

May 13, 2009

Advice 3458-E

(Pacific Gas and Electric Company ID U39 E)

Public Utilities Commission of the State of California

**Subject: Contracts for Procurement of Renewable Energy Pursuant to
Power Purchase Agreements 1 and 2 Between PG&E and
Subsidiaries of BrightSource Energy, Inc.**

I. INTRODUCTION:**A. Purpose and Overview**

Pacific Gas and Electric Company (“PG&E”) seeks California Public Utilities Commission (“Commission” or “CPUC”) authorization to procure electricity generated by eligible renewable energy resources using concentrating solar thermal technology developed by BrightSource Energy, Inc. (“BrightSource”) to meet PG&E’s Renewables Portfolio Standard (“RPS”) goals. PG&E has entered into seven separate power purchase agreements (“PPAs”), each with a different BrightSource subsidiary, for the development and operation of each facility (hereinafter, a “Project”). This advice letter presents Projects 1 and 2, which are the first two projects scheduled for operation, for Commission approval.¹ Regulatory approval, development, and operation of Projects 1 and 2 are entirely independent of the other five Projects.²

Pursuant to PPAs 1 and 2, electricity will be generated by two new solar thermal resources located in Ivanpah, California.³ Project 1 will have a capacity of 110 megawatts (“MW”) and Project 2 will have a capacity of 200 MW. In addition to PPAs 1 and 2, PG&E has entered into a Royalty Agreement with BrightSource

¹ Two subsidiaries of BrightSource, Solar Partners II, LLC, and Solar Partners VIII, LLC, will develop, own, and operate the Projects related to PPAs 1 and 2, respectively. However, for the sake of simplicity, these entities will be referred to collectively as “BrightSource.”

² Projects 3 through 7 are the subject of a separate concurrently filed advice letter.

³ Ivanpah is in San Bernardino County, on the southeastern side of the Clark Mountains near the Nevada border, about 40 miles from Las Vegas.

Industries (Israel) Ltd. (“BS II”), a wholly-owned subsidiary of BrightSource, and a Royalty Agreement Guaranty with BrightSource, which guarantees BS II’s obligations under the Royalty Agreement. PPAs 1 and 2, the Royalty Agreement and the Royalty Agreement Guaranty are collectively referred to as the “Agreements.” Approval of the Agreements will authorize PG&E to (1) procure up to a total of 800 gigawatt hours per year (“GWh/yr”) of as-available power for 25-year delivery terms, and (2) potentially receive certain payments under the Royalty Agreement.⁴

Initial deliveries from Project 1 are scheduled to commence in July 2012 and those of Project 2 are scheduled to begin a year later. Deliveries from these Projects within three years of 2010 should help PG&E to meet its 20 percent RPS 2010 goal through flexible compliance.

Projects 1 and 2 are two of the five projects originally proposed by BrightSource in bilateral negotiations with PG&E. The five resultant PPAs were submitted for Commission approval via PG&E Advice Letter 3243-E on April 1, 2008. These five PPAs have been renegotiated and Advice Letter 3243-E is being withdrawn concurrent with the submission of this and a companion advice letter representing a total of seven new agreements. The Agreements presented by this Advice Letter should be reviewed by the Commission as bilateral transactions.

1. **Project Background**

PG&E commenced negotiations with BrightSource in 2006. The original set of agreements with BrightSource consisted of five PPAs, a Development and Program Agreement (“Program Agreement”), a Royalty Agreement and a Royalty Agreement Guaranty. The comprehensive nature of this package was better considered outside the annual solicitation process. Under the 2008 Transaction, PG&E would have procured output from five solar thermal projects having a total capacity of 900 MW.

In late 2008, BrightSource alerted PG&E that, as a result of research done at its test facility in Israel, the BrightSource engineers had gained a deeper understanding of the technology and some of the parameters of the projects had changed. This prompted BrightSource to seek modification of the 2008 Transaction. PG&E asked the Energy Division to suspend its review of Advice Letter 3243-E until the

⁴ These royalty payments will be recorded to PG&E’s Energy Resource Recovery Account (ERRA) for the benefit of PG&E’s customers.

transaction could be renegotiated. Today, PG&E simultaneously withdraws Advice Letter 3243-E with the filing of this Advice Letter, 3458-E.

Renegotiation has produced seven Projects and corresponding PPAs in place of the original five. Two of the projects, Projects 1 and 2, are the subjects of this advice letter. The remaining five projects are the subject of a concurrently filed, separate advice letter.⁵

BrightSource has applied for DOE Loan Guarantees for Projects 1 and 2. According to BrightSource, final, non-appealable CPUC approval of PPAs 1 and 2 is required by the DOE as a Condition Precedent to closing on a Loan Guarantee. Ratepayer costs will be minimized if a Loan Guarantee is obtained.

Under the revised Agreements, the price of power will not exceed the 2008 MPR, adjusted for the on-line date. The 25-year MPR from Resolution E-4118, issued December 18, 2008, was used to determine the relationship of the negotiated prices to the MPR. In addition, project viability has been improved, the Program Agreement has been eliminated, and the Royalty Agreement and Royalty Amendment Guaranty have been amended. These changes and other terms of the resultant Agreements are detailed in Confidential Appendix D.

