

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

ENERGY DIVISION

RESOLUTION E-4159  
September 18, 2008

**PUBLIC**

**R E S O L U T I O N**

Resolution E-4159. Southern California Edison (SCE) requests approval of two new renewable resource procurement contracts with FlexEnergy Corporation: Flex LA and Flex Riverside. SCE's Advice Letter (AL) 2203-E is approved without modification.

By Advice Letter 2203-E filed on January 23, 2008.

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**SUMMARY**

**SCE's renewable contracts comply with the Renewable Portfolio Standard (RPS) procurement guidelines and are approved**

Generating facility	Type	Term (Years)	Capacity (MW)	Energy (GWh)	Expected Online Date	Location
Flex LA	Biomass	20	2	12.26	October 22, 2012	Sun Valley, CA
Flex Riverside	Biomass	20	2	12.26	October 22, 2012	Beaumont, CA

Southern California Edison (SCE) filed Advice Letter (AL) 2203-E on January 23, 2008, requesting Commission review and approval of two new power purchase agreements (PPAs) executed with FlexEnergy Corporation (FlexEnergy). These bilateral contracts result from SCE's 2007 biomass standard contract program, and utilize new lean-burning Flex-Microturbines. These turbines have been developed by FlexEnergy to burn low concentration methane gas that is present at landfills. The expected online date for both FlexEnergy projects is October 22, 2012. Due to the small size of the projects, no significant transmission upgrades are expected.

For all contracts executed through SCE's 2007 biomass standard contact program, the contract price is set at the 2006 market price referent (MPR) that corresponds to the project's online date. Thus, the proposed contract prices are deemed reasonable by the Commission because they are at or below the 2006 and 2007 MPRs, and all costs of the contracts are fully recoverable in rates over the life of the contracts, subject to Commission review of SCE's administration of the contracts.

AL 2203-E is approved without modification.

**Confidential information about the contract should remain confidential**

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

**BACKGROUND**

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

Senate Bill (SB) 1078<sup>1</sup>, chaptered on September 12, 2002, established the California Renewable Portfolio Standard Program, which required an electrical corporation to increase its use of eligible renewable energy resources<sup>2</sup> to 20 percent of total retail sales no later than December 31, 2017.<sup>3</sup>

The State's Energy Action Plan (EAP) called for acceleration of the RPS goal to reach 20 percent by 2010. The Commission reiterated this accelerated goal in the Order Instituting Rulemaking (R.04-04-026) issued on April 28, 2004.<sup>4</sup> On September 26, 2006, Governor Schwarzenegger signed Senate Bill 107<sup>5</sup>, which

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<sup>1</sup> Statutes of 2002, Chapter 516

<sup>2</sup> Defined in Public Utilities (Pub. Util) Code section 399.12(a)

<sup>3</sup> Pub. Util Code Section 399.15(b)(1)

<sup>4</sup> [http://www.cpuc.ca.gov/Published/Final\\_decision/36206.htm](http://www.cpuc.ca.gov/Published/Final_decision/36206.htm)

<sup>5</sup> Statutes of 2006, Chapter 464,

codified the State's RPS targets to 20 percent by 2010. The bill took effect on January 1, 2007.

### **CPUC has established procurement guidelines for the RPS Program**

In response to SB 1078, the Commission has issued a series of decisions that establish the regulatory and transactional parameters of the utility renewables procurement program. On June 19, 2003, the Commission issued its "Order Initiating Implementation of the Senate Bill 1078 Renewable Portfolio Standard Program," D.03-06-071<sup>6</sup>. Instructions for utility evaluation (known as 'least-cost, best-fit') of each offer to sell products requested in a RPS solicitation were provided in D.04-07-029.<sup>7</sup> The Commission adopted Standard Terms and Conditions (STCs) for RPS power purchase agreements in D.04-06-014 as required by Public Utilities Code Section 399.14(a)(2)(D). Subsequent decisions have amended the required STCs; most recently, the Commission compiled the most updated STCs in D.08-04-009. There are now thirteen STCs, four of which are non-modifiable.

