Pacific Gas and Electric Company™

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February 5, 2014

Advice 4351-E
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Pacific Gas and Electric Company's Power Purchase Agreement with Chevron Products Company for Procurement of As-Available Energy and Capacity

I. INTRODUCTION

A. Purpose of the Advice Letter

Pacific Gas and Electric Company ("PG&E") seeks California Public Utilities Commission ("Commission" or "CPUC") approval of a Power Purchase Agreement ("Richmond PPA" or "Agreement") that PG&E has executed with Chevron Products Company, a division of Chevron U.S.A. Inc. ("Chevron"), for as-available deliveries from existing and new cogeneration facilities ("Facilities") located at Chevron's Refinery in Richmond, California ("Refinery") and a Letter Agreement that compensates Chevron for continued deliveries from the Refinery pending Commission approval of the Richmond PPA.[1] PG&E requests that the Commission issue a resolution approving the Richmond PPA and Letter Agreement that contains the terms set forth in Section VI, below, to be effective when the Commission adopts a resolution approving this advice letter, pursuant to General Order 96-B, General Rules, Rule 7.3.5.

PG&E also asks the Commission to find that PG&E's payments under the Agreement and Letter Agreement are reasonable, that the payments shall be recovered in rates, and that the executed Agreement will contribute approximately 28 megawatts[2] ("MW") new Eligible Combined Heat and Power ("CHP") capacity and 39,644 metric tons ("MT") per year of greenhouse gas ("GHG") emissions reductions toward PG&E's MW and GHG emissions reduction targets ("Targets") under Commission decision "D."10-12-035.

[1] Capitalized terms that are not defined in this document have the meaning provided by the Richmond PPA.

[2] The actual capacity amount is 27.85 MW.

This Agreement was negotiated bilaterally between PG&E and Chevron to replace a legacy qualifying facility ("QF") Standard Offer 1 PPA ("SO1 PPA"). The Agreement provides for the sale of as-available energy and capacity from Existing Generating Units at the Refinery and New Generating Units consisting of approximately 28 MW of new bottoming-cycle CHP facilities[3] and a potential 8 MW of renewable generation. By capturing waste heat from thermal processes and using it for power generation, the new efficient CHP facilities will serve more of the Refinery's electrical demand without the combustion of additional fossil fuel or the purchase of grid electricity. The Richm PPA facilitates the development of new bottoming-cycle CHP technologies and on-site renewable generation at the Refinery by providing for the delivery and purchase of generation from the New Generation Facilities.

The Richmond PPA provides the following significant benefits to PG&E's customers:

- New, efficient, bottoming-cycle CHP generation and renewable generation to be constructed at the existing "brownfield" site,[4]
- The operational integration of Chevron's existing as-available generation with the electric grid under updated PPA terms and conditions,[5]
- A contribution of 28 MW of Eligible CHP capacity toward PG&E's CHP MW Target,
- A contribution of 39,644 MT per year towards PG&E's GHG emissions reduction Target, and
- Reasonably priced energy and capacity.

A Tier 3 Advice Letter is the appropriate vehicle for seeking Commission approval of this bilaterally-negotiated PPA.[6] The twelve year term of the Richmond PPA will take effect upon CPUC Approval and the satisfaction of other conditions precedent.

The Richmond PPA contributes to the goals of the Settlement Agreement, contains reasonable terms and conditions, and merits the Commission's unconditional approval.

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[3] Actual bottoming-cycle capacity is expected to be 27.85 MW.

[4] "Bottoming-cycle CHP" is a cogeneration technology in which the energy input to the system is first applied to a useful thermal energy application or process, and at least some of the rej heat emerging from the application or process is then used for power production, and as otherwise provided in 18 CFR Section 292, et seq. Glossary of Defined Terms, CHP Program Settlement Agreement Term Sheet, appended to the QF and CHP Program Settlement Agreement, adopted by CPUC Decision ("D.") 10-12-035.

[5] The Term Sheet was approved by CPUC Decision ("D.") 10-12-035. Section 4.3. authorizes bilateral agreements for CHP resources. Section 4.6 of the Term Sheet addresses As Available Procurement Alternatives and the Optional As-Available PPA.

[6] QF/CHP Settlement Agreement Term Sheet Section 4.10.2.

B. Background

PG&E has purchased electricity generated by the Existing Generating Units on an as-available basis under the existing SO1 PPA since 1992. Over time, Chevron expanded the generation operating under the 99 MW nameplate SO1 PPA to a combined nameplate capacity of 143 MWs. In 2012, Chevron expressed interest in installing additional generation capacity at the Refinery. To facilitate the development of new generation capacity at the Refinery, a decision was made to pursue a new PPA.

The Richmond PPA provides that PG&E will procure electricity from the Existing Generating Units and allows Chevron to develop New Generating Units at the existing site. PG&E will not count any of the capacity of the Existing Generating Units toward its CHP MW target. The new cogeneration facilities will use bottoming-cycle CHP technologies that capture waste heat streams for power generation. The new capacity will reduce GHG emissions by displacing electricity that would otherwise be purchased from the grid or produced on-site through fossil fuel combustion.

The Richmond PPA also accommodates the development of up to 8 MW of renewable generation at the Refinery. Any PG&E purchases of renewable energy generation will be treated as non-CHP, non-RPS conventional power.

C. Supporting Documents

PG&E provides the following documents as Appendices to this Advice Letter:

Document	Topic
Appendix 1:	Final Independent Evaluator Report of Merrimack Energy Group, Inc. (Redacted)
Confidential Appendix A:	Consistency with Commission Decisions and Rules and Project Development Status
Confidential Appendix B:	Final Independent Evaluator Report of Merrimack Energy Group, Inc.
Confidential Appendix C:	Contract Summary
Confidential Appendix D:	Comparison of Richmond PPA with Optional As-Available PPA Pro Forma
Confidential Appendix E:	Richmond PPA
Confidential Appendix F:	Letter Agreement

Some of the information in these documents, such as the prices, terms and conditions of performance, and PG&E's negotiating process, could be used by energy market participants to affect the price that PG&E subsequently pays for energy. This information constitutes confidential market sensitive information that must be protected from public disclosure.

PG&E seeks confidentiality protection for certain portions of this advice letter using the process established in the Decision Adopting Model Protective Order and Non-Disclosure Agreement, Resolving Petition For Modification and Ratifying Administrative Law Judge Ruling, D.08-04-023 (issued on April 18, 2008). PG&E provides the Declaration of Harold Pestana Seeking Confidential Treatment as Appendix 2 to this advice letter in support of its request. Mr. Pestana explains the need to preserve the confidentiality of the material under either the terms of the IOU Matrix, Appendix 1 D.06-06-066 and Appendix C of D.08-04-023 or General Order 66-C.

II. Description of the Transaction

A. Project Summary

Table A
Basic Richmond PPA Terms

Project Name	Chevron Richmond Refinery (PG&E Log No. 01C202)
Owner/Developer	Chevron Products Company, A division of Chevron U.S.A. Inc.
Technology	Gas turbines, steam turbine, Organic Rankine Cycle turbine, motor-generator, and solar PV
As-Available Contract Capacity (MW)	20.0 MWs
Expected Generation (MWh/Year)	19.67 GWh/Year
Delivery Pattern (As-available, Firm, Utility Prescheduled Facility)	As-Available
Delivery Term (number of months)	144 months
Vintage (New, Existing, Repower, Expanded, Utility Prescheduled Facility)	Existing and New
Location (city and state)	Richmond, CA

Source of Agreement (e.g., RFO or Bilateral Negotiations)	Bilateral Negotiations

B. Project Description

Chevron's Richmond Refinery is located on 2,900 acres of land in Richmond, California. The Refinery is a major contributor to the California economy with the capability to process 240,000 barrels of crude oil per day into lubricants and fuels. The CHP units primarily serve the thermal demand of the Refinery, but they also help serve on-site electrical demand and deliver electricity to PG&E on an as-available basis under the SO1 PPA.

The Existing Generating Units include two combustion turbines, a bottoming-cycle steam turbine, and a steam-driven motor-generator unit. Steam is produced for the Refinery by each of the two combustion turbines, which exhaust through a dedicated heat recovery steam generator ("HRSG") having multiple levels of steam generation. In addition to the HRSGs, steam is generated by various equipment and production cooling processes throughout the Refinery. Additional generator driving torque is provided by air expander processes where the air is depressurized for cracking operations. A small solar photovoltaic system supplements power to the on-site cafeteria.

Chevron intends to develop, install, and operate New Generating Units at the Refinery, consisting of up to 28 MW of efficient, bottoming-cycle CHP and up to 8 MW of renewable generation.

C. Electric Procurement Transaction

A detailed description of the terms of the Agreement appears in Confidential Appendix A.

III. CONSISTENCY WITH COMMISSION DECISIONS

A. Authorization to Procure Combined Heat and Power Generation Resources

PG&E is required by D.10-12-035 to enter into new contracts to procure at least 1,387 MW of eligible CHP capacity through Commission-approved programs during the Initial Program Period of the QF/CHP Settlement Agreement.[7] The Initial Program Period

[7] Term Sheet, Section 2.2.2.

began on the settlement effective date, which was November 23, 2011, and will terminate four years thereafter.[8]

B. Contributions toward PG&E's Initial Program Period Target May be Made Through a Bilaterally-Negotiated PPA.

The Optional As-Available PPA may be executed by a CHP Facility with a nameplate rating greater than 20 MW with average annual deliveries less than 131,400 MWh. The Existing Generating Units have a total combined nameplate of 43 MW and deliver less than 131,400 MWh per year, making the Refinery eligible for the pro forma Optional As-Available PPA with PG&E.

The pro-forma As-Available PPA does not allow the addition of new capacity to an existing CHP Facility; it is drafted for use by an existing facility, or all-new facility. However, the QF/CHP Settlement Agreement envisions that an eligible CHP Facility may be expanded, and the expansion would count toward the purchasing utility's QF/CHP Settlement Targets to the extent allowed by the Term Sheet; the Term Sheet allows incremental additions to CHP Facilities to count toward GHG emissions reduction targets.[9] Because the pro-forma PPAs do not address every possible procurement scenario authorized by the Settlement Agreement, PG&E and Chevron modified the pro-forma Optional As-Available PPA to accommodate Chevron's need for flexibility to add up to 28 MW of new bottoming-cycle CHP and 8 MW of renewable generation to its Richmond Refinery.