2. PG&E Proposes to Support A New Form of Utility Scale Solar Technology.

In furtherance of the state's renewables energy policy, PG&E employs a portfolio approach to procure a technologically diverse portfolio of successful and cost competitive projects for its customers. To this end, PG&E has encouraged the development of projects utilizing multiple solar electric generation technologies.

The BrightSource Projects will further PG&E's strategy of diversifying its renewable energy resource portfolio by contributing a new solar thermal technology to the supply. Although concentrating solar power has been used successfully by BrightSource's predecessor, Luz Industries at the 354 MW Solar Electric Generating Stations ("SEGS") facilities in the Mojave Desert, the Luz Power Tower ("LPT") technology to be used by the Projects is a "next generation" advancement in concentrating solar thermal technology.

⁵ Projects 3 and 4 will be sited at Coyote Springs, Nevada. Projects 5, 6, and 7 are planned to be sited at Broadwell Dry Lake in California's Mojave Desert. Each Project's development is independent of the development of any other Project. Therefore, the two advice letters should not be linked for purposes of regulatory review.

BrightSource owns the LPT technology and has constructed a test facility in Israel nominally rated at 6 MW thermal. PPAs 1 and 2 will generate output comparable to that of utility-owned central generation facilities and will lead the way for the additional Projects that, as explained below, will produce in the aggregate as much as PG&E's largest non-nuclear generating facility.

B. Detailed Description of the Projects

The following table summarizes the primary features of PPAs 1 and 2:

Generating Facility and Technology	Term (Years)	MW Capacity	Capacity Factor	Expected Annual Deliveries (GWh)	Expected Commercial Operating Date	Project Location
PPA 1 LPT technology	25	110	29.47%	284	July 2012	Ivanpah , CA
PPA 2 LPT technology	25	200	29.47%	516	July 2013	Ivanpah, CA

II. THE PPAs ARE CONSISTENT WITH THE COMMISSION'S RPS-RELATED DECISIONS

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

1. Decision adopting 2008 RPS Plan

On February 14, 2008, the Commission issued D.08-02-008, which conditionally approved PG&E's 2008 renewable procurement plan ("2008 Plan"). This advice letter is being submitted on the basis of PG&E's 2008 Plan. However, the BrightSource PPAs result from bilateral negotiations, not a bid into PG&E's 2008 RPS Solicitation, so the PPAs are not necessarily tied to the 2008 RPS Plan. PG&E's 2009 RPS Plan probably will be in effect when the Commission acts on this advice letter, so the analysis of consistency with PG&E's RPS Plan is based on the 2009 RPS Plan.⁶ Regardless of which Plan is used to evaluate the PPAs for

⁶ PG&E filed its draft 2009 RPS Plan on September 15, 2008. A proposed decision approving PG&E's 2009 RPS Plan was issued on May 1, 2009. According to the proposed decision, Commission action on the 2009 Plan is expected on June 4, 2009. PG&E will then have 14 days to submit its final 2009 Plan in compliance with the decision and Energy Division will have 7 days to accept or reject the compliance documents. PG&E's 2009 RPS Plan will become effective no earlier than June 25, 2009.

consistency with PG&E's RPS strategy, the same analysis of project consistency with RPS goals would be performed in either case because the 2009 goals are nearly identical to the 2008 goals. PG&E's Draft 2009 RPS Plan states, "In addition to current procurement efforts from its ongoing 2008 solicitation, PG&E plans to sign additional renewable contracts amounting to 1 to 2 percent of its retail sales in its upcoming 2009 solicitation. However, if additional, cost-effective renewable resources are available and meet PG&E's evaluation criteria, PG&E will then seek to contract for those additional renewable resources."⁷

2. The Projects Meet the Resource Needs Identified in PG&E's 2009 RPS Plan.

The goal of PG&E's 2009 Plan is to procure approximately one to two percent of PG&E's annual retail sales volume, or 800 to 1600 GWh per year, through competitive solicitation or bilateral negotiations. In addition to providing 800 GWh of new generation, Projects 1 and 2 may be considered as incremental to the minimum authorized by the Plan because Projects 1 and 2 offer qualitative and quantitative benefits. The use of new concentrating solar technology increases the diversity of renewable technology at a price at or below the MPR, and the Projects further PG&E's goal of environmental stewardship by using air-cooled, not water-cooled, steam turbine technology.

Projects 1 and 2 will also occupy an important niche identified by PG&E's 2009 RPS Plan. PG&E forecasts that in the long term, solar generation will provide about 70% of its renewable generation.⁸ The BrightSource Projects fall within this Plan category. With on-line dates in 2013 and 2014 and available transmission capacity, Projects 1 and 2 also are valuable because they will generate electricity in the relatively near term. The 2009 Plan predicts that projects from the 2009 RPS Solicitation will experience a 4 to 6 year lead time from the date of project solicitation, with potentially longer delay to resolve issues such as transmission constraints.⁹ With 3 and 4 year lead times, Projects 1 and 2 exceed the Plan's expectations for development under its terms.

3. The Projects are Consistent with PG&E's Long Term Procurement Plan.

⁷ PG&E's Draft 2009 RPS Plan, p.1.

⁸ Draft 2009 RPS Plan, p. 4.

⁹ Draft 2009 RPS Plan, p. 5.

PG&E vowed to aggressively pursue procurement of RPS eligible renewable resources in its 2006 long-term procurement plan (“LTPP”). The combined annual output of Projects 1 and 2 will represent approximately 1% of PG&E’s 2008 annual retail sales and their solar-powered deliveries coincide with peak load periods. This transaction is a significant positive step toward fulfilling PG&E’s renewables goals.

