

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298



Advice Letter: 4473-E

February 5, 2015

Pacific Gas and Electric Company
Attention: Meredith Allen
Senior Director, Regulatory Relations
77 Beale Street, Mail Code B10C
San Francisco, CA 94177

SUBJECT: Amended and Restated Power Purchase Agreement for Procurement of Eligible Renewable Energy Resources between CalRENEW-1 LLC and PG&E.

Dear Ms. Allen:

Advice Letter 4473-E is effective as of January 15, 2015, per Resolution E-4701 Ordering Paragraphs.

Sincerely,

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

Edward Randolph
Director, Energy Division



August 8, 2014

Advice 4473-E

(Pacific Gas and Electric Company ID U39 E)

Public Utilities Commission of the State of California

**Subject: Amended and Restated Power Purchase Agreement for
Procurement of Eligible Renewable Energy Resources between
CalRENEW-1 LLC and PG&E**

I. PURPOSE

Pacific Gas and Electric Company (“PG&E”) seeks California Public Utilities Commission (“Commission” or “CPUC”) approval of an amendment described below to a CPUC-approved Renewables Portfolio Standard (“RPS”) power purchase agreement (“PPA”) between CalRENEW-1 LLC (“CalRENEW”) and PG&E (collectively, the “Parties”).

PG&E requests that the Commission issue a Resolution containing the findings requested in Section VIII, below, and approving this Advice Letter with an effective date no later than November 10, 2014.

II. BACKGROUND

CalRENEW-1 is an existing 5 megawatt photovoltaic facility (the “Project”) located within California and interconnected to the California Independent System Operator (“CAISO”) balancing authority area. The CalRENEW PPA originally resulted from PG&E’s 2006 RPS Solicitation. PG&E filed the PPA for Commission approval on June 27, 2007 in Advice Letter 3074-E along with two other PPAs that PG&E had executed with developers for eligible renewable energy resources. PG&E filed a first amendment to the PPA to change the location of the project in Advice Letter 3074-E-A on October 9, 2007, and a second amendment to the PPA to conform to the non-modifiable standard terms and conditions (“STCs”) defined in CPUC Decision (“D.”) 07-11-025 in Advice Letter 3074-E-B on

November 29, 2007. The Commission approved the PPA and both amendments on December 20, 2007 in Resolution E-4132.

PG&E filed a third amendment to the PPA in Advice Letter 3260-E on April 30, 2008 to provide an extension to a no-fault termination right related to federal legislation extending the 30 percent Energy Tax Credit. The Parties also agreed in the third amendment to extend certain project milestones. The Commission approved the third amendment to the PPA (as amended, the "Original PPA") on November 6, 2008 in Resolution E-4203.

III. DESCRIPTION OF THE AMENDED AND RESTATED CALRENEW POWER PURCHASE AGREEMENT

In the fall of 2013, CalRENEW initiated bilateral negotiations with PG&E about amending the Original PPA to address market structure changes due to the CAISO implementation of the Federal Energy Regulatory Commission's Order 764. Following negotiations, the parties agreed to amend and, for purposes of clarity, to restate the agreement. The resulting Amended and Restated PPA, executed on June 17, 2014 and attached as Confidential Appendix C, ensures the Project's ability to participate in the evolving CAISO market, in large part by PG&E becoming the Scheduling Coordinator SC in return for increased operational flexibility through additional curtailment rights and other terms benefitting PG&E's customers. The specific terms and conditions of the Amended and Restated PPA are described in detail in Confidential Appendix A.

In restating the Original PPA, the Parties also agreed to generally update the Original PPA to more fully reflect PG&E's more current RPS Form PPA. For example, the parties agreed to revise or add new language related to the following concepts, as more specifically discussed in Confidential Appendix A:

- Scheduling;
- Economic dispatch rights;
- Excess energy;
- Guaranteed Energy Production;
- Schedule deviations;
- Meteorological requirements; and
- Western Renewable Energy Generation Information System requirements.

Confidential Appendix D provides a full comparison of the Amended and Restated PPA against the Original PPA.

As more fully shown in Confidential Appendix A, PG&E believes that approval of the Amended and Restated PPA will result in incrementally greater Portfolio-Adjusted Value (“PAV”) from the Project, using the PAV methodology approved by the Commission for use in the 2013 RPS Solicitation.

III. BILATERAL CONTRACTING REQUIREMENTS AND BENCHMARKING

The Commission has adopted requirements related to the bilateral negotiation of RPS agreements. These apply to agreements negotiated outside of a formal RPS competitive solicitation. 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.” 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 via the advice letter process. Based on D.03-06-071 and D.06-10-019, the Commission set forth the following four requirements for approval of bilateral contracts in a Resolution approving a bilateral RPS contract executed by PG&E: (1) the contract is submitted for approval via advice letter; (2) the contract is longer than one month in duration; (3) the contract does not receive above-market funds; and (4) the contract is deemed reasonable by the Commission.

Finally, in D.09-06-050, the Commission established price benchmarks and contract review processes for short-term and bilateral RPS contracts. D.09-06-050 provides that bilateral contracts should be reviewed using the same standards as contracts resulting from RPS solicitations.