PG&E may enter into bilateral agreements as a means of achieving its MW Target and its GHG Emissions Reduction Targets.[10] Bilaterally negotiated PPAs are one of the vehicles by which PG&E can procure CHP MW and GHG emissions reductions.

The Agreement requires the seller to meet the definition of a "CHP Facility." PG&E has confirmed that the Refinery meets the federal definition of a qualifying cogeneration facility and complies with the efficiency standards established for topping cycle cogeneration facilities under the Public Utilities Regulatory Policy Act ("PURPA"), and therefore, is an existing CHP Facility. Thus, the Agreement is "a new PPA with a CHP Facility," and the capacity from the additional New Generating Units qualifies to count toward PG&E's QF/CHP Settlement Targets.

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[8] Term Sheet, Section 2.2.1.

[9] Term Sheet Section 7.3.1.2.

[10] Term Sheet, Sections 4.2 and 4.3.

C. Counting the Richmond PPA's Contribution Toward PG&E's QF/CHP Settlement Targets

The Agreement replaces an "evergreen Legacy PPA" and allows the development of 27.85 MW of new CHP capacity. The MW contribution in this case is counted according to the following Term Sheet provision:

> 4.6.2.11.2.2 A CHP Facility currently operating under an evergreen Legacy PPA may not terminate its evergreen Legacy PPA to obtain a new Optional As-Available PPA. Neither the MW nor the AMW of deliveries under these CHP PPAs may be counted toward the MW Targets or the AMW Cap. If, however, the CHP Facility adds new capacity, it may receive an Optional As-Available PPA for any deliveries that are determined to be associated with the new capacity, and the MW of new capacity shall be counted toward the MW Targets.

The Richmond PPA provides for the addition of approximately 28 MW of new CHP capacity to the Refinery. PG&E will count the incremental 28 MW of new CHP capacity toward PG&E's MW Target.

Table B
Chevron Richmond PPA's Contribution Toward PG&E's MW Target

Project Name	PG&E's MW Target by the End of the Initial Program Period	MWs Procured from Project to Count towards PG&E's Settlement MW Target	Estimated Progress As-Available Average MW (AMW) Cap
Chevron Richmond Refinery	1,387	27.85	2.2

The new, bottoming-cycle CHP units provided by the Richmond PPA will contribute GHG emission reductions toward PG&E's GHG Emissions Reduction Target. The contribution is described by Section 7.3.1.1 of the Term Sheet, which states:

> 7.3.1.1 New CHP Facilities: Efficient New CHP Facilities as compared to the Double Benchmark will count as a GHG Credit toward the contracting IOU's GHG emissions Reduction Target regardless of where the CHP Facility is located. Measurement is based on the Double Benchmark in place at the time of PPA execution compared to the anticipated operations reflected in the PPA.

The Double Benchmark test compares the GHG emissions from the CHP Facility with the GHG emissions that would be produced by conventional generation resources and a stand-alone boiler producing the electrical generation and the thermal load of the CHP Facility. The GHG emissions of a topping cycle cogeneration facility that burns fossil fuel to generate electricity and produce heat to serve thermal load might not meet the Double Benchmark test. However, in the case of bottoming-cycle cogeneration, only waste heat is used to provide additional capacity and energy, so the Double Benchmark test is easily met.

PG&E proposes to measure the GHG benefit of bottoming cycle procurement as the emissions that would have been produced had the equivalent output been procured from the conventional generation resources used in Double Benchmark test. But for the bottoming cycle operations, 39,644 MT per year of CO2 equivalent ("CO2e") would have been discharged by the conventional generation of electricity. The Richmond PPA's contribution to the GHG target is presented in Table C, below.

Table C
Chevron Richmond PPA's Contribution Toward PG&E's GHG Target

Project Name	PG&E's GHG Target by 2020 (MTCO2e)	GHG Credit/Debit of Project to Count towards the Settlement GHG Target (MTCO2e)
Chevron Richmond Refinery	currently 2.16 million	39,644

The Energy Division's 2013 update of PG&E's 2020 GHG Target is used as "PG&E's GHG Target by 2020." This number is subject to revision based on conditions in effect on the deadline for GHG Target compliance.[11]

D. Emissions Performance Standard

In D.07-01-039, the Commission adopted an Emissions Performance Standard ("EPS") that applies to new or renewed contracts for a term of five or more years for baseloa generation with an annualized plant capacity factor of at least 60 percent.[12]

Pursuant to Section 4.10.4 of the QF/CHP Settlement Term Sheet, PPAs that are equal to or greater than five years in length that are submitted for CPUC approval by Tier 2

[11] Term Sheet, Section 6.1.1.4.

[12] Pub. Util. Code section 8340(a).

Tier 3 advice letter must demonstrate compliance with the EPS.[13] Because the annualized capacity factor for the deliveries under the Richmond PPA is expected to be significantly below 60 percent, the Commission should find that the Richmond PPA is not covered procurement subject to the EPS and is compliant with the EPS for purposes of Section 4.10.4.1 of the Term Sheet.

IV. Compliance with Procedural Requirements for the Procurement of CHP Resources

A. Independent Evaluator

PG&E retained an Independent Evaluator ("IE") to monitor and evaluate the integrity of its bilateral negotiation process, as permitted for bilaterally negotiated CHP PPAs.[14] The IE for this negotiation is Merrimack Energy Group, Inc. ("Merrimack Energy"). In this case, Merrimack Energy is represented by Wayne Oliver. The public version of the IE Report on the Richmond PPA is attached as Appendix A; the confidential version of the IE Report is attached as Confidential Appendix B.

In addition to participating in the substantive negotiations between the parties and discussions within PG&E, the IE's representative participated in the PRG-CAM Group meeting in which this negotiation was discussed. Based upon his comprehensive knowledge of the QF/CHP Settlement Agreement and its objectives, Mr. Oliver issued his "IE Report," which provides his critical evaluation and findings on the negotiations process, and his evaluation of the resulting Richmond PPA. His observations were shared with the PRG-CAM Group on July 16, 2013.

B. Procurement Review Group ("PRG") or Cost Allocation Mechanism Group ("CAM") Participation

The Term Sheet provides that each IOU's Procurement Review Group ("PRG") shall advise the CHP RFO process.[15] PG&E's Cost Allocation Mechanism ("CAM") Group is also consulted because procurement under the QF/CHP Settlement will be allocated to all benefiting customers in accordance with D.10-12-035, Ordering Paragraph 5. That paragraph states,

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[13] Public Utilities Code ("Pub. Util. Code") section 8341(b)(1) states: "The commission shall not approve a long-term financial commitment by an electrical corporation unless any baseload generation supplied under the long-term financial commitment complies with the greenhouse gases emission performance standard established by the commission...."

[14] Term Sheet, Section 4.3.2

[15] Term Sheet Section 4.2.5.8.

> When procuring or potentially procuring Combined Heat and Power resources under D.10-12-035 where the costs are allocated to all benefitting customers, PG&E will utilize an advisory CAM Group[16] ....

PG&E's CAM includes the Commission's Energy Division and Division of Ratepayer Advocates ("DRA"), The Utility Reform Network ("TURN"), the Coalition of California Utility Employees ("CCUE"), Department of Water Resources ("DWR"), the Union of Concerned Scientists ("UCS"), and Coast Economic Consulting, which comprise the PRG, plus one member representing CCA customers and one member representing Direct Access ("DA") customers. PG&E's consultative group will be referred to as the "CAM Group" for purposes of this discussion, unless specifically stated otherwise.

PG&E presented the proposed Agreement to its PRG on July 16, 2013 and notified its CAM Group of pending negotiation on September 27, 2013. During this process, the consultative groups assembled and were briefed either in person or telephonically, or were notified electronically. There was ample opportunity for a complete discussion of the terms, conditions, features, and benefits of the Agreement. Throughout this process, PG&E provided answers in response to any comments or questions from the PRG and CAM Group members.

V. COST RECOVERY MECHANISM

In its decision approving the QF/CHP Settlement, the Commission determined that it had the statutory authority to require Direct Access[17] ("DA"), Community Choice Aggregator ("CCA"),[18] and Departing Load Customers[19] to bear a portion of the CHP resource costs incurred by the IOUs under the QF/CHP Settlement.[20] The Commission also determined that the utilities should procure "CHP resources on behalf of non-IOU LSEs [i.e., load serving entities] and [allocated the] net capacity costs and associated benefits as described in Section 13.1.2.2 of the Term Sheet."[21] Section 13.1.2.2 of the Term Sheet provides:

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[16] See PG&E's Long Term Procurement Plan, filed May 21, 2012, Sheet 175.

[17] As defined by Term Sheet section 6.3.1.

[18] As specified by Pub. Util. Code section 331.1.

[19] The Term Sheet defines "Departing Load Customers" on page 66 as including: "CGDL, TMDL, and NMDL [customers] in PG&E's existing E-DCG, E-NMDL and E-TMDL tariff schedules".

[20] D.10-12-035, at pp. 46-50.

[21] The Commission adopted IOU procurement of CHP resources as a means of meeting the ESP and CCA portion of the State's GHG Emissions Reduction Targets and stated that "ESP and CCA customers would be responsible for the costs of CHP resources procured on their behalf by the IOUs." D.10-12-035, at p. 56.

> If the CPUC determines that the IOUs should purchase CHP generation on behalf of DA and CCA customers, then D.06-07-029 (and D.08-09-012 if necessary) shall be superseded to the extent necessary to authorize the IOUs to recover the net capacity costs associated with the CHP Program from all bundled service, DA and CCA customers and all Departing Load Customers except for CHP Departing Load Customers and from Municipal Departing Load (MDL) Customers only to the extent as described below, on a non-bypassable basis. The net capacity costs of the CHP Program shall be defined as the total costs paid by the IOU under the CHP Program less the value of the energy and any ancillary services supplied to the IOU under the CHP Program. No energy auction shall be required to value such energy and ancillary services. In exchange for paying a share of the net costs of the CHP Program, the LSEs serving DA and CCA customers will receive a pro-rata share of the RA credits procured via the CHP Program.[22]

PG&E is entering into the Richmond PPA to satisfy the QF/CHP Settlement requirements for CHP MW procurement and GHG Emissions Reductions. The CHP Decision provides that the primary IOUs will procure MW on behalf of the LSEs and CCAS customers within their service territory. The net capacity costs associated with the Richmond PPA must be proportionately allocated annually to all bundled, DA, CCA, and specified Departing Load Customers for collection on a non-bypassable basis. Net capacity costs will be billed via PG&E's Cost Allocation Mechanism ("CAM") rate and recovered through PG&E's New System Generation Balancing Account ("NSGBA") from all benefiting customers, i.e., bundled, DA, CCA, other non-exempt Departing Load Customers. In addition to this proportionate allocation of costs, PG&E will also proportionately allocate all RA benefits associated with the Richmond PPA to bundled, DA, CCA and other nonexempt Departing Load Customers. PG&E will allocate all procurement costs associated with the non-CHP renewable component of the new Refinery generation through the Power Charge Indifference Amount ("PCIA"). PG&E will recover the costs associated with the Richmond PPA through its Energy Resource Recovery Account ("ERRA").

