



**Pacific Gas and
Electric Company™**

Brian K. Cherry
Vice President
Regulatory Relations

77 Beale Street, Room 1087
San Francisco, CA 94105

Mailing Address
Mail Code B10C
Pacific Gas and Electric Company
P.O. Box 770000
San Francisco, CA 94177

Fax: 415.973.7226

July 6, 2009

**Advice 3488-E
(Pacific Gas and Electric Company ID U 39 E)**

Public Utilities Commission of the State of California

**SUBJECT: Contract for Procurement of Renewable Energy Resources between
PG&E and Big Valley Power, LLC**

I. INTRODUCTION

A. Purpose and Overview

Pacific Gas and Electric Company (“PG&E”) seeks California Public Utilities Commission (“Commission” or “CPUC”) approval to replace an existing Qualifying Facilities (“QF”) contract with an up to 20-year Renewables Portfolio Standard (“RPS”) Purchase Power Agreement (“PPA”) that PG&E has executed with Big Valley Power, LLC (“Big Valley”). The RPS PPA has an initial 10-year term and also includes a PG&E option to extend for an additional 10-year period, for a potential total term of 20 years. PG&E submits the PPA for CPUC Approval to establish PG&E’s ability to recover the cost of payments made pursuant to the PPA through its Energy Resource Recovery Account (“ERRA”).

The Big Valley plant is co-located with an associated saw mill in Bieber, California, and although currently under an as-available QF contract, the plant is not operating and is not expected to be able to resume operations under that contract. The new RPS PPA will replace the existing QF contract, which will terminate once the PPA is approved. Approval of the Big Valley PPA will allow a renewable energy resource that is currently not operating to restart operation and provide PG&E and its customers with cost-effective, renewable energy. In addition, significant economic benefits to the local community will ensue as soon as the plant is able to resume operations. According the

plant owner, returning the plant to service will allow Big Valley to also resume production at the associated saw mill providing stable jobs for 78 people, ongoing local expenditures for plant operations and fuel purchases, and also increasing the property tax base.¹

The PPA is a result of bilateral negotiations between PG&E and Big Valley. Consistent with the protocol used for review of RPS contracts resulting from the 2008 RPS Solicitation and contracts resulting from bilateral negotiations, PG&E has included confidential Appendices A through H, which demonstrate the reasonableness of the PPA. As discussed below, PG&E requests confidential treatment of the information contained in these Appendices.

Given that the Big Valley project is highly viable, cost-effective and can commence operation soon after the PPA is approved, PG&E requests that the Commission issue a resolution no later than **September 24, 2009** approving the PPA and payments to be made by PG&E under the PPA and containing the findings required by the definition of CPUC Approval adopt by Decision (“D.”) 07-11-025 and D.08-04-009.²

B. Detailed Description of the Project

As mentioned above, the PPA resulted from bilateral negotiations that will enable a non-operating QF biomass facility to come back on-line. The following table summarizes the substantive features of the PPA:

Owner / Developer	Big Valley Power, LLC
Technology	Biomass
Capacity (MW)	Up to 7.5 MW
Capacity Factor	Approximately 70%
Expected Generation (MWh/Year)	40 GWh/Yr ³ .
Online Date (if	Big Valley is expected to commence

¹ According to Big Valley Power, resuming operations is estimated to provide: 46 jobs in the plant/sawmill; 12 jobs in the forests; 20 jobs trucking. It will also increase local expenditure annually for log purchases and operations by \$7.2M and provide benefits to schools, through increased property tax payments of \$41,500/yr.

² As provided by D.07-11-025 and D.08-04-009, the Commission must approve the PPA and payments to be made thereunder, and find that the procurement will count toward PG&E’s RPS procurement obligations.

³ Expected generation listed is associated with deliveries to PG&E. In addition to this amount, Big Valley’s energy will be used by the plant and is also expected to supply the associated saw mill.

existing, the contract delivery start date)	operations shortly after CPUC approval of the PPA.
Contract Term (Years)	20 (initial 10-year period and an option to extend for an additional 10-year period)
New or Existing Facility	Existing
Location (include in/out-of-state) and Control Area (e.g., CAISO, BPA)	In-state, within the CAISO control area, in the NP 15 zone
Price relative to MPR (i.e. above/below)	Does not exceed the 2008 MPR

A copy of the PPA is provided as confidential Appendix G, and a contract analysis is provided as part of confidential Appendix D.

II. THE PPA IS CONSISTENT WITH THE COMMISSION'S RPS-RELATED DECISIONS

A. Consistency with PG&E's Adopted RPS Plan and Solicitation

PG&E's 2008 renewable procurement plan ("2008 Plan") was conditionally approved in D.08-02-008 on February 14, 2008. As required by statute, the 2008 Plan include an assessment of supply and demand to determine the optimal mix of renewable generation resources, consideration of compliance flexibility mechanisms established by the Commission, and a bid solicitation setting forth the need for renewable generation of various operational characteristics.⁴

The goal of PG&E's 2008 Plan was to procure approximately one to two percent of its retail sales volume, or between 800 GWh and 1,600 GWh per year. Projects capable of providing actual deliveries with only a short or no delay are especially valuable to PG&E.

By replacing this standard offer QF contract with a new RPS contract, Big Valley will be able to resume operation of its facility and deliver RPS-eligible power to PG&E's customers.

⁴ Pub. Util. Code § 399.14(a)(3).

B. Consistency with PG&E's Long Term Procurement Plan

PG&E's 2006 long-term procurement plan ("LTPP") stated that PG&E would aggressively pursue procurement of RPS-eligible renewable resources. In approving PG&E's 2006 LTPP, the Commission noted that development of renewable energy is "of great importance to the Governor, the State of California, and the Commission."⁵ The PPA is consistent with PG&E's 2006 LTPP and with Commission policy regarding renewable energy expressed in the decision approving PG&E's 2006 LTPP.

C. Consistency with Commission Guidelines for Bilateral Contracting

Big Valley has informed PG&E that operation of the generation facility has not been economically feasible under the pricing term in the existing QF contract since February 2009. Therefore, PG&E and Big Valley met to discuss alternative contract structures that would allow Big Valley to resume operations. The parties subsequently negotiated the PPA, which does not exceed the 2008 MPR, but still provides sufficient revenue to allow Big Valley to resume operation of its facility.

The Commission has developed guidelines pursuant to which the utilities may enter into bilateral RPS contracts. In D.03-06-071, the Commission authorized entry into bilateral RPS contracts provided that such contracts did not require Public Goods Charge funds and were "prudent."⁶ Later, in D.06-10-019, the Commission again held that bilateral contracts were permissible provided that they were at least one month in duration, and also found that such contracts must be reasonable and submitted for Commission approval by advice letter.⁷ Also in that decision, the Commission stated that bilateral contracts were not eligible for supplemental energy payments.⁸

In D.09-06-050, issued earlier this month, the Commission further clarified its policies regarding the review of RPS bilateral contracts. In particular, the Commission explained that "long-term bilateral contracts should be reviewed according to the same processes and standards as contracts that come through a solicitation."⁹ This includes review by the Procurement Review Group ("PRG") and the Independent Evaluator ("IE"). The Commission also determined that the MPR should be used as the price benchmark for long-term bilateral contracts.

⁵ D.07-12-052 at 73.

⁶ D.03-06-071 at 59.

⁷ D.06-10-019 at 29, 31.

⁸ *Id.* at 32.

⁹ D.09-06-050 at 29.

The PPA fully satisfies these requirements. As PG&E explains in more detail below and in the Appendices to this advice letter, the PPA satisfies the standards and requirements established for the 2008 Plan and has been reviewed by both the PRG and the IE. Moreover, the PPA price is below the 2008 MPR.

D. Consistency of Bid Evaluation Process with Least-Cost Best Fit Decision

The RPS statute requires PG&E to procure the “least cost, best fit” (“LCBF”) eligible renewable resources.¹⁰ The LCBF decision directs the utilities to use certain criteria in their bid ranking.¹¹ It offers guidance regarding the process by which the utility ranks bids in order to select or “shortlist” the bids with which it will commence negotiations. The renewables bid evaluation process focuses on four primary areas:

1. Determination of market value of bid,
2. Calculation of transmission adders and integration costs,
3. Evaluation of portfolio fit, and
4. Consideration of non-price factors.

PG&E’s evaluation considered these areas. However, since the PPA is the result of bilateral negotiations with an existing QF resource located in NP15 that is already in PG&E’s portfolio the consideration of some of these elements was abbreviated. However, the reasonableness of the PPA was examined considering many factors, including the applicable LCBF factors and market value comparisons with other RPS transactions currently being offered to PG&E. The general finding is that this opportunity is competitive with other offers received in the 2008 RPS Solicitation and with other opportunities recently executed or under negotiation. A more detailed discussion of PG&E’s evaluation of the PPA is provided in Confidential Appendix D.

1. Market Valuation

In a “mark-to-market” analysis, the present value of the bidder’s payment stream is compared with the present value of the product’s market value to determine the benefit (positive or negative) from the procurement of the resource, irrespective of PG&E’s portfolio. This analysis includes evaluation of the bid price and indirect costs, such as transmission and integration costs. PG&E’s analysis of the market value of the PPA is addressed in Confidential Appendix D.

¹⁰ Pub. Util. Code § 399.14(a)(2)(B).

¹¹ D.04-07-029.