Changes to the contract reflected in this Amended and Restated PPA are the result of bilateral negotiations. However, the amendment does not change the contract price, and the parties approached the negotiation with the understanding that while an amendment may, and ultimately did, provide additional value to both PG&E’s customers and CalRENEW, the Original PPA remained viable without the amendment. Accordingly, PG&E did not require the amendment to be bid into an RPS solicitation, nor are the bids from recent RPS solicitations appropriate benchmarks for comparison of the Amended and Restated PPA. Rather, the Amended and Restated PPA should be compared against the Original PPA. As noted above, and shown in Confidential Appendix D, the Amended and Restated PPA provides additional PAV to PG&E’s customers and should be approved on that basis.

IV. PORTFOLIO CONTENT CATEGORIZATION

Senate Bill 2 sets out three portfolio content categories (“PCC”) that apply to RPS-eligible generation associated with RPS procurement contracts signed after June 1, 2010. The Commission described these three categories in detail in D.11-12-052. In that decision, the Commission also required the Investor Owned Utilities (“IOUs”) to include in their advice letters an upfront showing related to the categorization of their RPS procurement transactions signed after June 1, 2010.¹

The PPA for the Project was originally signed prior to June 1, 2010, and thus is exempt from the D.11-12-052 categorization requirements for new RPS procurement.² The procurement associated with the Amended and Restated PPA counts in full toward PG&E’s RPS procurement requirements as long as it satisfies the following three statutory requirements:³

- (1) The renewable energy resource was eligible under the rules in place as of the date when the contract was executed.
- (2) For an electrical corporation, the contract has been approved by the commission, even if that approval occurs after June 1, 2010.
- (3) Any contract amendments or modifications occurring after June 1, 2010, do not increase the nameplate capacity or expected quantities of annual generation, or substitute a different renewable energy resource. The duration of the contract may be extended if the original contract specified a procurement commitment of 15 or more years.

The Original PPA was executed prior to June 1, 2010 and approved by the Commission, as noted above. Additionally, the Amended and Restated PPA changes neither the nameplate capacity, expected quantities of annual generation, the renewable energy resource, nor the contract duration. Thus, the Amended and Restated PPA is “grandfathered,” or “PCC 0,” and shall count in full toward the PG&E’s RPS procurement requirements.

IV. STANDARD TERMS AND CONDITIONS

1 D.11-12-052 at p. 10.

2 *Id.* at pp. 62-63.

3 California Public Utilities Code Section 399.16(d).

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 and D.07-02-011, as modified by D.07-05-057 and D.07-11-025. These terms and conditions were compiled and published in D.08-04-009. Additionally, the non-modifiable terms related to Green Attributes were finalized in D.08-08-028 and the non-modifiable terms related to RECs were finalized in D.10-03-021, as modified by D.11-01-025. In D. 13-11-024, the existing Green Attribute non-modifiable terms were deemed outdated and replaced with a new STC 2 related to biomethane transactions, and that term is deemed modifiable. D.13-11-024 noted that the outdated non-modifiable Green Attribute terms could continue to be used in a PPA as long as they did not conflict with the new, modifiable STC 2. At this time, PG&E continues to include those old Green Attribute terms in its PPAs as long as there is no conflict with STC 2; however, they are no longer marked as either non-modifiable or modifiable. The non-modifiable standard terms and conditions in the Amended and Restated PPA conform exactly to the “non-modifiable” terms set forth in Attachment A of D.08-04-009, as modified by D.08-08-028, D.10-03-021, D.11-01-025, and D.13-11-024.

The non-modifiable and modifiable terms found in the Amended and Restated PPA are also highlighted in Confidential Appendix D. The Original PPA included the non-modifiable and modifiable terms current at the time of contract signature. Because the standard terms and conditions were subsequently revised several times by the Commission, the non-modifiable and modifiable terms used in the current Amended and Restated PPA are different from the terms found in the Original PPA. Thus, the comparison will show what appear to be modifications to the non-modifiable terms; however, those modifications are showing all the changes made by the Commission to the non-modifiable terms since the Original PPA was written.

V. PROCUREMENT REVIEW GROUP (“PRG”)

The Amended and Restated PPA was presented to PG&E’s Procurement Review Group via email on April 15, 2014.

VI. INDEPENDENT EVALUATOR (“IE”)

The Independent Evaluator (“IE”), Lewis Hashimoto from Arroyo Seco Consulting, observed the negotiations leading to execution of the Amended and Restated PPA to ensure that they were conducted fairly. In his report, the IE states that the Amended and Restated PPA “merits CPUC approval” and that the negotiations to achieve the amended and restated agreement between the Parties were conducted

“fairly”.⁴ The confidential and public versions of the IE’s report are attached to this Advice Letter as Appendices B.1 and B.2, respectively.

VII. REQUEST FOR CONFIDENTIAL TREATMENT

In support of this Advice Letter, PG&E has provided the confidential information listed below. This information includes the Amended and Restated 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.

Confidential Attachments:

Appendix A – Contract Summary

Appendix B.1 – Independent Evaluator Report (Confidential)

Appendix C – Amended and Restated Power Purchase Agreement

Appendix D – Comparison of the Amended and Restated Power Purchase Agreement to the Original Power Purchase Agreement

Public Attachment

Appendix B.2 – Independent Evaluator Report (Public)

VIII. REQUEST FOR COMMISSION APPROVAL

⁴ Report of the Independent Evaluator on an Amended and Restated Contract with Calrenew-1, LLC (Appendices B.1-B.2 of this advice letter) at pp.15-17.