VI. REQUEST FOR COMMISSION APPROVAL

PG&E requests that the Commission issue a resolution effective upon the Commission's adoption of a resolution approving this advice letter, that:

1. Approves the Richmond PPA and Letter Agreement with Chevron Products Company in their entirety, including payments to be made

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[22] Term Sheet, Section 13.1.2.2., as modified by D.11-07-010, OP3.

thereunder, subject only to Commission review of the reasonableness of PG&E's administration of the contract.

2. Determines that the rates and other terms and conditions set forth in the Richmond PPA and Letter Agreement are reasonable.

3. Allows PG&E to count 27.85 MW of incremental capacity towards its CHP Settlement MW Target.

4. Finds that the 39,644 MT per year of GHG Emissions Reductions resulting from the Richmond PPA applies toward PG&E's GHG Emissions Reduction Target.

5. Finds that PG&E's costs under the Richmond PPA and Letter Agreement shall be recovered through PG&E's ERRA.

6. Adopts the following findings of fact and conclusions of law in support of cost recovery for the Richmond PPA and Letter Agreement:

   a. PG&E shall be entitled to allocate the net capacity costs and associated RA benefits of the Richmond PPA to bundled, DA, CCA, and departing load (to the extent not exempted) customers consistent with D.10-12-035, as modified by D.11-07-010, and PG&E's Advice 3922-E, approved on December 19, 2011.

   b. The net capacity costs of the CHP components of the Richmond PPA will be billed via PG&E's CAM rate and recovered through PG&E's New System Generation Balancing Account ("NSGBA") from all benefiting customers. The procurement costs of the non-CHP components of the Richmond PPA will be collected via PG&E's PCIA rate.

   c. Richmond PPA and Letter Agreement costs will be recovered through ERRA.

7. Finds that because the expected annualized capacity factor of the deliveries under the Richmond PPA is below 60 percent, the Richmond PPA is not a covered procurement subject to the EPS adopted in D.07-01-039 and that the Richmond PPA is compliant with the EPS.

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile E-mail, no later than February 25, 2014, 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 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 th Commission:

Brian K. Cherry
Vice President, Regulatory Relations
Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, California 94177

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

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Rule 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the prote 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, Rule 3.11).

Effective Date

PG&E requests that this advice filing become effective upon the Commission's adoption of a resolution approving this advice letter. PG&E submits this request as a Tier 3 advic letter.

Notice

In accordance with General Order 96-B, Section IV, a copy of this advice letter is being sent electronically and via U.S. mail to parties shown on the attached list and the part on the service list for R.12-03-014. Address changes to the General Order 96-B service list should be directed to PG&E at email address PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at

(415) 703-2021 or at Process_Office@cpuc.ca.gov. Send all electronic approvals to PGETariffs@pge.com. Advice letter filings can also be accessed electronically at: http://www.pge.com/tariffs.

Brian Cherry /IG

Vice President, Regulatory Relations

Attachments:

Appendix 1: Final Independent Evaluator Report of Merrimack Energy Group, Inc. (Redacted)

Appendix 2: Declaration of Harold Pestana Seeking Confidential Treatment

Confidential Appendix A: Consistency with Commission Decisions and Rules and Project Development Status

Confidential Appendix B: Final Independent Evaluator Report of Merrimack Energy Group, Inc.

Confidential Appendix C: Contract Summary

Confidential Appendix D: Comparison of Richmond PPA with Optional As-Available PPA Pro Forma

Confidential Appendix E: Richmond PPA

Confidential Appendix F: Letter Agreement

cc: Damon Franz, Energy Division, CPUC
Jason Houck, Energy Division, CPUC
Cem Turhal, Energy Division, CPUC
Noel Crisostomo, Energy Division, CPUC
Chris Ungson, ORA, CPUC
Karen Hieta, ORA, CPUC
Service List for R.12-03-014

Limited Access to Confidential Material:

The portions of this Advice Letter marked Confidential Protected Material are submitted under the confidentiality protection of Section 583 and 454.5(g) of the Public Utilities Code and General Order 66-C. This material is protected from public disclosure because it consists of, among other items, the contracts themselves, price information, and analysis of the proposed energy procurement contracts, which are protected pursuant to D.06-06-066 and D.08-04-023. A declaration seeking confidential treatment of the following attachments is being submitted with this advice letter in accordance with D.08-04-023:

- Confidential Appendix A: Consistency with Commission Decisions and Rules and Project Development Status
- Confidential Appendix B: Final Independent Evaluator Report of Merrimack Energy Group, Inc.
- Confidential Appendix C: Contract Summary
- Confidential Appendix D: Comparison of Richmond PPA with Optional As-Available PPA Pro Forma
- Confidential Appendix E: Richmond PPA
- Confidential Appendix F: Letter Agreement

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY
ENERGY UTILITY

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

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

Utility type:	Contact Person: Igor Grinberg
ELC ffi GAS	Phone #: (415) 973-8580
ffi PLC ffi HEAT ffi WATER	E-mail: ixg8@pge.com and PGETariffs@pge.com

EXPLANATION OF UTILITY TYPE

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

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 4351-E Tier: 3

Subject of AL: Pacific Gas and Electric Company's Power Purchase Agreement with Chevron Products Company for Procurement of As-Available Energy and Capacity

Keywords (choose from CPUC listing): Agreements, Portfolio

AL filing type: Monthly Quarterly Annual ffi One-Time Other ______________

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

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

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

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: the attached matrix that identifies all of the confidential information.

Confidential information will be made available to those who have executed a nondisclosure agreement: ffi Yes No All members of PG&E's Procurement Review Group who have signed nondisclosure agreements will receive the confidential information

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: Harold J. Pestana, (415) 973-4523

Resolution Required? ffi Yes No

Requested effective date: Upon Approval No. of tariff sheets: N/A

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

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

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

Tariff schedules affected: N/A

Service affected and changes proposed: N/A

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

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

California Public Utilities Commission	Pacific Gas and Electric Company
Energy Division	Attn: Brian Cherry
EDTariffUnit	Vice President, Regulatory Relations
505 Van Ness Ave., 4th Flr.	77 Beale Street, Mail Code B10C
San Francisco, CA 94102	P.O. Box 770000
E-mail: EDTariffUnit@cpuc.ca.gov	San Francisco, CA 94177
	E-mail: PGETariffs@pge.com

Appendix 1

Final Independent Evaluator Report of Merrimack Energy Group, Inc. (Redacted)

Chevron Richmond Refinery

Pacific Gas and Electric Company Submission of Bilateral As-Available Power Purchase and Sale Agreement with Chevron Products Company for As-Available Capacity and Energy from the Chevron Richmond Refinery

Final Report of the Independent Evaluator

January 14, 2014

Prepared by
Merrimack Energy Group, Inc.

Merrimack
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Energy

Table of Contents

I. Introduction

A. Overview

On January 14, 2014 Pacific Gas & Electric Company ("PG&E") submitted a Tier 3 Advice Letter to the California Public Utilities Commission ("CPUC") seeking approval of a bilateral Power Purchase and Sale Agreement for As-Available Product ("As-Available PPA" or "Replacement PPA") with Chevron Products Company, a Division of Chevron U.S.A., Inc. ("Chevron") for 20,000 kW of As-Available contract capacity [redacted] from the Chevron Richmond Refinery,[1] which is an existing Combined Heat and Power ("CHP ") facility.[2] The PPA is for a term of twelve years (144 months) beginning on April 1, 2014 or after CPUC approval and replaces an existing Standard Offer 1 Qualifying Facility ("QF") PPA that expires on March 31, 2014. The Replacement PPA was executed by the parties on November 22, 2013.

Under the PPA, Chevron is required to develop new, efficient CHP capacity at the Refinery as outlined in the PPA. The expected new generation will be emission free, bottoming-cycle CHP technology that will capture waste heat to be used for power generation.

PG&E also seeks approval to count approximately 28 MW towards PG&E's CHP MW targets as set forth in the Qualifying Facility/Combined Heat and Power Settlement Agreement Term Sheet ("QF/CHP Settlement" or "Term Sheet"). PG&E also seeks a finding that 39,644 metric tons (" MT") per year of GHG Emission Reductions resulting from the Replacement PPA applies toward PG&E's GHG Emissions Reduction Target as established by the QF/CHP Settlement.[3]

PG&E has a current Legacy QF PPA with Chevron for the cogeneration facility that was originally executed in 1986. The current Legacy QF PPA is a Standard Offer One "evergreen" PPA with indefinite terms and a termination right for either the Buyer or

[1] The Chevron Refinery is located in Richmond, California.

[2] [redacted].

[3] Pursuant to the CHP Program Settlement, PG&E seeks to acquire 1,387 MW of CHP capacity during the Initial Program Period and about 2.2 million metric tons of GHG emission reductions during the First and Second Program Periods. At its October 8, 2013 PRG/CAM meeting, PG&E provided an update regarding its progress toward meeting CHP Settlement Targets. [redacted].

Seller.[4] PG&E has purchased as-available capacity and energy from Chevron under the contract since 1992.

Pursuant to regulatory requirements of the CPUC, PG&E retained Merrimack Energy Group, Inc. ("Merrimack Energy") as the Independent Evaluator (" IE") for th is bilateral contract filing. Merrimack Energy has also served as IE for both of PG&E's CHP RFO's undertaken to date under the QF/CHP Settlement.

B. Regulatory Requirements for the IE

The requirements for participation by an IE in utility solicitations are outlined in Decisions ("D").04-12-048 (Findings of Fact 94-95, Ordering Paragraph 28), D.06-05-039 (F inding of Fact 20, Conclusion of Law 3, Ordering Paragraph 8) of the CPUC, D.09-06-050 and D.10-07-042.

