PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

I. D. #5969

ENERGY DIVISION **RESOLUTION E-4022**
November 30, 2006

REDACTED

R E S O L U T I O N

Resolution E-4022. Pacific Gas & Electric (PG&E) Company requests approval of the Military Pass Road-Newberry LLC (Vulcan) renewable resource procurement contract. This contract is approved without modifications

By Advice Letter 2860-E filed on July 14, 2006.

SUMMARY

PG&E's renewable contract complies with the Renewable Portfolio Standard (RPS) procurement guidelines and is approved

PG&E's request for approval of the Military Pass Road-Newberry LLC (Vulcan) renewable resource procurement contract is granted pursuant to D.04-06-014 and subsequent letter by the Commission's Executive Director dated June 30, 2004. The energy acquired from this contract will count towards PG&E's Renewable Portfolio Standard (RPS) requirements. CPUC approval of this advice letter would conclude PG&E's 2004 RPS solicitation, as PG&E has now concluded negotiations with all of the projects on its shortlist and executed contracts with all viable projects.

Generating facility	Type	Term Years	MW	GWh	Online Date	Location
Vulcan	Geothermal	20	120	840	10/08	Newberry, OR

Deliveries from this power purchase agreement (PPA) are priced above the 2004 market price referent (MPR) and thus require supplemental energy payments (SEPs) from the California Energy Commission (CEC).

Confidential information about the contract should remain confidential

This resolution finds that certain portions of this resolution so marked Confidential Protected Material are in accordance with the May 20, 2003 Protective Order in R. 01-10-024 Regarding Confidentiality of Pacific Gas and Electric Company (PG&E) Power Procurement Information. As required by that Order, reviewing representatives of Market Participating Parties will not be granted access to Protected Material, but will instead be limited to reviewing redacted versions of documents that contain Protected Material.

BACKGROUND

The RPS Program requires each utility to increase the amount of renewable energy in its portfolio

The California Renewables Portfolio Standard (RPS) Program was established by Senate Bill 1078, effective January 1, 2003. It requires that a retail seller of electricity such as PG&E purchase a certain percentage of electricity generated by Eligible Renewable Energy Resources (ERR). The RPS program is set out at Public Utilities Code Section 399.11, et seq. Each utility is required to increase its total procurement of ERRs by at least 1% of annual retail sales per year so that 20% of its retail sales are supplied by ERRs by 2017.

The State's Energy Action Plan (EAP) called for acceleration of this RPS goal to reach 20 percent by 2010. This was reiterated again in the Order Instituting Rulemaking (R.04-04-026) issued on April 28, 2004[1], which encouraged the utilities to procure cost-effective renewable generation in excess of their RPS annual procurement targets (APTs) for 2004, in order to make progress towards the goal expressed in the EAP.

For 2004 the Commission established an APT for each utility, which consists of two separate components: the baseline, representing the amount of renewable generation a utility must retain in its portfolio to continue to satisfy its obligations under the RPS targets of previous years; and the incremental procurement target (IPT), defined as at least one percent of the previous year's

[1] http://www.cpuc.ca.gov/Published/Final_decision/36206.htm

total retail electrical sales, including power sold to a utility's customers from its DWR contracts. D.04-06-014 established a 2004 APT for PG&E of 711 GWh[2].

R.04-04-026 established procurement guidelines for the RPS Program

The Commission has issued a series of decisions that establish the regulatory and transactional parameters of the utility renewables procurement program. On June 19, 2003, the Commission issued its "Order Initiating Implementation of the Senate Bill 1078 Renewable Portfolio Standard Program," D.03-06-071. On June 9, 2004, the Commission adopted its Market Price Referent methodology[3] for determining the Utility's share of the RPS seller's bid price, as defined in Public Utilities Code Sections 399.14(a)(2)(A) and 399.15(c). On the same day the Commission adopted standard terms and conditions for RPS power purchase agreements in D.04-06-014 as required by Public Utilities Code Section 399.14(a)(2)(D). Instructions for evaluating the value of each offer to sell products requested in a RPS solicitation were provided in D.04-07-026.

