

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



September 3, 2014

Advice Letter: 4376-E

Brian Cherry
Vice President, Regulation and Rates
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, CA 94177

SUBJECT: Approval of Pacific Gas & Electric Co.'s Power Purchase Agreements with Badgar Creek Ltd., Bear Mountain Ltd., Chalk Cliff Ltd., Live Oak Ltd. and McKittrick Ltd. for Procurement of Combined Heat and Power Energy and Capacity

Dear Mr. Cherry:

Advice Letter 4376-E is effective as of August 28, 2014, per Resolution E-4662 approved on August 28, 2014.

Sincerely,

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

Edward Randolph
Director, Energy Division

March 14, 2014

Advice 4376-E
(Pacific Gas and Electric Company ID U 39 E)

Public Utilities Commission of the State of California

Subject: Approval of Pacific Gas and Electric Company's Power Purchase Agreements with Badger Creek Limited, Bear Mountain Limited, Chalk Cliff Limited, Live Oak Limited and McKittrick Limited for Procurement of Combined Heat and Power 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 the five Power Purchase Agreements ("PPAs") that PG&E has executed with Badger Creek Limited ("Badger Creek"), Bear Mountain Limited ("Bear Mountain"), Chalk Cliff Limited ("Chalk Cliff"), Live Oak Limited ("Live Oak") and McKittrick Limited ("McKittrick") (collectively, the "ArcLight Companies" or "Facilities").¹ These PPAs ("ArcLight Agreements") will provide for deliveries from five 48 megawatt ("MW") cogeneration facilities located in Kern County, California, which currently delivers baseload energy under existing contracts with PG&E.

The ArcLight Agreements are based on PG&E's form tolling power purchase agreement ("Tolling PPA") and were executed as part of PG&E's Combined Heat and Power ("CHP") Program. The ArcLight Agreements provide significant benefits to PG&E's customers, including:

- The advantages of the reliability requirements, performance requirements, and operational flexibility terms of PG&E's standard form Tolling PPA;
- Significant reductions in greenhouse gas ("GHG") emissions through a change in operations;

¹ These entities are indirect subsidiaries of ArcLight Energy Partners Fund II, L.P., an investment fund managed by ArcLight Capital Partners, LLC ("ArcLight").

- Operational flexibility resulting from the conversion of baseload generation to generation that PG&E can economically dispatch into the California Independent System Operator (“CAISO”) market; and
- Contributions toward the MW and GHG Emissions Reduction Targets established for PG&E by the Qualifying Facilities/Combined Heat and Power Settlement Agreement (“QF/CHP Settlement Agreement” or “Settlement”) that was approved by Commission Decision (“D.”) 10-12-035, (the “Settlement Decision”).

Subject to Commission Approval² and the satisfaction of other conditions precedent, all five of the ArcLight Agreements will have an 84-month delivery term starting on May 1, 2015. The ArcLight Agreements are eligible to contribute a total of 240.45 MW of CHP generation capacity and 154,186 metric tonnes (“MT”) of GHG Emissions Reductions toward PG&E’s targets under the Settlement. The terms and conditions of these PPAs are reasonable and each of the ArcLight Agreements merits the Commission’s unconditional approval. The Commission should authorize PG&E to recover the costs to be incurred pursuant to the ArcLight Agreements. PG&E requests the Commission to issue a resolution approving the ArcLight Agreements by no later than August 14, 2014, as set forth in Section V, below.

B. Background

The QF/CHP Settlement Agreement between PG&E, the other investor owned utilities (“IOUs”), representatives of QF/CHP generators, and consumer representatives (“Settling Parties”)³ established the new CHP Program for California. The operative provisions of the Settlement are contained in the Settlement Term Sheet (“Term Sheet”).

The Term Sheet requires PG&E to procure at least 1,387 MW of eligible CHP capacity during the Initial Program Period.⁴ The IOUs must conduct three RFOs exclusively for CHP resources and may use other means to achieve their MW targets.⁵ PG&E must

² Capitalized terms have the meanings provided by the ArcLight Agreements, unless otherwise specified in this advice letter.

³ The settling parties consist of Southern California Edison (“SCE”), San Diego Gas & Electric Company (“SDG&E”), California Cogeneration Council (“CCC”), Cogeneration Association of California (“CAC”), Energy Producers and Users Coalition (“EPUC”), Independent Energy Producers Association (“IEPA”), The Utility Reform Network (“TURN”) and the Office of Ratepayer Advocates (“ORA”).

⁴ Term Sheet, Section 2.2.2.2. The Initial Program Period began on the Settlement Effective Date, November 23, 2011, and will conclude on November 22, 2015.

⁵ Term Sheet, Section 4.2.1 specifies that each IOU shall conduct RFOs exclusively for CHP resources (CHP RFOs) for achieving its CHP MW and GHG Emissions Reduction Target.

also fulfill a GHG Emissions Reduction Target, which is currently estimated to be 2.17 million MT; however, completion of the GHG target is not required until the end of 2020.

The ArcLight Agreements originated from PG&E's second CHP RFO, which was initiated on February 20, 2013.⁶ The *Combined Heat and Power Request for Offers -- Protocol for the Second Solicitation* ("CHP RFO Protocol") sets forth the terms and conditions of PG&E's second competitive solicitation for CHP resources.⁷ PG&E requested offers for existing, new, repowered and expanded CHP facilities, Utility Prescheduled Facilities and CHP capacity-only products. PG&E stated a strong preference for offers that are low cost and that are from facilities with efficient operations and either have low associated GHG emissions or provide GHG Emissions Reductions through changes in operations or technology. As required by the Commission, PG&E engaged an Independent Evaluator to assure that the CHP RFO was conducted fairly and that PG&E's selection of winning offers was fair and reasonable.

PG&E reviewed the merits of each offer received in the CHP RFO and compiled a shortlist of the most attractive offers. On July 2, 2013, PG&E informed the ArcLight Companies that their offers had been shortlisted. The parties subsequently engaged in negotiations over the terms of the offers. On December 19, 2013, PG&E and the last ArcLight Company executed the last of the five ArcLight Agreements.

C. General Project Summary

Project Names (five individual Facilities)	Badger Creek Limited Bear Mountain Limited Chalk Cliff Limited Live Oak Limited McKittrick Limited
Owner/Developer	ArcLight
Technology	GE LM5000 STIG 120 natural gas-fired combustion turbine

⁶ The MW procurement targets are set forth in Section 5.1.2 of the Settlement Term Sheet, and the GHG Emissions Reduction Targets are explained Article 6 of the Settlement Term Sheet.

⁷ The second CHP RFO Protocol is available for public review on PG&E's website at: http://www.pge.com/includes/docs/word_xls/b2b/wholesaleelectricsuppliersolicitation/CHP2/01%20%20CHPRFO_Protocol%20.pdf.

Contract Capacity (MW)	42 MW (for each contract)
Delivery Pattern (As-available, Firm, Utility Prescheduled Facility)	Utility Prescheduled Facility (Dispatchable)
Delivery Term (number of months)	84 months
Vintage (New, Existing, Repower, Expanded, Utility Prescheduled Facility)	Operational Change from Baseload to Utility Prescheduled Facility
Location (city and state)	Badger Creek: Bakersfield, CA Bear Mountain: Bakersfield, CA Chalk Cliff: Taft, CA Live Oak: Bakersfield, CA McKittrick: Bakersfield, CA
Source of Agreement (e.g., RFO or Bilateral Negotiations)	Second CHP RFO

- A confidential description of the ArcLight Agreements' consistency with the Commission's Decisions and Rules is attached as Confidential Appendix A.
- A confidential version of the Independent Evaluator's Report is attached as Confidential Appendix B.
- A confidential summary of the ArcLight Agreements is attached as Confidential Appendix C.
- Comparisons of the ArcLight Agreements with PG&E's Pro Forma Tolling Agreement are attached as Confidential Appendix D.
- The ArcLight Agreements are attached as Confidential Appendix E.

D. General Project Description

The five Facilities covered by the ArcLight Agreements are natural gas-fired qualifying cogeneration facilities, as defined by 18 Code of Federal Regulations 292.205, that have supplied electricity to PG&E and steam for enhanced oil recovery to oil fields in the Kern County area as a QF since early 1990s. The electric generator of each ArcLight

Facility consists of a single GE LM5000 STIG 120 Gas Turbine (“GT”) Unit with a nameplate capacity of 48.09 MW.

Project	Original Online Date
Badger Creek	April 1, 1991
Bear Mountain	April 3, 1995
Chalk Creek	March 20, 1990
Live Oak	March 16, 1991
McKittrick	October 16, 1991

Each GT Unit is paired with a heat recovery steam generator (HRSG) that can be used to turn treated water into steam for use in enhanced oil recovery. Each GT Unit is also capable of operating in simple cycle mode if the useful thermal output is not needed. All electrical energy generated by a GT Unit in excess of station load flows to the grid. Each ArcLight Facility has its own CAISO meter and resource identification number to measure and record its deliveries to the grid pursuant to its PPA with PG&E.

E. QF/CHP Settlement Targets

Each ArcLight Agreement will contribute 48.09 MW of capacity towards the CHP MW Target assigned to PG&E under the following provisions of Section 5.2.3.1 of the Settlement Term Sheet:

For the purposes of Section 5.2 regarding MW counting, Existing CHP Facilities are gas-fired Topping Cycle CHP Facilities that exported and delivered electric power to an IOU listed by QF ID number in each IOU’s July 2010 Cogeneration and Small Power Production Report (July 2010 Semi-Annual Report) – “Contract Nameplate,” as amended, if necessary. The MWs counted for New PPAs executed with Existing CHP Facilities will be the published Contract Nameplate value, unless otherwise noted in this Settlement.

Each one of the five ArcLight Facilities was listed in PG&E’s July 2010 Semi-Annual Report with a contract nameplate capacity of 48.09 MW. The following table illustrates each Agreement’s contribution toward PG&E’s MW Target.

Table A
PG&E's MW Target as Prescribed by the QF/CHP Settlement

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	As-Available Average MWs (AMWs) (where applicable)
Badger Creek	1,387	48.09	N/A
Bear Mountain	1,387	48.09	N/A
Chalk Cliff	1,387	48.09	N/A
Live Oak	1,387	48.09	N/A
McKittrick	1,387	48.09	N/A
Total for all five ArcLight Agreements		240.45	

The ArcLight Agreements will also count towards PG&E's GHG Emissions Reduction Target. Section 7.3.1.3 of the Settlement Term Sheet states that a "CHP Facility Change in Operations or Conversion to a Utility Prescheduled Facility" counts as a GHG Credit; ... "[m]easurement is based on the Baseline year emissions minus the projected PPA emissions and emissions associated with replacing one hundred percent (100%) of the decreased electric generation at a time differentiated Heat Rate. The Baseline year emissions are the average of the previous two (2) calendar years of operational data." The ArcLight Agreements' contributions towards PG&E's GHG Emissions Reduction Target are presented in Table B, below.

Table B
GHG Target as Prescribed by the QF/CHP Settlement Agreement

Project Name	PG&E's GHG Target by 2020 (MTCO ₂ e)	GHG Credit/Debit of Project to Count towards the Settlement GHG Target (MTCO ₂ e)
Badger Creek	currently 2.17 million	21,329
Bear Mountain	currently 2.17 million	31,501

Chalk Cliff	currently 2.17 million	31,651
Live Oak	currently 2.17 million	45,068
McKittrick	currently 2.17 million	24,637
Total for all five ArcLight Agreements		154,186

For purposes of this interim calculation, “PG&E’s GHG Target by 2020” is Energy Division’s December 3, 2012 update of PG&E’s 2020 GHG Target. This number is subject to revision based on conditions in effect on the deadline for GHG Target compliance.⁸

F. Additional Information

The ArcLight Agreements are based on the form of PG&E’s Tolling PPA that is available for Utility Prescheduled Facilities. The CHP RFO Pro Forma included in the QF/CHP Settlement Agreement was not used because it was designed for facilities providing baseload CHP capacity. PG&E’s Tolling PPA is the appropriate contract for a facility providing dispatchable capacity.

By converting the ArcLight Facilities from their previous QF agreements, PG&E has added significant additional economically dispatchable capacity and operational flexibility which enable these facilities to better meet PG&E’s future expected load profile.

In addition, the Tolling PPA contains PG&E’s preferred terms for reliability, performance requirements, scheduling and operations, and consequences for deviations from schedule. Under the ArcLight Agreements, PG&E may schedule the ArcLight Facilities into both the day-ahead and real-time CAISO markets based upon PG&E’s desired response to CAISO market signals, thereby generating only in response to economic signals or market reliability needs. Additional information about these contract terms is included in Confidential Appendix C.

The ArcLight Facilities have a strong reliability record. The ArcLight Agreements allow each ArcLight Facility to continue serving California’s energy needs in a manner that provides flexibility. These revised operations should help mitigate overgeneration and renewable integration concerns and serve the increased needs of modern electricity markets for operationally flexible economic dispatch.

⁸ Term Sheet, Section 6.1.1.4.

II. CONSISTENCY WITH COMMISSION DECISIONS

A. Consistency with PG&E's Requirements during the Initial Program Period Adopted in the QF/CHP Settlement Agreement

PG&E is required to achieve a CHP procurement target of 1,387 MW during the Initial Program Period⁹ adopted in the Settlement. The MW Targets may be met through a variety of procurement mechanisms, including any of the CHP Procurement Processes described in Term Sheet Section 4.¹⁰ PG&E must conduct three RFOs exclusively for CHP resources as a means of achieving its MW Target and its GHG Emissions Reduction Targets.¹¹ Participants in CHP RFOs must meet specific eligibility criteria.¹² CHP RFO PPAs are subject to maximum terms¹³ and must be found to be reasonable when evaluated in accordance with specified criteria.¹⁴ While the QF/CHP Settlement included a CHP Form PPA to be used in CHP RFOs, pursuant to Sections 4.2.6 and 4.2.12 of the Term Sheet, IOUs are able to offer and sign other contract options in the CHP RFO. As part of the offer package for each CHP-Only RFO, each IOU may request offers with specific dispatch terms that differ from the Pro Forma PPA.¹⁵ PG&E's selection and execution of the ArcLight Agreement is consistent with all of these obligations.

The ArcLight Facilities are existing natural gas-fired qualifying cogeneration facilities that met Public Utility Regulatory Policies Act (PURPA) efficiency requirements as of September 20, 2007. The ArcLight Agreements originated from the second of the three CHP RFOs that PG&E is required to hold during the Initial Program Period. PG&E's RFO Protocol solicited offers based on PG&E's "Pro Forma Tolling Agreement for CHP Facilities RFO Program."¹⁶ As previously discussed, PG&E's agreement with the ArcLight Facilities are eligible to contribute a combined 154,186 MT per year toward PG&E's GHG Emissions Reduction Target and 240.45 MW towards the CHP MW Target.

⁹ The "Initial Program Period" commenced on the Settlement Effective Date, November 23, 2011, and will conclude November 22, 2015. Term Sheet, Section 2.2.1.

¹⁰ Term Sheet, Section 5.1.1.

¹¹ Term Sheet, Sections 4.2.1 and 5.1.2.

¹² Term Sheet, Section 4.2.2.

¹³ Term Sheet, Section 4.2.3.

¹⁴ Term Sheet, Sections 4.2.5.3 through 4.2.5.7.

¹⁵ Term Sheet, Section 4.2.12.

¹⁶ PG&E's "Combined Heat and Power Request for Offers Protocol for First Solicitation" is available for public review on PG&E's website at:

http://www.pge.com/includes/docs/word_xls/b2b/wholesaleelectricssuppliersolicitation/CHP/CHP_RFO_Protocol_Document_rev012612%20CLEAN.doc.

A closer evaluation of the PPA terms, such as pricing and operational requirements, supports PG&E's decision to execute the ArcLight Agreements. Since these terms and analyses are commercially sensitive, PG&E's evaluation, selection, and negotiation of the ArcLight Agreements are described in Confidential Appendix A.

B. Confidentiality

In support of this request for approval, PG&E has attached materials that describe the ArcLight transactions and their benefits. Certain information in these documents, such as the price, terms and conditions of performance, the parties' negotiations, and other factors, could affect the price that PG&E subsequently pays for energy and is deemed to be confidential market sensitive information that should be protected from public disclosure. The following documents, some of which contain confidential information, are appended to and constitute a part of this advice letter:

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:	Summary of the ArcLight Agreements
Confidential Appendix D:	Comparison of ArcLight Agreements with PG&E's Pro Forma Tolling Agreement
Confidential Appendix E:	ArcLight Agreements

This information is being submitted in the manner directed by 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), to demonstrate the confidentiality of the material and to invoke the protection of confidential utility information provided under either the terms of the IOU Matrix, Appendix 1 of D.06-06-066 and Appendix C of D.08-04-023 or General Order 66-C. In support of this request for confidential treatment, the *Declaration of Elizabeth Ingram Seeking Confidential Treatment and the IOU Matrix* is attached as Appendix 2 to this advice letter.

C. Interim Emissions Performance Standard

Pursuant to Section 4.10.4 of the Term Sheet, PPAs that are equal to or greater than five years in length that are submitted by Tier 2 or Tier 3 advice letter must demonstrate compliance with the Emissions Performance Standard (“EPS”).¹⁷ In D.07-01-039, the Commission adopted an EPS that applies to new or renewed contracts for a term of five or more years for baseload generation, which is electricity generation from a power plant that is designed and intended to provide electricity at an annualized plant capacity factor of at least 60 percent.¹⁸

While the ArcLight Agreements have terms greater than 5 years, they are not “covered procurement” under D.07-01-039 because their low capacity factor under expected operations falls short of the 60 percent capacity factor threshold for the application of the EPS to an energy procurement contract.

The Commission should find that the ArcLight Agreements are compliant with the EPS for purposes of Section 4.10.4.1 of the Term Sheet since the capacity factors are below 60 percent EPS threshold.

D. 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.¹⁹ 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. When procuring or potentially procuring CHP resources under D.10-12-035 where the costs are allocated to all benefitting customers, PG&E will utilize an advisory CAM Group.²⁰

PG&E’s CAM includes the members of PG&E’s PRG, that is, representatives of Commission’s Energy Division and ORA, 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 Community Choice Aggregator (“CCA”) customers and one member representing Direct Access (“DA”) customers. PG&E’s consultative

¹⁷ Public Utilities (“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....”

¹⁸ Pub. Util. Code Section 8340(a).

¹⁹ Term Sheet Section 4.2.5.8.

²⁰ See PG&E’s Long Term Procurement Plan, filed May 21, 2012, Sheet 175.

group will be referred to as the “CAM Group” for purposes of this discussion, unless specifically stated otherwise.

PG&E presented its second CHP RFO to its consultative groups at five meetings beginning in January 30, 2013. On January 30, 2013, PG&E presented to the PRG and CAM Group that it would launch its second CHP RFO and sought PRG and CAM comments and questions. After performing an initial review of the submitted offers, PG&E provided the CAM with the number and types of offers it had received in general terms and an overview of its CHP RFO offer evaluation methodology. PG&E then presented its ranked list of its second CHP RFO offers to the PRG and to the CAM Group. The ArcLight transactions were included on the shortlist of offers. PG&E subsequently presented the essential agreed-upon terms and the status of the ArcLight Agreements to its PRG Group.

During each of these information sessions, CAM members were invited and were subsequently briefed either in person or telephonically if they were not able to attend the originally scheduled meetings. There was ample opportunity for a complete discussion of the terms and conditions under which the solicitation was undertaken, the features and merits of the offers received, and the methodology and reasons for PG&E’s ranking of the offers. Throughout this process, PG&E provided answers in response to any comments or questions from its PRG and CAM Group members. PG&E further addresses PRG and CAM Group feedback in Confidential Appendix A.

E. Independent Evaluator

PG&E engaged an Independent Evaluator (“IE”) as required by the Settlement Decision and D.07-12-052, which approved the 2008 long term procurement plans of the IOUs. The LTPP decision requires IOUs to engage an IE to monitor the integrity of their competitive solicitations, selection, and contracting for electric supply-side resources with a delivery term of two years or more. The IE for PG&E’s second CHP RFO is Merrimack Energy Group, Inc. (“Merrimack Energy”). In the course of its CHP RFO evaluation, Merrimack Energy also evaluated the integrity of the means by which PG&E executed any agreement with a participant in the CHP RFO and the merit of the resulting agreement. In this case, Merrimack Energy was represented by Wayne Oliver.

The IE reviewed PG&E’s development of its CHP RFO 2 evaluation criteria and protocols for the evaluation of offers before the offers received in response to the second CHP RFO were opened. A representative of the IE was present at offer opening, received a copy of all offer documents, and performed an independent evaluation of the offers. In addition to attending and monitoring the substantive negotiations between the parties and discussions within PG&E, the IE’s representative participated in every PRG and CAM Group meeting related to PG&E’s second CHP RFO solicitation. Based upon his comprehensive knowledge of the second CHP RFO and its objectives, Mr. Oliver issued his “IE Report,” which provides his findings on the CHP RFO solicitation, the offers, his concurrence with the ranking and shortlist, his critique of the contract negotiation process, and his evaluation of the key terms of the

ArcLight Agreements. His observations were shared with the PRG and CAM Group. The IE concluded that the ArcLight Agreements merit Commission approval.

The public version of the IE Report on the ArcLight Agreements is attached as Appendix 1; the confidential version of the IE Report is attached as Confidential Appendix B.

III. REGULATORY PROCESS

PG&E requests that the Commission issue a resolution approving the ArcLight Agreements no later than August 14, 2014.

IV. COST RECOVERY MECHANISM

In its decision approving the QF/CHP Settlement, the Commission 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:

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 [Resource Adequacy] credits procured via the CHP Program.²²

²¹ The Commission adopted IOU procurement of CHP resources as a means of meeting the Energy Service Provider (“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.

²² Term Sheet, Section 13.1.2.2., as modified by D.11-07-010, OP 3.

PG&E is entering into the ArcLight Agreements pursuant to the terms of the QF/CHP Settlement. PG&E's procurement of the ArcLight Agreements will help to satisfy the QF/CHP Settlement requirements for CHP procurement and GHG Emissions Reductions associated with the customers of ESPs who facilitate DA service, and CCAs, as well as its own MW and GHG Emissions Reduction Targets. Accordingly, the net capacity costs associated with the ArcLight Agreements must be proportionately allocated to all bundled, DA, CCA, and specified Departing Load Customers.

The net capacity costs of the ArcLight Agreements will be recovered through PG&E's New System Generation Balancing Account (NSGBA), which is collected through the non-bypassable charge on all end users within PG&E's territory. In exchange for this proportionate allocation of costs, bundled, DA, CCA and other nonexempt Departing Load Customers will receive a commensurate portion of RA benefits associated with the ArcLight Agreement. PG&E requests authorization to recover its costs associated with the ArcLight Agreements through its Energy Resource Recovery Account ("ERRA").

V. REQUEST FOR COMMISSION APPROVAL

PG&E requests that the Commission issue a resolution no later than August 14, 2014 that:

1. Approves the ArcLight Agreements in their entirety, including payments to be made thereunder, subject only to Commission review of the reasonableness of PG&E's administration of the contracts;
2. Determines that the rates and other terms and conditions set forth in the ArcLight Agreements are reasonable;
3. Finds that the 240.45 MW of CHP capacity procured by the five ArcLight Agreements may be applied toward PG&E's target of 1,387 MW of CHP capacity in the Initial Program Period, as established by the QF/CHP Settlement;
4. Finds that annual GHG Emissions Reductions in the amounts of 21,329 MT for Badger Creek, 31,501 MT for Bear Mountain, 31,651 MT for Chalk Cliff, 45,068 MT for Live Oak and 24,637 MT for McKittrick resulting from the ArcLight Agreements apply toward PG&E's GHG Emissions Reduction Target as established by the QF/CHP Settlement;
5. Finds that PG&E shall recover the costs incurred pursuant to the ArcLight Agreements in rates;

6. Adopts the following findings of fact and conclusions of law in support of cost recovery for the ArcLight Agreements:
 - a. PG&E shall be entitled to allocate the net capacity costs and associated RA benefits of the ArcLight Agreements 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 December 19, 2011.
 - b. The costs of the ArcLight Agreements are recoverable through PG&E's ERRAs.
7. Finds that because the expected annualized capacity factor of ArcLight is below 60 percent, the ArcLight Agreements are compliant with the Emissions Performance Standard adopted in D.07-01-039.

Protests

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than April 3, 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 via E-mail or U.S. mail (and by facsimile, if possible) at the address shown below on the same date it is mailed or delivered to the Commission:

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 protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Rule 3.11).

Effective Date

PG&E requests that this advice filing be effective upon the Commission's adoption of a resolution approving this advice letter no later than **August 14, 2014**. PG&E submits this request as a Tier 3 advice 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 parties 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>.

Handwritten signature of Brian Cherry in cursive, with the initials 'KAC' written at the end.

