

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



January 23, 2012

**Advice Letter 3843-E**

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

**Subject: Amendment to Existing Qualifying Facility Power Purchase Agreement  
for Procurement of Eligible Renewable Energy Resources Between DG  
Fairhaven Power LLC and PG&E Company**

Dear Mr. Cherry:

Advice Letter 3843-E is effective December 1, 2011 per Resolution E-4427.

Sincerely,

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

Edward F. Randolph, Director  
Energy Division

May 10, 2011

**Advice 3843-E**  
(Pacific Gas and Electric Company ID U39 E)

Public Utilities Commission of the State of California

**Subject: Amendment to Existing Qualifying Facility Power Purchase Agreement for Procurement of Eligible Renewable Energy Resources Between DG Fairhaven Power LLC and Pacific Gas and Electric Company**

## **I. INTRODUCTION**

### **A. Purpose**

Pacific Gas and Electric Company (“PG&E”) seeks the California Public Utilities Commission’s (“Commission”) approval of an amendment and letter agreement (together, the “Amendment”) to a Qualifying Facility (“QF”) Standard Offer Power Purchase Agreement (“PPA”) with DG Fairhaven Power LLC (“DG Fairhaven”) (together, the “Parties”). The PPA was originally developed as a part of PG&E’s Qualifying Facility (“QF”) program. The Amendment has an initial term of three years. PG&E has the option of extending the Amendment term by one year and the option to further extend the Amendment for another eleven months. Accordingly, the Amendment may be approved through the advice letter process as authorized by Decision (“D.”) 06-12-009.<sup>1</sup> PG&E submits the Amendment for Commission approval to establish PG&E’s ability to recover the cost of payments made pursuant to the Amendment through its Energy Resource Recovery Account (“ERRA”).

### **B. Subject of the Advice Letter**

The Commission’s approval of the Amendment would enable DG Fairhaven to continue to generate and sell Renewables Portfolio Standard (“RPS”)-eligible power from its existing 17.25 megawatt (“MW”) facility (“Facility”) located near Eureka, California.<sup>2</sup>

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<sup>1</sup> See D.06-12-009 at 7.

<sup>2</sup> The Facility’s nameplate is officially 17.25 MW; however the firm capacity level is 16 MW.

Since 1987, the Facility has supplied power to PG&E primarily by burning fuel derived from woody biomass.<sup>3</sup> The Facility has also been a steady employer in the Humboldt County area. The remaining term of the PPA is approximately five years and nine months.

On February 28, 2011, PG&E and DG Fairhaven executed the Amendment. A letter agreement that limits the maximum term of the Amendment to four years and eleven months and clarifies that the legal name of the Seller is “DG Fairhaven *Power* LLC” was executed on April 1, 2011. The Amendment preserves PG&E’s existing supply of RPS-eligible energy at a reasonable price while DG Fairhaven seeks a long-term delivery option.

The Amendment is appended as Confidential Appendix A. It provides DG Fairhaven with a price adjustment for delivered energy. In exchange, DG Fairhaven is subject to stricter performance obligations, such as a requirement to provide PG&E with advance notice so that the Facility’s generation can be scheduled more effectively into the California Independent System Operator (“CAISO”) markets. DG Fairhaven is expected to deliver approximately 106 gigawatt-hours (“GWh”) of RPS-eligible power to PG&E each year during the term of the Amendment. PG&E expects that under the amended PPA, customers should receive more RPS-eligible power on a more reliable basis than they would under the current PPA.

Confidential Appendix B provides an analysis of DG Fairhaven’s financial situation, an explanation of how Amendment terms will encourage DG Fairhaven to provide increased deliveries on a reliable, year-round basis, and PG&E’s reasonableness showing. Information provided by DG Fairhaven’s treasurer is appended.<sup>4</sup> PG&E also compared the amended PPA to other relevant transactions. Based on DG Fairhaven’s cost and revenue projections, and the terms of contracts or amendments that PG&E has recently executed with other biomass generators, PG&E concludes that the price and performance terms of the amended PPA are reasonable.

The Amendment becomes effective upon Commission Approval. The Parties agreed that upon CPUC Approval, certain true-up payments would be made. The true-up mechanism is explained in Confidential Appendix B. The Facility is currently in operation.

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<sup>3</sup> The PPA was executed in 1984 but deliveries commenced in 1987.

<sup>4</sup> See Confidential Appendix D, “Affidavit of Keith Pattison.”

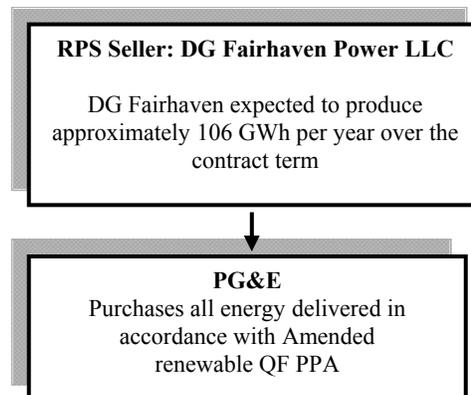
### C. General Facility Description

The following table summarizes the substantive features of the Facility:

<b>Facility Name</b>	DG Fairhaven
<b>Technology</b>	Biomass
<b>Capacity (MW)</b>	17.25 MW nameplate capacity (16 MW firm capacity level)
<b>Capacity Factor</b>	78%
<b>Expected Generation (GWh/Year)</b>	Approximately 106 GWh
<b>Amendment Effective date</b>	February 3, 2011
<b>Amendment Term (Years)</b>	Minimum 3 years Maximum 4 years and 11 months
<b>Location (City and State)</b>	Eureka, CA
<b>Control Area (e.g., California Independent System Operator (“CAISO”), Bonneville Power Administration (“BPA”))</b>	CAISO

### D. General Deal Structure

**Figure 1: PPA Delivery Structure**



### E. Confidentiality

In support of this Advice Letter, PG&E has provided the confidential information listed under Section V.C, “Request for Confidential Treatment,” below. This information includes the Amendment and other information that more specifically describes the rights and obligations of the parties. This information is being submitted in the manner directed

by D.08-04-023 and the August 22, 2006, Administrative Law Judge's Ruling Clarifying Interim Procedures for Complying with D.06-06-066 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. A separate Declaration Seeking Confidential Treatment is being filed concurrently with this Advice Letter.

## **II. CONSISTENCY WITH COMMISSION DECISIONS**

### **A. Consistency With PG&E's Adopted RPS Procurement Plan**

The Amendment will benefit PG&E's customers by: (1) allowing an existing QF resource that provides RPS-eligible energy to continue operation and deliver renewable energy at a competitive price and (2) modifying PPA performance obligations so that production from the Facility will be increased and be provided on a year-round basis. PG&E's approved 2009 Renewable Energy Procurement Plan ("2009 RPS Plan") assumed "a 75 percent average contract renewable rate...for all existing RPS contracts."<sup>5</sup> PG&E indicated it would "pursue all reasonable avenues to procure sufficient eligible renewable energy to meet RPS targets and remain in compliance with its mandated RPS requirements..."<sup>6</sup> PG&E's RPS procurement could be adversely affected if the operation of existing renewable energy resources, such as DG Fairhaven's Facility, were not preserved through reasonable means. The Amendment will help PG&E to maintain its baseline RPS portfolio consistent with the needs defined in the 2009 RPS Plan. The Amendment is also in accordance with the Governor's executive order regarding the procurement of biomass renewable energy.<sup>7</sup> For all these reasons, the Amendment is reasonable and should be approved.

### **B. Procurement Review Group Participation**

On February 8, 2011, PG&E presented its Procurement Review Group ("PRG") with a description of the proposed transaction. Further discussion is included in Confidential Appendix B.

