May 13, 2009

Advice 3459-E
(Pacific Gas and Electric Company ID U39 E)

Public Utilities Commission of the State of California

Subject: Contracts for Procurement of Renewable Energy Resources Pursuant to Power Purchase Agreements 3 Through 7 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 eligible renewable energy facility (hereinafter, a “Project”).¹ This advice letter presents Projects 3 through 7 for Commission approval. Regulatory approval, development, and operation of Projects 3 through 7 are entirely independent of Projects 1 and 2.²

Projects 3 through 7 consist of five new solar thermal resources, each with 200 megawatt (“MW”) of capacity. Projects 3 and 4 will be located in Coyote Springs, Nevada. Projects 5, 6, and 7 will be located at Broadwell Dry Lake, California.

¹ Five subsidiaries of BrightSource, Solar Partners XII, LLC, Solar Partners XIV, LLC, Solar Partners XV, LLC, Solar Partners XXII, LLC, and Solar Partners XXIII, LLC, will develop, own and operate the Projects related to PPAs 3, 4, 5, 6, and 7, respectively, which are the subject of this advice letter. However, for the sake of simplicity, the developers will be referred to collectively as “BrightSource”.

² Projects 1 and 2 are the subject of a separate concurrently filed advice letter.
unless this site is designated or determined to be a preserved area under Federal law.

Generation from each Project will be purchased through a corresponding PPA (“PPA 3”, “PPA 4”, etc.). In addition, PG&E has entered into a Royalty Agreement with BrightSource 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 3 through 7, 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 2,865 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.3

Initial deliveries from Project 3 are scheduled to commence in July 2014 and those of each successive Project are scheduled to begin a year later.4 PG&E intends to use generation from the Projects to meet its RPS goals by earmarking deliveries to its RPS obligations.

Projects 3, 4, and 5 are three of the five projects originally proposed by BrightSource, albeit at a different location, 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 original 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,

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

4 An exception is Project 6, which is scheduled to commence deliveries 18 months after Project 5.
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 transaction could be renegotiated. Today, PG&E simultaneously withdraws Advice Letter 3243-E with the filing of this Advice Letter, 3459-E.

Renegotiation has resulted in seven Projects and corresponding PPAs in place of the original five. Five of the projects, Projects 3 through 7, are the subject of this advice letter. The remaining two projects are the subject of a concurrently filed, separate advice letter.5

Under the revised Agreements, the price of power will not exceed the 2008 MPR. 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 Agreement Guaranty have been amended. These changes and other terms of the resultant Agreements are detailed in Confidential Appendix D.

2. PG&E Proposes to Help Pioneer 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

5 Projects 3 and 4 will be sited at Coyote Springs, Nevada. Projects 5, 6, and 7 are planned to be sited in the Southern California desert region. 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.
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.

BrightSource owns the LPT technology and has constructed a test facility in Israel, nominally rated at 6 MW thermal. PPAs 3 through 7 will generate output comparable to that of utility-owned central generation facilities.

**B. Detailed Description of the Projects**

The following table summarizes the primary features of PPAs 3 through 7:

<table>
<thead>
<tr>
<th>Generating Facility and Technology</th>
<th>Term (Years)</th>
<th>MW Capacity</th>
<th>Capacity Factor</th>
<th>Expected Annual Deliveries (GWh)</th>
<th>Expected Commercial Operating Date</th>
<th>Project Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>PPA 3 LPT technology</td>
<td>25</td>
<td>200</td>
<td>32.7%</td>
<td>573</td>
<td>July 2014</td>
<td>Coyote Springs, NV</td>
</tr>
<tr>
<td>PPA 4 LPT technology</td>
<td>25</td>
<td>200</td>
<td>32.7%</td>
<td>573</td>
<td>July 2015</td>
<td>Coyote Springs, NV</td>
</tr>
<tr>
<td>PPA 5 LPT technology</td>
<td>25</td>
<td>200</td>
<td>32.7%</td>
<td>573</td>
<td>July 2015</td>
<td>Broadwell Dry Lake, CA</td>
</tr>
<tr>
<td>PPA 6 LPT technology</td>
<td>25</td>
<td>200</td>
<td>32.7%</td>
<td>573</td>
<td>December 2016</td>
<td>Broadwell Dry Lake, CA</td>
</tr>
<tr>
<td>PPA 7 LPT technology</td>
<td>25</td>
<td>200</td>
<td>32.7%</td>
<td>573</td>
<td>July 2017</td>
<td>Broadwell Dry Lake, CA</td>
</tr>
</tbody>
</table>

**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. 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. It is very likely that PG&E’s 2009 RPS Plan 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. Regardless of which Plan is used to evaluate the PPAs for 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.”