Vice President, Regulatory Relations

Attachments:

Appendix 1:	Final Independent Evaluator Report of Merrimack Energy Group, Inc. (Redacted)
Appendix 2:	Declaration of Elizabeth Ingram Seeking Confidential Treatment and the IOU Matrix
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:	Summary of the ArcLight Agreements

Confidential Appendix D: Comparison of ArcLight Agreements with PG&E's Pro Forma Tolling Agreement

Confidential Appendix E: ArcLight Agreements

cc: Damon Franz, Energy Division, CPUC
Noel Crisostomo, Energy Division, CPUC
Jason Houck, Energy Division, CPUC
Yuliya Shmidt, ORA, CPUC
Service List for R.12-03-014

Limited Access to Confidential Material:

The appendices to 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: Summary of the ArcLight Agreements
- Confidential Appendix D: Comparison of ArcLight Agreements with PG&E's Pro Forma Tolling Agreement
- Confidential Appendix E: ArcLight Agreements

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

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

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

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Kingsley Cheng

Phone #: (415) 973-5265

E-mail: k2c0@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) #: **4376-E**

Tier: **3**

Subject of AL: **Approval of Pacific Gas and Electric Company's Power Purchase Agreements with Badger Creek Limited, Bear Mountain Limited, Chalk Cliff Limited, Live Oak Limited and McKittrick Limited for Procurement of Combined Heat and Power Energy and Capacity**

Keywords (choose from CPUC listing): Agreements, Portfolio

AL filing type: Monthly Quarterly Annual 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: Yes. See the attached matrix that identifies all of the confidential information.

Confidential information will be made available to those who have executed a nondisclosure agreement: 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: Elizabeth Ingram (415) 973-8613

Resolution Required? 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
Energy Division
EDTariffUnit
505 Van Ness Ave., 4th Flr.
San Francisco, CA 94102
E-mail: EDTariffUnit@cpuc.ca.gov

Pacific Gas and Electric Company
Attn: Brian K. Cherry
Vice President, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177
E-mail: PGETariffs@pge.com

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

for

Pacific Gas and Electric's Power Purchase Agreements with

Badger Creek Limited

Bear Mountain Limited

Chalk Cliff Limited

Live Oak Limited

McKittrick Limited

(collectively, the "ArcLight Agreements")

***Pacific Gas and Electric Company
Combined Heat and Power Request for Offers for Second
Solicitation
2013
Public Version***

***Independent Evaluator
Bid Evaluation and Selection Process
Final Report on Five ArcLight Contracts***

February, 2014

***Prepared by
Merrimack Energy Group, Inc.
26 Shipway Place
Charlestown, Mass. 02129***



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Appendices

Appendix A: Summary Information for the Offers Received

Appendix B: Additional Summary Information for the Offers Received

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I. Introduction

A. Overview

Pacific Gas and Electric Company (“PG&E”) is seeking approval of five power purchase agreements (“PPA”) with ArcLight Capital Partners (“ArcLight”) for five virtually identical Combined Heat and Power (“CHP”) power generating facilities.¹ All projects are existing CHP facilities converting to Utility Pre-Scheduled Facilities (“UPF”) as offered into PG&E’s 2013 CHP Request for Offers (“CHP RFO 2”). In all cases, the agreements are for dispatchable facilities based on PG&E’s form of a tolling agreement (“CHP Tolling Agreement”). The five projects are McKittrick Limited, Live Oak Limited, Bear Mountain Limited, Badger Creek Limited, and Chalk Cliff Limited.

Each facility consists of one GE LM5000 STIG 120 natural gas-fired combustion turbine with a Heat Recovery Steam Generator (“HRSG”) which allows for steam injection into the gas turbine for power augmentation and emissions reduction. The equipment was manufactured between 1986 and 1992 and overhauled during the 2006 – 2012 timeframe. Four of the five agreements were executed by the parties on December 6, 2013. The fifth agreement with Chalk Cliff Limited was executed on December 19, 2013. The agreements are for the purchase and sale of Capacity, Energy, and all Other Products that are available from the Facilities.² The agreements are for a term of 84 months (i.e. seven years) for each project. The delivery term of the agreements start on May 1, 2015. Each agreement has a contract capacity of 42 MW, with a project nameplate rating of 48 MW.

The steam output from the facilities has been used for oil field steam flooding for enhanced oil recovery. The qualifying supply of steam to enhanced oil recovery will be discontinued upon execution of a UPF tolling agreement with PG&E. Each unit has an existing PPA with PG&E which terminate on [REDACTED] (with the exception of Bear Mountain which terminates on 4/23/2015).

On February 20, 2013, PG&E issued its second Combined Heat and Power Request for Offers Protocol (“CHP RFO 2” or “CHP RFO”). PG&E issued the CHP RFO to achieve its megawatt (“MW”) and Greenhouse Gas (“GHG”) Emissions Reduction Targets,

¹ Through its Advice Letter filing PG&E requests that the California Public Utilities Commission (“Commission” or “CPUC”) approves the Agreements with ArcLight for the five projects listed above in their entirety, including payments to be made thereunder, subject only to Commission review of the reasonableness of PG&E’s administration of the contract. PG&E requests that the Commission’s findings shall include (1) determination that the rates and other terms and conditions set forth in the Agreement are reasonable and (ii) that the total 240.45 MW associated with the five Agreements apply toward PG&E’s procurement target of 1,387 MW of CHP capacity in the Initial Program Period, as established by the QF/CHP Settlement; (iii) that the 154,186 MT/year of GHG emission reduction resulting from the Agreements apply toward PG&E’s GHG emissions reduction target as set forth in the Qualifying Facility/Combined Heat and Power Program Settlement Agreement (“QF/CHP Settlement”). All projects are located in Kern County, California and have a gas interconnection with the Kern-Mojave Pipeline.

² The five ArcLight facilities are all existing natural gas-fired cogeneration facilities that have supplied electricity to PG&E and steam for enhanced oil recovery to multiple steam hosts, [REDACTED]

[REDACTED]. All five projects entered service between 1990 and 1995.

established in the QF/CHP Program Settlement Agreement (“Settlement Agreement” or “Settlement”) that was approved by the California Public Utilities Commission (“CPUC”) Decision 10-12-035. PG&E solicited offers from owners of eligible CHP generating facilities to supply the requested product. Offers were received on May 2, 2013.

PG&E seeks to acquire a total of up to 1,387 MW of CHP capacity under power purchase agreements (“PPA” or “Agreements”) during the Initial Program Period³ and about 2.2 million metric tons (“MMT”) of GHG reductions during the Second Program Period.⁴ Through this second of three CHP RFOs required during the Initial Program Period, PG&E seeks offers to meet its second CHP MW target of 376 MW.⁵

As noted in the CHP RFO 2 Protocol, PG&E has a strong preference for Offers that are low cost, efficient, and have either low associated GHG emissions or provide GHG emission reductions through changes in operations or technology. A facility that offers operating flexibility will be considered favorably.

In this CHP RFO, PG&E will accept offers for the following resources, as defined in the Settlement Agreement and the CHP RFO:

- Existing CHP
- New CHP
- Repowered CHP
- Expanded CHP
- Existing CHP Facilities Converting to Utility Prescheduled Facilities (referred to as Utility Tolling Facilities)
- CHP Capacity Only (“RA Capacity”)⁶

³ The initial program period ends four years after the Settlement Effective Date of November 23, 2011.

⁴ The Second Program Period commences from the end of the Initial Program Period and concludes on December 31, 2020. GHG Targets change yearly based on the load served by each IOU. A final 2020 GHG Target for PG&E will be set in 2015 pursuant to section 6.4 of the QF/CHP Settlement Term Sheet.

⁵ According to Attachment A of the Settlement Agreement, PG&E’s MW Targets are 630 MW for the first solicitation (“Target A”), 376 MW for the second solicitation (“Target B”), and 381 MW for the third solicitation (“Target C”). Prior to issuance of CHP RFO 2, PG&E procured and the CPUC approved 1,013.25 MW toward its CHP MW targets. [REDACTED]

In addition, the contracts executed and approved via this first CHP RFO total up to 436.25 MW, including 296 MW for the Kern River Cogeneration Company (“KRCC”) agreement and 140.25 MW for the Calpine Los Medanos RA contract. As a result of the contracts executed and approved, PG&E has a requirement to contract for at least 363 MW to reach its target of 1,387 MW of eligible CHP capacity. This does not include any agreements attributable to the CHP RFO 2 solicitation. In addition, PG&E procured 1,1 MMT of the total 2.17 MMT target requirement for GHG emission reductions.

⁶ [REDACTED]. In Resolution E-4529 (July 31, 2013) which rejected PG&E’s Confirmation for Resource Adequacy Capacity Product with the Los Medanos Energy Center, the CPUC directed that for the second CHP RFO and any subsequent CHP RFO’s no RA-only bids shall be accepted.

Pursuant to regulatory requirements of the CPUC and the Settlement Agreement requirements, PG&E retained Merrimack Energy Group, Inc. (“Merrimack Energy”) as the Independent Evaluator (“IE”) for the CHP RFO 2 procurement process.⁷

This IE report is submitted in conformance with the requirements of the CPUC and is designed to be consistent with the requirements outlined in the CPUC’s IE Report Template (Long Form), subject to adjustments in requirements to reflect the unique nature of this solicitation.

B. Background to the CHP Settlement Agreement

The Combined Heat and Power Program Settlement Agreement is an extensive agreement that contains a number of requirements and directives that affect the design and implementation of the utility CHP RFO Protocol or solicitation process.⁸ Given the extensive and complex nature of the CHP Settlement Agreement, Merrimack Energy will attempt to identify several of the major provisions that are associated with the CHP procurement process.

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. On October 11, 2011, the CPUC issued Decision 11-10-016, which granted a petition to modify the cost allocation terms of the Settlement Agreement. On October 6, 2011, the CPUC issued Decision 11-10-016, which disposed of one of the remaining issues. On October 24, 2011, the CPUC issued Decision 11-10-043, denying rehearing of D.10-12-035 raised by the City and County of San Francisco. 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 goals of the Settlement was to resolve existing disputes and future litigated issues associated with QFs that were before the Courts and CPUC. The Settlement was designed to develop a new state CHP program that includes competitive solicitations for CHP projects greater than 20 MW.

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

⁷ Merrimack Energy also served as IE for PG&E’s first CHP RFO solicitation.

⁸ This solicitation process is unique in that the provisions of the CHP Settlement Agreement have a primary influence on the design and implementation of the CHP procurement process. As a result, the IE views that one of the IE requirements is to ensure that the solicitation process conforms to the requirements of the Settlement Agreement. To provide a basis for assessment of these requirements, the report provides a summary of the major provisions of the CHP Settlement as a means of comparison with the approach used by PG&E for meeting Settlement Agreement requirements.

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.⁹ 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.

The Settlement also established a GHG Reduction Target of 6.7 million metric tons of GHG annual reductions from CHP statewide by 2020. 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;
- PPAs for QFs 20 MW or less;
- 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

The 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.

⁹ 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.

As a component of the Settlement, the parties also established a CHP RFO Pro Forma Contract that would be used by the utility for securing traditional CHP projects.

Exhibit 1 provides a summary of the key provisions of the CHP Settlement primarily pertaining to CHP procurement process requirements as a basis for assessing the consistency of PG&E’s CHP RFO process relative to Settlement requirements associated with CHP procurement.

Exhibit 1: Summary of QF/CHP Settlement Provisions

Settlement Provisions	Description of Provisions
Section 1 – Settlement Goals and Objectives	
Section 1.1 Settlement Goals and Objectives	Settlement goals and objectives include: <ul style="list-style-type: none"> • Develop a State CHP Program • Create a smooth transition from the existing QF CHP PURPA program to a state-administered CHP Program • Settle all CHP/QF litigation
Section 1.2 State CHP Program Policy Objectives	This section of the Settlement Agreement provides an extensive list of policy and societal goals and objectives for the State CHP Program. Some of the policy objectives that pertain more closely to the procurement aspects of the Program are listed below: The purpose of the State CHP program is to encourage the continued operation of the State’s existing CHP Facilities, and the development, installation, and interconnection of new, clean, and efficient CHP facilities. These policies and purposes will be achieved by a State CHP program that procures CHP as set forth in the Settlement, retains existing efficient CHP, supports the change in operations of inefficient CHP to provide greater benefits to the State, and replaces CHP that will no longer be under contract with the IOUs with a new, efficient CHP. In addition, this State CHP program will secure additional Greenhouse Gas (GHG) emission reduction benefits, consistent with the reduction targets of Assembly Bill (AB) 32, by addition of new, efficient CHP.
Section 1.2 CHP Program Objectives	The Settlement identifies a number of Program objectives. These include: <ul style="list-style-type: none"> • Encourage the upgrade of the inefficient CHP facilities in the IOU’s electric portfolios into efficient CHP through repowering or change of operations; • Provides an orderly exit strategy for CHP Facilities that cannot participate, or are unsuccessful, in the new CHP Program; • Sustains and enhances reductions in GHG emissions; • Encourages the development of new, clean and efficient CHP.
Section 2. Program Periods	The Settlement establishes two Program periods; (1) an Initial Program Period that extends from the Settlement Effective Date until November 23, 2015 and (2) The Second Program Period that commences at the end of the Initial Program Period and ends on December 31, 2020. The Settlement establishes procurement targets for each utility for the Initial Program Period.

Section 3. Transition PPA	A CHP facility currently selling to an IOU under a Legacy PPA or an extension that is expiring during the Transition Period, may sign a Transition PPA with the same IOU-Buyer. The Transition PPA begins upon the expiration of the Legacy PPA or extensions of a Legacy PPA and ends at the election of the Seller but no later than the last day of the Transition Period (i.e. July 1, 2015). During the Settlement Term, QFs who elect to sign a Transition PPA waive their rights to sign a CHP PPA that is not obtained through competitive procurement, bilateral negotiations or the under 20 MW nameplate PURPA must-take obligation.
Section 4. – CHP Procurement Targets	
1. Eligibility to Bid (Section 4.2.2)	<p>Any CHP Facility with a nameplate larger than 5 MW may bid into the CHP RFO, including CHP facilities seeking firm and as-available capacity PPAs, provided that the CHP Facility meets the California Public Utilities Code Section 216.6 and the federal definition of a qualifying cogeneration facility under 18 CFR Section 292.205 implementing PURPA.</p> <p>A CHP Facility that met the PURPA efficiency requirements as of September 2007 and converts to a Utility Prescheduled Facility is also eligible to participate in the CHP RFOs. After the existing CHP Facility converts to a Utility Prescheduled Facility, it may be either a QF or an Exempt Wholesale Generator if the facility otherwise meets the criteria in this Section 4.2.2.2.</p>
2. Term (Section 4.2.3)	<p>Maximum term is up to 7 years for Existing CHP Facilities or Expanded CHP Facilities, if they do not provide credit and collateral. An existing CHP Facility is one that was operational before the Settlement Effective Date.</p> <p>Maximum term is up to 12 years for New CHP facilities, Repowered CHP Facilities, or Expanded CHP facilities if they provide credit and collateral as set forth in section 4.2.8. A New CHP Facility is one that becomes operational after the Settlement Effective Date and a Repowered CHP Facility is one that repowers after the Settlement Effective Date.</p>
3. Pricing (Section 4.2.4)	Pricing is defined according to the executed PPA.
4. CHP RFO Scope – Evaluation and Selection Criteria (Section 4.2.5)	<p>The CHP RFO will recognize that CHP has unique attributes and that CHP offers shall be compared only to other CHP offers within the CHP RFO process.</p> <p>The IOU shall conduct an evaluation process, including an analysis of market value, in its CHP RFO process.</p> <p>When evaluating an offer from an Existing CHP Facility, the IOU should evaluate the energy that is being delivered to the grid from that CHP Facility.</p> <p>CHP offers shall be evaluated on all of the CHP Program goal characteristics, including GHG emissions.</p>
5. CHP RFO Pro-Forma PPA (Section 4.2.6)	The CHP Pro-Forma PPA may be modified on a bilateral basis during negotiations for a particular CHP PPA or Utility Prescheduled Facility PPA. The IOU may also offer other contract options in the CHP RFO.
6. GHG Compliance Costs (Section 4.2.7)	Seller must offer two options in its proposal: (1) Seller assumes GHG Compliance Cost and (2) Seller elects to pass-through GHG

	<p>Compliance costs to Buyer. Also, Seller and Buyer may elect a hybrid approach for GHG cost recovery. For example, buyer covers GHG costs up to a certain Heat Rate and Seller assumes additional costs above that heat rate.</p>
<p>7. Credit and Collateral Provisions for New, Repowered or Expanded Facilities (Section 4.2.8)</p>	<p>Credit and collateral provisions shall apply only to PPAs for new CHP Facilities, Repowered or Expanded CHP Facilities. An IOU may request additional offers for different credit and collateral terms.</p> <p>Credit and collateral provisions for an Existing CHP Facility will not be required in any CHP PPA but may be requested by an IOU in CHP RFOs or bilateral negotiations and will be evaluated by IOUs and Sellers accordingly.</p> <p>Performance Assurance for New or Repowered CHP Facilities shall be established equal to the value from one of the following options and the option is at the election of the Seller:</p> <ul style="list-style-type: none"> • Twelve months of capacity payments • Twelve months of revenues • Five percent of anticipated revenues projected over the term of the PPA • Negotiated performance assurance value and conditions for providing securing for such Performance Assurance.
<p>8. Efficiency Performance Obligations and Compliance (Section 4.2.9)</p>	<p>The Efficiency Performance Obligation shall apply as incorporated into the final CHP RFO PPA, and the 60% efficiency in the Optional As-Available PPA. Failure to meet the Efficiency requirement in the CHP PPA throughout the Term shall be, at the Buyer's election, an Event of Default under the PPA.</p> <p>Seller may have up to two cure periods during the term of the applicable PPA for no more than two Efficiency Performance Deficiencies.</p>
<p>9. Curtailment – Economic (Section 4.2.10 and Section 4.2.11)</p>	<p>The CHP Pro-Forma PPA will contain an Economic Curtailment Option that may be selected by the CHP RFO participant and the participant may bid zero under this option. The Buyer can only instruct the Seller to curtail production in those hours when the CAISO published Day-Ahead Integrated Forward Market (IFM) results indicate there is a negative EZ-Gen Hub Location Marginal Price (LMP) or negative System Marginal Energy Cost.</p> <p>Once a Curtailment Period Cap is reached for any quarterly period (either on-peak or off-peak), no additional economic curtailment is available to the Buyer in that quarterly on-peak or off-peak period. Any MWhs not called by the Buyer in any period cannot be rolled over to another period.</p>
<p>10. PPA Options in CHP RFOs (Section 4.2.12)</p>	<p>As part of the bid package for each CHP-Only RFO, each IOU may request offers with specific (1) credit and collateral, (2) voluntary curtailment, and (3) dispatchability terms that differ from the CHP RFO Pro Forma PPA.</p> <p>In IOU evaluations of final offers from CHP bidders, the IOU will give preference to Pro Forma offers with no options, relative to non-Pro Forma offers, to the extent that such Pro Forma offers are competitive with the non-Pro Forma offers.</p>
<p>11. Bilaterally Negotiated PPA (Section 4.3)</p>	<p>Bilaterally negotiated and executed CHP PPAs or Utility Prescheduled Facilities PPAs are part of the procurement options in this CHP</p>

		Program. 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 the Seller in other negotiations.
12. IOU-Owned CHP (Section 4.7)		IOU-owned CHP counts toward the IOU's GHG Emission Reduction Targets for the Second Program Period, but not for the 3,000 MW Target. The counting from these resources is capped at 10% of the IOU's GHG Emission Reduction Target.
13. Utility Pre-Scheduled Facilities – Eligibility (Section 4.8)		<p>A CHP Facility that met the PURPA efficiency requirements as of September 20, 2007 and converts to a Utility Prescheduled Facility is eligible to participate in a CHP RFO or to obtain a PPA through bilateral negotiations or amend an existing Legacy PPA through bilateral negotiations.</p> <p>New PPAs with Utility Prescheduled Facilities (not Legacy PPA Amendments) count towards the MW Targets if the existing QF PPA expires before the end of the Transition Period.</p> <p>Amendments to Legacy PPAs to convert to a Utility Prescheduled Facility count towards each IOU's GHG Emissions Reduction Targets.</p>
14. Approval of PPAs (Section 4.10)		<p>IOUs will utilize a Tier 2 Advice Letter for Existing CHP facilities that execute the CHP RFO Pro Forma PPA without material modification.</p> <p>IOUs will utilize a Tier 3 Advice Letter for all other PPAs (new, repowering or existing PPAs) that contain any material modification of the PPAs approved in this Settlement.</p> <p>PPAs of less than five years do not require advance CPUC approval according to existing CPUC policy.</p>
Section 5 - MW Targets		
1. CHP RFOs (Section 5.1)		<p>The IOUs combined target is 3,000 MW;</p> <p>Each IOU shall conduct 3 RFOs during the initial Program Period to seek PPAs for the portion of the MW Targets not procured by other procurement processes;</p> <p>The CHP RFOs during the Initial Program Period shall be scheduled at regular intervals, provided the first CHP RFO is initiated within 90 days of the Settlement Effective Date;</p> <p>The amount of CHP sought in each CHP RFO during the Initial Program Period shall not be less than the Net MW Target for each IOU. For PG&E the target for the initial RFO is 630 MW; 376 for the second RFO and 381 for the third RFO for a total of 1,387 MW.</p>
2. MW Counting Rules (Section 5.2)		<p>PPAs executed during the period between September 1, 2009 and the Settlement Effective Date count towards the IOUs MW Targets and GHG Emission Reduction Targets.</p> <p>The MWs counted for New PPAs executed with Existing CHP Facilities will be the published Contract Nameplate value, unless otherwise noted in the Settlement.</p> <p>If full output of a facility is offered, only the actual amount procured by a utility will count. If a utility acquires all that the Seller offers but the project is larger, the utility can count the full size of the project.</p> <p>Capacity from repowered and new CHP Facilities will be determined</p>

	based on a Capacity Demonstration Test.
3. Justification for Failure to Meet MW Targets (Section 5.4)	<p>Any IOU that is unable to meet its MW Target must make a showing to justify its inability to meet the MW Target. Lack of sufficient offers can be used as a reason to justify failure to procure the MW Targets and GHG Emissions Reduction Targets. The efficiency of the CHP Facility participating in the IOU's procurement programs as compared to the Double Benchmark, offer prices in excess of levels as provided herein, and the amount of GHG emissions reductions may be valid justifications for missing the IOU MW Targets and GHG Emissions Reduction Targets. Lack of need or portfolio fit arguments shall not be used as reasons to justify failure to procure the MW Targets, but are reasons to justify an inability to meet the GHG Emissions Reduction Targets.</p> <p>If the IOU claims that CHP RFO offer prices are excessive, the IOU must refer to independent or publicly-available sources.</p>
Section 6 – GHG Emission Reduction Targets	
1. Objectives/Strategy (Section 6.1)	<p>The CPUC will adopt a strategy to reduce statewide GHG emissions by the following means:</p> <ul style="list-style-type: none"> • Maintain the existing GHG emissions reduction attributable to the efficient existing CHP Facilities and reduce GHG emissions from the inefficient Existing CHP Facilities by encouraging the repowering, conversion to Utility Prescheduled Facilities (“UPF”) or retirement of such CHP facilities; • Increase the efficiency of the CHP fleet by adding efficient CHP resources to the IOU's electric portfolios to make progress towards the CARB CHP RRM; • Achieve the GHG Emissions Reduction targets by December 31, 2020
2. IOUs GHG Emissions Reduction Targets (Section 6.2)	<p>Existing: Maintain GHG Emission reductions from existing CHP. The IOUs shall maintain an equivalent amount of GHG emission reductions attributable to the gas-fired Topping Cycle CHP Facilities included in each IOU's July 2010 Semi-Annual Reports for PPAs that expire in the Initial Program Period.</p> <p>New GHG Reductions: In addition to existing GHG reductions, the Settlement establishes a GHG target of 4.3 MMT based on the CARB Scoping Plan estimates that, by 2020, the State can add 4,000 MW of additional CHP. These 4,000 MW are estimated to reduce GHG emissions by 6.7 MMT. The CARB CHP RRM does not have specific allocations to the IOUs.</p>
3. Method to Determine Each IOU's GHG Emissions Reduction Target (Section 6.4)	<p>In 2015, after the Initial Program Period, all Parties, in conjunction with CPUC Energy Division Staff, will meet and confer to determine the status of the Existing CHP Facilities from each IOU's July 2010 Semi-Annual Reports for purposes of determining any GHG Emission Reduction Target shortfall or surplus.</p> <p>Coal-fired, wood waste, and renewable CHP will count towards the GHG Emission Reduction Targets.</p>
Section 7 – GHG Emission Accounting Methodology	
1. GHG Accounting	Progress toward the IOU's GHG Emissions Reduction Targets will be

<p>Principles (Section 7.1)</p>	<p>determined by a GHG Credit or GHG Debit. A “+” counts as a GHG Credit which will count toward the IOU’s then-current GHG Emissions Reduction Target from CHP resources. A “-“ counts as a GHG Debit, which will count against the IOU’s then-current GHG Emissions Reduction Target.</p> <p>Except as noted in Section 7.3, the parties agree to measure the amount of GHG emissions from CHP Facilities as compared to the current Double Benchmark in place at the time of PPA execution or, for a Utility Prescheduled Facility, execution of a new PPA or a Legacy PPA Amendment.</p> <p>The Double Benchmark is intended to reflect the GHG emissions that would have occurred if the same amount of electricity and thermal output were obtained from conventional generation resources and a stand-alone boiler. The Double Benchmark measures the additional amount of GHG emissions that otherwise would exist if the CHP Facility did not exist.</p> <p>For the purposes of GHG accounting, an “efficient” CHP refers to one that reduces emissions as compared to the Double Benchmark. An “inefficient” CHP refers to one that increases GHG emissions as compared to the Double Benchmark.</p>
<p>2. Double Benchmark (Section 7.2)</p>	<p>The Double Benchmark is as follows:</p> <ul style="list-style-type: none"> • The Heat Rate for the electricity generated is 8,300 BTU/kWh HHV at the busbar and excluding line losses; • The thermal efficiency of the standard boiler is 80%;
<p>3. Detailed GHG Accounting Methodology to Measure Progress Toward the IOU’s GHG Emissions Reduction Targets (Section 7.3)</p>	<p>Projects counted as a GHG Credit (+) include:</p> <ul style="list-style-type: none"> • New CHP Facilities as compared to the Double Benchmark; • Physical change from a Repowered Facility, MW Expansion, or Fuel change. The measurement is the difference between (i) the previous two calendar years of operational data compared to the Double Benchmark in place at the time of PPA execution and (ii) the anticipated change in operations as identified in the PPA compared to the Double Benchmark; • CHP Facility Change in Operations or Conversion to a Utility Prescheduled Facility which counts as a GHG Credit. Measurement is based on the Baseline year emissions minus the projected PPA emissions and emissions associated with replacing 100% of the decreased electric generation at a time differentiated Heat Rate. The Baseline year emissions are the average of the previous 2 calendar years of operational data; • Existing inefficient CHP Facility shuts down – counts as a GHG Credit toward the CARB CHP RRM of the IOU that previously contracted with the CHP. <p>Projects counted as a GHG Debit toward GHG Emission Reduction Targets include:</p> <ul style="list-style-type: none"> • Inefficient New CHP Facilities; • Shutdown or Retirement of an existing, efficient CHP Facility and the thermal need continues; • Physical change, a Repowered CHP Facility, MW Expansion or Fuel Change.