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<sup>5</sup> D.09-06-018.

<sup>6</sup> PG&E's 2009 RPS Plan, p. 4.

<sup>7</sup> Executive Order S-06-06 was issued April 25, 2006.

### **C. Independent Evaluator**

Although an amendment to an existing QF PPA is not required to be reviewed by an Independent Evaluator (“IE”), PG&E voluntarily elected to have an IE review the Amendment. Lewis Hashimoto from Arroyo Seco Consulting evaluated the Amendment and concluded that the Amendment merits CPUC Approval. The IE noted some concerns that PG&E addresses in Confidential Appendix B.

Please refer to Appendix E for the public portion of the IE’s report on the Amendment and Confidential Appendix C for the confidential appendix to the IE’s report.

## **III. REGULATORY PROCESS**

### **A. Requested Effective Date**

PG&E requests that this advice filing be approved on or before November 10, 2011. PG&E submits this request as a Tier 3 advice letter.

### **B. Request for Confidential Treatment**

#### **Confidential Attachments:**

In support of this advice letter, PG&E provides the following confidential supporting documentation:

- Confidential Appendix A - Power Purchase Agreement Amendment and Letter Agreement
- Confidential Appendix B - Contract Amendment Summary
- Confidential Appendix C - Independent Evaluator Report (confidential portion)
- Confidential Appendix D - Affidavit of Keith Pattison

#### **Public Appendix:**

- Appendix E – Independent Evaluator Report (public portion)

## VI. REQUEST FOR COMMISSION APPROVAL

PG&E requests that the Commission issue a resolution no later than November 10, 2011, that:

1. Approves the Amendment without modification as just and reasonable; and,
2. Determines that all costs associated with the Amendment, including any costs incurred if PG&E elects to exercise its options to extend the Amendment for up to one year and eleven months, be recovered through PG&E's Energy Resource Revenue Account ("ERRA").

### Protests:

Anyone wishing to protest this filing may do so by sending a letter by **May 31, 2011**, which is **21** days from the date of this filing.<sup>8</sup> The protest must state the grounds upon which it is based, including such items as financial and service impact, and it should be submitted expeditiously. Protests should be mailed to:

CPUC Energy Division  
Attention: Tariff Unit, 4<sup>th</sup> Floor  
505 Van Ness Avenue  
San Francisco, California 94102

Facsimile: (415) 703-2200  
E-mail: mas@cpuc.ca.gov and jnj@cpuc.ca.gov

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

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

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<sup>8</sup> Since the protest period ends on a holiday, PG&E is therefore moving the end of the protest period to the following business day.

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

Facsimile: (415) 973-6520  
E-mail: PGETariffs@pge.com

**Effective Date:**

PG&E requests that this advice filing be approved on or before **November 10, 2011**.  
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 excluding the confidential appendices is being sent electronically and via U.S. mail to parties shown on the attached list and the service lists for R.08-08-009, R.06-02-012 and R.08-02-007. Non-market participants who are members of PG&E's Procurement Review Group and have signed appropriate Non-Disclosure Certificates will also receive the Advice Letter and accompanying confidential attachments by overnight mail. Address changes to the GO 96-B service list and electronic approvals should be directed to e-mail PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process\_Office@cpuc.ca.gov. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs>.



Vice President – Regulation and Rates

cc: Service List for R.08-08-009  
Service List for R.06-02-012  
Service List for R.08-02-007  
Andrew Schwartz – Energy Division

Attachments

**Limited Access to Confidential Material:**

The portions of this Advice Letter marked Confidential Protected Material are submitted under the confidentiality protections of Sections 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 contract itself, price information, and analysis of the proposed RPS contract, which are protected pursuant to D.06-06-066 and D.08-04-023. A separate Declaration Seeking Confidential Treatment regarding the confidential information is filed concurrently herewith. See Section III.B. above for list of confidential attachments.

# 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 M)**

Utility type:

- ELC       GAS  
 PLC       HEAT       WATER

Contact Person: David Poster and Linda Tom-Martinez

Phone #: (415) 973-1082 and (415) 973-4612

E-mail: dxpu@pge.com and lmt1@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) #: **3843-E**

Tier: **3**

Subject of AL: **Amendment to Existing Qualifying Facility Power Purchase Agreement for Procurement of Eligible Renewable Energy Resources Between DG Fairhaven Power LLC and Pacific Gas and Electric Company**

Keywords (choose from CPUC listing): Contracts, Portfolio

AL filing type:  Monthly  Quarterly  Annual  One-Time  Other \_\_\_\_\_

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

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: Hugh Merriam (415) 973-1269

Resolution Required?  Yes  No

Requested effective date: **November 10, 2011**

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<sup>1</sup>: 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:

**CPUC, Energy Division**

**Tariff Files, Room 4005**

**DMS Branch**

**505 Van Ness Ave.,**

**San Francisco, CA 94102**

**jnj@cpuc.ca.gov and mas@cpuc.ca.gov**

**Pacific Gas and Electric Company**

**Attn: Brian Cherry**

**Vice President, Regulation and Rates**

**77 Beale Street, Mail Code B10C**

**P.O. Box 770000**

**San Francisco, CA 94177**

**E-mail: PGETariffs@pge.com**

**DECLARATION OF HUGH M. MERRIAM  
SEEKING CONFIDENTIAL TREATMENT  
FOR CERTAIN DATA AND INFORMATION  
CONTAINED IN ADVICE LETTER 3843-E  
(PACIFIC GAS AND ELECTRIC COMPANY - U 39 E)**

I, Hugh M. Merriam, declare:

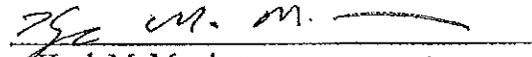
1. I am presently employed by Pacific Gas and Electric Company ("PG&E"), and have been an employee at PG&E since 1983. My current title is Manager within PG&E's Energy Procurement organization. In this position, my responsibilities include negotiating new and amended Power Purchase Agreements. In carrying out these responsibilities, I have acquired knowledge of PG&E's contracts with numerous counterparties and have also gained knowledge of the operations of electricity sellers in general. Through this experience, I have become familiar with the type of information that would affect the negotiating positions of electricity sellers with respect to price and other terms, as well as with the type of information that such sellers consider confidential and proprietary.

2. Based on my knowledge and experience, and in accordance with Decision ("D.") 08-04-023 and the August 22, 2006 "Administrative Law Judge's Ruling Clarifying Interim Procedures for Complying with Decision 06-06-066," I make this declaration seeking confidential treatment of Appendices A, B, C and D to PG&E's Advice Letter 3843-E submitted on May 10, 2011. By this Advice Letter, PG&E is seeking this Commission's approval of an amendment to its Qualifying Facility Power Purchase Agreement with DG Fairhaven Power LLC.

3. Attached to this declaration is a matrix identifying the data and information for which PG&E is seeking confidential treatment. The matrix specifies that the material PG&E is seeking to protect constitutes the particular type of data and information listed in Appendix 1 of

D.06-06-066 and Appendix C of D.08-04-023 (the "IOU Matrix"), and/or constitutes information that should be protected under General Order 66-C. The matrix also specifies the category or categories in the IOU Matrix to which the data and information corresponds, if applicable, and why confidential protection is justified. Finally, the matrix specifies that: (1) PG&E is complying with the limitations specified in the IOU Matrix for that type of data or information, if applicable; (2) the information is not already public; and (3) the data cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure. By this reference, I am incorporating into this declaration all of the explanatory text in the attached matrix that is pertinent to this filing.

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 May 10, 2011 at San Francisco, California.

