request 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 Procurement; Roy Kuga, Vice President, Energy Supply Management; Gary Jeung, Senior Director, Renewable Energy; Don Howerton, Director, Renewable Transactions; Joe Lawlor, Director, Portfolio Management; and/or Pete Koszalka, Director, 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 Procurement Review Group (PRG) during the Quarter are included in Confidential Attachment F.

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

   **a) Electric Procurement – Description**
   - BPP-approved electricity procurement processes used during the Quarter including CAISO’s CRR Allocations and Auctions
   - Convergence Bidding
   - Direct Bilateral Contracting for Short-Term Products
   - Electronic Solicitations
   - Qualifying Facility/Combined Heat and Power (QF/CHP) Legacy Contracts
   - CHP Feed-in Tariffs

   **b) Electric Procurement – Justification**

   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 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 Monthly CRR Allocation and Auction Process** – PG&E procures CRRs to narrow the distribution of PG&E’s energy procurement costs due to 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, Helms pumping load and wholesale load obligations) 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 May 2015, June 2015 and July 2015, 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 April 2015, May 2015 and June 2015, PG&E participated in Tier 1, Tier 2 and the Auction of the CAISO’s monthly CRR process to procure CRRs for May 2015, June 2015 and July 2015, respectively. Relevant information is included in Confidential Attachment J.

- **Convergence Bidding** – Based on factors including anticipated loads, resource availabilities and intermittent resource generation forecasts, PG&E participates in the CAISO’s convergence bidding market. Relevant information is included in Confidential Attachments E, F and J.

- **Bilaterally Negotiated Contracts**
  - Transmission – Transmission energy is purchased to relocate power from one point to another, often necessary outside a Regional Transmission Operator (RTO) such as the CAISO. Relevant information is included in Confidential Attachment A.
  - Bookouts – In the course of scheduling physical power transactions which require transmission from one region to another, power is sometimes interrupted. In such cases it is necessary for the buyer and seller to settle the interrupted power financially. Those transactions appear as sales back to the counterparty from which the power was originally purchased. Such transactions are commonly termed as “bookouts.” During the Quarter, PG&E executed one bookout contract. Relevant information is included in Confidential Attachment A.
  - Resource Adequacy – During the Quarter, PG&E executed six bilateral short-term resource adequacy transactions. Four were for system sales and purchases and two were import rights sales. Relevant information and supporting justifications are included in Confidential Attachments E and H.

- **Electronic Solicitations** – Physical Term – During the Quarter, PG&E executed seventeen physical term transactions via electronic solicitation. Relevant information is included in Confidential Attachment A.

- **QF/CHP Legacy Contracts (For informational purposes only)** – Under the QF/CHP Program, some QF generators holding a legacy contract may
convert to one of several new PPAs (i.e., Under 20 megawatts (MW) PURPA PPA, Transition PPA, and As-Available PPA) 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 Confidential Attachment H.

- **CHP Feed-in Tariffs (For informational purposes only)** – Under the Waste Heat and Carbon Emissions Act, codified as California Public Utilities 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 Decision 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 under 20 MW, a simplified PPA for CHP generators less than 5 MW, and a further simplified PPA for smaller CHP systems under 500 kW. Relevant information is included in Confidential Attachment H.

c) **Natural Gas Procurement – Description**

PG&E procured natural gas during the Quarter using various methods, including:

- Competitive Solicitation (Gas Storage RFO)
- Transparent Exchanges
- Direct Bilateral Contracting for Short-Term Products
- Voice Brokering for the purchase and sale of natural gas futures or options
- Electronic Solicitations
- Market Requests for Proposals

d) **Natural Gas Procurement – Justification**

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

- There were no competitive solicitations for the Quarter

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 bought and sold physical natural gas on the 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. Relevant information is included in Confidential Attachment A.

  **Gas Hedges (in Compliance With D.12-01-033)** – During the Quarter, PG&E conducted hedging activities that were in compliance with its approved Hedging Plan. PG&E executed hedges (futures and options) directly on the ICE electronic trading platform. Hedge transactions were 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 bilateral 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.12-01-033 are in Confidential Attachment L.

• **Direct Bilateral Contracting for Short-Term Products**:

  **Commodity Purchases/Sales** – PG&E bought and sold physical gas directly with counterparties in the bilateral market. Spot gas (deliveries less than one month) is traded at fixed prices and Gas Daily or CGPR index. 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 bidweek 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 prices, and/or broker quotes, to inform and conduct these transactions. Relevant information is included in Confidential Attachments A and M.

  **Gas Parking and Lending** – PG&E purchased gas parking and/or lending services to balance its daily supplies with demand. The terms of the parking and lending transactions were less than one month.
• **Voice Brokers – Gas Hedges** – PG&E executed natural gas hedges (futures) through voice brokers that resulted in exchange-cleared trades. Brokers provide access to anonymous bids and offers from both bilateral 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 is included in Confidential Attachment A.

• **Voice Brokers – Commodity Purchases/Sales** – PG&E executed physical gas supply transactions through voice brokers that resulted in over-the-counter transactions. Brokers provide access to anonymous bids and offers from both over-the-counter 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 is included in Confidential Attachment A.

• **Electronic Solicitations:**
  
  **Conducted via Instant Messaging and Telephone** – PG&E conducted auctions for the purchase of natural gas futures and options using instant messaging and telephone with financial counterparties. 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). These transactions were then cleared on an exchange, such as NYMEX or ICE.

  PG&E conducted auctions for the purchase of multi-month physical gas supply 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).

• **Market Requests for Proposals:**
  
  **PG&E Core Gas Market Request for Proposal** – On May 15, 2015, PG&E Core Gas announced an electronic auction to release firm pipeline capacity on PG&E California Gas Transmission’s Baja Path for a five-month term (June 2015 through October 2015). Participants bid on reservation rate only, with the highest bid receiving preference. On March 6, 2015, PG&E Electric consulted with the PRG, sharing its plans to procure firm pipeline capacity as part of its 2015 Annual Gas Supply Plan. PG&E Electric submitted a bid and was awarded capacity on May 20, 2015. The RFP results are located in Confidential Attachment E and H.
e) Other Commodities

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

- 2015 GHG Offset Credit RFO – PG&E issued the 2015 GHG Offset Credit RFO on February 26, 2015 to solicit offers of Offset Credits to satisfy PG&E’s compliance obligations under the GHG Cap-and-Trade program adopted by the California Air Resources Board (CARB) as part of CARB’s implementation of Assembly Bill 32. PG&E evaluated and selected offers based on market value, credit/collateral, portfolio fit, contract modifications, and supplier diversity. An IE monitored all evaluations and communications with Participants during the RFO. The contracts executed provide PG&E with offset credits at competitive prices. The RFO concluded in early May 2015. Relevant information is included in Confidential Attachments E, F, G, H, and L.

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

- CARB Allowance Allocation and Auction Processes – PG&E received its annual allocation of Electric Distribution Utility (EDU) Current Vintage allowances from CARB in October 2014. All of the EDU allowances will be consigned into the 2015 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 climatiques2 (MDDELCC) held joint allowance auction #3 on May 21, 2015 for Current Vintage and 2018 Vintage allowances. PG&E is authorized to procure EDU GHG products through CARB Auctions, approved exchanges, and utilizing a competitive RFO process. PG&E provided information regarding its allowance procurement strategy to the PRG. Relevant information is included in Confidential Attachments E, F, K 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. Operational constraints include the local area reliability requirements of the CAISO, as set forth in D.04-07-028. 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 is based on the PG&E Electric Portfolio 2015-2016 (April 1, 2015 – March 31, 2016) Physical Gas Procurement Plan and 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 electricity 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 day-ahead 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 Real-Time Market (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 IFM, PG&E submits resource bids and schedules and those resources that clear the market will be obligated to operate in real time.
b) **PG&E-Owned Generation Conditions During Second Quarter 2015**

PG&E received 59 percent of normal rainfall during the Quarter.

Helms Pumped Storage Facility (Helms) was used throughout the Quarter as unit availability, system conditions, and economics allowed. On March 1, 2015 Unit 3 began a planned outage to replace its generator rotor. Unit 3 was released to full dispatch on May 14, 2015. There was one forced outage greater than 24 hours during the Quarter on Unit 2 on April 5, 2015 for repair of turbine shutoff valve bypass valve.

