PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

I. D. # 11534

ENERGY DIVISION **RESOLUTION E-4521**

September 27, 2012

REDACTED

R E S O L U T I O N

Resolution E-4521. Pacific Gas and Electric Company requests approval of an amended and restated power purchase agreement with Bottle Rock Power LLC, owned by private investment companies including US Renewables Group and Riverstone Holdings.

PROPOSED OUTCOME: This Resolution denies cost recovery for the amended and restated power purchase agreement between Pacific Gas and Electric Company and Bottle Rock Power LLC.

ESTIMATED COST: None

By Advice Letter 4048-E filed on May 25, 2012.

SUMMARY

Cost recovery for Pacific Gas and Electric Company's amended and restated renewable energy power purchase agreement with Bottle Rock Power LLC is denied.

Pacific Gas and Electric Company (PG&E) requests approval of a power purchase agreement (PPA) with Bottle Rock Power LLC (Bottle Rock), owned by private investment companies including US Renewables Group and Riverstone Holdings. Bottle Rock operates an existing geothermal facility in The Geysers region of Lake County, CA and is currently providing approximately 80 gigawatt hours per year (GWh/year) of generation at a capacity of 10 MW for a term of 15 years.

The PPA under consideration for approval is the third amended and restated PPA between PG&E and Bottle Rock. The original PPA resulted from PG&E's 2005 RPS Solicitation. The Bottle Rock facility has been burdened with cost over-runs and performance issues since the execution of the original PPA in 2006. The

third amended and restated PPA requests approval of a 56 percent increase in the PPA price, waives significant accrued performance damages plus an extension of the contract term from 15 to 20 years.

The CPUC denies cost recovery for the third amended and restated PPA between PG&E and Bottle Rock. PG&E did not adequately compare the Bottle Rock PPA to other less costly and more valuable projects that existed at the time the PPA was re-negotiated and signed. Other RPS-eligible projects that are online, located in-state and provide baseload generation were available at the time that PG&E executed the amended and restated PPA that are lower in price and significantly higher in value. Furthermore, because PG&E has sufficient RPS-eligible resources under contract PG&E's RPS portfolio need does not warrant having PG&E's ratepayers pay higher costs for generation from Bottle Rock.

The following table summarizes the project-specific features of the agreement:

Generating Facility	Type	Term Years	MW Capacity	Annual Deliveries	Online Date	Project Location
Bottle Rock Power	Geothermal	20	10-25	85-219 GWh	CPUC Approval	Lake Co., CA

BACKGROUND

Overview of the Renewables Portfolio Standard (RPS) Program

The California RPS program was established by Senate Bill (SB) 1078, and has been subsequently modified by SB 107, SB 1036, and SB 2 (1X).[1] The RPS program is codified in Public Utilities Code Sections 399.11-399.31.[2] Under SB 2 (1X), the RPS program administered by the Commission requires each retail seller to procure eligible renewable energy resources so that the amount of electricity generated from eligible renewable resources be an amount that equals an average of 20 percent of the total electricity sold to retail customers in

[1] SB 1078 (Sher, Chapter 516, Statutes of 2002); SB 107 (Simitian, Chapter 464, Statutes of 2006); SB 1036 (Perata, Chapter 685, Statutes of 2007); SB 2 (1X) (Simitian, Chapter 1, Statutes of 2011, First Extraordinary Session).

[2] All further references to sections refer to Public Utilities Code unless otherwise specified.

California for compliance period 2011-2013; 25 percent of retail sales by December 31, 2016; and 33 percent of retail sales by December 31, 2020.[3]

Additional background information about the Commission's RPS Program, including links to relevant laws and Commission decisions, is available at http://www.cpuc.ca.gov/PUC/energy/Renewables/overview.htm and http://www.cpuc.ca.gov/PUC/energy/Renewables/decisions.htm.

NOTICE

Notice of AL 4048-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 3.14 of General Order 96-B.

PROTESTS

PG&E's Advice Letter 4048-E was timely protested on June 14, 2012 by the Division of Ratepayer Advocates (DRA). PG&E responded to DRA's protest on June 21, 2012.