  
\_\_\_\_\_  
Hugh M. Merriam

PACIFIC GAS AND ELECTRIC COMPANY Advice Letter 3843-E May 10, 2011		IDENTIFICATION OF CONFIDENTIAL INFORMATION PER DECISION 06-06-066 AND DECISION 08-04-023					Length of Time
Redaction Reference	1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06-066 and Appendix C to D.08-04-023 (Y/N)	2) Which category or categories in the Matrix the data correspond to:	3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data (Y/N)	4) That the information is not already public (Y/N)	5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	
1 Document: Advice Letter 3843-E	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C	Y	Y	Y	For information covered under item VII B), remain confidential for three years.	
2 Appendix A - Power Purchase Agreement Amendment and Letter Agreement	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C	Y	Y	Y	This Appendix contains the amendment and the letter agreement (together, the "Amendment"). Disclosure of the Amendment would provide valuable market sensitive information to competitors. Individual contract information, such as price, other key terms, and descriptive information for each contract are protected from disclosure by Item VII.B in the IOU Matrix. The Amendment is subject to a confidentiality agreement between the parties which prohibits either party from making an unauthorized disclosure of the information within the Amendment. Thus, the Amendment is not already public. The Amendment cannot be aggregated, redacted, summarized, masked or otherwise protected to allow partial public disclosure without violating the non-disclosure agreement. PG&E has already summarized the terms of the Amendment in more general terms in the body of the Advice Letter.	
3 Appendix B - Contract Amendment Summary	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C	Y	Y	Y	This Appendix restates and describes the Amendment terms, analyzes the effect of the Amendment on the terms of the existing Power Purchase Agreement ("PPA"), and describes the financial circumstances of DG Faithaven Power LLC and how the Amendment will enable the Facility to operate and deliver power to PG&E at the specified price. Disclosure of the this information would provide valuable market sensitive information to competitors. Individual contract information, such as price, other key terms, and descriptive information for each contract are protected from disclosure by Item VII.B in the IOU Matrix. Information about the counterparties' financial condition and business plans is protected by General Order 66-C 2.8 it constitutes "information obtained in confidence from other than a business regulated by the Commission where the disclosure would be against the public interest." Disclosure would inhibit generators from providing PG&E with the information the Commission needs for its reasonableness review and hamper negotiations between PG&E and the seller. The Amendment is subject to a confidentiality agreement between the parties which prohibits either party from	

Redaction Reference	1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06-066 and Appendix C to D.08-04-023 (Y/N)	2) Which category or categories in the Matrix the data correspond to:	3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data (Y/N)	4) That the information is not already public (Y/N)	5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	Length of Time
4 Appendix C - Independent Evaluator Report	Y	Item VII B) Contracts and power purchase agreements between utilities and non-affiliated third parties. General Order 66-C	Y	Y	Y	This Appendix contains information regarding the terms of the existing Power Purchase Agreement ("PPA") and the Amendment. Disclosure of this information would provide valuable market sensitive information to competitors. Individual contract information, such as price, other key terms, and descriptive information for each contract are protected from disclosure by Item VII.B in the IOU Matrix. The Amendment is subject to a confidentiality agreement between the parties which prohibits either party from making an unauthorized disclosure of the information within the Amendment. Thus, the Amendment is not already public. Amendment cannot be aggregated, redacted, summarized, masked or otherwise protected to allow partial public disclosure without violating the non-disclosure agreement. PG&E has already summarized the terms of the Amendment in more general terms in the body of the Advice Letter. The description of the Amendment in the Appendices consists only of information that is commercially sensitive and limited information from the public advice letter which is necessary to provide a logical context for the confidential information.	For information covered under Item VII B), remain confidential for three years. Information covered by General Order 66-C remains confidential indefinitely.
5 Appendix D - DG Fairhaven Power LLC Affidavit	Y	Item II - Cost Forecast Data - Electric, Section B.3 (Generation Cost Forecasts, QF Contracts); GO 66-C 2.8, and Public Utilities Code sections 454.5 (g) and 583	Y	Y	Y	This Appendix contains an Affidavit from DG Fairhaven Power LLC. Information includes historic, current and forecast QF Contract costs. Also included is information regarding facility operations. Disclosure of this information would provide valuable market sensitive information to competitors, as described above with regard to Appendices A-C. Information about the counterparties' financial condition and business plans is protected by General Order 66-C 2.8. It constitutes "information obtained in confidence from other than a business regulated by the Commission where the disclosure would be against the public interest." Disclosure would inhibit generators from providing PG&E with the information the Commission needs for its reasonableness review and hamper negotiations between PG&E and the seller.	For information covered under Item II, remain confidential for three years. Information covered by General Order 66-C remains confidential indefinitely.

**Public Appendix E**  
**Independent Evaluator Report**

ARROYO SECO CONSULTING

PACIFIC GAS AND  
ELECTRIC COMPANY  
CONTRACT  
AMENDMENT  
EVALUATION

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ADVICE LETTER REPORT OF THE  
INDEPENDENT EVALUATOR ON AN  
AMENDED CONTRACT WITH DG  
FAIRHAVEN POWER, LLC

MAY 3, 2011

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# EXECUTIVE SUMMARY

This report provides an independent evaluation of the process by which the Pacific Gas and Electric Company (“PG&E”) negotiated and executed a contract amendment to an existing long-term Qualifying Facility (QF) contract with DG Fairhaven Power, LLC (“DG Fairhaven”), a wholly-owned subsidiary of EWP Renewable Corp.<sup>1</sup>, for the output of a currently operating biomass-fueled generating facility in Samoa, Humboldt County.

This proposed contract amendment originated as an inquiry from DG Fairhaven to seek medium term price relief from its existing contract, having previously obtained two prior short-term contract amendments in 2009 and 2010. After considerable discussion the parties bilaterally negotiated a short-term amendment to the existing QF contract, and executed the amendment on February 28, 2011. An independent evaluator (IE), Arroyo Seco Consulting (Arroyo), conducted activities to review and assess PG&E’s processes as the utility evaluated and negotiated the contract amendment.

The structure of this report generally follows the 2009 RPS Independent Evaluator Report Template provided by the Energy Division of the CPUC, although the agreement with DG Fairhaven is not a modern RPS power purchase agreement from a solicitation, but rather an amended QF contract, so the form of this report does not strictly follow the template but omits sections more relevant for an RPS solicitation. Topics covered include:

- The role of the IE;
- The fairness of the design of PG&E’s least-cost, best-fit (LCBF) methodology;
- Fairness of project-specific negotiations; and
- Merit of the PPA for CPUC approval.

Arroyo’s opinion is that the negotiations between PG&E and DG Fairhaven were generally conducted fairly and resulted in a contract amendment with reasonable terms and conditions overall. Ratepayer protections in the amendment are stronger than those in the existing QF contract, though not quite as strong as would be provided if this were a new RPS agreement that followed PG&E’s standard for short-term RPS contracts.

While Arroyo agrees with PG&E that the contract agreement merits CPUC approval, Arroyo has some reservations about the contract that are described in greater detail in the confidential appendix to this report. In Arroyo’s opinion, the contract amendment ranks as low to moderate in net valuation and in contract price relative to competing short-term alternatives previously available to PG&E. Arroyo ranks the operational DG Fairhaven facility as quite high in physical project viability, and its output as moderate in portfolio fit. Continued operation of the facility would contribute to Executive Order S-06-06 that sets a quantitative goal for the role of biomass in the state’s renewable energy mix.

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<sup>1</sup> EWP Renewable Corp. is itself a wholly-owned subsidiary of Korea East-West Power Co., Ltd., a subsidiary of Korea Electric Power Co., the monopoly integrated electric utility of South Korea.