2. Portfolio Fit

Portfolio fit considers how well an offer's features matches PG&E's portfolio needs. This analysis includes the anticipated transaction costs involved in any energy remarketing (*i.e.*, the bid-ask spread) if the contract adds to PG&E's net long position. Because the unit is already operational (though currently off-line), and has been in PG&E's portfolio as a QF, PG&E believes it will continue to fit well and not increase remarketing costs.

3. Consistency with the Transmission Ranking Cost Decision

Under the RPS program, the potential customer cost to accept energy deliveries from a particular project must be considered when determining a project's value. Under the PPA, Big Valley proposes to deliver generation from, an existing plant already connected to the transmission system with no anticipated need for transmission upgrades. Hence, no additional costs to accept deliveries were included in the evaluation of the PPA's net benefits.

4. Consistent Application of TODs

Time of Delivery ("TOD") factors were not included in the contract.

5. Qualitative Factors

PG&E considered qualitative factors as required by D.04-07-029 and D.07-02-011 when evaluating the PPA, including benefits associated with resource diversity.

E. PRG Participation and Feedback

PG&E informed its PRG of the proposed PPA on May 15, 2009. PG&E further addresses PRG feedback in Confidential Appendix D.

The PRG for PG&E consists of: California Department of Water Resources, the Commission's Energy Division and Division of Ratepayer Advocates, Union of Concerned Scientists, the Utility Reform Network, the California Utility Employees, and Jan Reid, Coast Economic Consulting.

F. RPS Goals

Senate Bill ("SB") 1078 established the California RPS Program, requiring an electrical corporation to increase its use of eligible renewable energy resources to 20 percent of total retail sales no later than December 31, 2017. The legislature subsequently accelerated the RPS goal to reach 20 percent by the end of 2010. In addition, California is actively considering increasing its renewable goals beyond the current 20 percent renewable energy target. Governor Schwarzenegger's Executive Order issued in

November 2008 describes a new target for California of 33 percent renewable energy by 2020. The California Legislature is actively considering legislation increasing the overall RPS target to 33 percent. Finally, the California Air Resource Board's Scoping Plan, adopted in December 2008, identifies an increase in the renewables target to 33 percent by 2020 as a key measure for reducing greenhouse gas emissions and meeting California's climate change goals. As discussed above, the PPA contributes to these RPS goals in the years beyond 2010.

G. Consistency with Adopted Standard Terms and Conditions

The Commission set forth standard terms and conditions to be incorporated into contracts for the purchase of electricity from eligible renewable energy resources in D.04-06-014, D.07-02-011 as modified by D.07-05-057, and D.07-11-025. These terms and conditions were compiled and published by D.08-04-009. Additionally, the non-modifiable term related to Green Attributes was finalized in D.08-08-028. The non-modifiable terms in the PPA conform to the non-modifiable terms set forth in Attachment A of D.07-11-025 and Appendix A of D.08-04-009, as modified by D.08-08-028.

Modifications have been made to terms in the PPA designated as modifiable in D.07-11-025 and D.08-04-009 based upon mutual agreement reached during negotiations. A comparison of the modifiable terms in the PPA against the modifiable terms in PG&E's 2008 RPS As-available PPA form in the Solicitation Protocol dated February 29, 2008 is provided in Confidential Appendix H.

Each provision in the PPA is essential to the negotiated agreement between the parties, and the Commission should therefore not modify any of the provisions. The Commission should consider the PPA as a whole, in terms of its ultimate effect on utility customers. PG&E submits that the PPA protects the interests of its customers while achieving PG&E's and the Commission's goal of increasing procurement from eligible renewable resources.

H. Consistency with Minimum Quantity

In D.07-05-028, the Commission determined that in order to count energy deliveries from short-term contracts with existing facilities toward RPS goals, RPS-obligated load-serving entities must contract for deliveries equal to at least 0.25 percent of their prior year's retail sales through long-term contracts or through short-term contracts with new facilities. The PPA is a long-term contract with an existing facility and thus counts toward PG&E's procurement obligation for 2009 under D.07-05-028. PG&E has determined that in 2009, it will be in compliance with the minimum quantity requirement set forth in D.07-05-028.

I. Compliance with the Interim Emissions Performance Standard

In D.07-01-039, the Commission adopted an Emissions Performance Standard (“EPS”) that applies to new and renewal contracts for a term of five or more years for baseload generation with an annualized plant capacity factor of at least 60 percent. D.07-01-039 determined that certain renewable resources and technologies are pre-approved as EPS-compliant. The Big Valley PPA is largely an as-available structure; however, it will likely generate at a capacity factor greater than 60 percent so it may fall within the following category:

“Generating facilities (e.g., agricultural and wood waste, landfill gas) using biomass that would otherwise be disposed of utilizing open burning, forest accumulation, landfill (uncontrolled, gas collection with flare, gas collection with engine), spreading and composting.”¹²

Notification of compliance with D.07-01-039 is provided through this Advice Letter, which has been served on the service list in the RPS rulemaking, R.08-08-009.

J. MPR and AMFs

The actual price under the PPA is confidential, market-sensitive information. The price under the PPA does not exceed the 20-year 2008 MPR for a project with a 2009 commercial online date adopted in Resolution E-4214, December 18, 2008. Since the PPA is a bilateral contract it is not eligible for AMFs.

III. PROJECT DEVELOPMENT STATUS

Big Valley is an existing facility and very little project development is expected. However, the plant will be required to review and update its interconnection and metering arrangements. This step is expected to result in an upgrade to a CAISO revenue quality meter.

A. Site Control

The Project is an existing facility with no site control issues.

B. Resource and/or Availability of Fuel

Fuel is primarily obtained from federal and private forest lands near the facility as well as from Big Valley’s associated saw mill. Federal lands include the Modoc National Forest and Lassen National Forest, with some availability from the Bureau of Land

¹² D.07-01-039 at 18-19 and Conclusions of Law 35(d).

Management. Big Valley is located at Bieber, California which is on the southwest boundary of the Modoc National Forest and is just north of the Lassen National Forest.

Big Valley occupies a unique position with respect to raw material resources for its operations. It is located within one of only two remaining areas designated by the United States Department of Agriculture (“USDA”) Forest Service to provide saw timber to local industry for the manufacture of lumber. This area is referred to as the Big Valley Federal Sustained Yield Unit (“BVFSYU”) and it has a Federal mandate to manage for a continuous and ample supply of forest products for the benefit of the local community. In addition, Big Valley is well situated to draw saw timber and biomass from the entire Modoc National Forest (within which the BVFSYU is located), the Lassen National Forest and several private timberland ownerships.

In addition, timber sales programs in eastern California are conducted on a sustained yield basis and fuel is available from Juniper removal operations on private ranches in the area. Big Valley believes that adequate fuel supplies exist at prices that will allow it to operate for the potential full 20-year term of the PPA. More detailed fuel resource analysis and a fuel supply plan information are provided in Confidential Appendix D.

C. Transmission

The Project is operational and no additional transmission issues are expected.

D. Technology Type and Level of Technology Maturity

The Project is a mature technology. The Project has been in operation since 1983 and continued to operate until early 2009. The project includes a biomass fired thermal power plant with 4 Wellons SN# B-2812 combustors, one boiler, one multi-clone separator, fuel silos, fuel yard, two cell cooling tower, water treatment, switchgear, various auxiliaries and an eighteen (18) mile 69 kV interconnection line. Big Valley acquired the Project in 2004 and installed a new fuel yard, upgraded equipment, installed Continuous Emissions Monitoring Systems (CEMS), and improved the temperature control of the combustors and the cooling tower.

E. Permitting

Big Valley supplied the following permitting information:

Permit and Lease Table					
Name of Permit or lease required	Public or Private?	Agency	Description of Permit or Lease	Current Status	Timeframe for approval
Air Permit	Public	Lassen County Air Pollution Control District	Permit to Operate, Renewable every 5 Years	In Force	N/A
Water Permit	Public	Cal. Regional Water Quality Control Board	Permit to Discharge Wastewater	In Force	N/A
Boiler Operating Permit	Public	California OSHA Pressure Vessel Dept.	Permit to Operate a Pressure Boiler	In Force	N/A
Storm water Discharge Permit	Public	Cal. Regional Water Quality Board Storm Water Division	Permit to discharge storm water	In Force	N/A

F. Production Tax Credit/Investment Tax Credit

The terms of the PPA do not address whether the Project is eligible for tax credits.

G. Developer Experience

This is an existing operational project and does not require development.

H. Financing Plan

This is an existing operational project so it does not require construction financing for the plant

I. Production Tax Credit/Investment Tax Credit

The terms of the PPA do not address whether the Project is eligible for tax credits.

J. Equipment Procurement

This is an existing operational project and no major equipment for the plant is contemplated.

IV. CONTINGENCIES AND MILESTONES

Performance criteria are further described in Confidential Appendix D.

V. REGULATORY PROCESS

A. Requested Effective Date

PG&E requests that the Commission issue a resolution approving this advice filing no later than **September 24, 2009**. Justification for this date is provided in Confidential Appendix D.

B. Earmarking

PG&E reserves the right to earmark future, incremental deliveries from Big Valley for purposes of RPS compliance.

C. RPS-Eligibility Certification

The PPA includes the non-modifiable representation and warranty that during the delivery period, the Project will constitute an eligible renewable energy resource certified by the California Energy Commission ("CEC"). Note, however, that while the facility was CEC-certified under its QF contract, PG&E believes that it will need to obtain such certification under the new PPA.

D. Request for Confidential Treatment

In support of this Advice Letter, PG&E has provided the following confidential attachments, including the PPA 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.