Planned outages lasting longer than 72 hours on conventional hydro facilities greater than 30 MW during the Quarter included: Balch 1 Unit 1 (34 MW), Balch 2 Units 2 & 3 (52.5 MW, each), Butt Valley (41 MW), Caribou 1 Unit 3 (25 MW), Caribou 2 Units 4 & 5 (60 MW, each), Pit 1 Units 1 & 2 (30.5 MW, each), Pit 4 Unit 2 (47.5 MW), Pit 6 Units 1 & 2 (40 MW, each), Rock Creek Unit 1 (63 MW) and Tiger Creek Units 1 & 2 (29 MW, each).

Forced outages lasting longer than 24 hours at conventional hydro facilities greater than 30 MW were incurred at: Butt Valley (41 MW), Pit 4 Unit 1 (47.5 MW), Pit 6 Unit 2 (40 MW).

There were two planned outages at fossil combined cycle facilities, one each at Gateway and Colusa Generating Stations during the Quarter. On April 24, 2015 Gateway Generating Station began a planned spring outage. Gateway Generating Station was released to dispatch on May 8, 2015. On May 30, 2015 Colusa Generating Station began a planned combustion turbine hot gas path inspection. Colusa Generating Station was released to dispatch on June 19, 2015. There was one forced outage greater than 24 hours during the Quarter at fossil combined cycle facilities at Colusa Generating Station on June 21. There was one planned outage at Humboldt Bay Generating Station Unit 8 during the Quarter. This outage, an 18,000-hour engine overhaul, began on April 1, 2015 and lasted for 45 days. There were two forced outage greater than 24 hours during the Quarter at
Humboldt Bay Generating Station, both on Unit 2 on June 22, 2015 and June 27, 2015.

i. **DCPP Unit 1**

Unit 1 operated at a capacity factor of 102.4% during the Quarter, experiencing one brief period operating at 87% power for planned testing of main turbine control valves, otherwise operating at full power the remainder of the Quarter.

ii. **DCPP Unit 2**

Unit 2 operated at a capacity factor of 101.2% during the Quarter, experiencing one brief period operating at 88% power for planned testing of main turbine control valves, otherwise operating at full power the remainder of the Quarter.

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.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 that PG&E is seeking 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 Public Utilities Code.**

   To the extent that the Office of Ratepayer Advocates (ORA) has requested information for the Quarter as identified in its Master Data Request, this information will be included in PG&E’s Master Data Request response, and submitted to the ORA 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 Decision 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 (CAM)**

   PG&E executed one PURPA PPA and one Transition PPA under the QF/CHP Settlement that qualify for CAM-like treatment in the New System Generation Balancing Account (NSGBA).
Attachment 2
Attachment H – Public Version
New Contracts Executed and Amended During the Quarter

The table below provides a summary of Request for Offer (“RFO”) and 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.

<table>
<thead>
<tr>
<th>Contract/Counterparty Name</th>
<th>Executed/ Signed Date</th>
<th>Product</th>
<th>Term</th>
<th>Volume</th>
<th>Price</th>
<th>Notional Value ($)</th>
<th>Confirm File Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. This value represents two transactions within Attachment A and it is shown as two transactions due to accounting reasons.
2. This value represents only the electric volume of the transaction. The total contract volume is 50,000 Offset Credits.
3. This value represents only the electric notional value of the transaction. The total notional value is $564,500.
4. This value represents only the electric volume of the transaction. The total contract volume is 193,873 Offset Credits.
5. This value represents only the electric notional value of the transaction. The total notional value is $2,181,071.25.
The table below provides a summary of auction and/or e-solicitation contracts executed during the Quarter.

<table>
<thead>
<tr>
<th>Contract/Counterparty Name</th>
<th>Executed Date</th>
<th>Product</th>
<th>Term</th>
<th>Volume</th>
<th>Price</th>
<th>Notional Value ($)</th>
<th>Confirm File Name</th>
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</thead>
<tbody>
<tr>
<td>None.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table below provides a summary of bilateral contracts 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.

<table>
<thead>
<tr>
<th>Contract/Counterparty Name</th>
<th>Executed Date</th>
<th>Product</th>
<th>Term</th>
<th>Volume</th>
<th>Price</th>
<th>Notional Value ($)</th>
<th>Confirm File Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern California Edison (33B217M01)</td>
<td>5/29/2015</td>
<td>System Resource Adequacy (RA) Purchase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Electric Bilateral Transactions folder</td>
</tr>
<tr>
<td>Southern California Edison (33B217M02)</td>
<td>5/29/2015</td>
<td>System RA Sale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Electric Bilateral Transactions folder</td>
</tr>
<tr>
<td>Shell Energy North America (US), L.P. (33B022M10)</td>
<td>6/5/2015</td>
<td>System RA Purchase</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Electric Bilateral Transactions folder</td>
</tr>
<tr>
<td>Shell Energy North America (US), L.P. (33B022M09)</td>
<td>6/5/2015</td>
<td>System RA Sale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Electric Bilateral Transactions folder</td>
</tr>
<tr>
<td>Shell Energy North America (US), L.P. (33B022M08)</td>
<td>6/5/2015</td>
<td>RA Import Rights Sale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Electric Bilateral Transactions folder</td>
</tr>
<tr>
<td>Exelon Generation (33B007M05)</td>
<td>6/5/2015</td>
<td>RA Import Rights Sale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Electric Bilateral Transactions folder</td>
</tr>
</tbody>
</table>
**Informational purposes only:** A summary of QF/CHP contracts executed and/or amended during the Quarter filed via separate application, advice letter or other approval mechanisms:

<table>
<thead>
<tr>
<th>Contract/ Counterparty Name</th>
<th>Executed/ Signed Date</th>
<th>Product</th>
<th>Term</th>
<th>Type of Transaction</th>
<th>Date Filed</th>
<th>Regulatory Reporting or Approval Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bear Mountain Limited (25C251)</td>
<td>4/16/2015</td>
<td>QF</td>
<td>7 days</td>
<td>Extension Agreement</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Unison Energy – Whole Foods San Jose (24B002FHP)</td>
<td>4/15/2015</td>
<td>AB1613</td>
<td>10 years</td>
<td>Contract</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Oldsdale Energy LLC (25C170QTR)</td>
<td>4/27/2015</td>
<td>QF/CHP</td>
<td>2 months</td>
<td>Contract</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Indian Valley Hydro (04H061QPA2)</td>
<td>4/29/2015</td>
<td>QF/CHP</td>
<td>3 months</td>
<td>Contract</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Burney Forest Products (13C038)</td>
<td>6/4/2015</td>
<td>QF</td>
<td>N/A</td>
<td>Routine Amendment to Existing Agreement</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Contract/ Counterparty Name</th>
<th>Executed/ Signed Date</th>
<th>Product</th>
<th>Term</th>
<th>Type of Transaction</th>
<th>Date Filed</th>
<th>Regulatory Reporting or Approval Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lemoore PV 1, LLC (33R307AB)</td>
<td>4/3/2015</td>
<td>AB1969/Feed In Tariff (FiT)</td>
<td>N/A</td>
<td>Consent to Assignment (CTA)</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Desert Sunlight 300, LLC (33R138)</td>
<td>4/6/2015</td>
<td>RPS</td>
<td>N/A</td>
<td>Routine Amendment to Existing Agreement</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Lemoore PV 1, LLC (33R307AB)</td>
<td>4/8/2015</td>
<td>AB1969/Fit</td>
<td>N/A</td>
<td>CTA</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>North Star Solar, LLC (33R148)</td>
<td>4/17/2015</td>
<td>RPS</td>
<td>N/A</td>
<td>CTA</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Sun Harvest Solar, LLC (33R338RM)</td>
<td>4/21/2015</td>
<td>ReMAT</td>
<td>N/A</td>
<td>Routine Amendment to Existing Agreement</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Fresno Cogeneration Partners, L.P. (Fresno Solar West) (33R296AB)</td>
<td>4/21/2015</td>
<td>AB1969/Fit</td>
<td>N/A</td>
<td>Routine Amendment to Existing Agreement</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
</tbody>
</table>
### Qtr2 2015 Transaction Quarterly Compliance Report