B. Bilateral Contract Considerations

D.03-06-071 allows a utility and a generator to enter into bilateral contracts outside of the competitive RPS solicitation process. In Resolution E-4161, the Commission determined that utilities’ bilateral contracts could be approved based upon a showing of reasonableness even though an evaluation criteria for bilateral contracts had not been developed.¹⁰ On May 5, 2009, a Proposed Decision in the RPS policy proceeding addressed the question of how to judge the reasonableness of bilateral RPS contracts.¹¹ It held that bilateral PPAs should be evaluated against the results of the most relevant RPS solicitation and could be as short as one month in duration. This affirms and does not change the treatment of bilateral RPS contracts provided in D. 06-10-019.¹²

This advice letter demonstrates that the BrightSource PPAs are consistent with the results of PG&E’s most recent RPS Solicitation, have delivery terms longer than one month in duration, and are reasonable. On this basis, the Commission should find that BrightSource PPAs comply with both existing and proposed Commission requirements for bilateral contracts.¹³

¹⁰ Resolution E-4161 at 5.

¹¹ Proposed Decision of ALJ Simon, “Decision Establishing Price Benchmarks and Contract Review Processes for Short-Term and Bilateral Procurement Contracts for Compliance with the California Renewables Portfolio Standard”, issued May 5, 2009 in R.08-08-009.

¹² “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 at 21), “For now, utilities’ bilateral RPS contracts, of any length, must be submitted for approval by advice letter. Such contracts are not subject to the MPR, which applies to solicitations, but they must be reasonable. (Ibid at 31, citing D.03-06-017, *mimeo.*, p. 59).

¹³ The Director of Energy Division is authorized to review procurement contracts for contracts to meet the renewables portfolio standard that are negotiated outside a utility’s annual solicitation (bilateral contracts) and are submitted for Commission approval using the same methods and criteria as are used to review contracts that are negotiated as a result of a utility’s annual solicitation for contracts to meet the renewables portfolio standard, provided that, in reviewing any bilateral contracts 10 years or longer in duration, the Director of Energy Division uses the market price reference calculated for the same solicitation year in which the contract is signed as a price reasonableness benchmark, and for no other purpose in the review of the contract. (Proposed “Decision Establishing Price Benchmarks ... etc.” Ordering Paragraph 7 in R.08-08-009, final decision expected June 4, 2009).

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

PG&E's execution of PPAs 1 and 2 is consistent with the Commission's direction to procure the "least-cost, best fit" ("LCBF") eligible renewable resources in accordance with the RPS statute.¹⁴ Under the Commission's LCBF decision, projects ranked high in accordance with Commission criteria are placed on a "shortlist" for further consideration and potential negotiation.¹⁵ Bilateral contracts are then evaluated in terms of their imputed position along the annual solicitation's bid supply curve. The renewables bid evaluation process focuses on four primary areas:

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

To demonstrate the reasonableness of procuring these Projects in view of PG&E's other options, the Projects were compared to the 2008 bids in terms of the above criteria. As shown in the confidential appendices, the BrightSource PPAs are competitive with bids received and evaluated in the 2008 RPS Solicitation.

1. Results, Bid Comparison, and Market Valuation

The market valuation of Projects 1 and 2 compares favorably with the market valuation of bids received from the 2008 RPS Solicitation under a standard "mark-to-market analysis." In a mark-to-market analysis, the present value of the bidder's payment stream is compared with the present value of the product's market value to determine the benefit (positive or negative) from the procurement of the resource, irrespective of the bid's position relative to PG&E's portfolio. Both bid price and indirect costs, such as transmission and integration costs, are included in this analysis. PG&E's analysis of the market value of the PPAs is provided in Confidential Appendix D.

2. Portfolio Fit

¹⁴ Pub. Util. Code § 399.14(a)(2)(B).

¹⁵ D.04-07-029.

Projects 1 and 2 exhibit superior portfolio fit. As part of the portfolio fit assessment, PG&E differentiates offers by the firmness of their energy delivery and by their energy delivery patterns. A higher portfolio fit measure is assigned to a reliable source of generation that enables PG&E's supply portfolio to better address the need for energy. Because deliveries under PPAs 1 and 2 will occur mainly during the daytime and largely coincide with PG&E's peak demand, the PPAs provide a reasonable match to PG&E's portfolio needs. In addition, because solar power is relatively predictable, the costs to integrate generation from the Projects, if any, will be less than those of other, non-dispatchable technologies. PG&E further addresses portfolio fit in Confidential Appendix D.

3. **Consistency with the Transmission Ranking Cost Decision**

The transmission-adjusted cost of Projects 1 and 2 compares favorably with the adjusted cost of bids received in response to PG&E's 2008 RPS solicitation. Under the Transmission Ranking Cost Decision, the total cost of the Projects, including the cost of transmission upgrades necessary to allow project generation to reach customer load, must be considered to establish the value of each project when ranking solicitation results to create a cost curve. Because the Projects' first point of interconnection will be within the service territory of Southern California Edison Company ("SCE"), SCE's "transmission ranking cost report ("TRCR") was consulted to determine whether there is a cost associated with connecting the Projects to the transmission grid. The details of this comparison are presented in Confidential Appendix D.

