PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

ID #8956
RESOLUTION E-4286
November 20, 2009

REDACTED

R E S O L U T I O N

Resolution E-4286. Pacific Gas and Electric Company (PG&E).

PROPOSED OUTCOME: This Resolution approves cost recovery for a power purchase agreement (PPA) resulting from bilateral negotiations between PG&E and Solaren Corporation (Solaren), pursuant to California's renewables portfolio standard (RPS) program. The PPA is approved with conditions.

ESTIMATED COST: Actual costs are confidential at this time.

By Advice Letter 3449-E filed on April 10, 2009.

SUMMARY

PG&E's proposed power purchase agreement complies with the RPS procurement guidelines and is approved with conditions.

PG&E filed Advice Letter (AL) 3449-E on April 10, 2009, requesting California Public Utilities Commission (Commission) review and approval of a renewable energy PPA with Solaren. Pursuant to the proposed PPA, PG&E will procure generation from a first-of-its-kind space-based solar project (Project). PG&E's request is granted, with conditions, because the PPA is consistent with Decision (D.) 08-02-008, which approved PG&E's 2008 RPS Procurement Plan and because the costs of PPA is reasonable. The conditions for Commission approval are that PG&E does not rely on the proposed Project for RPS compliance or procurement planning purposes prior to certain development milestones being met. The payments made under the PPA between PG&E and Solaren are fully recoverable in rates over the life of the PPA, subject to Commission review of PG&E's administration of the PPA.

Project specific features of the PPA

Seller	Solaren Corporation
Technology	Solar (space-based)
Contract Term (Years)	15 years
Capacity (MW)	200 MW
Expected Deliveries (GWh/yr)	1,700 GWh/yr
Commercial Operation Date	June, 2016
Project Location	Satellite: Geosynchronous Orbit Ground Receiver Station: Fresno County, CA

Confidential information about the contract should remain confidential

This resolution finds that certain material filed under seal pursuant to Public Utilities (Pub. Util.) Code Section 583, General Order (G.O.) 66-C, and D.06-06-066 should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future RPS solicitations.

Pursuant to D.06-06-066 and the decision's Appendix I "IOU Matrix", this Commission adopted a "window of confidentiality" for individual contracts for RPS energy or capacity. Specifically, this Commission determined that RPS contracts should be confidential for three years from the date the contract states that energy deliveries begin, except contracts between IOUs and their own affiliates, which should be public.

BACKGROUND

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

The California RPS Program was established by Senate Bill (SB) 1078, and has been subsequently modified by SB 107 and SB 1036.[1] The RPS program is set forth in Public Utilities (Pub. Util.) Code §§ 399.11-399.20. An RPS is a market-

[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)

based policy mechanism that requires a retail seller of electricity purchase a certain percentage of its electric portfolio from electricity generated by Eligible Renewable Energy Resources (ERR). Under the California RPS, each utility is required to increase its total procurement of ERRs by at least one percent of annual retail sales per year so that twenty percent of its retail sales are supplied by ERRs by 2010.[2] In response to SB 1078 and SB 107, the Commission has issued a series of decisions that establish the regulatory and transactional parameters of the investor owned utility (IOU) renewables procurement program.[3]

RPS Program is jointly implemented by this Commission and the California Energy Commission

Pursuant to Pub. Util. Code § 399.13, the California Energy Commission (CEC) is responsible for certifying the eligibility of renewable energy facilities for the RPS program, as well as verifying and tracking the generation and delivery of renewable energy claimed for compliance with the RPS program.

Greenhouse Gas Emissions Performance Standard established emission rate limitations for long-term electricity procurement

A greenhouse gas emissions performance standard (EPS) was established by Senate Bill 1368[4], which requires that the Commission consider emissions costs associated with new long-term (five years or greater) power contracts procured on behalf of California ratepayers.

On January 25, 2007, the Commission approved D.07-01-039 which adopted an interim EPS that establishes an emission rate quota for obligated facilities to levels no greater than the greenhouse gas (GHG) emissions of a combined-cycle

[2] On November 17, 2008, Governor Schwarzenegger signed Executive Order S-14-08, which established a 33 percent PRS target to be met by 2020.