# 1. ROLE OF THE INDEPENDENT EVALUATOR

This chapter elaborates on the prior CPUC decisions that form the basis for an Independent Evaluator's participation in reviewing contracts that are negotiated by IOUs, describes key roles of the IE, details activities undertaken by the IE in this transaction to fulfill those roles, and identifies the treatment of confidential information.

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## A. CPUC DECISIONS REQUIRING INDEPENDENT EVALUATOR PARTICIPATION

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The CPUC first mandated a requirement for an independent, third-party evaluator to participate in competitive solicitations for utility power procurement in its Decision 04-12-048 on December 16, 2004 (Findings of Fact 94-95, Ordering Paragraph 28). In that Decision, which addressed the approval of three utilities' long-term procurement plans, the CPUC required the use of an IE when Participants in a competitive procurement solicitation include affiliates of investor-owned utilities (IOUs), IOU-built projects, or IOU-turnkey projects. The Decision envisaged that establishing a role for an IE would serve as a safeguard in the process of evaluating IOU-built or IOU-affiliated projects competing against Power Purchase Agreements (PPAs) with independent power developers, a safeguard to protect consumers from any anti-competitive conduct between utilities and their corporate affiliates or from anti-competitive conduct by utilities developing their own generation.

Later, in approving the IOUs' 2006 RPS procurement plans and solicitation protocols, the CPUC issued Decision 06-05-039 on May 25, 2006. In that Decision, the CPUC expanded its requirement, ordering that each IOU use an IE to evaluate and report on the entire solicitation, evaluation, and selection process, for the 2006 RPS RFO and all future competitive solicitations, whether or not a utility affiliate or utility-owned generation is involved. The DG Fairhaven contract amendment did not arise from a competitive solicitation.

Subsequently, as part of Rulemaking 08-08-009 to continue implementation of the RPS program, the CPUC issued Decision 09-06-050 on June 19, 2009. In that decision, the Commission concluded that short-term bilaterally negotiated RPS contracts (e.g. those with term of less than ten years but more than one month) should be governed by the same contract review processes and standards as contracts that arise through competitive solicitations, including review by an IE.

Arroyo perceives there to a spectrum between (1) a minimally amended 1980s-style Standard Offer contract with a renewable QF (e.g. one in which, say, the delivery point is altered by amendment but all other terms and conditions are unchanged) and (2) a fully renegotiated agreement with a renewable QF that closely follows PG&E's 2010 RPS Form Agreement and for which price, delivery term, and most terms and conditions are altered

from 1980s' language to 2011 language. Arroyo would speculate that (2) would likely meet the intent of Decision 09-06-050 and clearly require an accompanying IE report, while (1) might not. Arroyo perceives the amendment to the DG Fairhaven QF agreement to be closer to (1) than to (2) and appears to fall into a gray area where it is unclear whether an IE report is formally required.

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## B. KEY INDEPENDENT EVALUATOR ROLES

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PG&E retained Arroyo Seco Consulting to serve as IE for the contract amendment to be negotiated between PG&E and DG Fairhaven Power, LLC.<sup>2</sup>

The CPUC stated its intent for participation of an IE in competitive procurement solicitations to “separately evaluate and report on the IOU’s entire solicitation, evaluation and selection process”, in order to “serve as an independent check on the process and final selections.”<sup>3</sup> More specifically, the Energy Division (ED) of the CPUC has provided a template to guide how IEs should report on the 2009 RPS competitive procurement process, outlining four specific issues that should be addressed:

1. Describe the IE’s role.
2. Did the IOU do adequate outreach to potential bidders, and was the solicitation robust?
3. Was the IOU’s least-cost, best-fit (LCBF) methodology designed such that bids were fairly evaluated?
4. Was the LCBF bid evaluation process fairly administered?
5. Describe the fairness of the project-specific negotiations.
6. Does the contract merit CPUC approval?

In this situation, in which the contract is an amended QF contract with an eligible renewable resource rather than a modern RPS contract that resulted from a competitive solicitation, Arroyo’s focus is in reporting is on the first, third, fifth, and sixth of these elements of a standard IE report for RPS solicitations.

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## C. IE ACTIVITIES

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To fulfill the role of evaluating the proposed DG Fairhaven contract amendment, several tasks were undertaken. Arroyo Seco had performed several of these tasks within its work scope of serving as IE for PG&E’s 2008 and 2009 RPS competitive solicitations; these prior activities were directly relevant to the evaluation of the DG Fairhaven contract amendment.

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<sup>2</sup> The contract amendment in question is arguably not an amendment to an existing RPS contract in form but rather an amendment to a Standard Offer Qualifying Facilities contract.

<sup>3</sup> CPUC Decision 06-05-039, May 25, 2006, “Opinion Conditionally Approving Procurement Plans for 2006 RPS Solicitations, Addressing TOD Benchmarking Methodology”, page 46.

- Reviewed the 2009 RPS RFO Solicitation Protocol and its various attachments including the Forms of Power Purchase Agreement (PPA) and PG&E's detailed description of its LCBF bid evaluation and selection process and criteria.
- Examined the utility's nonpublic protocols detailing how PG&E evaluates proposed contracts against various criteria, including market valuation, portfolio fit, transmission adders, credit, project viability, and RPS goals.
- Interviewed members of PG&E's evaluation committee and sub-committees regarding the process, data inputs and parameters, background industry and utility information, quantitative models, and other considerations taken into account in evaluating contracts against non-quantitative criteria and in performing market valuation of contracts.
- Reviewed in detail various data inputs and parameters used in PG&E's LCBF market valuation methodology.
- Spot-checked contract-specific data inputs to PG&E's valuation model.
- Spot-checked the assignment of individual projects to transmission clusters or to local zones within the system controlled by the California Independent System Operator (CAISO).
- Built an independent valuation model and using it to value proposed contracts. This served as a cross-check against PG&E's LCBF market valuation model. The IE model used independent inputs and a different methodology than PG&E's LCBF methodology. It was much simpler and lacked detail and granularity used in aspects of the PG&E model. Its main value was to provide an independent check on the ranking of contracts provided by PG&E's valuation model and to scan for data input errors and differences in treatment of contracts between PG&E and the IE. Where variances in the ranking of contracts between the two models were large (and there were very few such situations) the cross-comparison was helpful in identifying errors such as incorrect energy pricing, inappropriate exclusion or inclusion of Resource Adequacy (RA) value, or inaccurate assignment of Transmission Ranking Cost Report (TRCR) adders.
- Developed an independent project viability score, using the ED's version of the Project Viability Calculator.
- Reviewed PG&E's evaluation on criteria other than market valuation and project viability, testing for consistency and fairness in the treatment of contracts.
- Attended meetings of PG&E's Procurement Review Group (PRG).
- Directly observed (telephonically) negotiation sessions between PG&E and DG Fairhaven.
- Reviewed documents that passed between the two parties during the negotiation, including draft contracts.

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#### D. TREATMENT OF CONFIDENTIAL INFORMATION

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The CPUC's Decision 06-06-066, issued on June 29, 2006, detailed specific guidelines for the treatment of information as confidential vs. non-confidential in the context of IOU electricity procurement and related activities, including competitive solicitations and bilaterally negotiated agreements. For example, the Decision provides for confidential treatment of "Score sheets, analyses, evaluations of proposed RPS projects",<sup>4</sup> as opposed to public treatment (after submittal of final contracts for CPUC approval) of the total number of projects and megawatts bid by resource type.

To the extent that Arroyo's reporting on the evaluation of the DG Fairhaven contract amendment requires a more explicit discussion of such analyses, scores, and evaluations, and a more specific critique of specific contract terms and conditions, these are handled in greater detail in the confidential appendix to this report.