As the Project consists of an existing facility that was operating up through early 2009, there is no known viability uncertainty associated with the facilities. As a result,

Confidential Appendix E – Project Viability has not been provided, as noted below in the list of Confidential Attachments.

Confidential Attachments:

Appendix A – Overview of 2004 – 2008 Solicitation Bids

Appendix B – 2008 Bid Evaluations

Appendix C – Independent Evaluator Report

Appendix D – Contract Terms and Conditions Explained

Appendix E – Intentionally Omitted

Appendix F – Project’s Contribution Toward RPS Goals

Appendix G – Power Purchase Agreement

Appendix H – Standard Terms and Conditions Comparison – Modifiabiles

Non-Confidential Attachment:

Appendix I – Independent Evaluator Report, Public Version

VI. REQUEST FOR COMMISSION APPROVAL

PG&E requests that the Commission issue a resolution no later than **September 24, 2009** that:

1. Approves the PPA in its entirety, including payments to be made by PG&E pursuant to the PPA, subject to the Commission’s review of PG&E’s administration of the PPA.
2. Finds that any procurement pursuant to the PPA is procurement from an eligible renewable energy resource for purposes of determining PG&E’s compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard (Public Utilities Code Section 399.11 et seq.) D. 03-06-071 and D.06-10-050, or other applicable law.

3. Finds that all procurement and administrative costs, as provided by Public Utilities Code section 399.14(g), associated with the PPA shall be recovered in rates.
4. Adopts the following finding of fact and conclusion of law in support of CPUC Approval:
 - a. The PPA is consistent with PG&E's 2008 RPS procurement plan.
 - b. The terms of the PPA, including the price of delivered energy and the term of up to 20 years, are reasonable.
5. Adopts the following finding of fact and conclusion of law in support of cost recovery for the PPA:
 - a. The utility's costs under the PPA shall be recovered through PG&E's Energy Resource Recovery Account.
 - b. Any stranded costs that may arise from the PPA are subject to the provisions of D.04-12-048 that authorize recovery of stranded renewables procurement costs over the life of the contract. The implementation of the D.04-12-048 stranded cost recovery mechanism is addressed in D.08-09-012.
6. Adopts the following findings with respect to resource compliance with the Emissions Performance Standard ("EPS") adopted in R.06-04-009:
 - a. The PPA is not a covered procurement subject to the EPS because it is for an existing biomass facility.

Protests:

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, by facsimile or electronically, any of which must be received no later than **July 27, 2009**¹³, which is 21 days after the date of this filing. The protest must state the grounds upon which it is

¹³ The 20 day protest period concludes on a weekend. PG&E hereby moving this date to the following business day.

based, including such items as financial and service impact, and should be submitted expeditiously. Protests should be mailed to:

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

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

Copies should also be mailed to the attention of the Director, Energy Division, Room 4005 and Honesto Gatchalian, Energy Division, at the address shown above.

The protest also should 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.

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

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

Effective Date:

PG&E requests that the Commission issue a resolution approving this advice filing no later than **September 24, 2009**.

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.06-02-012, R.08-02-007 and R.08-08-009. 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 should be directed to San Heng (415) 973-2640. Advice letter filings can also be accessed electronically at: <http://www.pge.com/tariffs>

Brian K. Cherry /sc

Brian K. Cherry
Vice President - Regulatory Relations

cc: Service List for R.08-08-009
Service List for R.08-02-007
Service List for R.06-02-012
Paul Douglas - Energy Division
Sean Simon – Energy Division

Attachments

Limited Access to Confidential Material:

The portions of this Advice Letter marked Confidential Protected Material are submitted under the confidentiality protection of Section 583 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.

Confidential Attachments:

Appendix A – Overview of 2004 – 2008 Solicitation Bids

Appendix B – 2008 Bid Evaluations

Appendix C – Independent Evaluator Report

Appendix D – Contract Terms and Conditions Explained

Appendix E – Intentionally Omitted

Appendix F – Project’s Contribution Toward RPS Goals

Appendix G – Power Purchase Agreement

Appendix H – Standard Terms and Conditions Comparison – Modifiables

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 Sally Cuaresma

Phone #: (415) 973-1082; (415) 973-5012

E-mail: DXPU@pge.com; A2C7@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) #: **3488-E**

Tier: [3]

Subject of AL: **Contract for Procurement of Renewable Energy Resources between PG&E and Big Valley Power, LLC**

Keywords (choose from CPUC listing): Contracts; Agreements

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: All members of PG&E's Procurement Review Group who have signed nondisclosure agreement 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: Joe Lawlor, (415) 973-1569

Resolution Required? Yes No

Requested effective date: **September 24, 2009**

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:

Service affected and changes proposed:

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
jn@cpuc.ca.gov and mas@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

**DECLARATION OF JOE LAWLOR
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION
CONTAINED IN ADVICE LETTER 3488-E
(PACIFIC GAS AND ELECTRIC COMPANY - U 39 E)**

I, Joe Lawlor, declare:

1. I am presently employed by Pacific Gas and Electric Company ("PG&E"), and have been an employee at PG&E since 1992. My current title is Principal within PG&E's Energy Procurement organization. In this position, my responsibilities include negotiating PG&E's Renewables Portfolio Standard Program ("RPS") 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, D, F, G, and H to PG&E's Advice Letter 3488-E submitted on July 6, 2009. By this Advice Letter, PG&E is seeking this Commission's approval of a biomass energy PPA that PG&E has executed with Big Valley 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, 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; (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 July 6, 2009 at San Francisco, California.

A handwritten signature in black ink, appearing to read "Joe Lawlor", written over a horizontal line.

Joe Lawlor

PACIFIC GAS AND ELECTRIC COMPANY Advice Letter 3488-E July 6, 2009		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	Length of Time
1 Document: Advice Letter 3488-E	Y	Item VIII A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Y	Y	Y	This Appendix contains bid information and bid evaluations from the 2004, 2005, 2006, 2007 and 2008 solicitations. This information would provide market sensitive information to competitors and is therefore considered confidential. Furthermore, contracts from the 2005, 2006, 2007, and 2008 solicitations are still under negotiation, further substantiating why releasing this information would be damaging to the negotiation process.	For information covered under Item VIII A), remain confidential until after final contracts submitted to CPUC for approval For information covered under Item VIII B), remain confidential for three years after winning bidders selected
2 Appendix A	Y	Item VIII A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Y	Y	Y	This Appendix contains bid information and bid evaluations from the 2008 solicitation. This information would provide market sensitive information to competitors and is therefore considered confidential. Furthermore, contracts from the 2005, 2006, 2007, and 2008 solicitations are still under negotiation, further substantiating why releasing this information would be damaging to the negotiation process.	For information covered under Item VIII A), remain confidential until after final contracts submitted to CPUC for approval For information covered under Item VIII B), remain confidential for three years after winning bidders selected
3 Appendix B	Y	Item VIII A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Y	Y	Y	This Appendix contains bid information and bid evaluations from the 2008 solicitation. This information would provide market sensitive information to competitors and is therefore considered confidential. Furthermore, contracts from the 2005, 2006, 2007, and 2008 solicitations are still under negotiation, further substantiating why releasing this information would be damaging to the negotiation process.	For information covered under Item VIII A), remain confidential until after final contracts submitted to CPUC for approval For information covered under Item VIII B), remain confidential for three years after winning bidders selected
Appendix C	Y	Item VIII A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Y	Y	Y	This Appendix contains bid information and bid evaluations from the 2008 solicitation. This information would provide market sensitive information to competitors and is therefore considered confidential. Furthermore, contracts from the 2005, 2006, 2007, and 2008 solicitations are still under negotiation, further substantiating why releasing this information would be damaging to the negotiation process.	For information covered under Item VIII A), remain confidential until after final contracts submitted to CPUC for approval For information covered under Item VIII B), remain confidential for three years after winning bidders selected

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 D	Y	Item VII (G) Renewable Resource Contracts under RPS program - Contracts without SEFs. Item VII (un-numbered category following VII G) Score sheets, analyses, evaluations of proposed RPS projects. General Order 66-C.	Y	Y	Y	This Appendix contains information regarding the terms of the PPA, and analyses and evaluations of the project. Disclosure of this information would provide valuable market sensitive information to competitors. Since negotiations are still in progress with bidders from the 2005, 2006, 2007, and 2008 solicitations, this information should remain confidential. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the Confirmation has an expectation that the terms of the Confirmation will remain confidential pursuant to confidentiality provisions in the Confirmation. I am informed and believe that General Order 66-C provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.	Remain confidential for three years
5 Appendix F	Y	Item VII (un-numbered category following VII G) Score sheets, analyses, evaluations of proposed RPS projects. Item VI B) Utility Bundled Net Open Position for Energy (MWh).	Y	Y	Y	This Appendix contains information that, if disclosed, would provide valuable market sensitive information to competitors and allow them to see PG&E's remaining RPS net open energy position. Since negotiations are still in progress with bidders from the 2005, 2006, 2007, and 2008 solicitations, this information should remain confidential for three years.	Remain confidential for three years
6 Appendix G	Y	Item VII (G) Renewable Resource Contracts under RPS program - Contracts without SEFs.	Y	Y	Y	This Appendix contains certain terms of the PPA. Disclosure of certain terms of the PPA would provide valuable market sensitive information to competitors. Since negotiations are still in progress with bidders from the 2005, 2006, 2007 and 2008 solicitations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the PPA has an expectation that the terms of the PPA will remain confidential pursuant to confidentiality provisions in the PPA. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.	Remain confidential for three years