In addition, D.06-10-050, as modified by D.07-03-046, refined the RPS reporting and compliance methodologies.<sup>8</sup> In this decision, the Commission established methodologies to calculate an LSE's initial baseline procurement amount, annual procurement target (APT) and incremental procurement amount (IPT).<sup>9</sup>

On June 9, 2004, the Commission adopted its market price referent (MPR) methodology<sup>10</sup> for determining the utility's share of the RPS seller's bid price (the contract payments at or below the MPR), as defined in Public Utilities Code Sections 399.14(a)(2)(A) and 399.15(c). On December 15, 2005, the Commission

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<sup>6</sup> [http://docs.cpuc.ca.gov/word\\_pdf/FINAL\\_DECISION/27360.PDF](http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/27360.PDF)

<sup>7</sup> [http://docs.cpuc.ca.gov/WORD\\_PDF/FINAL\\_DECISION/38287.PDF](http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/38287.PDF)

<sup>8</sup> D.06-10-050, Attachment A, [http://www.cpuc.ca.gov/WORD\\_PDF/FINAL\\_DECISION/61025.PDF](http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/61025.PDF)) as modified by D.07-03-046 ([http://www.cpuc.ca.gov/WORD\\_PDF/FINAL\\_DECISION/65833.PDF](http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/65833.PDF)).

<sup>9</sup> The IPT represents the amount of RPS-eligible procurement that the LSE must purchase, in a given year, over and above the total amount the LSE was required to procure in the prior year. An LSE's IPT equals at least 1% of the previous year's total retail electrical sales, including power sold to a utility's customers from its DWR contracts.

<sup>10</sup> D.04-06-015; [http://docs.cpuc.ca.gov/word\\_pdf/FINAL\\_DECISION/37383.pdf](http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/37383.pdf)

adopted D.05-12-042 which refined the MPR methodology for the 2005 RPS Solicitation.<sup>11</sup> Subsequent resolutions adopted MPR values for the 2005, 2006 and 2007 RPS Solicitations.<sup>12</sup>

In addition, the Commission has implemented Pub. Util. Code 399.14(b)(2), which states that before the Commission can approve an RPS contract of less than ten years' duration, the Commission must establish "for each retail seller, minimum quantities of eligible renewable energy resources to be procured either through contracts of at least 10 years' duration (long-term contracts) or from new facilities commencing commercial operations on or after January 1, 2005." On May 3, 2007, the Commission approved D.07-05-028, which established a minimum percentage of the prior year's retail sales (0.25%) that must be procured with contracts of at least 10 years' duration or from new facilities commencing in order for short-term contracts to be used towards RPS compliance.

### **The Commission has established bilateral procurement guidelines for the RPS Program**

While the focus of the RPS program is procurement through competitive solicitations, D.03-06-071<sup>13</sup> allows for a utility and a generator to enter into bilateral contracts outside of the competitive solicitation process. Specifically, D.03-06-071 states that bilateral contracts will only be allowed if they do not require Public Goods Charge (PGC) funds. In D.06-10-019, the Commission interprets D.03-06-071, stating that bilaterals are not subject to the MPR, not eligible for Supplemental Energy Payments (SEPs)<sup>14</sup> and must be deemed

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<sup>11</sup> [http://www.cpuc.ca.gov/word\\_pdf/FINAL\\_DECISION/52178.pdf](http://www.cpuc.ca.gov/word_pdf/FINAL_DECISION/52178.pdf)

<sup>12</sup> Respectively, Resolution E-3980: [http://www.cpuc.ca.gov/WORD\\_PDF/FINAL\\_RESOLUTION/55465.DOC](http://www.cpuc.ca.gov/WORD_PDF/FINAL_RESOLUTION/55465.DOC), Resolution E-4049: [http://www.cpuc.ca.gov/word\\_pdf/FINAL\\_RESOLUTION/63132.doc](http://www.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/63132.doc), Resolution E-4118: [http://www.cpuc.ca.gov/word\\_pdf/FINAL\\_RESOLUTION/73594.pdf](http://www.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/73594.pdf)

<sup>13</sup> [http://www.cpuc.ca.gov/PUBLISHED/FINAL\\_DECISION/27360.htm](http://www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/27360.htm)

<sup>14</sup> Since D.06-10-019 was adopted, SB 1036 halted the portion of the PGC fund collection that went to the SEP fund, returned the collected SEPs to the utilities, and moved above-market cost recovery to the CPUC (where the funds are known as Above-MPR Funds [AMFs]). While the SEP process has been reformed, the restriction remains that only contracts that result from a competitive solicitation can receive AMFs; thus bilateral contracts are not eligible for AMFs. (Pub. Util. Code §399.15(d)(2)(A)).

reasonable. Further, bilateral contracts must be at least one month in duration and such contracts of any length must be submitted to the CPUC for approval by advice letter.<sup>15</sup>

As D.06-10-019 notes, the Commission will be developing evaluation criteria for bilateral RPS contracts.<sup>16</sup> However, in the interim, utilities' bilateral contracts can be evaluated as long as they follow the four requirements mentioned above:

- The contract was submitted for approval by advice letter
- The contract is at least one month in duration
- The contract does not receive AMFs
- The contract must be deemed reasonable by the CPUC.