The role of the IEs in California IOU procurement processes has evolved over the past ten years. In D.04-12-048 (December 16, 2004), the CPUC required the use of an IE by investor-owned utilities (IOUs) in resource solicitations where there is an affiliated bidder or bidders, or where the utility proposed to build a project or where a bidder proposed to sell a project or build a project under a turnkey contract that would ultimately be owned by a utility. The CPUC generally endorsed the guidelines issued by the Federal Energy Regulatory Commission ("FERC") for independent evaluation where an affiliate of the purchaser is a bidder in a competitive solicitation, but stated that the role of the IE would not be to make binding decisions on behalf of the utilities or administer the entire process.[5] Instead, the IE would be consulted by the IOU, along with the Procurement Review Group ("PRG") on the design, administration, and evaluation aspects of the Request for Proposals ("RFP"). The Decision identifies the technical expertise and experience of the IE with regard to industry contracts, quantitative evaluation methodologies, power market derivatives, and other aspects of power project development. From a process standpoint, the IOU could contract directly with the IE, in consultation with its PRG, but the IE would coordinate with the Energy Division.

In D.06-05-039 (May 25, 2006), the CPUC required each IOU to employ an IE regarding all RFPs issued pursuant to the RPS, regardless of whether there are any utility-owned or affiliate-owned projects under consideration. This was extended to any long-term contract for new generation in D.06-07-029 (July 21, 2006). In addition, the CPUC directed the IE for each RFP to provide separate reports (a preliminary report with the shortlist and final reports with IOU advice letters to approve contracts) on the entire bid, solicitation, evaluation and selection process, with the reports submitted to the utility, PRG, and CPUC and made available to the public (subject to confidential treatment of protected information). The IE would also make periodic presentations regarding its

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[4] [redacted].

[5] Decision 04-12-048 at 129-37. The FERC guidelines are set forth in Ameren Energy Generating Company, 108 FERC ¶ 61,081 (June 29, 2004).

findings to the utility and the utility's PRG consistent with preserving the independence of the IE by ensuring free and unfettered communication between the IE and the CPUC's Energy Division, and an open, fair, and transparent process that the PRG could confirm.

In 2007, the use of an IE was required for any competitive solicitation seeking products for a term of more than three months in D.07- 12-052 (December 21, 2007). Also, the process for retaining IEs was modified substantially, with IOUs developing a pool of qualified IEs subject to feedback and any recommendations from the IOU's PRG and the Energy Division, an internal review process for IE candidates, and final approval of IEs by the Energy Division.

In 2008, in D.08-11-008, the CPUC changed the minimum term requirements from three months to two years, and reiterated that an IE must be utilized whenever an affiliate or utility bidder participates in the RFO, regardless of contract duration.

In D.09-06-050 issued on June 18, 2009 in Rulemaking 08-08-009, Order Instituting Rulemaking to Continue Implementation and Administration of California Renewable Portfolio Standard Program, the CPUC required that bilateral contracts should be reviewed according to the same processes and standards as contracts that come through a solicitation. This includes review by the utility's PRG and its IE, including a report filed by the IE.

In D.10-07-042 issued on July 29, 2010, the Commission reaffirmed the role of the IE and required the Energy Division to revise the IE Template to ensure that the IEs focus on their core responsibility of evaluating whether an IOU conducted a well-designed, fair, and transparent RFO for the purpose of obtaining the lowest market prices for ratepayers, taking into account many factors (e.g. project viability, transmission access, etc.).

Finally, Section 4.3.2 of the QF/CHP Settlement Agreement which addresses bilaterally negotiated PPAs states that "use of an IE shall be required for any negotiations between an IOU and its affiliate and may be used, at the election of either the Buyer or Seller, in other negotiations."

This IE report is submitted in conformance with the above requirements and is generally consistent with the requirements outlined in the CPUC's Short Form IE Report Template.

C. Issues Addressed in this Report

This report address es Merrimack Energy's assessment regarding the following issues associated with the execution of the As-Available Capacity Power Purchase and Sale Agreement ("Replacement PPA") with Chevron Products Company. The issues addressed in this report are consistent with the CPUC Independent Evaluator Report Template.

1. Describe in detail the role of the IE throughout the solicitation (if applicable) and negotiation process;

2. Description of PG&E's Least Cost Best Fit methodology consistent with the type of resource evaluated. Evaluate the strengths and weaknesses of the methodology;

3. Describe project specific negotiations. Highlight any areas of concern including unique terms and conditions;

4. Describe the outreach activities undertaken by the utility;

5. If applicable, describe safeguards and methodologies employed by the utility to compare affiliate bids or UOG ownership proposals. If a utility selected a bid from an affiliate or a bid that would result in utility asset ownership, explain and analyze whether the utility's selection of such bid(s) was appropriate;

6. Based on the complete bid process, is the IOU contract the best overall offer received by the IOU?

7. If the contract does not directly reflect a product solicited and bid in an RFO, is the contract superior to the bids received or the products solicited in the RFO? Explain?

8. Is the contract a reasonable way of achieving the need identified in the RFO?

9. Based on your analysis of the RFO bids, the bid process, and the overall market, does the contract merit Commission approval? Explain.

II. Description of the Role of the IE throughout the Negotiation Process

In compliance with D.09-06-050 PG&E requested that Merrimack Energy serve as IE for the Chevron Richmond Refinery contract negotiation process in January 2013. As noted, Merrimack Energy has also served as IE for PG&E's first two CHP RFO processes under the QF/CHP Settlement.

Merrimack Energy's role during the contract negotiation process included the following:

- Reviewed contract turns exchanged between the counterparties and term sheets and discussed the contract negotiation process and status with PG&E's contract negotiations team;

- Monitored contract negotiation sessions between PG&E and Chevron Products Company throughout the negotiation process;

- Participated in the presentation regarding the contract negotiation status with the PRG on July 16, 2013;

- Conducted assessment of the reasonableness of the PPA provisions relative to the QF/CHP Settlement and other offers submitted in response to PG&E 2013 CHP RFO 2 process;

- Prepared the final IE Report for filing with PG&E's Tier 3 Advice Letter

III. Background to Contract Decision – QF/CHP Settlement

The Combined Heat and Power Program Settlement Agreement is an extensive agreement that contains a number of requirements and directives for affected utilities. The CHP Settlement, which was negotiated over an extended period by the California IOUs, representatives of California's QFs/CHPs, and ratepayer advocates to replace California's QF PURPA Program, is embodied in the CHP Program Settlement Agreement Term Sheet dated October 8, 2010 ("Settlement Agreement"). The Settlement Agreement requires that the three major California IOUs enter into new power purchase agreements ("PPAs") with eligible facilities under the Settlement in specified MW amounts (subject to various qualifications) with an objective of achieving certain target levels of CHP MWs and greenhouse gas ("GHG") emission reductions.

The CHP Settlement process was initiated in May 2009 and encompassed a 16 month process. The Settling Parties submitted the Qualifying Facility ("QF")/CHP Settlement Agreement for CPUC approval on October 8, 2010. On December 21, 2010, the CPUC issued Decision 10-12-035, in which it approved the QF/CHP Settlement Agreement. Applications for rehearing were filed in January 2011. On March 24, 2011, the CPUC issued Decision 11-03-051, in which some but not all of the challenges were resolved. Subsequently, the QF/CHP Settlement Agreement became effective on November 23, 2011 when the decisions granting modification and denying rehearing of D.10-12-035 became final and non-appealable.

One of the primary results of the Settlement was a CHP procurement program that would be implemented through 2020, with established CHP MW targets and GHG reduction targets. The Settlement established a target of 3,000 MW of CHP contracts resulting from the CHP Program Procurement Processes. The Initial Program Period established a target of 2,949 MW for the three Investor-Owned utilities ("IOU") for a four year period after the effective date of the Settlement. [6] The Second Program Period, which extends from the end of the Initial Program Period to December 31, 2020, establishes a target of any shortfall from the Initial Program Period Targets as well as any additional amounts established in the Long-Term Procurement Plan ("LTPP") proceeding at the CPUC.

Specifically, in the Initial Program Period, starting with the Settlement Effective Date, and concluding 48 months afterwards, November 22, 2015, each IOU is required to conduct three Requests for Offers ("RFOs") with the goals of entering into new PPAs

[6] Based on the Settlement effective date of November 23, 2011, the four year period for the Initial Program Period would end on November 22, 2015. The Settlement Agreement became effective when the decisions granting modification and denying rehearing of D.10-12-035 became final and non-appealable.

with either CHP facilities or existing CHP facilities that have changed operations to convert to utility pre-scheduled dispatchable facilities (referred to as "Utility Prescheduled Facilities" or "UPFs"). As noted, PG&E's target for the Initial Program Period is 1,387 MW, with a target of approximately 2.2 MMT in GHG emission reductions to be procured by the end of the Second Program Period. During the Second Program Period, IOUs will procure any portion of the MW targets not procured in the Initial Program Period plus additional CHP capacity to meet GHG emission reduction targets as established by the CPUC in the Long Term Procurement Planning proceeding ("LTPP").[7]

This new statewide CHP program has a number of goals and objectives which are set forth in Section 1 of the Settlement Agreement. Among them are the retention of existing efficient CHP, support for changes in operations and upgrades of inefficient CHP to provide greater benefits, providing an orderly exit for CHP Facilities that cannot participate, or are unsuccessful, in the new CHP program, retaining existing CHP GHG emissions reductions benefits and incrementally reducing GHG emissions through new or repowered CHP or changes in operations in existing CHP Facilities, and the resolution of long-standing disputes and litigation regarding California's prior QF PURPA Program.

The Settlement includes accounting mechanisms based on:

- Avoided GHG emissions assumptions;
- Facility efficiency;
- Must-take status;
- New or existing capacity;
- Repowering;
- Conversion to prescheduled facilities; and
- Shut-downs with or without continuation of thermal application.

The initial IOU GHG Targets are allocated on a proportional share of retail sales.

The Settlement also identifies a number of eligible procurement options under the CHP Program for meeting CHP MW and GHG targets. These include:

- RFOs conducted by IOUs;
- Optional As-Available PPAs ("OAA");
- PPAs for QFs 20 MW or less;

[7] There is also a Transition Period, beginning on the Settlement Agreement effective date and ending on July 1, 2015, a period largely consistent with the Initial Program Period, during which owners of existing CHP Facilities under existing QF contracts or contracts under extension can enter into standard Transition Period power purchase agreements with their existing IOU-buyers ("Transition PPAs") at standard capacity rates and standard energy rate formulas, with the ability to negotiate rates and terms and conditions for what is called "Additional Dispatchable Capacity" at "a competitive market price." Settlement Agreement §§ 3.2.3.3 and 3.4.1.2. A seller under a Transition PPA is entitled to terminate it if it is successful in obtaining a new contract through a CHP RFO.