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.06-04-023 (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
7 Appendix H	Y	Item VII G) Renewable Resource Contracts under RPS program - Contracts without SEPs.	Y	Y	Y	This Appendix contains certain terms of the PPA. Disclosure of certain terms of the PPA would provide valuable market sensitive information to competitors. Since negotiations are still in progress with bidders from the 2005, 2006, 2007 and 2008 solicitations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the PPA has an expectation that the terms of the PPA will remain confidential pursuant to confidentiality provisions in the PPA. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.	Remain confidential for three years

Appendix I

Public Independent Evaluator Report

PACIFIC GAS AND
ELECTRIC COMPANY
BILATERAL CONTRACT
EVALUATION

ADVICE LETTER REPORT OF THE
INDEPENDENT EVALUATOR ON THE
PROPOSED AGREEMENT WITH BIG VALLEY
POWER, LLC

JULY 2, 2009

TABLE OF CONTENTS

EXECUTIVE SUMMARY	3
1. ROLE OF THE INDEPENDENT EVALUATOR.....	4
2. FAIRNESS OF EVALUATION METHODOLOGY.....	8
3. FAIRNESS OF HOW PG&E ADMINISTERED THE EVALUATION METHODOLOGY.....	18
4. FAIRNESS OF PROJECT-SPECIFIC NEGOTIATIONS.....	22
5. MERIT FOR CPUC APPROVAL	24
6. CONCLUSIONS.....	26

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 Power Purchase Agreement (PPA) with Big Valley Power, LLC (“Big Valley”) to procure renewable energy from this eligible renewable resource. An independent evaluator, Arroyo Seco Consulting (Arroyo), conducted oversight activities to evaluate PG&E’s processes as the utility evaluated this PPA and finalized contract terms and conditions with Big Valley. The purpose of this report is to provide an independent review of the extent to which PG&E’s least-cost, best-fit (LCBF) methodology is designed fairly, whether PG&E administered its methodology fairly in evaluating the PPA, whether project-specific negotiations with Big Valley were fair, and whether the PPA with Big Valley merits approval by the California Public Utilities Commission (CPUC).

An independent review raised no major concerns about the fairness of the methodology or the administration of the methodology in evaluating the Big Valley PPA. Also, Arroyo has identified no issues with the fairness of the negotiations or the reasonableness of the terms of the PPA. Arroyo agrees with PG&E that the PPA with Big Valley merits approval, based on the PPA’s reasonable market valuation and high project viability.

1. ROLE OF THE INDEPENDENT EVALUATOR

Pacific Gas and Electric Company negotiated the proposed PPA with Big Valley in order to secure renewable generation from an eligible renewable energy resource (ERR) under the California Renewables Portfolio Standard (RPS) Program. The RPS Program was established by state law to ensure that retail sellers of electricity meet targets for procurement of ERRs as a percentage of annual retail sales.

This chapter elaborates on the basis for the participation of an Independent Evaluator (IE) in the review of long-term bilateral contracts for renewable energy, describes the role of the IE, details oversight activities performed by the IE on this PPA, and identifies the treatment of confidential information.

A. CPUC DECISIONS REQUIRING INDEPENDENT EVALUATOR PARTICIPATION

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 third parties, 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 Request for Offers (RFO) and all future competitive solicitations. This requirement to employ an IE now applies whether or not IOU-owned or IOU-affiliate generation participates in the solicitation (Finding of Fact 20, Conclusion of Law 3, and Ordering Paragraph 8). This requirement, among others, was intended by the CPUC to increase the fairness, equity, and transparency of the Offer selection process.

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 articulated principles to apply to the evaluation of short-term contracts for

renewable power, and concluded that “long-term 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 Procurement Review Group and its Independent Evaluator.”¹ PG&E applied the same LCBF methodology to market valuation of the Big Valley bilateral contract that it uses in the annual RPS competitive solicitations, though the data inputs have been routinely updated since the 2008 RPS solicitation.

B. KEY INDEPENDENT EVALUATOR ROLES

To comply with the requirements ordered by the CPUC in Decision 09-06-050, PG&E retained Arroyo Seco Consulting to serve as IE for the long-term bilateral contract being negotiated between PG&E and Big Valley.

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.”² More specifically, the Energy Division (ED) of the CPUC provided a template to guide how IEs should report on the 2008 RPS competitive procurement process, outlining five specific issues that should be addressed:

- Did the IOU do adequate outreach to potential bidders, and did its outreach activities result in an adequately robust solicitation to promote competition?
- Was the IOU’s methodology for offer evaluation and selection designed fairly?
- Was the IOU’s evaluation and selection process fairly administered?
- Were project-specific negotiations fair?
- Does the proposed contract merit CPUC approval?

The structure of this report, setting out detailed findings for each of these key questions, is organized around the template provided by the ED, with one exception. Because the Big Valley PPA resulted from direct, bilateral discussions between the two parties (who had had a pre-existing contractual relationship) rather than as the result of a competitive solicitation requiring outreach to a broad universe of potential generation developers, this report omits discussion of outreach efforts or the robustness of a solicitation. Arroyo’s prior review of PG&E’s 2008 RPS solicitation concluded that the utility conducted substantial outreach to renewable power developers in North America, generating a healthy, robust response.

¹ CPUC Decision 09-06-050, June 19, 2009, “Decision Establishing Price Benchmarks and Contract Review Processes for Short-Term and Bilateral Procurement Contracts for Compliance with the California Renewables Portfolio Standard”, page 29

² CPUC Decision 06-05-039, May 25, 2006, “Opinion Conditionally Approving Procurement Plans for 2006 RPS Solicitations, Addressing TOD Benchmarking Methodology”, page 46

C. IE OVERSIGHT ACTIVITIES

To fulfill the role of evaluating and providing oversight to the process of developing the Big Valley PPA, 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 RPS competitive solicitation; these prior activities were directly relevant to the evaluation of the Big Valley PPA.

- Reviewing the 2008 RPS RFO Solicitation Protocol and its various attachments including the Forms of Power Purchase Agreement and PG&E's detailed LCBF evaluation criteria; reviewing the draft 2009 form agreement for PG&E PPAs;
- Examining the confidential protocols detailing how PG&E evaluates PPAs against various criteria, including market valuation, portfolio fit, transmission adders, credit, project viability, and RPS goals. These nonpublic internal protocols were evaluated to test whether they were consistent with the approved public Solicitation Protocol and whether the procedures, inputs, parameters, and standards were fair and reasonable.
- Interviewing members of PG&E's evaluation committee and evaluation sub-committees regarding the process, data inputs and parameters, background industry and utility information, quantitative models, and other considerations taken into account in evaluating PPAs against non-quantitative criteria and in performing market valuation of PPAs;
- Interviewing PG&E middle-office staff regarding the internal review process that serves as a check on market valuation modeling and its inputs;
- Reviewing in detail various data inputs and parameters used in PG&E's market valuation methodology;
- Spot-checking offer-specific data inputs to PG&E's valuation model;
- Developing a simple but independent market valuation model for the purpose of checking results from PG&E's LCBF methodology;
- Providing independent advice and suggestions to the PG&E team as needed, such as input on contract size issues and possible inclusion of non-shortlisted parties.

Because the final CPUC decision requiring utilities to engage an Independent Evaluator for oversight of and reporting about long-term bilateral contracts was not issued until June 19, 2009, a point in time at which PG&E had largely completed negotiations with Big Valley, Arroyo Seco Consulting was unable to participate directly in or observe discussions between the two parties, as would ordinarily be the case for IE role in a negotiations following a competitive solicitation. The findings of this report regarding the fairness of negotiations are based instead on review of the detailed contract terms and conditions of the Big Valley PPA and comparison of these to those of other PPAs, executed or under negotiation, from

the 2008 RPS RFO, and not on actual observation over time of the bilateral negotiations and concessions granted within them.

D. TREATMENT OF CONFIDENTIAL INFORMATION

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. For example, the Decision provides for confidential treatment of "Score sheets, analyses, evaluations of proposed RPS projects",³ as opposed to public treatment (after submittal of final contracts for CPUC approval) of the counterparty, resource type, location, expected deliveries, and length of contract for bilateral contracts under the RPS program.

³"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 EVALUATION METHODOLOGY

The key finding of this chapter is that, based on IE oversight activities and findings, PG&E's evaluation methodology used in assessing the Big Valley PPA was designed fairly.

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.

A. PRINCIPLES FOR EVALUATING THE METHODOLOGY

The Energy Division of the CPUC has usefully provided a set of principles for evaluating the process used by IOUs for selecting Offers in competitive solicitations, within the template intended for use by IEs in reporting. This list was previously developed by Jonathan Jacobs of PA Consulting, serving as IE for San Diego Gas & Electric Company (SDG&E).

Mr. Jacobs' principles include:

- The procurement target should be large enough to ensure that the utility has a reasonable chance of meeting its 20% RPS target (taking into account potential contract failures).
- The IOU evaluation should only be based on those criteria requested in the response form. There should be no consideration of any information that might indicate whether the bidder is an affiliate.
- The methodology should identify how quantitative measures will be considered and be consistent with an overall metric.
- There should be no differences in the evaluation method for different technologies that cannot be explained in a technology-neutral manner.
- The methodology does not have to be the one that the IE would independently have selected but it needs to be 'reasonable'.