PG&E requests approval of a new renewable energy contract

On July 14, 2006 PG&E filed AL 2660-E requesting Commission approval of one geothermal contract: Military Pass Road-Newberry LLC (Vulcan). This PPA results from PG&E's July 15, 2004 solicitation for renewable bids, which was authorized by D.04-06-014 and subsequent letter by the Executive Director on June 30, 2004.

The Commission's approval of this PPA will contribute significantly towards PG&E's renewable procurement goals. In 2004, the year of this RPS solicitation, PG&E's incremental procurement target (IPT) was 711 GWh. The PPAs will contribute an aggregate 840 GWH per year of incremental RPS generation.

PG&E requests final "CPUC Approval" of PPAs

PG&E requests the Commission to issue a resolution containing the findings required by the definition of "CPUC Approval" in Appendix A of D.04-06-014. In addition, PG&E requests that the Commission issue a resolution that approves:

[2] D.04-06-014, Appendix B (p. 3)
[3] D.04-07-029

I. Approves the PPA in its entirety, finds that the cost of the contract between PG&E and Vulcan are reasonable, in the public interest, and payments to be made by PG&E are fully recoverable in rates over the life of the project, subject to CPUC review of PG&E's administration of the PPA.

2. Finds that any procurement pursuant to this 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.), Decision 03-06-071, or other applicable law;

3. Finds that any procurement pursuant to this PPA constitutes incremental procurement or procurement for baseline replenishment by PG&E from an eligible renewable energy resource for purposes of determining PG&E's compliance with any obligation to increase its total procurement of eligible renewable energy resources that it may have pursuant to the California Renewables Portfolio Standard, Decision 03-06-071, or other applicable law;

4. Finds that any indirect costs of renewables procurement identified in Section 399.15 (a)(2) shall be recovered in rates.

PG&E's Procurement Review Group participated in review of the contract

In D. 02-08-071, the Commission required each utility to establish a "Procurement Review Group" (PRG) whose members, subject to an appropriate non-disclosure agreement, would have the right to consult with the utilities and review the details of:

1. Overall transitional procurement strategy;
2. Proposed procurement processes including, but not limited to, RFO; and
3. Proposed procurement contracts before any of the contracts are submitted to the Commission for expedited review.

The PRG for PG&E consists of: California Department of Water Resources (DWR), California Energy Commission (CEC), the Commission's Energy Division, Natural Resources Defense Council (NRDC), Union of Concerned

Scientists (UCS), Office of Ratepayer Advocates (ORA), and The Utility Reform Network (TURN).

PG&E provided its PRG with reports on the progress of its 2004 RPS solicitation on several occasions.[4] The first briefing occurred on September 29, 2004, and focused on the results of PG&E's July 15, 2004 solicitation. At that briefing, PG&E described the process by which it evaluated the Offers and provided its preliminary Shortlist. At the second PRG briefing on December 14, 2004, PG&E provided a status report on the 2004 solicitation. At the March 4, 2005 meeting, PG&E provided the PRG with an overview of the projects it considered most likely to proceed to final agreement. This presentation included the negotiated terms and conditions of the PPAs.

The PRG members expressed general satisfaction with the manner in which PG&E arrived at its 2004 RPS shortlist and the resulting PPAs. Specifically, the PRG either supported or did not oppose the approval of the PPA that PG&E is asking for Commission approval via AL 2860-E.

Although Energy Division is a member of the PRG, it reserved its conclusions for review and recommendation on the contracts to the resolution process. Energy Division had to review the modifications independently, and allow for a full protest period before concluding its analysis.

NOTICE

Notice of AL 2860-E was made by publication in the Commission's Daily Calendar. PG&E states that a copy of the Advice Letter was mailed and distributed in accordance with Section III-G of General Order 96-A.

PROTESTS

Advice Letter 2860-E was not protested.

[4] While the Energy Division is a member of the PRG, its representatives did not attend any of the briefings before it had issued the draft 2004 MPR for public comment, which occurred on February 4, 2005.