[3] RPS decisions are available on the Commission's RPS website (last visited 09/29/09): http://www.cpuc.ca.gov/PUC/energy/Renewables/decisions.htm

[4] Chapter 464, Statutes of 2006 (SB 1368)

gas turbine powerplant.[5] The EPS applies to all energy contracts for baseload generation that are at least five years in duration.[6] Renewable energy contracts are deemed EPS compliant from the EPS except in cases where intermittent renewable energy is firmed and shaped with generation from non-renewable resources.

PG&E requests Commission approval of a new renewable energy contract

PG&E requests that the Commission issue a resolution containing the findings necessary for "CPUC Approval" as defined in the by this Commission in D.08-04-009. In addition, PG&E requests that the Commission issue a resolution that does the following:

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.) ("RPS"), Decision ("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.

[5] D.07-01-039 adopted an emission rate of 1,100 pounds of carbon dioxide per megawatt-hour for the proxy CCGT (section 1.2, page 8) http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/64072.PDF

[6] "Baseload generation" is electricity generation at a power plant "designed and intended to provide electricity at an annualized plant capacity factor of at least 60%." § 8340 (a)

b. The terms of the PPA, including the price of delivered energy, 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 cost of procurement 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 a covered procurement subject to the EPS because it is a new contract commitment with a baseload generating facility. However, because this Project would not generate power through the combustion of fossil fuels and would not produce any greenhouse gas as a direct byproduct of their conversion of solar energy into grid-ready renewable electricity, this Project meet the EPS.

NOTICE

Notice of AL 3449-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 IV of General Order 96-B.

PROTESTS

On April 30, 2009, the Independent Energy Producers Association (IEP) filed a timely protest to AL 3449-E. The Division of Ratepayers Advocates (DRA) filed a

response to the advice letter on May 5, 2009.[7] PG&E replied to the IEP and DRA protests on May 7 and May 8, 2009, respectively.

In its protest, IEP states that it supports PG&E's decision to execute a PPA for generation from what IEP refers to as an RDD effort.[8] However, IEP asserts that the advice letter raises issues related to the utility's role in the development of renewable resources. Also, IEP questions whether PG&E redacted information in AL 3449-E, beyond what is permitted by the Commission's confidentiality decision D.06-06-066.

PG&E, in its reply, generally asserts that IEP's policy recommendation related to utility-owned generation (UOG) is out-of-scope for AL 3449-E and that any information redacted in the advice letter was done in a manner consistent with the Commission's confidentiality decision.

DRA's response to AL 3449-E was based on how PG&E might use the PPA under the RPS Program's flexible compliance rules. DRA and PG&E reached an agreement on this issue, which we discuss later in this resolution.

DISCUSSION

PG&E has executed an agreement with Solaren to procure renewable generation from a new, first-of-its-kind space-based solar project, and seeks Commission approval. Under the PPA, PG&E would procure an estimated 1,700 GWh per year over the 15-year term. The PPA is the result of bilateral negotiations. Because PPA negotiations occurred during the same time as the 2008 RPS solicitation, PG&E states that the results of the 2008 RPS solicitation "provide a logical context for reviewing the reasonableness of the Solaren PPA."

[7] On April 27, 2009, DRA sent a letter to the Energy Division Director requesting a five-day extension to respond to AL 3449-E. The letter showed that PG&E agreed to the five-day extension. The five-day extension was granted and we accept DRA's response to AL 3449-E.

[8] We assume, as PG&E did in their reply, that IEP means "research, development and deployment" when it uses "RDD".

PG&E explains that Solaren was founded in 2001 to develop, engineer, test, construct, and operate space solar generating stations. PG&E submits that Solaren's project development team is comprised of experienced satellite engineers and space scientists with 20 to 45 years of space industry experience with numerous aerospace organizations.[9] PG&E notes that the Project would be Solaren's first and likely the world's first space-based solar power project.[10]

To date, we have only approved RPS contracts for projects that utilize commercialized or pre-commercialized[11] technology, not technologies that are still in the research and development stage. So, consideration of the Solaren project is unique for the RPS program. In addition, Solaren will need to address several significant technological and regulatory barriers (e.g., permitting) before this emerging technology can be commercialized and generate renewable electricity pursuant to the terms and conditions within the contract.