- AB 1613 PPAs;
- Bilaterally negotiated PPAs and amendments;
- IOU-owned CHP for GHG targets, capped at 10% of GHG targets;
- Utility Prescheduled Facilities;
- New behind the meter CHP facilities

As a component of the Settlement, the parties also established five proform a contracts including an Optional As-Available PPA that would be used by the utility for securing As-Available CHP Facilities. The Agreement, which is the subject of this application, is based on the Optional As-Available PPA modified to reflect the expansion of the facility as proposed by Chevron.

Section 4 of the Settlement Agreement discusses the role of As-Available PPA's as part of the overall CHP procurement options. Specifically, Section 4.6 addresses As-Available Procurement Alternatives and the Optional As-Available PPA. As noted in Section 4.6.1, As-Available CHP Facilities are eligible for several procurement alternatives under the CHP program including CHP RFOs, bilaterally negotiated PPAs, the AB 1613 Feed-in Tariff and the PURPA Program for QFs 20 MW or under. In addition to these alternatives for the procurement from as-available CHP facilities, there is also an Optional As-Available PPA.

The Optional As-Available PPA is subject to a number of defined terms and conditions included in Section 4.6.2 of the Settlement document. These are summarized below based on the specific provisions:

- Eligibility – There are specific eligibility requirements for the Optional As-Available PPA as contained in Section 4.6.2.1, including:
  - Gas-fired CHP Facilities with nameplates greater than 20 MW, but average annual deliveries less than 131,400 MWh;
  - The as-available project host(s) must consume, consistent with Public Utilities Code 218(b), at least 75% of the total electricity generated by a Topping Cycle CHP Facility or at least 25% of the total electricity generated by a Bottoming Cycle CHP Facility.
  - For Topping Cycle or Bottoming Cycle with supplemental firing, the as-available CHP Facility must meet sixty percent (60%) efficiency calculated by dividing the total annual useful thermal and electrical output by the total annual fuel use, based on Higher Heating Value. There will be no efficiency requirement for a Bottoming Cycle CHP Facility with no supplemental firing.

- Capacity Pricing – The capacity price shall be set consistent with the as-available capacity price in D.07-09-040, subject to escalation as provided in the above decision, and shall be applied up to a maximum of 20 MW of deliveries.

- Energy Pricing – Energy scheduled on a day-ahead basis and delivered up to 20 MW per hour in a given hour based on the lesser of Day-Ahead scheduled energy or metered deliveries will be priced at the Short-Run Avoided Cost (SRAC)
    - Energy scheduled on a Day-Ahead basis and delivered above 20 MW per hour in a given hour will be priced at the MRTU Day-Ahead Market PNode energy price;
    - Seller shall schedule all deliveries with the IOU on a Day-Ahead basis in advance of timing required for Buyer to schedule energy into the CAISO Day-Ahead market (8 hours in the CAISO day-ahead market);
    - Unscheduled energy incremental to scheduled energy in a given hour shall be priced at the MRTU real time PNode price for such energy, thus Seller shall pay any applicable CAISO Charges and receive all CAISO Revenues attributable to unscheduled deviations between Seller's scheduled and metered deliveries for such incremental energy. Applicable CAISO Charges for deviations shall be the responsibility of the Seller;
    - The Performance Tolerance Band under Scheduling and Delivery Deviation (SDD) Energy Adjustment and the SC Trade Tolerance Band shall be set at the greater of (a) 3% of the Seller's Final Energy Forecast divided by the number of Settlement Intervals in such hour or (b) 3 MWh divided by the number of Settlement Intervals in such hour.

- Term of an Optional As-Available PPA – the term of the Agreement shall be up to 7 years at the discretion of the Seller. If the Seller chooses a PPA term of 5 years or greater, the Seller will provide on a confidential basis to the IOU sufficient information for the IOU to confirm that the CHP Facilities comply with the Emissions Performance Standard, if such standard is applicable to the CHP as an as-available facility.

- CAISO Tariff – Seller shall comply with the applicable provisions of the CAISO Tariff as determined by the CAISO.

- Scheduling Coordinator – Buyer, at Seller's election, shall be Seller's Scheduling Coordinator. At Seller's option, Seller may establish and pay for a Scheduling Coordinator ID for the CHP facility.

- GHG Emission Reduction – GHG emission reductions associated with New, Repowered, or Expanded CHP under an Optional As-Available PPA shall be the amount of GHG emission reductions from the entire CHP facility, as set forth in Section 7.

- Counting Rules for Optional As-Available PPA Enrollment and MW Targets – A CHP Facility currently operating under an evergreen Legacy PPA may not terminate its evergreen Legacy PPA to obtain a new Optional As-Available PPA. Neither the MW nor the AMW of deliveries under these CHP PPAs may be counted toward the MW Targets or the AMW Cap. If, however, the CHP Facility adds new capacity, it may receive an Optional As-Available PPA for any deliveries that are determined to be associated with the new capacity, and the MW of new capacity shall be counted toward the MW Targets.

As a result of the provisions of Section 4 of the Settlement as described above, PG&E intends to count 27.85 MW toward its Settlement MW target and 39,644 MT of GHG emission reductions.

IV. Description of PG&E's Least Cost Best Fit Methodology

For evaluation of offers received in response to its CHP RFO's, PG&E has stated that it will primarily use a Portfolio Adjusted Value ("PAV") methodology to evaluate and rank Offers received. PG&E will also evaluate and consider the following criteria:

- Market Valuation (i.e. Net Market Value or NMV);
- GHG Emission Reductions;
- Credit;
- Project Viability;
- Project Technical Reliability;
- Adherence to applicable form PPA; and
- Supplier Diversity.

PAV is intended to represent the value of a resource or Offer in the context of PG&E's portfolio and contrasts with Market Valuation, which is intended to represent the value of a resource or Offer regardless of PG&E's portfolio.

[redacted]

- [redacted];
- [redacted];
- [redacted].

The starting point or primary component of the Least Cost Best Fit methodology is Market Valuation. Market Valuation considers how an Offer's (or contract's) costs compared to its benefits, from a market perspective. An Offer's cost is reflected in the Offer's pr icing, including fixed and variable components represented by the Offer's pricing proposal. Costs are essentially PG&E's payments to the Participant, adjusted by Time of Deli very ("TOD") factors. [redacted].

[redacted].

In the Solicitation Protocol for the 2013 CHP RFO it is stated that "PG&E will primarily use Portfolio Adjusted Value" ("PAV") to evaluate and rank Offers received in the CH P RFO." [redacted].

[redacted].

[redacted].

A more detailed description of the CHP evaluation methodology is included as Appendix A.

Given the nature of this PPA as a contract for CHP capacity consistent with Settlement requirements, PG&E has calculated the PAV/CHP kW-year and Net Market Value (NMV/kW-year) for the Chevron Replacement PPA in the same manner as it calculated these metrics for the CHP RFO to assess the reasonableness of the bilaterally negotiated PPA in comparison to the short listed offers from the 2013 CHP RFO. These metrics for the Chevron Refinery and the projects selected for the short list in the 2013 CHP RFO based on October 2013 forward curves are presented in Exhibit 1 later in this report.

Evaluation of the Strengths and Weaknesses of PG&E's Methodology in This Solicitation

PG&E has implemented a methodology for evaluating offers received in response to the 2013 (and previous) CHP RFO that includes methodologies and models used in previous solicitations as well as revised methodologies and qualitative criteria that apply specifically to the CHP solicitation. PG&E began the planning for development of the bid evaluation methodology early on in the development of the 2011 CHP RFO ("CHP RFO 1") solicitation process and vetted the methodology through PG&E's Steering Committee and Evaluation Committee at numerous stages in the process. In addition, PG&E undertook a test bid process to assess the best approach for evaluating and ranking the expected resources to be submitted by Participants. There have been several lessons learned from the implementation of the two CHP RFO processes which highlight the strengths and weaknesses of the evaluation and ranking methodology. Furthermore, many of the weaknesses identified by Merrimack Energy in its Report on the CHP RFO 1 process have been addressed by PG&E. These are discussed in this section of the Report.

Strengths of Evaluation and Ranking Methodology

The following represents the IEs perspective regarding the strengths associated with the evaluation and ranking methodology implemented by PG&E for assessing CHP Offers submitted into the CHP RFO processes. These include:

- The methodology used by PG&E takes into consideration all reasonable costs and benefits associated with the various types of offers submitted;

- This methodology is capable of effectively and consistently evaluating a range of different types of resources, project structures with different terms, product sizes, and starting dates, different generation profiles and operating parameters. The IE does not view this methodology as having any undue bias es toward any product solicited in this RFO;

- The models used by PG&E for undertaking the evaluation of both CHP options as well as dispatchable options have been used in several other PG&E solicitations and have undergone testing and evaluation in previous processes such as the ITRFO's undertaken by PG&E using the same option pricing model as used for dispatchable offers in this solicitation;

- PG&E has developed and maintained detailed documentation for each of the models used to evaluate CHP projects;

- PG&E uses consistent input assumptions for undertaking the evaluation of all offers;

- At the request of the IE, PG&E developed an internal model to compile all input and output data for each of the Offers and provides a detailed summary of the components of the costs and benefits for each Offer, detailed calculations for the GHG emission reductions, and provides other pertinent data for each offer to allow the IE to undertake a detailed review of the evaluation results for each offer.

- The use of Portfolio Adjusted Value (PAV) as the basis for undertaking this evaluation represents a reasonable next step in the evolution of PG&E's evaluation methodology since the methodology is intended to represent the value of a resource or Offer in the context of PG&E's portfolio;

- PG&E developed a system of "checks and balances" regarding the compilation of bid evaluation results which includes an internal reviewer within the Quantitative Analysis Group compiling and checking bid evaluation results;

- The ranking and presentation of bid evaluation results was provided to the IE, PRG and CAMS groups by resource type or product to allow for a more effective comparison of offers;

- PG&E prepared detailed internal evaluation protocol documents that clearly described the evaluation methodologies and criteria, which facilitated review by the IE;

- [redacted];

Weaknesses of the Evaluation and Ranking Methodology

The following reflects the views of the IE with regard to the weaknesses of the bid evaluation and ranking methodology.