4. **Consistent Application of TODs**

For purposes of analysis, the time-period specific Time of Delivery ("TOD") factors adopted by the 2008 RPS Protocol were applied to PPAs 1 and 2 to reflect the value of Project power delivered during different time periods. The effect of TOD factors on Project prices is explained in Confidential Appendix D.

5. **Qualitative Factors**

Projects 1 and 2 are desirable renewable generating resources because they impose fewer environmental impacts than most projects with a similar delivery profile. Under the rules applicable to RPS solicitations, if two projects were ranked equally based upon other LCBF considerations, the project that promotes environmental stewardship, local reliability, resource diversity, or benefits to low income or

minority communities would be ranked above the project that does not.¹⁶ In this case, the presence of any of the identified qualitative factors does not improve the Projects' position on the supply curve because the Projects resulted from bilateral offers. Nonetheless, these factors contribute to the overall reasonableness of each Project.

The Luz Power Tower or "LPT" technology uses air, rather than water, to cool its power plants. In addition, each heliostat will be mounted on a single pylon, and no concrete pads will be poured to support the solar tracking devices. The fact that the mirrors are adjustable in two planes also derives maximum efficiency from the seasonal position of the sun. These design features diversify PG&E's portfolio of solar thermal generation with a technology that is less taxing on the environment.

D. PRG Participation and Feedback

The Procurement Review Group ("PRG") for PG&E consists of the following: California Department of Water Resources ("DWR"), the Commission's Energy Division and Division of Ratepayer Advocates, Union of Concerned Scientists ("UCS"), The Utility Reform Network ("TURN"), the California Utility Employees ("CUE"), and Jan Reid, as a PG&E ratepayer. PG&E informed its PRG of the transaction on March 23, 2009. PG&E addresses the PRG response in Confidential Appendix D.

E. RPS Goals

California's RPS Program requires an electrical corporation to increase its deliveries from eligible renewable energy resources to 20 percent of total retail sales no later than December 31, 2017. The Legislature subsequently accelerated the RPS goal to reach 20 percent by the end of 2010. In addition, Governor Schwarzenegger's Executive Order issued in November 2008 describes a new target of 33 percent renewable energy by 2020. The California Legislature is actively considering legislation to increase the RPS target from 20 to 33 percent. Finally, the California Air Resource Board's Scoping Plan, adopted in December 2008, identifies an increase in the renewables target to 33 percent by 2020 as a key measure for reducing greenhouse gas emissions and meeting California's climate change goals.

¹⁶ See, D.04-07-029 and D.07-02-011.

The BrightSource PPAs represent a total 3,666 GWh of annual renewable energy; Projects 1 and 2 contribute 800 GWh of this amount and will make major contributions toward California's RPS goals. As shown in the above table, deliveries from PPAs 1 and 2 are scheduled to begin in July 2012 and July 2013, respectively. PG&E intends to earmark deliveries received from these PPAs toward meeting its future years' RPS obligations, as needed. Deliveries from these Projects that occur within three calendar years of 2009 will be earmarked to 2009 (e.g., Project 1); deliveries within three calendar years of 2010 will be earmarked to 2010 (e.g., Projects 1-3, which are expected to be operating in 2013); etc.

F. Consistency with Adopted Standard Terms and Conditions

Standard terms and conditions to be incorporated into contracts for the purchase of RPS-eligible have evolved over the course of several Commission decisions, i.e., D.04-06-014, D.07-02-011 as modified by D.07-05-057, and D.07-11-025 and Appendix A of D.08-04-009, as modified by D.08-08-028. These terms and conditions were compiled and published by D.08-04-009. Additionally, the non-modifiable term related to Green Attributes was finalized in D.08-08-028.

The non-modifiable terms in the BrightSource PPAs conform exactly to the current version of non-modifiable terms. Modifications have been made to terms in the PPAs designated as modifiable based upon mutual agreement reached during negotiations. Each provision in the PPAs is essential to the negotiated agreement between the Parties. The Commission should consider the PPAs as a whole, in terms of its ultimate effect on utility customers, and should not analyze any specific PPA term in isolation. PG&E submits that the PPAs protect the interests of its customers while achieving the Commission's goal of increasing procurement from eligible renewable resources. The Commission should, therefore, refrain from making any modifications to any of the provisions.

A comparison of the modifiable terms in the PPAs against the modifiable terms in PG&E's 2009 RPS draft form PPA in the Solicitation Protocol issued on September 15, 2008 is provided in Confidential Appendix H.

G. Consistency with Minimum Quantity Decision

PPAs 1 and 2 have delivery terms of 25 years, making these PPAs long-term contracts. The minimum quantity decision does not affect the eligibility of long-term contracts to count toward PG&E's RPS obligation.

In D.07-05-028, the Commission determined that in order to count energy deliveries from short-term contracts with existing facilities toward RPS goals, RPS-obligated load-serving entities must contract for deliveries equal to at least 0.25 percent of their prior year's retail sales through long-term contracts or through short-term contracts with new facilities. Because PPAs 1 and 2 represent approximately 1.0 percent of 2008 retail sales, PG&E's minimum quantity requirement for 2009 will have been met once these PPAs have been approved.