Advice Letter – 4676-E  
July 30, 2015

<table>
<thead>
<tr>
<th>Contract/ Counterparty Name</th>
<th>Executed/ Signed Date</th>
<th>Product</th>
<th>Term</th>
<th>Type of Transaction</th>
<th>Date Filed</th>
<th>Regulatory Reporting or Approval Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresno Cogeneration Partners, L.P. (Fresno Solar South) (33R295AB)</td>
<td>4/21/2015</td>
<td>AB1969/FiT</td>
<td>N/A</td>
<td>Routine Amendment to Existing Agreement</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Green Light Energy Corporation (33R300AB)</td>
<td>4/27/2015</td>
<td>AB1969/FiT</td>
<td>N/A</td>
<td>Amendment</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Midway Sunset Cogeneration Co. (33B126)</td>
<td>4/27/2015</td>
<td>Tolling (Hybrid)</td>
<td>N/A</td>
<td>Amendment</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
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<tr>
<td>Hollister Solar, LLC (33R281AB)</td>
<td>5/7/2015</td>
<td>AB1969/FiT</td>
<td>N/A</td>
<td>CTA</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Sierra Pacific Industries (33R254)</td>
<td>6/3/2015</td>
<td>RPS</td>
<td>N/A</td>
<td>Routine Amendment to Existing Agreement</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Geysers Power Company LLC (33T002)</td>
<td>6/3/2015</td>
<td>Misc. 6</td>
<td>N/A</td>
<td>Amendment</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Pristine Sun Fund 6, LLC (RGA2 Solar) (33R346RM)</td>
<td>6/10/2015</td>
<td>ReMAT</td>
<td>N/A</td>
<td>CTA</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Pristine Sun Fund 6, LLC (2076 Maas) (33R313AB)</td>
<td>6/10/2015</td>
<td>AB1969/FiT</td>
<td>N/A</td>
<td>CTA</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
<tr>
<td>Mission Solar LLC (33R285AB)</td>
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<td>AB 1969/FiT</td>
<td>N/A</td>
<td>CTA</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
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<tr>
<td>Merced Solar LLC (33R282AB)</td>
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<td>AB 1969/FiT</td>
<td>N/A</td>
<td>CTA</td>
<td>N/A</td>
<td>2015 ERRA Compliance Filing</td>
</tr>
</tbody>
</table>

6. This is a retained assets agreement that serves a small number of PG&E customers.
**Informational purposes only:** A summary of the contracts terminated/expired during the Quarter:

<table>
<thead>
<tr>
<th>Contract/ Counterparty Name</th>
<th>Termination or Expiration</th>
<th>Date</th>
<th>Product</th>
<th>Volume (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altamont Midway, Ltd. (16W009)</td>
<td>Expiration</td>
<td>4/1/2015</td>
<td>QF</td>
<td>48.9</td>
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<tr>
<td>Forebay Wind LLC – Taxvest (01W015)</td>
<td>Expiration</td>
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<td>QF</td>
<td>0.715</td>
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<tr>
<td>Forebay Wind LLC – Viking (01W014)</td>
<td>Expiration</td>
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<td>QF</td>
<td>1.69</td>
</tr>
<tr>
<td>Forebay Wind LLC – Western (01W012)</td>
<td>Expiration</td>
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<td>QF</td>
<td>2.7</td>
</tr>
<tr>
<td>Forebay Wind LLC – Altech (01W011)</td>
<td>Expiration</td>
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<td>QF</td>
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</tr>
<tr>
<td>Forebay Wind LLC – CWES (01W007)</td>
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<td>QF</td>
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</tr>
<tr>
<td>Forebay Wind LLC – Seawest (01W006)</td>
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<td>QF</td>
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<td>Altamont Power LLC (Partners 2) (16W010)</td>
<td>Expiration</td>
<td>4/10/2015</td>
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<td>WSF PV2, LLC (33R314AB)</td>
<td>Termination</td>
<td>4/13/2015</td>
<td>AB1969/FIT</td>
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<tr>
<td>Rio Bravo Poso (25C076)</td>
<td>Termination</td>
<td>4/13/2015</td>
<td>QF</td>
<td>37</td>
</tr>
<tr>
<td>Shamrock Utilities (Clover Leaf) (13H012)</td>
<td>Expiration</td>
<td>4/14/2015</td>
<td>QF</td>
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<tr>
<td>Kings River Conservation District (33D052)</td>
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<td>4/15/2015</td>
<td>Tolling</td>
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<tr>
<td>Shamrock Utilities (Cedar Flat) (19H048)</td>
<td>Expiration</td>
<td>4/16/2015</td>
<td>QF</td>
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<tr>
<td>Oildale Energy LLC (25C170)</td>
<td>Expiration</td>
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<td>33.8</td>
</tr>
<tr>
<td>McKittrick Limited (25C275QTR)</td>
<td>Termination</td>
<td>4/30/2015</td>
<td>QF/CHP</td>
<td>48</td>
</tr>
<tr>
<td>Contract/ Counterparty Name</td>
<td>Termination or Expiration</td>
<td>Date</td>
<td>Product</td>
<td>Volume (MW)</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Live Oak Limited (25C274QTR)</td>
<td>Termination</td>
<td>4/30/2015</td>
<td>QF/CHP</td>
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<tr>
<td>Chalk Cliff Limited (25C272QTR)</td>
<td>Termination</td>
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<td>QF/CHP</td>
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<td>Expiration</td>
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<td>QF</td>
<td>48.094</td>
</tr>
<tr>
<td>Badger Creek Limited (25C250QTR)</td>
<td>Termination</td>
<td>4/30/2015</td>
<td>QF/CHP</td>
<td>48</td>
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<tr>
<td>GASNA 36P LLC (33R293AB)</td>
<td>Termination</td>
<td>5/1/2015</td>
<td>AB1969/FiT</td>
<td>1.5</td>
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<tr>
<td>Occidental Power Services, Inc. (04C101)</td>
<td>Termination</td>
<td>5/17/2015</td>
<td>QF</td>
<td>0.06</td>
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<tr>
<td>Westmoor High School (02C049)</td>
<td>Termination</td>
<td>5/17/2015</td>
<td>QF</td>
<td>0.06</td>
</tr>
<tr>
<td>Midway-Sunset Cogen Co. (33B091)</td>
<td>Termination</td>
<td>5/31/2015</td>
<td>Conventional</td>
<td>151</td>
</tr>
<tr>
<td>STS HydroPower Kekawaka (13H039QPA)</td>
<td>Termination</td>
<td>5/31/2015</td>
<td>QF/CHP</td>
<td>5.445</td>
</tr>
<tr>
<td>Berry Petroleum Company (University) (25C099QTR)</td>
<td>Expiration</td>
<td>6/30/2015</td>
<td>QF//CHP</td>
<td>37.2</td>
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<tr>
<td>Oildale Energy LLC (25C170QTR)</td>
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<td>QF/CHP</td>
<td>40</td>
</tr>
<tr>
<td>Graphic Packaging International, Inc. (08C023QTR)</td>
<td>Expiration</td>
<td>6/30/2015</td>
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<td>26</td>
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<tr>
<td>Martinez Cogen Limited Partnership (01C044QTR)</td>
<td>Expiration</td>
<td>6/30/2015</td>
<td>QF/CHP</td>
<td>99.9</td>
</tr>
</tbody>
</table>

7. A terminated contract is ended before its original expiration date. An expiration date is the natural end of the contract.
Attachment 3
Attachment G – Public Version

Independent Evaluator’s Report
PACIFIC GAS AND ELECTRIC COMPANY
2015 GREENHOUSE GAS OFFSET CREDIT REQUEST FOR OFFERS

REPORT OF THE INDEPENDENT EVALUATOR ON CONTRACTS FOR GREENHOUSE GAS OFFSET CREDITS

JULY 14, 2015
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1. INTRODUCTION

This report of Arroyo Seco Consulting (“Arroyo”), serving as Independent Evaluator (“IE”) for Pacific Gas & Electric Company’s (PG&E’s) 2015 Greenhouse Gas (“GHG”) Offset Credit Request for Offers (“RFO”), provides a review of:

- The role of the Independent Evaluator,
- The adequacy of PG&E’s outreach to potential participants and the robustness of the solicitation,
- The strengths and weaknesses of the methodology for Offer evaluation and selection used by PG&E,
- The fairness of PG&E’s bidding and selection process,
- Fairness of contract-specific negotiations, and
- Merit of the executed offset credit contracts for approval by the California Public Utilities Commission (“CPUC”).

Overall, Arroyo believes that PG&E’s selection methodology and process were fair to ratepayers and to competing providers of GHG compliance instruments. The solicitation was less than fully robust, which Arroyo ascribes to the requirements of PG&E’s RFO, to the state of supply and demand in the current market, and also to the current state of the California Air Resources Board’s (ARB’s) progress in developing the cap-and-trade program. In Arroyo’s opinion, PG&E’s evaluation and selection process was handled fairly and the selected short list was reasonable.