DISCUSSION

Description of the projects

The following table summarizes the substantive features of the PPA. See confidential Appendix A for a detailed discussion of contract prices, terms, and conditions:

Generating facility	Type	Term Years	MW	GWh	Online Date	Location
Vulcan	Geothermal	20	120	840	10/08	Newberry, OR

PPAs are consistent with PG&E's CPUC adopted 2004 RPS Plan

California's RPS statute (SB 1078) requires the Commission to review the results of a renewable energy resource solicitation submitted for approval by a utility. The Commission will then accept or reject proposed PPAs based on their consistency with the utility's approved renewable procurement plan (Plan).[5] PG&E's 2004 RPS plan was approved on June 30, 2004. As determined by statute, it includes 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.[6]

The proposed PPA is consistent with PG&E's approved 2004 RPS plan because (1) the PPA fits with identified renewable resource needs and (2) it was achieved through PG&E's adherence to its Solicitation Protocol, which is the primary component of the 2004 RPS plan.

PPA fits with identified renewable resource needs

[5] Pub. Util. Code Section 399.14(c)
[6] Pub. Util. Code Section 399.14(a)(3)

In its approved 2004 RPS Plan, PG&E's portfolio assessment showed a "medium" need for as-available and baseload resources beginning in 2007 and a "high" need for baseload resources starting in 2008. In order to meet the 20 percent renewable energy target by 2010, PG&E would require incremental energy deliveries from newly contracted resources at an average rate of approximately 700 to 800 GWh per year. With a nameplate capacity of 120 MW, the PPA for geothermal-based baseload electricity generation is expected to contribute significantly toward PG&E's RPS target.

<u>PPA selection consistent with RPS Solicitation Protocol</u>

The proposed PPA is consistent with the RPS plan because it was achieved through PG&E's adherence to its Solicitation Protocol:

1. PG&E generally followed the RPS Solicitation schedule set forth in its Solicitation Protocol, but ultimately, the schedule for concluding negotiations was necessarily extended.
2. Using the approved Protocol and forms of power purchase agreements, PG&E commenced its solicitation on July 15, 2004. Bids were received until August 23, 2004, consistent with the published schedule. All of the accepted bids conformed to the Protocol; that is, they offered power from eligible renewable energy resources, they were submitted using the standard forms, and they posted the required bid deposit.
3. These bids were evaluated and scored in the manner prescribed in the Protocol. In particular, evaluation of the offer price took into account PG&E's published Time of Delivery factors, as defined in the Protocol, the potential cost of transmission adders was imputed to the offer, and offers were scored pursuant to a methodology that attributed the proper weight to market valuation, portfolio fit, credit and other non-price factors of the Protocol.

A number of the highest-ranked bids, sufficient in number to facilitate the achievement of the one percent annual procurement target, were placed on PG&E's shortlist on September 29, 2004 and were presented to PG&E's PRG. On October 22, 2004, PG&E notified the Commission's Executive Director that it had finalized its shortlist. Vulcan's geothermal project was on the shortlist.

Bid evaluation process consistent with Least-Cost Best Fit (LCBF) decision

The LCBF decision[7] directs the utilities to use certain criteria in their bid ranking. 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 serious negotiations. Much of the bid ranking criteria described in the LCBF decision is incorporated in PG&E's Solicitation Protocol and is discussed below.

Market Valuation

In its "mark-to-market analysis," which PG&E's analyst described at the Least Cost Best Fit workshop on May 25, 2004, 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. PG&E evaluates the bid price and indirect costs, such as the costs to the utility transmission system caused by interconnection of the resource to the grid or integration of the generation into the system-wide electrical supply.[8] This PPA ranked high in PG&E's Market Valuation, as defined further in the Protocol.

Portfolio Fit

Portfolio fit considers how well an offer variation's features match 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 deliveries under the PPA are anticipated to occur at a time when PG&E is experiencing medium to high need for baseload energy, the acceptance of these baseload deliveries should not result in significant remarketing costs. This Project scored well in this category. It should also be noted, however, that Portfolio Fit only comprises ten percent (10%) of an Offer's valuation. In the 2004 RPS Solicitation, Portfolio Fit was not a determinative factor for inclusion on the shortlist.