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 2,865 GWh of new generation, Projects 3 through 7 are may be considered as incremental to the minimum authorized by the Plan because Projects 3 through 7 offer qualitative and quantitative benefits. The use of new concentrating solar methods 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.

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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.

Projects 3 through 7 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 2009 Plan predicts that projects from the 2009 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.\(^9\) Projects 3 through 7 fall within this Plan category and are consistent with PG&E’s 2009 Plan.

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

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 3 through 7 represent more than 3% 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.\(^12\)

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\(^8\) Draft 2009 RPS Plan, p. 4.
\(^9\) Draft 2009 RPS Plan, p. 5.
\(^10\) Resolution E-4161 at 5.


\(^12\) “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
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.

In addition, the BrightSource PPAs exemplify how a bilateral transaction can address PG&E’s multi-year RPS obligations in a way that a contract from the bid solicitation could not. The bid solicitation PPA only provides for deliveries from a single project, while the BrightSource transaction encompasses seven Projects, five of which are being proposed in this advice letter. The annually-phased Projects should mitigate increased RPS procurement costs because each Project will come online sequentially through 2017, each will make a sizable contribution toward PG&E’s RPS goals each year, and each is priced no higher than the 2008 MPR.

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

PG&E’s execution of PPAs 3 through 7 is consistent with the Commission’s direction to procure the “least-cost, best fit” (“LCBF”) eligible renewable resources in accordance with the RPS statute. 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. 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

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

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14 D.04-07-029.
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 3 through 7 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 the 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**

Projects 3 through 7 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 3 through 7 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 costs of the Projects compare 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’ delivery points 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 3 through 7 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 3 through 7 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.\(^{15}\) 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, resulting in the significant conservation of scarce desert water. 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.

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\(^{15}\) See, D.04-07-029 and D.07-02-011.
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.

The BrightSource PPAs represent a total 3,666 GWh of annual renewable energy; Projects 3 through 7 contribute 2,865 GWh of this amount and will make major contributions toward California’s RPS goals. As shown in the above table, deliveries from PPAs 3 through 7 are scheduled to begin in July 2014 and continue through July 2017, 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 2011 will be earmarked to 2011 (e.g., Project 3); deliveries within three calendar years of 2012 will be earmarked to 2012, (e.g., Projects 3 and 4), etc.

F. Consistency with Adopted Standard Terms and Conditions

Standard terms and conditions to be incorporated into contracts for the 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 in 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 3 through 7 have a 25-year delivery term, 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 3 through 7 represent more than 3.0 percent of 2008 retail sales, PG&E’s minimum quantity requirement for the year 2009 will have been met once these PPAs have been approved.

H. Interim Emissions Performance Standard

The Commission 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.\(^{16}\) PPAs 3 through 7 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.\(^{17}\) 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 3 through 7 is equal to or less than the applicable 2008 MPR. Accordingly, none of these Projects is eligible to draw on the AMF (above-market funds) pursuant to Resolution E-4199. PG&E has

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\(^{16}\) D.07-01-039.

\(^{17}\) D.07-01-039, Appendix 7.
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 Coyote Springs and Broadwell sites are discussed in Confidential Appendix D.

B. Resource and/or Availability of Fuel

The primary fuel for Projects 3 through 7 is sunlight. Natural gas will be used as a supplementary fuel for Project operation during plant start-up and during temporary cloud cover. Natural gas will be obtained by the construction of a new distribution pipeline from an existing transmission pipeline.

C. Transmission

The site for Projects 3 and 4 is Coyote Springs in Lincoln County, Nevada. The point of delivery is the El Dorado Substation.

The site for Projects 5, 6, and 7 is Broadwell Dry Lake, California, so long as Broadwell Dry Lake is not designated or determined to be a preserved area under Federal law. The Delivery Point for the Broadwell Projects will be the Projects’ Interconnection Point, which shall connect to the CAISO Grid. For the Broadwell site, the Interconnection Point is the SCE Pisgah 230kV substation.