- The adjustment factors used in the Portfolio Adjusted Value methodology are still subject to revision and enhancement based on experience and judgment of PG&E Quantitative Analysis Group team members. These adjustors need to be reassessed over time as new information becomes available;

- [redacted];

- [redacted];

- [redacted].

Evaluation of Chevron Contract Relative to Shortlisted Offers from the 2013 CHP RFO

To assess the value of the bilateral contract with Chevron, Merrimack Energy requested that PG&E prepare an economic assessment of the project using the same methodology used for evaluating offers received in response to PG&E's most recent CHP RFO process as a comparable benchmark. The starting point of the assessment is PG&E's short list from the 2013 CHP RFO process, which was completed in June 2013.

As the basis for assessing the economic merits of the Chevron Refinery contract, Merrimack Energy has compared the [redacted] with the comparable metrics for the Chevron Refinery contract. Exhibit 1 below provides the shortlist from the 2013 CHP RFO, including detailed evaluation information generated by PG&E and verified by the IE. The results of the analysis demonstrate that [redacted].

Exhibit 1: PG&E Proposed Short List

[redacted]

[redacted]

[redacted].

Exhibit 2: PG&E Proposed Short List

[redacted]

As the above results illustrate, the Optional As-Available PPA with the Chevron Refinery is very competitive relative to the other offers on the short list from the 2013 CHP RFO solicitation and would certainly have been selected for the short list in competition with the offers from the solicitation.

V. Outreach to Bidders

PG&E negotiated the agreement as a bilateral contract rather than selecting the project through a solicitation process.

Under the QF/CHP Settlement, As-Available CHP facilities are eligible for several procurement alternatives, including an Optional As-Available PPA as long as the project meets the specified terms and conditions in the Settlement. The Chevron Richmond Refinery is an existing qualifying cogeneration facility that complies with the applicable PURPA efficiency standards. The Agreement resulting from the bilateral negotiations started with the form of the Optional As-Available PPA developed as part of the QF/CHP Settlement process. [redacted].

VI. Contract Negotiations Process

As noted, during the contract negotiation process Merrimack Energy had the opportunity to review mark-ups of the term sheets and contracts exchanged between PG&E and Chevron Products Company and attend negotiation sessions. The Agreement is based upon the form of the Optional As-Available PPA developed by the Settling Parties to the CHP Settlement in accordance with the Settlement Agreement.

As noted, the Chevron Richmond Refinery has been under contract with PG&E under a Legacy QF PPA which was executed in 1986. The Legacy QF PPA is a Standard Offer One PPA.[8] The legacy PPA was amended in 2002 [9] with an expiration date of March 31, 2005. Also, under the Second Amendment, the parties shall extend the Term of the Agreement for a one (1) year period unless written notice of the termination is provided by either party ninety (90) days in advance of termination.[10] As a result, the PPA could be extended for one year periods unless either party provided written notice of termination. PG&E exercised its termination right on December 27, 2012. PG&E notified Chevron that the PPA would terminate on March 31, 2014. The key provisions of the original

[8] PG&E has purchased as-available capacity and energy from the Chevron Refinery since 1992, under the original agreement.

[9] The Second Amendment to the As-Delivered Capacity and Energy Power Purchase Agreement Between Chevron U.S.A. and Pacific Gas and Electric Company was dated as of May 1, 2002. On November 27, 2002, an Amended and Restated Second Amendment to the As-Delivered Capacity and Energy Power Purchase Agreement was executed which waived the requirement for CPUC approval as a condition in the Second Amendment.

[10] The Second Amendment also included revised pricing. According to Section 3 of the Second Amendment, "For the period prior to the CPUC issuing a final and non-appealable order approving this Amendment, PG&E shall pay Seller for as-delivered capacity and energy at prices established by the CPUC which are derived from PG&E's full short run avoided costs. Commencing on the date the CPUC issues a final and non-appealable order and thereafter until the expiration of the Agreement, as amended, PG&E shall pay Seller at prices equal to PG&E's full short-run avoided costs as approved by the CPUC for scheduled deliveries of electric energy. PG&E shall pay Seller at prices equal to ninety percent (90%) of PG&E's short-run avoided costs as approved by the CPUC for unscheduled deliveries of electric energy."

Legacy PPA are provided in Exhibit 3 below. The pricing provisions summarized in Exhibit 3 reflect the original pricing provisions contained in the Legacy PPA.

Exhibit 3: Provisions of Legacy PPA

PPA Provision	Description of Provision
Type of Contract	Standard Offer One Power Purchase Agreement for As-Delivered Capacity and Energy
Facility	The Facility has a nameplate rating of 99,000 kW
Energy Sales Option	The Seller has two energy sale options: (1) Net Energy Output or Surplus Energy Output. The seller chose Surplus Energy Output as its energy sales option. Seller is entitled to convert from one option to the other 12 months after execution of the agreement.
Contract Execution Date	October 30, 1986
Operations Date	August 1992
Pricing	PG&E shall pay Seller for as-delivered capacity at prices authorized from time to time by the CPUC and which are derived from PG&E's full avoided cost as approved by the CPUC. PG&E shall pay Seller for energy at prices equal to PG&E's full short run avoided capacity costs as approved by the CPUC. PG&E's then current As-Delivered Capacity Price calculation is shown in Appendix C of the Agreement. PG&E's then current energy price calculation is shown in Table A, Appendix B of the PPA.
Capacity Price	The Capacity Price in the Legacy PPA was based on 100% of the shortage value of as-delivered capacity. The shortage cost in the contract was identified to be $56/kW-year based partially on the annualized cost of a gas turbine.
Curtailment of Deliveries and Hydro Spill Conditions	PG&E shall not be obligated to accept or pay for and may require Seller to interrupt or reduce deliveries of as-delivered capacity and energy (1) when necessary in order to construct, install, maintain, repair, replace, remove, investigate, or inspect any of its equipment or any part of its system, or (2) if it determines that interruption or reduction is necessary because of emergencies, forced outages, force majeure, or compliance with prudent electrical practices. In anticipation of a period of hydro spill conditions, as defined by the CPUC, PG&E may notify Seller that any purchases of energy from Seller during such period shall be at hydro savings prices quoted by PG&E. If Seller delivers energy to PG&E during such period, Seller shall be paid hydro savings prices for those deliveries in lieu of prices which would otherwise be applicable.
Contract Termination	This Agreement shall become effective on the date of

	execution by the Parties and shall remain in effect until terminated by Seller or terminated pursuant to Article 7 of the Agreement

PG&E and Chevron began discussions regarding a potential replacement contract in August 2012 and then again in October, 2012. Merrimack Energy began to serve as the IE in January 2013, once the parties agreed to continue negotiations toward a Replacement PPA.

The initial negotiations between the parties associated with this Replacement PPA involved the development of a Term Sheet to address major issues. In late January, 2013 PG&E provided an initial Term Sheet to Chevron outlining its proposal for a new contract based on the initial discussions held between the parties in the fall of 2012 . Under the initial proposal, PG&E suggested a [redacted].

The parties met on January 30, 2013 to discuss the proposed term sheet for the PPA and QF Conversion Interconnection Agreement. Chevron discussed [redacted]. PG&E mentioned that the OAA PPA would require two modifications:

- [redacted];
- [redacted].

On February 13, 2013 Chevron provided comments on the term sheet with regard to PG&E's initial proposal. The primary comments of Chevron included:

- [redacted];
- [redacted];

- [redacted];
- [redacted];

In mid-February, 2013, Chevron prepared a response to PG&E's term sheet proposal on several of the key provisions of the agreement. Exhibit 4 provides a summary of the Current PPA, PG&E's proposal for a New Replacement PPA, and Chevron's response to PG&E's proposal.

Exhibit 4: Summary of the Parties Negotiation Positions – February, 2013

PPA Term	Existing PPA	[redacted]
Form of PPA	Legacy Standard Offer One Contract	
Delivery Term and Start Date	• Annual termination window; • Existing SO1 PPA and amendments terminate 3/31/2014	
Contract Capacity	99 MW	

		[redacted]
Energy Pricing	SRAC plus CSC 90% of SRAC for unscheduled deliveries	
Delivery Restrictions	44,000 MWh/year	
Credit and Collateral	None	
Green Attributes	N/A	
Interconnection	CPUC jurisdictional Rule 21 legacy agreement	
Scheduling Tolerance		

On February 19, 2013 PG&E submitted the first draft of the Optional As-Available Replacement PPA for Chevron's Richmond Refinery Facility.

The new Agreement was intended to replace the Legacy PPA and included modifications to address the following issues:

- Addresses CAISO Tariff considerations by bringing the provisions of the contract in compliance with the CAISO Tariff and Settlement Term Sheet;

- Addresses modifications to the PPA to allow for the development of new CHP facilities and renewable generation at the Refinery.

The parties participated in a conference call on February 20, 2013 to discuss the proposals of each party. PG&E team members clearly articulated in their discussion the specific terms of the QF/CHP Settlement with regard to Optional As-Available PPA requirements and how these requirements affect the agreement. The following issues were addressed:

- [redacted];
- [redacted];
- [redacted];
- [redacted];
- [redacted];
- [redacted];
- [redacted];
- [redacted]

[redacted] major issues for future discussion were identified including [redacted].

A follow-up conference call was held on March 14, 2013. The discussions revisited some of the same issues addressed in the February 20, 2013 call with a focus on the Settlement requirements. Chevron indicated that one of its key issues was [redacted].

The next call between PG&E and Chevron took place in early April, 2013. Chevron raised a concern about [redacted]. As a solution to this issue, both parties agreed to [redacted].

The parties held another call on May 6, 2013 with issues such as [redacted] remaining as key topics for discussion.

On May 24, 2013 PG&E submitted a redline of the PPA to Chevron with its proposed revisions.

Negotiation sessions with Chevron were held in late June and early July to address outstanding issues. [redacted]es that were the focus of these discussions included the [redacted]. Chevron wanted to [redacted]. The parties also did a "page turn" of the PPA to address business and other outstanding issues. A follow-up call occurred on July 15, 2013 to attempt to resolve outstanding issues and confirm the [redacted].