PG&E selected [Redacted] for its short list. Following negotiations with all shortlisted parties, PG&E executed contracts for deliveries of GHG offset credits from [Redacted]. Arroyo’s opinion is that negotiations were, overall, conducted in a manner that was fair to ratepayers and to competing sellers. The contract pricing appears to fall within the range of market quotes for roughly comparable instruments at or around the date of contract execution. Arroyo’s opinion is that the executed contracts merit CPUC approval.
2. ROLE OF THE INDEPENDENT EVALUATOR

Pacific Gas and Electric Company issued a Request for Offers on February 26, 2015 for GHG offset credits to help meet the utility’s obligations under cap-and-trade regulations adopted by the ARB. The cap-and-trade program implements legislation adopted by the State as Assembly Bill 32 in 2006, targeting the reduction of emissions of greenhouse gases.

This chapter describes key roles of the IE, details activities undertaken by the IE in this solicitation to fulfill those roles, and identifies the treatment of confidential information.

A. ROLE OF THE INDEPENDENT EVALUATOR

The CPUC stated its intent for participation of an IE in competitive procurement solicitations to “separately evaluate and report on the IOU’s entire solicitation, evaluation and selection process”, in order to “serve as an independent check on the process and final selections.”1 The Energy Division provided a short-form template in 2010 for use in reporting about transactions (other than renewable energy) that are filed through a Quarterly Compliance Report, specifying that such an IE report cover topics including:

- Describe the IE’s role.
- How did the IOU conduct outreach to bidders, and was the solicitation robust?
- Describe the IOU’s evaluation methodology and its strengths and weaknesses.
- Evaluate the fairness of the IOU’s bidding and selection process.
- Describe contract-specific negotiations, and highlight any areas of concern.
- Does the contract merit Commission approval?

B. KEY INDEPENDENT EVALUATOR TASKS

To fulfill the role of evaluating PG&E’s 2015 GHG offset credit RFO, several tasks were undertaken, both prior to Offer Opening and subsequently. Prior to the offer due-date of March 20, 2015, Arroyo conducted activities to assess PG&E’s evaluation methodology:

- Reviewed the public solicitation protocol, and examined the utility’s non-public protocols detailing how PG&E would evaluate Offers against various criteria.
- Observed (telephonically) PG&E’s webinar/information session held on March 5.

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• Reviewed PG&E’s public website to check information made available to potential participants.

• Examined PG&E’s RFO contact list; performed an analysis of outreach contacts.

• Read feedback from an April 2015 survey that PG&E conducted to seek commentary about the solicitation from both participants and non-participants.

During the period between Offer due-date and selection, IE activities included:

• Participating in opening Offers. Arroyo was copied by participants on their e-mail submittals of Offers to the PG&E team; Arroyo reviewed each Offer.

• Reviewing PG&E evaluations. The evaluation team provided copies of work products evaluating Offers against the various criteria.

• Monitoring e-mail communications between PG&E and participants to check for fairness in how information was provided.

• Independently assessing the Offers against non-valuation criteria such as viability.

• Attending meetings of PG&E’s Procurement Review Group (PRG), including answering questions about the solicitation and the Offers, and presenting independent commentary and observations about the RFO.

• Offering PG&E’s evaluation team commentary and feedback as appropriate.

After PG&E selected its short list and informed participants of their status, Arroyo observed negotiations between PG&E and the sellers, in order to assess their fairness.

C. TREATMENT OF CONFIDENTIAL INFORMATION

The CPUC’s Decision 06-06-066 detailed guidelines for treating confidential information in IOU power procurement and related activities, including competitive solicitations. The Decision provides for confidential treatment of “Score sheets, analyses, evaluations of proposed RPS projects”, vs. public treatment (after submittal of final contracts) of the total number of projects and megawatts bid by resource type. While procuring greenhouse gas offset credits is not the same as contracting with RPS-eligible projects, PG&E and Arroyo agree that commercially sensitive information on the details of Offers and their evaluation should be treated as confidential in a manner analogous to data on RPS contracts. Such information has been redacted in the public version of this report.

3. PG&E’S OUTREACH EFFORTS AND THE ROBUSTNESS OF THE SOLICITATION

PG&E received a less than fully robust response to the solicitation.

A. CLARITY AND CONCISENESS OF SOLICITATION MATERIALS

PG&E’s solicitation protocol for the GHG RFO was fifteen pages long, which is short for a California utility’s solicitation. PG&E convened an outreach session as a webinar on March 5 to stimulate interest in the solicitation and to provide detailed guidance to potential participants. The webinar presentation was twenty pages long. Arroyo considers these solicitation materials to be concise by the standards of utility electric power procurement.

Arroyo believes that solicitation materials for the GHG RFO were fairly clear to participants. On its website, PG&E posted a general set of “frequently asked questions” with answers. Typically the utility also posts specific questions and answers from the outreach session, but in this case the discussion within the outreach webinar elicited only one question. Arroyo’s review of participants’ questions posed by e-mail to PG&E after the webinar suggests that clarity of materials about the process, product requirements, evaluation criteria, or schedule did not pose issues for potential sellers, as opposed to concern about PG&E’s collateral requirements and details about filling in the offer form. The fact that many participants in the 2015 GHG RFO had participated in prior solicitations likely aided comprehension of this year’s materials.

B. ADEQUACY OF OUTREACH

Prior to issuing the Request for Offers, PG&E assembled an e-mail contact list for use in publicizing the GHG offset credit solicitation. This appears to include most individuals and firms contacted by PG&E for its 2015 Renewables Portfolio Standard (RPS) solicitation, plus additional contacts. This list included several types of contacts:

- Developers of solar photovoltaic generation projects;

3 By comparison, SDG&E’s October 2014 GHG Offset RFO protocol totaled 17 pages; Edison’s solicitation for offset credits issued in March 2014 had a protocol that also totaled 17 pages.
• Vendors of equipment and services for generation projects;

• Consultants, including management consultants, engineering consultants, and other service contractors;

• Developers and owners of wind generation projects;

• Electric utilities;

• Marketers, traders, and brokers of oil, gas, power, and offset credits and allowances;

• Owners and operators of biomass-fueled generation facilities, mostly woody waste-fueled projects;

• Owners or developers of conventional generation fueled by natural gas;

• Firms that provide engineering, procurement, and construction services to build new power plants;

• A variety of non-profit entities, including land trusts, greenhouse gas offset credit registries, and forest owners;

• Digester-based biogas generation facility owners and operators, developers, dairy farms and their industry associations, and agricultural businesses other than dairies;

• Governmental agencies, from municipalities to state regulators;

• Developers of or owners of hydroelectric, tidal, or wave-based generation;

• Real estate agents and landowners, including farmers;

• Banks and other financial institutions that fund generation and infrastructure investments;

• Developers of or owners of landfill gas-fueled generation projects;

• Attorneys;

• Oil, coal, and natural gas exploration and production companies, firms that provide energy efficiency or other demand-side management services, developers and owners of geothermal generation projects, forest owners;

• Ozone-depleting substance (ODS) vendors, servicers, and destruction facilities;

• Other entities, including journalists, accountants, and other apparently non-energy-related entities such as a shoemaker, a python breeder, a carpenters’ union, a potato chip manufacturer, an organic baby food maker, a pet daycare center, a pre-school, a
Baptist pastor, and a scrap metal dealer. Arroyo attributes the inclusion of such obscure contacts into the general RFO list as a demonstration of PG&E’s efforts to be inclusive in accepting expressions of interest about RFOs and requests to be informed about such solicitations from the general public.

The e-mail contact list overall totaled more than 2,900 contacts. Figure 1 displays a distribution of the members of the contact list by industry or category.

One observation about this list is the extent of PG&E’s challenge of attempting to focus on those few entities likeliest to be in a position to sell ARB-issued offset credits and motivated to do so. The majority of individuals or firms that PG&E contacted seem to Arroyo to be quite unlikely to participate in a solicitation for GHG offset credits. The largest segment represented on the list that could reasonably yield sellers of GHG offset credits was made up of wholesale marketers, traders, and brokers; of these, only some are active in marketing ARB-issued offset credits. A number of dairy farms were contacted as well, but it appears that as yet few dairy operators are well-positioned to sell offset credits directly to a utility through an RFO, as opposed to selling credits to brokers.

The universe of owners of forestry lands on which carbon sequestration projects could be undertaken is fairly fragmented, and it would be challenging to identify which commercial forests (or acreage owned by non-profit organizations such as land trusts) have the potential to start such projects or have started such projects, unless they have already begun marketing credits in voluntary markets.
Very few of the contacts were associated with ODS destruction activities. A very few U.S. incinerators account for all of the offset credits that the ARB has thus far issued under the ODS protocol; one of those operators is on the list.