PG&E requests that the Commission issue a Resolution that:

1. Finds that entry into the Amended and Restated PPA is reasonable;
2. Approves the Amended and Restated PPA in its entirety, including payments to be made by PG&E pursuant to the Amended and Restated PPA, subject to the Commission's review of PG&E's administration of the Amended and Restated PPA.
3. Finds that the Amended and Restated PPA has no effect upon the RPS eligibility of the Project.
4. Adopts a finding of fact and conclusion of law that deliveries from the Amended and Restated PPA shall be categorized as grandfathered pursuant to California Public Utilities Code Section 399.16(d), subject to the Commission's after-the-fact verification that all applicable criteria have been met.

Protests:

Anyone wishing to protest this filing may do so by letter sent via U.S. mail, facsimile or E-mail, no later than August 28, 2014, which is 20 days after the date of this filing. Protests must be submitted to:

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

Facsimile: (415) 703-2200
E-mail: EDTariffUnit@cpuc.ca.gov

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

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

Meredith Allen
Senior Director, Regulatory Relations

Pacific Gas and Electric Company
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, California 94177

Facsimile: (415) 973-7226
E-mail: PGETariffs@pge.com and kcj5@pge.com

Any person (including individuals, groups, or organizations) may protest or respond to an advice letter (General Order 96-B, Rule 7.4). The protest shall contain the following information: specification of the advice letter protested; grounds for the protest; supporting factual information or legal argument; name, telephone number, postal address, and (where appropriate) e-mail address of the protestant; and statement that the protest was sent to the utility no later than the day on which the protest was submitted to the reviewing Industry Division (General Order 96-B, Rule 3.11).

Effective Date:

PG&E requests that the Commission issue a Resolution approving this Tier 3 advice filing effective on or before November 10, 2014.

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.11-05-005, and R.12-03-014. Non-market participants who are members of PG&E's Procurement Review Group and have signed appropriate Non-Disclosure Certificates will also receive the Advice Letter and accompanying confidential attachments by overnight mail. Address changes to the General Order 96-B service list should be directed to PGETariffs@pge.com. For changes to any other service list, please contact the Commission's Process Office at (415) 703-2021 or at Process_Office@cpuc.ca.gov. Advice letter filings can also be accessed electronically at <http://www.pge.com/tariffs>.



Senior Director – Regulatory Relations

cc: Service List for R.11-05-005
Service List for R.12-03-014
Paul Douglas – Energy Division
Jason Simon – Energy Division
Joseph Abhulimen – ORA
Karin Hieta – ORA
Cynthia Walker – ORA

Limited Access to Confidential Material:

The portions of this Advice Letter marked Confidential Protected Material are submitted under the confidentiality protection of Sections 583 and 454.5(g) of the Public Utilities Code and General Order 66-C. This material is protected from public disclosure because it consists of, among other items, the PPA itself, price information, and analysis of the proposed PPA, 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.

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 E)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Jennifer Wirowek

Phone #: (415) 973-1419

E-mail: J6WS@pge.com and PGETariffs@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) #: **4473-E**

Tier: 3

Subject of AL: **Amended and Restated Power Purchase Agreement for Procurement of Eligible Renewable Energy Resources Between CalRENEW-1 LLC and PG&E**

Keywords (choose from CPUC listing): Agreements, Portfolio

AL filing type: Monthly Quarterly Annual One-Time Other _____

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

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: No

Summarize differences between the AL and the prior withdrawn or rejected AL: _____

Is AL requesting confidential treatment? If so, what information is the utility seeking confidential treatment for: Yes. See the attached matrix that identifies all of the confidential information.

Confidential information will be made available to those who have executed a nondisclosure agreement: Yes No All members of PG&E's Procurement Review Group who have signed nondisclosure agreements will receive the confidential information.

Name(s) and contact information of the person(s) who will provide the nondisclosure agreement and access to the confidential information: Marie Fontenot (415) 973-4985

Resolution Required? Yes No

Requested effective date: **Upon Commission Approval**

No. of tariff sheets: N/A

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: N/A

Service affected and changes proposed: N/A

Pending advice letters that revise the same tariff sheets: N/A

Protests, dispositions, and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

California Public Utilities Commission
Energy Division
EDTariffUnit
505 Van Ness Ave., 4th Flr.
San Francisco, CA 94102
E-mail: EDTariffUnit@cpuc.ca.gov

Pacific Gas and Electric Company
Attn: Meredith Allen
Senior Director, Regulatory Relations
77 Beale Street, Mail Code B10C
P.O. Box 770000
San Francisco, CA 94177
E-mail: PGETariffs@pge.com

**DECLARATION OF MARIE FONTENOT
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION CONTAINED IN
ADVICE LETTER 4473-E
(PACIFIC GAS AND ELECTRIC COMPANY - U 39 E)**

I, Marie Fontenot, declare:

1. I am presently employed by Pacific Gas and Electric Company (PG&E) and have been an employee since December, 2012. My current title is Principal, Renewable Transactions, in the Renewable Energy Department, which is part of the Energy Procurement Department. In this position, my responsibilities include negotiating PG&E's Renewables Portfolio Standard Program ("RPS") Power Purchase Agreements. 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. 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.1, C, and D to PG&E's Advice Letter 4473-E, submitted on August 8, 2014.