	<p>Projects counted as Neutral toward GHG Emission Reduction Targets include:</p> <ul style="list-style-type: none"> • Existing CHP with no change in operations. Regardless of contract status (i.e. a new PPA with an Existing CHP Facility or one that sells to the market) the CHP facility is considered neutral for GHG accounting purposes; • Efficient existing CHP Facility shuts-down and the thermal need is discontinued. For example, if the host facility does not put in boilers, then there is no change to the IOU GHG Emissions Reduction Target; • Inefficient projects required by law to execute (including PURPA <20 MW, as-available, and feed-in tariffs)
<p>4. Effective Date for Accounting of Changes in GHG Credits and GHG Debits (Section 7.4)</p>	<p>The GHG benefit shall be calculated at the time of execution of the CHP PPA (includes RFO, bilateral agreement, Feed-in Tariff, as-available, PURPA<20 MWs). The calculation of the GHG Credit or GHG Debit attributable to the CHP Facility shall not be altered for the term of the PPA for the purposes of counting progress towards the IOU’s GHG Emissions Reduction Targets, regardless of a change to the Double Benchmark or modifications to the CARB Scoping Plan regarding the goal of securing 6.7 MMT of incremental GHG reductions from incremental CHP resources. If revised by a CARB determination and adopted by the CPUC in the LTPP proceeding, the modified Double Benchmark shall only apply to a CHP Facility that executes a PPA on or after the adoption of the modified Double Benchmark.</p>

C. PG&E CHP Solicitation Background

PG&E initiated development of its 2013 CHP RFO (“CHP RFO 2”) Solicitation process in December 2012. The starting point for the CHP RFO 2 and related documents was the documents from CHP RFO 1. However, PG&E’s Project Team and the IE met to discuss “lessons learned” from the CHP RFO 1 process and sought to make improvements and adjustments to the documents and process to reflect the lessons learned. Some of the early initiatives implemented by PG&E to undertake the CHP RFO 2 solicitation process included:

- Maintained an internal Project Team to manage and implement the CHP RFO solicitation process;
- Retained Merrimack Energy to serve as IE very early in the CHP RFO solicitation development process (December 2012);
- Established an internal process to seek input and sign-off from senior corporate management through creation of an RFO Steering Committee to evaluate and decide on policy and operational issues and an Evaluation Committee to review and approve the internal protocols and evaluation and selection methodology for evaluation and selection of offers;
- Reviewed key issues that needed to be resolved in the development of the solicitation process and Protocol documents consistent with the Settlement requirements;

- Reviewed and revised internal evaluation criteria and evaluation protocol documents that define the bid evaluation methodology and selection process;
- Developed several drafts of the CHP RFO 2 Protocol documents and supporting Forms and Attachments;
- Revised the Offer Forms and information required from Participants in their offers.

The process and schedule established at the initiation of the solicitation process was generally followed throughout the implementation of the bid evaluation and selection process, which provided stability to the process. The only exception was the schedule for contract negotiations which extended approximately two months beyond the initially scheduled end date for negotiations.

D. CHP RFO Procurement Protocol

On February 20, 2013 PG&E launched the Combined Heat and Power Request for Offers Protocol for Second Solicitation and posted the CHP RFO Protocol document on its website. In the CHP RFO document, PG&E listed a number of requirements and preferences to inform prospective Participants of the requirements for competing in the procurement process. A summary of the key provisions of the Protocol are provided in Exhibit 2.

Exhibit 2: Provisions for the 2013 CHP RFO Protocol

2013 CHP RFO Requirements/Characteristics	Description of Key Provisions
Resource Requirements	PG&E seeks to acquire a total of up to 1,387 MW of CHP capacity during the Initial Program Period and about 2.2 million metric tons of GHG reductions during the Second Program Period. For this second solicitation, PG&E seeks offers to meet its CHP MW Target of 376 MW.
Objectives of RFO	In this Solicitation, PG&E states that it has a strong preference for Offers that are low cost, efficient, and have either low associated GHG emissions or provide GHG emissions reductions through changes in operations or technology. A facility that offers operating flexibility will be considered favorably
Proposed Schedule	The Schedule contained in the 2013 CHP RFO Protocol document contained the following key dates for the RFO: <ul style="list-style-type: none"> • February 20, 2013 – Issue RFO; • May 2, 2013 – Deadline for PG&E to receive offers; • Week of July 1, 2013 – Notification of shortlist selection;

	<ul style="list-style-type: none"> • Week of November 18, 2013 – RFO negotiations concluded.
Product Requirements	<p>Through this RFO, PG&E is seeking Offers from existing, new, repowered, and expanded CHP Facilities, CHP Facilities converting to dispatchable capacity under a Utility Tolling PPA and CHP Facilities providing capacity-only products.¹⁰ Natural gas-fired and non-gas fired CHP Facilities are eligible to submit Offers. PG&E prefers Offers in which PG&E is the sole off-taker of the net output from the facility.</p> <p>For PPA Offers from Utility Tolling Facilities and Hybrid Facilities, PG&E’s preferred contract structure is a natural gas fuel conversion (Utility Tolling PPA) structure.</p>
Eligible Products	<p>Eligible CHP offers/products include:</p> <ul style="list-style-type: none"> ○ Existing CHP facilities – a facility that was operational before the Settlement Effective Date; ○ New CHP facilities – a facility that became or will become operational after the Settlement Effective Date; ○ Repowered CHP facilities – a facility that, on or after the Settlement Effective Date, has had its prime movers replaced or refurbished, subject to the specific provisions outlined in the Settlement; ○ Expanded CHP facilities; ○ Existing CHP facilities converting to utility prescheduled facilities – referred to as utility tolling facilities – an existing facility that has changed operations to convert the facility to a utility dispatchable generation facility, including but not limited to an Exempt Wholesale Generator (“EWG”) ○ CHP Capacity-Only Facility – an existing CHP Facility that provides capacity-only, or Resource Adequacy (RA), from an eligible CHP Facility and

¹⁰ In CPUC Resolution E-4529, July 31, 2013 regarding approval of the Los Medanos contract with Calpine for RA capacity, the CPUC directed that for the second CHP RFO and any subsequent RFO’s, the Commission directs that no RA-only bids shall be accepted. [REDACTED]

	<p>will maintain and take all necessary steps to maintain its status as a CHP Facility through the term of its Offer or obtain a FERC waiver.</p>
<p>Eligibility Requirements</p>	<p>PG&E will consider an Offer that meets the following eligibility requirements or specifications:</p> <ul style="list-style-type: none"> • CHP Facility with a nameplate capacity larger than 5 MW; ○ CHP Facility as of September 2007 converting to Utility Tolling Facility; ○ CHP Facility that meets the requirements in Section II.C “Resources” contained in the RFO; ○ If the CHP Facility does not meet the FERC criteria for topping-cycle or bottoming-cycle qualifying cogeneration facilities set forth at 18 CFR 292.205, the CHP Facility has obtained a waiver of the applicable operating and efficiency standards from FERC; ○ New CHP Facilities must be constructed with new equipment. In addition, PG&E is interested in Offers to repower existing generating facilities, as identified in the Settlement Agreement; ○ CHP Facility must be located in California; ○ The Delivery Point must be within the CAISO controlled transmission grid or applicable California IOU distribution grid. Each Participant is required to have the necessary agreements with the CAISO for physical delivery of its generation to a transmission P-Node within the CAISO controlled grid area; ○ Each Participant is encouraged to initiate and submit an interconnection request to PG&E (or other California IOU) for distribution interconnection and to the CAISO for transmission interconnection prior to Offer submittal; ○ Each Participant offering a new or expanded gas facility must initiate an Application for Gas Service.

	<p>Participants with existing gas interconnection must provide documentation in their Offer submission;</p> <ul style="list-style-type: none"> ○ As applicable, each Participant accepting a position on the Shortlist must satisfy the Shortlist Offer Deposit requirements listed in the RFO Protocol; ○ Each Participant offering a new or expanded gas-fired facility must demonstrate no later than two weeks after notification of shortlisting that it has control over the proposed site by ownership, long-term lease or an option to control the proposed site through ownership or a long-term lease; ○ Offer shall confer upon PG&E exclusive rights to the Project’s capacity; ○ Each Participant must agree: (i) to schedule and dedicate the contracted amount of electrical output to PG&E, net of station use and electrical losses; and (ii) not to sell, deed, grant, convey, transmit, or otherwise provide any energy, capacity, ancillary services or any other related electricity product, including Green Attributes, or capacity attributes associated with the output to an entity other than PG&E; ○ Each Participant must agree to term start dates within the following time periods as applicable: within 24 months of PPA execution for Existing CHP Facility, Utility Tolling Facility and CHP-only Facility; within 36 months of CPUC approval for Expanded CHP Facility; and within 60 months of CPUC approval for New CHP and Repowered CHP Facility; ○ Each entity submitting an Offer in this RFO is a Participant. A Participant may be an individual owner, corporation, partnership or joint venture for a CHP or UPF project.
Resource Eligibility	Any CHP facility with a nameplate larger than 5 MW

	<p>may bid into the CHP RFO, including CHP facilities seeking firm and as-available capacity PPAs, provided that: (1) the facility meets the federal definition of a qualifying cogeneration facility under PURPA; (2) the facility meets the definition of cogeneration under California Public Utilities Code; and (3) the facility meets the Emissions Performance Standard established Senate Bill 1368;</p>
Contract Options	<p>The RFO contains three contract options: (1) CHP RFO Proforma PPA; (2) Utility Tolling PPA; and (3) RA Confirmation (“RA Confirm”). Participants are encouraged not to make changes to the CHP Proforma PPA, Utility Tolling Proforma PPA, or RA Confirm with their offer. Participants seeking material changes to the CHP RFO proforma PPA should consider using PG&E’s form tolling agreement, i.e. Utility Tolling PPA;¹¹</p> <p>Participant’s Offer must include the appropriate pro-forma agreement, marked to state the term of Participant’s Offer, in order for its Offer to be valid.</p>
Term	<p>The maximum delivery term for PPAs resulting from the CHP RFO shall be the following:</p> <ul style="list-style-type: none"> ○ Up to 7 years for existing CHP Facilities ○ Up to 7 years for Repowered CHP Facilities and Expanded CHP Facilities not providing credit and collateral as set forth in Section 4.2.8.3 of the Settlement Agreement ○ Up to 7 years for Utility Tolling Facilities providing credit and collateral as set forth in the Utility Tolling PPA ○ Up to 12 years for New CHP Facilities, Repowered CHP Facilities, and Expanded CHP Facilities providing credit and collateral as set forth in Section 4.2.8.3 of the Settlement Agreement; ○ Up to 7 years for CHP capacity-only Facilities providing credit and collateral.
Pricing	<p>In its pricing proposal, Participants are requested to</p>

¹¹ PG&E’s Utility Tolling Agreement was based on the Tolling Agreement used for PG&E’s Long Term RFOs.

	<p>provide pricing for the following items:</p> <ol style="list-style-type: none"> (1) Capacity payment (\$/kW-year) assuming the Seller will pass through GHG Compliance Costs to PG&E; (2) Capacity payment (\$/kW-year) assuming that the Seller will bear GHG Compliance Costs; (3) Energy payment in \$/MWh or at a guaranteed (fixed) heat rate (BTU/kWh) applied to the PG&E City Gate or SoCal Gas price index; (4) Fixed O&M Payment (\$/kW-year) if applicable; (5) Variable O&M Payments (\$/MWh); <p>Alternatively, Participant may address GHG Compliance Costs by providing:</p> <ol style="list-style-type: none"> (6) Variable O&M assuming that Seller will pass through GHG Compliance Costs to PG&E; (7) Variable O&M assuming that Seller will bear GHG Compliance Costs. <p>Participants are also required to offer two GHG Compliance Cost options. Participants are required to offer pricing for a case assuming the Seller will pass through GHG Compliance costs to PG&E and assuming that the Seller will bear GHG Compliance costs. Participants can include the costs for the two cases in either the capacity payment or Variable O&M payment or in both;</p>
<p>Evaluation Process/Evaluation of Offers Received</p>	<p>The RFO Protocol identifies and describes the procedures for evaluation of offers. To evaluate Offers, PG&E indicates it will primarily use a Portfolio Adjusted Value (“PAV”) methodology to evaluate and rank Offers received in its CHP RFO. PG&E will also evaluate and consider the following criteria: Market Valuation, Credit, GHG Emissions, Project Viability, Project Technical Reliability, adherence to applicable form PPA, and Supplier Diversity. The evaluation criteria listed and described in the Protocol include:</p> <ul style="list-style-type: none"> ○ Portfolio Adjusted Value (“PAV”) ○ Market Valuation ○ Curtailment Option ○ Credit

	<ul style="list-style-type: none"> ○ GHG Emissions ○ Project Viability ○ Project Viability and Technical Reliability¹² ○ Adherence to Applicable Forma PPA Terms and Conditions ○ Supplier Diversity <p>The RFO provides a description of the information which Participants are required to provide as part of their proposal. This includes:</p> <ul style="list-style-type: none"> ○ Offer Forms ○ Project Description ○ Credit Information ○ Electric and Gas interconnection information ○ Supplier Diversity information ○ Redline PPA ○ Clean, executed PPA
Participation in the RFO Process	Each entity submitting an Offer in this RFO is a Participant. A Participant may be an individual owner, corporation, partnership or joint venture for a CHP or Utility Tolling facility. The terms and conditions under which each Participant agrees to be bound are listed in the RFO.
Allowable Offers	Respondents may submit one Offer for each project at a particular site. Each Offer may include two (2) Offer variations (the original Offer and one additional variation of the Offer). A variation may alter such attributes as term, price, commercial operation date, or other PPA terms and conditions.
Security and Performance Assurance	<p>Security and Performance Assurance requirements differ by resource/contract type.</p> <p>For New, Expanded and Repowered CHP Facilities under the CHP RFO PPA, Participants are required to (1) post Development Security in the amount of \$20/kW of Net Contract Capacity on or before the 30th day following the PPA Execution Date; (2) Post additional Development Security in the amount of \$40/kW of Net Contract Capacity at the end of 18 months following the PPA Effective Date; and (3) Post Performance Assurance in an amount equal to one of</p>

¹² PG&E combined Project Viability and Technical Reliability criteria for this RFO.

	<p>four options [(1) 12 months of expected total Net Contract Capacity revenues; (2) 12 months of expected total revenues; (3) 5% of expected total revenues; (4) As proposed by Seller].</p> <p>For Utility Tolling PPA, Participants are required to (1) Post Development Security for New Facilities in the amount of \$15/kW of maximum contract capacity within 10 business days following PPA execution. Participant shall post additional Project Development Security in the amount of \$85/kW of maximum contract capacity for a total of \$100/kW; (2) Post Pre-Delivery Term Security for Existing Facilities in the amount of \$15/kW of maximum contract capacity within 10 business days following the PPA Execution Date and an additional amount of \$20/kW of maximum contract capacity within 10 business days following PPA CPUC Approval; (3) Post and maintain Delivery Term Security in an amount equal to the sum of the Mark-to-Market Value and Independent Amount from the PPA Initial Delivery Date until the end of the PPA Delivery Term. The Independent Amount is only applicable to a Seller who is rated or has a Credit Rating below BBB- or Baa3 by S&P and Moody's respectively. This amount shall be calculated as 5% of the notional value of the expected capacity payment under the Agreement.</p>
Electric Interconnection	<ul style="list-style-type: none"> • In terms of interconnection requirements, Participants are required to seek a CAISO finding of Full Capacity Deliverability Status. The Seller must also demonstrate that there is sufficient capacity at the facility interconnection with PG&E's electric grid to receive the full net output of the Project. This ability and the associated costs are determined from the applicable generator interconnection procedure, i.e. CAISO Tariff for CAISO controlled transmission grid interconnections and PG&E's Wholesale Distribution Tariff for non-CAISO controlled distribution grid interconnections as applicable. While Participants are encouraged to initiate the applicable request as early as possible, Participants that are shortlisted that have not submitted an interconnection application must apply for interconnection at the next available

	<p>interconnection open period;</p> <ul style="list-style-type: none"> • For those projects that have a current interconnection study (i.e. a Feasibility Study, System Impact Study, Facilities Study, Phase I or Phase II) or Interconnection Agreement, each Offer must include all completed interconnection studies or a copy of the Interconnection Agreement to be considered for selection. The Participant must provide to PG&E the results of any updated CAISO Interconnection studies as those results become available. This information may be used by PG&E in ranking and evaluating Offers. • Participants must initiate applicable generation interconnection procedures or provide updated information for existing interconnection, as applicable. For Participants initiating new interconnection procedures, Participants must submit proof of interconnection application with its Offer if the application has been made. If the interconnection application has not been made, Participant must submit proof of application upon acceptance of shortlist position or 5 business days after the close of the next applicable Generation Interconnection Procedures (“GIP”) cluster window; • For projects that have already obtained cost estimates from completed and current interconnection Studies through the applicable Interconnection Procedure, the Participant shall submit copies of the completed studies with the Offer. For projects that do not yet have completed Interconnection Studies, pending the availability of the completed studies, PG&E will use transmission proxy costs for Offer evaluation. Copies of the completed Interconnection Studies must be provided to PG&E when they are available;
Gas Interconnection	<ul style="list-style-type: none"> • Participants who require a new gas interconnection with PG&E, or who have an existing gas interconnection with PG&E, but will have a higher peak gas demand, are

	<p>required to submit a Preliminary Application for Gas Service and an Agreement to Perform Tariff Schedule Work;</p> <ul style="list-style-type: none"> • Participants who do not take service from PG&E’s California Gas Transmission must demonstrate comparable initiation with their local gas service provider. The Participant is responsible for the cost of each interconnection study or application; • The 2013 CHP RFO Protocol also provides details on the PG&E Gas Transmission connection process including documentation required.
Regulatory Approval	<p>The effectiveness of any Agreement is expressly conditioned on PG&E’s receipt of Regulatory Approval. “Regulatory Approval” means a final and non-appealable order or orders of each regulatory or other governmental body designated by PG&E, including without limitation the CPUC, without conditions or modifications unacceptable to PG&E.</p>

During discussions between the IE and PG&E relative to the preparation of the documents for the CHP RFO, the IE asked PG&E to identify the revisions made to the Tolling Agreement for this RFO. PG&E provided a summary of the revisions as requested. Most of the changes involved updating the language in the sections identified to reflect recent changes in other agreements or to address CAISO or FERC provisions and requirements.

PG&E made revisions to the Tolling Agreement for the CHP RFO solicitation consistent with recent revisions in other form contracts. Provisions in the PPA that were subject to the most change include the following:

- Article 3.1 - Transaction;
- Article 3.3 – Gas Supply;
- Article 3.5 – Scheduling;
- Article 3.8 – Scheduled Maintenance Outage Notification Requirements;
- Article 3.9 – Force Majeure;
- Article 3.11 – Performance Testing and Adjustment of Monthly Contract Capacity;
- Article 3.13 – Changes to Scheduling and Outage Procedures;
- Article 4.2 – Heat Rate;
- Article 4.3 – Product Compensation;
- Article 5.1 – Events of Default;
- Article 6.1 – Billing;

- Article 8.4 – Performance Assurances;
- Article 9.3 – Carbon Dioxide/AB 32 Compliance and Requirements;
- Article 10.1 – Representations, Warranties and Covenants;
- Appendix II – Description of Facility, Units and Operational Limitations.

Prior to issuing the CHP RFO, PG&E provided a list of the contract revisions along with a description of the changes to the IE.

E. Issues Addressed in This Report

This report addresses Merrimack Energy’s assessment and conclusions regarding the following eleven issues identified in the CPUC’s IE Report Template:

1. Describe the role of the IE;
2. How did the IOU conduct outreach to bidders? Was the solicitation robust?
3. Evaluate the fairness of the investor-owned utility’s (“IOU’s”) bid evaluation and selection process (i.e. quantitative and qualitative methodology used to evaluate and select offers, consistency of evaluation and selection methods with criteria specified in bid documents, etc.);
4. Describe the IOU’s Least Cost Best Fit (“LCBF”) methodology for evaluating offers. Was the LCBF process fairly administered? Evaluate the strengths and weaknesses of the IOU’s methodology;
5. Describe project specific negotiations. Highlight any areas of concern including unique terms and conditions;
6. If applicable, describe safeguards, code of conduct and methodologies employed by the IOU to compare affiliate bids or utility-owned generation ownership offers;
7. Does the contract(s) merit CPUC approval? Is the contract reasonably priced and does it reflect a functioning market?;
8. Based on your analysis of the RFO bids, the bid process, and overall market, do you agree with the IOU that the contract(s) merit CPUC approval? Explain;
9. Based on the complete bid process, was the RFO acceptable?

II. Description of the Role of the IE

A. 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 (Finding of Fact 20, Conclusion of Law 3, Ordering Paragraph 8) of the CPUC, and D.09-06-050.

In addition, Section 4.2.5 of the Settlement Agreement identifies a requirement for an IE in the CHP RFO process. Section 4.2.5.7 of the Settlement Agreement states that each utility shall use an Independent Evaluator similar to that used in other IOU RFO processes. According to the directive, it is preferable that the IE have CHP expertise and financial modeling experience. Also, section 4.2.5.8 requires that the IE review the entire CHP RFO process.

The role of 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.¹³ 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 findings to the utility and the utility’s PRG consistent with preserving the independence

¹³ 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).

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 requirement 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.

B. Description of Key IE Roles

In compliance with the above requirements, PG&E selected Merrimack Energy to serve as IE for the CHP RFO in December, 2012. The overall objective of the role of the IE is to ensure that the solicitation process is undertaken in a fair, consistent, unbiased, and objective manner and that the best resources are selected and acquired consistent with the solicitation requirements.

In addition to the requirements identified in CPUC Orders, the Scope of Work included in the Contract Work Authorization between Merrimack Energy and PG&E clearly identifies the tasks to be performed by the IE. These include the following tasks:

- Review and comment on the consistency of PG&E's evaluation methodology and processes with the CPUC Decision 10-12-035 and the Settlement Agreement;
- Review and comment on the fairness, appropriateness, and implementation of:
 - PG&E's solicitation process;
 - PG&E's evaluation methodology;
 - PG&E's selection process.
- Evaluate PG&E's methodology for evaluating offers to the Solicitation, and analyze the results of PG&E's evaluation of offers;
- Review and report on whether the outreach that PG&E conducted to potential industry participants ("Participants") in the solicitation was adequate and robust;

- Identify whether any Participant in the Solicitation received undue information or failed to receive due information, that advantaged or disadvantaged a Participant unfairly;
- Provide to PG&E, PG&E's Procurement Review Group ("PRG"), Cost Allocation Mechanism Group ("CAM"), and the Energy Division of the CPUC presentations of the Consultant's findings;
- Participate, as needed, in any PRG, CAM and/or supplier meetings and/or teleconferences and/or bidder conferences concerning the Solicitation;
- Review and comment on the draft Solicitation documents and bid evaluation methodology. The draft documents to be reviewed include the protocol document, associated contracts and other data forms and related documents. Review and comment on the fairness of the project-specific negotiations and the reasonableness of the resulting executed contracts, and whether they merit CPUC approval;
- Monitor communications between PG&E and Participants and participate in meetings with Participants, as required;
- Independently evaluate each executed offer and comment on whether the selected contracts are the best overall offers received;
- Be available to testify as an expert witness in any CPUC proceeding regarding review of potential transactions arising from the Solicitation; if appropriate, prepare direct and rebuttal testimony, respond to data requests, and perform other activities required to testify as an expert witness;
- Prepare the IE reports for inclusion in any Advice Letter filings, if necessary;

With regard to the role of the IE, the objective is to ensure that the process is undertaken in a fair and equitable manner and that the results of the offer evaluation and selection are accurate, reasonable and consistent and in the best interest of consumers. This role generally involves a detailed review and assessment of the evaluation process and the results of the quantitative and qualitative analysis.

C. Description of IE Oversight Activities

In performing its oversight and evaluation role, the IE participated in and undertook a number of activities in connection with the solicitation process including providing comments on the protocol documents, monitoring communications between PG&E and the Participants, reviewing internal RFO Evaluation Protocol documents, organizing and summarizing the bids received, reviewing the evaluation and selection process and results at each stage in the process, monitoring the status of short-listed offers, participating in

calls with Participants after receipt of offers, communicating with PG&E's Project Manager on a regular basis to discuss RFO issues, participating in meetings with the PRG, PG&E's Evaluation Committee and PG&E's Steering Committee, and monitoring the contract negotiation process with shortlisted Participants. Merrimack Energy was retained by PG&E prior to the development of the RFO documents and therefore had the opportunity to participate in and assess the development and implementation of the entire process from start to completion. A list of the activities of the IE during the procurement process consistent with the important activities and milestones for the process is described below.

