

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue  
Implementation and Administration of California  
Renewables Portfolio Standard Program.

Rulemaking 08-08-009  
(Filed August 21, 2008)

**RESPONSE OF THE CALIFORNIA WIND ENERGY  
ASSOCIATION AND THE LARGE-SCALE SOLAR ASSOCIATION TO  
PACIFIC GAS AND ELECTRIC COMPANY'S MOTION FOR UPDATES  
TO ITS 2010 RENEWABLE ENERGY PROCUREMENT PLAN**

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**I. INTRODUCTION**

Pursuant to the California Public Utilities Commission's ("Commission") Rule of Practice and Procedure 11.1(e), the California Wind Energy Association ("CalWEA") and the Large-scale Solar Association ("LSA") respectfully submit this response to Pacific Gas and Electric Company's ("PG&E") motion for updates to its 2010 renewable energy procurement plan (the "PG&E Motion").

As set forth in the CalWEA/LSA comments filed on January 19, 2010 in this proceeding ("Opening Comments"), Southern California Edison Company's ("SCE") 2010 Renewables Portfolio Standard ("RPS") Procurement Plan includes an interpretation of its prior pro forma power purchase agreements ("PPA") and proposes revised terms for its 2010 pro forma PPA that will render projects subject to such terms unfinanceable. The CalWEA/LSA Opening Comments also noted that there are several alternative commercial structures that would provide the buyer with some degree of flexibility without threatening the developer's ability to obtain financing, such as shifting from an "all-in" energy price to a capacity payment, requiring payments to the seller for revenues lost due to a curtailment, or placing a cap on the number of hours in which the

project could be curtailed.<sup>1</sup> The PG&E Motion, in stark contrast to SCE's position, includes a curtailment proposal that reflects one such alternative commercial structure. To summarize, PG&E's proposal would (1) allow PG&E to curtail a project for up to five percent (5%) of the project's expected annual energy output,<sup>2</sup> (2) require PG&E to pay the contract price for the energy that could have been produced and delivered by the project but for the curtailment order,<sup>3</sup> (3) subject the seller to a penalty of two hundred percent (200%)<sup>4</sup> of the contract price for actual generation during a curtailment period,<sup>5</sup> and (4) clarify that PG&E is required to maintain separation between its transmission and merchant functions.<sup>6</sup> While still in need of some modifications to be acceptable to project developers and their financing providers, PG&E's proposal is a major step in the right direction because it, unlike SCE's position on curtailment, recognizes that a project cannot remain viable if exposed to unlimited curtailment risk.

Moreover, PG&E's curtailment proposal is consistent with the approach taken by several other utilities in the western United States. For example, Section 9.7 of the NV Energy pro forma renewable PPA<sup>7</sup> provides that the supplier will curtail as directed by the buyer, and the buyer will pay the product rate for the product that could have been generated and delivered but was not generated and delivered due to the curtailment notice. Likewise, Section 7.3 of the Public Service Company of New Mexico ("PNM") pro forma solar energy PPA provides that the buyer can direct seller to curtail the project, and Section 8.2 of the PNM pro forma PPA provides that the buyer will pay for energy that would have been generated and delivered had the

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<sup>1</sup> Opening Comments at 11-14.

<sup>2</sup> PG&E 2010 pro forma RPS PPA § 3.1(o).

<sup>3</sup> *Id.* § 4.1.

<sup>4</sup> Note that Section 3.1(o) of the 2010 pro forma RPS PPA states the penalty is 200%, whereas Appendix B to the 2010 Renewable Energy Procurement Plan states that the penalty is 150%. CalWEA and LSA believe that PG&E intends this to be 200%.

<sup>5</sup> PG&E 2010 pro forma RPS PPA § 3.1(o).

<sup>6</sup> *Id.* § 2.4

<sup>7</sup> Available at <http://www.nvenergy.com/company/doingbusiness/rfps/renewable.cfm> (last visited March 2, 2010).

generation not been curtailed as if such energy had not been curtailed.<sup>8</sup> The Public Service Company of Colorado pro forma PPA for wind projects also provides that the buyer may curtail the project, but will pay both the amount that would have been paid under the contract and the value of lost production tax credits ("PTC") (on a grossed-up basis) in respect of the energy that would have been generated and delivered had the generation not been curtailed.<sup>9</sup> Relevant excerpts from each of these pro forma PPAs demonstrating the willingness of other investor-owned utilities to compensate developers for curtailment are included in Attachment A hereto.