While we have concerns regarding the viability of the Project, as noted above, we approve this Project because it is 1) consistent with the state's objective of increasing its reliance on renewable energy resources and of supporting renewable technologies; 2) will help support the advancement of new renewable technologies at reasonable costs and risks to ratepayers; and 3) will not jeopardize PG&E's ongoing pursuit of least-cost best-fit renewable resources to meet its RPS targets.

In AL 3449-E, PG&E described the technology through which Solaren has based its proprietary Project design. Based on documented reports and studies, PG&E explained the concept, research and demonstration of the technology.[12]

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[9] AL 3449-E, page 12

[10] *Ibid*

[11] For example, see Resolution E-4132 which approved PG&E's contract with GreenVolts.

[12] AL 3449-E, pages 9-11

Concept

Space Solar Power (SSP) uses satellites in geosynchronous orbit to collect solar energy, which is then transmitted to the ground for conversion into electricity. More specifically, SSP satellites use solar cells to convert the sun's energy to electricity in space. A high-efficiency generator device, such as a magnetron or solid state power amplifier ("SSPA"), then converts electricity into RF energy. The SSP satellite then transmits the RF energy from the satellite's antenna to a receiver on the ground. The receiver directly converts the RF power to electricity, and uses the local power grid for transmission to the utility customer. This general energy conversion process is the same process that has been used on communications satellites for over 45 years. The engineering challenge of building a Space Solar Power Plant is not the energy conversion process itself, but the need to engineer and build MW-class SSP satellites, which are much larger than current kW-class communications satellites.

Concept Research

As a concept, SSP is clearly an emerging technology, although a number of experts believe it holds great promise as a potential new source of energy. The concept has been researched in the United States over the past 40 years. The most recent report was the 2007 Department of Defense ("DOD") National Security Space Office ("NSSO") study on Space Solar Power.[13] Previously, in the 1990s and early 2000s, the National Aeronautics and Space Administration ("NASA") supported several studies and assessments,[14,15] which built on the work of the first major study on the topic, the 1978 Department of Energy "Solar Power Satellite Reference System Report" study.[16]

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[13] Space Based Solar Power as an Opportunity for Strategic Security, National Security Space Office, October 2007 (available at http://www.acq.osd.mil/nsso/solar/SBSPInterimAssesment0.1.pdf) (last visited April 8, 2009).

[14] J. C. Mankins, "A Fresh Look at Space Solar Power: New Architectures, Concepts and Technologies," Acta Astronautica, 41, 4-10, 1997, pp. 347-359.

[15] Congressional Testimony for NASA'S Study of Space Solar Power, 1997 U.S. House of Representatives, Committee on Science (available at http://commdocs.house.gov/committees/science/hsy297160.000/hsy297160_0 HTM) (last visited April 8, 2009).

[16] U.S. Department of Energy and NASA, DOE/ER-0023, October 1978 (available at http://www.nss.org/settlement/ssp/library/1978DOESPSReferenceSystemReport.pdf) (last visited April 8, 2009).

The 2007 NSSO report "Space Based Solar Power as an Opportunity for Strategic Security" is a review of the Space Solar Concept. This report was based on feedback from over 170 participants and evaluated Space Solar from a broad conceptual perspective. While the report did include discussion about utility scale development, it primarily focused on DOD energy goals such as battlefield and humanitarian needs.

In the 1990's and early 2000s there was a series of "fresh look" studies conducted by NASA. One comprehensive report was the National Research Council's (NRC) "Laying the Foundation for Space Solar Power."[17] The NRC provided an independent assessment of the viability of NASA's Space Solar Power Concepts, SSP Research and Technology, and SSP System Demonstrations.

Concept Demonstration
The concept of wireless transmission of power has been validated in both the US and Japan through numerous engineering demonstrations. A 1974 NASA Jet Propulsion Laboratory ("JPL") transmitted 34 kW of energy 1.5 kilometers across the NASA Goldstone antenna range and achieved greater than 80% conversion efficiency of energy to electricity. According to Solaren, in 2008, Dr. Neville I. Marzwell from NASA JPL conducted a Discovery Channel wireless power transmission demonstration using ground solar cells to generate electricity to drive a SSPA array and transmit RF energy a distance of 92 miles (148 km) between two Hawaiian Islands. Dr. Marzwell's demonstration achieved greater than 90% conversion efficiency of RF energy to electricity.