Met with PG&E's Project Team to Discuss Lessons Learned from CHP RFO 1

In October 2012, the IE met with PG&E's CHP RFO Project Team to discuss "lessons learned" from CHP RFO 1 solicitation and assess potential revisions to the CHP RFO 2 process. The IE identified several observations and lessons learned from the CHP RFO 1 process that should be reconsidered in the implementation of CHP RFO2. These included:

- Given the complexity of the offers, the IE suggested that PG&E should engage the counterparty sooner in the process after receipt of offers to ensure PG&E and the counterparty are in full agreement on the provisions of the Offer and that the parties have the opportunity to identify possible provisions or options that could provide value to customers based on further negotiations or discussions such as enhancing project operational flexibility or a change in operations;
- The IE felt that the contract negotiation process was lengthy and time consuming based on pursuing several offers that did not appear to be "serious" offers. The IE suggested that PG&E should prioritize the short listed offers for contract negotiation purposes and focus more resources on those prioritized offers;
- The IE recommended that PG&E eliminate the exclusivity provisions of the RFO Protocol;
- The IE also requested that PG&E consider developing a methodology to more effectively combine and summarize the bid evaluation results to facilitate review of the offer evaluation results by the IE and internal oversight.

Submitted Comments on RFO Protocol Design

Merrimack Energy submitted two rounds of comments on the design of the CHP RFO 2 protocol, with the first round of comments submitted shortly after PG&E provided its initial draft of the 2013 CHP RFO Protocol on January 3, 2013. In addition to providing comments on specific issues (i.e. description of hybrid facility requirements, inclusion of a reference in the RFO protocol regarding the need to procure GHG emission reductions) and organization of the Protocol document, the IE provided several comments on the Offer Forms and Appendix B, Project Description, including suggested questions of Participants related primarily to seeking additional specific information on steam host requirements and status of the steam host agreement as well as additional detail on fuel supply and transportation options and costs.

Participated in Evaluation Committee Meeting on January 10, 2013

The IE participated in the first Evaluation Committee meeting associated with the CHP RFO 2 process. The Evaluation Committee discussed maintaining the same overall bid evaluation process, quantitative and qualitative evaluation criteria, and general framework used in CHP RFO 1 including maintaining the Portfolio Adjusted Value (“PAV”) methodology for evaluating and ranking offers. Other topics addressed at the meeting included changes to the exclusivity requirements for short listed participants, eligibility for in-state resources only, and discussion of a proposal to engage with participants sooner in the solicitation process and more frequently throughout the process. The Evaluation Committee also discussed the need to review [REDACTED].

Participated in Steering Committee Meeting on January 18, 2013

PG&E held a Steering Committee meeting on January 18, 2013 to address CHP RFO 2. PG&E’s Project Manager proposed several recommendations for the CHP RFO 2 based on discussions at the Evaluation Committee meeting. The recommendations put forward to the Steering Committee by the Project Manager included:

- Remove language in the Protocol requiring Participants to provide binding offers for which PG&E could agree to execute as is if preferred;
- Solicit offers for California-only resources;
- Recommend removing exclusivity language;
- Maintain requirement for short list deposit except for existing CHP proforma offers;
- Maintain same quantitative and qualitative evaluation methodology.

The Steering Committee approved the recommendations and also approved the proposed schedule for the RFO.

[REDACTED]

¹⁴ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Issuance of the CHP RFO February 20, 2013

PG&E eventually issued the CHP RFO on February 20, 2013, approximately two weeks after the original proposed issuance date. PG&E delayed issuance to allow the project team the opportunity to conduct a final comprehensive review of all the applicable documents and to make revisions to the proforma Tolling Agreement. The IE did provide comments with regard to Appendix B and suggested that PG&E revise Appendix B to eliminate any information requested that would not be used for the evaluation process. PG&E also made a few edits to the Tolling PPA.

On February 20, 2013, PG&E also notified all potential solicitation participants on its distribution list that it had issued the second or 2013 Combined Heat and Power (CHP) RFO. The notification provided a link to the website for the 2013 CHP RFO and listed the scheduled dates for the Participants Webinar (March 14, 2013) and the offer due date of May 2, 2013.

Meeting Between IE and CHP RFO Project Team March 13-14, 2013

The IE requested a meeting with the PG&E project team to review and clarify key issues associated with evaluation of offers. The issues for discussion identified by the IE included the following:

- Bid evaluation protocols
 - Lessons learned from the previous solicitation regarding the protocols
 - Remaining revisions to the protocols
 - Changes in the evaluation methodology, [REDACTED]
- Incorporation of GHG savings as part of the bid evaluation process
 - Maintain same approach as CHP RFO 1
 - Reflect GHG reduction as a more direct metric in the analysis/evaluation
 - Creation of other metrics to inform PG&E regarding final selection decisions
- [REDACTED]
- Presentation of quantitative evaluation results for IE review and assessment
 - CHP project analysis results
 - Tolling agreements
 - Hybrid projects
- Completion and presentation of input assumptions
- Questions and comments on the proforma Contracts

[REDACTED]

The IE and PG&E's quantitative evaluation team members spent a significant amount of time discussing options for presenting the quantitative bid evaluation results to the IE. PG&E indicated its objective was to enable the resulting evaluation data to be checked and verified easily by the IE as well as internally. [REDACTED]

[REDACTED]

The IE and PG&E project team also discussed the development of the input assumptions for the evaluation of the offers. [REDACTED]

[REDACTED]

PG&E also informed the IE that it was looking into ways to [REDACTED]

Attendance at the Participants Webinar – March 14, 2013

The IE attended the CHP RFO Participants Webinar held on March 14, 2013. The IE also coordinated with PG&E's Project Manager on the issues to address at the Participants Webinar and provided comments on the presentation material. Topics addressed by PG&E included:

- CHP Settlement Overview
- Solicitation Overview
- Offer Submittal Process
- Offer Form Description and Highlights
- Description of Evaluation Methodology
- Supplier Diversity Requirements
- Gas Interconnection Requirements
- Electric Interconnection Requirements
- Overview of PPAs

In addition, PG&E set aside time for Questions and Answers. Five questions were submitted and answered. [REDACTED]

[REDACTED]

¹⁵ The IE reviewed and provided a number of comments on the revised protocol resulting from combination of project viability and technical reliability. The suggestions of the IE were oriented toward providing greater resolution of the scoring and evaluation of offers under the combined project viability and technical reliability categories.

¹⁶ [REDACTED]

[REDACTED]

Input Assumptions – April 24, 2013

An important aspect of the offer evaluation process is the development of input assumptions to use in the evaluation of the Participant’s pricing formulas and other evaluation parameters. PG&E’s quantitative evaluation team provided the input assumptions to the IE prior to receipt of offers and participated in discussions with the IE to review the methodology underlying the development of the input assumptions, including the development of forward price curves for power and gas as well as the forecast for capacity or RA costs. [REDACTED]

[REDACTED]

Questions and Answers Posted

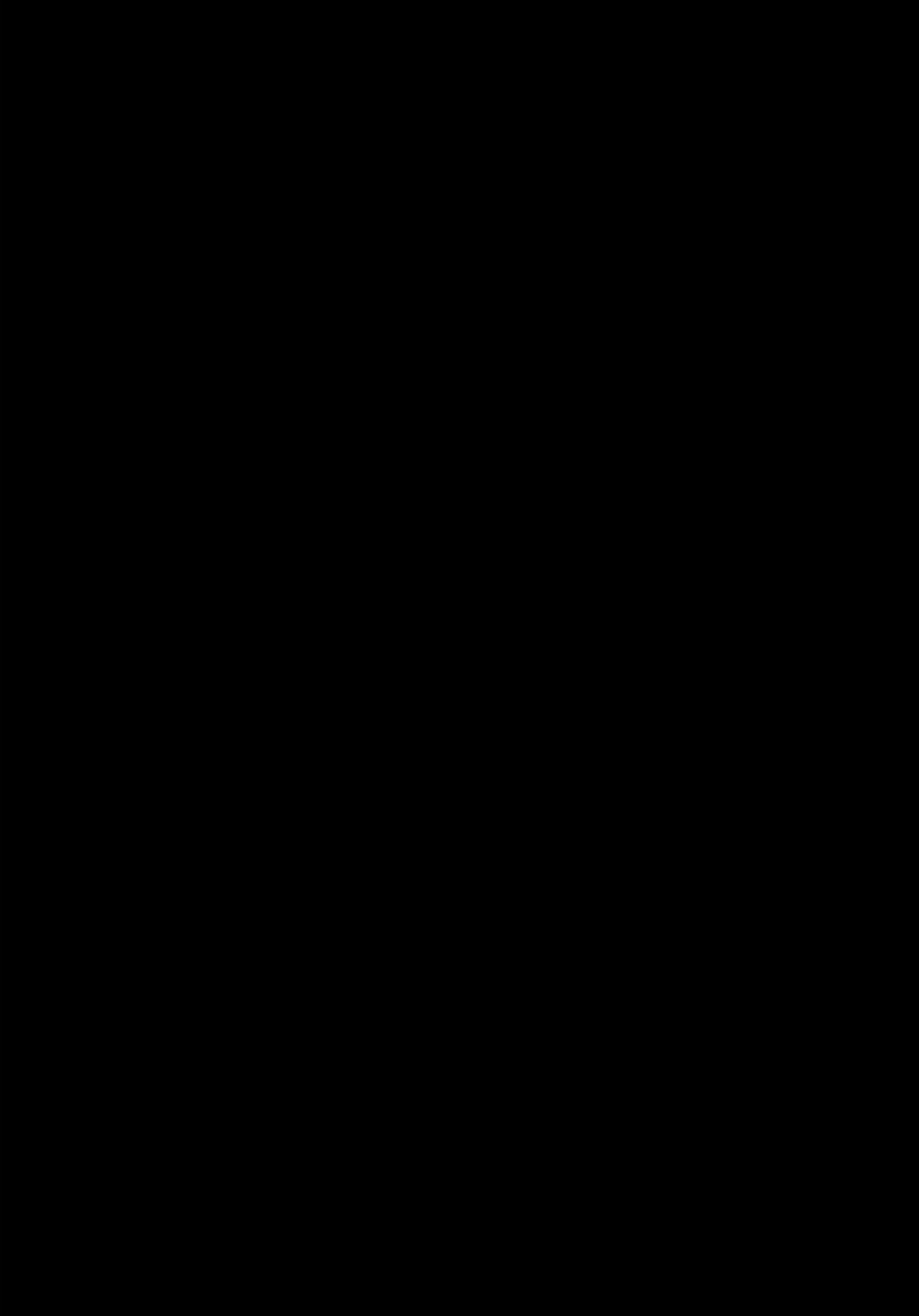
All final questions and answers were posted to PG&E’s website for the CHP RFO 2 procurement process by April 25, 2013. In total, 48 questions and answers were posted based on bidder questions posted to the website, as well as questions submitted at both the Participants Webinar and Offer Form Webinar.

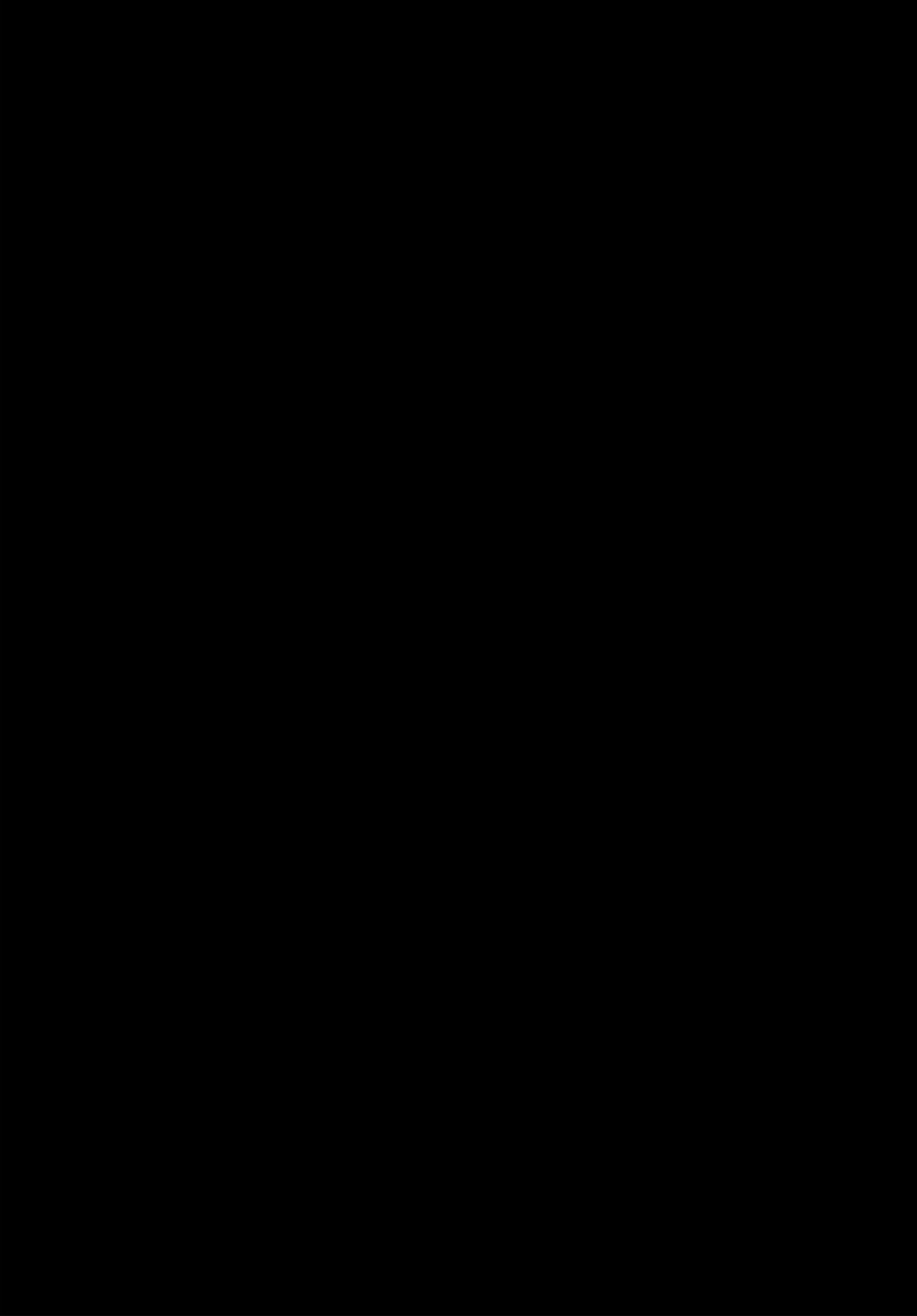
Approval of Evaluation Protocols – April 26, 2013

On April 26, 2013, PG&E’s Steering Committee approved the internal evaluation protocols and criteria to be used for evaluating offers received in response to CHP RFO 2. The general procedure, methodologies and protocols for evaluating offers in CHP RFO 2 will follow the framework used for CHP RFO 1. Exhibit 3 below, which was requested by the Evaluation Committee, provides a summary of the changes implemented for CHP RFO 2 relative to CHP RFO1.

Exhibit 3: Revisions to PG&E’s Evaluation Process for CHP RFO 2

Protocol	CHP RFO 1	CHP RFO 2
[REDACTED]		





[REDACTED]

Meeting of IE and PG&E Project Team – May 1, 2013

The IE and PG&E's project team met on May 1, 2013 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Some of the noteworthy points of discussion included the following:

- [REDACTED]
[REDACTED];
- [REDACTED];
- [REDACTED]
[REDACTED];
- [REDACTED]
[REDACTED];
- [REDACTED].

Receipt of Offers – May 2, 2013

Offers were received on May 2, 2013. The IE was present at PG&E's offices for bid receipt and opening. All bids were opened and a copy of a flash drive or disks for each offer was provided to the IE for downloading onto the IE's computer. The IE and PG&E conducted their own independent review and summary of the offers received and compared notes to ensure all offers had been accounted for along with categorizing the types of offers received and the products proposed. [REDACTED]
[REDACTED]

Following the receipt of offers, PG&E's project team and IE began to review the offers received, including the Offer Forms, to ensure the information provided by the Participants was complete and accurate. The initial tasks upon receipt of offers involved a review of the offers to ensure the Participants provided all the information required, check for conformance with eligibility requirements, and review of the offers and PPA mark-ups for purposes of identifying any follow-up questions or clarification of the offer. A few offers contained inconsistent or missing information (that was identified either in this review or through follow-up discussions with Participants) which required PG&E to seek clarification of the offers or ask for additional information. The IE was copied on all communication with Participants and was therefore in a position to monitor all communications with Participants and access any offer updates or clarification requests.

Evaluation Committee Meeting – May 16, 2013

An Evaluation Committee meeting was held on May 16, 2013, which served to provide an update to Committee members regarding the offers received and to discuss the next steps in the evaluation process. [REDACTED]

[REDACTED]

[REDACTED]. The IE was in agreement with the determination that several offers were non-conforming and should not be considered.

Discussions with Counterparties – May 17, 2013 to May 30, 2013

[REDACTED]

PG&E also sent clarifying questions to Participants, if necessary, to further clarify more detailed information requirements. In addition, the discussions focused on issues associated with the status of the steam host, operational issues based on changes to steam host requirements, operational parameters of the offer including heat rates and operating flexibility, areas where the counterparty could offer additional value to PG&E, curtailment options for CHP offers, GHG emissions, fuel supply/transportation arrangements and costs, and contract exceptions. The IE attended all the calls and prepared clarifying questions for the counterparties along with members of PG&E's project team.

Steering Committee Meeting – May 24, 2013

A meeting of the Steering Committee was held on May 24, 2013. PG&E’s project team lead provided an update to the Steering Committee on the CHP RFO process. PG&E’s Project Manager provided a map of California with the location of each project identified as well as a spreadsheet that compared the pricing for the same projects offered in CHP RFO 1 and CHP RFO 2. The key points raised by the project team lead included:

- [REDACTED];
- [REDACTED];
- [REDACTED];
- [REDACTED];
- [REDACTED];
- The evaluation process will generally be based on the same procedures as CHP RFO 1, with some adjustments;
- [REDACTED];
- The project team has been doing a “deep dive” into the PPAs submitted by Participants and has held calls with Participants seeking clarity on the offers. This has proven to be very beneficial for understanding the offers.

Meeting Between the IE and Quant Team – June 4, 2013 to June 5, 2013

The IE conducted nearly two days of meetings with PG&E’s Quant team on June 4-5, 2013 for purposes of conducting an initial evaluation of offer results. The IE reviewed all the offers and prepared a number of questions with regard to the evaluation of each offer. The IE and Quant team members spent the first day of the meetings walking through the evaluation process for each offer including interpretation of the pricing formulas and components, the operational parameters proposed, offers that would have value based on early termination of an existing contract, and any unique issues identified in the offer that could affect bid evaluation results. As a result, this assessment focused on ensuring that Quant team members and the IE agreed on the interpretation of the offers to ensure a consistent evaluation would be undertaken. In addition, the IE and Quant team members identified offers with outstanding issues that needed clarification from the counterparties.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

IE Review and Evaluation of PG&E's Offer Evaluation Results – June 12, 2013

PG&E provided detailed supporting documentation to the IE regarding the quantitative and qualitative evaluation results prepared by PG&E's project teams. [REDACTED]

[REDACTED] The IE undertook a detailed review of the quantitative and qualitative evaluation results and held several follow-up conference calls or exchanged emails with PG&E project team members to ask clarification questions about the evaluation results.

The IE developed a summary of the cost and benefit components for each offer along with the heat rates, and any operating constraints to assess whether the cost and benefit components were consistent and reasonable. [REDACTED]

[REDACTED]. This involved preparing summary of the results of the detailed evaluation sheets completed by PG&E for the CHP options and comparing the results against the final summary results used to compare and rank offers. [REDACTED]

[REDACTED] The IE also prepared questions for clarification about the results and held discussions with PG&E

team members to discuss the evaluation results. PG&E’s project team was able to provide reasonable and detailed responses to all the IEs questions in a satisfactory manner.

Evaluation Committee Meeting – June 13, 2013

An Evaluation Committee meeting was held on June 13, 2013 to review the evaluation results, consider projects for shortlisting, and reach an initial consensus on the short list. The discussion focused on specific projects that evaluated highly or had unique characteristics. Several projects exhibited metrics that would clearly indicate inclusion on the short list while others were discussed in detail as potential shortlisted projects.

[REDACTED]

Steering Committee Meeting – June 20, 2013

A Steering Committee meeting was held by PG&E on June 20, 2013 to review the bid evaluation results and discuss shortlisting of offers based on recommendations of the project team. Discussions at the meeting also included an assessment as to whether any new CHP projects could be competitive and under what conditions. [REDACTED]

[REDACTED]

[REDACTED]. PG&E’s project team also identified opportunities to enhance value for a few projects that may be willing to offer flexibility or additional capacity and asked for the opportunity to pursue discussions with these projects. The Steering Committee approved the suggested shortlist identified by the project team.

The proposed short list approved by the Steering Committee and presented to the PRG/CAM is identified in Exhibit 5. This Exhibit identifies the project, type of resource, CHP MW offered and estimated GHG emission reductions. A more detailed presentation of the shortlist, including CHP and GHG values and ranking is included in Section IV of this report. The shortlist selected included the following projects:

Exhibit 5: PG&E Proposed Shortlist for CHP RFO 2

Project Name	Type	CHP MW	GHG Reductions – MT
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED] 20 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

With regard to the proposed shortlisted projects, there are several with unique characteristics that may or may not have sufficient value for customers. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] 21 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

The IE was in general agreement with the shortlist selection but raised a few issues with regard to certain offers. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

20 [REDACTED]

21 [REDACTED]

[REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED];
- [REDACTED].

Notification of Offer Status – July 2, 2013

Following the PRG/CAM meeting, PG&E notified all Participants of their status in the process. For offers selected for the shortlist, PG&E required Participants to execute a Confidentiality Agreement as illustrated in Section XI of the CHP Solicitation Protocol. PG&E also informed the shortlisted Participants that PG&E would contact them early in the week of July 8, 2013 to inquire about acceptance of PG&E’s offer for shortlisting and to schedule an initial meeting to begin the negotiation process. Also, PG&E notified the Participant that they are required to submit an Offer deposit of cash or a letter of credit in the amount of \$3/kW of contract capacity by July 17, 2013. All shortlisted Participants complied with these requirements.

Monitored Contract Negotiations with Shortlisted Bidders

The IE monitored follow-up contract negotiations with shortlisted Participants following notification of shortlist selection and execution of Non-Disclosure Agreements.

[REDACTED]

[REDACTED] In all initial calls, PG&E indicated to bidders that although they were on the short list this is a highly competitive process and there was no guarantee that the counterparty will get a contract. PG&E encouraged the Participant to increase the value of their offers, if possible, to enhance their value and ranking.

Follow-up Discussions with Non-Shortlisted Participants/Debriefing

PG&E offered the opportunity for Participants who were not selected for the short list to receive a de-briefing from PG&E about their projects. The debriefing calls with Participants not selected for the shortlist began in early July, 2013 after shortlist selection. In addition to providing a reasonable level of information to assist the Participant in future solicitations, PG&E and the IE asked the Participants to identify any issues or suggest ways to improve the process in future solicitations. The response from the non-shortlisted Participants was very favorable with regard to the solicitation process and information requirements. Examples of some of the comment of Participants included:

- The documentation required of bidders was straightforward;
- PG&E generally maintained the schedule proposed;
- It was easier to offer a dispatchable project based on the revised templates;
- PG&E answered questions in a timely manner;
- PG&E should have discussions with Participants prior to submission of offers to discuss the unique aspects of each offer. Given the nature of these projects it is difficult to propose a standardized product.

While a few Participants suggested some minor improvements, there were no major criticisms leveled at the process even though the IE and PG&E informed the participants that they could contact the IE or submit follow-up comments to the PG&E CHP website with any issues.

[REDACTED]

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

III. Did PG&E Do Adequate Outreach to Bidders and Was the Solicitation Robust?

This section of the Report focuses on the adequacy of outreach activities of PG&E and the robustness of the response of bidders with regard to the solicitation process.

²² [Redacted]

²³ [Redacted]

A. Describe the IOU outreach to potential bidders (e.g., sufficient publicity, emails to expected interested firms)

Outreach activities are important to the success of a competitive solicitation process. PG&E's outreach efforts targeted a large number of potential Participants based on PG&E's contact lists of energy companies and individuals. These efforts likely played a role in the robust response to the RFO in terms of number of Participants and specific offers or projects.

PG&E maintains a detailed list of potential Participants with nearly [REDACTED] contacts that serves as the database for Seller contact and outreach. PG&E sent emails to all potential Participants on this list informing them of the CHP RFO 2 process and the issuance of the CHP RFO Protocol. [REDACTED]

[REDACTED] Finally, PG&E maintains a Diverse Supplier list that was also informed via email of the CHP RFO.