B. PG&E'S LEAST-COST BEST-FIT METHODOLOGY

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 (LCBF) 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 Offer selection and evaluation processes and criteria for its 2008 RPS RFO. These are summarized

in Section XI of PG&E's 2008 Solicitation Protocol for its renewable solicitation, and detailed in Attachment K to that Solicitation Protocol. A version of the quantitative market valuation component of this methodology, using data inputs updated to mid-May 2009, was used to evaluate the Big Valley PPA in June 2009. PG&E did not apply the other formal protocols for non-quantitative, non-valuation attributes, used in competitive solicitations, to develop quantitative scorings of the Big Valley PPA. However, PG&E did take some of these attributes, such as project viability and portfolio fit, into account in deciding to approve the PPA.

This section summarizes PG&E's market valuation methodology briefly and at a high level; readers are referred to the 2008 Solicitation Protocol and its Attachment K for a fuller treatment of the detailed methodology. PG&E applies the same methodology to the market valuation of long-term bilateral contracts as to Offers resulting from its annual competitive solicitations for RPS resources, though the data inputs are routinely updated.

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. Costs are adjusted to reflect transmission adders. The costs of integrating an intermittent resource into the electric system, such as load-following and regulation, are assumed zero. Both benefits and costs are discounted from the entire contract period to 2009 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 Offer's generation profile. For peaking or baseload Offers, the energy quantity is based on the performance requirements of the Offer.

PG&E projects capacity value as a nominal dollar per kilowatt-year estimate. For as-available products, capacity quantity is calculated based on the annual average of the generation profile for the noon to 6 p.m. period; this calculation was adopted by the CPUC in Decision D.05-10-042 as the peak period for the purpose of measuring qualifying RA capacity from wind and solar resources.⁴ The Big Valley project was treated as an as-available resource in PG&E's valuation. Capacity benefit is calculated as the product of capacity value and quantity, and discounted to 2009 nominal dollars.

C. STRENGTHS AND WEAKNESSES OF PG&E'S METHODOLOGY

PG&E's evaluation methodology has been revised over the course of several years, and its evolution has benefitted from input from IEs and the utility's PRG. Consequently, it has

⁴ CPUC Decision D.05-10-042, "Opinion on Resource Adequacy Requirements", October 27, 2005, page 101

achieved a certain degree of refinement that has strengthened the process from the perspective of fairness and reasonableness.

At a high level, PG&E's methodology has several strengths, particularly when compared to approaches employed by many utilities in other jurisdictions:

- Use of an IE and the PRG for oversight and review, and their particular focus on evaluation of utility-affiliate offers, utility-owned generation, Power Purchase and Sale Agreements, and buyout options, allow for more transparent consideration of the fairness of how affiliate or utility-owned generation is treated vs. independent developers. The lack of such safeguards against anti-competitive behavior in some jurisdictions is strikingly different.
- A methodology that allows the use of subjective judgment in creating a short list provides PG&E with more latitude to emphasize key non-valuation criteria that have current importance, such as project viability, in contrast to a rigid weighting system for price and non-price criteria as employed by other utilities.
- The public issuance of PG&E's evaluation protocols, and the transparency and detail provided to potential counterparties about how, specifically, PPAs will be evaluated, gives renewable power developers clearer and more detailed guidance than typical utility industry practice.

However, PG&E's methodology has vulnerabilities that come along with these strengths.

- The two-step process for incorporating transmission adders into the ranking by market value is complex and time-consuming.
- The valuation methodology has some properties that, when combined with the specific elements of some PPAs, may appear counterintuitive to some observers, though these properties are internally consistent with the construction of the valuation approach.
- The methodology takes into account the cost of potential transmission network upgrades identified by the three California IOUs as necessary when enough new generation is added at a local "cluster" to trigger such a need. However, the evaluation of these costs relies on data provided in Transmission Ranking Cost Reports of the IOUs and on the practices of those utilities in compiling the reports. If the TRCRs provide inconsistent guidance, it can skew or bias the outcome of the valuation with transmission adders. This does not affect the evaluation of existing resources such as Big Valley.

The remainder of this section focuses on issues identified in the Energy Division's IE template as specific topics of interest to describe the strengths and weaknesses of PG&E's evaluation methodology.

1. COMPARISON OF PG&E'S METHODOLOGY TO THOSE IN OTHER STATES

There is a very wide range of practice among electric utilities in how they conduct competitive procurement for new resources. As noted above, PG&E's methodology is generally more transparent regarding process and criteria, has more safeguards against utility or utility-affiliate self-dealing, and provides an extra degree of outreach to potential counterparties. Here are some other general observations:

- As with the PG&E approach, most utilities specify a valuation (or price) criterion as well as non-valuation criteria for evaluating PPAs.
- "Portfolio Fit" is seldom used as an explicit non-valuation criterion in PPA evaluation outside California.⁵ To the extent that valuation methods such as production cost models assign greater value to dispatchable resources and to resources that produce more on peak than off peak, the fit of a resource is captured in that analysis.
- Relatively few utilities employ a real-option pricing approach to value generation, as PG&E does for dispatchable resources. More typically, utilities employ production cost or dispatch models, such as PROSYM or STRATEGIST, to evaluate the impact on system operation and cost of a new resource and to identify a least-cost plan. Another common approach is for the utility to value the hourly generation of the new resource using the system marginal cost estimated by such a production cost model. Many utilities, when evaluating renewable resources that are not dispatchable, perform their valuation against an internal, proprietary set of forward curves, as PG&E does.
- It is typical for utilities to use an avoided-cost economics approach to valuing the capacity provided by a new resource, as PG&E does.
- In other jurisdictions, utilities are often allowed to consider integration costs when evaluating intermittent resources such as new wind generation. These cost adders can range from \$3 to \$10/MWh and are considered appropriate by regulators in those jurisdictions to capture the increased system costs needed to accommodate resources with unpredictable generation profiles.

To summarize, when compared to typical practices employed by utilities in other U.S. jurisdictions, PG&E's evaluation methodology appears to be designed to stimulate a more robust response from participants in its competitive solicitations by suppressing some of the constraints applied in other utilities' solicitations.

⁵ Arizona Public Service employed "Portfolio Fit" as a non-quantitative evaluation criterion in its 2008 renewable solicitation: "APS 2008 Renewable RFP Bidder's Conference, June 25, 2008", page 7. Duke Energy, Nevada Power, and Sierra Pacific use "Portfolio Fit" as an evaluation criterion in their renewable solicitations, but for these companies the term refers specifically to the relative timing of the utility's RPS obligation and the offered project's ability to come into operation to meet the scheduled need

2. BIAS AGAINST TECHNOLOGY OR OPERATING CHARACTERISTICS

PG&E's evaluation methodology, unlike those of some other utilities, does not explicitly incorporate a preference for one renewable technology over another (such as for landfill gas over wind power) or for one operating characteristic over another (such as for baseload resources over as-available resources). The market valuation analysis, by which the initial ranking is performed, is designed to be neutral to technology.

That being said, PG&E's market valuation methodology calculates a capacity value based on the annual average hourly generation profile measured between noon and 6 p.m. All else being equal, a project which delivers most of its generation in that afternoon block will be assigned a higher capacity value than a project that delivers energy at a flat level around the clock, if they have the same annual generation. So, all else being equal, a technology that strongly shapes its generation into the afternoon block is favored over technologies with baseload or flattish generation profiles.

These attributes of PG&E's protocol do not appear to be biases intended to tilt towards one technology or one operating regime. Reasonable business judgment should favor resources with energy production that is highly predictable on a day-ahead basis over those with poor firmness and uncertain predictability. To increase the likelihood that PG&E customers will benefit from renewable projects that are built on schedule and deliver the promised levels of generation, the methodology should on average favor projects with well-commercialized technology. When planning to ensure a reliable electric system, a project with a predictable profile of generation peaking in the afternoon should on average receive a higher capacity valuation than one with a flat baseload profile, all else being equal. If the methodology is administered fairly these attributes of the market valuation and non-valuation scoring process should not result in short list decisions biased towards one technology or operating regime.

3. THE ROLE OF "PORTFOLIO FIT" IN PG&E'S EVALUATION

One issue with the design of PG&E's methodology is the challenge of capturing the impact of adding new renewable resources on remarketing costs. To the extent new must-take resources are generating in periods when the utility might otherwise be net long power anyway, such as in the early hours of the morning in springtime, adding the resource may exacerbate the challenge of either dispatching down other resources or remarketing that extra power in a market that does not value it, creating opportunity costs or increasing total system costs to accommodate redispatch.⁶ Utilities that employ a production cost or utility dispatch model have the ability to assess quantitatively how the thermal unit commitment may change, how units may need to be redispatched, and what the cost of that may be when a new must-take renewable resource is added.

⁶ Hypothetically, a system operator may choose to commit more small thermal units in those hours instead of a few big ones in order to decrease the system minimum load point, increasing system fixed costs that day. The utility that takes delivery of poorly predicted must-take power may need to sell it to other parties at short notice, driving down its price in an illiquid market.

On an unrelated note, new renewable resources that have poor day-ahead predictability may add to total system costs (relative to new resources that have a firm generation profile or good day-ahead predictability). All else being equal, a risk-averse system operator may choose to commit more dispatchable resources to take into account the volume uncertainty associated with unpredictable resources. More units committed, operating at lower load points, on average may increase total system cost.