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"), or constitutes information that should be protected under General Order 66-C. The matrix also specifies the category or

categories in the IOU Matrix to which the data and information corresponds, if applicable, and why confidential protection is justified. Finally, the matrix specifies that: (1) PG&E is complying with the limitations specified in the IOU Matrix for that type of data or information, if applicable; (2) the information is not already public; and (3) the data cannot be aggregated, redacted, summarized or otherwise protected in a way that allows partial disclosure. By this reference, I am incorporating into this declaration all of the explanatory text in the attached matrix.

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 August 8, 2014, at San Francisco, California.


MARIE FONTENOT

PACIFIC GAS AND ELECTRIC COMPANY'S (U 39 E)
Advice Letter 4473-E
August 8, 2014

IDENTIFICATION OF CONFIDENTIAL INFORMATION

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 (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
Document: Advice Letter 4473-E							
Appendices A, B.1, C, and D	Y	<p>Item VII G) Renewable Resource Contracts under RPS program - Contracts without SEPs.</p> <p>Item VII (un-numbered category following VII G) Score sheets, analyses, evaluations of proposed RPS projects.</p> <p>Item VIII B) Specific quantitative analysis involved in scoring and evaluation of participating bids.</p> <p>General Order ("GO") 66-C.</p>	Y	Y	Y	<p>These appendices contain, discuss, analyze, and/or evaluate the terms of the Amended and Restated Power Purchase Agreement ("PPA") that PG&E is seeking Commission approval of within Advice Letter 4473-E. Appendix A contains PG&E's analysis and evaluation of the Portfolio-Adjusted Value of the Amended and Restated PPA. Appendix B.1. contains quantitative analysis of bids from the 2013 RPS Solicitation.</p> <p>Public disclosure of this information would offer valuable market sensitive information to market participants. It is in the public interest to treat such information as confidential. Release of this information would be damaging to future PG&E contract negotiations and ultimately detrimental to PG&E's ratepayers.</p> <p>Furthermore, the counterparty to this PPA has an expectation that the terms of the PPA will remain confidential. It would put the counterparty at a business disadvantage and could create a disincentive to do business with PG&E and other regulated utilities.</p>	<p>For information covered under Item VII G) remain confidential for three years after the date upon which deliveries are to commence under the Amended and Restated PPA, or one year after expiration (whichever is sooner).</p> <p>For information covered under Item VII (un-numbered category following VII G), remain confidential for three years from the submission of this advice letter.</p> <p>For information covered under Item VIII B), remain confidential for three years after winning bidders selected.</p> <p>For information covered under GO 66-C, remain confidential indefinitely.</p>

Public Appendix B.2
Independent Evaluator Report

CaIRENEW-1 LLC

ARROYO SECO CONSULTING

PACIFIC GAS AND
ELECTRIC COMPANY
CONTRACT
AMENDMENT
EVALUATION

REPORT OF THE INDEPENDENT
EVALUATOR ON AN AMENDED AND
RESTATED CONTRACT WITH CALRENEW-1
LLC

AUGUST 8, 2014

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EXECUTIVE SUMMARY

This report provides an independent evaluation of an amended and restated Power Purchase Agreement (PPA) between the Pacific Gas and Electric Company (PG&E) and CalRENEW-1 LLC, owner and operator of a solar photovoltaic generation facility. An independent evaluator (IE), Arroyo Seco Consulting (Arroyo), conducted various activities to review, test, and check PG&E's processes as the parties negotiated the amended agreement. PG&E and CalRENEW-1 executed the amended contract on June 17, 2014.

During the negotiations, CalRENEW-1 LLC was owned by a U.S. subsidiary of Meridian Energy Ltd., a New Zealand-based state-owned enterprise. The facility is a 5-MW solar photovoltaic generator sited just to the east of the municipal airport of Mendota in Fresno County. After contract negotiations were substantially complete, Meridian Energy sold its ownership of the project company to SunEdison, Inc. on May 15, 2014. SunEdison is a semiconductor manufacturer and owner and operator of solar photovoltaic projects. Its portfolio includes a large number of small solar PV facilities (under 1 MW in capacity) and some larger projects, most of which it has either acquired from other developers or acquired through purchasing other companies such as Axio Power and the U.S. subsidiary of Fotowatio Renewable Ventures.

The structure of this report follows a portion of the guidance of the 2013 RPS Shortlist Report Template provided by the Energy Division of the CPUC¹. Topics covered include:

- The role of the IE;
- Fairness of project-specific negotiations; and
- Merit of the contract for CPUC approval.

Arroyo's opinion is that the negotiations between PG&E and CalRENEW-1 were conducted fairly with respect to competitors, and on balance to ratepayers as well, though it is difficult to quantify the costs and benefits of the changes to the contract for ratepayers.