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<sup>4</sup>"Interim Opinion Implementing Senate Bill No. 1488, Relating to Confidentiality of Electric Procurement Data Submitted to the Commission", June 29, 2006, Appendix 1, page 17

## 2. FAIRNESS OF PG&E'S CONTRACT EVALUATION METHODOLOGY

The key finding of this chapter is that, based on IE activities and findings, PG&E's evaluation methodology was designed fairly. The same methodology that the utility applies to bilaterally negotiated RPS proposals was applied to the review of DG Fairhaven's proposed contract amendment.<sup>5</sup>

The following discussion identifies principles for evaluating the methodology, describes the methodology, evaluates the strengths and weaknesses of the chosen methodology, and identifies some specific issues with the methodology and its inputs that Arroyo recommends be addressed in future solicitations.

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### A. PRINCIPLES FOR EVALUATING THE METHODOLOGY

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The Energy Division of the CPUC has usefully provided a set of principles for evaluating the process used by IOUs for evaluating contracts in competitive renewable solicitations, within the template intended for use by IEs in reporting. The principles include:

- The IOU bid evaluation should be based only on information submitted in bid proposal documents.
- There should be no consideration of any information that might indicate whether the bidder is an affiliate.
- Procurement targets and objectives were clearly defined in the IOU's solicitation materials.
- The IOU's methodology should identify quantitative and qualitative criteria and describe how they will be used to rank bids. These criteria should be applied consistently to all bids.
- The LCBF methodology should evaluate bids in a technology-neutral manner.
- The LCBF methodology should allow for consistent evaluation and comparison of bids of different sizes, in-service dates, and contract length.

Some additional considerations appear relevant to the specific situation PG&E finds itself in when evaluating renewable power contracts. Unlike some utilities, PG&E does not

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<sup>5</sup> This approach is a modified version of the methodology applied to Offers received in PG&E's competitive RPS solicitations; the modification is described below, under "Transmission Cost Adders"

rely on weighted-average calculations of scores for various evaluation criteria to arrive at a total aggregate score. Instead, the team ranks contracts by net market value using its methodology, after which, “[u]sing the information and scores in each of the other evaluation criteria, PG&E will decide which Offers to include and which ones not to include on the Shortlist.”<sup>6</sup> The application of judgment in bringing the non-valuation criteria to bear on decision-making, rather than a mechanical, quantitative means of doing so, implies an opportunity to test the fairness and consistency of the method using additional principles:

- The methodology should identify how non-valuation measures will be considered; non-valuation criteria used in evaluating contracts should be clear to counterparties.
- The logic of using non-valuation criteria or preferences to reject high-value contracts and select low-value contracts should be applied consistently and without bias.
- The valuation methodology should be reasonably consistent with industry practices.

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#### **B. PG&E’S LEAST-COST BEST-FIT METHODOLOGY**

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The California state legislation that mandated the RPS program required that the procurement process use criteria for the selection of least-cost and best-fit renewable resources; in its Decisions D.03-06-071 and D.04-07-029 the CPUC laid out detailed guidelines for the IOUs to select LCBF renewable resources. PG&E adopted selection and evaluation processes and criteria for its 2009 RPS RFO. These are summarized in Section XI of PG&E’s 2009 Solicitation Protocol for its renewable solicitation, and detailed in Attachment K to that Solicitation Protocol.

Additionally, PG&E developed nonpublic documents for internal use that detail the protocols for each individual criterion used in the evaluation process. These include:

- Market valuation
- Portfolio fit
- Credit (including provision of collateral requirements)
- Project viability
- RPS goals
- Adjustment for transmission cost adders
- Ownership eligibility
- Sites for development

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<sup>6</sup> “Renewables Portfolio Standard, 2009 Solicitation Protocol, Pacific Gas and Electric Company, June 29, 2009”, page 42

The first six of these are listed as evaluation criteria in the 2009 RPS RFO solicitation protocol. Additionally, the protocol states two other evaluation criteria: the materiality and cost impact of counterparty's proposed modifications to PG&E's Form Agreement, and the total volume of offers submitted by a single counterparty (considering the volume of energy already under contract as well). In other words, the utility stated that it will take into account the degree to which potential counterparties have proposed changes to PG&E's 2009 Form Agreement as the basis for contracting, and the degree of supplier concentration in contracts with individual counterparties.

This section summarizes PG&E's methodology briefly and at a high level; readers are referred to the Solicitation Protocol and its Attachment K for a fuller treatment of the detailed methodology.

## MARKET VALUATION

PG&E measures market value as benefits minus costs. Benefits include energy value and capacity value (Resource Adequacy value); ancillary services value is assumed zero. Costs are PG&E's payments to the counterparty, appropriately adjusted by Time-of-Delivery (TOD) factors as specified in the Solicitation Protocol. The TOD factors serve as a multiplier to the contract price per megawatt-hours (MWh) based on the time of day and season of the delivery, and are intended to reflect the relative value of the energy and capacity delivered in those time periods. Also, costs are adjusted to reflect transmission adders. The costs of integrating an intermittent resource into the electric system, such as load-following, providing imbalance services, operational reserves, and regulation, are assumed zero. Both benefits and costs are discounted from the entire contract period to 2010 dollars per MWh in the methodology.

For as-available energy delivery, PG&E measures energy value by projecting a forward energy curve (in hourly granularity) out to the time horizon of the contract period, and multiplying projected hourly energy price by the projected hourly generation specified by the contract's generation profile. For peaking or baseload contracts, the energy quantity is based on the performance requirements of the contract.

For dispatchable contracts, the protocol specifies use of a real-option pricing model to measure energy benefit. Similarly, the protocol specifies use of a real-option pricing model to value the utility buyout option attached to contracts that provide for a PPA plus such an option.

PG&E projects Resource Adequacy (capacity) value as a nominal dollar per kilowatt-year estimate. The CPUC recently revised the Resource Adequacy methodology that load-serving entities use to calculate Net Qualifying Capacity for intermittent generation that is sold on an as-available basis. While previously capacity quantity was calculated based on the annual average of the generation profile for the noon to 6 p.m. period, now the calculation is based on averaging the generation profile over five-hour blocks, the hours of which differ between April-October and November-May to reflect the different timing of peak demand in

different seasons.<sup>7</sup> Also, the CPUC decided to base the Net Qualifying Capacity on a 70% exceedance level for these solar and wind resources whose output is stochastic in nature, in a calculation that takes into account diversity benefits of multiple individual generators with different profiles. The PG&E team has adapted its calculations of resource adequacy value to reflect the new definition of Net Qualifying Capacity.

For baseload and dispatchable resources, the capacity quantity is determined by the performance requirements of the contract. Capacity benefit is calculated as the product of capacity value and quantity, and discounted to 2009 nominal dollars.

PG&E incorporates compliance costs for greenhouse gases into the costs of non-renewable generation, assumed to begin in 2012. This feature is consistent with the CPUC's final resolution regarding the 2009 Market Price Referent that applies to contracts resulting from PG&E's 2009 RPS RFO.<sup>8</sup> This feature only affects the net valuation of contracts indirectly, to the extent that projected future compliance costs are estimated to affect the value of capacity.

### PORTFOLIO FIT

For the 2009 renewable solicitation, PG&E employed a quantitative scoring system to assess the portfolio fit of a contract into its overall set of energy resources and obligations. The team calculated one score for the firmness of delivery of the offered resource and another score for the time of delivery of the resource (relative to PG&E's portfolio needs). The overall score for portfolio fit is the numerical average of the two. This detailed methodology is not typically employed by PG&E for evaluating bilateral contracts.