Energy Division has reviewed the proposed PPA pursuant to Commission decisions

Specifically, Energy Division evaluated the PPA for the following criteria:

- Consistency with PG&E's 2008 RPS procurement plan
- Consistency with bilateral contracting guidelines
- Consistency with RPS standard terms and conditions

[17] Committee for the Assessment of NASA's Space Solar Power Investment Strategy, Aeronautics and Space Engineering Board, National Research Council (2001) (available at http://www.nss.org/settlement/ssp/library/2001LayingTheFoundationForSpaceSolarPower.pdf) (last visited April 8, 2009).

- Consistency with Emissions Performance Standard

PPA is consistent with PG&E's Commission accepted 2008 RPS procurement plan, in a limited manner

The Commission accepted PG&E's 2008 RPS procurement plan (Plan), which included a pro forma power purchase agreement under which PG&E would contract for new renewable resources, in D.08-02-008 on February 14, 2008. The Solaren PPA is based on the pro forma PPA which was accepted in D.08-02-008, and therefore, in this limited manner we find that the PPA is consistent with PG&E's 2008 Plan.

Pursuant to statute, PG&E's Plan also included an assessment of supply and demand to determine the optimal mix of renewable generation resources, consideration of flexible compliance mechanisms established by the Commission, and a bid solicitation protocol setting forth the need for renewable generation of various operational characteristics.[18]

Fit with PG&E's identified renewable resource needs

In AL 3449-E, PG&E states that the "Solaren PPA fits into PG&E's portfolio in a satisfactory manner" because the baseload resource would add value for "integrating intermittent solar and wind generation" and because it will contribute to PG&E's RPS goals post-2010.[19]

We disagree for two reasons that this PPA fits satisfactorily in PG&E's portfolio for meeting its need for renewable generation. The reasons are that the state's RPS goals are aggressive and this Commission stressed the importance that the utilities take project viability seriously when considering RPS procurement opportunities.[20] PG&E itself admits that the Project faces numerous challenges in achieving successful commercial operation. Simply put, we think that any expectation of deliveries from this type of undemonstrated technology should be

[18] Pub. Util. Code § 399.14(a)(3)

[19] AL 3449-E, pages 5-6

[20] D.09-06-018, page 3

discounted heavily as to not influence any procurement decision in the near term.

That said, the Solaren PPA certainly merits Commission consideration. In AL 3449-E, PG&E included information and documentation about the technology contemplated under the PPA.[21] Based on this information, it is clear that there is a body of work for Solaren to build off of and that Solaren may be well positioned to achieve its goals. There is no doubt, that if the proposed Project were successful, that PG&E, PG&E's ratepayers and the state would benefit from that success, were we to approve the PPA. Because this is a PPA, PG&E's ratepayers are not subject to any costs other than the PPA price for delivered energy.

Still, there remains a concern that approving this PPA would crowd out other more viable procurement opportunities. In consideration of this, PG&E should not rely on the Solaren PPA for making procurement decisions or for procurement planning purposes until certain project development milestones are met. Executing an agreement with this particular technology serves a unique strategy for meeting future RPS obligations, separate from where we expect PG&E to focus its procurement efforts. In light of the significant viability concerns, we think the proposed PPA merits Commission approval, with the conditions mentioned above.

Consideration of flexible compliance for the Solaren PPA

Pursuant to statute, the Commission adopted certain flexible compliance rules for the RPS Program.[22] Flexible compliance rules allow PG&E to defer but not avoid annual procurement targets. These provisions include the banking of surplus procurement for later use, and the allowance of a deficit for up to three years, if certain conditions are met. One of the conditions for carrying a deficit is that the utility has an executed contract that will provide future deliveries sufficient to satisfy current year deficit.

[21] AL 3449-E, pages 9-11

[22] See D.06-10-050, Attachment A

DRA, in its response to AL 3449-E, raised concerns about how PG&E might earmark future deliveries from the Solaren PPA. Specifically, DRA explains that while "PG&E has clearly stated in the Advice Letter that it does not plan to earmark the contract for RPS compliance, DRA is concerned that PG&E could ask for earmarking via a Tier 1 Advice Letter or by simply doing so in a RPS compliance filing."[23] PG&E and DRA reached an agreement on this issue which is that PG&E is permitted to use the Solaren PPA for earmarking only after the start of Project construction, as defined in Section 3.9(c)(iii)(A) of the PPA, and that PG&E must seek the Commission's approval through a Tier 3 advice letter in order to do so. We accept this agreement between DRA and PG&E and we require that PG&E adhere to these conditions.