**Pursuant to SB 1036, the process for above-market cost recovery has been modified**

Pursuant to SB 1078 and SB 107, the California Energy Commission (CEC) was authorized to “allocate and award supplemental energy payments” to cover above-market costs<sup>17</sup> of long-term RPS-eligible contracts executed through a competitive solicitation.<sup>18</sup> The CEC required that developers seeking above-market costs to apply to the CEC for supplemental energy payments (SEPs). This above-market cost recovery mechanism was reformed on October 14, 2007 when Governor Schwarzenegger signed SB 1036,<sup>19</sup> which authorizes the CPUC to provide cost recovery through rates for the total costs of above-MPR contracts, when the contracts are deemed reasonable. Above-MPR cost recovery has a ‘cost limitation’ equal to the amount of funds currently accrued in the CEC’s New Renewable Resources Account, which had been established to collect SEP funds, plus the portion of funds which would have been collected through January 1,

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<sup>15</sup> D.06-10-019 pp. 31

<sup>16</sup> Second Amended Scoping Memo and Ruling of Assigned Commissioner, <http://docs.cpuc.ca.gov/efile/RULC/79195.pdf>

<sup>17</sup> Note: “above-market costs” refers to the portion of the contract price that is greater than the appropriate market price referent (MPR).

<sup>18</sup> Former Pub. Util. Code 399.15(d) pursuant to SB 107 (2006)

<sup>19</sup> Chapter 685, Statutes of 2007 (SB 1036)

2012. SB 1036 also sets forth a number of eligibility criteria that the CPUC must apply when awarding above-MPR cost recovery<sup>20</sup>.

The CEC and CPUC are working collaboratively to implement SB 1036, which became effective January 1, 2008<sup>21</sup>.

### **SCE initiated the SCE Biomass Standard Contract Program**

In order to help small biomass projects contribute to the State's RPS goals and to support California Governor Arnold Schwarzenegger's goal to promote energy production from biomass fuel sources,<sup>22</sup> SCE started a biomass power contracting initiative (Biomass Program) to offer a standardized contract for the purchase of renewable energy to biomass facilities with capacities of 20 MW or less.

SCE states that the Biomass Program was started because SCE recognized that smaller biomass projects have had difficulties participating in SCE's annual solicitations. By eliminating the complex negotiation process that is needed to participate in the annual RPS solicitations, the Biomass Program gives smaller projects the opportunity to execute contracts with SCE and contribute to the State's RPS goals.

SCE offers three different standard contracts for projects of different sizes: less than 1 MW; 1 MW to 5 MW; and greater than 5 MW to 20 MW. The standard contracts are offered to RPS-eligible biomass resources for terms of 10, 15, and 20 years, and at an energy price set at the MPR. Important differences exist between the three standard contracts:

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<sup>20</sup> Pub. Util. Code § 399.15(d)(2)

<sup>21</sup> CPUC implemented the rate-making aspects of SB 1036 in Resolution E-4160. The CPUC held a workshop on the remaining implementation issues surrounding the above-MPR funds on May 29, 2008. Website:  
<http://www.cpuc.ca.gov/PUC/energy/electric/RenewableEnergy/SB1036implementation.htm>

<sup>22</sup> See Executive Order S-06-06.

	<b>Less than 1 MW</b>	<b>1 MW through 5 MW</b>	<b>&gt;5 MW through 20 MW</b>
<b>Location Restrictions</b>	Within SCE service territory	Within CAISO control area	Within CAISO control area
<b>Startup Deadline</b>	Within five years of contract signing	Within five years of contract signing	Seller provides date
<b>Required Capacity Factor</b>	As available	70%	80%
<b>Development Security</b>	None	None	\$20/kW
<b>Credit and Collateral</b>	None	None	Six (6) months of revenue

The FlexEnergy contracts were negotiated as part of SCE’s 2007 Biomass Program.