In addition to soliciting responses by direct e-mails to individuals on the contact list, PG&E posted information about the GHG RFO on its public web site, including the solicitation protocol and its appendices, the presentation and audio recording from the participants’ webinar⁴, and information about the ARB cap-and-trade program.

PG&E did not issue a public news release to publicize the GHG RFO as it has done for other solicitations in the past. News of this year’s solicitation was not picked up and distributed by other services that had in the past publicized PG&E’s GHG RFO, including Argus Air Daily, Carbon Finance, Carbon Future News, and Point Carbon. The news of the GHG RFO was reposted by the Geothermal Resources Council on its Facebook page and news blog.

An indicator of the adequacy of PG&E’s outreach efforts was the number of individuals who chose to attend the outreach webinar session; fourteen attendees were observed on the audio line for the session. This was a smaller turnout than the 22 who attended the 2014 GHG RFO webinar. Attendees represented at least three firms that trade, market, or broker offset credits (not all attendees signed in); another attendee represented a lobbying firm for a class of compliance entities that could be buyers of offset credits. In Arroyo’s opinion, more or different outreach would be necessary to attract more direct project developers and operators into PG&E’s orbit. For example, PG&E could further research project developers that have already generated offsets under voluntary registries and could yet convert them to ARB-issued offsets. Or PG&E could research project developers that coordinate ODS destruction projects and seek to contact them.

In future GHG solicitations, Arroyo would encourage PG&E to consider issuing a formal news release to increase public exposure to news of an RFO, and to further research and pursue other means of publicizing its RFO among trade associations, the trade press, and sellers of voluntary credits for potential participants, rather than relying primarily on a broad salvo of e-mails to a very large contact list not specifically focused on the greenhouse gas compliance instrument community. Arroyo’s opinion is that PG&E’s outreach to the community of potential participants for this GHG solicitation was entirely adequate but, with some diligence and creativity, could be improved even further for future RFOs.

C. ROBUSTNESS OF THE SOLICITATION

PG&E did not state in its public protocol a quantitative target for the volume of compliance instruments it sought to procure through this solicitation. The California ARB’s regulations set a limit for entities subject to the cap-and-trade regulations to meet only up to

⁴ In prior years PG&E also posted questions and answers from the outreach sessions for its GHG RFOs on its public website; however, only one question was posed to PG&E during the March 5 webinar, a question whose answer could be found by carefully reading the solicitation protocol and its attachments. Arroyo agrees that there was little need to post that single question and answer.
8% of their compliance obligation through offset credits.

The market’s response to the solicitation was less than fully robust.

This response seemed to offer an opportunity for PG&E to make some progress towards its volume target by shortlisting and contracting for the lowest-priced proposals, Arroyo can only speculate on why the response to PG&E’s 2015 solicitation was relatively modest rather than fully robust:

- Starting in 2015, PG&E competes as a buyer against non-utility compliance entities that do not have to meet CPUC constraints on offset credit purchases. For example, refinery operators and cement makers must acquire compliance instruments but are not limited to competitive solicitations to buy offset credits; they can freely enter into bilateral negotiations with brokers and other intermediaries. It is unclear whether their credit and collateral requirements are as stringent as those of the utilities. Arroyo would expect the requirements imposed by PG&E and the other IOUs to compare unfavorably to what is demanded by unregulated compliance buyers. Other buyers might be willing to purchase offset credits for which buyer rather than seller takes invalidation risk and to accept eight-year invalidation periods rather than demanding three years.

- The substantial expansion of demand for allowances and offset credits with the onset of compliance obligations for fossil fuel sellers has not been matched by a commensurate expansion of offset supply. While the number of ARB-approved offsets continues to grow, there is a perceived bottleneck in ARB approval of early-action offset credits. There appears to be a substantial backlog of such

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5 PG&E has two other major vehicles for meeting its GHG compliance needs: quarterly auctions of allowances conducted by ARB and purchases of allowances on CPUC-approved exchanges such as the Intercontinental Exchange.
credits still unavailable to the market at the time the RFO was held, with some credits reportedly taking more than a year for approval.

- The ARB’s decision to invalidate some offset credits produced by the Clean Harbors El Dorado incinerator has left some market participants in doubt about just how much invalidation risk the seller of credits will bear going forward when signing a contract like PG&E’s.

If these hypotheses for the modest response to the RFO are accurate, then some constraints to the volume response may relax over time as the ARB works down its backlog, more supply of offset credits appears in the market, and the perception of invalidation risk possibly recedes. However, if in fact the IOUs are competitively disadvantaged against unregulated compliance buyers then PG&E may continue to suffer an inability to generate robust interest in participation in its GHG solicitations.

D. SEEKING ADEQUATE FEEDBACK FROM ALL PARTICIPANTS

PG&E circulated a survey in April 2015 to solicit feedback about its offset credit RFO, contacting substantially all the individuals on its RFO contact list. While the data collected from feedback are scarce, they tend to support the hypotheses cited above for a less than robust response to the RFO.
4. PG&E’S OFFER EVALUATION METHODOLOGY AND ITS STRENGTHS AND WEAKNESSES

This section describes PG&E’s evaluation methodology for selecting Offers, and appraises its fairness to ratepayers and participants.

A. PG&E’S METHODOLOGY

PG&E’s public solicitation protocol for the GHG offset credit RFO stated four primary evaluation criteria for assessing Offers; each had a non-public protocol detailing how Offers would be evaluated. Also, the protocol described some preferences regarding Offer attributes and three additional criteria that could influence selection or act as tie-breakers.

Market Valuation. The protocol calls for an estimate of net market value based on the "between Offer price and value, with the latter based on PG&E’s internal forward curve."

Offers are ranked by net present market value in $/mtCO₂e for evaluation."
Credit. This criterion assesses a participant’s ability to meet its financial obligations and to comply with collateral requirements. Participants were required to submit a variety of financial data to PG&E, including financial statements, credit ratings, banking contacts, and where relevant for new projects, project financing plans, letters of commitment, and project financing experience. PG&E’s credit group assessed the credit quality of the participant, similar to how it evaluates counterparties for other transactions. The evaluation also takes into account the risk of excess credit concentration with any single counterparty.

Portfolio Fit. Under the ARB regulations, an entity can meet no more than 8% of its compliance obligation with offset credits. CPUC Decision 12-04-046 orders the investor-owned utilities to purchase no more than 8% of their compliance requirement in the form of offsets.

Adherence to Agreement Terms and Conditions. The Offer documents included form contracts for a master offset credit purchase agreement and a confirmation agreement. Participants were allowed to modify the form agreements to reflect what terms and conditions they would accept. PG&E requested that these changes be limited to what was necessary to reflect the unique nature of any Offer. Participants were warned that significant modifications to the form agreements could lead to a failure to achieve executed contracts or a failure for PG&E to file the contracts for CPUC approval. Offers were evaluated by members of PG&E’s legal and commercial teams...
Preferences. In its public protocol, PG&E expressed a preference for offset credits that had already been issued by the ARB at the time of the solicitation, or alternatively for credits that were still awaiting ARB issuance as of the offer due-date but had already been verified and were being offered for a delivery date prior to December 15, 2015. Also, for those credits delivered after 2015, PG&E stated a preference for delivery by December 15, 2016.

PG&E also stated that it would apply a qualitative preference if the supplier diversity criterion were relevant as a tie-breaker in favor of CPUC-certified diverse business enterprises.

Other evaluation criteria. In its public protocol PG&E identified three additional factors that could be applied in selecting Offers, particularly if the need for a tie-breaker should arise in selecting proposals. The first was offset credit status, expressing the utility’s preference for offset credits that have greater likelihood of providing product attributes the utility needs. This includes having already obtained a second verification, which would provide the shortened invalidation period PG&E requires. It also includes an assessment of how likely the offset credits will be delivered on time as proposed.

In the case of proposed offset credits that had not yet been produced or verified by the offer due-date, PG&E would consider project developer and operator experience. In the case of Offers submitted by sellers that are not rated as investment grade credits, the offer package would include detailed information about the specific projects that created or will create the offset credits offered. The information would be reviewed to assess the status of ARB certification of the credits, the risk of invalidation of the credits, and the risk of failure to deliver the credits. This information was not required for offset credits that had already been produced and verified, but PG&E required participants that are not investment-grade credits to name the project, vintage, and approval status of the offset credits they offer (in contrast to proposals from investment-grade entities, who could preserve the anonymity of the source of their offered credits).