### CREDIT

PG&E assesses the degree to which counterparties propose to meet the requirements for providing collateral to meet their obligations. The requirements for collateral, described in detail in Section VII of the Solicitation Protocol, include posting Project Development Security after a PPA or PSA is executed and before Commercial Operation Date of the project, and posting Delivery Term Security for a PPA following the commencement of commercial operation. In the 2009 renewable solicitation, a subcommittee of PG&E's evaluation committee assigned numerical scores to each contract based primarily on the degree to which the counterparty proposed to comply with the utility's requirements for security; this scoring approach is not employed to evaluate bilaterally negotiated contracts, but such contracts are still rigorously evaluated by PG&E's credit department to ensure that its requirements are met.

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<sup>7</sup> California Public Utilities Commission, Decision 09-06-028, "Decision Adopting Local Procurement Obligations for 2010 and Further Refining the Resource Adequacy Program", June 18, 2009

<sup>8</sup> California Public Utilities Commission, Energy Division, Final Resolution E-4298, December 17, 2009, pages 9 - 10

## PROJECT VIABILITY

New in 2009, PG&E employs a version of the Project Viability Calculator to assess the likelihood that a proposed generation facility will be completed and enter full commercial operation on the proposed on-line date.

The history of renewable power procurement by California IOUs has been fraught with a certain incidence of contract failure. IOUs have, on occasion, negotiated PPAs with developers of new generation facilities, only to find later that some projects failed to come into full commercial operation on their proposed on-line dates. The failures or delays have arisen from a number of underlying causes, including impediments to site control, permitting, financing, transmission interconnection, and technical performance of the projects.<sup>9</sup> Such failures or delays have contributed to a degree of shortfall between planned growth in delivered volumes of renewable energy and realized growth.

The Commission sought to address these issues of contract failure or delay related to poor viability of contracted facilities through vehicles such as Rulemaking 08-08-009 that included a review of LCBF methodologies for RPS offer evaluation, including an assigned Commissioner's ruling that addressed the issue of how to change procurement rules to ensure that viable projects are selected in the IOU's solicitations.<sup>10</sup> Pursuant to that ruling, the Energy Division of the CPUC drafted, circulated among stakeholders for comment, and finalized a Project Viability Calculator. The Calculator is envisaged to serve as a tool that will use standardized criteria to quantify a project's viability, relative to other projects.

The viability score is developed through an assessment of several attributes of the project, including

- Project development experience,
- Ownership and operating and maintenance experience,
- Technical feasibility,
- Resource quality,
- Manufacturing supply chain (e.g. degree of constraints upon availability of key components),
- Site control,
- Permitting status,

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<sup>9</sup> The CPUC's "Renewables Portfolio Standard Quarterly Report" to the California Legislature in July 2008 also reported other risk factors that could impede successful on-time completion of contracted renewable projects, such as uncertainty about the renewal of federal production and investment tax credits, developer inexperience, price reopeners, military radar, fuel supply, and equipment procurement.

<sup>10</sup> California Public Utilities Commission, "Assigned Commissioner's Ruling Regarding Potential Renewables Portfolio Standard Development in Imperial Valley and Evaluation of Renewable Procurement Contracts", February 3, 2009, pages 7-8.

- Project financing status,
- Interconnection progress,
- Transmission requirements, and
- Reasonableness of Commercial Operation Date (COD).

The Energy Division provided a set of scoring guidelines for each of these criteria, in an effort to standardize how a project would be assigned a score between zero and ten for each. These guidelines proved to be helpful for pursuing consistency and fairness in rating the viability of proposed projects.

In its Decision accepting the IOU's 2009 procurement plans, the CPUC noted that the Calculator "is a screening, not a dispositive, tool" that permits room for judgment.<sup>11</sup> Arroyo reads this to indicate that scores provided by the Calculator should not be used as the only determinant for selecting contracts based on superior viability, nor used to set a hard cutoff for selection vs. rejection based on score, but that the PG&E team may consider the Calculator score among other facts and considerations in assessing the likely viability of proposed projects. PG&E does not routinely score existing projects using the Calculator under the assumption that if they are already operating they are highly viable.

PG&E modified the Energy Division's final version of the Calculator by including a criterion for Engineering, Procurement, and Construction (EPC) experience, and reweighting the calculation to accommodate an twelfth criterion. This is consistent with a thesis that a project will be likelier to achieve commercial operation on schedule if the external contractor engaged by the developer to design, engineer, procure components for, and construct the project has had significant prior experience providing these services for other projects of similar size and technology.

## RPS GOALS

PG&E assesses the degree to which a contract is consistent with and will contribute to the state of California's goals for the RPS Program, and the degree to which a contract will contribute to PG&E's goals for supplier diversity. The CPUC has articulated specific attributes of renewable generation projects which can be considered in utility procurement evaluations, such as benefits to low-income or minority communities, environmental stewardship, and resource diversity, that do not clearly fall within the other evaluation criteria. Similarly, the CPUC has issued a Water Action Plan, and to the extent a renewable energy project makes use of water on site, its proposed use of water is evaluated for consistency or inconsistency with the CPUC's recommended water conservation practices.

Additionally, the California Legislature articulated program benefits anticipated for the RPS program in the Legislative Findings and Declarations associated with the laws passed to

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<sup>11</sup> California Public Utilities Commission, Decision 09-06-018, "Decision Conditionally Accepting 2009 Renewables Portfolio Standard Procurement Plans and Integrated Resource Plan Supplements", June 8, 2009, page

create the program, and PG&E assesses the degree to which contracts would promote these benefits.

The Governor of California issued Executive Order S-06-06 that, among other things, established a goal that the state will meet 20% of its renewable energy needs with electricity generated from biomass. PG&E assesses the extent to which a project supports that goal.

PG&E has well-defined corporate objectives for supplier diversity, and evaluates whether the counterparty is, or will make a good faith effort to subcontract with, Women-, Minority-, and Disabled Veteran-owned Business Enterprises.

PG&E's methodology for scoring projects in the RPS solicitations on their support for RPS Goals involves scoring attributes of the proposal and calculating a weighted-average numerical score. This numerical approach is typically not employed to evaluate bilaterally negotiated contracts.

### TRANSMISSION COST ADDERS

The cost of transmission to move power from a project offered in the solicitation to PG&E retail customers is considered twice in the process of market valuation. In the first ranking of Offers by market value, projects whose delivery points are outside the control area of the California Independent System Operator (or "CAISO") (such as projects interconnecting to other utilities' grids in the Pacific Northwest or the desert Southwest, or those within California that interconnect to the grids of utilities that are not CAISO members) are loaded with a proxy estimate of cost to transmit power from the delivery point to the border of the CAISO for firm delivery.

In the second step, the methodology takes into account the possible need to upgrade the transmission network in order to accommodate the increment of new renewable generation in locations (clusters) that may require significant capital outlay, either by PG&E or by other IOUs. Each California IOU publishes a Transmission Ranking Cost Report (TRCR) which identifies clusters that would require network upgrades to accommodate some level of new generation, and estimates a proxy for the cost of upgrades and the amount of new generation that would trigger the need for upgrades. If a CAISO interconnection study has been completed, the team can use the more specific estimate of transmission network upgrade costs identified in the study rather than the TRCR proxy.

PG&E does not use TRCR adders in the evaluation of bilaterally negotiated contracts, and did not use either a TRCR adder or an estimate of the cost of alternative commercial arrangements in evaluating the DG Fairhaven contract amendment; the facility is already interconnected to the grid and operating, and continued operation will likely require small or no network upgrades.