PG&E's methodology for market valuation does not have the specific means to review such impacts on unit commitment and dispatch. PG&E's approach to valuing as-available renewable generation basically attributes a low value to the new project's production in those springtime off-peak periods because the forward curve assigns low prices to those hours. However, absent a tool that looks at unit commitment decisions, redispatch decisions, and remarketing costs, these impacts of building intermittent, poorly predictable, must-take generation aren't captured by the analysis (this is not meant to imply that production cost models do an excellent job of capturing the real costs of these impacts). Also, the methodology is required to treat integration costs as zero, even if intermittent wind generation were to increase as a major portion of the overall portfolio.

Consequently, there would seem to be a role for the use of portfolio fit as a criterion in addition to the market valuation step. To the extent that the portfolio fit criterion is designed to capture, even in a non-quantitative way, a sense of the costs or opportunity losses the customer bears when a new must-take resource affects remarketing costs and other system costs when it is added, this criterion may be helpful in overall PPA evaluation, at the margin.

4. GENERATION PROJECT TIMING VS. TRANSMISSION PROJECT TIMING

There are clearly situations in the California power market where the commercial operation date (COD) of a new renewable generation project is dependent on the COD of a major transmission network upgrade, as when a project proposes to interconnect to a yet-to-be-built substation or transmission line of SCE's Tehachapi Renewable Transmission Project or of SCE's proposed Devers-Palo Verde 2 transmission project. Alternatively, there are situations where a new project can come into commercial operation prior to the COD of a major transmission project, but the value of the project will be harder to realize and the operation and output of the project may be constrained until a major transmission upgrade is completed, as with generators proposing to interconnect in Imperial County and to inject power to IID or SDG&E substations prior to completion of the Sunrise Powerlink project. In the case of an existing project such as Big Valley Power, these considerations did not come into play during the evaluation.

5. TRANSMISSION COST ANALYSIS

The PG&E methodology provides for four major sources of transmission cost information to be used in valuing PPAs:

1. For some projects, transmission wheeling costs from an project's delivery point outside the CAISO grid to the boundary of the CAISO grid must be estimated. For

the purposes of making a short list, the methodology calls for the use of the full cost of third-party transmission tariffs as a proxy for this cost

2. Transmission adders published in the IOUs' Transmission Ranking Cost Reports are used as proxies for those network upgrade costs potentially needed to accommodate incremental renewable generation in locations that may become congested.
3. If a project has already progressed to an advanced state of development or construction, the specific cost of network upgrades needed to accommodate its incremental production have been estimated in a System Impact Study and/or Feasibility Study through the CAISO interconnection process.
4. The methodology affords PG&E an opportunity to estimate the cost of "alternative commercial arrangements", such as remarketing the project's power, undertaking swaps, or purchasing non-firm transmission rights, to avoid network upgrades.

In the case of Big Valley Power, an existing project already interconnected to the CAISO within NP-15, PG&E's evaluation used none of these. Zero transmission cost was added to the project economics for delivery within NP-15.

6. WEIGHTINGS APPLIED TO EVALUATION CRITERIA

The PG&E methodology does not use quantitative weights to apply to evaluation criteria. In its current form, the methodology does not provide for, say, an assignment of a 60% weight to market valuation and a 20% weight to project viability in ranking PPAs. Instead, a valuation is the starting point for decision-making, and PG&E uses subjective judgment to reject or accept bilateral contracts using information regarding non-valuation criteria such as project viability.

7. POTENTIAL IMPROVEMENTS TO PG&E'S METHODOLOGY

PG&E's LCBF methodology has benefitted from several iterations over the years with input from IEs, guidance from PG&E's PRG, and internal discussions on how to improve the approach. Consequently significant progress has been made to streamline the evaluation process. Still, incremental improvements are still possible, and this section suggests areas where these may be made.

- Transparency of evaluation criteria: supplier concentration. Supplier concentration, or the degree to which PG&E's RPS procurement portfolio is concentrated in the hands of relatively few counterparties, is a legitimate business concern. In this stage of the development of the industry, several developers of renewable power are start-up enterprises, lack project experience, rely on technologies that have seldom or never been constructed on the massive scale now being undertaken, and face other project-specific risks related to equipment, permitting, site control, etc. It would be imprudent for PG&E to make a short list that placed a large fraction of counterparty risk in the hands of one or two competitors who, for example, had never developed a biomass generation project previously but proposed to construct a number of biomass facilities. The risk of failure to meet RPS goals would be increased if PG&E

were to rely on a very few renewable developers to build and operate very large numbers of projects successfully in the next few years, as opposed to several developers with a diverse set of skills, experience, and technologies, each assigned a manageable volume of project awards.

Supplier concentration is closely related to project viability. The risk of failure to bring a renewable generation project to fruition is one thing; to multiply that risk by including several projects of a single counterparty is another. A small development company that might easily be able to manage a PG&E contract for one or two projects of a dozen MW apiece might find itself overwhelmed if it were awarded a contract for dozens of such projects totaling hundreds of MW, jeopardizing its ability to complete more than a few projects on schedule and on budget.

Thus, supplier concentration is a commercial consideration that should be seriously considered when making decisions about renewable power procurement. Several of the short-listed projects in the 2008 RPS solicitation that were ranked high for market valuation were put forward by firms which lacked project experience in siting, developing, permitting, constructing, and operating generation projects using the specific technologies they proposed. Several proposed projects much larger than any they had previously undertaken.

However, the attribute of supplier concentration, applicable to a short list or a procurement portfolio as a whole, is not identical to project viability. The current protocol is designed for the evaluation committee to score individual PPAs on their stand-alone viability. If, hypothetically, 50 projects offered by one developer each received a score of 4.0 out of 5.0 for project viability, it means that each project individually is quite viable, but it does not mean that accepting all 50 projects and negotiating contracts for all 50 is a viable, prudent, or reasonable strategy for PG&E.

PG&E's protocols do not mention supplier concentration explicitly as a criterion for evaluating PPAs or as a consideration for selecting PPAs. Arroyo Seco Consulting recommends that in future PG&E should explicitly identify supplier concentration as a consideration used in evaluation and selection. This would improve the transparency to the developer community of how PG&E makes decisions. It would make protocols more consistent with how PPA selection is actually conducted. Supplier concentration need not be a separate evaluation criterion but could, perhaps, be incorporated in the protocol's discussion of the Project Viability criterion or of what factors will be taken into account as subjective judgment is applied to make a short list.

- Transparency of evaluation criteria: emerging technologies. The CPUC decision that conditionally approved PG&E's 2008 RPS Procurement Plan explicitly stated that "We [the Commission] also expect utilities to consider projects which employ emerging technologies." To the extent that such projects are evaluated in RPS

solicitations, “utilities may need to develop slightly different evaluation criteria for emerging, pilot and demonstration projects.”⁷

PG&E has not as yet modified its Solicitation Protocol to accommodate this concept of setting up different evaluation criteria for emerging technologies within the RPS RFO than for mainstream renewable projects. The CPUC’s guidance to consider projects using emerging technologies directly contradicts the overall imperative for utilities to select commercially viable contracts with the greatest likelihood of coming into operation and serving the policy objective of meeting RPS goals. Going forward, the regulator and utility could identify an alternative procurement process than RPS solicitations for selecting commercial-scale projects based on emerging technologies and awarding contracts.⁸

- Eligibility criteria: hybrid renewable/fossil technology. In future, PG&E should give explicit guidance to potential counterparties about the conditions under which a hybrid renewable/fossil project can be evaluated vs. will be rejected as non-conforming.
- Inputs to market valuation: extrapolating forward curves. The valuation analysis relies on PG&E making a forward energy curve and volatility curve that stretches far into the future, to the termination date of the longest proposed PPA. This requires extrapolation of gas and electric forwards beyond the furthest date of what is observable based on market transactions or broker quotes; the power market is illiquid beyond a reasonably short time horizon.

In extrapolating so far into the future, the PG&E team must assume escalation rates for both gas and power forwards. The gas forwards serve as input to the calculation of projected RA value. Escalating forward gas and power prices at different rates has an effect on the predicted RA price. For example, if the power forward price is extrapolated to escalate faster than gas price, the implied market heat rate increases. This would be consistent with a future in which the gas-fired unit needed at the margin to serve peak demand will be increasingly inefficient. It implies that no technological improvements in unit efficiency are anticipated. It would also imply that a new marginal generating unit’s utilization increases over time. This result would affect the projected capacity value used in the market valuation protocol.

Arroyo Seco Consulting suggests that the gas and power forward prices be extrapolated to increase at about the same escalation rate beyond the point in time when the California power market is assumed to be in capacity equilibrium. That would tend to reduce effects on the capacity valuation caused by disparate assumptions about gas and power price escalation.

⁷ CPUC Decision 08-02-008, “Opinion Conditionally Accepting Procurement Plans for 2008 RPS Solicitations”, February 14, 2008, pages 31-32

⁸ For example, the Emerging Renewable Resource Program, which serves as a vehicle for confirming the commercial feasibility of technologies that have been tested only in a preliminary manner, could possibly form the basis for awarding utility procurement contracts for commercialized projects using these technologies

- Inputs to market valuation: adjustment assumptions. The current market valuation protocol includes adjustments to take into account the likely impact of transmission congestion. The data used to make these adjustments are obsolete and need to be updated.

Because this step of the market valuation analysis can play a major role affecting the ranking of projects that interconnect in historically congested locales, Arroyo recommends that in future years the public market valuation protocol be expanded to discuss the methodology at a summary level.

3. FAIRNESS OF HOW PG&E ADMINISTERED THE EVALUATION METHODOLOGY

This section describes the extent to which PG&E's administration of its evaluation methodology was conducted fairly to review the proposed Big Valley PPA. The overall conclusion is that the process in this case was conducted in a fair and consistent manner.