As noted above, PG&E also established a section on its public website for distribution of information to prospective Participants. The website also included contact information for PG&E should prospective Participants wish to ask any questions or request follow-up information. The website contained all the pertinent solicitation documents, time tables, and a list of questions and answers related to the solicitation. PG&E maintained a website that focuses on the QF/CHP Settlement Agreement and related documents that is accessible to prospective Participants. PG&E held two public webinars for the 2013 CHP RFO prior to submission of offers. A total of 48 questions and answers were posted on the website, including questions from the Participants Webinar. The IE found the website easy to access and navigate. All documents associated with the CHP RFO were included on the website and were easy to identify, access, and download.

B. Identify Principles Used to Determine Adequate Robustness of a Solicitation (e.g. number of proposals submitted, number of MWs associated with submitted proposals).

With regard to assessing whether the response to the solicitation was adequately robust, there are several criteria to consider:

- Was the response to the solicitation commensurate with the level of outreach?
- Did the solicitation encourage a diverse response from Participants in terms of products requested, project structure, pricing options, etc?
- Was the response large with respect to the number of proposals and megawatts ("MW") offered relative to the amount requested?
- Was the process a competitive process based on the amount of MW submitted by Bidders relative to the number of MW requested?

contracted for all the CHP MW offered in this solicitation, it would not reach its GHG emission reduction target of 2.2 MMT.

In conclusion, the outstanding response of the market to PG&E's CHP RFO is evidence that the outreach activities of PG&E were effective and Sellers felt they had an adequate opportunity to receive a contract from the process.

E. Did the IOUs Seek Adequate Feedback About the Bidding/Bid Evaluation Process From All Bidders After the Solicitation Was Complete?

PG&E's project team members, particularly PG&E's Project Manager, were involved in regular communications with prospective Participants, with much of the communications occurring after submission of the offers. Also, as noted, PG&E agreed to debrief Participants who submitted offers that were not selected about the general reasons for non-selection. The IE participated in a number of the calls with Participants who were not selected. In the IE's view, the debriefing sessions were very well handled by the Project Manager, who provided consistent information to all Participants without unduly providing additional information to certain bidders. In addition, either the PG&E Project Manager or the IE asked the Participants if they had any suggestions for improving future solicitation processes. Participants were invited to provide comments about the process to the Company and IE. Consistent with the feedback from Participants from the first CHP RFO process, the IE found the responses of the Participants who were not selected to the short list to be very favorable with regard to the process. Suggestions for improving the process were few and involved relatively minor issues, such as requesting a quicker response to "some" questions. Although the IE asked Participants to provide written comments to PG&E's CHP RFO mailbox or directly to the IE and several indicated they would follow up, none of the Participants provided a written response or written comments regarding opportunities for improving the process beyond comments during the conference calls.

The impression of the IE was that the Participants were becoming familiar with the CHP RFO process and recognized the efforts made by PG&E to inform them of the nuances of the process. In general, the Participants had a very favorable impression of PG&E's CHP RFO solicitation process.

F. Was the Outreach Sufficient and Materials Clear Such That the Bids Received Meet the Needs the Solicitation Was Intending to Fill?

PG&E used the CHP RFO 1 Protocol document as the starting point for the CHP RFO 2 documents. PG&E focused significant attention to improving the Offer Forms to be easier to complete and to be more flexible so as to address hybrid offers and other creative offers. The IE had the opportunity to review the CHP RFO 2 Protocol document, Bid Forms and other attachments during the development of the Protocols and provided comments on the documents. The IE's comments were designed to ensure the information was consistent and clear to Participants. In addition, given the unique nature of this process, the IE also focused on ensuring that the process was designed consistent

with the requirements of the Settlement Term Sheet and that the information requested of Participants was reasonable and consistent with the evaluation criteria established to evaluate CHP projects.

Overall, the IE was of the opinion that the documents and follow-up information presented by PG&E were clear and concise and reflected changes made as a result of the CHP RFO 1 solicitation process. The IE also felt that the documents and follow-up webinars provided detailed information for Participants to decide if they wanted to participate and to understand the requirements for competing.²⁵ Prospective Participants had multiple opportunities to ask questions and participate in interactive discussions with PG&E staff regarding the Offer Forms, Attachments and contracts.

In addition, PG&E established a website for the program and provided a significant base of information which described the CHP program and contained all documents necessary to complete a proposal. The website contained the following documents:

- CHP RFO Protocol Document and all Appendices
 - Appendix A – Offer Form
 - Appendix B – Project Description
 - Appendix C1 – Electric Interconnection Information
 - Appendix C2 – FERC 717 Waiver
 - Appendix C3 – Electric Transmission Proxy Costs
 - Appendix D1 – Gas Interconnection Information
 - Appendix D2 – CPUC Rule 26 Waiver
 - Appendix D3 – Application for Gas Service Template
 - Appendix D4 – Agreement to Perform Tariff Schedule Related Work
 - Appendix E1 – Credit and Finance Information
 - Appendix E2 – Letter of Credit
 - Appendix E3 – Request for Taxpayer ID (W-9) Form
 - Appendix F1 – Supplier Diversity Information
 - Appendix F2 – Supplier Diversity Exhibit 1A
 - Appendix G1 – CHP RFO PPA
 - Appendix G2 – Utility Tolling PPA
 - Appendix G3 – CHP RA Capacity Confirm
 - Appendix G4 – EEI Cover Sheet Standard Form
 - Appendix G5 – EEI Paragraph 10 Collateral Annex
 - Appendix H – Confidentiality Agreement
 - Appendix I – CHP Program Settlement Agreement Term Sheet
- Frequently Asked Questions
- Email Address for CHP RFO website

As noted, PG&E held a CHP RFO Participant’s Webinar on March 14, 2013 followed by the General Participants Offer Form Webinar on March 28, 2013. The Participants Webinar addressed a number of topics including CHP Settlement overview, solicitation

²⁵ As noted in the previous section, feedback from actual Participants was very favorable regarding the clarity of the CHP RFO Protocol documents.

overview, offer submittal process, offer form highlights, evaluation methodology, gas interconnection, electric interconnection, and overview of the PPAs. In addition, participants were then able to ask questions. Questions that PG&E could not answer or wished to enhance with a more detailed response were posted on the website as the official response.

The IE also found that PG&E's project team was particularly responsive to the needs of prospective Participants and also responded to most questions in a timely and thorough manner.

G. Any Other Relevant Information or Observations

CHP RFO 1 was the first of its kind undertaken in California and represented a break from past practices for many Participants, who were not familiar with a competitive procurement process. As we had expected, a number of Participants provided incomplete or inconsistent information in their proposals in response to CHP RFO 1. However, it was more evident in CHP RFO 2 that Participants were more in tune with the process and requirements for information expected from Participants. Most of the Participants provided reasonably complete proposals with limited clarification questions or information requirements. [REDACTED]

[REDACTED]. The IE and PG&E both recognized that since every CHP project was unique in that projects had different steam requirements and operational characteristics, it was in PG&E's best interest to actively engage the Participants early in the solicitation process. For this solicitation, PG&E conducted telephone discussions with all Participants (except Berry) after the offers were received to clarify the offers and fully discuss the projects and offers submitted.

IV. Fairness and Appropriateness of the CHP RFO Bid Evaluation and Selection Methodology and Design

A. Principles for Evaluating PG&E's Bid Evaluation Methodology

This section of the report addresses the principles and framework underlying Merrimack Energy's review of PG&E's methodology for the CHP RFO solicitation process. Key areas of inquiry by the IE and the underlying principles used by the IE to evaluate the methodology include the following:

- Were the procurement targets, products solicited, principles and objectives clearly defined in PG&E's CHP RFO and other materials?
- Is the IOU bid evaluation based on those criteria specified in the bid documents? In cases where bid evaluation goes beyond the criteria specified

in the bid documents, the IE should note the criteria and comment on the evaluation process.

- Do the IOU bid documents clearly define the type and characteristics of products desired and what information the bidder should provide to ensure that the utility can conduct its evaluation?
- Was the bid evaluation and selection process and criteria reasonably transparent such that Participants would have a reasonable indication as to how they would be evaluated and selected?
- Was the bid evaluation methodology consistent with CPUC direction?
- Was PG&E's bid evaluation based on and consistent with the information requested in the RFO to be submitted by Participants in their proposal documents?
- Does the evaluation methodology reasonably identify how the quantitative and qualitative criteria would be used to qualify and rank offers?
- Were the bid evaluation criteria consistently applied to all offers?
- Does the quantitative evaluation methodology allow for consistent evaluation of bids of different sizes and in-service dates? Are there differences in the evaluation method for different technologies that cannot be explained in a technology-neutral manner (e.g. evaluation metric should be ability to ramp 10 MW/minute rather than, must be a hydro storage facility)?
- Did the bid evaluation criteria and evaluation process contain any undue or unreasonable bias that might influence project ranking and selection results or in any way favor affiliate bids?
- Was the RFO clear and concise to ensure that the information required by PG&E to conduct its evaluation was provided by project sponsors?
- Did the IOU bid evaluation criteria change after the bids were received? Explain the rationale for the changes.

To address these issues, Merrimack Energy will first present a detailed description of the bid evaluation methodology and process implemented by PG&E to undertake the evaluation. This includes both the quantitative and qualitative criteria used in the evaluation. Next, the bid evaluation results and short list selection process are described. Subsequently, the IE then discusses the strengths and weaknesses of the methodology relative to the issues identified above. The final section addresses potential improvements related to the bid evaluation methodology and process as identified by the IE for consideration in implementing the next solicitation process under the CHP Program.

B. Overview Description of PG&E’s Least Cost Best Fit (“LCBF”) Evaluation Methodology

This section of the report provides an overall description of PG&E’s LCBF bid evaluation methodology, procedures and criteria applicable to the second CHP RFO.²⁶ The methodology selected is designed to generally conform to the Least Cost Best Fit (“LCBF”) procedures applied in other solicitations but also needs to address the unique nature of CHP resources and Settlement requirements. This includes an assessment of both the value of an offer relative to CHP MWs provided as well as GHG Emission reductions. The CHP RFO bid evaluation procedure also includes evaluation of both quantitative and qualitative attributes of each proposal to assess its value to PG&E’s customers and relative value in comparison to other proposals. PG&E evaluates the offers based on a number of evaluation criteria which are discussed in this section.²⁷

For evaluation of offers received in response to its CHP RFO’s, PG&E stated in the 2013 CHP RFO Protocol 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/Technical Reliability;
- Adherence to applicable form PPA; and
- Supplier Diversity.

The 2013 CHP RFO Protocol also provided a description of each of the criteria to be applied in the evaluation. In addition, the Protocol document clearly identified the MW target for this solicitation and identified PG&E’s objectives for procuring both CHP MW and GHG emission reductions.

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.

Actually, for presenting the results of the evaluation and ranking of offers for the CHP RFO processes, PG&E presents three metrics for consideration:

- [REDACTED];
- [REDACTED];

²⁶ The IE Template also addresses the issue whether the IOUs bid evaluation criteria changed after the bids were received and explain the rationale.

²⁷ PG&E has developed Internal Evaluation Procedures for each of the evaluation criteria listed in this section for the 2013 CHP RFO. The Evaluation Procedures have been approved by PG&E’s Steering Committee and are used as the basis for the evaluation process. The information contained in the Evaluation Procedures are summarized in the write-up in this section of the report.

- [REDACTED]

In the Solicitation Protocol for the 2013 CHP RFO it is stated that “PG&E will primarily use PAV to evaluate and rank Offers received in the CHP RFO.” Augmenting measures are also considered such as the value of GHG emission reductions as measured by PAV

[REDACTED]

Portfolio Adjusted Value is determined by making adjustments to Market Valuation. PAV is intended to represent the value of a resource or offer in the context of PG&E’s portfolio.

[REDACTED]

[REDACTED]

[REDACTED]

C. Detailed Description of the Evaluation Process

The following section of the report provides a more in-depth discussion of the components of the evaluation process and describes how each eligible product in the CHP RFO 2 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 Value and as a result this assessment starts with a description of Market Valuation.

Market Valuation considers how an Offer's (or contract's) costs compare to its benefits, from a market perspective. [REDACTED]

[REDACTED]

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Costs and Benefits are each quantified and expressed in terms of present value (2013 dollars) per kW-year. 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. The majority of the Offers received through this solicitation have market values that are negative reflecting a situation where costs of the offer exceed the benefits attributed to the Offer.²⁹

[REDACTED]

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

- a. Pro Forma PPA Offers – [REDACTED]

[REDACTED]

[REDACTED]

²⁸ [REDACTED]
²⁹ [REDACTED]

[Redacted]

[Redacted]

b. Utility Pre-scheduled Offers – [Redacted]

[Redacted]³⁰ [Redacted]
[Redacted]³¹ [Redacted]
[Redacted]
[Redacted]
[Redacted]

[Redacted]

c. Offers that involve termination of an existing QF contract – [Redacted]

[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]
[Redacted]

d. Hybrid Offers: [Redacted]

[Redacted]
[Redacted]
[Redacted]

³⁰ [Redacted]

³¹ [Redacted]
[Redacted]
[Redacted]

[Redacted]

2. Input Assumptions

The input assumptions are integral to the evaluation of the offers received since the input assumptions are used not only to model the offer structures proposed but also the benefits associated with each project for purposes of assessing the costs and benefits of each offer.

The input assumptions used in the evaluation include:

- [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]

As noted above, the starting point for PAV is Market Valuation. Market Valuation

[REDACTED]

1. **Location** – [REDACTED]
[REDACTED].

a. **SP15**

Energy – [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] 32 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Capacity – [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

32 [REDACTED]
[REDACTED]

[Redacted text block]

[Redacted text block]

b. Other Locations within CAISO Footprint

Energy – [Redacted text block]

Capacity – [Redacted text block]

2. Energy Firmness

Energy – [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Capacity – [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

3. Renewable Energy Credit (REC) Value

[REDACTED]
[REDACTED]

4. Curtailment – [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]:

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]

5. Adjusted Transmission Cost Adder

- a) [REDACTED]

33 [REDACTED]

b) [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].

6. CHP MW

[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

7. Final PAV

[REDACTED]
[REDACTED]

[REDACTED] ³⁴ [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

³⁴ [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

GHG Emission Protocol

This protocol specifies how each offer received in response to the CHP RFO will be evaluated in terms of GHG emissions.

The GHG emission evaluation protocol measures how an Offer contributes toward the GHG Emissions Reduction Targets specified in the CHP Settlement. One objective of the CHP Program is GHG emissions reductions. GHG emissions reductions are measured in metric tons, per the Settlement Term Sheet.

[REDACTED]

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Technical Reliability and Project Viability

This evaluation protocol specifies how PG&E will govern the evaluation process for Technical Reliability and Project Viability. [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]:

³⁵ 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.

(1) **Plant Configuration and Construction** – [REDACTED]
[REDACTED]
[REDACTED];

(2) **Plant Performance** – [REDACTED]
[REDACTED];

(3) **Plant Operations** – [REDACTED]
[REDACTED];

(4) **Plant Financing** – [REDACTED]
[REDACTED];

(5) **Plant Emissions** – [REDACTED]
[REDACTED]

(6) **Environmental Assessment** – [REDACTED]
[REDACTED].

[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED].

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Compliance With Non-Price Terms and Conditions

This criterion considers how closely an Offer complies with the terms and conditions set forth in the CHP PPA, Utility Tolling PPA, or the RA Confirmation, [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

Credit

An Offer's credit evaluation score will be based on the Participant's willingness to post collateral as required under the CHP RFO solicitation. PG&E is interested in executing agreements with creditworthy participants or participants that are willing to post the required credit support to mitigate the financial risk of non-performance under the contracts. [REDACTED]

Supplier Diversity

Supplier Diversity addresses how an offer assists PG&E in reaching its enterprise-wide diversity spending goals for Woman, Minority or Disabled Veteran Business Enterprise (WMDVBE). The evaluation methodology will use the information provided by the Participant. [REDACTED]

36

D. 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. [REDACTED]

36

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 a bias toward any product solicited in this RFO with respect to technology, operating characteristics, etc.;
- 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 or similar 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 and provided the documentation to the IE;
- PG&E uses consistent input assumptions for undertaking the evaluation of all offers;
- [REDACTED];
- 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 has evolved toward a PAV methodology for other solicitations including RPS solicitations as well;
- PG&E's methodology is consistent with Least Cost Best Fit principles by incorporating quantitative and qualitative factors to determine a shortlist of projects. [REDACTED];

- 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 CAM groups by resource type or product to allow for a more effective comparison of offers;
- [REDACTED];
- [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.

- [REDACTED]. These adjustors need to be reassessed over time as new information becomes available;
- [REDACTED];
- Given the nature of the QF/CHP Settlement, including the specific targets specified, the evaluation methodology is effective for evaluating and ranking similar resources or product types through a specific solicitation process but may not fully assess the system-wide impacts of a resource or portfolio of resources on PG&E’s overall system resource portfolio. [REDACTED];

- Qualitative factors have proven not to be very relevant in the final evaluation and selection of resources in each of the two CHP RFOs. This is largely attributed to the nature of the resources offered with most of the offers representing existing projects that are more viable and possess an operating history. As more new or potentially repowered CHP projects are offered, it would be expected that qualitative factors would become more important. [REDACTED]

E. Bid Evaluation Results and Selection of the Short List

The offers received were evaluated based on the above methodology. [REDACTED]

While the bid evaluation output results prepared by PG&E included all eligible offer alternatives (including the required alternatives where the bidder absorbs the GHG risk and the case where the GHG risk is flowed through to PG&E), for purposes of presenting the results, [REDACTED]³⁷.

In addition, for Participants which offered a hybrid option (i.e. a combination of units which are traditional CHP units and those which are converted to utility dispatchable resources), [REDACTED].

[REDACTED]

³⁷ [REDACTED]

[Redacted text block]

Exhibit 6: Summary of Bid Evaluation Results

[Redacted content block]

[Redacted]

[Redacted]

[Redacted] ³⁸ [Redacted]

[Redacted]

[Redacted] ³⁹ [Redacted]

[Redacted]

[Redacted] ⁴⁰ [Redacted]

³⁸ According to Section 4.8.1.2 of the CHP Settlement Agreement, “New PPAs with Utility Prescheduled Facilities (not Legacy PPA Amendments) count towards the MW Targets if the existing QF expires before the end of the Transition Period.

³⁹ [Redacted]

⁴⁰ [Redacted]

[Redacted]

The short list selected by PG&E is presented in Exhibit 7 below. [Redacted]

[Redacted]

[Redacted] Five ArcLight offers which proposed to convert from CHP to tolling were also ranked highly [Redacted]

[Redacted]

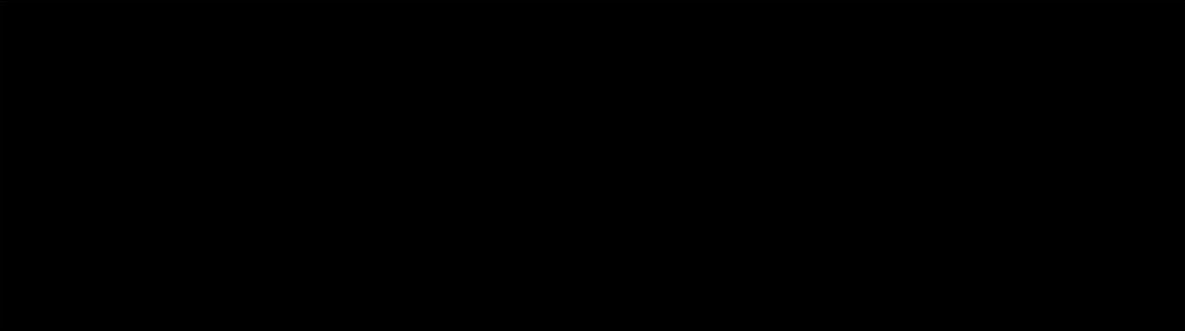
41

[Redacted]

Exhibit 7: PG&E Proposed Short List

[Redacted]

41 [Redacted]



A brief summary of the shortlisted projects is included in Appendix E.

The IE presented its observations with regard to the CHP RFO 2 process to the PRG/CAM [REDACTED] [REDACTED]:

- 1) [REDACTED]
[REDACTED]
[REDACTED];
- 2) [REDACTED]
[REDACTED];
- 3) [REDACTED]
[REDACTED];
- 4) [REDACTED]
[REDACTED];
- 5) [REDACTED]
[REDACTED];
- 6) [REDACTED]
[REDACTED]
[REDACTED].

The IE also identified the factors or “value drivers” that distinguished the valuation of offers. These included:

- 1) [REDACTED]
- 2) [REDACTED]
- 3) [REDACTED]
- 4) [REDACTED]
- 5) [REDACTED]

E. Recommended Future Improvements in the Evaluation and Ranking Process

There are several issues that should be considered as potential future improvements in the evaluation and ranking process. These include:

- Continue to assess the value of the adjustors for undertaking the Portfolio Adjusted Value of offers received;
- Conduct an assessment of whether the methodology used for the first two solicitations is a reasonable approach [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. For example, it appears that PG&E will be able to meet its CHP MW targets for the first Program Period fairly easily but will fall short of its GHG emission reduction targets. To meet the emission reduction targets PG&E will either have to over-procure CHP, procure more renewable resources, or find other methods for meeting CHP emission reductions. The IE recommends that PG&E develop a methodology to assess such costs by calculating the total additional cost to acquire more CHP MW than is required to meet the targets to achieve the GHG emission reduction targets;
- The IE previously recommended that PG&E should engage the bidders sooner in the bid evaluation process. For CHP RFO 2, PG&E contacted the Participants shortly after receipt of the offers to review the offer and discuss the pricing and operational parameters of the offers prior to beginning the evaluation process. PG&E adopted this approach for CHP RFO 2, which proved to be a valued addition to the evaluation process;
- In the IE’s view one of the successes of the CHP RFO 2 process was that PG&E’s project team was proactive in attempting to create value by identifying possible opportunities to enhance potential GHG emission reductions or CHP MW during discussions and negotiations with counterparties. PG&E should continue to pursue opportunities to increase the potential for GHG emission reductions given the current status of PG&E for nearly achieving its CHP MW target but lagging behind in reaching its GHG emission reduction targets;
- [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

F. Additional Information or Observations Regarding PG&E's Evaluation Methodology

No additional information or observations are provided.

V. Did PG&E Fairly Administer the Evaluation Process?

A. Principles and Guidelines Used to Determine Fairness of Process

In evaluating PG&E's performance in implementing the CHP RFO solicitation process, Merrimack Energy has applied a number of principles and factors, which incorporate those suggested by the Commission's Energy Division in previous Templates as well as additional principles that Merrimack Energy has used in its oversight of other competitive bidding processes. These include:

- Identify the principles you used to assess the fairness of the LCBF evaluation process including the following:
 - What qualitative and quantitative factors were used to evaluate bids?
 - If applicable, were affiliate bids treated the same as non-affiliate bids?
 - Were economic evaluations consistent across bids?
 - Was there a reasonable justification for any fixed parameters that enter into the methodology?
- Were all Participants treated the same regardless of the identity of the Participants?
- Were Participants questions answered fairly and consistently and the answers made available to all?
- Describe the IE methodology used to evaluate administration of the IOU LCBF process.
- How did the IOU identify non-conforming bids?
- For those parts of the process conducted by the utility, how were the parameters and inputs used and were they reasonable? What quality controls were in place?
- Did the quantitative and qualitative methodologies result in a fair and equitable evaluation and selection process?
- Did the bid evaluation team maintain consistent scoring and evaluation among and across projects, including different products and price structures?
- Were the requirements listed in the RFO Protocol applied in the same manner to all proposals?

- Was there evidence of any undue bias regarding the evaluation and selection of different type of product, project structures, or bid sizes, that cannot be reasonably explained?
- Did PG&E ask for “clarifications” in a manner that provided the bidder an unfair advantage over others?
- Did all bidders have access to the same information?
- Did PG&E consistently apply the requirements, procedures and criteria of the evaluation process as identified in the RFO documents to different bids and types of projects?
- Was the evaluation and selection process based on complete information about each proposal and a thorough investigation by PG&E’s project team?

B. Description of IE Methodology Used to Evaluate Administration of PG&E’s CHP RFO Solicitation Process

As previously discussed, the IE was actively involved in all phases of the process. The IE was copied on all emails exchanged between PG&E and Participants including receiving copies of all offers, supporting documents, and contracts. The IE also compiled summaries of all offers and the results of the bid evaluation and was fully engaged in the progress of the process throughout. In addition, the IE and PG&E’s Project Manager had regular conference calls to discuss the progress of the solicitation process and any issues that arose during the process. Also, during the bid evaluation and selection process the IE held several meetings with PG&E’s quantitative and qualitative evaluation teams. With regard to the quantitative evaluation team, the IE met on several occasions to discuss the bid evaluation methodology prior to submission of bids. The IE also held several meetings with the quantitative team to discuss the rationale underlying the interpretation and evaluation of each offer, to discuss the results generated by the team, and follow-up questions and responses to questions submitted by the IE at the time of IE review of the bid evaluation results. The IE basically had unfettered access to members of the evaluation teams for this solicitation. Furthermore, as previously noted, at the IE’s request [REDACTED]

This allowed the IE to review the evaluation results for each project in a timely manner and identify any perceived inconsistencies in the evaluation results. All issues and questions raised by the IE relative to the evaluation of offers was resolved by PG&E prior to selection of the shortlist.