PPA is consistent with RPS bilateral contracting guidelines

The Solaren PPA is consistent with the bilateral contracting guidelines in D.06-10-019.

1. The PPA will not be applied to PG&E's cost limitation.[24]
2. Pursuant to D.06-10-019, the PPA was submitted by advice letter.[25]
3. The PPA is at least one month in duration.[26]
4. The PPA is reasonably priced.[27]

[23] DRA response, page 1

[24] The PPA is ineligible for the cost limitation because it did not result from a competitive solicitation. (Pub. Util. Code § 399.15(d)(2))

[25] "For now, utilities' bilateral RPS contracts, of any length, must be submitted for approval by advice letter." (D.06-10-019, p.31)

[26] "All RPS-obligated LSEs are also free to enter into bilateral contracts of any length with RPS-eligible generators, as long as the contracts are at least one month in duration, to enable the CEC to verify RPS procurement claims." (D.06-10-019 p. 29)

[27] The contract price of bilaterals must be deemed reasonable by the Commission. (D.06-10-019, p. 31)

Also, in D.09-06-050, this Commission determined that bilateral contracts should be reviewed according to the same processes and standards as contracts that come through a solicitation. Accordingly, the Solaren PPA was compared to PG&E's other RPS opportunities received in its 2008 RPS solicitation and the proposed agreement was reviewed by PG&E's PRG. Energy Division staff did not, however, require an Independent Evaluator report for the contract because the PPAs were executed before the Commission adopted D.09-06-050.

PPA price is reasonable and recoverable in rates

Based on an expected online dates of 2016 for 15-year contracts, the levelized price for the Project exceeds the 2008 market price referent (MPR).[28] The MPR is used by the Commission to evaluate the reasonableness of prices of long-term PPAs for RPS-eligible generation. The Commission's reasonableness review for RPS PPA prices also includes a comparison to other proposed RPS projects from recent RPS solicitations, as well as, Commission approved projects. Using this metric, we determine that the PPA price is within the reasonable band of other RPS procurement opportunities that were bid into the 2008 RPS solicitation. (See Confidential Appendix A for a detailed discussion of PPA pricing terms and conditions)

PG&E's Procurement Review Group (PRG) participated in review of the PPAs

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

On April 11, 2008 and September 19, 2008, PG&E briefed its PRG on the Solaren transaction. The PRG feedback, as described in the confidential section of the advice letter, did not provide a basis for disapproval of the PPA.

[28] The applicable MPR for a 15-year contract with an expected commercial online date of 2016 is $129.15/MWh. See Resolution E-4214.

Consistency with RPS standard terms and conditions

The proposed PPA conforms to the Commission's decisions requiring standard terms and conditions for RPS contracts.[29]

Consistency with Emissions Performance Standard

The EPS applies to all energy contracts for baseload generation that are at least five years in duration. The PPA constitutes "covered procurement" under the EPS, as defined by D.07-01-039, because it is new long-term contract with a baseload generating facility. Normally, we would find that a long-term contract with a generating facility using solar technology complies with the EPS. However, in this case, at this time, we do not make that determination. Because this technology is relatively unknown and the CEC has not yet established space-based solar as an RPS-eligible resource, we think it is premature to make a determination on EPS compliance.

Our decision to defer the question of EPS compliance for this PPA does not constitute a waiver of the EPS. We will allow PG&E to proceed with the agreement and require that PG&E demonstrate EPS compliance at a later date. PG&E is required to demonstrate that the PPA complies with the EPS once the CEC makes a determination on whether the technology is RPS-eligible. PG&E shall demonstrate EPS compliance through the filing of a Tier 3 advice letter with the Commission's Energy Division.

Project viability assessment and development status

As discussed above, and provided in some detail in AL 3449-E, the Solaren Project faces notable technology and permitting challenges and uncertainty.[30] The PPA includes specific project development criteria, milestones and performance contingencies to ensure that the Project meets the conditions set forth in the agreement. (See Confidential Appendix A for PPA terms and conditions)

[29] See D.08-04-009, as modified by D.08-08-028.