### UTILITY OWNERSHIP ALTERNATIVES AND SITES FOR DEVELOPMENT

PG&E has developed protocols for evaluation of proposals to sell the utility a site for development of renewable generation, to build and transfer to utility ownership a new facility, to provide the utility with an option to purchase a facility after some period of commercial operation, or to undertake joint development and/or joint ownership of a new facility. The evaluation of such Offers includes both an analysis of the economics of the

project generation under utility ownership, analogous to the valuation of PPAs, as well as a consideration of the extent to which ownership of such a project is compatible with the utility's core competencies.

### COUNTERPARTY CONCENTRATION

In the 2009 RPS solicitation protocol, PG&E stated explicitly that it will consider its total exposure to volume of contracted deliveries from any individual counterparty as well as the volume already contracted with the counterparty in making short list decisions. Arroyo regards supplier concentration as a legitimate business concern for the utility, both with respect to credit risk for the utility's supply portfolio as well as risk of development failure.

### PG&E'S PREFERENCES REGARDING OFFERS

In addition to the various evaluation criteria, PG&E's 2009 solicitation protocol stated two preferences regarding selection of Offers. In section III regarding Solicitation Goals, the section on contract term states that "Earlier deliveries are preferred to later deliveries." Arroyo views this as a reasonable preference to take into account when making a short list. PG&E has a legal obligation to meet near-term targets for RPS deliveries as a percent of total retail sales.<sup>12</sup>

PG&E also stated in its solicitation protocol a preference for projects that deliver power to "a nodal delivery point...within PG&E's service territory" over projects that deliver to CAISO interface points (e.g. the California-Oregon Border, or COB, or points such as Mead, Palo Verde, or Four Corners substations) or to "California locations outside of the CAISO's control area", or to out-of-state locations.

Arroyo regards this as a reasonable preference, and appropriate to state in the protocol. Some of the operators of control areas external to the CAISO have in the past chosen not to provide services such as imbalance service or operating reserves that would be required to enable an intermittent generator such as a wind or solar photovoltaic facility that interconnects in their territory to schedule firm deliveries to a CAISO intertie. For other control area operators, there is a limitation on availability of transmission to wheel power within their territory from a generator to and across a CAISO interface point, as there has been on Path 42 between IID and Southern California Edison territories.

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<sup>12</sup> With some offers, however, the reverse may be true: an earlier proposed commercial operation date may be indicative of an inexperienced developer who is unaware of the barriers to achieving successful interconnection agreements, transmission development, local permitting, etc.

### 3. FAIRNESS OF PROJECT-SPECIFIC NEGOTIATIONS

This chapter gives an independent review of the extent to which PG&E's negotiations with DG Fairhaven Power, LLC to enter into a contract amendment to the existing QF contract were conducted fairly. A more detailed narrative of discussion points of the negotiation and issues of fairness to other counterparties is provided in the confidential appendix to this report.

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#### A. PRINCIPLES FOR EVALUATING THE FAIRNESS OF NEGOTIATIONS

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Arroyo took into account several principles to evaluate the degree of fairness with which DG Fairhaven and other entities that have brought competing proposals for renewable energy to PG&E were treated in the course of project-specific negotiations.

- Were counterparties treated fairly and consistently by PG&E during negotiations? Were all counterparties given equitable opportunities to advance their proposals towards final PPAs? Were individual counterparties given unique opportunities to move their proposals forward or concessions to improve their contracts' commercial value, opportunities not provided to others?
- Was the distribution of risk between Seller and Buyer in the PPAs distributed equitably across PPAs? Did PG&E's ratepayers take on a materially disproportionate share of risks in some contracts and not others? Were individual counterparties given opportunities to shift their commercial risks towards ratepayers, opportunities that were not provided to others?
- Was non-public information provided by PG&E shared fairly with all counterparties in discussions? Were individual counterparties uniquely given information that advantaged them in securing contracts or realizing commercial value from those contracts?
- If any individual counterparty was given preferential treatment by PG&E in the course of negotiations, is there evidence that other counterparties were disadvantaged by that treatment? Were other proposals of comparable value to ratepayers assigned materially worse outcomes?

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#### B. INDEPENDENT EVALUATOR'S OBSERVATIONS OF NEGOTIATIONS BETWEEN DG FAIRHAVEN AND PG&E

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Arroyo observed several negotiation sessions between PG&E's and DG Fairhaven's staffs over the course of more than a year. Arroyo was also able to review several draft versions of the contract amendment in order to identify specific proposals and

counterproposals the two parties previously made regarding terms in the course of discussion.

Based on this review, Arroyo did not identify any situations where PG&E provided DG Fairhaven with concessions in contract terms that Arroyo considered to be materially unfair to other counterparties that own and operate renewable QFs. At this point in time, Arroyo believes that information provided to DG Fairhaven has generally been made available to other competing counterparties that are renewable QF generators actively seeking contract amendments. Arroyo's opinion is that DG Fairhaven has not been unfairly advantaged by PG&E providing unique confidential information that has not been provided to these others.<sup>13</sup> Arroyo believes that PG&E stands open to pursue discussions with other renewable QFs with issues similar to those of DG Fairhaven, with the qualification that Arroyo is not directly involved in all contacts the utility has with all owners of renewable QFs.

The executed amendment provides ratepayers with several specific protections not provided in the existing QF contract. The QF contract as amended shifts certain risks towards DG Fairhaven from ratepayers that the project does not bear in the existing contract. Arroyo believes that the QF contract amendment falls somewhat short of the ratepayer protections provided by modern short-term RPS contracts that PG&E has entered, though there are provisions in the amendment that significantly mitigate concerns about these variances. Arroyo does not believe that, given the situation where a 1980's-era QF agreement is amended for a short portion of the remaining term, rather than a fully new long-term RPS contract being executed, these variances create a serious level of concern about the fairness to ratepayers of the amendment, especially given the new protections given to ratepayers compared to the unamended contract. These issues are discussed in detail in the confidential appendix to this report.

Arroyo's review of the contract amendment suggests that in most respects the contract amendment does not provide DG Fairhaven with terms and conditions that are materially more advantageous to the seller than could have been the case had the parties used the short-term version of PG&E's RPS Form Agreement.

At this point in time Arroyo is not aware of proposals for QF contract amendments from others that provide comparable value to ratepayers that have arrived at materially worse outcomes. A discussion of comparisons is provided in the confidential appendix.

Overall, Arroyo concludes that the negotiations between PG&E and DG Fairhaven to arrive at the executed contract amendment were conducted fairly. More details about which specific terms and conditions underwent changes in the course of negotiation, and a detailed narrative of the negotiation, are provided in the confidential appendix to this report.

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<sup>13</sup> Arroyo did not observe every single negotiation session between parties so this is a qualified opinion.

## 6. MERIT FOR CPUC APPROVAL

This chapter provides an independent review of the merits of the amendment to the contract between PG&E and DG Fairhaven Power, LLC against criteria identified in the Energy Division's 2009 RPS IE template.<sup>14</sup>

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### A. CONTRACT SUMMARY

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On February 28, 2011, PG&E and DG Fairhaven executed a contract amendment to their existing QF contract that governs delivery of renewable energy from a woody waste biomass-fueled generator. The existing, operating facility is located in the unincorporated community of Samoa in Humboldt County, among large decommissioned pulp mills, and has produced renewable energy for PG&E customers for more than two decades. The delivery commencement date of the amendment was February 3, 2011; the term of the amendment is three years and can be extended at PG&E's option by two periods of an additional year and additional eleven months. The amendment sets a contract quantity of 106 GWh annually.

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### B. NARRATIVE OF EVALUATION CRITERIA AND RANKING

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The 2009 template for IEs provided by the Energy Division calls for a narrative of the merits of the proposed project on the categories of contract price, portfolio fit, and project viability. More specific details are provided in the confidential appendix to this report.