DRA recommends that the Commission deny cost recovery for the Bottle Rock PPA on the following grounds: 1) uncompetitive price, 2) elimination of all accrued non-performance damages, 3) lack of RPS portfolio need, 4) concurrence with the Independent Evaluator which expresses concern that Bottle Rock risks returning for another price amendment, and 5) disagreement with approval of a project for the sole benefit of supporting economic development.

PG&E believes the Bottle Rock project provides benefits beyond the sole benefit of supporting economic development which justifies the higher contract price. In its reply to DRA's protest, PG&E suggests that the Bottle Rock project offers additional attributes including the following: 1) it is an existing and operating in-state facility with local area reliability benefits, 2) does not require any additional transmission network upgrades, 3) does not present integration issues that are

[3] D.11-12-020 established a methodology to calculate procurement requirement quantities for the three different compliance periods set forth in Section 399.15 (2011-2013, 2014-2016, and 2017-2020).

associated with intermittent resources, and 4) is required to spend at least a specified amount of capital in order to improve plant production in the long term. PG&E also states that the Bottle Rock project would provide generation that can qualify as excess procurement in near term compliance periods, allowing PG&E to meet its RPS portfolio needs in later compliance periods. Lastly, PG&E disagrees that Bottle Rock is at risk of returning for another price amendment and states that the amended and restated contract has provisions that require Bottle Rock to upgrade the facility to increase generation and the price of the PPA is adequate to allow Bottle Rock to successfully receive financing to complete the upgrades.

DISCUSSION

PG&E requests Commission approval of an amended and restated renewable energy contract between PG&E and Bottle Rock Power LLC.

Bottle Rock operates an existing geothermal facility in The Geysers region of Lake County, CA that first began operation in 1985 under the Department of Water Resources (DWR). DWR suspended operations in 1990 due to lower than expected generation and sold the power station to US Renewables Group in 2005 who then sold a 50% interest to Riverstone Holdings in 2006.

Under new ownership, Bottle Rock signed a purchase power agreement (PPA) with PG&E in 2006 resulting from PG&E's 2005 RPS Solicitation for a minimum of 14.45 megawatts (MW) of capacity for a term of 10 years with a commercial operation date (COD) of July 31, 2007. Due to performance issues, Bottle Rock and PG&E amended the PPA in October 2007 to extend the COD to October 1, 2007, decrease the minimum capacity from 14.45 MW to 10 MW, set a milestone of December 31, 2007 to achieve a capacity of 14.45 MW, and a milestone of December 31, 2008 to reach 16.15 MW. The CPUC approved the amended PPA in December 2007 and the project achieved COD in October 2007.

In 2010, Bottle Rock and PG&E re-negotiated the amended PPA for a second time due to further performance issues and cost increases. The amended and restated PPA increased the contract price for deliveries above the required minimum deliveries, increased the project development security and delivery term security, lowered the minimum contract capacity, and increased the delivery term from 10 years to 15 years. The CPUC approved the amended and restated PPA in January 2011.

Bottle Rock has not been able to satisfy the minimum quantity requirements of the second amended and restated PPA. Therefore, Bottle Rock has not been able to receive higher payments for deliveries above the required minimum deliveries. PG&E states in AL 4048-E that Bottle Rock was unable to raise the additional capital necessary to expand the steam field and increase generation required in the second amended and restated PPA.

Bottle Rock approached PG&E in June 2011 to amend the already twice-amended PPA to increase the price of the PPA approximately 56%, which would allow Bottle Rock to obtain financing for steam field expansion and to support the facility's continued operation. Bottle Rock has also requested that PG&E waive significant non-performance damages owed to PG&E under the third amended and restated PPA. Finally, Bottle Rock indicated that if a price increase was not approved by the CPUC, it would shut the plant down.

On May 25, 2012 PG&E filed AL 4048-E requesting CPUC approval of a third amended and restated PPA with the following adjustments:

1. Increase the contract price by approximately 56%;
2. Waive significant non-performance damages owed to PG&E;
3. Increase the contract term to 20 years;
4. Reduce the maximum capacity from 55 MW to 25 MW, and require that the facility reach 15 MW by early 2018 or PG&E has a right to terminate the contract;
5. Increase the delivery term security;
6. Maintain a certain employment level;
7. Invest a minimum amount in steam field expansion and improvement of the Project.