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 3 through 7 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

<table>
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<tr>
<th>Permit and Lease Table</th>
<th>Coyote Springs</th>
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<tbody>
<tr>
<td>Name of Permit or lease required</td>
<td>Public or Private?</td>
</tr>
<tr>
<td>Clean Water Act Section 401 Permit</td>
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<tr>
<td>Clean Water Act Section 404 Permit</td>
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<td>Section 10a1B Incidental Take Permit and Multiple Species Habitat Conservation Plan (MSHCP)</td>
<td>Public</td>
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<td>Section 106 Compliance with National Historic Preservation Act</td>
<td>Private</td>
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<td>Utility Environmental Protection Act Permit (UEPA)</td>
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<td>Bureau of Water Pollution Control - NPDES Construction Stormwater</td>
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Electrical Energy Production (continued)

<table>
<thead>
<tr>
<th>Permit and Lease Table</th>
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<tbody>
<tr>
<td>Ivanpah and Broadwell</td>
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<table>
<thead>
<tr>
<th>Name of Permit or lease required</th>
<th>Public or Private?</th>
<th>Agency</th>
<th>Description of Permit or Lease</th>
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<tbody>
<tr>
<td>BLM Right-of-Way/Record of Decision</td>
<td>Private</td>
<td>BLM</td>
<td>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.</td>
</tr>
<tr>
<td>CEC AFC</td>
<td>Private</td>
<td>CEC</td>
<td>Permits the construction and operation of solar thermal power generation facilities above 50 MW.</td>
</tr>
<tr>
<td>Air Quality Management District Final Determination of (Ivanpah Projects)</td>
<td>Public</td>
<td>Mojave AQMD</td>
<td>Regulates air emissions</td>
</tr>
</tbody>
</table>

18 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.
F. Developer Experience

Each of the Sellers under PPAs 3 through 7 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 ITC, a solar generating 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.

Another time-sensitive benefit of the Stimulus Act is the expansion of the Federal Loan Guarantee Program, which authorizes approximately $60 billion in U.S. Department of Energy loans to renewable energy and transmission projects. To qualify for a Loan Guarantee, however, renewable projects must go through a rigorous application process and begin construction by September 30, 2011.

2. **Availability of Federal Energy Stimulus Programs for BrightSource**

The Projects to be developed under PPAs 3 through 7 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, these Projects will be eligible for a DOE Loan Guarantee, pending approval of an application, if construction begins by September 30, 2011.

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 September 24, 2009 to support cost-effective development of the Projects.

**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 1-3); deliveries that occur within three calendar years of 2011 will be earmarked to 2011 (e.g., Projects 1-4), etc.

**C. RPS-Eligibility Certification**

The PPAs include the non-modifiable representation and warranty that during the delivery period the respective Project will constitute an eligible renewable energy resource certified by the California Energy Commission (“CEC”). BrightSource will file an application for pre-certification of each Project with the CEC no later than the Construction Start Date for that Project.

**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 3 through 7. 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
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 September 24, 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 each is 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 September 24, 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
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, Right of First Refusal Offer Letter

Appendix H – Standard Terms and Conditions Comparison – Modifables
**Company name/CPUC Utility No.** Pacific Gas and Electric Company (ID U39 M)

<table>
<thead>
<tr>
<th>Utility type:</th>
<th>Contact Person: David Poster</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ ELC</td>
<td>☑ GAS</td>
</tr>
<tr>
<td>☐ PLC</td>
<td>☐ HEAT</td>
</tr>
<tr>
<td>Phone #: (415) 973-1082</td>
<td>E-mail: <a href="mailto:DXPU@pge.com">DXPU@pge.com</a></td>
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</table>

**EXPLANATION OF UTILITY TYPE**

| ELC = Electric | GAS = Gas | PLC = Pipeline | HEAT = Heat | WATER = Water |

Advice Letter (AL) #: 3459-E

**Subject of AL:** Contracts for Procurement of Renewable Energy Resources Pursuant to Power Purchase Agreements 3 through 7 Between PG&E and Subsidiaries of BrightSource Energy, Inc.