H. Interim Emissions Performance Standard

The Commission has adopted an Emissions Performance Standard ("EPS") that covers procurement for baseload generation with a delivery term of five or more years with an annualized plant capacity factor of at least 60 percent.¹⁷ PPAs 1 and 2 represent "covered procurement" subject to the EPS because they are new contracts with a baseload generating facility. However, they are exempt from the EPS under D.07-01-039 because the facilities use solar power.¹⁸ Notification of compliance with D.07-01-039 is provided through this Advice Letter, which has been served on the service list in the RPS rulemaking, R.08-08-009.

I. MPR and AMFs

The price of procurement under Projects 1 and 2 is equal to or less than the applicable 2008 MPR. Accordingly, neither Project is eligible to draw on the AMF (above-market funds) pursuant to Resolution E-4199. PG&E has provided the Energy Division with the requested AMF information in Confidential Appendix D.

III. PROJECT DEVELOPMENT STATUS

A. Site Control

Project siting and the developer's control over the Ivanpah site are discussed in Confidential Appendix D.

B. Resource and/or Availability of Fuel

The primary fuel for these two Projects is sunlight. Natural gas will be used as a supplementary fuel for Project operation during plant start-up and during temporary

¹⁷ D.07-01-039

¹⁸ D.07-01-039, Appendix 7.

cloud cover. Natural gas will be obtained by the construction of a new distribution pipeline from an existing transmission pipeline located approximately 0.5 mile north of the Ivanpah site.

C. Transmission

The point of delivery will be within the service territory of SCE. SCE will upgrade the existing 115-kV transmission line between a new Ivanpah Substation and the El Dorado Substation to 220 kV to serve other projects planned in the general vicinity. While it is not being built specifically for Projects 1 and 2, it will provide sufficient capacity for these Projects and other SCE-anticipated projects. Additional transmission-related issues are addressed in Confidential Appendix D.

D. Technology Type and Level of Technology Maturity

BrightSource's decision to use a power tower design stems from its engineering team's experience designing and building the nine Solar Electric Generating Stations ("SEGS") in California. While built to be durable, the SEGS plants' trough technology has efficiency and cost limitations. PPAs 1 and 2 feature a new, promising Luz Power Tower ("LPT") technology that offers the following design benefits:

- More efficient production of steam from solar radiation due to two-axis tracking
- More efficient generation of electricity from steam due to higher temperature steam production
- Less 'parasitic' energy usage for plant operation due to reduced movement of thermal mass
- Higher capacity factor – more megawatt hours produced per megawatt of installed power equipment
- Lower capital costs due to commodity-based inputs, no concrete foundations, and fewer pipes and cabling
- Less water usage

The result is a large-scale solar thermal energy system that delivers solar energy at a cost that is competitive with fossil fueled generation. The LPT technology has been tested successfully at demonstration scale but has never been employed at the scale provided under the PPAs. Commercial scale development is not expected to

present any issues that have not been successfully resolved during the demonstration phase.

E. Permitting

The below table summarizes permits necessary for the construction and operation of Projects 1 and 2. Further details are included in Confidential Appendix D.

Permit and Lease Table Ivanpah and Broadwell¹⁹			
Name of Permit or lease required	Public or Private?	Agency	Description of Permit or Lease
BLM Right-of-Way/Record of Decision	Private	BLM	Land use approval required for the commercial use of public land under BLM jurisdiction, including the construction and operation of commercial solar thermal power generation facility and related facilities. Usually granted for a period of 30 years.
CEC AFC	Private	CEC	Permits the construction and operation of solar thermal power generation facilities above 50 MW.
Air Quality Management District Final Determination of Compliance (Required for CEC approval of AFC)	Public (Ivanpah Projects) Private (others)	Mojave AQMD	Regulates air emissions
Biological Opinion, Endangered Species Act Section 7	Private	FWS	Required to implement federal agency consultation process for major construction that may adversely affect listed species or designated critical habitat.
Clean Water Act Section 401 Permit	Private	RWQCB	Required for delegated state approval of discharges into navigable waters that are waters of the state.
Clean Water Act	Private	ACE	Required for dredging or filling

¹⁹ The Permit and Lease Table for Ivanpah and Broadwell have been combined because both sites are owned by the BLM, and are located in San Bernadino County, have substantially the same resources, and as such, are subject to the same permitting and land conditions.

Section 404 Permit			navigable waters.
Incidental Take Permit, California Endangered Species Act of 1984 (Fish and Game Code Section 2081)	Private	DFG	Required for take of California listed or candidate species.

F. Developer Experience

Each of the Sellers under PPAs 1 and 2 is a special purpose limited liability company formed by BrightSource. BrightSource was founded as Luz II, Inc. in 2004 by the CEO of Luz International Ltd. (“Luz International”). Luz International was the solar technology company that successfully designed, financed, and built nine solar energy plants in Southern California between 1984 and 1991. The resultant 350 MW Solar Electricity Generating Stations (“SEGS”) projects in the Mojave Desert are still in operation today. Fifteen of the key members of the Luz International engineering and commercial team that built those SEGS are now key members of the BrightSource team. In 2006, the name of the company was changed from Luz II, Inc. to BrightSource Energy, Inc.

G. Financing Plan

BrightSource is a privately held company. Further details are included in Confidential Appendix D.

H. Production Tax Credit/Investment Tax Credit

1. 2009 Stimulus Act – Successor to the Production Tax Credit/Investment Tax Credit

The American Recovery and Reinvestment Act of 2009 (the “Stimulus Act”), which was signed into law by President Obama on February 17, 2009, provides developers of renewable energy with a fleeting opportunity to obtain federal funds to assist with the financing of their projects. For example, the Stimulus Act includes a new program of cash grants meant to be equal to the Investment Tax Credit (“ITC”). To qualify for a cash grant in lieu of the Investment Tax Credit, a project must begin construction by December 31, 2010.