While PG&E's updated curtailment proposal is unquestionably a significant step in the right direction, there are still two fundamental issues, and several refinements, that remain to be addressed. Most significantly, the text proposed in PG&E's 2010 pro forma RPS PPA does not actually preclude the SCE-type argument that the buyer can curtail the project, without compensation to the seller, if bids relating to the project do not clear the applicable California Independent System Operator ("CAISO") market. Accordingly, CalWEA and LSA respectfully request that the Commission direct PG&E to revise its proposed language to:

(A) provide that curtailments ordered by the CAISO for reasons other than physical reliability issues will be compensated as if the curtailment had been ordered by PG&E;

(B) include the value (on an after-tax basis) of lost PTCs that the seller would have received but for the curtailment order in the payment to be made to the seller in respect of deemed delivered energy;<sup>10</sup>

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<sup>8</sup> Available at <http://www.pnm.com/rfp/solar/home.htm> (last visited March 2, 2010).

<sup>9</sup> Public Service of Colorado pro forma PPA §§ 7.4, 8.2, and definition of "Tax Benefits". Available at [http://www.xcelenergy.com/Colorado/Company/About\\_Energy\\_and\\_Rates/Energy%20RFPs/Pages/2009PSCoAll-SourceRFP.aspx](http://www.xcelenergy.com/Colorado/Company/About_Energy_and_Rates/Energy%20RFPs/Pages/2009PSCoAll-SourceRFP.aspx) (last visited March 2, 2010).

<sup>10</sup> Section 1.56 of PG&E's 2010 pro forma RPS PPA defines "Deemed Delivered Energy" in part as the energy that would have been produced and delivered but that is not produced and delivered during a PG&E curtailment period.

(C) clarify that time of delivery ("TOD") factors are applied to payments for deemed delivered energy;

(D) clarify that the seller is only required to pay a penalty for energy generated in excess of the level permitted under a buyer curtailment order;

(E) remove PG&E's proposed excuse from its obligation to receive and purchase energy during a buyer-directed curtailment period; and

(F) include a placeholder for operational constraints that may limit a project's ability to be curtailed.

Each of these requests is addressed in greater detail below, and specific proposed changes to the new curtailment provisions proposed by PG&E are included, in redline format, in Attachment B hereto.

## II. ARGUMENT

### **A. Curtailments Ordered By the CAISO for Reasons Other Than Physical Reliability Issues Should Be Compensated As If the Curtailment Had Been Ordered By PG&E**

As noted in the CalWEA/LSA Emergency Motion for an Expedited Order on Curtailment Issues in SCE's 2010 RPS Procurement Plan, filed in this proceeding on February 16, 2010 ("Emergency Motion"), the mere assertion of discretionary curtailment rights by SCE is sufficient to threaten access to project financing for renewable projects subject to the curtailment terms in SCE's pro forma RPS PPA.<sup>11</sup> Even more troubling, placement of this issue in the consciousness of the financing community has likely tainted the well of renewable project financing for any renewable project with a PPA with a California investor-owned utility ("IOU"). A developer seeking financing will likely be required to explain why the project is not exposed to SCE's interpretation of its curtailment rights or a corollary argument by one of the other IOUs

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<sup>11</sup> Emergency Motion at 11.

that the buyer may curtail the project anytime bids don't clear the applicable CAISO market. To avoid this impediment to obtaining project financing, the PG&E 2010 pro forma RPS PPA should be clear that the seller is not at risk of being curtailed, without compensation, for reasons other than physical reliability issues.

Unfortunately, the proposed text of the PG&E 2010 pro forma RPS PPA is not clear on this point. Section 4.1 of the pro forma PPA provides that PG&E will pay the seller for "Deemed Delivered Energy," which is defined in part as the energy that would have been produced and delivered, but is not produced and delivered during a "Buyer Curtailment Period." But "Buyer Curtailment Period" is defined in part as the period of time during which PG&E orders the seller to curtail,<sup>12</sup> which effectively leaves the door open to an argument that failure of a bid relating to the project to clear the applicable CAISO market is tantamount to an instruction from the CAISO to curtail. To be clear, as with SCE's interpretation of its curtailment rights under its pro forma RPS PPA, CalWEA and LSA do not believe that the text of PG&E's 2010 pro forma RPS PPA, taken as a whole, would support such an argument. But financing providers are a conservative lot, and SCE has already announced to the market that language that is not clear on this point may be subject to an interpretation by the buyer as entitling it to unlimited economic curtailment. As such, the SCE-type argument should be addressed explicitly to avoid providing even the appearance of unnecessary economic curtailment risk.