The CPUC found in its Resolution E-4132 in 2007 that the contract price of the original CalRENEW-1 PPA was reasonable; subsequent amendments and this additional amendment have not altered that price. Arroyo ranks the contract as quite high in contract price and low

¹ This report does not include a discussion of PG&E's outreach efforts for and the robustness of its 2013 Renewables Portfolio Standard (RPS) Request for Offers (RFO), the design of its Least-Cost Best-Fit evaluation methodology and its implementation, which would be appropriate elements if this contract had arisen from PG&E's 2013 RPS solicitation. The IE report by Sedway Consulting, Inc. accompanying PG&E's Advice Letter 3074-E that submitted the original CalRENEW-1 PPA for CPUC approval provided discussion of these issues for PG&E's 2006 RPS RFO from which the original PPA originated.

in value when compared to recent market benchmarks; this reflects the trend in market pricing over the period since the original PPA was negotiated. Given that the facility is already operating and delivering to PG&E, Arroyo views its project viability as quite high.

In Arroyo's opinion, the amended and restated CalRENEW-1 contract merits CPUC approval.

1. ROLE OF THE INDEPENDENT EVALUATOR

The CPUC first required an independent evaluator to participate in competitive solicitations for utility power procurement in its Decision 04-12-048. It required an IE when Participants in a competitive procurement solicitation include affiliates of investor-owned utilities (IOUs), IOU-built projects, or IOU-turnkey projects. Decision 06-05-039 expanded requirements, ordering use of an IE to evaluate and report on the entire solicitation, evaluation, and selection process for the 2006 RPS RFO and future competitive solicitations. This was intended to increase the fairness and transparency of the Offer selection process. Decision 09-06-050 further expanded the requirement to require an IE to report on long-term RPS contracts that are bilaterally negotiated rather than awarded through a competitive solicitation; one might view the CalRENEW-1 amended and restated PPA as the result of such a bilateral negotiation.

The CPUC's Decision 06-06-066 detailed guidelines for treating confidential information in IOU power procurement including competitive solicitations. It provides for confidential treatment of "Score sheets, analyses, evaluations of proposed RPS projects", vs. public treatment of the total number of projects and MW bid by resource type. Where Arroyo's reporting on the fairness of PG&E's negotiation of an amended and restated contract requires explicit discussion of such analyses, scores, and evaluations, these are redacted in the public version of this document. With the elapse of time from the approval of the original CalRENEW-1 contract, the CPUC has put most of the details of that original agreement into public view.²

² The original PPA, with redactions of e-mail addresses, phone numbers, and account numbers, can be found on the CPUC's website at [ftp://ftp.cpuc.ca.gov/rps_ppas/20070625_33R032_CalRenew-1_PPA\(Public\)_Redacted.pdf](ftp://ftp.cpuc.ca.gov/rps_ppas/20070625_33R032_CalRenew-1_PPA(Public)_Redacted.pdf)

2. FAIRNESS OF PROJECT-SPECIFIC NEGOTIATIONS

This chapter provides an independent review of the extent to which PG&E's negotiations with CalRENEW-1 LLC for an amended and restated contract were conducted fairly with respect to competitors and to ratepayers.

Discussions between PG&E and the commercial team of Meridian Energy's U.S. subsidiary began in the fall of 2013. Arroyo was engaged to serve as Independent Evaluator for the amended contract in February 2014, and telephonically observed five negotiation sessions between PG&E and Meridian Energy. Arroyo was also able to review multiple draft versions of the amended contract in order to identify specific proposals and counterproposals the parties made in the course of discussions. The original basis for the text of the amended contract was PG&E's 2012 RPS Form Agreement published with the 2012 RPS solicitation protocol in December 2012³; this was the utility's approved standard RPS contract in the autumn of 2013. In the course of negotiations, PG&E updated the terms of the amended contract to conform to the revised provisions of its 2013 RPS Form Agreement, which was made public in December 2013.

Arroyo's opinion is that PG&E's negotiations with Meridian Energy for the amended CalRENEW-1 contract were conducted in a manner that was fair to competitors. The next chapter further addresses whether the amended terms of the PPA were fair to ratepayers.

A. BACKGROUND INFORMATION

The original PPA for output of the CalRENEW-1 facility originated with an offer to PG&E's 2006 RPS solicitation by Cleantech America, Inc., the original developer of the project. PG&E selected the offer for its short list and negotiated and executed a contract that was submitted for approval by the CPUC in Advice Letter 3074-E in June 2007⁴. The CPUC approved the contract in its Resolution E-4132 in December 2007. The PPA has previously been amended four times, in order to:

- Change the location of the project;
- Conform the non-modifiable standard terms and conditions to those defined by the CPUC in Decision 07-11-025 in November 2007;

³ Meridian Energy's original proposal for an amended contract was based on scheduling language from PG&E's form for its Renewable Auction Mechanism RFO; PG&E steered the discussion instead to using its standard RPS PPA form.

⁴ Nearly all of the text of the original PPA has subsequently been made public by the CPUC.

- Defer the guaranteed construction start date and guaranteed commercial operation date by one year (GCOD to April 2010), given uncertainty about renewal of the federal tax credit on which financing for the project relied; and
- Edit the contract provisions governing PG&E's right of first refusal and the assignment of the contract to another party.

Cleantech America, Inc. was acquired by Meridian Energy in 2009. Despite project delays from the original guaranteed commercial operation date of April 2009, the facility was constructed and brought into commercial operation in April 2010. The CalRENEW-1 project is a 5-MW solar photovoltaic facility using Sharp thin-film amorphous silicon panels, sited on the east side of the city of Mendota in northwestern Fresno County. Its annual production, based on public filings to date, has averaged about 10 GWh/year.