PG&E required a version of its standard Supplier Diversity Questionnaire; this includes queries about goals, internal processes, certification status, and subcontracting programs aimed toward furthering procurement from Women-, Minority-, and Disabled Veteran-Owned Business Enterprises. The questionnaire is used in PG&E’s other competitive RFOs, and was scored by PG&E’s supplier diversity team. This criterion is intended to help PG&E understand how Offer selection could support the utility’s enterprise-wide supplier diversity goals.

Evaluation process. PG&E established a non-public protocol for its evaluation process; this prescribed

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6 However, PG&E would be unable to discern if an investment-grade seller had offered credits that had not yet been produced, verified, or issued, because such a seller is not required to provide any information on the offset credits.
Then Offers would be evaluated against each of the other evaluation criteria as required.

B. STRENGTHS AND WEAKNESSES OF PG&E’S METHODOLOGY

PG&E’s approaches to evaluate credit quality, modifications to form agreements, and supplier diversity resemble those that PG&E uses to evaluate proposals and sellers in other RFOs. Using these time-tested protocols is a strength of the solicitation and is consistent with PG&E’s practices in other activities than procuring GHG compliance instruments.

Other strengths of PG&E’s approach to evaluating Offers include:

- The methodology is technology-neutral; there are no internal biases that, for example, favor offset credits from urban forestry projects over those from ODS-destruction projects. The project assessment, if required, relies on assessing technology-independent attributes such as project development experience and operational experience and not on technology-specific attributes. Indeed, PG&E’s approach favors selection of a short list with a more diverse set of technologies.

- The approach generally evaluates differently sized Offers and Offers of offsets from projects with different on-line dates consistently.

- Evaluations are based primarily on information submitted in Offers. A possible exception might be credit evaluation; PG&E has access to information about counterparties in prior transactions and to credit rating agency reports. Another possible use of external information is research that PG&E may need to perform to assess the environmental performance of a project, such as the occurrence of permit violations or verification of a project’s participation in a climate registry. Arroyo does not view the use of these external sources as introducing a serious risk of unfair treatment to the process as opposed to improving the quality of decisions.

One challenge of evaluating proposals to sell California offset credits is the context of valuation. While there is now a decent set of data sources for pricing California allowances, including broker quotes and exchange trading data, the market for offset credits is still emerging. Trades are not executed with sufficient frequency to assure that price signals are fully liquid at any point in time. Daily broker quotes are available for offset credits for a limited range of delivery dates, but price data on actual transactions are lacking and the contractual attributes of those contracts, including protections against invalidation, are unknown outside of the sellers, buyers, and brokers. The PG&E team constructing the
forward curve used to value offset credits is forced to rely on interpolation and extrapolation to fill in gaps in the market price data on allowances.

Arroyo’s sense is that these challenges to constructing forward curves are partly due to the immaturity and relative illiquidity of the market for California carbon compliance instruments. Arroyo does not expect a California-only market for allowances or offset credits to achieve the degree of liquidity seen in power and gas markets. The bid-ask spread in this less-than-fully-liquid market is rather wide. Also, the forward curves for compliance instruments may be so volatile and easily moved by market news that it will be hard to know in advance whether Offer selection will in hindsight look prudent or rash after a few months.

These issues are more concerns about the universal challenges of purchasing compliance instruments in this market than weaknesses of PG&E’s specific methodology for evaluating market value. It seems likely that any utility attempting to make prudent procurement decisions in the California GHG compliance instrument market would have to deal with such challenges regardless of the design of the evaluation methodology.

One possible weakness is that the procurement target for the solicitation was not publicly disclosed to potential participants. The public solicitation protocol and other materials did not state a volume target for the RFO. This is not consistent with one of the principles for fairness of methodology suggested by the regulator in its IE template for RPS procurement, of clearly stating the target, objectives, and preferences of the RFO. Also, the absence of a public target was previously cited by a non-participant as a disincentive to making an Offer to the RFO, perceiving that PG&E did not provide concrete evidence that it actually intended to buy offset credits through the RFO in volume, making it harder to justify the effort required for a seller to prepare an Offer. Arroyo does not consider this to be a serious flaw in the solicitation; the most knowledgeable market participants should have a general sense of what PG&E’s needs are.

In this year’s solicitation PG&E decided to drop its prior requirement that non-investment grade participants submit detailed project information when offering credits that have already been produced and verified. The required project information for existing credits is now limited to naming the project, the vintage, and the credits’ status in the ARB approval process. The evaluation process is streamlined and can be conducted in a few business days, which helps alleviate the concerns of sellers that PG&E is too slow to move from Offer to contract execution, letting offer prices become stale over time. This step also may alleviate a prior concern expressed by non-participants that PG&E’s approach unduly punishes small firms by imposing greater information requirements for their proposals.

The trade-off is that PG&E now relies on the strength of its contract terms governing default and damages to ensure that ratepayers are kept whole in the event a project or a seller fails to provide offset credits as proposed, instead of on a review of the viability of the project that produced or will produce the credits. PG&E is comfortable treating these offset credits as a commodity product with anonymous origins as long as the seller meets collateral requirements to replace them or pay for damages if delivery fails. Arroyo’s concern is that it is infeasible to assess invalidation risk for a particular batch of offset credits if no
information about the project is provided, as is the case for Offers from investment-grade sellers.

5. FAIRNESS OF PG&E’S BIDDING AND SELECTION PROCESS

This section provides a narrative of how PG&E administered its evaluation and selection process and selected a short list for its 2015 GHG offset credit RFO. Arroyo’s opinion is that the process was fair to ratepayers and competitors.

A. NARRATIVE OF EVALUATION AND SELECTION PROCESS

PG&E received [redacted] submitted timely before the deadline of 1 p.m. on March 20, 2015. [redacted]
Upon review, PG&E concluded that all Offers conformed to the requirements of the solicitation protocol; Arroyo agreed with this judgment.

**B. PG&E'S EVALUATION OF OFFERS AGAINST CRITERIA**

PG&E’s process for evaluating these Offers was straightforward and, overall, followed the procedures described at a high level in the public solicitation protocol.

**Market Valuation.** The utility’s forward curve was locked in for use in valuation based on market prices on March 19, 2015, the day before Offers were due.

**Credit.** were judged by PG&E to have passed the screen for credit performance;

**Portfolio Fit.** The evaluation team selected a short list that met the protocol’s constraints on selecting Offers for offset credits.

**Adherence to Agreement Terms and Conditions.** PG&E scored offer packages for modifications to its form agreements.
The PG&E team anticipated the opportunity to negotiate acceptable contract terms after shortlisting.

**Supplier Diversity.** PG&E’s applied its standard approach (used in other RFOs) to score supplier diversity questionnaires submitted in the offer packages.

**Project Assessment.** The evaluation team scored conforming Offers from participants with non-investment grade credit for risks.

**Preferences.**

**Short list decision.** PG&E decided to select
C. FAIRNESS OF BIDDING AND EVALUATION PROCESS

Overall, Arroyo concludes that the bidding and evaluation process used in PG&E’s 2015 GHG offset credit RFO to select a short list was conducted fairly.

- Proposals were handled the same regardless of the seller’s identity. PG&E has had prior business relationships with some sellers and not others, but Arroyo saw no difference or bias in how PG&E applied its evaluation and selection methodology.

- PG&E posted on its public website the presentation and audio from its solicitation webinar session. This helped to ensure that information about the RFO was made available to all potential participants on an equal footing.

- While there were some communications with participants prior to the shortlisting decision, these focused on clarifying how the process would work, what products would qualify for the RFO, and how to fill in fields in the offer form. Arroyo did not observe PG&E signaling participants in a way that advantaged any one seller over others. In Arroyo’s opinion, however, it would have been better if PG&E had posted on its public website its private answers to questions of clarification that individual participants asked privately, in order that all participants could benefit equally from those insights.

- Applying quantitative criteria such as market valuation, scoring of supplier diversity, and the review of credit, were handled in a consistent manner across Offers.

- PG&E used the primary evaluation criteria to make selection decisions. All of these criteria were clearly spelled out (at a high level) in the public solicitation protocol. Secondary criteria and stated preferences did not play a significant role in selection.

- PG&E granted an extension, and Arroyo does not consider it unfair. Arroyo cannot identify how any competitor was disadvantaged or failed to win a transaction because of the extension.

Arroyo’s opinion is that, overall, PG&E handled the bidding and selection process in this RFO in a manner that was fair to ratepayers and to competitors.
6. FAIRNESS OF CONTRACT-SPECIFIC NEGOTIATIONS

This chapter provides an independent review of the extent to which PG&E’s negotiations were conducted fairly with respect to competitors and to ratepayers.