[REDACTED]

[REDACTED]

After review of the bid evaluation methodology and testing of the results, the IE concluded that the evaluation methodology is reasonable for this type of analysis and effectively evaluates offers with different products, terms, and contract structures. The IE found no evidence of bias in the evaluation methodology as a result of review of the model operation and results. Although dispatchable or offers with dispatchable components generally ranked higher in the evaluation, the IE does not view that result to be attributed to any bias in the models but to the value of dispatchability for resources of this type since dispatchable resources can be “run” when the variable cost of power from the facility is below the market price. On the other hand, standard CHP options are generally forward contracts that provide power to the market when available. [REDACTED]

[REDACTED]

Based on the IE’s involvement, we conclude that PG&E reasonably followed the criteria outlined in the CHP RFO. Any revisions to the process were fully vetted between the IE and PG&E’s Project Manager and in the IE’s view did not negatively affect the final evaluation and selection process. In addition, the evaluation was consistent and equitable with regard to all offers. PG&E’s overall approach for this initial solicitation was to be

⁴² While it is typical for a new power project to secure financing over a 15 to 20 year terms, the contract term for new CHP is only 12 years.

the cost of achieving GHG emission reduction targets. [REDACTED]
[REDACTED]
[REDACTED].

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

D. Administration of the Bid Evaluation Process

The IE has concluded that the bid evaluation process was fairly administered with respect to all Offers. Since there were no affiliate Offers, issues associated with affiliate Offers were not a factor in the assessment. The IE felt that PG&E's project team performed their function in communicating with Participants in an exemplary manner, particularly with regard to follow-up conference calls with Participants that were not selected for a contract. PG&E generally provided thorough and informative responses to Participant questions and did so in a timely manner.

E. Any Other Relevant Information

None at this time.

VI. Project Specific Contract Negotiations

For reviewing and evaluating the performance of the utility with regard to specific contract negotiations, the IE has addressed the issues raised in the CPUC Independent Evaluator Report Template. These include:

- Identify the principles the IE used to evaluate negotiations.
- Using the principles, evaluate the project specific negotiations. Highlight any issues of interest/concern including unique terms and conditions.
- Was similar information/options made available to other bidders when appropriate (i.e. if a bidder was told to reduce its price, was the same information made available to others?)
- Describe and explain any differences of opinion between the IE and utility. If resolved, describe the reasonableness of the outcome.
- Any other information relevant to negotiations not asked above but important to understanding the IOU's process.

The general principles followed by the IE in evaluating contract negotiations include assurance that the risk allocation provisions in the contract are reasonably balanced between the counterparties and that the utility customers are not placed at undue risk as a result of the contracting process. The IE generally “monitors” but does not actively participate in the contract negotiation process but will identify issues to the utility transactors if negotiations are moving off track or there are potential biases or inconsistencies in the process. It has been the IE’s experience in monitoring a number of negotiation processes that contract negotiations can divert off course but eventually return to a balance after contested provisions are resolved. We also attempt to ensure that similarly situated counterparties are treated the same or similarly and that all counterparties are provided with the same message. For example, PG&E has generally provided a clear message to counterparties to the CHP solicitations that the process is a very competitive process with more projects shortlisted than PG&E intends to execute contracts for. As a result, counterparties should sharpen their pencils and price as competitively as possible. This message was clearly sent to all shortlisted Participants.

The other issues above will be addressed in the discussion of contract negotiations with five ArcLight projects subject to this Advice Letter filing. [REDACTED]

The five Agreements with ArcLight Capital Partners are all conversions from CHP to Utility Pre-scheduled Facilities (“UPF”) or dispatchable facilities based on PG&E’s CHP Tolling Agreement. The Agreements were executed by PG&E and four of the projects on December 6, 2013, with the fifth Agreement for Chalk Cliff executed on December 19, 2013. The total contract capacity of the five projects is 210 MW, with a nameplate rating of 240 MW. The Agreements are for the purchase and sale of Capacity, Energy, and all other products that are available from the Facilities. The projects are existing CHP projects that currently sell electricity to PG&E under a QF agreement. The five projects achieved commercial operations at different times between 1990 and 1995.

ArcLight submitted proposals for all five facilities in response to PG&E’s CHP RFO 2, proposing to offer a conversion from a CHP to UPF which are fully dispatchable by PG&E under a tolling agreement.

Exhibit 8 summarizes the key pricing and other provisions submitted by ArcLight in their proposal to PG&E. The pricing provisions are the same for all five facilities but there are a few slight differences between the contracts that will be highlighted by the IE in this write-up.

Exhibit 8: Pricing Provisions in Original Proposals

Proposed Pricing	Summary of Offer

As part of its process to contact all Participants who submitted offers shortly after receipt of offers, PG&E held a conference call with ArcLight to discuss the five offers. [REDACTED]

[REDACTED]

As illustrated on Exhibits 6 and 7, the five ArcLight were highly ranked in PG&E's bid evaluation process. [REDACTED]

[REDACTED]

[REDACTED]

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After notifying ArcLight that its five offers had been shortlisted, PG&E and ArcLight first executed a non-disclosure agreement. PG&E then initiated a call with ArcLight to discuss the shortlisted offers and the next steps in the process. During this initial meeting, the parties also reviewed all the changes in the redlined Tolling Agreement submitted by ArcLight. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]:

- [REDACTED];
- [REDACTED];
- [REDACTED];
- [REDACTED].

[REDACTED]

43 [REDACTED].

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

- [Redacted text];
- [Redacted text];
- [Redacted text];

[Redacted text]

[Redacted]

44

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

44 [Redacted]

[Redacted text block]

[Redacted text line]

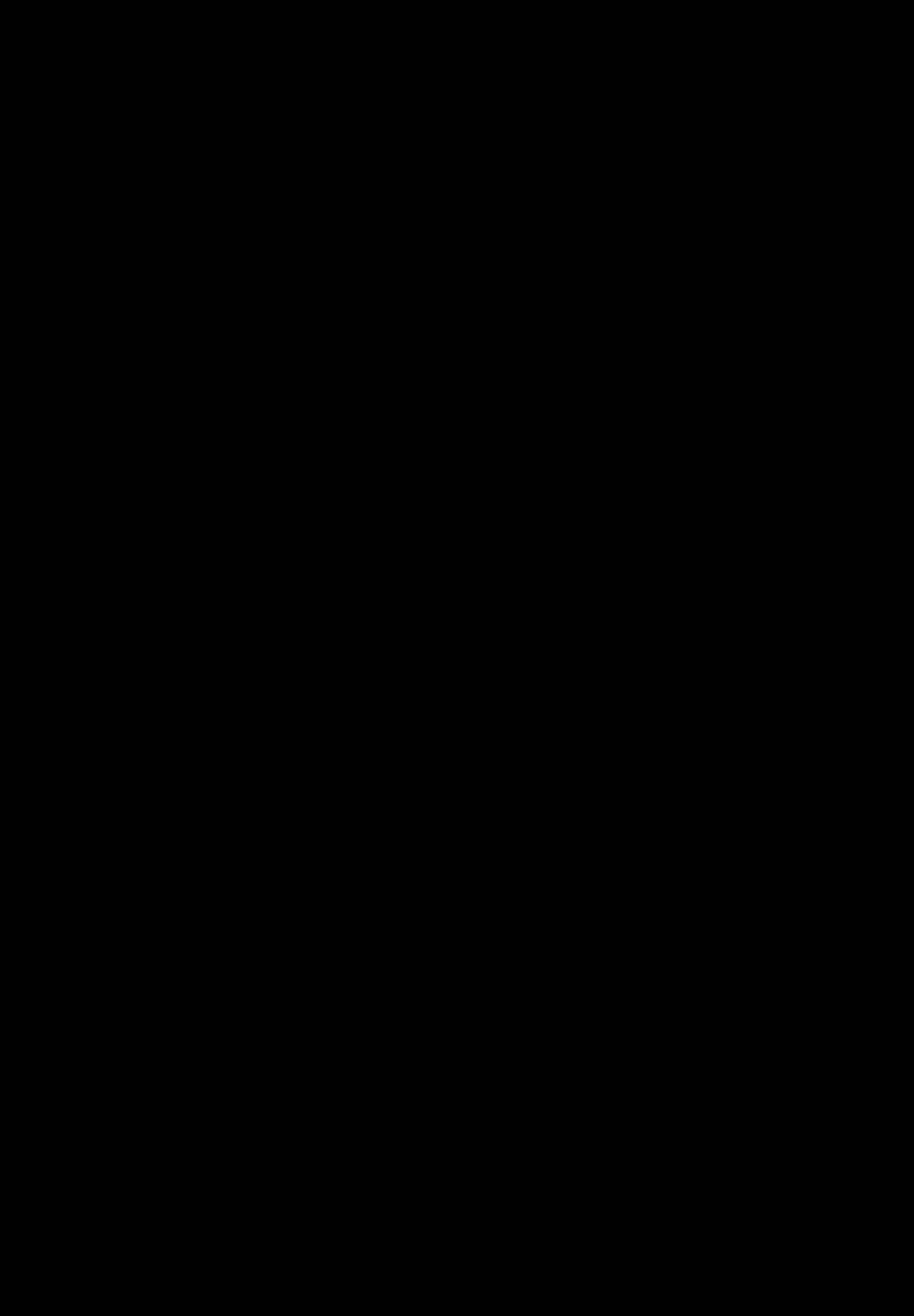
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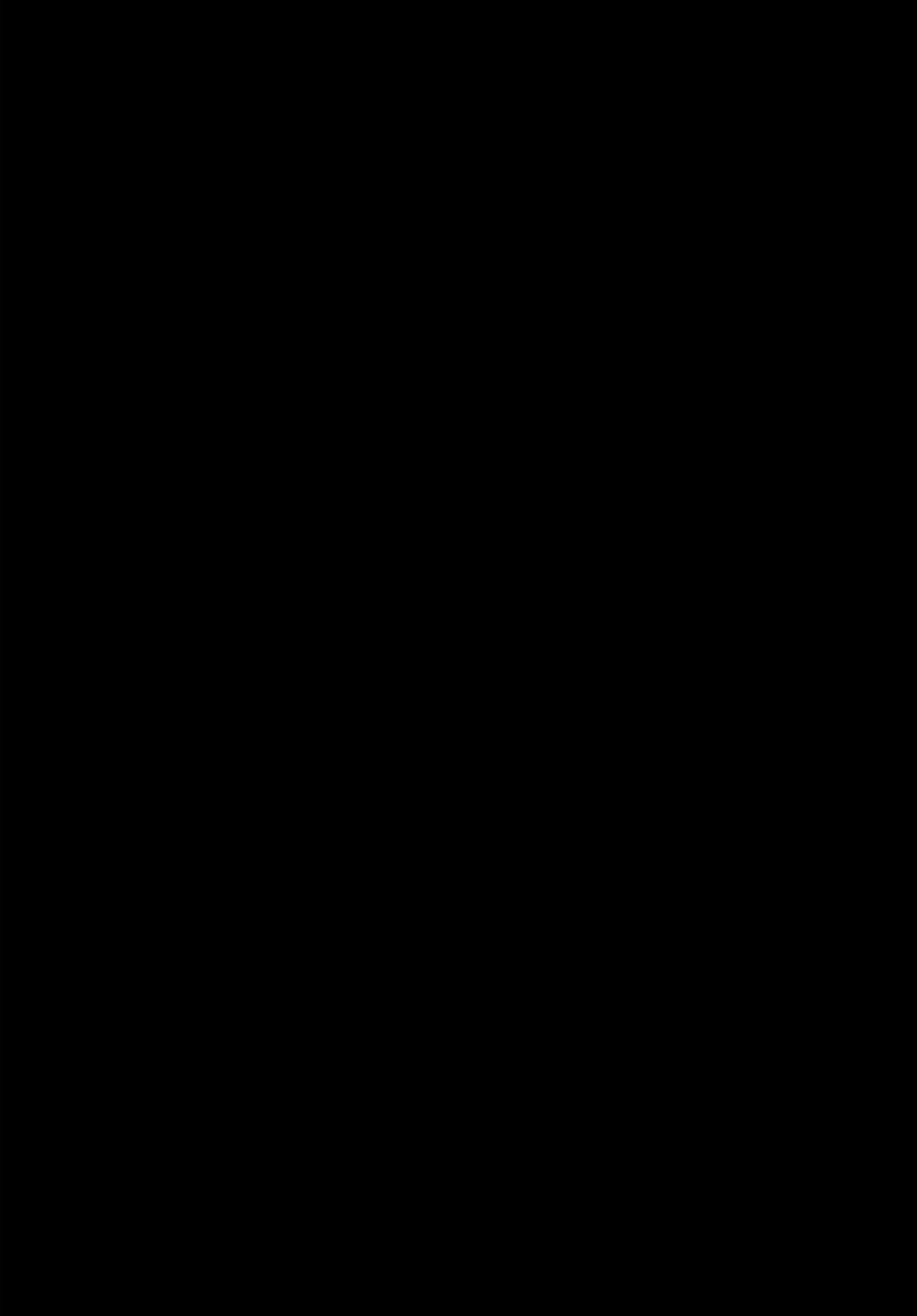
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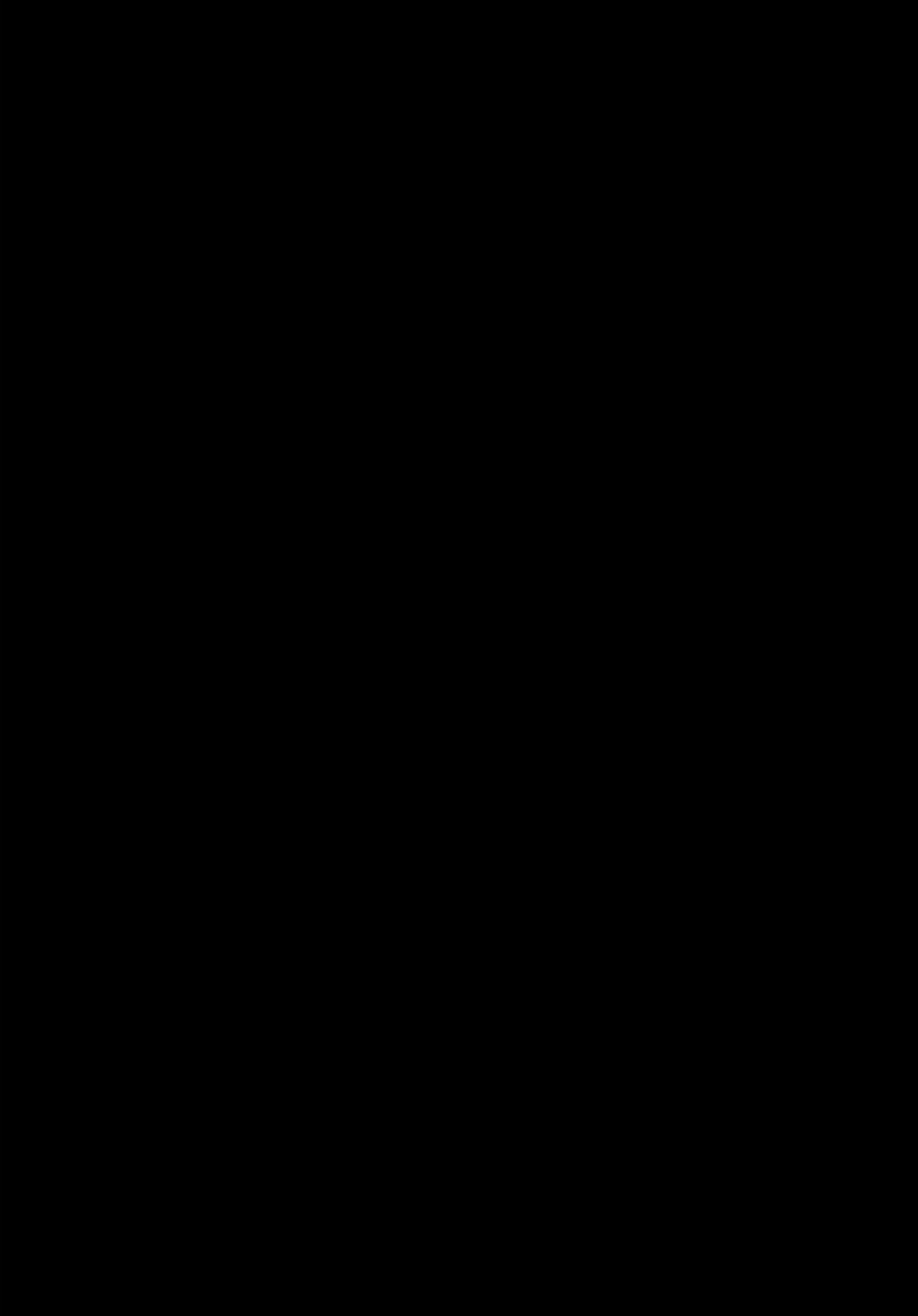
[Redacted text line]

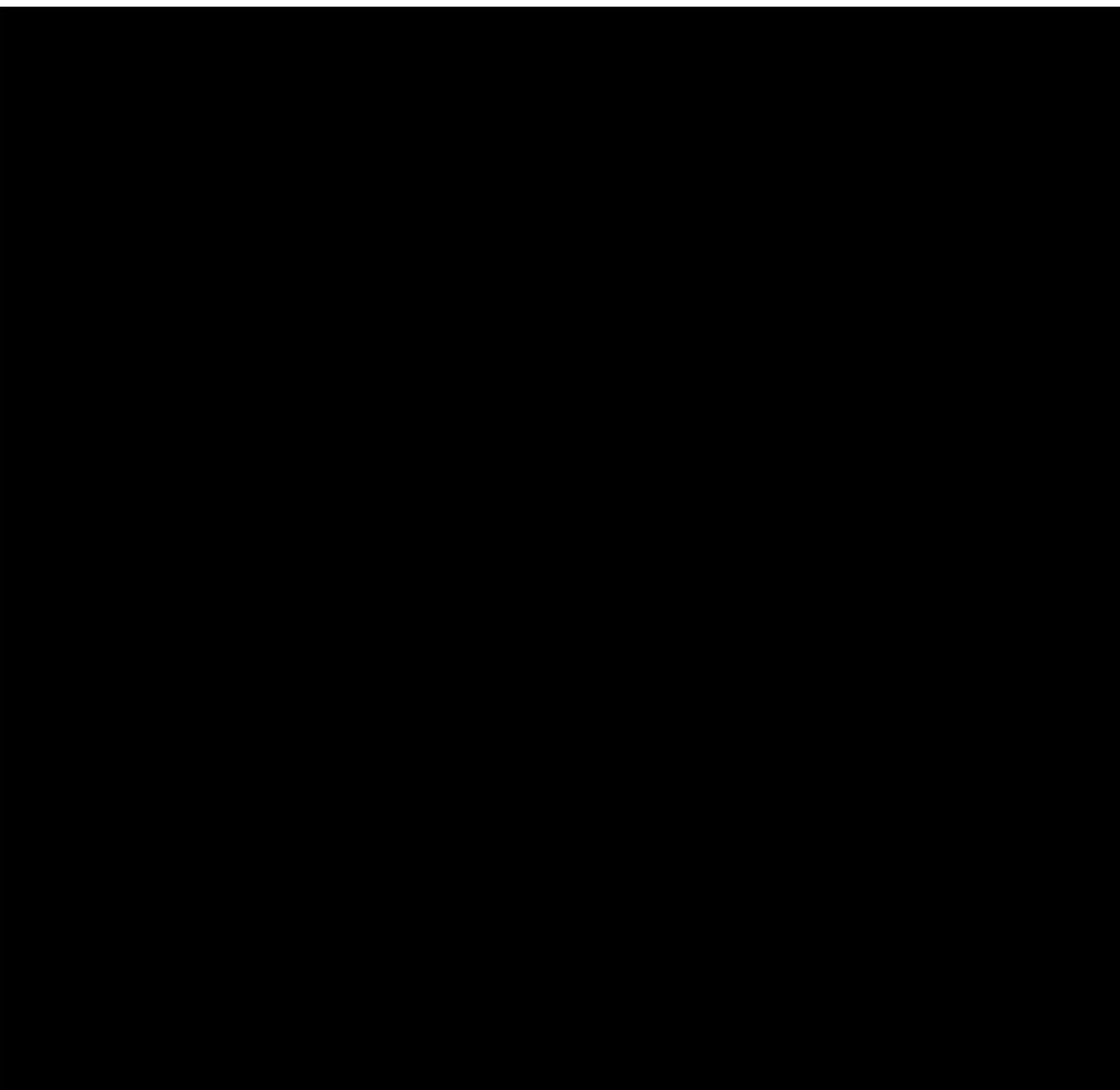
Exhibit 12: Final Contract Provisions

[Redacted text block]



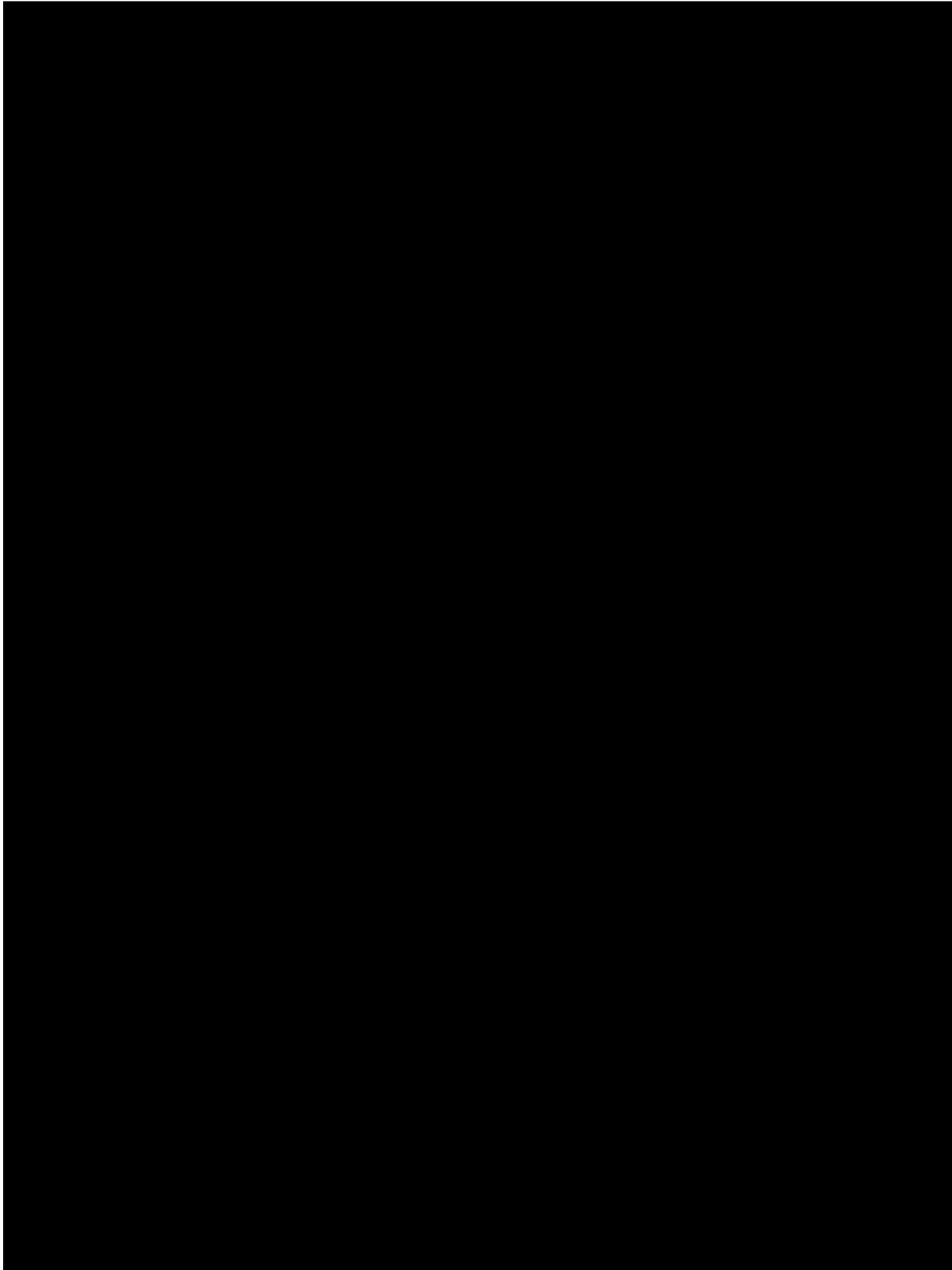


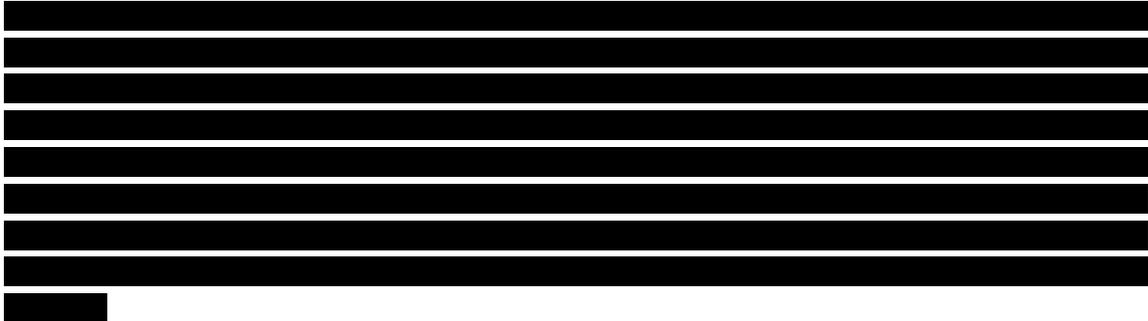




In addition to the contract provisions described above, the Tolling Agreements also include Appendix II which provides a description of the facility, unit and operational limitations. Since this Advice Letter filing requests approval for five Agreements with five different projects, Exhibit 13 is designed to provide relevant information regarding the operational characteristics of all units, including data from Appendix II of each Agreement as well as information provided with the Offers.