**SCE requests CPUC approval of two renewable energy contracts**

On January 23, 2008, SCE filed AL 2203-E seeking approval of two power purchase agreements (PPAs) between SCE and FlexEnergy Corporation. The PPAs result from bilateral negotiations, in which FlexEnergy accepted SCE’s Standard Biomass Program contract.

The PPAs for which SCE is currently requesting approval will contribute energy deliveries towards SCE’s renewable procurement goal required by California’s RPS statute.<sup>23</sup> With the approval of these PPAs<sup>24</sup>, SCE will have contracted for

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<sup>23</sup> California Public Utilities Code section 399.11 et seq., as interpreted by D.03-07-061, the “Order Initiating Implementation of the Senate Bill 1078 Renewables Portfolio Standard Program”, and subsequent CPUC decisions in Rulemaking (R.) 04-04-026.

<sup>24</sup> The California Energy Commission is responsible for determining the RPS-eligibility of a renewable generator. See Public Utilities Code Sect. 399.12 and D.04-06-014.

deliveries of an estimated 24.52 GWh towards its 2012 annual procurement target (about one-tenth of one percent of the target)<sup>25</sup>.

SCE requests that the Commission issue a resolution containing:

1. Approval of the FlexEnergy Contracts in their entirety;
2. A finding that any electric energy sold or dedicated to SCE pursuant to the FlexEnergy Contracts constitutes procurement by SCE from an eligible renewable energy resource ("ERR") for the purpose of determining SCE's compliance with any obligation that it may have to procure from ERRs pursuant to the RPS Legislation or other applicable law concerning the procurement of electric energy from renewable energy resources;
3. A finding that all procurement under the FlexEnergy Contracts counts, in full and without condition, toward any annual procurement target established by the RPS Legislation or the Commission which is applicable to SCE;
4. A finding that all procurement under the FlexEnergy Contracts counts, in full and without condition, toward any incremental procurement target established by the RPS Legislation or the Commission which is applicable to SCE;
5. A finding that all procurement under the FlexEnergy Contracts counts, in full and without condition, toward the requirement in the RPS Legislation that SCE procure 20 percent (or such other percentage as may be established by law) of its retail sales from ERRs by 2010 (or such other date as may be established by law);
6. A finding that the FlexEnergy and SCE's entry into these PPAs, is reasonable and prudent for all purposes, including, but not limited to, recovery in rates of payments made pursuant to the PPAs, subject only to further review with respect to the reasonableness of SCE's administration

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<sup>25</sup> SCE's 2012 APT is 16,704.4 GWh from the March 2008 Semi-Annual Compliance Report, R.06-05-027.

of the PPAs; and

7. Any other and further relief as the Commission finds just and reasonable.

### **SCE's Procurement Review Group participated in review of the contracts**

In D. 02-08-071, the Commission required each utility to establish a "Procurement Review Group" (PRG) whose members, subject to an appropriate non-disclosure agreement, would have the right to consult with the utilities and review the details of:

1. Overall transitional procurement strategy;
2. Proposed procurement processes including, but not limited to, RFO; and
3. Proposed procurement contracts before any of the contracts are submitted to the Commission for expedited review.

SCE's PRG was formed on or around September 10, 2002. Participants include representatives from the Commission's Energy and Legal Divisions, the Division of Ratepayer Advocates, The Utility Reform Network, the Natural Resources Defense Council, California Utility Employees, the Union of Concerned Scientists, Aglet Consumer Alliance and the California Department of Water Resources.

SCE asserts that its PRG was consulted during each step of the renewable procurement process. In April of 2007, SCE presented the PRG with the details of the SCE Biomass Program. On November 12, 2007, SCE briefed the PRG concerning the successful conclusion of discussions with FlexEnergy.

Although Energy Division is a member of the PRG, it reserved its judgment on the contracts until the resolution process. Energy Division reviewed the transactions independent of the PRG, and allowed for a full protest period before concluding its analysis.

### **NOTICE**

Notice of AL 2203-E was made by publication in the Commission's Daily Calendar. Southern California Edison states that a copy of the Advice Letter and Supplemental Advice Letters were mailed and distributed in accordance with Section IV of General Order 96-B.

**PROTESTS**

Advice Letter 2203-E was not protested.

**DISCUSSION**

**Description of the projects**

The following table summarizes the substantive features of the proposed PPAs. See confidential Appendix A for a discussion of the contracts' terms and conditions.