The Stimulus Act also extends the Production Tax Credit, which is an essential funding tool for wind developers. To qualify for the Production Tax Credit, the wind project must be placed in service by December 31, 2012.

2. Availability of Federal Energy Stimulus Programs for BrightSource

BrightSource has applied for a DOE Loan Guarantee for Projects 1 and 2 under the program created by the Energy Policy Act of 2005 and modified by the Stimulus Act. The DOE Loan Guarantee may offer significant financial advantages over conventional financing. PG&E understands that issuance of the DOE's Conditional Commitment to lend is conditioned upon BrightSource's receipt of timely Commission approval of PPAs 1 and 2. Additional details are provided in Confidential Appendix D.

The Projects to be developed under PPAs 1 and 2 are eligible for a cash grant in lieu of the ITC, if construction begins prior to December 31, 2010. If construction does not begin by that date, the Projects are eligible for the 30% ITC. In addition, as discussed above, these Projects are currently under review for a DOE Loan Guarantee.

IV. CONTINGENCIES AND PROJECT MILESTONES

The PPAs include certain performance criteria and milestones based on PG&E's filed form of RPS PPA. These and other contingencies and milestones constitute sensitive commercial information and are accordingly addressed in Confidential Appendix D.

V. REGULATORY PROCESS

A. Requested Effective Date

PG&E requests that the Commission issue a resolution approving this advice filing no later than August 20, 2009 to support cost-effective development of the Projects, including the potential closing on a DOE Loan Guarantee.

B. Earmarking

As discussed above, PG&E proposes to earmark deliveries received from these phased PPAs as needed to meet its future years' RPS obligations and goals. Deliveries from these Projects that occur within three calendar years of 2009 will be

earmarked to 2009 (e.g., Project 1); deliveries that occur within three calendar years of 2010 will be earmarked to 2010 (e.g., Projects 1 and 2), etc.

C. RPS-Eligibility Certification

The PPAs include the non-modifiable representation and warranty that during the delivery period, the Project will constitute an eligible renewable energy resource certified by the California Energy Commission (“CEC”). Applications for CEC pre-certification will be filed prior to construction.

D. Request for Confidential Treatment

In support of this Advice Letter, PG&E is providing Energy Division with confidential information that more specifically describes the rights and obligations of the parties under PPAs 1 and 2. This information is provided through the “Confidential Attachments” listed below.

PG&E submits its confidential information in the manner required 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. A separate Declaration Seeking Confidential Treatment is being filed concurrently with this Advice Letter.

Confidential Attachments:

- Appendix A – Overview of 2004 – 2008 Solicitation Bids
- Appendix B – 2008 Bid Evaluations
- Appendix C – Intentionally Omitted
- Appendix D – Contract Terms and Conditions Explained
- Appendix E – Project Viability
- Appendix F – Project’s Contribution Toward RPS Goals
- Appendix G – Power Purchase Agreements, Royalty Agreement, Royalty Agreement Guaranty, Department of Energy Loan Guarantee
- Appendix H – Standard Terms and Conditions Comparison – Modifiables

VI. REQUEST FOR COMMISSION APPROVAL

The continued effectiveness of the PPAs is conditioned on the occurrence of “CPUC Approval,” as that term is defined in the PPAs. Time is of the essence in the Commission’s consideration and approval of this Advice Letter.

Therefore, PG&E requests that the Commission issue a resolution no later than **August 20, 2009**, that:

1. Approves the PPAs in their entirety, including payments to be made by PG&E pursuant to the PPAs, subject to the Commission's review of PG&E's administration of the PPAs.
2. Finds that any procurement pursuant to the PPAs 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 PPAs shall be recovered in rates.
4. Adopts the following finding of fact and conclusion of law in support of CPUC Approval:
 - a. The PPAs are consistent with PG&E's 2009 RPS procurement plan.
 - b. The terms of the PPAs, 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 PPAs:
 - a. The utility's costs under the PPAs shall be recovered through PG&E's Energy Resource Recovery Account.
 - b. Any stranded costs that may arise from the PPAs 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 PPAs are a covered procurement subject to the EPS because they are a new contract commitment with a baseload generating facility. However, because these Projects 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, these Projects meet the EPS.
 - b. PG&E has provided the notice of procurement required by D.06-01-038 in its Advice Letter filing.

Protests:

Anyone wishing to protest this filing may do so by sending a letter by **June 2, 2009**, which is **20** days from the date of this filing. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. Protests should be mailed to:

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

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

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

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

Pacific Gas and Electric Company
Attention: Brian Cherry
Vice President, Regulatory Relations
77 Beale Street, Mail Code B10C

P.O. Box 770000
San Francisco, California 94177

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

Effective Date:

PG&E requests that the Commission issue a resolution approving this advice filing **no later than August 20, 2009.**

Notice:

In accordance with General Order 96-B, Section IV, a copy of this Advice Letter excluding the confidential appendices is being sent electronically and via U.S. mail to parties shown on the attached list and the service list for R.08-08-009. Non-market participants who are members of PG&E's Procurement Review Group and have signed appropriate Non-Disclosure Certificates will also receive the Advice Letter and accompanying confidential attachments by overnight mail. Address changes should be directed to Rose De La Torre (415) 973-4716. Advice letter filings can also be accessed electronically at <http://www.pge.com/tariffs>.