[30] AL 3449-E, pages 9-13

Contribution to minimum quota requirement for long-term/new facility contracts

As a new facility, delivering pursuant to a long-term PPA, the Solaren PPA would normally contribute to PG&E's minimum quota requirement under D.07-05-028.[31] In this case, because we accept the agreement between DRA and PG&E that limits PG&E's ability to use the Solaren PPA for earmarking until after the start of Project construction, we apply that condition here. Accordingly, PG&E should not include the Solaren PPA in its minimum quota calculations until the year in which the condition is met.

IEP's protest to PG&E's advice letter is denied

IEP states that it does not oppose the Solaren PPA, but that IEP is "compelled to file a Protest as the sole means to comment on the PPA proposal."[32] IEP's protest is based on Commission policy for UOG and the Commission's confidentiality rules.

IEP recommends that the Commission consider "specifically limiting UOG project development to only RDD/emerging technologies."[33] PG&E in its reply asserts that IEP's protest has no basis because PG&E's request concerns only a PPA with a third-part developer.

We agree with PG&E. In this advice letter, PG&E is seeking approval of a PPA, not a UOG project. Moreover, IEP is effectively asking the Commission to make a policy decision in a resolution which is contravention to this Commission's

[31] D.07-05-028 requires a minimum quota for contracting with new facilities or executing long-term contracts for RPS-eligible generation. Specifically, in order for an LSE to count for RPS compliance, deliveries from contracts of less than ten years' duration with RPS-eligible facilities that commenced commercial operation prior to January 1, 2005 must in each calendar year enter into contracts of at least ten years' duration and/or short-term contracts with facilities that commenced commercial operation on or after January 1, 2005 for energy deliveries equivalent to at least 0.25% of that LSE's prior year's retail sales.

[32] IEP protest, page 1

[33] IEP protest, page 2

rules. Accordingly, we do not consider here any issues raised by IEP related to UOG because they are outside the scope of this advice letter.

Also in its protest, IEP questions whether PG&E redacted information in AL 3449-E beyond what is permitted by the Commission's confidentiality decision, D.06-06-066. IEP asserts that all the information filed in AL 3449-E that support PG&E's request for approval was redacted.
PG&E explains in its reply that the confidential appendices in AL 3449-E only include information that may be redacted pursuant to D.06-06-066.

We find that PG&E did redact information consistent with the "IOU Matrix" adopted in D.06-06-066. Therefore, IEP's protest is denied.

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, and will be placed on the Commission's agenda no earlier than 30 days from today.

FINDINGS AND CONCLUSIONS

1. PG&E filed Advice Letter (AL) 3449-E on April 10, 2009 requesting Commission review and approval of a power purchase agreement (PPA) with Solaren Corporation.
2. The RPS Program requires each utility, including PG&E, to increase the amount of renewable energy in its portfolio to 20 percent by 2010, increasing by a minimum of one percent per year.
3. On November 17, 2008, Governor Schwarzenegger issued Executive Order S-14-08, which sets a goal for energy retailers to deliver 33 percent of electrical energy from renewable resources by 2020.

4. The Commission requires each utility to establish a Procurement Review Group to review the utilities' procurement process and selected contracts.
5. The California Energy Commission is responsible for certifying the eligibility of renewable energy facilities for the RPS program, as well as verifying and tracking the generation and delivery of renewable energy claimed for compliance with the RPS program.
6. On April 27, 2009, the Division of Ratepayer Advocates requested a five-day extension to respond to AL 3449-E. PG&E agreed to the request and Energy Division granted the request.
7. On April 30, 2009, the Independent Energy Producers Association filed a timely protest on AL 3449-E. PG&E filed a timely response on May 7, 2009.
8. On May 5, 2009, the Division of Ratepayer Advocates filed a response on AL 3449-E. PG&E replied on May 8, 2009.
9. The PPA concerns a new, first-of-its-kind space-based solar project.
10. The PPA is based on PG&E's RPS pro forma contract that was included in PG&E's 2008 RPS Procurement Plan and accepted by the Commission in D.08-02-008.
11. The proposed project faces numerous challenges in achieving successful commercial operation.
12. Because the proposed project faces numerous challenges in achieving successful commercial operation, PG&E shall not rely on the Solaren PPA for making procurement decisions or for its procurement planning until certain project development milestones are met.
13. The Division of Ratepayer Advocates and PG&E reached an agreement concerning how PG&E would use the Solaren PPA for earmarking under the RPS program's flexible compliance rules.
14. Consistent with the agreement reached between the Division of Ratepayer Advocates and PG&E, PG&E is permitted to use the Solaren PPA for earmarking only after the start of Project construction, as defined in Section 3.9(c)(iii)(A) of the PPA.
15. When the Project reaches the start of Project construction milestone, PG&E shall file a Tier 3 advice letter with the Energy Division seeking Commission approval to use the Solaren PPA for earmarking.