Consideration of Transmission Adders

[7] D.04-07-029

[8] PG&E's RPS Renewable Energy Procurement Plan, June 24, 2004, page (p.)6, lines (ll.) 4-18.

The RPS statute requires the "least cost, best fit" eligible renewable resources to be procured. 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 for bid ranking purposes. PG&E's 2004 transmission ranking cost (TRC) report identified the remaining available transmission capacity and upgrade costs for PG&E substations at which renewable resources are expected to interconnect.
PG&E determined the TRCR cluster at which Vulcan's project would interconnect to the transmission grid. With the exception of one project, Pacific Renewable Energy Generation LLC, none of the shortlisted bids required a significant transmission upgrade to deliver power as proposed under their PPAs. In accordance with the TRCR, Vulcan was assigned a small transmission adder. This adder serves as a proxy for the voltage support devices required as a result of the interconnection of Vulcan's project. To the extent that any transmission constraint may exist at the time of delivery under the PPA, Vulcan has assumed the risk of congestion or lack of capacity.

<u>Terms and conditions of delivery</u>

Vulcan will be its own scheduling coordinator and is responsible for all related charges assigned to scheduling coordinators by the California Independent System Operation Corporation (CAISO). The point of delivery will be NP-15. Provision is made for alternate points of delivery if the CAISO's current zonal delivery system is changed from zonal to nodal. No other transmission-related issue required accommodation in the PPA.

Consistency with Adopted Standard Terms and Conditions

The Commission set forth standard terms and conditions to be incorporated into RPS agreements in D.04-06-014. Standard Terms and Conditions identified in Appendix A of that decision as "may not be modified" have not been modified.

During the course of negotiations, the parties identified a need to modify some of the standard terms in order to reach agreement. These terms had all been designated as subject to modification upon request of the bidder in D.04-06-014. See confidential Appendix A for a detailed description and comparison of each term that has been materially modified from its form in the 2004 Solicitation.

Contract price is above the 2004 MPR

The actual price is the bargained-for price for delivery under the PPA. The price that PG&E will pay to Vulcan, or the "Contract Price" is equal to the 2004 MPR, adjusted for the year of initial deliveries. The actual price is confidential, market sensitive information that will not be publicly revealed. As discussed above, the levelized actual price exceeds the 2004 MPR; that is, the net present value of the sum of payments Vulcan is to receive under the PPA is above the net present value of payments that would be made at the 2004 market price referent for the year of anticipated delivery. Confidential Appendix B presents a detailed analysis of the net present value of the 2004 MPR based contract payments and the net present value of the same deliveries based on the actual price per MWh.

Qualitative factors were considered during bid evaluation

PG&E considered qualitative factors as required by D.04-07-029. While it was possible to include a diverse mix of renewable technologies in the short list, eventually certain technologies were found to confer significantly greater customer benefits. This developer submitted a descriptive plan to provide environmental stewardship at one of its contingent generation locations. This factor was considered along with the other relevant factors in the decision that led to short listing this project. None of the bids asserted that the proposed project would contribute to local reliability.

PPAs are viable projects

PG&E believes that this project is viable because:

Project Milestones

The PPA identifies the agreed upon project milestones, including, interconnection agreement, project financing, construction start and commercial operation deadlines.

Financebility of resource

It is PG&E's belief that the project selected has a reasonable likelihood of being financed and completed as required by the PPA and will be available to deliver energy by the guaranteed commercial operation date. PG&E has analyzed the financial materials submitted by Vulcan and is satisfied that its project is financeable.

Sponsor's creditworthiness and experience

As part of the 2004 RPS Solicitation, Vulcan and all bidders were required to provide credit-related information and an explanation of their relevant project experience as part of the bid. PG&E has reviewed this information and is satisfied that Vulcan possesses the necessary credit and experience to perform as required by the PPA. Vulcan's directors, management and consultants have many years of electric utility, geothermal and other power plant development and operations experience. Vulcan team members have led and/or worked on many successful geothermal projects.