Exhibit 13: Summary of PPA Appendix II for Each Project





VII. Treatment of Affiliate Bids

PG&E did not have any affiliate bids competing in the CHP RFO solicitation.

VIII. Assessment of the PPA Relative to Energy Division Criteria

The CPUC has issued Resolutions approving several contracts between the IOU's in California and CHP facilities under the QF/CHP Settlement. The Resolutions have addressed the criteria used by the Energy Division to assess and evaluate the PPAs. The criteria include:

- Consistency with D.10-12-035, which approved the QF/CHP Program Settlement including:
 - Consistency with the Definition of CHP Facility and Qualifying Cogeneration Facility;
 - Consistency with CHP Request for Offers (“RFO”);
 - Consistency with MW Counting Rules;
 - Consistency with GHG Accounting Methodology;
 - Consistency with Cost Recovery Requirements.
- Need for Procurement;
- Contract Pricing/Cost Reasonableness;
- Public Safety;
- Project Viability;
 - Technology
 - Bidder Experience
 - Credit and collateral
 - Permitting, site control and other site-related matters
 - Fuel Status
 - Transmission upgrades
- Consistency with Emissions Performance Standard;
- Consistency with D.02-08-071 and D.07-12-052 which require Procurement Review Group (“PRG”) and Cost Allocation Mechanism (“CAM”) Group participation.

In this section of the Report, the IE addresses the relevant criteria identified in the IE Template relative to the contracts as submitted in this Advice Letter filing.

A. Consistency with D.10-12-035 which approved the QF/CHP Program Settlement

The projects underlying the contracts which are the subject of this Advice Letter filing have operated as qualifying facilities since the 1990's. The facilities have provided steam to several steam hosts for enhanced oil recovery operations. All five facilities operated as Qualifying Cogeneration Facilities and met the definition of "cogeneration" under the Public Utilities Code Section 216.6 as of September 20, 2007. All projects have nameplate power ratings that are greater than 5 MW and are therefore qualified to bid into the CHP RFOs. A CHP Facility that has met the PURPA efficiency requirements as of September 20, 2007 and that converts to a Utility Prescheduled Facility is eligible to participate in the CHP RFOs whether it will be a Qualifying Facility or Exempt Wholesale Generator.

The five ArcLight facilities are converting from existing CHP facilities to Utility Prescheduled Facilities. As required by Section 4.2.2.2 of the Settlement Term Sheet, the ArcLight facilities met the efficiency requirements as of September 20, 2007. PG&E has verified that ArcLight met the efficiency requirements in 2007 based on compliance reports. In conclusion, the five ArcLight facilities meet the eligibility requirements to bid into PG&E's CHP RFO.

According to the Settlement Term Sheet (Section 4.8.1.2), a new PPA with a Utility Prescheduled Facility (not Legacy PPA Amendments) counts toward the MW targets if the existing QF PPA expires before the end of the Transition Period. The Transition Period shall not extend beyond July 1, 2015. All five ArcLight facilities have contract termination dates that are prior to July 1, 2015. Therefore, the 48 MW nameplate rating for each facility should count toward PG&E's MW procurement Target.

With regard to GHG emission reduction credits, according to Section 7.3.1.3 of the settlement Term Sheet, a CHP facility change in operation or conversion to a utility prescheduled facility counts as a GHG credit. Measurement is based on the Baseline year emissions minus the projected PPA emissions and emissions associated with replacing one hundred percent (100%) of the decreased electric generation at the time differentiated Heat Rate. The Baseline year emissions are the average of the previous two calendar years of operational data. PG&E has conducted an analysis of the expected generation from the facilities based on the unit heat rates, operating costs, and operational constraints. PG&E estimates that the total GHG emission reductions for the five facilities are approximately 154,186 MT. This includes: Bear Mountain (31,501 MT); Chalk Cliff (31,651 MT); Live Oak (45,068 MT); Badger (21,329 MT); and McKittrick (24,637 MT).

B. Need for Procurement

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]. The execution of the five contracts with ArcLight will provide an addition 240 CHP MW toward the procurement target. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] The contracts with ArcLight will provide an additional 154,186 MT⁴⁵ of GHG reductions, [REDACTED].

C. Cost Reasonableness

The pricing agreed to by the parties is contained in the PPAs which are the subject of this Advice Letter filing. Pricing for the ArcLight projects has changed over the course of the RFO process. All five projects were among the most competitive from the 2013 CHP RFO process, [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] The ArcLight offers were the most competitive from among a robust market response to the solicitation in terms of meeting the needs of PG&E’s CHP RFO 2 while ensuring the highest ratepayer benefit among the shortlisted projects.

D. Project Viability

All five of the ArcLight projects are existing projects with PPAs with PG&E. All projects went into service in the 1990 to 1995 timeframe, are fully permitted, have site control and have served several enhanced oil recovery steam hosts for a number of years. [REDACTED]
[REDACTED]
[REDACTED].

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

⁴⁵ The IE requested that PG&E provide the detailed methodology and inputs for each of the projects for review and assessment. PG&E provided the back-up information requested by the IE and the IE was then able to verify the results prepared by PG&E to support the GHG emission reductions requested.

IX. Bid Selection Recommendation

The IE was in general agreement with PG&E's overall shortlist selection, as well as the initial focus on the priority group of projects for which PG&E would initiate contract negotiations, including the ArcLight offers which garnered attention from PG&E from the beginning of the negotiation process. PG&E's shortlist was fairly inclusive and represented most of the eligible products requested. [REDACTED]

[REDACTED]. The five contracts with ArcLight represent some of the highest ranked offers from a PAV/CHPKW, Net Market Value (NMV/kW-year), and GHG reduction basis and therefore merit approval.

X. Conclusions and Recommendations

A. Conclusions and Observations

Merrimack Energy has the following conclusions and observations about the 2013 CHP RFO solicitation process based on its role of IE in this process:

- The contracts with ArcLight for five Utility Prescheduled Facilities provide an excellent balance in risk between the counterparties and provide relative value for PG&E and its customers. [REDACTED]

[REDACTED]. In addition, the projects in total provide a significant reduction in greenhouse gas ("GHG") emissions of an estimated 154,186 MT through a change in operations from CHP to Utility Prescheduled projects. PG&E has also negotiated additional value through negotiation of lower prices and more operational flexibility than originally offered. Based on the totality of project value relative to other projects on the short list as well as GHG emission reductions, the IE therefore concludes that the contract warrants CPUC approval;

- Both parties negotiated diligently and methodically to complete a contract that is favorable to both parties. PG&E's project team was aggressive with regard to pricing throughout the negotiations, continuously reminding all shortlisted counterparties that the process was a very competitive process with more MW on the shortlist than PG&E intended to acquire. [REDACTED]

[REDACTED]. All in all, the ability of the parties to work cooperatively to reach reasonable compromise was important for completing these agreements.

[REDACTED]
[REDACTED]
[REDACTED];

- The ArcLight facilities are operating projects that have been in operation since the early 1990's. The facilities are interconnected to the CAISO grid, have a reliable record of operations, and are viable projects based on site control, status of permits, and access to fuel supply;
- The RFO process was conducted consistent with the requirements outlined in the QF/CHP Settlement Agreement. PG&E was very diligent in ensuring that the provisions of the Settlement were adequately addressed and included in the design and implementation of the solicitation process. As IE, one of Merrimack Energy's objectives was to ensure the solicitation requirements conformed to the directives in the Settlement. The IE concludes that PG&E's solicitation process does conform to Settlement requirements;
- Based on our assessment of the evaluation process relative to the criteria outlined, it is our opinion that all Participants were treated equitably, consistently and fairly in the process. All Participants had access to the same amount and quality of information at the same time via PG&E's website dedicated to the CHP RFO process. PG&E posted all RFO information and Questions and Answers on PG&E's CHP RFO website. We also observed no difference in the treatment of Participants regarding clarification questions for Participants, correspondence and communications with Participants, follow-up contacts, and contract negotiations;
- PG&E's outreach process was a very active and inclusive process. Not only did PG&E actively inform prospective bidders of the status of the RFO and requirements for participating but PG&E also held several forums for Participants to communicate with PG&E and ask questions to clarify any issues about the process. This included the Participants Conference and the Participants Offer Form Conference call to review and explain how to complete the Offer Form. For this solicitation PG&E contacted all Participants subsequent to submission of offers to discuss the details of the offer and to ensure PG&E had a clear understanding of the offer for purposes of accurately accounting for all required offer information prior to beginning the evaluation process. PG&E also debriefed the Participants who did not make the shortlist and were interested in participating in a debriefing session. While the PG&E project team refused to get into specifics about the exact reasons for lack of success, the project manager identified in a general way the reasons for failure of the project to be successful. PG&E and the IE also used the opportunity for discussion with the counterparties regarding input into future solicitations. Several counterparties provided general feedback, the vast majority of which was very positive. However, the counterparties were not very specific about ways to improve the process;
- The CHP RFO Protocol and associated documents were generally clear and concise and were not overly burdensome. In the IE's view, the solicitation materials were sufficiently clear to communicate to perspective Participants what was required by PG&E to conduct its evaluation. Furthermore, the information

required of Participants was linked to the evaluation criteria. Participants who were not short listed provided input to PG&E and the IE that the documentation was reasonable and clear;

- Overall, the IE viewed the evaluation and ranking of offers by PG&E as being reasonable, consistent and fair to all Participants and consistent with the evaluation protocols. The evaluation results led to a shortlist ranking that included a range of project types, including traditional CHP offers, offers converting to UPF options, and hybrid facilities. [REDACTED]
[REDACTED], the IE views this outcome as being based on the higher cost of these options rather than any biases in the evaluation process. Based on the results of the evaluation, the IE also concludes that the evaluation methodology treats all types of products/resources fairly with no undue benefit to one type of product or resource. PG&E did not reject any offers at the initial stage of the evaluation and instead contacted Participants to ensure that all offers were complete and provided the information necessary for evaluation. All offers were therefore evaluated using a consistent set of inputs and assumptions and reflected a complete offer;
- PG&E generally followed its protocols with regard to the ranking and selection of offers. PG&E did not deviate from the stated protocol information with regard to the application of factors described in the evaluation protocols;
- Prior to and during the evaluation process, PG&E developed separate evaluation teams for the quantitative and qualitative factors, ensuring that bias did not inherently exist in the evaluation process;
- PG&E’s quantitative evaluation methodology was a reasonable methodology for evaluating the value of each offer by taking into consideration the benefits and costs over a consistent period based on a consistent set of inputs and assumptions. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED];
- From a qualitative perspective, all qualitative factors that would be used in the evaluation process were clearly identified and described in the CHP RFO protocol;
- PG&E was very active and diligent in attempting to uncover value and opportunities for additional CHP MW and GHG emission reductions within several projects. These activities were positive and beneficial for attempting to meet QF/CHP Settlement objectives;

- The PRG and CAM Group were actively involved in the CHP RFO process via several meetings with PG&E’s Project Team. PG&E held meetings with the PRG and CAM group to provide an update on PG&E’s status toward meeting its CHP and GHG reduction targets and to identify PG&E’s plan to issue CHP RFO 2 ([REDACTED]); provide a review of the offers received and describe the CHP RFO 2 evaluation methodology and criteria ([REDACTED]); present the results of the CHP RFO 2 evaluation and ranking and discuss PG&E’s proposed shortlist ([REDACTED]); provide an update on the transaction status with regard to the shortlisted offers selected for the shortlist from CHP RFO 2 ([REDACTED]); and provide an update on the status of negotiations with [REDACTED] ;
- The IE’s overall assessment is that PG&E’s evaluation and ranking of the offers and its decisions on offer ranking and short list selection were fair, reasonable, and consistent. PG&E exhibited considerable care and diligence in the evaluation process.

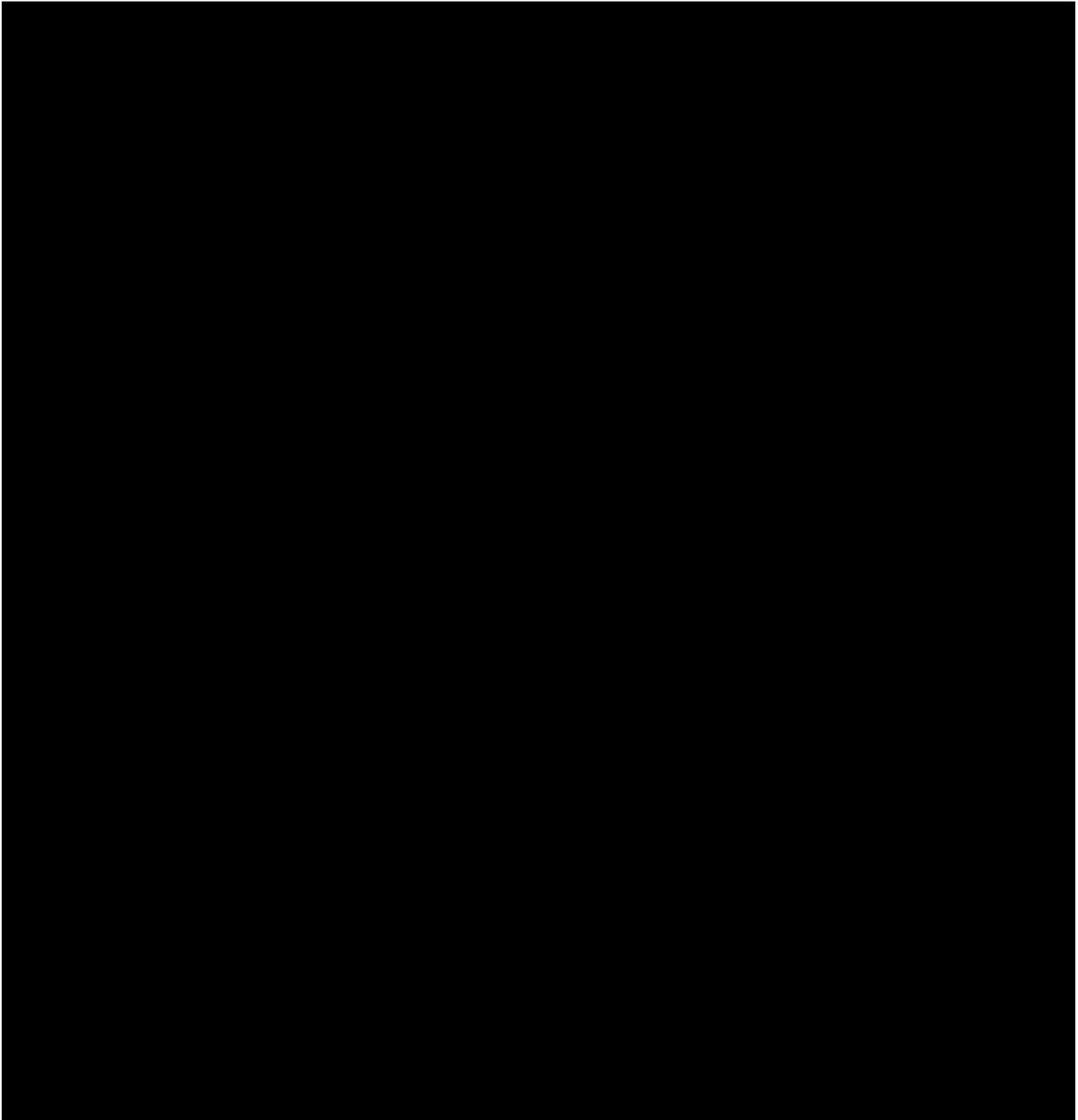
B. Additional Recommendations

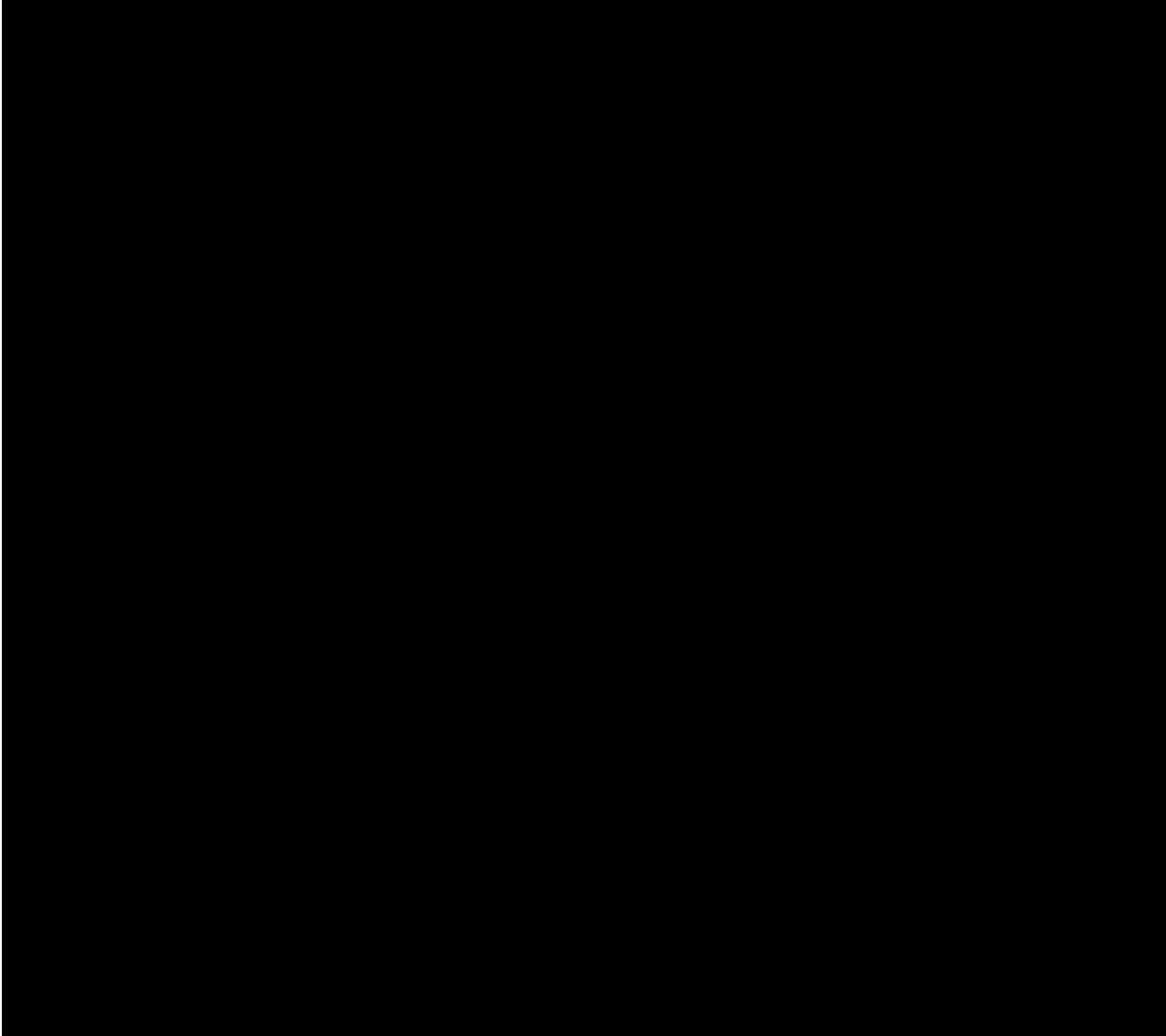
In addition to the recommendations listed by the IE in Chapter IV regarding the evaluation and ranking process, the IE has a few additional recommendations associated with process issues for future solicitations. These include:

- Through the process of engaging Participants early in the process, PG&E was able to identify potential value from projects that may not have identified such opportunities based on their offers provided on the offer forms. Given the current status for PG&E to meet its CHP MW and GHG emissions reduction status, in the future projects with high GHG emission reductions which offer limited amounts of CHP MW will be favored. PG&E should continue to engage Participants early in the solicitation process and may want to encourage Participants to offer more flexibility regarding GHG emission reduction opportunities that may not easily conform to the Offer Forms;
- The IE remains of the opinion that the contract negotiation process is too lengthy. While PG&E was diligent on focusing continually on the contract negotiation process with ArcLight for the five projects included in this Advice Letter filing, the experiences with several other projects was more of a “fits and starts” process. PG&E and the counterparty would aggressively negotiate on a concerted basis but then one party or the other would reduce its efforts for a period of time. For future solicitations, it would be preferable for both counterparties to set a time limit for negotiations upfront in the process and attempt to abide by the schedule. Perhaps fewer projects should be selected for the shortlist or the process for ranking the projects for negotiation purposes needs to be defined more clearly so that only a limited number of projects would be the subject of negotiations. Another option would be to select a more limited negotiation list and maintain a backup list should negotiations with one or more projects fail;

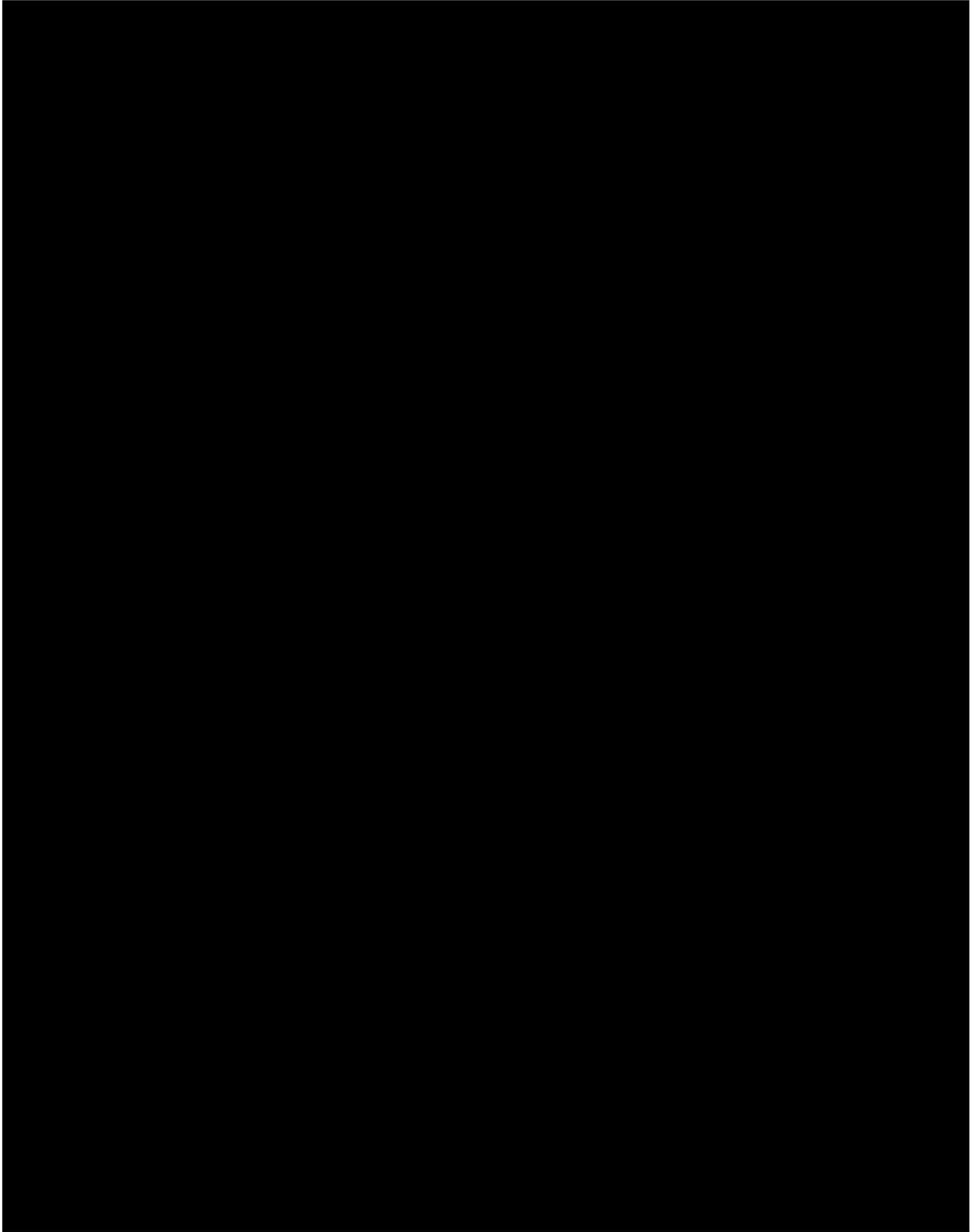
- PG&E should conduct a review of the information required of Participants when they submit their offers to ensure that the information requested is used in the evaluation of offers, so as to avoid the requirement for any extraneous information that may not be used in the evaluation process.