Energy Division Evaluated the Bottle Rock PPA on these Grounds:

- Consistency with Least-Cost Best-Fit Requirements
- RPS Portfolio Need
- Price Reasonableness and Value
- Independent Evaluator (IE) Report

Consistency with PG&E's Least-Cost Best-Fit Requirements

The LCBF decision directs the utilities to use certain criteria in their bid ranking.[4] The decision 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. PG&E's bid evaluation includes a quantitative and qualitative analysis, as well as each proposal's absolute value to PG&E's customers and relative value in comparison to other proposals. The basic components of PG&E's LCBF evaluation and selection criteria and process for RPS contracts were established in the Commission's LCBF Decisions D.03-06-071 and D.04-07-029.

Consistent with these decisions, the three main steps undertaken by PG&E are: (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 applied these criteria to the proposals received in the 2011 solicitation in order to establish a short-list of proposals from bidders with whom PG&E would engage in contract discussions. PG&E's 2011 RPS solicitation was the most recent solicitation at the time that the Bottle Rock PPA was negotiated and executed.

PG&E examined the reasonableness of the Bottle Rock PPA using the same LCBF evaluation methodology that it used for RPS offers received for the 2011 RPS solicitation. Although the Bottle Rock PPA was negotiated bilaterally, PG&E determined that the agreements were reasonable and compared favorably to proposals that PG&E received in its 2011 solicitation and to other bilateral offers negotiated around the same time. PG&E stated in AL 4048-E that while the economics of the Bottle Rock project compare unfavorably to its 2011 RPS Solicitation short-list, the non-price factors and improved portfolio fit are favorable.

PG&E fails to adequately disclose what the "non-price factors" are in the redacted copy of AL 4048-E that warrant an approximate 56% increase in the price of the PPA and the forgiveness of significant accrued non-performance damages, in lieu of selecting one of the many other projects that provide RPS-eligible generation at a significantly better price and value. A motivation for

[4] *See* D.04-07-029

amending and restating the PPA, based on comments that PG&E filed in response to DRA's protest, is to incentivize Bottle Rock to keep the facility operating to maintain jobs in an economically distressed area. However, other existing geothermal projects that are better priced and provide more value have the same potential to maintain job creation in distressed communities in California. Furthermore, PG&E does not adequately justify why the Bottle Rock project provides an improved portfolio fit. To the contrary, in PG&E's 2012 Renewable Energy Procurement Plan dated May 23, 2012, PG&E's own analysis indicates that it does not have a need for additional RPS-eligible generation until the third compliance period under its Current Expected Need Scenario. See Confidential Appendix A for a discussion on portfolio fit.

PG&E failed to adequately examine the reasonableness of the Bottle Rock PPA utilizing its LCBF methodology during the time the PPA was being negotiated and executed.

RPS Portfolio Need

The California RPS Program was established by Senate Bill (SB) 1078 and has been recently modified by SB 2 (1X), which became effective on December 10, 2011. SB 2 (1X) made significant changes to the RPS Program.[5] SB2 (1X) established new RPS procurement targets such that retail sellers must procure "…from January 1, 2011 to December 31, 2013…an average of 20 percent of retail sales…25 percent of retail sales by December 31, 2016, and 33 percent of retail sales by December 31, 2020."[6]

The Commission disagrees with PG&E and does not find that generation from the Bottle Rock project fits PG&E's portfolio need. PG&E has chosen to procure an above-market resource in the near-term in order to bank it for future need when the generation is actually needed. This strategy comes at an unnecessarily high cost to ratepayers particularly when less expensive and higher valued projects are currently available to fill PG&E's portfolio beginning in the third compliance period.

[5] The Commission opened Rulemaking (R.) 11-05-005 (May 5, 2011) to implement the new RPS law.

[6] See § 399.15(b)(2)(B), SB 2 (1X)

In light of recent information[7] provided to the Commission about PG&E's current net short position relative to these new RPS targets, the details of which are contained in Confidential Appendix A, the Commission finds that generation from the Bottle Rock project does not adequately fit the portfolio need requirements of PG&E's RPS portfolio.