Accordingly, PG&E's 2010 pro forma RPS PPA should be modified to provide that curtailments ordered by the CAISO, Participating Transmission Owner, or distribution operator for reasons other than the physical reliability issues will be compensated as if the curtailment had

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<sup>12</sup> PG&E 2010 pro forma RPS PPA § 1.15.

been ordered by PG&E. Proposed revisions to the text of the PG&E 2010 pro forma RPS PPA are set forth in Attachment B.

**B. Payments For Deemed Delivered Energy Should Include the Value (On An After-Tax Basis) of Lost PTCs That the Seller Would Have Received But For the Curtailment Order**

Renewable energy projects typically utilize PTCs, which are available for actual production over time on a volumetric basis, or the investment tax credit ("ITC"), which is independent of production volumes or timing. Thus, for a seller that is claiming PTCs, a curtailment order would preclude the seller from claiming PTCs with respect to the generation that the project could have produced but for the curtailment order, whereas the tax benefits available to a seller claiming the ITC are unaffected by a curtailment order. In order to fully compensate a seller utilizing PTCs for revenues lost due to a curtailment order, PG&E should pay the seller the TOD-adjusted contract price for the energy the project could have produced as well as the value (on an after-tax basis) of the PTCs associated with the energy the project could have produced. This approach is consistent with the approach taken by other investor-owned utilities in the western United States with respect to PTC-eligible renewable projects.<sup>13</sup>

Failure to provide compensation for lost PTCs risks creation of a price bias in favor of renewable technologies that are eligible for the ITC. As noted above, a curtailment order affects the value of the tax benefits available to a seller claiming PTCs, but does not affect the value of tax benefits available to a seller claiming the ITC. Thus, if the buyer pays the contract price for deemed delivered energy, but does not compensate the seller for lost PTCs, then the seller will be required to raise the contract price under the PPA to cover the cost of the lost PTCs.

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<sup>13</sup> Public Service of Colorado pro forma PPA §§ 7.4, 8.2, and definition of "Tax Benefits".

Using the PG&E curtailment proposal as an example, PG&E proposes the right to curtail a project up to 5% of the expected annual energy production. Because PG&E also proposes to pay the contract price for energy that could have been produced but for the curtailment, the curtailment proposal does not present an impact to the expected revenue stream under the PPA. But PG&E's proposal does not include compensation for PTCs that could have been claimed but for the curtailment. Thus, the seller claiming PTCs will have to increase the contract price applicable to 100% of the expected annual energy production by enough to cover the value (on an after-tax basis) of the lost PTCs for 5% of the expected annual energy production. A seller with the same starting contract price but claiming the ITC, on the other hand, would not have to increase the contract price. As a result, the project claiming PTCs would appear more expensive than the project claiming the ITC because of the structure of PG&E's curtailment rights. To avoid this bias, payment for deemed delivered energy should include the value (on an after-tax basis) of any lost PTCs associated with the deemed delivered energy.

**C. Payments for Deemed Delivered Energy Should Reflect PG&E's Time of Delivery Factors**

PG&E proposes that it will pay the seller the contract price for the energy that could have been generated but for the curtailment order.<sup>14</sup> However, under Section 4.3 of the 2010 pro forma PPA, PG&E typically pays the TOD-adjusted contract price for energy that is actually generated and delivered. To ensure that the compensation that the seller receives for energy that could have been generated but for the curtailment order matches the compensation that seller would have received if the energy actually were generated and delivered, Section 4.3 of PG&E's 2010 pro forma RPS PPA should be revised as set forth in Attachment B to apply the TOD factors to payments for deemed delivered energy.

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<sup>14</sup> PG&E 2010 pro forma RPS PPA § 4.1.

**D. Penalties for Generating During a Curtailment Order Should Be Limited to Generation in Excess of the Level Specified in Such Curtailment Order**

As currently drafted, PG&E's 2010 pro forma RPS PPA provides that the seller would be liable for penalties equal to two hundred percent (200%) of the contract price for each megawatt-hour of energy generated by the project during a curtailment period.<sup>15</sup> But the pro forma PPA also contemplates that PG&E could deliver a partial curtailment order specifying that generation from the project be reduced by a fixed amount consisting of less than the entire project capacity.<sup>16</sup> Taken together, these provisions would permit the counterintuitive result that the seller could be liable for penalties for generation that is compliant with a buyer curtailment order. For example, assume that the seller's project has a capacity of 100 MW. PG&E could deliver a curtailment order directing the seller to reduce output by 50 MW for the following hour. Under PG&E's proposed language, if the seller generated 51 MWh during that hour, then the seller would be liable for penalties for the entire 51 MWh even though PG&E's curtailment order contemplated output of 50 MWh, leaving only 1 MWh supplied in violation of the curtailment order. To avoid such an absurd result, Section 3.1(o)(ii) of PG&E's 2010 pro forma RPS PPA should be modified as set forth in Attachment B.