Generating facility	Type	Term (Years)	Capacity (MW)	Energy (GWh)	Expected Online Date	Location	Price
Flex LA	Biomass	20	2	12.26	October 22, 2012	Sun Valley, CA	2006 MPR for the year project comes online
Flex Riverside	Biomass	20	2	12.26	October 22, 2012	Beaumont, CA	2006 MPR for the year project comes online

The Flex LA and Flex Riverside projects are two new 2 MW biomass facilities being developed by FlexEnergy, a California corporation. These are the first two contracts executed as a result of SCE's Biomass Standard Contract Program, which is intended to reduce transaction costs and streamline the contracting process for small biomass facilities. Both the Flex LA and the Flex Riverside contracts obligate FlexEnergy to construct, own and operate a biomass electric energy generating facility and to sell all electric energy produced by that generating facility to SCE. The Flex LA facility will be located at a closed landfill in Sun Valley, California. The Flex Riverside facility will be located at a working landfill in Beaumont, California. Both facilities will utilize a new Flex-Microturbine, which is a new lean-burning gas turbine technology that

FlexEnergy has developed. This new Flex-Microturbine is commercially untested, and a prototype has only operated for 3,000 hours. Both facilities will each have an expected output of 12.26 GWh per year. The FlexEnergy contracts have a term of 20 years and are expected to come online in October 2012. The pricing under the FlexEnergy Contracts, as for all contracts from SCE's 2007 Biomass Program, is the 2006 market price referent value for the year the project comes online.

Energy Division has reviewed the proposed PPAs based upon multiple grounds:

- Consistency with SCE's 2007 RPS procurement plan
- Compliance with RPS bilateral procurement guidelines
- Consistency with RPS Standard Terms and Conditions (STCs)
- Contribution to RPS goals
- Reasonableness of the PPA prices
- Project viability

#### **The PPAs are consistent with SCE's CPUC adopted 2007 RPS Plan**

California's RPS statute requires the Commission to review the results of a renewable energy resource solicitation submitted for approval by a utility.<sup>26</sup> The Commission will then accept or reject proposed PPAs based on their consistency with the utility's approved renewable procurement plan (Plan). SCE's 2007 Plan includes an assessment of supply and demand for renewable energy, bid solicitation materials, a pro-forma agreement, and bid evaluation methodology documents. The Commission conditionally approved SCE's 2007 RPS procurement plan, including its bid solicitation materials, in D.07-02-011. As ordered by D.07-02-011, on March 2, 2007 SCE filed and served its amended 2007 Plan.

While the Commission has made no decision to approve the Biomass Program for 2007, bilateral contracts that conform with RPS bilateral contracting

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<sup>26</sup> Pub. Util. Code, Section §399.14

guidelines are allowed.<sup>27</sup> As such, the FlexEnergy contracts are approved as bilateral contracts, consistent with the RPS bilateral contracting guidelines.

#### PPAs fit with identified renewable resource needs

SCE's 2007 RPS Plan called for SCE to solicit electric energy generated by eligible renewable resources from either existing or new generating facilities that would deliver in the near term or long term. SCE's 2007 request for proposals (RFP) solicited proposals for projects that would supply electric energy, environmental attributes, capacity attributes and resource adequacy benefits from eligible renewable energy resources. SCE requested proposals based upon standard term lengths of 10, 15 or 20 years with a minimum capacity of 1 MW. SCE indicated a preference to take delivery of the electric energy at SP-15, but considered proposals based upon any designated delivery point within California. Additionally, SCE solicited for contracts that were located either within California, or if outside California, have the first point of interconnection in the WECC transmission system and have access to a transmission pathway capable of delivering the energy to a location within California. SCE also indicated a preference for proposals that would not require upgrades to transmission lines, since that is a common source of delay for renewable energy projects.

Both of the FlexEnergy proposed projects fit SCE's identified renewable resource needs. Both facilities will have their first point of interconnection within California. Both facilities are expected to require minimal, if any, transmission upgrades.