In September 2013, Meridian Energy's U.S. subsidiary initiated discussions with PG&E about amending the PPA in response to the CAISO's implementation of FERC Order 764. The Order requires transmission operators to provide an option to schedule energy in 15-minute intervals and requires variable energy resources to provide meteorological and forced outage data to improve energy forecasting. The CAISO developed a comprehensive proposal for changes to its market design to address inefficiencies in the real-time market as well as adding 15-minute schedules and settlement. The proposal includes changes to the Participating Intermittent Resource Program (PIRP), such as creating 15-minute schedules for PIRP resources based on forecasts made 37.5 minutes prior to the interval, and eliminating the prior practice of netting PIRP imbalance energy over the month and settling deviations at the monthly average of five-minute prices. In March 2014 the FERC conditionally accepted the CAISO's tariff amendment to comply with Order 764. Reaction from stakeholders included concerns about the costs for small intermittent generators to interface with the revised market and the potential financial burden on intermittent generators caused by eliminating PIRP monthly imbalance netting.

The original CalRENEW-1 PPA placed the obligation on both buyer and seller to serve as their own scheduling coordinators (or to hire third-party SCs), and required the seller to submit schedules to the CAISO consistent with the CAISO's Eligible Intermittent Resources Protocol (EIRP). It appears that Meridian Energy's interest in amending the CalRENEW-1 PPA was to shift the role of scheduling coordinator for the facility to PG&E, along with the increased risks to SCs associated with imbalance costs under the revised market regime. Under the original PPA, the project is responsible for imbalance penalties or other CAISO charges associated with imbalance energy as long as CalRENEW-1 participates in EIRP.

Discussions between PG&E and Meridian Energy's commercial team continued from the fall of 2013 through May 2014. On May 15, 2014, Meridian Energy announced that it had sold CalRENEW-1 to SunEdison, Inc.⁵ SunEdison has developed and built several solar photovoltaic projects smaller than 1 MW in capacity in California, and a few larger ones such as the 18.5-MW Cascade Solar facility near Joshua Tree that is under contract with San Diego Gas & Electric; it has acquired larger solar projects and obtained other large

⁵ Reuters News Service, "Brief – NZ's Meridian Energy Sells U.S. Solar Plant", May 15, 2014.

projects in the portfolios of other companies it purchased. Following this change in ownership, PG&E and CalRENEW-1 executed an amended and restated contract on June 17, 2014.

B. PRINCIPLES FOR EVALUATING THE FAIRNESS OF NEGOTIATIONS

Arroyo considered some principles to evaluate the degree of fairness with which PG&E handled negotiations to amend the CalRENEW-1 contract, compared to other sellers.

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

C. NEGOTIATIONS BETWEEN PG&E AND MERIDIAN ENERGY

Some of the issues addressed or not addressed in the negotiations included:

- Contract price. The contract price remains unchanged from the original PPA, which set it to \$179/MWh if CalRENEW-1 failed to obtain public goods funding from the California Energy Commission for that price, which was above the relevant market price referent. Price was not raised as a negotiating point in discussions.
- Scheduling coordinator role. The parties agreed to contract provisions that will transition the plant's scheduling coordinator role from CalRENEW-1's third-party SC to PG&E. [REDACTED]

- Buyer curtailment option. PG&E's 2013 RPS Form Agreement provides for the seller to curtail its output upon an order from PG&E, subject to operational constraints that the parties typically specify in a contract appendix. The original PPA from 2007 did not provide PG&E's merchant function with such a buyer option (as opposed to the standard curtailment requirement when ordered by the CAISO or the Participating Transmission Owner). [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- Force majeure. [REDACTED]

- Curtailment orders. [REDACTED]

- Resource Adequacy standards. [REDACTED]

- Resource Adequacy costs. [REDACTED]

- Excess energy. [REDACTED]

[Redacted]

[Redacted]

- Supplier diversity program. [Redacted]

- Guaranteed energy production. [Redacted]

- Real-time market pricing. [Redacted]

- Seller's other obligations. [Redacted]

- Assignment. [REDACTED]
- WREGIS certificates. [REDACTED]
- Meteorological stations. [REDACTED]

D. DEGREE OF FAIRNESS OF PROJECT-SPECIFIC NEGOTIATIONS

Overall, the negotiations to amend the existing contract between PG&E and CalRENEW-1 featured a quid pro quo: the seller shifted the risks and costs of its role as scheduling coordinator to the utility, and PG&E in return obtained the right to order buyer curtailments, subject to specific operational constraints. The contract price did not change, though PG&E ratepayers may or may not obtain some economic benefit from [REDACTED]

[REDACTED]. Arroyo views the variances in terms between the amended PPA and PG&E's 2013 Form Agreement to be minor in their impact, and generally consistent with the type of terms provided to CalRENEW-1's competitors through negotiation.

Arroyo did not observe PG&E providing the Meridian Energy team with non-public information that advantaged it against competing sellers. [REDACTED]

[REDACTED] Arroyo does not believe that CalRENEW-1 has been treated in a materially disparate manner from [REDACTED]

[REDACTED]. Arroyo does not believe that CalRENEW-1's competitors were materially disadvantaged by the terms that the parties negotiated; [REDACTED]

Arroyo's opinion is that PG&E's negotiations with Meridian Energy for the amended CalRENEW-1 contract were conducted fairly with respect to competitors. A discussion of possible impacts borne by ratepayers is provided in the next chapter.