**E. PG&E Should Not Be Excused From Its Obligation To Receive and Purchase Energy During a PG&E-Directed Curtailment Period**

PG&E proposes that it be excused from its obligation to purchase and receive energy from the project during any PG&E-directed curtailment period.<sup>17</sup> But, as noted above, PG&E also proposes that it be able to deliver partial curtailment orders, and that the seller should pay a penalty equal to 200% of the contract price for each megawatt-hour of generation during a

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<sup>15</sup> *Id.* § 3.1(o)(ii).

<sup>16</sup> *Id.* § 1.16.

<sup>17</sup> *Id.* § 3.1(i)(ii).

curtailment period. Taken together, these provisions would allow PG&E to refuse to pay for energy generated during a PG&E-directed curtailment period, including energy that may have been permitted under a partial curtailment order, and simultaneously assess the seller a penalty of 200% of the contract price for the same energy. This result is punitive and inequitable; therefore PG&E's excuse from performance during PG&E-directed curtailment periods should be removed.

Moreover, the framework proposed by PG&E retains appropriate incentives for the seller to comply with curtailment instructions even if PG&E's excuse from performance is removed. PG&E's pro forma RPS PPA provides that the seller is paid on the basis of its metered energy deliveries.<sup>18</sup> Metered energy would include any energy generated during a PG&E-directed curtailment period. Thus, if PG&E's excuse from performance during PG&E-directed curtailment periods were removed, the seller would be paid for energy generated during a PG&E-directed curtailment period under existing billing mechanisms. But the seller would remain subject to the 200% of contract price penalty for energy generated in excess of the level permitted under the curtailment order (assuming adoption of the proposed change in Section II.D. above). The seller would receive 100% of the contract price for the energy it generated, but would pay 200% of the contract price as a penalty for the same generation. The net result is that the seller would pay PG&E the contract price for energy that the seller generated in excess of the level specified in a curtailment order. This result is more than adequate to deter violations of curtailment orders and is substantially more equitable than the current provisions in PG&E's 2010 pro forma PPA.

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<sup>18</sup> *Id.* §§ 1.59, 4.1, 4.3.

Furthermore, the removal of PG&E's excuse from performance for PG&E-directed curtailment periods will not affect reliability. In addition to excusing PG&E's performance for PG&E-directed curtailments, Section 3.1(i)(ii) of PG&E's 2010 pro forma RPS PPA excuses PG&E's performance for events of force majeure, the seller's failure to perform, reliability-based curtailments ordered by the CAISO, participating transmission operator, or distribution system operator, as applicable.<sup>19</sup> Likewise, the seller will still be required to comply with the terms of its interconnection agreement with its transmission provider, which will contain terms requiring the generator to respond to reliability-based curtailment orders. Thus, removing PG&E's excuse from performance for PG&E-directed curtailment periods will not affect the seller's obligations to comply with physical, reliability-based curtailments. And, as noted above, the 200% penalty for generation in excess of the level specified in a PG&E curtailment order provides a significant economic incentive not to generate even if the seller is still paid the contract price for such generation. Accordingly, PG&E's 2010 pro forma RPS PPA should be revised as set forth in Attachment B.

**F. PG&E's 2010 pro forma RPS PPA Should Include a Placeholder for Operational Constraints on Curtailment Rights**

PG&E's proposed curtailment language appears to assume that projects are capable of reducing output to any level specified and immediately upon notice.<sup>20</sup> In reality, renewable projects may be subject to operational constraints that could require, for example, minimum advance notice requirements, minimum generation levels, minimum down-times, and ramp rate restrictions. PG&E's curtailment rights should be subject to such constraints, and renewable generators should not be exposed to penalties if they are unable to comply with a curtailment

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<sup>19</sup> See *id.* § 1.49.


<sup>20</sup> See *id.* § 1.16.

instruction that is inconsistent with their operational constraints. CalWEA and LSA recognize that various renewable generation technologies have widely divergent operational requirements. For example, a photovoltaic facility is likely to be much more flexible than a solar-thermal facility, and a wind project is likely to be much more flexible than a geothermal facility. Thus, while inclusion of specific operational constraints in the pro forma PPA would likely be infeasible, the pro forma PPA should at least include a placeholder noting that PG&E recognizes that operational constraints will need to be respected in the exercise of PG&E's curtailment rights.