#### CONTRACT PRICE AND MARKET VALUATION

Arroyo has compared the net value of the DG Fairhaven contract amendment to relevant peer groups of previously offered competing sources of renewable energy, using both PG&E's LCBF methodology and the simpler but independent IE model. Based on those comparisons, Arroyo opines that the market value of the DG Fairhaven contract amendment ranks as low to moderate compared to relevant peer groups of competing proposals, and the contract price also ranks as low to moderate.

The total contract price of the DG Fairhaven contract amendment is more than the approved 2009 Market Price Referent for renewable energy contracts of 5-year term that begin deliveries in 2011 (there is no approved MPR for 3-year contracts, but if PG&E were to choose to exercise its options to extend the amendment the term could be as long as 59 months). The confidential appendix to this report provides a more detailed discussion of

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<sup>14</sup> While the DG Fairhaven contract amendment is an amended QF contract for power delivery from an eligible renewable resource and not strictly an RPS agreement, Arroyo regards the 2009 RPS IE template as the most applicable approach to discussing the amendment's merits, rather than a non-RPS template.

the pricing of the contract amendment and the basis for Arroyo's opinion that the net value of the contract ranks low to moderate among competing alternatives.

### PORTFOLIO FIT

Arroyo ranks the DG Fairhaven contract amendment's fit with PG&E's supply portfolio needs as moderate. The existing facility generally operates as a baseload generator; while PG&E does not have an immediate need for more baseload generation, removing DG Fairhaven's production from the portfolio might create or accelerate such a need at some point in time. The project's specific baseload profile ranks somewhat below median when compared to Offers from the 2009 renewable solicitation on a quantitative measure of portfolio fit.

### PROJECT VIABILITY

In Arroyo's opinion, the physical project viability of the DG Fairhaven biomass-fueled facility is high. The project has operated for decades to provide PG&E customers with renewable energy. An existing, currently operating project such as DG Fairhaven is more viable, in a physical sense, than any proposed as-yet-unbuilt generator.

### RPS GOALS

The DG Fairhaven contract amendment would advance PG&E and the state towards the goal stated in Executive Order S-06-06 of providing at least 20% of the state's renewable power needs from biomass-based generation. Arroyo believes that PG&E currently exceeds that target, but over time there is some risk that biomass as a portion of PG&E's portfolio will drop below 20% because of impending rapid growth in other sources of renewable generation. Arroyo believes that approval of this contract amendment will significantly increase the likelihood that DG Fairhaven will continue to provide PG&E customers with its biomass-fueled generation over the term of the amendment, as opposed to curtailing its production.

Additionally, the legislative findings stated in Senate Bill 1078 that established the RPS program included a view that increasing the use of renewable energy sources may create employment opportunities. The CPUC's Decision 04-07-029 included benefits to low-income communities as a qualitative attribute that could be taken into consideration by utilities in evaluating competitive offers for new renewable generation. In the absence of a contract amendment there is greater risk to the employment base of the DG Fairhaven facility. Humboldt County has a significantly higher proportion of households living below the poverty level than the state as a whole.

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## **C. REVIEW OF CASH FLOW MODEL**

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DG Fairhaven's management provided PG&E and Arroyo with a cash flow model representing forecasted performance of the project over a time horizon including the maximum term of the contract amendment (with extensions). Arroyo independently reviewed the inputs to the model and its results. Overall, Arroyo's opinion is that DG Fairhaven's selection of inputs to the model is generally reasonable. Given the volatility of

markets and uncertainty of cost factors affecting the performance of this generating plant, one would expect a substantial margin of error around forecasted inputs and results.

Based on this review, Arroyo's opinion is that a contract price amendment in a range around what PG&E and DG Fairhaven have negotiated appears justified by the economics of the plant as revealed by the cash flow model.

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**D. DISCUSSION OF MERIT FOR APPROVAL**

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Arroyo concurs with PG&E management that the DG Fairhaven contract amendment merits CPUC approval, although Arroyo has a few reservations about the amendment, described in greater detail in the confidential appendix to this report. In Arroyo's opinion the contract offers low to moderate net value, low to moderate contract price, and high project viability. It would contribute to PG&E's efforts to meet its short-term RPS Goals under flexible compliance rules. In particular, the contract amendment would support continued compliance with Executive Order S-06-06 regarding the goal for biomass-fueled generation in the state; it would protect against employment losses in a locality with a higher proportion of low-income residents than the state at large.

Arroyo's opinion is that the special considerations relating to the DG Fairhaven contract amendment's support of RPS program goals outweigh the IE's reservations about the contract amendment. However, any individual decision-maker's judgment about the merits of this contract amendment will depend on the observer's or policy-maker's relative emphasis placed on the cost impact of the amendment upon ratepayers vs. the contribution of DG Fairhaven's continued operation to meeting the state's biomass-fueled generation goal and to employment stability.

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

AT&T	Dept of General Services	Northern California Power Association
Alcantar & Kahl LLP	Douglass & Liddell	Occidental Energy Marketing, Inc.
Ameresco	Downey & Brand	OnGrid Solar
Anderson & Poole	Duke Energy	Praxair
Arizona Public Service Company	Dutcher, John	R. W. Beck & Associates
BART	Economic Sciences Corporation	RCS, Inc.
Barkovich & Yap, Inc.	Ellison Schneider & Harris LLP	Recurrent Energy
Bartle Wells Associates	Foster Farms	SCD Energy Solutions
Bloomberg	G. A. Krause & Assoc.	SCE
Bloomberg New Energy Finance	GLJ Publications	SMUD
Boston Properties	GenOn Energy, Inc.	SPURR
	Goodin, MacBride, Squeri, Schlotz & Ritchie	San Francisco Public Utilities Commission
Braun Blaising McLaughlin, P.C.	Green Power Institute	Santa Fe Jets
Brookfield Renewable Power	Hanna & Morton	Seattle City Light
CA Bldg Industry Association	Hitachi	Sempra Utilities
CLECA Law Office	In House Energy	Sierra Pacific Power Company
CSC Energy Services	International Power Technology	Silicon Valley Power
California Cotton Ginners & Growers Assn	Intestate Gas Services, Inc.	Silo Energy LLC
California Energy Commission	Lawrence Berkeley National Lab	Southern California Edison Company
California League of Food Processors	Los Angeles Dept of Water & Power	Spark Energy, L.P.
California Public Utilities Commission	Luce, Forward, Hamilton & Scripps LLP	Sun Light & Power
Calpine	MAC Lighting Consulting	Sunshine Design
Cardinal Cogen	MBMC, Inc.	Sutherland, Asbill & Brennan
Casner, Steve	MRW & Associates	Tabors Caramanis & Associates
Chris, King	Manatt Phelps Phillips	Tecogen, Inc.
City of Palo Alto	McKenzie & Associates	Tiger Natural Gas, Inc.
City of Palo Alto Utilities	Merced Irrigation District	TransCanada
Clean Energy Fuels	Modesto Irrigation District	Turlock Irrigation District
Coast Economic Consulting	Morgan Stanley	United Cogen
Commercial Energy	Morrison & Foerster	Utility Cost Management
Consumer Federation of California	NLine Energy, Inc.	Utility Specialists
Crossborder Energy	NRG West	Verizon
Davis Wright Tremaine LLP	Navigant Consulting	Wellhead Electric Company
Day Carter Murphy	Norris & Wong Associates	Western Manufactured Housing Communities Association (WMA)
		eMeter Corporation
Defense Energy Support Center	North America Power Partners	
Department of Water Resources	North Coast SolarResources	