A. PRINCIPLES USED TO DETERMINE FAIRNESS OF PROCESS

The Energy Division has provided a set of principles proposed to guide the IE in determining whether PG&E's evaluation and selection process was fair:

- Were affiliate PPAs treated the same as non-affiliate?
- Were questions answered fairly and consistently and the answers made available to all?
- Did the utility ask for "clarifications" that provided the counterparty an advantage over others?
- Were PPAs given equal credibility in the economic evaluation?
- Was there a reasonable justification for any fixed parameters that enter into the methodology (e.g., RMR values; debt equivalence parameters)?
- What qualitative and quantitative factors were used to evaluate bids?

B. REVIEWING PG&E'S ADMINISTRATION OF ITS EVALUATION METHODOLOGY

In the case of bilateral discussions with Big Valley Power, considerations of fairness for treatment of affiliates vs. non-affiliates were moot. While PG&E has an application outstanding for a Photovoltaic Program that proposes to include development of utility-owned renewable generation,⁹ the utility's negotiations with Big Valley Power appear to be entirely independent of that proposed and as-yet-unapproved program.

The Big Valley Power project currently has the status of a Qualifying Facility (QF) under contract to PG&E. The current proposal is to replace that QF contract with a new PPA; the generator is not currently operating or providing renewable power to PG&E's customers

⁹ Application 09-02-019, "Application of Pacific Gas and Electric Company to Implement its Photovoltaic Program", February 24, 2009

under the economics of the current QF contract. To the extent Arroyo can discern by reviewing the status of negotiations with this and other parties, the utility gives equal credibility to other existing QF counterparties in this situation where restructuring a QF contract can provide benefits to both PG&E's RPS program and the counterparty.

PG&E provided Arroyo Seco Consulting with several inputs to its valuation model and with directly comparable results for the valuation of the Big Valley PPA and other PPAs under negotiation.

While PG&E did not, for this bilateral contract negotiation, conduct the detailed scoring of non-quantitative PPA attributes that is part of the methodology employed in competitive solicitations, and did not develop a project viability calculator for Big Valley, it is clear that PG&E assessed the project viability of the generator and that that assessment entered into the utility's evaluation of the PPA.

C. REASONABLENESS OF PARAMETERS AND INPUTS

The vast majority of the many parameters and inputs that PG&E used in its evaluation of PPAs were reasonably chosen, in the opinion of Arroyo Seco Consulting. There are a few minor issues that Arroyo has raised regarding the choices PG&E made about inputs that merit discussion.

PG&E used a discount rate of 7.6% to bring future contract costs and benefits to a 2009 present value. Members of the PG&E evaluation committee indicated that this value is based on PG&E's approved cost of capital proceeding. It represents the approved weighted average cost of capital (WACC) for PG&E, on an after-tax basis.

A public filing by PG&E Corporation described the approval by the CPUC, on December 20, 2007, of the utility's capital structure and authorized rate of return for 2008, at the same levels as had been approved for 2007.¹⁰ As reported in the filing, the "adopted cost of capital" on a weighted return basis was 8.79%; this is a pre-tax weighted average cost of capital. Applying an assumption for marginal tax rate of 40.75% to the debt component of this adopted pre-tax WACC yields an after-tax WACC of about 7.66%, close to the value used as discount rate.

It is not clear that an after-tax WACC is a reasonable choice to use for discounting PPA benefits and costs in a present value analysis. The costs of a PPA are based on payments by the utility to the counterparty, payments based on prices that are expressed in pre-tax nominal dollars per MWh in the PPAs. The benefits to utility customers are based on a forward curve and a projection of capacity value, each denominated in pre-tax nominal dollars per MWh or per kW-year. Utility customers who purchase renewable power from PG&E pay their bills out of pre-tax dollars. PG&E's approach for calculating levelized margin does not include a step for applying a tax rate to annual margins to convert them to after-tax margins (as the MPR methodology does). So a reasonable approach would be to

¹⁰ PG&E Corporation, Form 8-K, filed December 21, 2007

discount annual net pre-tax margin of a PPA using a discount rate based on pre-tax cost of capital, not after-tax.

If the focus of the analysis were to place an equity value on the renewable project for its shareholders by discounting the future cash flows flowing to project equity holders, net of interest and taxes, then an appropriate and reasonable approach would be to apply an appropriate after-tax cost of capital to those equity cash flows. However, the focus of this evaluation analysis is to assess the net benefit to ratepayers by inspecting future (pre-tax) payments to a counterparty relative to the (pre-tax) market value of the delivered energy, capacity, and environmental attributes.

Using the discount rate for this purpose which is based on an after-tax WACC (smaller value than a pre-tax WACC) has the effect of placing a larger weighting on the more distant future benefits and costs of the project than is appropriate. All else being equal, this tends to favor PPAs that propose flat nominal pricing for energy over PPAs that propose escalating prices over the contract term, compared to an evaluation using the larger pre-tax WACC.

Another open issue is whether it is appropriate to use a regulated utility's authorized cost of capital as the discount rate for net revenues from PPAs with renewable generation developers. These developers are generally not regulated utilities but are rather private or public companies in the independent power producer (IPP) sector. The cost of equity and cost of debt for the riskier IPP sector are both considered higher than for regulated utilities. For example, the cost of debt assumed into the California Energy Commission's (CEC's) 2007 analysis of the Market Price Referent (MPR), an analysis that represents the risks of an IPP developer building a proxy plant under a long-term PPA, was 7.72%¹¹ compared to PG&E's authorized 6.05%, and the assumed cost of equity underlying the proxy plant developer was 13.28% compared to PG&E's authorized 11.35%.

One could argue that the flow of net benefits of power deliveries from IPPs contracting in long-term PPAs has more risk associated with it than PG&E's risk (e.g. higher credit risk, bankruptcy risk, liquidity risk) that merits discounting the net benefits at the higher WACC associated with the IPP industry. That suggests that the appropriate WACC to be used when evaluating PPAs should be closer to the 8.93% pre-tax WACC for the proxy plant cited in the 2007 MPR spreadsheet, than to the after-tax 7.6%. Arroyo Seco Consulting suggests that PG&E use the pre-tax WACC of the proxy plant in the 2008 MPR as the discount rate for the next renewable solicitation.¹²

¹¹ Resolution E-4118, Energy Division of the Public Utilities Commission of the State of California, October 4, 2007, page 24

¹² Note that Arroyo does not suggest the use of a pre-tax IPP WACC as an input parameter to the Black option pricing model utilized for valuing dispatchable generation, described in Attachment K. Arroyo suggests using traditional proxies for the "risk-free rate" input to Black's model, such as U.S. Treasury securities. This discussion of pre-tax IPP WACC applies only to use of a rate for discounting pre-tax benefits and costs of as-available, baseload, and peaking Offers.

D. TRANSMISSION ANALYSIS AND TRANSMISSION INFORMATION

PG&E followed its transmission analysis protocols in administering its procedures for market valuation. The team utilized a set of detailed information on full transmission tariffs as a proxy to bring power delivered outside the CAISO grid to delivery points on the boundary of that grid. The team used the TRCR information of the three California IOUs to estimate the cost of network upgrades for new projects interconnecting in congested locations; in the case of projects within PG&E's service territory, the team was able in most cases to estimate a lower cost using alternative commercial arrangements. In the case of Big Valley Power, which is interconnected to the grid within NP-15, the analysis is not necessary, but is needed to make a comparison to other potential renewable energy PPAs that propose to interconnect outside the CAISO.

E. RESULTS ANALYSIS

PG&E followed its methodology in administering its procedures for market valuation of the Big Valley PPA. Other than the issues described above regarding inputs to the market valuation model, Arroyo did not disagree with PG&E's evaluation. Arroyo did not identify any problems specific to the evaluation of the Big Valley PPA. The overall administration of the market valuation methodology was fair to Big Valley and to other counterparties currently in negotiation for renewable energy PPAs with PG&E.

4. FAIRNESS OF PROJECT-SPECIFIC NEGOTIATIONS

This chapter details an independent review of the extent to which PG&E's negotiations with Big Valley Power, LLC can be considered to be fair. A more detailed narrative of points of the negotiation and how its fairness can be judged is provided in the confidential appendix to this report.

A. PRINCIPLES FOR EVALUATING THE FAIRNESS OF NEGOTIATIONS

Arroyo took into account several principles to evaluate the degree of fairness with which Big Valley was treated in negotiations.

- Were counterparties treated fairly and consistently by PG&E during negotiations? Were all counterparties given equitable opportunities to advance their negotiations towards final PPAs? Were individual counterparties given unique opportunities to move their negotiations 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? 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 counterparty were disadvantaged by that treatment? Were other potential contracts of comparable value to ratepayers assigned materially worse outcomes?

B. FAIRNESS OF NEGOTIATIONS BETWEEN BIG VALLEY AND PG&E

As described previously, because of the timing of the Commission's Decision regarding an IE role in evaluating long-term bilateral contracts, Arroyo did not have an opportunity to participate in negotiating sessions between PG&E transactors and Big Valley, or to undergo routine debriefings with PG&E transactors as negotiations progressed, as has been the case

with short-listed parties from the 2008 RPS RFO. As a consequence, Arroyo is unable to opine directly about the treatment of Big Valley in those sessions, or how that treatment compares to the treatment of other counterparties with whom PG&E is negotiating, based on direct observation. The findings in this section are based more narrowly on a comparison of the resulting executed contract's terms and conditions to those of other draft or executed contracts between PG&E and short-listed participants in the 2008 RPS RFO. More specifics regarding negotiation issues and the fairness with which they were handled are addressed in the confidential appendix to this report.