### III. CONCLUSION

For the foregoing reasons, CalWEA and LSA respectfully request that the Commission direct PG&E to revise its 2010 pro forma RPS PPA as set forth in Attachment B.

Respectfully submitted,



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## ATTACHMENT A

### POWER PURCHASE AGREEMENT EXCERPTS

#### PNM PPA

Available at <http://www.pnm.com/rfp/solar/home.htm> (last visited 3/2/10).

7.3 Company's Right to Curtail Energy. Company shall have the right to notify Seller, by telephonic communication from the SCC, to curtail the delivery of Solar Energy Output for Company from the Facility to the Point of Delivery, and Seller shall immediately comply with such notification consistent with Prudent Utility Practices. Company may provide such notification for any reason and in its sole discretion; provided, however, any curtailment shall be in accordance with the provisions of this PPA.

#### 8.2 Curtailed Energy Payment Rate.

(A) If (i) delivery of Solar Energy Output is curtailed by Company or (ii) Company elects to utilize non-firm transmission service(s) to deliver Solar Energy Output from the Point of Delivery to Company load, and deliveries of Solar Energy Output to Company are curtailed as a result of the curtailment of such non-firm transmission service(s) by the Interconnection Provider, then Seller shall offer such curtailed Solar Energy Output to the Participants among any other offerees, but if to the Participants, Seller shall offer such curtailed Solar Energy Output in the proportions set forth in Schedule I and at the rates specified in Section 8.1 hereof. If no Participant is willing to purchase the curtailed Solar Energy Output at the rate specified in Section 8.1 hereof, then;

(1) the Parties shall determine the quantity of Solar Energy Output that would have been generated by the Facility and delivered to the Point of Delivery had its generation not been so curtailed ("Curtailed Energy") and

(2) Company shall pay to Seller for such Curtailed Energy all amounts that Seller would have received from Company under this PPA had production not been so curtailed (at the applicable rates set out in Section 8.1); provided, however, that no such payment shall exceed the differential between the actual amounts paid by any non-participant to Seller for such Curtailed Energy and the amount Seller would have received from Company for such Curtailed Energy.

(B) Notwithstanding anything in this Section 8.2 to the contrary, no payment shall be due to Seller from Company under paragraph (A) above for curtailments of delivery of Solar Energy Output resulting from:

(1) an Emergency Condition, or Force Majeure Event,

(2) any action taken by the Interconnection Provider under the Interconnection Agreement,

(3) any curtailment of firm transmission service by the applicable Transmission Provider, arranged by either Party, to provide transmission of Solar Energy Output to or from the Point of Delivery, or

(4) any notification from SCC requiring Seller to curtail deliveries of Solar Energy Output if Seller has failed to obtain and/or maintain in full force and effect any Governmental Approval.

### **Public Service Company of Colorado Wind PPA**

Available at

[http://www.xcelenergy.com/Colorado/Company/About\\_Energy\\_and\\_Rates/Energy%20RFPs/Pages/2009PSCoAll-SourceRFP.aspx](http://www.xcelenergy.com/Colorado/Company/About_Energy_and_Rates/Energy%20RFPs/Pages/2009PSCoAll-SourceRFP.aspx) (last visited 3/2/10).

#### Article 1.

“Tax Benefits” means an amount equal to: (A) the PTCs to which Seller would have been entitled with respect to Renewable Energy that could have been delivered but for a Compensated Curtailment pursuant to Section 8.2 of this PPA; plus (B) a “gross up” amount to take into account the federal, state and local income tax to Seller on such payments in lieu of PTCs so that the net amount retained by Seller, after payment of federal, state and local income taxes, is equal to the amount set forth in clause (A) of this definition. For purposes of determining the foregoing, Seller shall be deemed to be subject to tax at the highest statutory corporate income tax rates for the highest income bracket (federal, state or local, as applicable) for the Seller or its parent, as appropriate, that are in effect or scheduled to be in effect for the tax year in which the receipt of such Tax Benefits payment is taxed. By way of example, as of the date of this PPA, the highest marginal corporate federal income tax rate for the highest income tax bracket is [35%].

7.4 Company’s Right to Curtail Renewable Energy. Company shall have the right to notify Seller, by telephonic communication from the EMCC, to curtail the delivery of Renewable Energy to Company from the Facility and to the Point of Delivery, and Seller shall immediately comply with such notification. Company may provide such notification for any reason and in its sole discretion.