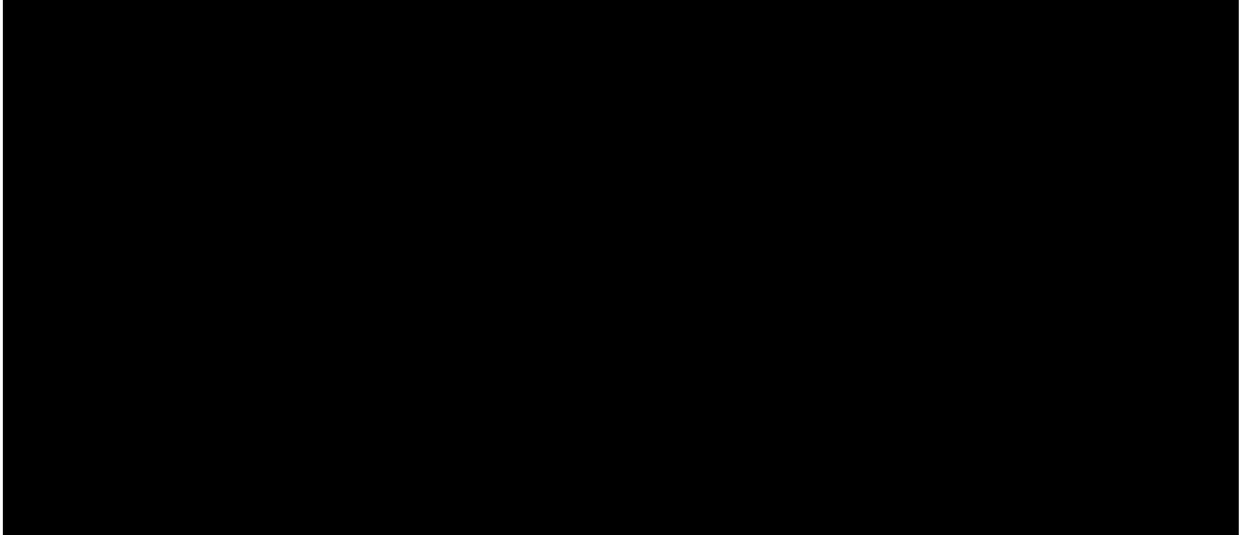
Appendix A: Summary Information for the Offers Received



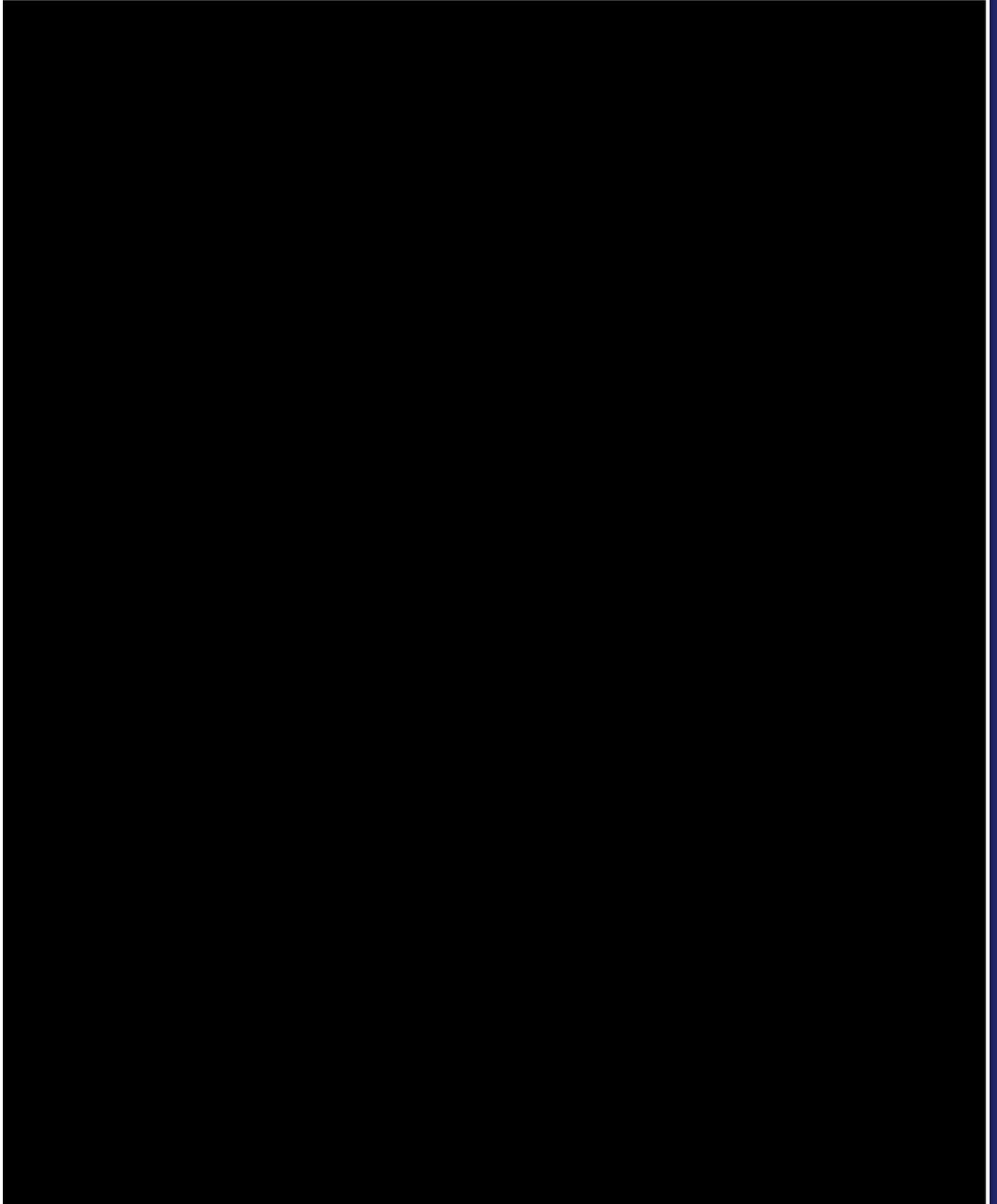


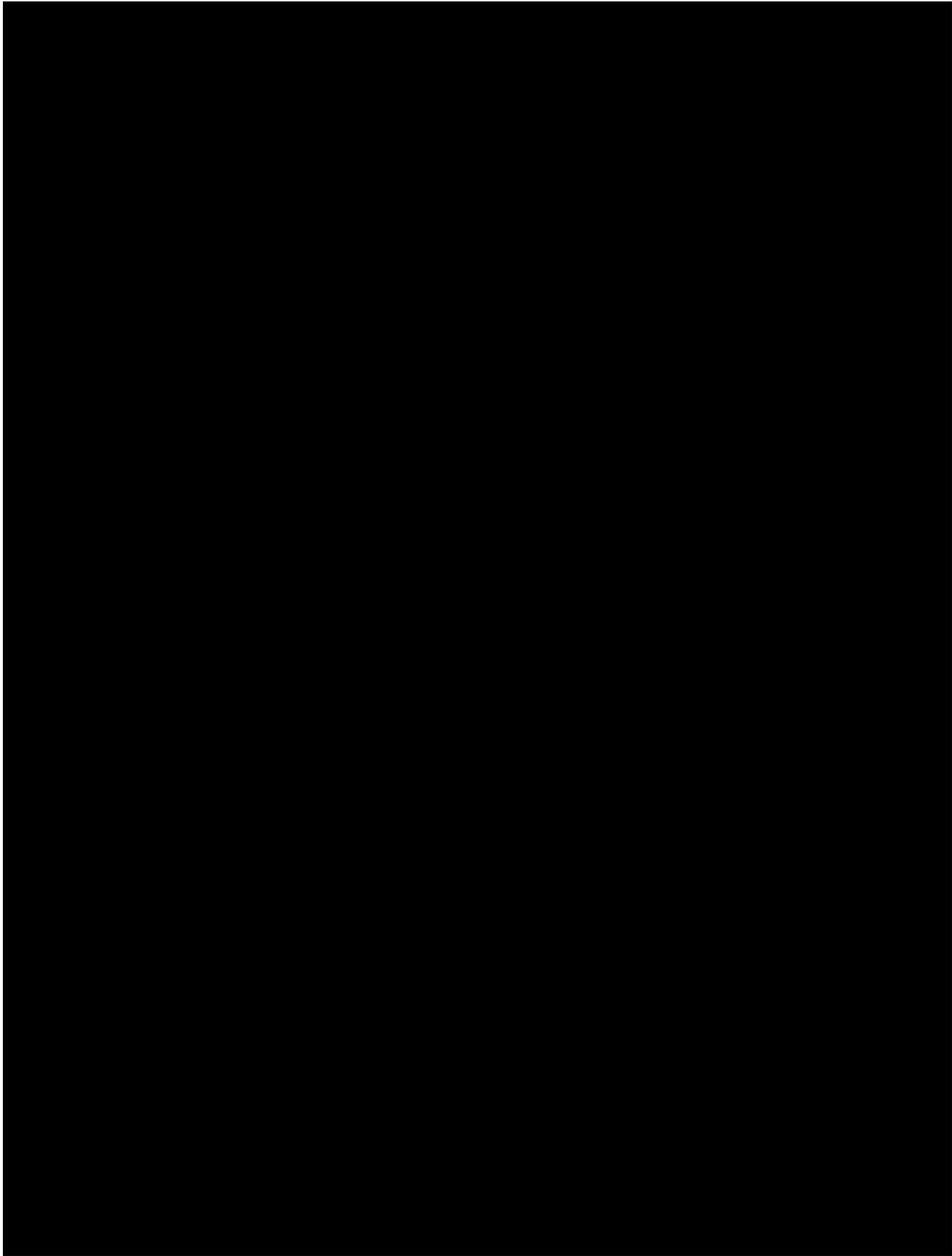
Appendix B: Additional Summary Information for the Offers Received

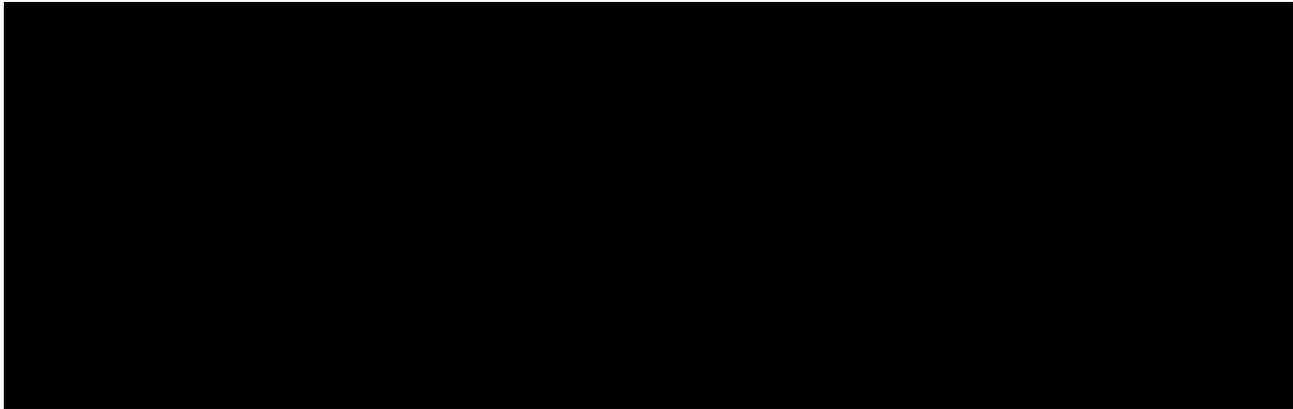




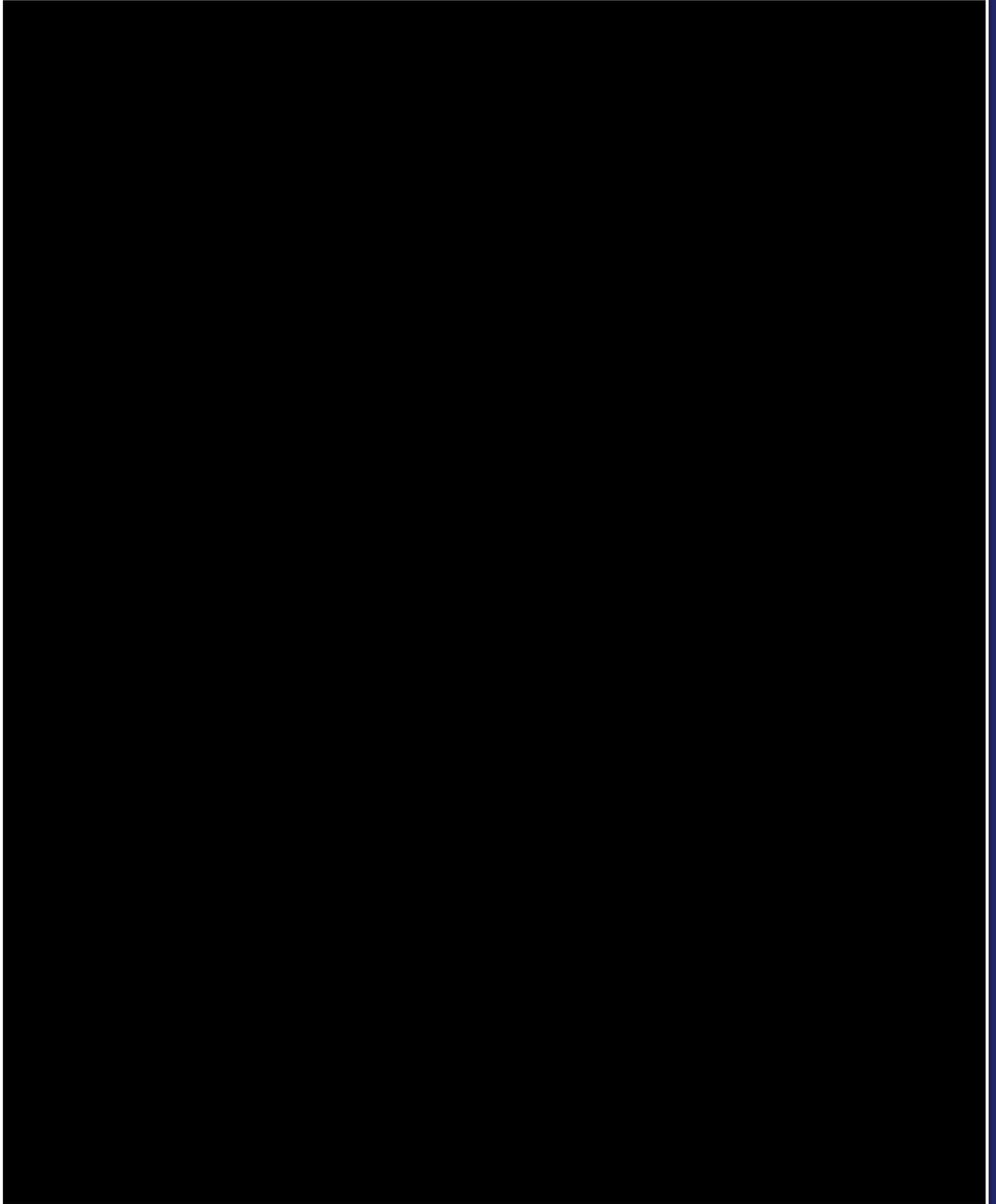
Appendix C: Bid Price Information- Buyer Assumes GHG Risk

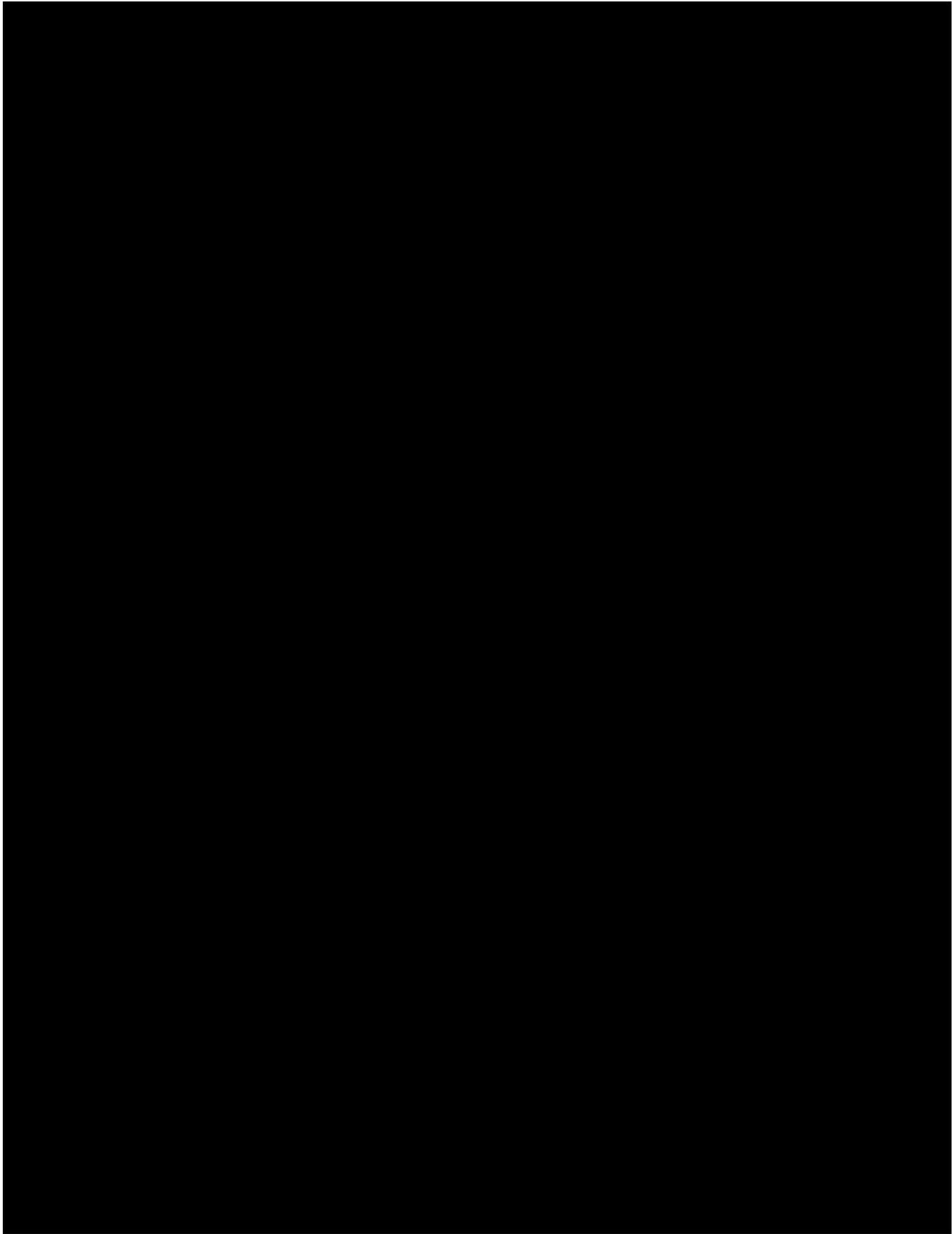






Appendix D: Bid Price Information- Seller Assumes GHG Risk







Appendix E: Summary of Shortlisted Offers

[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]

[REDACTED]

Appendix 2
Declaration of Elizabeth Ingram Seeking
Confidential Treatment and the IOU Matrix

for

Pacific Gas and Electric's Power Purchase Agreements with

Badger Creek Limited

Bear Mountain Limited

Chalk Cliff Limited

Live Oak Limited

McKittrick Limited

(collectively, the "ArcLight Agreements")

**DECLARATION OF ELIZABETH INGRAM
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION CONTAINED IN
BADGER CREEK LIMITED, BEAR MOUNTAIN LIMITED, CHALK CLIFF
LIMITED, LIVE OAK LIMITED AND MCKITTRICK LIMITED (ARCLIGHT
AGREEMENTS) ADVICE LETTER
(PACIFIC GAS AND ELECTRIC COMPANY - U 39 E)**

I, Elizabeth Ingram, declare:

1. I am presently employed by Pacific Gas and Electric Company (“PG&E”), and have been an employee of PG&E since 2012. I am a Principal in the Portfolio Management group in the Energy Procurement department within PG&E. I am responsible for negotiating transactions resulting from PG&E's second Combined Heat and Power Request for Offers solicitation and negotiating power purchase agreements with counterparties in the business of producing electric energy. In carrying out these responsibilities, I have acquired knowledge of PG&E's contracts with numerous counterparties and have also gained knowledge of the operations of electric sellers in general. Through this experience, I have become familiar with the type of information that would affect the negotiating position 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 was the primary contract negotiator on behalf of PG&E in the PG&E-ArcLight transactions. Based on my knowledge and experience, I make this declaration seeking confidential treatment of Appendices A, B, C, D, and E 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: Summary of the ArcLight Agreements
- Confidential Appendix D: Comparison of the ArcLight Agreements with PG&E's Pro Forma Tolling Agreement
- Confidential Appendix E: ArcLight Agreements

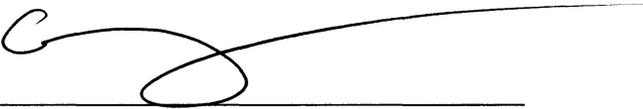
4. Attached to this declaration is a matrix that describes the Confidential Information for which PG&E seeks continued protection against public disclosure, states whether PG&E seeks to protect the confidentiality of the Confidential Information pursuant to D.06-06-066 and/or other authority; and where 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 March 14, 2014, at San Francisco, California.

A handwritten signature in black ink, consisting of a large, stylized loop followed by a long horizontal stroke that tapers to the right.

ELIZABETH INGRAM

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
ARCLIGHT AGREEMENTS 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	Items VIII.B –Specific quantitative analysis involved in scoring and evaluation of participating bids and VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS)	Y	Y	Y	This confidential appendix describes in detail the evaluation methodology and criteria used to evaluate and rank bids in PG&E's Combined Heat and Power (CHP) Request for Offers (RFO). This information is confidential under Item VIII.B of the D.06-06-066 Appendix 1 matrix for 3 years after the winning bidders are selected. It also describes terms and conditions from the ArcLight Agreements, 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 ArcLight Agreements have been signed, the 3 year protection period begins when deliveries begin under the Agreements.	3 years from the commencement of deliveries under the Agreements
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.	Items VIII.A – Bid Information, VIII.B – Specific quantitative analysis involved in scoring and evaluation of participating bids and VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties	Y	Y	Y	This is the confidential Independent Evaluator Report for the ArcLight transactions. The redacted portion of this confidential appendix provides the participating bids in PG&E's Combined Heat and Power (CHP) Request for Offers, of which the participating bids, counter-party names, prices and quantities offered are confidential. In addition, the redacted portion of this confidential appendix describes in detail the evaluation methodology and criteria used to evaluate and rank bids in PG&E's CHP RFO. This information is confidential under Item VIII.B of the D.06-	3 years from the commencement of deliveries under the Agreements

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
ARCLIGHT AGREEMENTS 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
		(except RPS)				06-066 Appendix 1 matrix for 3 years after the winning bidders are selected. It also describes the terms and conditions of the ArcLight Agreements, 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 ArcLight 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 the counterparties and PG&E. Its disclosure would violate the contract, discourage counterparties from executing confidentiality agreements to protect the confidentiality of subsequent negotiations, and impair the contract formation process. Now that the ArcLight Agreements have been signed, the 3 year protection period begins when deliveries begin under the Agreements.	
Document: Confidential Appendix C – Summary of the ArcLight Agreements							
Entire document	Y	Item VII.B - Contracts and power purchase agreements between utilities and non-affiliated third parties (except RPS), VIII.B – Specific quantitative analysis involved in scoring and evaluation of participating bids	Y	Y	Y	This confidential appendix is a contract summary that describes terms and conditions from the ArcLight Agreements, 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. It also describes in detail the evaluation methodology and criteria used to evaluate and rank bids in PG&E's second CHP RFO. This information is confidential under Item VIII.B of the D.06-06-066 Appendix 1 matrix for 3 years after the winning bidders are selected.	3 years from the commencement of deliveries under the Agreements

**PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
ARCLIGHT AGREEMENTS 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 D – Comparison of the ArcLight Agreements with PG&E's Pro Forma Tolling 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 a redline of the ArcLight Agreements against PG&E's Pro Forma Tolling Agreement that was issued with the solicitation. It contains the terms and conditions from the ArcLight Agreements, 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 Agreements
Document: Confidential Appendix E – ArcLight Agreements							
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 are the ArcLight Agreements which contains the terms and conditions of the agreements, 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 Agreements

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

1st Light Energy	Douglass & Liddell	Occidental Energy Marketing, Inc.
AT&T	Downey & Brand	OnGrid Solar
Alcantar & Kahl LLP	Ellison Schneider & Harris LLP	Pacific Gas and Electric Company
Anderson & Poole	G. A. Krause & Assoc.	Praxair
BART	GenOn Energy Inc.	Regulatory & Cogeneration Service, Inc.
Barkovich & Yap, Inc.	GenOn Energy, Inc.	SCD Energy Solutions
Bartle Wells Associates	Goodin, MacBride, Squeri, Schlotz & Ritchie	SCE
Braun Blaising McLaughlin, P.C.	Green Power Institute	SDG&E and SoCalGas
CENERGY POWER	Hanna & Morton	SPURR
California Cotton Ginners & Growers Assn	In House Energy	San Francisco Public Utilities Commission
California Energy Commission	International Power Technology	Seattle City Light
California Public Utilities Commission	Intestate Gas Services, Inc.	Sempra Utilities
California State Association of Counties	K&L Gates LLP	SoCalGas
Calpine	Kelly Group	Southern California Edison Company
Casner, Steve	Linde	Spark Energy
Center for Biological Diversity	Los Angeles County Integrated Waste Management Task Force	Sun Light & Power
City of Palo Alto	Los Angeles Dept of Water & Power	Sunshine Design
City of San Jose	MRW & Associates	Tecogen, Inc.
Clean Power	Manatt Phelps Phillips	Tiger Natural Gas, Inc.
Coast Economic Consulting	Marin Energy Authority	TransCanada
Commercial Energy	McKenna Long & Aldridge LLP	Utility Cost Management
County of Tehama - Department of Public Works	McKenzie & Associates	Utility Power Solutions
Crossborder Energy	Modesto Irrigation District	Utility Specialists
Davis Wright Tremaine LLP	Morgan Stanley	Verizon
Day Carter Murphy	NLine Energy, Inc.	Water and Energy Consulting
Defense Energy Support Center	NRG Solar	Wellhead Electric Company
Dept of General Services	Nexant, Inc.	Western Manufactured Housing Communities Association (WMA)
Division of Ratepayer Advocates	North America Power Partners	