On July 16, 2013 PG&E informed the Procurement Review Group about the status of the Replacement PPA for the Chevron Richmond Refinery. [redacted]

- [redacted];
- [redacted];
- [redacted];
- [redacted]
    - [redacted];
    - [redacted];
    - [redacted];
    - [redacted];
    - [redacted];
- [redacted]

[redacted]

- [redacted];
- [redacted];
- [redacted];

- [redacted].

The parties held another discussion on August 7, 2013. [redacted].

The next discussion took place on September 3, 2013. [redacted].

The parties generally agreed on the terms of the PPA by early October. [redacted].

Exhibit 5 provides a summary of the key contract provisions for the executed contract negotiated by PG&E with Chevron.

Exhibit 5: Summary of Final Contract Provisions

PPA Provisions	Description of Provisions
Form of PPA	Agreement based upon the Optional As-Available Power Purchase Agreement ("OAA") included in the CHP Settlement Agreement
Contract Start Date – Section 1.01	April 1, 2014
Contract Term – Section 1.01	144 months
[redacted]	[redacted]
As-Available Contract Capacity – Section 1.02	Section 1.02 (e) – The total As-Available Contract Capacity of the Existing Generating Units and New Generating Units equals 20,000 kW.
[redacted]	[redacted]

[redacted]

If the Generating Facility is an Existing CHP Facility on the Effecti ve Date, the Power Rating of the Generating Facility equals 143,260 kW. [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

In conclusion, the IE is of the opinion based on review of the communications between the counterparties and monitoring of contract negotiations that the negotiation process was a fair and equitable process. Both parties negotiated aggressively but fairly with no major controversies emerging which could derail the negotiation process. [redacted].

VII. Safeguards to Compare Affiliate Bids or Utility Owned Generation Options

This section is not applicable since this is a third-party non-affiliate transaction.

VIII. Recommendation For Contract Approval

The CPUC Independent Evaluator Report Template raises several questions with regard to the evaluation of a contract either resulting from a solicitation process or bilaterally negotiated:

- If the contract does not directly reflect a product solicited and bid in an RFO, is the contract superior to the bids received or the products solicited in the RFO? Explain.

- Is the contract a reasonable way of achieving the need identified in the RFO?

- Based on your analysis of the RFO bids, the bid process, and the overall market, does the contract merit Commission approval? Explain.

Assessment of the Chevron Richmond Refinery Contract

In undertaking an assessment of the Chevron Replacement PPA, Merrimack Energy has reviewed and addressed several criteria pertaining the contract, including:

1. Is the contract superior to the bids received or the products solicited in the most recent CHP RFO? In that regard, is it reasonable to expect that the contract would have been included on the short list had the project directly competed against the solicitation options;

2. Is the contract consistent with PG&E's need for the procurement in terms of its CHP MW and GHG emission reduction targets;

3. Does the contract/project meet all the eligibility and other requirements outlined in the QF/CHP Settlement and D.10-12-035.

Evaluation of the Chevron Refinery PPA Relative to PG&E Short Listed Projects

With regard to the first criteria noted above, as illustrated in Exhibit 2, [redacted] re lative to other offers included on PG&E's short list for the 2013 CHP RFO. For example, Chevron's [redacted] is significantly better than the next best project on the short list [redacted].

Also, PG&E estimates that the project will provide 39,644 MT per year of GHG emission reductions. The measurement of these emission reductions is based on the Doubl e Benchmark in place at the time of PPA execution compared to the anticipated operations in the PPA. [redacted]

[redacted].

PG&E also conducts a qualitative ranking of offers based on several factors as listed on Page nine of this report. Offers are ranked on a +, 0, and – scoring system. The Chevron Richmond Refinery project is an existing CHP facility with a proven track record as a CHP project. PG&E has been purchasing as-available capacity and energy from Chevron's existing CHP facilities at the Richmond Refinery under an existing Standard Offer 1 contract since 1992. The CHP facilities have provided thermal output and electricity to the Refinery and surplus as-available energy and capacity to PG&E.

With regard to project viability and technical reliability, Merrimack Energy would rank the project as a 0. This is largely due to [redacted] the technology proposed is proven technology, a viable steam host exists at the refinery and the infrastructure is already in place. With regard to credit, Chevron has agreed to [redacted].

Since this was a bilateral negotiation process, initial exceptions to the PPA were not provided. Instead, the parties began with a term sheet and started negotiations based on the Optional As-Available PPA proforma agreement. As noted in the discussions in this report about the contract negotiation process, [redacted].

Consistency of Contract With PG&E's Need for Procurement

PG&E provided an update at its October 8, 2013 PRG/CAM meeting with regard to its progress toward its CHP Settlement Targets. [redacted]. The contract with Chevron provides both CHP MW and GHG emission reductions at a reasonable cost to consumers and provides a contribution to both targets.[11] Thus, such a contract can contribute in a meaningful way to both targets at a reasonably high value and is an important addition to the utility's CHP portfolio.

[11] The IE's view of the CHP market is that utilities should be able to meet their CHP MW target with the available CHP capacity in the market. However, unless there are new CHP facilities constructed, significant conversion of traditional CHP facilities to utility dispatchable projects, repowering or fuel conversion of existing facilities, or project expansion similar to the Chevron project it is not likely that utilities will be able to meet their GHG emission reduction targets based only on the CHP capacity currently available in the market.

Consistency with QF/CHP Settlement Eligibility Requirements for As-Available Products

As described on page 7 of this report, section 4.6 of the QF/CHP Settlement lists several eligibility requirements for Optional As-Available PPAs. These include:

1. The CHP facility has to have a nameplate rating greater than 20 MW, but average annual deliveries less than 131,400 MWh;

2. The as-available project hosts must consume, consistent with Public Utilities Code section 218(b), at least 75% of the total electricity generated by a Topping Cycle CHP Facility or at least 25% of the total electricity generated by a Bottoming Cycle CHP Facility;

3. For Topping or Bottoming Cycle with supplemental firing, the as-available CHP Facility must meet 60% efficiency calculated by dividing the total annual useful thermal and electrical output by the total annual fuel use, based on Higher Heating Value. There will be no efficiency requirement for a Bottoming Cycle CHP Facility with no supplemental firing.

[redacted].

[redacted].

[redacted].

As a result, the Chevron Refinery facility meets the conditions established for Optional As-Available PPAs in the QF/CHP Settlement.

Conclusions

There are several pros and cons associated with the Replacement PPA that should be factored into a decision whether to approve the Replacement PPA. On the positive side, Chevron intends to add more CHP capacity at its Refinery, much of which will be efficient bottoming cycle capacity. Through this arrangement, PG&E intends to credit approximately 28 MW of new CHP toward its overall CHP MW target as well as 39,644 MT of GHG emission reductions. The pricing provisions in the PPA and delivered energy and capacity requirements are consistent with the provisions of the QF/CHP Settlement Agreement. In addition, PG&E has been able to negotiate provisions in the contract that are more consistent with the current CAISO market and also require the counterparty to [redacted]. Finally, the IE found that the parties negotiated fairly and aggressively to eventually secure the Replacement PPA in a timely manner.

On the other hand, the contract negotiated is a 12 year contract, which exceeds the term included in the Settlement Agreement for the Optional As-Available PPA. [redacted].

While the IE is concerned with regard to the longer contract terms, if the [redacted]. Importantly, the Replacement PPA is more in tune with the current market and offers more protections for customers since PG&E would essentially have access to [redacted].[12]

The IE is also of the opinion that GHG emission reduction targets may be difficult to achieve for the utilities in California under the QF/CHP Settlement unless new efficient CHP capacity is constructed. [redacted]. As a result, this Replacement PPA may provide the incentive for other refineries or existing CHP facilities to consider the development of new CHP options on site.

Finally, while the IE would generally prefer that eligible projects compete through an RFO process, the complexity of this arrangement may have led to difficulties for the project to compete through a standard RFO process and is therefore more suited to a bilateral contract.

On balance, due to the value of the contract, GHG emission reductions offered, the consistency with the Optional As-Available PPA and the addition of new CHP capacity, the IE is of the opinion that the Replacement PPA with Chevron should be approved.

---

[12] [redacted].

Appendix A

Detailed Description of the CHP Evaluation Methodology and Process

This Appendix to the report provides a more in-depth discussion of the components of the evaluation methodology and process utilized by PG&E to evaluate CHP offers received in response to PG&E's 2013 CHP RFO and describes how each eligible product in the 2013 CHP RFO process is evaluated. In addition, this section includes a description of the input assumptions utilized for evaluation purposes.

1. Market Valuation

Market Valuation assessment is the starting point for PG&E's bid evaluation methodology for the CHP RFO process, although as will be discussed in this section of the report, PG&E has evolved to Portfolio Adjusted Value or PAV as the basis of the quantitative evaluation methodology and offer ranking process. PAV represents adjustments to Market Valuation and as a result this assessment starts with a description of Market Valuation.

Market Valuation considers how an Offer's costs compare to its benefits, from a market perspective. An Offer's cost is reflected in the Offer's pricing, including fixed and variable components as well as other relevant costs including transmission network upgrade cost adders, congestion cost and debt equivalence. Benefits include the value of the energy, capacity (RA and Flexible Capacity [13]), and ancillary services. These costs and benefits may also include GHG Compliance Costs and operational flexibility (such as dispatchability and curtailability) value as represented by option value.

Costs and Benefits are each quantified and expressed in terms of present value (2013 dollars) per kW-year for contract kWs. Net Market Value is Benefits minus Costs. Positive values reflect a situation where benefits exceed costs while a negative value reflects a case where costs exceed benefits. [redacted].[14]

[redacted].

---

[13] [redacted].

[14] [redacted].

PG&E uses distinct methodologies for each of the following types of Offers eligible for the CHP solicitation:

Pro Forma PPA Offers – [redacted].

[redacted].

[redacted].

[redacted].

Utility Pre-scheduled Offers – [redacted][15] [redacted][16] [redacted].

[redacted]

---

15 [redacted].

16 [redacted].

[redacted].

<u>Offers that involve termination of an existing QF contract</u> – [redacted].

<u>Hybrid Offers:</u> [redacted].

2. Input Assumptions

[redacted].

[redacted]

- [redacted]
- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
  - [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

[redacted].

[redacted].

[redacted].

[redacted].

[redacted].

[redacted].

3. Portfolio Adjusted Value (PAV)

PG&E now uses a bid evaluation methodology referred to as Portfolio-Adjusted Value ("PAV"). Portfolio-Adjusted Value is intended to represent the value of a resource or offer in the context of PG&E's portfolio. This approach contrasts with Market Valuation, which is intended to represent the value of a resource or offer independent of PG&E's portfolio.