16. D.04-06-014 and D.07-11-025 set forth standard terms and conditions to be incorporated into each RPS PPA. Those terms were compiled and published by D.08-04-009, as modified by D.08-08-028.
17. The PPA includes the Commission adopted RPS standard terms and conditions deemed "non-modifiable".
18. The PPA constitutes "covered procurement" under the Emissions Performance Standard (EPS), as defined by D.07-01-039 because the Project will operate as a baseload facility.
19. It is premature to make a determination on EPS compliance at this time because space-based solar is a relatively unknown technology and the California Energy Commission has not yet established that this technology is an RPS-eligible resource.
20. Our decision to defer the question of EPS compliance for this PPA does not constitute a waiver of the EPS.
21. After the CEC makes a determination on whether the technology is RPS-eligible, PG&E shall demonstrate that the PPA complies with the EPS by filing a Tier 2 advice letter with the Commission's Energy Division.
22. Because the proposed project faces numerous challenges in achieving successful commercial operation, PG&E shall not include the Solaren PPA in its minimum quota calculations, set forth in D.07-05-028, until the year in which Project construction begins, as defined in Section 3.9(c)(iii)(A) of the PPA.
23. The protest of the Independent Energy Producers Association is denied.
24. Any stranded costs that may arise from the PPA are subject to the provisions of D.08-09-012 that authorize recovery of stranded renewables procurement costs over the life of the contract.
25. Provided that the California Energy Commission determines that the technology contemplated in AL 3449-E is an RPS-eligible technology, procurement pursuant to the PPA between PG&E and Solaren Corporation 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.

26. Provided that the California Energy Commission determines that the technology contemplated in AL 3449-E is an RPS-eligible technology, the payments made under the PPA between PG&E and Solaren Corporation are reasonable and in the public interest; accordingly, the payments to be made by PG&E are fully recoverable in rates over the life of the project, subject to Commission review of PG&E's administration of the PPA.
27. 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 not be disclosed. Accordingly, the confidential appendices, marked "**[REDACTED]**" in the redacted copy, should not be made public upon Commission approval of this resolution.
28. The PPA is reasonable and should be approved.
29. AL 3449-E should be approved effective today, subject to the conditions described above.

THEREFORE IT IS ORDERED THAT:

1. The request of Pacific Gas and Electric Company for Commission approval of a power purchase agreement with Solaren Corporation as requested in Advice Letter 3449-E is approved with conditions.
2. Pacific Gas and Electric Company shall not rely on its power purchase agreement with the Solaren Corporation for making procurement decisions or for its procurement planning until the start of Project construction, as defined in Section 3.9(c)(iii)(A) of the power purchase agreement.
3. Pacific Gas and Electric Company shall not use its power purchase agreement with Solaren Corporation for earmarking until the start of Project construction, as defined in Section 3.9(c)(iii)(A) of the power purchase agreement.
4. Pacific Gas and Electric Company shall file a Tier 3 advice letter with the Energy Division seeking Commission approval to use the Solaren power purchase agreement for earmarking.
5. Pacific Gas and Electric Company shall demonstrate whether its power purchase agreement with the Solaren Corporation complies with the EPS by filing a Tier 2 advice letter with the Commission's Energy Division after the California Energy Commission makes a determination on whether the

technology is eligible for compliance with the Renewables Portfolio Standard program.

6. Pacific Gas and Electric Company shall not include its power purchase agreement with the Solaren Corporation in its minimum quota calculations, set forth in Decision 07-05-028, until the year in which Project construction begins, as defined in Section 3.9(c)(iii)(A) of the power purchase agreement.

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 20, 2009; the following Commissioners voting favorably thereon:

_____
PAUL CLANON
Executive Director

Confidential Appendix A

Summary of PPA

[REDACTED]