**Keywords (choose from CPUC listing):** Contracts, Portfolio

**AL filing type:** Monthly

**Tier:** [3]

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: 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: September 24, 2009

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 3459-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 3459-E, submitted on May 13, 2009. By this Advice Letter, PG&E is seeking this Commission’s approval of five 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
<table>
<thead>
<tr>
<th>Redaction Reference</th>
<th>Identification of Confidential Information per Decision 05-08-1990 and Decision 06-04-2003</th>
<th>PG&amp;E's Justification for Confidential Treatment</th>
<th>Length of Time</th>
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<tr>
<td>1 Document: Advice Letter 3459-E</td>
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<td>2 Appendix A</td>
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<td>Item VIII A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.</td>
<td>Y</td>
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<td>Item VIII A) Bid information and B) Specific quantitative analysis involved in scoring and evaluation of participating bids.</td>
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<td>Item VII (G) Renewable Resource Contracts under RPS program - Contracts without SBPs. Item VII (un-numbered category following VII G) Score sheets, analyses, evaluations of proposed RPS projects. General Order 66-C.</td>
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<td>Redaction Reference</td>
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<td>Category</td>
<td>Why the Category is Confidential</td>
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Aglet
Agnews Developmental Center
Alcantar & Kahl
Ancillary Services Coalition
Anderson & Poole
Arizona Public Service Company
BART
BP Energy Company
Barkovich & Yap, Inc.
Bartle Wells Associates
Blue Ridge Gas
Braun & Associates
C & H Sugar Co.
CA Bldg Industry Association
CAISO
CLECA Law Office
CSC Energy Services
California Cotton Ginners & Growers Assn
California Energy Commission
California League of Food Processors
California Public Utilities Commission
Calpine
Cameron McKenna
Cardinal Cogen
Casner, Steve
Cerox
Chamberlain, Eric
Chevron Company
Chris, King
City of Glendale
City of Palo Alto
City of San Jose
Clean Energy Fuels
Coast Economic Consulting
Commerce Energy
Commercial Energy
Constellation
Constellation New Energy
Consumer Federation of California
Crossborder Energy
Davis Wright Tremaine LLP
Day Carter Murphy
Defense Energy Support Center
Department of Water Resources
Department of the Army
Debt of General Services
Division of Business Advisory Services
Douglas & Liddell
Douglas & Liddell
Downey & Brand
Duke Energy
Duncan, Virgil E.
Dutcher, John
Ellis Schneider & Harris LLP
Energy Management Services, LLC
FPL Energy Project Management, Inc.
Foster Farms
Foster, Wheeler, Martinez
Franciscan Mobilehome
G. A. Krause & Assoc.
GLJ Publications
Goodin, MacBride, Squeri, Schlotz & Ritchie
Green Power Institute
Hanna & Morton
Heeg, Peggy A.
Hitachi
Hogan Manufacturing, Inc.
Imperial Irrigation District
Innercite
International Power Technology
Intestate Gas Services, Inc.
J. R. Wood, Inc.
JTM, Inc.
Los Angeles Dept of Water & Power
Luce, Forward, Hamilton & Scripps LLP
MBMC, Inc.
MRW & Associates
Manatt Phelps Phillips
Matthew V. Brady & Associates
McKenzie & Associates
Meek, Daniel W.
Merced Irrigation District
Mirant
Modesto Irrigation District
Morgan Stanley
Morrison & Foerster
New United Motor Mfg., Inc.
Norris & Wong Associates
North Coast SolarResources
Northern California Power Association
Occidental Energy Marketing, Inc.
OnGrid Solar
PPL EnergyPlus, LLC
Pinnacle CNG Company
Praxair
R. W. Beck & Associates
RCS, Inc.
RMG Lonestar
Recon Research
SCD Energy Solutions
SCE
SES
SMUD
SPURR
Santa Fe Jets
Seattle City Light
Sempra Utilities
Sequoia Union HS Dist
Sierra Pacific Power Company
Silicon Valley Power
Smurfit Stone Container Corp
Southern California Edison Company
St. Paul Assoc.
Sunshine Design
Sutherland, Asbill & Brennan
TFS Energy
Tabors Caramanis & Associates
Tecogen, Inc.
Tiger Natural Gas, Inc.
Tioga Energy
TransCanada
Turlock Irrigation District
U S Borax, Inc.
United Cogen
Utility Cost Management
Utility Resource Network
Utility Specialists
Vandenbarg Air Force
Verizon
Wellhead Electric Company
Western Manufactured Housing
Communities Association (WMA)
White & Case
eMeter Corporation