3. MERIT FOR CPUC APPROVAL

This chapter provides an independent review of the merits of the amended and restated contract between PG&E and CalRENEW-1 LLC against criteria identified in the Energy Division’s 2013 RPS IE template.

A. CONTRACT SUMMARY

On June 17, 2014, PG&E and CalRENEW-1 LLC executed an amended and restated contract for continued delivery of RPS-eligible energy from an existing solar photovoltaic facility. Contract capacity for this PPA is 5 MW. The contract quantity for the PPA declines over time on a fixed schedule based on expected degradation of the solar panels, averaging about 8.4 GWh/year over the remaining delivery term. The term commencement date for the amended PPA will take place when all conditions precedent have been satisfied (e.g. final CPUC approval) and [REDACTED]

[REDACTED] The project is sited to the east of the Mendota municipal airport, in Fresno County.

B. NARRATIVE OF EVALUATION CRITERIA AND RANKING

The 2013 RPS template for IEs provided by the Energy Division calls for a narrative of the merits of the proposed project on the criteria of contract price, portfolio fit, and project viability.

CONTRACT PRICE AND MARKET VALUATION

The Energy Division of the CPUC reviewed the original CalRENEW-1 contract in 2007 along with two other PPAs and concluded that “PG&E made a sufficient showing the contract prices are reasonable.”⁶ The Commission ordered that the costs of the original CalRENEW-1 contract are reasonable and are fully recoverable in rates over the life of the project. At the time, the size of the proposed CalRENEW-1 project was larger than any solar photovoltaic plant constructed in California, and the CPUC’s resolution approving the PPA viewed the project as “first-of-its-kind technology” and as a pilot project that should be “valued differently than commercialized projects”.

Neither the prior four amendments to the PPA nor the amended and restated contract for which PG&E is currently seeking CPUC approval involved changes to the original contract price.

Contract Price. Deliveries from the CalRENEW-1 project to PG&E will continue to be priced at \$179/MWh before adjustments by time-of-delivery factors. While this price was

⁶ California Public Utilities Commission Resolution E-4132, December 20, 2007, page 9.

sufficiently competitive for the offer to merit shortlisting in PG&E's 2006 RPS solicitation and approval by the CPUC, in today's market it ranks quite high in price in comparison to alternatives recently available to PG&E through its 2013 RPS RFO. [REDACTED]

Market Valuation. PG&E performed a valuation of the original CalRENEW-1 PPA as part of its 2006 RPS RFO, taking into account contract price and transmission adders. Sedway Consulting, the Independent Evaluator assigned to PG&E's 2006 RPS solicitation, reported that based on its own analysis and ranking of Offers it could confirm that PG&E was "selecting the best offers for the short list."⁷

Arroyo lacks the detailed project-specific data required to perform, to the usual degree of accuracy, an independent evaluation of the value of the CalRENEW-1 amended and restated contract. Based on other data provided in the past by Meridian Energy, Arroyo would expect the contract to rank very low in net market value when compared to Offers PG&E received in its 2013 RPS RFO; as with pricing, the competitive market benchmark for contract value has moved considerably since 2007.

PORTFOLIO FIT

PG&E's approved 2012 RPS procurement plan expressed an expectation that it would have procured sufficient RPS-eligible energy to meet its RPS compliance needs through the third compliance period of 2017-2020. As an existing contract within PG&E's supply portfolio, the CalRENEW-1 PPA is already counted within the baseline assumption that PG&E uses when projecting when its RPS compliance position will be long or short. The amended contract is expected to continue to contribute towards RPS compliance through its delivery term including years when the compliance position is expected to be short or long. On that basis Arroyo believes that its fit with PG&E's portfolio is moderate; its production is expected to contribute to the estimated net long position through 2020 and will help reduce the estimated net short position in later years.

PROJECT VIABILITY

As an existing generation facility that has operated reliably with production levels above its annual contract quantity, Arroyo assesses the project viability of the CalRENEW-1 facility as ranking quite high.

RPS GOALS

In PG&E's 2013 RPS RFO, the utility applied an evaluation criterion for consistency with and contribution to California's goals for the RPS program. Offers were evaluated on three dimensions:

- California-based projects providing benefits to communities afflicted with poverty, high unemployment, or high emission levels;

⁷ Sedway Consulting, Inc., "Independent Evaluation Report for Pacific Gas & Electric's 2006 Renewable Resource Solicitation: First Advice Letter Report", June 25, 2007, page I-11.

- Impact of the project on California’s water quality and use;
- Contribution to the biomass goal of Executive Order S-06-06.

The CalRENEW-1 facility is sited on municipal property of the city of Mendota, just east of the municipal airport. Based on the U.S. Census Bureau’s 2008-2012 American Community Survey, Mendota’s median household income is far lower than that of the state of California as a whole (\$26 vs. \$61 thousand per year), and its percentage of individuals living in poverty is far higher than of the state (46% vs. 15%). Mendota has an unemployment rate that is well above that of the state as a whole (26% vs. 11%). Fresno County is a non-attainment area for PM-2.5 particulates and an extreme non-attainment area for ozone. As a solar photovoltaic facility, CalRENEW-1 likely has minimal impact on water quality and use. It does not contribute to the state’s biomass goal. On that basis Arroyo expects that the project would score high on the RPS Goals criterion as defined in PG&E’s 2013 RPS RFO.