#### SCE's Standard Biomass Program

This procurement program was not proposed or approved as part of SCE's 2007 RPS Procurement Plan. However, on June 22, 2007, SCE filed a copy of the procurement protocol, application, and the three standard contracts for the program in R.06-05-027.<sup>28</sup> Also, SCE's amended 2008 Plan discussed SCE's Biomass Program but SCE did not specifically seek approval of the Program or the standard contracts as part of its 2008 Plan. Instead, SCE stated that they

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<sup>27</sup> D.03-06-071

<sup>28</sup> In addition, all of these documents can be found on SCE's website at:  
<http://www.sce.com/EnergyProcurement/bsc.htm>

intended to file an application seeking approval of the program and the standard contracts along with any executed agreements arising from the program.<sup>29</sup> In the Plan, SCE wrote, "Originally, the program was to remain open the earlier of December 31, 2007 or until such time SCE has signed contracts totaling 250 MW in aggregate. SCE, however, has determined that it will extend the program into 2008." The Commission, thus found it reasonable to accept the program as part of SCE's 2008 RPS Procurement Plan if SCE elected to extend the program into 2008.<sup>30</sup> While noting in D.08-02-008 that the Biomass Program appears to be a reasonable application of SCE's business judgment, the Commission made no decision to accept the 2007 Biomass Program.

### **PPAs are consistent with RPS bilateral contracting guidelines**

The proposed PPAs are consistent with Commission decisions regarding RPS bilateral contracts for the following reasons:

1. The PPAs are not seeking above-market funds (AMFs). The PPAs are ineligible for AMFs because they did not result from a competitive solicitation.<sup>31</sup>
2. Pursuant to D.06-10-019, the PPAs were submitted by advice letter.<sup>32</sup>
3. The PPAs are at least one month in duration.<sup>33</sup>
4. The PPAs are at or below the MPR, and are reasonably priced.<sup>34</sup>

### **Consistency with adopted Standard Terms and Conditions**

The PPAs' terms and conditions are consistent with D.08-04-009.

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<sup>29</sup> SCE Plan, P. 32

<sup>30</sup> D.08-02-008, Conclusion of Law number 22, Ordering Paragraph 2, and Appendix A (Item 10)

<sup>31</sup> Public Utilities Code 399.15(d)(2).

<sup>32</sup> "For now, utilities' bilateral RPS contracts, of any length, must be submitted for approval by advice letter." (D.06-10-019, pp.31)

<sup>33</sup> "All RPS-obligated LSEs are also free to enter into bilateral contracts of any length with RPS-eligible generators, as long as the contracts are at least one month in duration, to enable the CEC to verify RPS procurement claims." (D.06-10-019 p. 29)

<sup>34</sup> The contract price of bilaterals must be deemed reasonable by the Commission. D.06-10-019, p. 31.

### **PPAs will contribute to SCE's RPS procurement goals**

The proposed PPAs consist of two proposed biomass power plants, representing an estimated 24.52 GWh of RPS-eligible procurement. Although a small portion of SCE's RPS portfolio, this incremental RPS eligible energy will contribute towards SCE's RPS goal when the facilities begin operating in 2012. Additionally, these projects will enable a new technology to enter the market that could be applied to many landfills across the state. The benefit of these projects connecting to the distribution level will provide energy without requiring costly transmission upgrades. These projects will also contribute towards the governor's goal of increasing the number of biomass energy projects.<sup>35</sup>

### **Contract prices are reasonable**

As part of SCE's efforts to standardize and simplify the small biomass contract negotiation process, all of the 2007 Biomass Program contracts are priced at the 2006 MPR. Based on the 2012 online date, the contract prices for these projects are \$88.21/MWh.

According to D.06-10-019, bilateral contracts are not subject to the MPR, but the prices must be deemed reasonable. The Commission evaluated the FlexEnergy contract prices based on their relation to the 2006 and 2007 MPRs and a comparison of the contracts to SCE's 2007 RPS solicitation bids. First, the contract prices do not exceed the 2006 or 2007 MPR for projects coming online in 2012.<sup>36</sup> As a result, the net present values of the sum of payments to be made under the PPAs are equal to or less than the net present values of payments that would be made at the market price referent for the anticipated delivery dates. Further, SCE calculated the projects' benefit-to-cost ratios and found them favorable as compared to other bids in its 2007 solicitation. Thus, the FlexEnergy contract prices are reasonable.

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<sup>35</sup> See Executive Order S-06-06.