#### 8.2 Curtailment Energy Payment Rate.

(A) If (i) delivery of Renewable Energy is curtailed by Company pursuant to Section 7.4, or (ii) Company elects to utilize non-firm transmission service(s) to deliver Renewable Energy from the Point of Delivery to Company load and deliveries of Renewable Energy to Company are curtailed as a result of the curtailment of such non-firm transmission service(s) by the Interconnection Provider, then

(1) the Parties shall determine the quantity of Renewable Energy that would have been produced by the Facility and delivered to the Point of Delivery had its generation not been so curtailed (“Curtailment Energy”) and

(2) Company shall pay to Seller for such Curtailment Energy (i) all amounts that Seller would have received from Company under this PPA had production not been so curtailed, plus (ii) the amount of any associated Tax Benefits to which Seller would have been entitled but did not receive as a result, on a grossed-up basis.

(B) Wind data and Wind Turbine availability during the affected hours shall be used to calculate any amounts due Seller under paragraph (A) above. Seller shall install sufficient measuring equipment at the Facility to collect data necessary to reasonably determine Wind Turbine availability and the amount of Facility generation subject to any curtailment. Seller shall install sufficient meteorological towers around the Site or on sufficient Wind Turbines to provide the capability of measuring and recording representative wind data 24 hours per Day.

(C) Notwithstanding anything in this Article 8 to the contrary, no payment shall be due Seller under paragraph (A) above for curtailments of delivery of Renewable Energy resulting from

- (1) an Emergency;
- (2) any action taken by the Interconnection Provider under the LGIA;
- (3) any curtailment of firm transmission service by the applicable transmission service provider, arranged by either Party, to provide delivery of Renewable Energy to or from the Point of Delivery; or
- (4) any curtailment arising from Seller's failure to maintain in full force and effect any permit, consent, license, approval, or authorization from any Governmental Authority required by law to construct and/or operate the Facility.

### **NV Energy PPA**

Available at <http://www.nvenergy.com/company/doingbusiness/rfps/renewable.cfm> (last visited 3/2/10).

1.46 "Emergency" means any circumstance or combination of circumstances or any condition of the Generating Facility, the Interconnection Facilities, the Transmission System, or the transmission system of other transmission operators, which is (a) reasonably likely to endanger life or property and necessitates immediate action to avert injury to persons or serious damage to property or (b) is reasonably likely to adversely affect, degrade or impair Transmission System reliability or transmission system reliability of the transmission system of other electric utilities. Any curtailment of the Generating Facility output by the Transmission Provider or the Control Area Operator shall be considered an Emergency, provided, however, that in no event shall any curtailment of the Generating Facility output made solely for economic reasons be considered an Emergency.

9.7 Supplier shall curtail deliveries of Energy at any time, in whole or in part, in a quantity and for any duration specified by Buyer upon at least thirty (30) minutes prior notice (which may be given by e-mail or recorded telephone) to Supplier. The amount of Energy curtailed and any associated PCs ("Curtailed Product") shall be reasonably determined by Supplier after the curtailment has ended based upon the Energy that could have been generated and delivered to Buyer at the Delivery Point(s), but that was not generated and delivered solely as a result of Buyer's curtailment notice. Supplier shall promptly provide Buyer with such information and data as Buyer may request to confirm to its satisfaction the amount of Curtailed Product that was not generated as a result of Buyer's curtailment notice. Supplier shall be paid for the Curtailed Product at the Product Rate. Notwithstanding anything in the preceding sentence to the contrary, Supplier will be paid the Excess Product Rate for any Curtailed Product (or any portion thereof) that would have been payable by Buyer at the Excess Product Rate. During any such period of curtailment, Supplier shall not produce Product (to the extent curtailed by Buyer) or sell Product to any third party. Curtailed Product shall be deemed to be Excused Product Amount for purposes of calculating a Shortfall or PC Shortfall. Under no circumstance shall the provisions of this Section 9.7 apply to a curtailment of the Generating Facility based upon an Emergency.

## ATTACHMENT B

### PROPOSED REVISIONS TO PG&E'S 2010 pro forma RPS PPA

1.15 “**Buyer Curtailment Period**” means the period of hours during which Buyer orders Seller to reduce generation from the Project ~~for reasons other than Force Majeure or in accordance with a Buyer Curtailment Period Order.~~

1.16 “**Buyer Curtailment Order**” means the written instruction from Buyer to Seller in compliance with Section 3.1(o)(i) ordering that Seller reduce generation from the Project by the amount, in whole MWh increments, and for the period of time set forth in such order.