PG&E notified that their Offers had been shortlisted in early April 2015. The parties began negotiations shortly thereafter.

Arroyo observed negotiation sessions Arroyo was also able to review draft contract versions in order to identify specific proposals and counterproposals the parties made in the course of discussions. The starting point for the negotiations was PG&E’s 2015 pro forma confirmation agreement for GHG offset credits.

Arroyo’s opinion is that PG&E’s negotiations were conducted in a manner that was fair to ratepayers and to competitors.

A. BACKGROUND INFORMATION

The negotiations between PG&E and through the month of April and resulted in
B. NEGOTIATIONS BETWEEN PG&E AND

- Contract price.
- Representations and warranties.

9 Arroyo was not included in the discussions between the parties in March 2015, nor does Arroyo have access to the terms of the executed and cannot provide an opinion on whether PG&E handled these negotiations fairly or not. Arroyo views the success of those negotiations as having been key to enabling the offset credit transaction.
C. NEGOTIATIONS BETWEEN PG&E AND

- Seller obligations.

Contract price.

Representations and warranties.

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11 Arroyo did not observe this bilateral telephonic discussion; this narrative of the content of the call was reported by the PG&E team.
Events of default.

Seller obligations.

Other.
In Arroyo’s opinion, negotiations between [REDACTED] were, overall, conducted fairly. Most of the negotiations focused on minor edits to provisions of the pro forma confirmation agreement. A discussion of the reasonableness of the contract price follows in the next chapter. Arroyo did not observe PG&E providing [REDACTED] any non-public information that advantaged [REDACTED].

Arroyo does not regard PG&E’s decision to [REDACTED] as unfair.

Overall, Arroyo’s opinion is that the negotiations between the parties were, overall, handled fairly with respect to ratepayers and to competitors.
7. MERIT FOR CPUC APPROVAL

This chapter provides an independent opinion on whether PG&E’s merit approval by the CPUC. It also addresses other required topics identified in the Energy Division’s short-form template for Independent Evaluators to use in preparing reports on non-RPS procurement.

A. AFFILIATE AND UOG ISSUES

None of the participants in the GHG offset credit solicitation were affiliates of PG&E, nor did the RFO seek the construction of utility-owned generation or other projects.

B. BEST OFFERS RECEIVED

PG&E selected the highest-valued proposals for its short list that met its stated preference for delivery of offset credits by December 15, 2015. In that sense, these were the best overall Offers received by PG&E. Arroyo believes that the short list represented the best Offers received in the context of the least-cost, best-fit framework that PG&E designed for this solicitation. The highest-valued proposals resulted in executed contracts; lower-valued proposals did not lead to transactions.

C. SOLICITED PRODUCTS

The shortlisted Offers directly reflect proposals to sell ARB-issued offset credits as solicited by PG&E.

D. REASONABLE WAY TO MEET NEED

The need identified in PG&E’s solicitation protocol is to satisfy PG&E’s compliance obligations under cap-and-trade regulations adopted by the California ARB. The obligations can be satisfied using either eligible ARB-issued GHG allowances or offset credits. The shortlisted Offers are for offset credits, and are priced below contemporaneous market indications of pricing for ARB-issued allowances.

In Arroyo’s opinion, the project viability of the is high, while the project viability of is indeterminate.
Arroyo’s opinion, described below, is that the pricing of the contracts is within the range of market indications of pricing for roughly comparable instruments at or around contract execution. On that basis, Arroyo concludes a reasonable way to meet PG&E’s identified GHG compliance need.

E. MERIT FOR CPUC APPROVAL

This section reports on the IE’s view of attributes of the offset credit agreement.

Fairness. In Arroyo’s opinion PG&E’s methodology for evaluating and selecting Offers and its process of implementing that methodology were, overall, designed and handled fairly.

Pricing and market value. On that basis Arroyo’s opinion is that PG&E is procuring these offset credits at a fair market price. Price discovery in this market is illiquid and opaque, but the limited data available support an opinion that the contract pricing is reasonable.

Project viability. Arroyo’s opinion is that the risk level posed by the offset credits is low. Arroyo’s opinion is that the risk level posed by the offset credits is indeterminate.
Summary. Struck at prices within the range of market forward prices available for roughly comparable instruments on the date of contract execution, and compared favorably with PG&E’s alternative of procuring carbon allowances instead of credits. Arroyo ranks the offset credits as high in project viability, while no assessment of the viability of credits. Arroyo’s opinion is that buying a product with unknown provenance requires PG&E to rely on the protections embedded in the contract, which are fairly strong. The contracts meet PG&E’s criterion for portfolio fit. Although PG&E provided concessions, in Arroyo’s opinion the negotiations were, overall, conducted fairly with respect to ratepayers and competitors. On that basis Arroyo’s opinion is that merit CPUC approval.
Attachment 4
Confidentiality Declarations and Matrix
## IDENTIFICATION OF CONFIDENTIAL INFORMATION