PG&E has generally provided fair opportunities for counterparties to seek modifications to specific elements of its standard PPA terms. When PG&E and one of its potential counterparties negotiate specific modifications to the standard pro forma language provided in the 2008 RPS RFO solicitation protocol, PG&E is then open to analogous modifications with other potential counterparties. PG&E does not generally volunteer the opportunity to negotiate such modifications, in order to maintain the general level of risk borne by ratepayers. However, PG&E's transactors have to date handled these modifications or concessions fairly, and unique concessions offered to one counterparty have not been withheld from others that actively sought such concessions. It is evident that PG&E's transactors as a group have coordinated their activities closely regarding how individual negotiations have yielded specific modifications, in order to avert unfair treatment of individual counterparties.

In the negotiations with short-listed entities from the 2008 RPS RFO, PG&E's management has accommodated certain specific accommodations in terms with several counterparties. Some of these accommodative terms, which PG&E's management has deemed to be commercially reasonable and which are in most cases responses to concerns raised in common by several counterparties, have been articulated in the draft Form Agreement that PG&E has proposed for its 2009 renewable solicitation. As a consequence, some of the terms negotiated with counterparties for the 2008 solicitation resemble the contract points articulated in the draft 2009 Form Agreement. To some extent the Big Valley PPA adopts some of these contract points, and to the extent it does, it reflects the consistency with which PG&E has accommodated several of its counterparties.

Arroyo has reviewed the executed PPA between PG&E and Big Valley. The negotiated terms include specific variances from the 2008 Form Agreement that represent accommodations to the specific situation of the Big Valley project as a QF generator not currently actively producing. In Arroyo's opinion, the executed agreement suggests that negotiations treated Big Valley fairly in comparison to other counterparties. Similarly, to the extent that the variances from the 2008 Form Agreement may raise the potential of uniquely shifting risk from Big Valley to ratepayers, the contract implements mitigating terms that protect ratepayers' interests. Also, PG&E's ratepayers receive some unique benefits from the PPA that are accommodative to the utility and that differ from the standard form agreement. In Arroyo's opinion these variances, both those that favor Big Valley and that favor PG&E and its ratepayers, are commercially reasonable. They are detailed in the confidential appendix to this report.

5. MERIT FOR CPUC APPROVAL

This chapter provides an independent review of the merits of the Big Valley PPA against the high-level criteria identified in the Energy Division's 2008 IE template.

A. CONTRACT SUMMARY

PG&E and Big Valley Power, LLC executed a complete contract for the Big Valley project on July 2, 2009. The contract is a ten-year PPA with an option to extend for an additional ten years, for a potential total term of twenty years. The start of commercial operation is anticipated to take place shortly after CPUC approval of the PPA. Annual contract energy quantity is expected to be about 40 GWh.

The Big Valley Power project is located in Bieber, California, in northwestern Lassen County. It is associated with a sawmill and will operate with biomass as fuel (wood chips, sawdust, bark, brush, other wood waste). Its generating capacity is up to 7.5 MW.

B. NARRATIVE OF EVALUATION CRITERIA AND RANKING

The 2008 template for independent evaluators, provided by the Energy Division, calls for a narrative of the merits of the proposed project on the major 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

The contract price for Big Valley does not exceed the Market Price Referent (MPR) for ten-year PPAs, using the 2008 baseload MPR for ten-year resources commencing in 2009, the year the Big Valley PPA was executed.¹³ If the option to extend for an additional ten years were to be exercised, the contract price would not exceed the MPR for twenty-year resources commencing in 2009. The confidential appendix to this report provides a more detailed narrative of the pricing of the PPA and its relationship to the 2008 MPR.

Based on PG&E's LCBF methodology, the market valuation of the Big Valley PPA is reasonable. Also, Arroyo performed a simplified but independent market valuation of the PPA to confirm that the net market value of the contract is reasonable. In Arroyo's opinion, the contract price for Big Valley is reasonable and the PPA's market valuation is high.

¹³ California Public Utilities Commission, Resolution E-4214, December 18, 2008, page 1; the baseload MPR for ten-year resources commencing 2009 is \$100.43/MWh in nominal dollars, while the baseload MPR for twenty-year resources commencing 2009 is \$111.26/MWh in nominal dollars.

PORTFOLIO FIT

Arroyo ranks Big Valley projects as moderate in portfolio fit. The generator is anticipated to operate as a baseload resource. This baseload resource has been part of PG&E's generation mix for several years. This would imply that the costs associated with remarketing energy from the project in off-peak periods, when energy may not be needed, should be low, or at least no higher than previously anticipated when the QF contract was executed. The fit with PG&E's portfolio would be even greater if the PPA had conveyed full dispatch rights to the utility, but such an arrangement would generally be economically infeasible for a cogeneration unit associated with a saw mill. In this situation, the project is currently contracted to the utility under a QF contract for as-available energy, and the execution of this PPA will not lead to a worse fit with the utility's portfolio.

PROJECT VIABILITY

Arroyo ranks the project viability of Big Valley as high. The generator already exists, and has been generating renewable power under the existing QF contract until fairly recently. There does not appear to be any major physical impediment to bringing the existing generator back into operation or to keeping the project in operation once restarted. A more detailed discussion of factors that suggest a high likelihood of bringing the project back into commercial operation is addressed in the confidential appendix to this report.

RPS GOALS

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. The Big Valley project will operate using biomass (wood chips, sawdust, bark, brush, and/or other wood waste) as fuel, advancing the state's efforts to meet that specific goal. This is a notable aspect of the proposed PPA, since relatively few viable biomass-based projects have emerged from recent RPS solicitations.

Returning this eligible renewable resource to active operation, which is expected shortly after CPUC final approval of the PPA, will advance PG&E towards its overall RPS goals in 2010.

C. DISCUSSION OF MERIT FOR APPROVAL

Arroyo concurs with PG&E management that the proposed Big Valley contract merits CPUC approval, given Arroyo's opinion that the PPA's market valuation is high, its portfolio fit is moderate, and its project viability is high.

7. CONCLUSIONS

Arroyo Seco Consulting concludes that the LCBF methodology that PG&E employed in evaluating the Big Valley bilateral contract was fair and reasonable. The administration of the methodology was fair and reasonable. Based on a review of the terms and conditions of the executed PPA (rather than on direct observation of the actual negotiation process), Arroyo infers that the negotiations were conducted fairly, with the counterparty benefitting from some concessions by PG&E made to accommodate Big Valley's specific situation, and PG&E and its ratepayers benefitting from some unique concessions by Big Valley.

In Arroyo's opinion, the proposed Big Valley contract ranks as high in market valuation, moderate in portfolio fit, and high in project viability, and merits CPUC approval.

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

Aglet	Day Carter Murphy	North Coast SolarResources
Alcantar & Kahl	Defense Energy Support Center	Northern California Power Association
Ameresco	Department of Water Resources	Occidental Energy Marketing, Inc.
Anderson & Poole	Department of the Army	OnGrid Solar
Arizona Public Service Company	Dept of General Services	Praxair
BART	Division of Business Advisory Services	R. W. Beck & Associates
BP Energy Company	Douglas & Liddell	RCS, Inc.
Barkovich & Yap, Inc.	Douglass & Liddell	Recon Research
Bartle Wells Associates	Downey & Brand	SCD Energy Solutions
C & H Sugar Co.	Duke Energy	SCE
CA Bldg Industry Association	Dutcher, John	SMUD
CAISO	Ellison Schneider & Harris LLP	SPURR
CLECA Law Office	FPL Energy Project Management, Inc.	Santa Fe Jets
CSC Energy Services	Foster Farms	Seattle City Light
California Cotton Ginners & Growers Assn	G. A. Krause & Assoc.	Sempra Utilities
California Energy Commission	GLJ Publications	Sierra Pacific Power Company
California League of Food Processors	Goodin, MacBride, Squeri, Schlotz & Ritchie	Silicon Valley Power
California Public Utilities Commission	Green Power Institute	Southern California Edison Company
Calpine	Hanna & Morton	Sunshine Design
Cameron McKenna	Hitachi	Sutherland, Asbill & Brennan
Cardinal Cogen	International Power Technology	Tabors Caramanis & Associates
Casner, Steve	Intestate Gas Services, Inc.	Tecogen, Inc.
Chamberlain, Eric	Los Angeles Dept of Water & Power	Tiger Natural Gas, Inc.
Chevron Company	Luce, Forward, Hamilton & Scripps LLP	Tioga Energy
Chris, King	MBMC, Inc.	TransCanada
City of Glendale	MRW & Associates	Turlock Irrigation District
City of Palo Alto	Manatt Phelps Phillips	U S Borax, Inc.
City of San Jose	Matthew V. Brady & Associates	United Cogen
Clean Energy Fuels	McKenzie & Associates	Utility Cost Management
Coast Economic Consulting	Merced Irrigation District	Utility Specialists
Commerce Energy	Mirant	Verizon
Commercial Energy	Modesto Irrigation District	Wellhead Electric Company
Consumer Federation of California	Morgan Stanley	Western Manufactured Housing Communities Association (WMA)
Crossborder Energy	Morrison & Foerster	eMeter Corporation
Davis Wright Tremaine LLP	New United Motor Mfg., Inc.	
	Norris & Wong Associates	