<sup>36</sup> Resolution 4049: [http://docs.cpuc.ca.gov/published/Final\\_resolution/63132.htm](http://docs.cpuc.ca.gov/published/Final_resolution/63132.htm); Resolution 4118: [http://www.cpuc.ca.gov/word\\_pdf/FINAL\\_RESOLUTION/73594.pdf](http://www.cpuc.ca.gov/word_pdf/FINAL_RESOLUTION/73594.pdf)

### **Projects have some viability risk**

SCE stated in its advice letter that both projects have low viability since they are based on commercially unproven technology. Since that time, FlexEnergy has received additional funding, expanded its workforce, and has progressed with pilot projects to demonstrate the Flex-Microturbine technology on a small scale. These developments have prompted SCE to upgrade the viability of the projects to “average”.<sup>37</sup> Additionally, if these projects are approved, and the technology works as advertised, FlexEnergy has estimated that their Flex-Microturbines could generate 500 MW-800 MW of power by utilizing gas and other biomass materials statewide that are currently unusable by other technologies.<sup>38</sup> Successful application of this technology could be a positive contribution to California’s renewable energy standards and the Governor’s biomass goals. Further, ratepayers will benefit from the Biomass Program because these contracts allow small companies with limited resources to demonstrate their innovative technology, with the potential to scale these technologies for larger applications. Thus, on balance, while these projects face some viability risk, the ratepayers benefit from the approval of these projects.

### Project Milestones

The FlexEnergy PPAs identify necessary milestones, including a number of permit applications and startup deadlines.

### Financeability of Resource

SCE asserts that FlexEnergy has secured enough financing to enhance the overall project viability of both projects.

### Production Tax Credit

FlexEnergy will be seeking the federal production tax credit (PTC) for both projects. The PTC is set to expire December 31, 2008. The PTC has been extended several times in recent history, and there is potential that it will again be extended. However, this poses a project viability concern for the projects since it is uncertain whether the PTC will be extended.

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<sup>37</sup> Based on additional information provided by SCE (August 6, 2008)

<sup>38</sup> Based on additional information provided by SCE (July 24, 2008)

### Sponsor's Creditworthiness and Experience

SCE does not have any prior experience with FlexEnergy. FlexEnergy asserts that members of their team have experience with engineering and constructing power plants and negotiating and obtaining PPAs in California.

Transmission Upgrades Although not all of the required transmission studies or interconnection applications have been completed, SCE believes that transmission upgrades will not be required due to the small size (2 MW) of the facilities. CAISO has indicated that they will not require CAISO interconnection agreements for the projects. The FlexRiverside project is expected to connect to the distribution grid inside SCE territory. Since the Flex LA project is located within the Los Angeles Department of Water and Power's (LADWP's) territory, FlexEnergy is working out an agreement with LADWP to connect that project to the distribution grid.

### Fuel/Technology

The landfills are currently flaring the methane gas at both locations. FlexEnergy has asserted that it has verbal agreement for gas usage royalty levels with both facilities. FlexEnergy asserts that these agreements will not become formal written contracts until after FlexEnergy obtains the required permits and demonstrates that its turbines operate as advertised (expected by April 2010). The gas at the Flex Riverside facility has been untapped by previous power plants. The gas at the Flex LA facility had been previously used by a power plant, but the gas has deteriorated to such a low concentration of methane that the power plant was shut down. FlexEnergy believes that their Flex-Microturbine can capture the gas at both facilities and deliver the electricity specified in the PPAs. Two 30 kW prototype Flex-Microturbines have operated as test projects with one operating for over 3,000 hours, including 1,000 hours of uninterrupted operation. 100 kW and 200 kW Flex-Microturbines are currently under construction for demonstration as pilot projects.

### Site Control

FlexEnergy has not yet received commitments from either landfill to allow the projects to operate on the site.

### Permitting

FlexEnergy has already received an operating permit from the South Coast Air Quality Management District (SCAQMD) for the Flex Riverside site. Building and electrical permits for the Flex Riverside site have been filed and FlexEnergy expects to receive approved permits by September 2008. FlexEnergy has not yet received any permits for the Flex LA project.

### **Confidential information about the contracts should remain confidential**

Certain contract details were filed by PG&E under confidential seal. Energy Division recommends that certain material filed under seal pursuant to Public Utilities (Pub. Util.) Code Section 583 and General Order (G.O.) 66-C, and considered for possible disclosure, should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future RPS solicitations.

### COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. No comments were received on the draft resolution.

### FINDINGS

1. The RPS Program requires each utility, including SCE, to increase the amount of renewable energy in its portfolio to 20 percent by 2010, increasing by a minimum of one percent per year.
2. D.08-04-009 sets forth four non-modifiable and nine modifiable Standard Terms and Conditions to be incorporated into RPS power purchase agreements.
3. D.03-06-071 allows for a utility and a generator to enter into bilateral contracts outside of the competitive solicitation process.

4. D.07-02-011 directed the utilities to issue their 2007 renewable RFOs, consistent with their renewable procurement plans.
5. The Commission required each utility to establish a Procurement Review Group (PRG) to review the utilities' interim procurement needs and strategy, proposed procurement process, and selected contracts.
6. SCE filed Advice Letter 2203-E on January 23, 2008, requesting Commission review and approval of two renewable energy contracts with FlexEnergy: Flex LA and Flex Riverside.
7. SCE elected to initiate a Biomass Program that provides standard contracts for biomass projects of 20 MW or less.
8. In D.08-02-008, the Commission accepted the use of SCE's Biomass Program as part of SCE's 2008 RPS Procurement Plan for the purpose of judging whether or not a contract is consistent with the Plan.
9. The Commission has reviewed the proposed FlexEnergy contracts and finds them to be consistent with SCE's approved 2007 renewable procurement plan and bilateral procurement rules.
10. SCE briefed its PRG in April 2007 with details of the SCE Biomass Program. On November 12, 2007, SCE briefed the PRG concerning the successful conclusion of discussions with FlexEnergy.
11. Levelized contract prices below the 2007 MPR are considered *per se* reasonable as measured according to the net present value calculations explained in D.04-06-015, D.04-07-029, and D.05-12-042.
12. The proposed contract prices for the Flex LA and Flex Riverside projects are below the 2007 MPR released in Resolution E-4118.
13. The Flex LA and Flex Riverside contract prices are reasonable.
14. Procurement pursuant to these Agreements is procurement from eligible renewable energy resources for purposes of determining Buyer's compliance with any obligation that it may have to procure eligible renewable energy resources pursuant to the California Renewables Portfolio Standard (Public Utilities Code Section 399.11 et seq.), D. 03-06-071, or other applicable law.
15. All procurement under the Flex LA and Flex Riverside contracts count, in full and without condition, towards any annual procurement target established by the RPS Legislation or the Commission which is applicable to SCE;

16. All procurement under the Flex LA and Flex Riverside contracts count, in full and without condition, towards any incremental procurement target established by the RPS Legislation or the Commission which is applicable to SCE;
17. All procurement under the Flex LA and Flex Riverside contracts count, in full and without condition, towards the requirement in the RPS Legislation that SCE procure 20 percent (or such other percentage as may be established by law) of its retail sales from ERRs by 2010 (or such other date as may be established by law);
18. The Flex LA and Flex Riverside contracts, and SCE's entry into these PPAs, are reasonable and prudent for all purposes, including, but not limited to, recovery in rates of payments made pursuant to the PPAs, subject only to further review with respect to the reasonableness of SCE's administration of the PPAs.
19. Any indirect costs of renewables procurement identified in Section 399.15(a)(2) shall be recovered in rates.
20. The Flex LA and Flex Riverside contracts proposed in AL 2203-E should be approved without modification.
21. Certain material filed under seal pursuant to Public Utilities (Pub. Util.) Code Section 583 and General Order (G.O.) 66-C, and considered for possible disclosure, should not be disclosed. Accordingly, the confidential appendices, marked "[REDACTED]" in the redacted copy, should not be made public upon Commission approval of this resolution.

**THEREFORE IT IS ORDERED THAT:**

1. The Flex LA and Flex Riverside contracts proposed in Advice Letter 2203-E are approved without modification.
2. The costs of the contracts between SCE and FlexEnergy are reasonable and in the public interest; accordingly, the payments to be made by SCE are fully recoverable in rates over the life of the project, subject to CPUC review of SCE's administration of the PPAs.
3. This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on September 18, 2008; the following Commissioners voting favorably thereon:

/s/ Paul Clanon

Paul Clanon  
Executive Director

MICHAEL R. PEEVEY  
PRESIDENT  
DIAN M. GRUENEICH  
JOHN A. BOHN  
RACHELLE B. CHONG  
TIMOTHY ALAN SIMON  
Commissioners

# **Confidential Appendix A**

## **Contract Summaries [REDACTED]**

## **Confidential Appendix B**

# **Original Project Viability Matrices Filed with Advice Letter [REDACTED]**