[redacted].

[redacted].

1. **Location –** [redacted].

a. SP15

__Energy__ – [redacted][17] [redacted]

[17] [redacted]

[redacted].

<u>Capacity</u> – [redacted].

[redacted].

[redacted]

[redacted].

[redacted].

b. **Other Locations within CAISO Footprint**

Energy – [redacted].

Capacity – [redacted].

2. **Energy Firmness**

Energy – [redacted].

Capacity – [redacted].

3. **Renewable Energy Credit (REC) Value**

[redacted]

[redacted].

4. **Curtailment** – [redacted].

- [redacted]; [redacted]
- [redacted]; [redacted]
- [redacted]; [redacted]
- [redacted].

[redacted].

[redacted].

5. **Adjusted Transmission Cost Adder**

[redacted] [redacted]

[redacted].

[redacted].

6. **CHP MW**

[redacted].

[redacted]

[redacted].

7. **Final PAV**

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]t
- [redacted]
- [redacted]
- [redacted]

GHG Emission Protocol

[redacted].

[redacted].

[redacted][18] [redacted].

Technical Viability and Project Viability

[redacted]

[redacted]

[18] The CHP Settlement specifies the Double Benchmark as an alternative configuration whereby the CHP steam requirements and Utility power deliveries are replaced with a package boiler and conventional electrical generation at administratively-determined efficiencies. For the Double Benchmark, electricity is based on heat rate of 8.3 MMBtu per MWh and thermal energy is based on 80% efficient boiler.

[redacted].

[redacted].

[redacted].

[redacted].

[redacted].

[redacted].

Compliance With Non-Price Terms and Conditions

[redacted].

Credit

[redacted]

[redacted][19] [redacted].

Supplier Diversity

[redacted].[20]

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[19] [redacted].

[20] [redacted].

Appendix 2:

Declaration of Harold Pestana Seeking Confidential Treatment Pursuant to D.08-04-023 and D.06-06-066

DECLARATION OF HAROLD PESTANA
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION CONTAINED IN
CHEVRON RICHMOND ADVICE LETTER
(PACIFIC GAS AND ELECTRIC COMPANY - U 39 E)

I, Harold Pestana, declare:

1. I am presently employed by Pacific Gas and Electric Company ("PG&E") as a Senior Manager within PG&E's Energy Procurement organization. I have been employed by PG&E since 1997, and during that time I have acquired knowledge of PG&E's contracts with numerous counterparties and have also gained knowledge of the operations of gas and electric sellers in general. Through this experience, I have become familiar with the type of information that would affect the negotiating positions of electric sellers with respect to price and other terms, as well as with the type of information that such sellers consider confidential and proprietary. I can also identify information that buyers and sellers of electricity would consider to be "market sensitive information" as defined by California Public Utilities Commission ("CPUC") Decision ("D.") 06-06-066 and D.09-12-020, that is, information that has the potential to materially impact a procuring party's market price for electricity if released to market participants.

2. Decision 08-04-023, ordering paragraph 8, requires that any advice letter containing information for which confidential treatment is requested must be accompanied by a declaration under penalty of perjury that justifies confidential treatment pursuant to D.06-06-066. I supervised the contract negotiatons and reviewed the resulting agreement on behalf of PG&E in the PG&E-Chevron Richmond transaction. Based on my knowledge and experience, I make this declaration seeking confidential treatment of Appendices A, B, C, D, E, and F to PG&E's Advice Letter ("Confidential Information").

3. The Appendices are as follows:

Confidential Appendix A:	Consistency with Commission Decisions and Rules and Project Development Status
Confidential Appendix B:	Final Independent Evaluator Report of Merrimack Energy Group, Inc.
Confidential Appendix C:	Contract Summary
Confidential Appendix D:	Comparison of Richmond PPA with Optional As-Available PPA Pro Forma
Confidential Appendix E:	Richmond PPA
Confidential Appendix F:	Letter Agreement

4. Attached to this declaration is a matrix that describes the Confidential Information for which PG&E seeks continued protection against public disclosure, states whether PG&E seeks to protect the confidentiality of the Confidential Information pursuant to D.06-06-066 and/or other authority; and where PG&E seeks protection under D.06-06-066, the category of market sensitive information in D.06-06-066 Appendix I Matrix ("Matrix") to which the Confidential Information corresponds.

5. The attached matrix demonstrates that the Confidential Information (1) constitutes a particular type of confidentiality-protected data listed in the Matrix; (2) corresponds to a category or categories of market sensitive information listed in the Matrix; (3) may be treated as confidential consistent with the limitations on confidentiality specified in the Matrix for that type of data; (4) is not already public; and (5) cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure . In the column labeled, "PG&E's Justification for Confidential Treatment", PG&E explains why the Confidential Information is not subject to public disclosure under either or both D.06-06-066 and

General Order 66-C. The confidentiality protection period is stated in the column labeled, "Length of Time."

6. By this reference, I am incorporating into this declaration all of the explanatory text in the attached matrix.

I declare under penalty of perjury, under the laws of the State of California, that to the best of my knowledge, the foregoing is true and correct. Executed on February 5, 2014, at San Francisco, California.

HAROLD PESTANA

PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
CHEVRON RICHMOND ADVICE LETTER

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	1) Constitutes data listed in Appendix 1 to D.06-06-066 (Y/N)	2) Data correspond to category in Appendix 1:	3) Complies with limitations of D.06-06-066 (Y/N)	4) Data not already public (Y/N)	5) Lead to partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	Length of Time
Document: Confidential Appendix A – Consistency with Commission Decisions and Rules and Project Development Status							
Entire document	Y	VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Y	Y	Y	This confidential appendix describes terms and conditions from the Richmond PPA, which are confidential under Item VII.B of the D.06-06-066 Appendix 1 matrix for 3 years from date contract states deliveries to begin; or until one year following expiration, whichever comes first. Now that the Richmond PPA has been signed, the 3 year protection period begins when deliveries begin under the Richmond PPA.	3 years from the commencement of deliveries under the Richmond PPA
Document: Confidential Appendix B – Final Independent Evaluator Report of Merrimack Energy Group, Inc.							
Redacted portion	Y Also constitutes data protected by GO 66-C, Exclusion 2.8.	VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Y	Y	Y	This is the confidential Independent Evaluator Report for the Chevron Richmond transaction. The redacted portion of this confidential appendix describes the terms and conditions of the Richmond PPA, which are confidential under Item VII.B of the D.06-06-066 Appendix 1 matrix for 3 years from date contract states deliveries are to begin; or until one year following expiration, whichever comes first. The negotiations between Chevron and PG&E constitute information obtained by PG&E in confidence from a party that is not regulated by the CPUC, the disclosure of which would harm the public interest. The exchange of information during contract negotiation is subject to a confidentiality agreement between Chevron and PG&E. Its disclosure would violate the contract, discourage counterparties from executing confidentiality agreements to protect the confidentiality of subsequent negotiations, and	3 years from the commencement of deliveries under the Richmond PPA

PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E) CHEVRON RICHMOND ADVICE LETTER IDENTIFICATION OF CONFIDENTIAL INFORMATION							
Redaction Reference	**1) Constitutes data listed in Appendix 1 to D.06-06-066 (Y/N)**	**2) Data correspond to category in Appendix 1:**	**3) Complies with limitations of D.06-06-066 (Y/N)**	**4) Data not already public (Y/N)**	**5) Lead to partial disclosure (Y/N)**	**PG&E's Justification for Confidential Treatment**	**Length of Time**
						impair the contract formation process. Now that the Richmond PPA has been signed, the 3 year protection period begins when deliveries begin under the Richmond PPA.	
Document: Confidential Appendix C – Contract Summary							
Entire document	Y	Item VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Y	Y	Y	This confidential appendix is a contract summary that describes terms and conditions from the Richmond PPA, which are confidential under Item VII.B of the D.06-06-066 Appendix 1 matrix for 3 years from date contract states deliveries to begin; or until one year following expiration, whichever comes first.	3 years from the commencement of deliveries under the Richmond PPA
Document: Confidential Appendix D – Comparison of Richmond PPA with Optional As-Available PPA Pro Forma							
Entire document	Y	Item VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Y	Y	Y	This confidential appendix is a redline of the Richmond PPA against PG&E's Optional As-Available Pro Forma Agreement. It contains the terms and conditions from the Richmond PPA, which are confidential under Item VII.B of the D.06-06-066 Appendix 1 matrix for 3 years from date contract states deliveries to begin; or until one year following expiration, whichever comes first.	3 years from the commencement of deliveries under the Richmond PPA

PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
CHEVRON RICHMOND ADVICE LETTER

IDENTIFICATION OF CONFIDENTIAL INFORMATION

Redaction Reference	1) Constitutes data listed in Appendix 1 to D.06-06-066 (Y/N)	2) Data correspond to category in Appendix 1:	3) Complies with limitations of D.06-06-066 (Y/N)	4) Data not already public (Y/N)	5) Lead to partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	Length of Time
Document: Confidential Appendix E – Richmond PPA							
Entire document	Y	Item VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Y	Y	Y	This confidential appendix is the Richmond PPA which contains terms and conditions of the agreement, which are confidential under Item VII.B of the D.06-06-066 Appendix 1 matrix for 3 years from date contract states deliveries to begin; or until one year following expiration, whichever comes first.	3 years from the commencement of deliveries under the Richmond PPA
Document: Confidential Appendix F – Letter Agreement							
Entire document	Y	Item VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Y	Y	Y	This confidential appendix is the Letter Agreement which describes terms and conditions under which PG&E will compensate Chevron for deliveries pending CPUC review and approval of the Richmond PPA. The terms of this agreement are confidential under Item VII.B of the D.06-06-066 Appendix 1 matrix for 3 years from date contract states deliveries to begin; or until one year following expiration, whichever comes first.	3 years from the commencement of deliveries under the Letter Agreement

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

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California Cotton Ginners & Growers Assn
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California Public Utilities Commission
California State Association of Counties
Calpine
Casner, Steve
Center for Biological Diversity
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City of San Jose
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Southern California Edison Company
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Sunshine Design
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Tiger Natural Gas, Inc.
TransCanada
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Utility Power Solutions
Utility Specialists
Verizon
Water and Energy Consulting
Wellhead Electric Company
Western Manufactured Housing Communities Association (WMA)