C. DISCUSSION OF MERIT FOR APPROVAL

In Arroyo’s opinion, the amended and restated contract between PG&E and CalRENEW-1 merits CPUC approval:

- The CPUC has already found the original PPA to be reasonable, including its pricing, which is not altered in the amended contract. While Arroyo currently ranks the PPA’s contract price as quite high and net market value as likely low compared to recent competing proposals, the relevant peer group considered by the Commission when approving the original PPA would have included competing proposals submitted to PG&E’s 2006 RPS solicitation, not perfect foresight of market conditions in 2014.
- The insertion of provisions for PG&E to exercise a buyer curtailment option [REDACTED] provides ratepayers with a material benefit with no change in contract price. This allows PG&E to avoid taking delivery of the project’s energy when CAISO market prices turn negative during over-generation episodes, when ratepayers would otherwise pay the facility for delivering a product that is worth less than zero. The CAISO is already experiencing a modest frequency of such negative-price hours and could experience more as additional intermittent resources are built and come on line in California.

Arroyo does not have an independent estimate of the ratepayer value for incorporating the buyer curtailment option into the CalRENEW-1 PPA. PG&E performed a valuation of the amended PPA using its current Portfolio-Adjusted Value methodology, including an estimate of the value of the new buyer curtailment option. Using the utility’s current model inputs and forward market curves from June 2014, PG&E’s methodology attributes a value [REDACTED] to the option.

This calculation is quite sensitive to input assumptions. For example, this estimate is more than twice what would be estimated for a solar project with 8,760 hours per year of buyer curtailment option if the input assumptions that PG&E originally proposed in January 2014 for its 2013 RPS RFO were applied. Arroyo views the current set of estimates for PG&E's valuation of buyer curtailment as too high. However, it seems credible that the benefit of flexibility provided by the curtailment option to avoid imbalance charges, CAISO curtailment orders, and volatile ancillary services prices during periods of negative market prices could be worth several dollars per MWh over the course of time for a contract that terminates in 2029.

- In the amended contract, as with the original contract, the project will be paid a reduced price for excess energy, defined by an annual trigger [REDACTED] [REDACTED] [REDACTED] the changes create some modest likelihood that total payments to CalRENEW-1 over the term of the PPA will be lower than would be case under the original contract, which if so could have the effect of a reduction in average pricing.
- In contrast, by taking on the role of scheduling coordinator from the seller, PG&E's ratepayers will be exposed to a greater likelihood of paying CAISO imbalance costs and penalties. It is not yet evident how much more costly the average costs of imbalances for CalRENEW-1 will be under the new rules implemented by the CAISO, including the elimination of netting of imbalances over a month. Arroyo does not have a basis for estimating the incremental average cost to ratepayers of PG&E taking on the scheduling coordinator role. Evidently it was a significant enough concern to Meridian Energy for it to initiate negotiations to shift these risks to the buyer.

That being said, PG&E's ratepayers already absorb these risks for hundreds of megawatts of solar photovoltaic projects under contract, and the number will continue to rise as new contracted projects come on line. Most of the PPAs with solar and wind projects that PG&E has entered since the CalRENEW-1 contract was first signed place the role of scheduling coordinator on the utility, so the amendment aligns this project's imbalance risks with those of most of PG&E's solar PPA portfolio; the amended contract is in line with these other contracts in its allocation of risks between buyer and seller. As far as imbalance risks go, ratepayers are no worse off with the amended PPA than they would be with any other 5-MW project under PG&E's standard contract terms in use today.

PG&E's skill set for managing the imbalance risks of its overall portfolio has likely evolved to the point where the utility is better able to manage these specific risks than any other entity other than one or two of the other California IOUs. Also, one would expect that PG&E's ability to manage a 5-MW solar project's imbalance risks is enhanced by its control of other projects and by the buyer curtailment options it has secured in other PPAs. One of the elements of PG&E's valuation of buyer

curtailment options is the ability to reduce exposure to CAISO imbalance energy charges.

- The existing, operating CalRENEW-1 project ranks very high in project viability.
- Arroyo regards the PPA as ranking as moderate in portfolio fit given that it is already counted in PG&E's baseline for estimating net compliance needs and will deliver renewable energy both in periods currently expected to have net long and net short RPS compliance needs.
- In Arroyo's opinion, the negotiations between Meridian Energy and PG&E to achieve an amended and restated agreement for the output of the CalRENEW-1 project were handled fairly by the utility with respect to competitors. Without being able to quantify with any accuracy the net cost to ratepayers of absorbing the risks of imbalance energy when PG&E becomes scheduling coordinator for the project, it is hard to judge whether the features of the amendment are a net positive or negative for ratepayers. Arroyo speculates that the balance between added risks of imbalance costs and the benefits of the buyer curtailment option is probably a net positive for ratepayers and therefore the overall changes to non-price terms are probably fair.

Based on these observation and judgments about the fairness of negotiations and overall impact on ratepayer benefits and costs, Arroyo's opinion is that the amended CalRENEW-1 contract merits CPUC approval.

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General Order 96-B, Section IV**

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