Price Reasonableness and Value

PG&E executed the third amended and restated PPA in early 2012, after the shortlist results from PG&E's 2011 RPS Solicitation were submitted to the Commission. Therefore, the proper cohorts to measure the Bottle Rock contract against are similar projects offered to PG&E resulting from the 2011 RPS Solicitation.

PG&E shortlisted four geothermal projects in PG&E's 2011 RPS Solicitation for a total of 291 MW, which all provide significantly better value to PG&E's ratepayers than the Bottle Rock PPA. Furthermore, two of these geothermal projects are currently online, better priced with much better value than Bottle Rock. Lastly, the net market value of Bottle Rock compares unfavorably to 26 out of 27 RPS-eligible PPAs that PG&E executed in all of 2011, highlighting the disparity between the net market value of the Bottle Rock project compared to the net market value of nearly all other projects PG&E executed in a similar timeframe. See Confidential Appendix A for a discussion on price reasonableness and value.

The Commission does not agree with PG&E that the higher price of the Bottle Rock PPA is justified based on the stated qualitative benefits of the Bottle Rock facility. Similar projects with the same qualitative benefits that are lower in price and higher in value were available at the time that the contract was amended.

The price and net market value of the Bottle Rock contract do not compare favorably against similar contracts that were offered to PG&E at the time the Bottle Rock PPA was being negotiated and executed.

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[7] *See*, Pacific Gas and Electric Company's (U 39-E) 2012 Renewable Energy Procurement Plan, Appendix 1: Quantitative Information, "Current Expected Need Scenario" (May 23, 2012)

The CPUC denies cost recovery for the third amended and restated PPA between PG&E and Bottle Rock. PG&E did not adequately compare the Bottle Rock PPA to other less costly and more valuable projects that existed at the time the PPA was negotiated and signed.

Independent Evaluator Report (IE)

PG&E retained Merrimack Energy Group as the Independent Evaluator for the Bottle Rock PPA. The IE states in its report:

> "The IE has reservations about the long term viability of the Bottle Rock project and the ability of the revised pricing in this amended and restated PPA to support the long term viability of the project. As a result, the IE feels it is possible that Bottle Rock could be back again looking for another amendment to the contract and a further price increase. Furthermore, the pricing in the contract is not competitive when compared to recent market information. Based on the contract pricing the project would not have been selected for the short list from the 2011 RPS solicitation. All these factors would lead to a recommendation not to approve the PPA."

The Commission concurs with DRA and the Independent Evaluator and finds that the historical performance of the Bottle Rock facility, under its current ownership, is questionable and sets a poor benchmark for future performance, increasing the likelihood that Bottle Rock will need to request another price amendment in the future.

CONFIDENTIAL INFORMATION

The Commission, in implementing Public Utilities Code Section 454.5(g), has determined in D.06-06-066, as modified by D.07-05-032, that certain material submitted to the Commission as confidential should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future RPS solicitations. D.06-06-066 adopted a time limit on the confidentiality of specific terms in RPS contracts. Such information, including price, is confidential for three years from the date the contract states that energy

deliveries begin, except contracts between IOUs and their affiliates, which are public.

The confidential appendices, marked "[REDACTED]" in the public copy of this resolution, as well as the confidential portions of the advice letter, should remain confidential at this time.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on August 14, 2012 and timely comments were received by Pacific Gas and Electric Company on August 30, 2012.

PG&E comments that it did adequately disclose the non-price factors that warrant approval of the PPA and lists factors such as: 1) it is an existing in-state facility with local reliability benefits and interconnected to the CAISO, 2) does not require any transmission upgrades, 3) does not present integration issues, and 4) preserves jobs. The Commission reiterates that "… it does not agree with PG&E that the higher price of the Bottle Rock PPA is justified based on the stated qualitative benefits of the Bottle Rock facility. Similar projects with the same qualitative benefits that are lower in price and higher in value were available at the time that the contract was amended."[8] Furthermore, the Commission reiterates that "other RPS-eligible projects that are online, located in-state and provide baseload generation were available at the time that PG&E executed the amended and restated PPA that are lower in price and significantly higher in value."[9]

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[8] See page 8

[9] See page 2

PG&E also comments that the Commission errs in finding that generation from the facility does not adequately fit the portfolio need requirements of PG&E's portfolio and states "the Project is required to produce and maintain additional RPS-eligible deliveries beginning in the third compliance period and continuing through the remainder of the 20-year (Bottle Rock) PPA term, when PG&E has a need for incremental RPS energy." The Commission reiterates that PG&E has explicitly shown that it has no portfolio need for RPS-eligible generation until after 2020.[10] Furthermore, having ratepayers shoulder the cost of an uncompetitive project with questionable performance for over nine years before PG&E has shown that is has no need is a poor use of ratepayer funds.