Project Status

Vulcan is moving forward with both site control and permits for both sites and has accepted the PPA includes a guaranteed construction start date and a guaranteed commercial operation date. Vulcan's obligation to meet these milestones is supported by security.

Confidential information about the contracts should remain confidential

Certain contract details were filed by PG&E under confidential seal. Energy Division recommends that certain material filed under seal pursuant to Public Utilities (Pub. Util.) Code Section 583 and General Order (G.O.) 66-C, and considered for possible disclosure, should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future RPS solicitations.

COMMENTS

This is an uncontested matter in which the decision grants the requested relief. Therefore, pursuant to Public Utilities Code § 311(g)(2), the otherwise applicable 30-day period for public review and comment is being waived.

FINDINGS

1. PG&E filed Advice Letter 2860-E on July 14, 2006, requesting Commission review and approval of the new renewable energy contract: Military Pass Road-Newberry LLC (Vulcan).
2. The RPS Program requires each utility, including PG&E, to increase the amount of renewable energy in its portfolio to 20 percent by 2017, increasing

by a minimum of one percent per year. The Energy Action Plan (EAP) called for acceleration of this goal to reach 20 percent by 2010.

3. Geothermal energy facilities are RPS-eligible renewable energy resources.
4. D.04-06-014 established a 2004 APT for PG&E of 711 GWh[9].
5. D.04-06-014 also directed the utilities to issue renewable RFOs, consistent with their renewable procurement plans, between June 30, 2004 and July 15, 2004.
6. PG&E issued its RFO on July 15, 2004.
7. D.04-06-014 set forth standard terms and conditions to be incorporated into RPS PPAs.
8. Levelized contract prices below the MPR are considered *per se* reasonable as measured according to the net present value calculations explained in D.04-06-015 and D.04-07-029.
9. D.04-07-029 adopted least-cost, best-fit criteria which the utilities must use in their selection process after the RFO has been closed.
10. The Commission required each utility to establish a Procurement Review Group (PRG) to review the utilities' interim procurement needs and strategy, proposed procurement process, and selected contracts.
11. PG&E briefed its PRG regarding these contracts on September 29, 2004, December 14, 2004, and on March 4, 2005. The members of PG&E's PRG either supported or did not oppose the approval of this contract.
12. Certain material filed under seal pursuant to pursuant to Public Utilities (Pub. Util.) Code Section 583 and General Order (G.O.) 66-C, and considered for possible disclosure, should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future RPS solicitations. Accordingly, the confidential appendices, marked "**[REDACTED]**" in the redacted copy, should not be made public upon Commission approval of this resolution.
13. The proposed contract price is above the 2004 MPRs released in Resolution E-3942.

[9] D.04-06-014, Appendix B (p. 3)

14. The Commission has reviewed the proposed contract and finds it to be consistent with PG&E's approved 2004 renewable procurement plan.
15. Procurement pursuant to the PPAs is procurement from an eligible renewable energy resource for purposes of determining PG&E 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.), Decision 03-06-071, or other applicable law.
16. Procurement pursuant to the PPAs constitutes incremental procurement or procurement for baseline replenishment by PG&E from an eligible renewable energy resource for purposes of determining PG&E's compliance with any obligation to increase its totals procurement of eligible renewable energy resources that it may have pursuant to the California Renewables Portfolio Standard (Public Utilities Code Section 399.11 et seq.), Decision 03-06-071, or other applicable law.
17. Any indirect costs of renewables procurement identified in Section 399.15(a)(2) shall be recovered in rates.
18. AL 2860-E should be approved without modifications.

THEREFORE IT IS ORDERED THAT:

1. Advice Letter AL 2860-E is approved without modifications
2. This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on November 30, 2006; the following Commissioners voting favorably thereon:

STEVE LARSON
Executive Director

Redacted Appendix A

Contract Summary: Military Pass Road-Newberry LLC (Vulcan)

Redacted Appendix B

MPR – SEP Worksheet

Redacted Appendix C

Project's Contribution Toward RPS Goals