1.49 “**Curtailment Period**” means the period of time during which there is any of the following:

(a) the CAISO orders, directs, alerts, or provides notice to a Party, which has the effect of requiring the Party to curtail Energy deliveries from the Project for reasons including, but not limited to, (i) any System Emergency, or (ii) any warning of an anticipated System Emergency, or warning of an imminent condition or situation, which jeopardizes the CAISO’s electric system integrity or the integrity of other systems to which the CAISO is connected;

(b) a curtailment of the Project ordered by the Participating Transmission Owner or distribution operator (if interconnected to distribution or sub-transmission system) in accordance with the applicable entity’s tariff for reasons including, but not limited to, (i) any situation that affects normal function of the electric system including, but not limited to, any abnormal condition that requires action to prevent circumstances such as equipment damage, loss of load, or abnormal voltage conditions, or (ii) any warning, forecast or anticipation of imminent conditions or situations that jeopardize the Participating Transmission Owner’s electric system integrity or the integrity of other systems to which the Participating Transmission Owner is connected;

(c) a curtailment of the Project ordered by the CAISO or the Participating Transmission Owner due to scheduled or unscheduled maintenance on the Participating Transmission Owner’s transmission facilities that prevents (i) Buyer from receiving or (ii) Seller from delivering Delivered Energy at the Delivery Point; or

(d) a curtailment ordered by the CAISO, the Participating Transmission Owner, or the distribution operator in accordance with Seller’s obligations under its interconnection agreement with the Participating Transmission Owner or distribution operator.

1.56 “**Deemed Delivered Energy**” means [*For As-Available Products use the following language*] the amount of Energy expressed in MWh that the Project would have produced and delivered to the Delivery Point, but that is not produced by the Project and delivered to the Delivery Point during a Buyer Curtailment Period, which amount shall be the result of the equation provided pursuant to Section 3.1(l)(i)(F) and using relevant availability, weather, and other pertinent data for the period of time during the Buyer Curtailment Period. [*For Baseload Products use the following language*] the amount of Energy expressed in MWh that the Project would have produced and delivered to the Delivery Point, but that is not produced by the Project and delivered to the Delivery Point during a Buyer Curtailment Period, which amount shall be determined by reference to the relevant availability and historical data provided as required pursuant to Section 3.1(l); however, in the event a Buyer’s Curtailment Period occurs prior to the fifth month of the first Contract Year, the amount of historical data accumulated to date shall be

sufficient.

1.219 “**Seller Excuse Hours**” means those hours during which Seller is unable to schedule or deliver Delivered Energy to Buyer as a result of (a) a Force Majeure event, (b) Buyer’s failure to perform, (c) Curtailment Period or (d) Buyer Curtailment Period.

**2.4 Separation of Functions.** The Parties acknowledge that this Agreement is between (a) Seller and (b) Buyer acting solely in its merchant function. Buyer is required to maintain the separation of its transmission and merchant functions pursuant to the FERC’s Standards of Conduct as directed by FERC Order No. 717, as may be modified, amended or replaced from time to time. The Parties further acknowledge that ~~they have~~ Buyer has no rights against each other or Seller and Seller has no obligations to each other ~~Buyer~~ under this Agreement with respect to any relationship between the Parties in which PG&E is acting in its capacity as Participating Transmission Owner, including, but not limited to, orders or instructions relating to Electric System Upgrades and/or Curtailment Periods.

**3.1(i) Performance Excuses.**

(i) Seller Excuses. Seller shall be excused from achieving the Guaranteed Energy Production for the applicable time period during Seller Excuse Hours.

(ii) Buyer Excuses. The performance of Buyer to receive and/or pay for the Product shall be excused only (A) during periods of Force Majeure, (B) by Seller’s failure to perform, or (C) during Curtailment Periods ~~or (D) Buyer Curtailment Periods.~~ Notwithstanding the foregoing, ~~Buyer shall pay Seller for Deemed Delivered Energy during Buyer Curtailment Periods in accordance with Section 4.1.~~

(iii) Curtailment. Notwithstanding Section 3.1(b) and this Section 3.1(i), Seller shall reduce output from the Project as directed by the CAISO, ~~Buyer,~~ or the Participating Transmission Owner during any Curtailment Period ~~or as directed by Buyer pursuant to a Buyer Curtailment Period Order.~~

(iv) No Excuse. Except for a failure or curtailment resulting from a Force Majeure or during a Curtailment Period, the failure of electric transmission service shall not excuse performance with respect to either Party for the delivery or receipt of Energy to be provided under this Agreement.