Lastly, PG&E argues that the Commission used the wrong set of cohorts to evaluate the Bottle Rock PPA and states that "the (Bottle Rock) PPA should be compared to the updated shortlist PG&E finalized in January 2012 and submitted to the Commission on February 8, 2012 in Advice Letter 3938-E-A, as that represents the current shortlist information when the (Bottle Rock) PPA was executed. Further, the economics of the (Bottle Rock) PPA should be compared to the entire shortlist, not only to projects using a particular technology." Using PG&E's recommended cohorts, the Bottle Rock PPA compares significantly worse on price and value. In addition, if we compare the Bottle Rock PPA to the one geothermal facility that PG&E included on its final shortlist, the shortlisted project is priced and valued significantly better than the Bottle Rock PPA. See Confidential Appendix A (Table 3) for a comparison of the Bottle Rock PPA to PG&E's final shortlist.

The Commission chose to compare the Bottle Rock PPA to other geothermal facilities shortlisted in PG&E's preliminary shortlist because there was an adequate representation of "in-state" geothermal facilities that were already "online" and "interconnected to the CAISO." In other words, these cohorts provided the best comparison. On the contrary, the final shortlist has one geothermal facility out of fourteen shortlisted projects while the rest of the projects are mostly solar PV.

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[10] *See*, Pacific Gas and Electric Company's (U 39-E) 2012 Renewable Energy Procurement Plan, Appendix 1: Quantitative Information, "Current Expected Need Scenario" (May 23, 2012)

The Commission maintains its position in E-4521 (Option A) and recommends rejection of the Bottle Rock PPA. PG&E provides no supportive evidence that the Commission erred in its initial evaluation of the project.

FINDINGS AND CONCLUSIONS

1. PG&E failed to adequately examine the reasonableness of the Bottle Rock PPA utilizing its LCBF methodology during the time the PPA was being negotiated and executed.
2. Generation from the Bottle Rock project does not adequately fit the portfolio need requirements of PG&E's RPS portfolio.
3. The price and net market value of the Bottle Rock PPA does not compare favorably against similar contracts that were offered to PG&E at the time the Bottle Rock PPA was being negotiated and executed.
4. PG&E's request for cost recovery for the third amended and restated PPA between PG&E and Bottle Rock should be denied. PG&E did not adequately compare the Bottle Rock PPA to other less costly and more valuable projects that existed at the time the PPA was negotiated and signed.
5. PG&E's Advice Letter 4048-E was timely protested on June 14, 2012 by the Division of Ratepayer Advocates. PG&E responded to DRA's protest on June 21, 2012.
6. Timely comments were received from PG&E on August 30, 2012 and disposed of in this resolution.
7. The protest of Advice Letter 4048-E by the Division of Ratepayer Advocates is accepted because the Commission concurs that the amended and restated PPA is not price competitive, PG&E does not have need for the project, and Bottle Rock is at risk of requesting another price amendment in the future.
8. The confidential appendices, marked "[REDACTED]" in the public copy of this resolution, as well as the confidential portions of the advice letter, should remain confidential at this time.
9. The amended and restated Bottle Rock PPA should be rejected in its entirety.

THEREFORE IT IS ORDERED THAT:

1. The power purchase agreement between Pacific Gas and Electric Company and Bottle Rock LLC as proposed in Advice Letter 4048-E is denied.

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 September 27, 2012; the following Commissioners voting favorably thereon:

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Paul Clanon
Executive Director

Confidential Appendix A

Price Reasonableness, Value and Portfolio Need

[REDACTED]

Confidential Appendix B

Independent Evaluator Conclusions and Recommendations

[REDACTED]

Confidential Appendix C

Amended and Restated Contract Terms and Conditions

[REDACTED]