Brian K. Cherry
Vice President - Regulatory Relations

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

Attachments

Limited Access to Confidential Attachments:

The portions of this Advice Letter marked Confidential Protected Material are submitted under Section 583 and are protected from public disclosure under the confidentiality protections of Public Utilities Code section 454.5(g), D.06-06-066 and D.08-04-023, and / or General Order 66-C. A separate Declaration Seeking

Confidential Treatment explains the application of these protections to each document.

Confidential Protected Material:

Appendix A – Overview of 2004 – 2008 Solicitation Bids

Appendix B – 2008 Bid Evaluations

Appendix C – Intentionally Omitted

Appendix D – Contract Terms and Conditions Explained

Appendix E – Project Viability

Appendix F – Project’s Contribution Toward RPS Goals

Appendix G – Power Purchase Agreements, Royalty Agreement, Royalty Agreement Guaranty, Department of Energy Loan Guarantee

Appendix H – Standard Terms and Conditions Comparison – Modifiables

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **Pacific Gas and Electric Company (ID U39 M)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: David Poster

Phone #: (415) 973-1082

E-mail: DXPU@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) #: **3458-E**

Tier: [3]

Subject of AL: Procurement of Renewable Energy Pursuant to Power Purchase Agreements 1 and 2 Between Subsidiaries of BrightSource Energy, Inc. and PG&E

Keywords (choose from CPUC listing): Contracts, Portfolio

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

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

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: 3243-E

Summarize differences between the AL and the prior withdrawn or rejected AL: Contracts have been renegotiated.

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

Confidential information will be made available to those who have executed a nondisclosure agreement: All members of PG&E's Procurement Review Group who have signed nondisclosure 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: Neha Patel (415) 973-6095

Resolution Required? Yes No

Requested effective date: **August 20, 2009**

No. of tariff sheets: N/A

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

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

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

Tariff schedules affected: N/A

Service affected and changes proposed: 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:

CPUC, Energy Division

Tariff Files, Room 4005

DMS Branch

505 Van Ness Ave., San Francisco, CA 94102

jnj@cpuc.ca.gov and mas@cpuc.ca.gov

Pacific Gas and Electric Company

Attn: Brian K. Cherry, Vice President, Regulatory Relations

77 Beale Street, Mail Code B10C

P.O. Box 770000

San Francisco, CA 94177

E-mail: PGETariffs@pge.com

**DECLARATION OF NEHA R. PATEL
SEEKING CONFIDENTIAL TREATMENT
FOR CERTAIN DATA AND INFORMATION
CONTAINED IN ADVICE LETTER 3458-E
(PACIFIC GAS AND ELECTRIC COMPANY - U 39 E)**

I, Neha R. Patel, declare:

1. I am presently employed by Pacific Gas and Electric Company ("PG&E"), and have been an employee at PG&E since 2008. My current title is Principal within PG&E's Energy Procurement organization. In this position, my responsibilities include negotiating PG&E's Renewable Portfolio Standard Program ("RPS") power purchase agreements ("PPAs") with counterparties in the business of producing electric energy. In carrying out these responsibilities, I have acquired knowledge of such sellers in general and, based on my experience in dealing with facility owners and operators, I am familiar with the types of data and information about their operations that such owners and operators 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 Appendix A, B, D, E, F, G and H to Advice Letter 3458-E, submitted on May 13, 2009. By this Advice Letter, PG&E is seeking this Commission's approval of two PPAs that PG&E has executed with subsidiaries of BrightSource Energy, Inc.

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

I declare under penalty of perjury, under the laws of the State of California, that to the best of my knowledge the foregoing is true and correct. Executed on May 13, 2009 at San Francisco, California.



Neha R. Patel

		PACIFIC GAS AND ELECTRIC COMPANY Advice Letter 3458-E May 13, 2009		IDENTIFICATION OF CONFIDENTIAL INFORMATION PER DECISION 06-06-066 AND DECISION 08-04-023			
Redaction Reference	1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06-066 and Appendix C to D.08-04-023 (Y/N)	2) Which category or categories in the Matrix the data correspond to:	3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data (Y/N)	4) That the information is not already public (Y/N)	5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	Length of Time
1	Document: Advice Letter 3458-E						
2	Appendix A	Y	Item VIII (A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Y	Y	This Appendix contains bid information and bid evaluations from the 2004, 2005, 2006, 2007 and 2008 solicitations. This information would provide market sensitive information to competitors and is therefore considered confidential. Furthermore, contracts from the 2005, 2006, 2007, and 2008 solicitations are still under negotiation, further substantiating why releasing this information would be damaging to the negotiation process.	For information covered under Item VIII (A), remain confidential until after final contracts submitted to CPUC for approval For information covered under Item VIII (B), remain confidential for three years after winning bidders selected
3	Appendix B	Y	Item VIII (A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.	Y	Y	These Appendices contain bid information and bid evaluations from the 2008 solicitation. This information would provide market sensitive information to competitors and is therefore considered confidential. Furthermore, contracts from the 2005, 2006, 2007, and 2008 solicitations are still under negotiation, further substantiating why releasing this information would be damaging to the negotiation process.	For information covered under Item VIII (A), remain confidential until after final contracts submitted to CPUC for approval For information covered under Item VIII (B), remain confidential for three years after winning bidders selected
4	Appendix D	Y	Item VII (G) Renewable Resource Contracts under RPS program - Contracts without SEPs. Item VII (un-numbered category following VII G) Score sheets, analyses, evaluations of proposed RPS projects. General Order 66-C.	Y	Y	This Appendix contains information regarding the terms of the PPAs, and analyses and evaluations of the projects. Disclosure of this information would provide valuable market sensitive information to competitors. Since negotiations are still in progress with bidders from the 2005, 2006, 2007, and 2008 solicitations, this information should remain confidential. Release of this information would be damaging to negotiations. Furthermore, the counterparties to the PPAs have an expectation that the terms of the PPAs will remain confidential pursuant to confidentiality provisions in the PPA, I am informed and believe that General Order 66-C provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because, if such information were made public, it could have a damaging effect on current and future negotiations with other offers.	For information covered under Item VII (G) and Item VII (un-numbered category following VII G), remain confidential for three years For information covered by General Order 66-C, remain confidential