<table>
<thead>
<tr>
<th>Redaction Reference</th>
<th>Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order that Data Corresponds To</th>
<th>Justification for Confidential Treatment</th>
<th>Length of Time Date To Be Kept Confidential</th>
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<tr>
<td><strong>Document: Quarterly Compliance Report</strong></td>
<td></td>
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<tr>
<td>Attachment A – Physical and Financial Electric Transactions</td>
<td>Item XIII) Energy Division Monthly Data Request (AB 57) XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings)</td>
<td>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.</td>
<td>3 Years</td>
</tr>
<tr>
<td>Attachment A – Physical and Financial Natural Gas Transactions</td>
<td>Item I) B) 2) Utility recorded gas procurement and cost information XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings) Item I) A) 4) Long-term fuel (gas) buying and hedging plans</td>
<td>Actual quantity and cost of procured physical gas are protected. Each financial transaction is a factor in PG&amp;E’s long term buying and hedging strategies. With the entire set of transactions PG&amp;E’s counterparties could reconstruct PG&amp;E’s gas buying and hedging plans.</td>
<td>Utility recorded physical gas procurement and cost information is confidential for one year. Monthly procurement costs (ERRA Filings) are confidential for 3 years. Financial transactions are confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)</td>
</tr>
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<td>Redaction Reference</td>
<td>Category from D.06-06-066, Appendix 1, or Separate Confidentiality Order that Data Corresponds To</td>
<td>Justification for Confidential Treatment</td>
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<td>Attachment B – Counterparty Information, including non-investment grade counterparties table: List of Non-Investment Grade Counterparties</td>
<td>CPUC General Order (“G.O.”) 66-C</td>
<td>Counterparty information constitutes confidential business information protected under G.O. 66-C.</td>
<td>Indefinite</td>
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<td>Attachment C - Electric Transactions</td>
<td>Item XIII) Energy Division Monthly Data Request (AB 57) XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings)</td>
<td>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. 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.</td>
<td>3 Years</td>
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<td>Attachment D – Natural Gas Transactions</td>
<td>Item I) B) 2) Utility recorded gas procurement and cost information Item I) A) 4) Long-term fuel (gas) buying</td>
<td>Actual quantity and cost of procured physical term gas are protected. PG&amp;E’s hedging strategies may be deduced through an analysis of PG&amp;E’s summarized transactions.</td>
<td>Utility recorded physical gas procurement and cost information is confidential for one year. Financial transactions are confidential for three years past</td>
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<tr>
<td>and hedging plans</td>
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<td>expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)</td>
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<td>Attachment E – Other Transactions (Except Greenhouse Gas (“GHG”) Information, which is presented separately below)</td>
<td>VII) B) Bilateral Contract Terms and Conditions – contracts and power purchase agreements between utilities and non-affiliated third parties; Items VIII) A) Bid Information and VIII) B) Specific quantitative analysis involved in scoring and evaluation of participating bids</td>
<td>This information includes confidential contract information for contracts between PG&amp;E and non-affiliated third parties. This information also includes information related to PG&amp;E’s participation in SDG&amp;E’s RA RFO.</td>
<td>3 Years</td>
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<td>Attachment E – Other Transactions GHG Information</td>
<td>D.14-10-033 G.O. 66-C</td>
<td>This information includes confidential GHG information, the disclosure of which is prohibited according to Title 17 of the California Code of Regulations. This information also includes confidential business information protected under G.O. 66-C.</td>
<td>Indefinite</td>
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<td>Attachment F – PRG Material</td>
<td>D.06-06-066 and Public Utilities Code Section 454.5(g)</td>
<td>Presentations to the PRG include a variety of confidential market sensitive information, including information about bilateral contracts, pricing information, strategy discussions, recently issued RFO’s, etc.</td>
<td>Length of Time for Specific Items identified in D.06-06-066 Matrix or Indefinite</td>
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<td>ATTACHMENT F – PRG MATERIAL-GHG INFORMATION</td>
<td>G.O. 66-C</td>
<td>The information constitutes confidential business information protected under GO 66-C.</td>
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<td>D.14-10-033</td>
<td>Presentations to the PRG include confidential GHG information, the disclosure of which is prohibited according to Title 17 of the California Code of Regulations.</td>
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<td>G.O. 66-C</td>
<td>The information constitutes confidential business information protected under GO 66-C.</td>
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<td>ATTACHMENT G – INDEPENDENT EVALUATOR REPORTS - GHG OFFSET CREDIT RFO</td>
<td>D.14-10-033</td>
<td>IE Report includes confidential GHG information, the disclosure of which is prohibited according to Title 17 of the California Code of Regulations.</td>
<td>Indefinite</td>
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<td></td>
<td>G.O. 66-C</td>
<td>The information constitutes confidential business information protected under G.O. 66-C.</td>
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<td>ATTACHMENT H – EXECUTED CONTRACTS</td>
<td>VII) B) Bilateral Contract Terms and Conditions – contracts and power purchase agreements between utilities and non-affiliated third parties; VIII) A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids</td>
<td>Disclosure of information would provide market sensitive information regarding bid strategy and selection.</td>
<td>3 Years;</td>
</tr>
<tr>
<td></td>
<td>Disclosure of information would provide market sensitive information regarding bid strategy and selection.</td>
<td>Bid information - remain confidential until after final contracts submitted to CPUC for approval</td>
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<tr>
<td>Item VI) E) and F) Utility Planning Area Matrix Net Open (Electric)</td>
<td>Residual net short/long is key input to PG&amp;E’s confidential forecast of net open position. Disclosure of information would provide market sensitive information regarding bid strategy and selection.</td>
<td>Utility recorded physical gas procurement and cost information is confidential for one year.</td>
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<tr>
<td>Attachment H – GHG Contracts Executed</td>
<td>D.14-10-033 G.O. 66-C</td>
<td>Attachment includes confidential GHG information, the disclosure of which is prohibited according to Title 17 of the California Code of Regulations. The information constitutes confidential business information protected under G.O. 66-C.</td>
<td>Indefinite</td>
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<td>Attachment J – System Conditions</td>
<td>Item VI) E) and F) Utility Planning Area Net Open for Energy and Capacity (Electric) G.O. 66-C</td>
<td>Residual net short/long is key input to PG&amp;E’s confidential forecast of net open position. The residual net short/long is 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. This attachment also includes information regarding PG&amp;E’s trading strategies. The information constitutes confidential business information protected under G.O. 66-C.</td>
<td>3 Years Indefinite</td>
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<tr>
<td>Attachment J - Gas Transaction, Natural Gas</td>
<td>Item I) A) 3) Gas Demand Forecasts and 4) Long-term fuel (gas) buying and hedging</td>
<td>This information includes detailed information on PG&amp;E’s implementation of its fuel buying and hedging plans and must remain confidential to avoid disclosing PG&amp;E’s market strategy.</td>
<td>Physical gas information is confidential for 3 Years; Financial gas information is confidential for 3 Years.</td>
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</thead>
<tbody>
<tr>
<td>Documents plans</td>
<td></td>
<td><strong>TeVaR</strong> and supporting forecasts and analysis are confidential. In addition, the Risk Management Committee attachments address PG&amp;E’s energy procurement strategy, price, volumes, and counterparties. The information constitutes confidential business information protected under GO 66-C.</td>
<td>Confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)</td>
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<td>Attachment K – Risk Management G.O. 66-C</td>
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<tr>
<td>Attachment L - Reasonable Number of Analyses - Electric Item VI) E) and F) Utility Planning Area Matrix Net Open (Electric) Item XIII) Energy Division Monthly Data Request (AB 57) XI) Monthly Procurement Costs (Energy Resource Recovery Account [ERRA] Filings)</td>
<td>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&amp;E’s position in the market place.</td>
<td>3 Years</td>
<td>Bid information - remain confidential until after final contracts submitted to CPUC for approval</td>
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</thead>
<tbody>
<tr>
<td>VIII ) A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids</td>
<td>G.O. 66-C</td>
<td>This information includes detailed information on PG&amp;E’s hedging plan, and must remain confidential to avoid disclosing PG&amp;E’s market strategy.</td>
<td>Financial gas information is confidential for three years past expiration of the last trade executed under the hedging plan. (Resolution E-4276, Finding 8)</td>
</tr>
<tr>
<td>Attachment L – Reasonable Number of Analyses – Natural Gas</td>
<td>Item I) A) 4) Long-term fuel (gas) buying and hedging plans</td>
<td></td>
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</tr>
<tr>
<td>Attachment M – Transactions Subject to Strong Showing – Electric Transactions</td>
<td>Item VI) E) and F) Utility Planning Area Matrix Net Open (Electric)</td>
<td>Disclosure of information would provide counterparty name, volume, and price and would provide market sensitive information regarding bid strategy and selection.</td>
<td>3 Years</td>
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## Identification of Confidential Information

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<tr>
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<th>Length of Time Date To Be Kept Confidential</th>
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<tbody>
<tr>
<td>Attachment M – Strong Showing Physical Natural Gas Transactions</td>
<td>Item I) B) 2) Utility recorded gas procurement and cost information</td>
<td>Actual quantity and cost of procured physical gas are protected.</td>
<td>Utility recorded physical gas procurement and cost information is confidential for one year.</td>
</tr>
</tbody>
</table>
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 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, 08-04-023, 14-10-033 and relevant Commission rules, I make this declaration seeking confidential treatment of PG&E’s July 30, 2015 Advice Letter 4676-E, Confidential Attachments A, B, C, 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/or General Order 66-C. 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 July 30, 2015, 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 4676-E

DECLARATION OF JAY BUKOWSKI
SEEKING CONFIDENTIAL TREATMENT OF CERTAIN DATA AND
INFORMATION CONTAINED IN PG&E’S
CONFIDENTIAL ATTACHMENTS F, G 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 Principal within PG&E’s Energy
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, 08-04-023, 14-10-033 and relevant Commission rules, I make this declaration seeking
confidential treatment of PG&E’s July 30, 2015 Advice Letter 4676-E, Confidential Attachments
F, G and K.

3. Attached to this declaration is a matrix identifying the data and information for which
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066, 14-10-033, and/or General Order 66-C. 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 July 30, 2015, at San Francisco, California.

_____________________/s/_____________________
Jay Bukowski
I, Peter E. Koszalka, declare:

1. I am presently employed by Pacific Gas and Electric Company (“PG&E”) and have been an employee since 2003. My current title is Director, Electric Gas Supply in the Energy Supply Management Department, which is part of the Energy 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, 08-04-023, 14-10-033 and relevant Commission rules, I make this declaration seeking confidential treatment of PG&E’s July 30, 2015 Advice Letter 4676-E, Confidential Attachments A, B, D, E, H, J, L, and M.

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to protect constitutes confidential market sensitive data and information covered by D.06-06-066, 14-10-033 and/or General Order 66-C. 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 July 30, 2015, at San Francisco, California.

/s/
Peter E. Koszalka
<table>
<thead>
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<th>PG&amp;E Gas and Electric</th>
<th>Advice Filing List</th>
<th>General Order 96-B, Section IV</th>
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<td>AT&amp;T</td>
<td>Don Pickett &amp; Associates, Inc.</td>
<td>Office of Ratepayer Advocates</td>
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<td>Albion Power Company</td>
<td>Douglass &amp; Liddell</td>
<td>OnGrid Solar</td>
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<td>Downey &amp; Brand</td>
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<td>Anderson &amp; Poole</td>
<td>Ellison Schneider &amp; Harris LLP</td>
<td>Praxair</td>
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<td>SCD Energy Solutions</td>
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<td>Braun Blaising McLaughlin, P.C.</td>
<td>Goodin, MacBridge, Squeri, Schlotz &amp; Ritchie</td>
<td>SDG&amp;E and SoCalGas</td>
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<td>Green Power Institute</td>
<td>SPURR</td>
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<td>Linde</td>
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<td>Sun Light &amp; Power</td>
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<td>Modesto Irrigation District</td>
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<td>Communities Association (WMA)</td>
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