**3.1(o) Buyer Curtailment Requirements.**

(i) ~~(a)~~ Order and Limit. Buyer shall have the right to order Seller to reduce generation from the Project pursuant to a Buyer Curtailment Order ~~for a period,~~ provided that (A) Buyer Curtailment Orders shall be limited to a total curtailment volume of not more than five percent (5%) of the Contract Quantity cumulatively per Contract Year, (B) [Note: operational constraints to be discussed], and (C) Buyer shall pay Seller for Deemed Delivered Energy pursuant to Sections 4.1 and 4.3. Any order, direction, alert, or Notice provided by the CAISO, the Participating Transmission Owner, the distribution operator, or Buyer requesting that Seller curtail Energy deliveries from the Project for any reason other than as a result of a condition or event expressly described in Sections 1.49 (a)(i)-(ii), (b)(i)-(ii), (c), or (d), including because a bid or schedule relative to the Project was not accepted, scheduled, or awarded in the CAISO’s markets, shall be deemed a Buyer Curtailment Order hereunder. Seller agrees to reduce the Project’s generation by the amount and for the period set forth in the Buyer Curtailment Order.

(ii) ~~(b)~~ Failure to Comply. If Seller fails to comply with a Buyer Curtailment Order provided in compliance with Section 3.1(o)(ai), then Seller shall pay Buyer ~~the~~ 200% of the Contract Price for each MWh of Delivered Energy that the Project generated ~~during the requested~~ in excess of the amount permitted pursuant to the Buyer Curtailment Period Order.

4.1 **Contract Price**. The Contract Price for each MWh of Product, as measured by Delivered Energy, or Deemed Delivered Energy in each Contract Year shall be as follows:

Contract Year	Contract Price (\$/MWh)

[4.3][4.4] **TOD Factors and Monthly TOD Payment**.

(a) TOD Factors. In accordance with all other terms of this Article Four, the Contract Price for Delivered Energy shall be adjusted by the following Time of Delivery Factors (“TOD Factors”) for each of the specified TOD Periods in which Delivered Energy is delivered:

TOD FACTORS FOR EACH TOD PERIOD			
Period	1. Super-Peak	2. Shoulder	3. Night
A. June – September	2.20490	1.12237	0.68988
B. Oct. – Dec.; Jan. & Feb.	1.05783	0.93477	0.76384
C. Mar. – May	1.14588	0.84634	0.64235

(b) Monthly TOD Payment. For each month, Buyer shall pay Seller for Delivered Energy and Deemed Delivered Energy in each TOD Period (“Monthly TOD Payment”) the amount resulting from multiplying the Contract Price times the TOD Factor for the applicable TOD Period, times the sum of Delivered Energy and Deemed Delivered Energy in each hour:

$$\text{Monthly TOD Payment} = \sum_{\text{hour}=1}^n \text{Contract Price \$} * \text{TOD Factor} * (\text{Delivered Energy MW}_{\text{hour}} + \text{Deemed Delivered Energy MW}_{\text{hour}})$$

***[Super-Peak (June-September), set forth in A.1 of the table above, shall be the only Time of Delivery factor applicable to the Peaking Product]***

## VERIFICATION

I, Nancy Rader, am the Executive Director of the California Wind Energy Association. I am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing copy of *Response of the California Wind Energy Association and the Large-scale Solar Association to Pacific Gas and Electric Company's Motion for Updates to Its 2010 Renewable Energy Procurement Plan* are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on March 4, 2010 at Berkeley, California.



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Nancy Rader

Executive Director, California Wind Energy Association

## VERIFICATION

I, Shannon Eddy, am the Executive Director of the Large-scale Solar Association. I am authorized to make this Verification on its behalf. I declare under penalty of perjury that the statements in the foregoing copy of *Response of the California Wind Energy Association and the Large-scale Solar Association to Pacific Gas and Electric Company's Motion for Updates to Its 2010 Renewable Energy Procurement Plan* are true of my own knowledge, except as to the matters which are therein stated on information and belief, and as to those matters I believe them to be true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on March 4, 2010 at Sacramento, California.

/s/ Shannon Eddy

Shannon Eddy

Executive Director, Large-scale Solar Association

## **Certificate of Service**

I hereby certify that I have this day served a copy of the

**RESPONSE OF THE CALIFORNIA WIND ENERGY  
ASSOCIATION AND THE LARGE-SCALE SOLAR ASSOCIATION TO  
PACIFIC GAS AND ELECTRIC COMPANY'S MOTION FOR UPDATES  
TO ITS 2010 RENEWABLE ENERGY PROCUREMENT PLAN**

on all known parties to R.08-08-009 by sending a copy via electronic mail and by mailing a properly addressed copy by first-class mail with postage prepaid to each party named in the official service list without an electronic mail address.

Executed on March 4, 2010, at San Francisco, California.

/s/ Marcus Hidalgo  
Marcus Hidalgo