Redaction Reference	1) The material submitted constitutes a particular type of data listed in the Matrix, appended as Appendix 1 to D.06-06-066 and Appendix C to D.08-04-023 (Y/N)	2) Which category or categories in the Matrix the data correspond to:	3) That it is complying with the limitations on confidentiality specified in the Matrix for that type of data (Y/N)	4) That the information is not already public (Y/N)	5) The data cannot be aggregated, redacted, summarized, masked or otherwise protected in a way that allows partial disclosure (Y/N)	PG&E's Justification for Confidential Treatment	Length of Time
5 Appendix E	Y	Item VII (un-numbered category following VII G) Score sheets, analyses, evaluations of proposed RPS projects.	Y	Y	Y	This Appendix contains information concerning and analyses and evaluations of project viability. If made public, this information could harm the counterparty and adversely affect project viability.	Remain confidential for three years
6 Appendix F	Y	Item VII (un-numbered category following VII G) Score sheets, analyses, evaluations of proposed RPS projects. Item VI B) Utility Bundled Net Open Position for Energy (MWh).	Y	Y	Y	This Appendix contains information that, if disclosed, would provide valuable market sensitive information to competitors and allow them to see PG&E's remaining RPS net open energy position. Since negotiations are still in progress with bidders from the 2005, 2006, 2007, and 2008 solicitations, this information should remain confidential for three years.	Remain confidential for three years
7 Appendix G	Y	Item VII G) Renewable Resource Contracts under RPS program - Contracts without SEPs.	Y	Y	Y	This Appendix contains the PPAs, Royalty Agreement, Royalty Agreement Guaranty and Department of Energy Loan Guaranty Letter. Disclosure of these documents would provide valuable market sensitive information to competitors. Since negotiations are still in progress with bidders from the 2005, 2006, 2007 and 2008 solicitations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the PPAs has an expectation that the terms of the PPAs will remain confidential pursuant to confidentiality provisions in the PPAs. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes, in its category of records not open to public inspection "Information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.	Remain confidential for three years
8 Appendix H	Y	Item VII G) Renewable Resource Contracts under RPS program - Contracts without SEPs.	Y	Y	Y	This Appendix contains certain terms of the PPAs. Disclosure of certain terms of the PPAs would provide valuable market sensitive information to competitors. Since negotiations are still in progress with bidders from the 2005, 2006, 2007 and 2008 solicitations, this information should remain confidential for three years. Release of this information would be damaging to negotiations. Furthermore, the counterparty to the PPAs have an expectation that the terms of the PPAs will remain confidential pursuant to confidentiality provisions in the PPAs. I am informed and believe that General Order 66-C also provides a basis for confidential treatment. General Order 66-C includes in its category of records not open to public inspection "Information obtained in confidence from other than a business regulated by this Commission where the disclosure would be against the public interest." (Paragraph 2.8). It is in the public interest to treat such information as confidential because if such information were made public, it could have a damaging effect on current and future negotiations with other offers.	Remain confidential for three years

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

Aglet	Department of the Army	Northern California Power Association
Agnews Developmental Center	Dept of General Services	Occidental Energy Marketing, Inc.
Alcantar & Kahl	Division of Business Advisory Services	OnGrid Solar
Ancillary Services Coalition	Douglas & Liddell	PPL EnergyPlus, LLC
Anderson & Poole	Douglass & Liddell	Pinnacle CNG Company
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California Public Utilities Commission	Hitachi	Smurfit Stone Container Corp
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City of Glendale	Luce, Forward, Hamilton & Scripps LLP	Tioga Energy
City of Palo Alto	MBMC, Inc.	TransCanada
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Clean Energy Fuels	Manatt Phelps Phillips	U S Borax, Inc.
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Commerce Energy	McKenzie & Associates	Utility Cost Management
Commercial Energy	Meek, Daniel W.	Utility Resource Network
Constellation	Merced Irrigation District	Utility Specialists
Constellation New Energy	Mirant	Vandenberg Air Force
Consumer Federation of California	Modesto Irrigation District	Verizon
Crossborder Energy	Morgan Stanley	Wellhead Electric Company
Davis Wright Tremaine LLP	Morrison & Foerster	Western Manufactured Housing Communities Association (WMA)
		White & Case
Day Carter Murphy	New United Motor Mfg., Inc.	eMeter Corporation
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