

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

ENERGY DIVISION

**RESOLUTION E-4183**  
July 31, 2008

**PUBLIC**

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

Resolution E-4183. Southern California Edison Company requests approval of a new renewable portfolio standard power purchase agreement with ORNI #21, LLC (ORNI 21). The ORNI 21 contract is approved without modifications.

By Advice Letter 2198-E Filed on December 31, 2007 and AL 2198-E-A filed on January 11, 2008.

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**SUMMARY**

**Southern California Edison's ORNI 21 contract complies with the Renewable Portfolio Standard (RPS) procurement guidelines and is approved**

Southern California Edison (SCE) filed advice letter (AL) 2198-E on December 31, 2007 requesting Commission review and approval of three renewable energy power purchase agreements (PPAs) executed with Daggett Ridge Wind Farm, LLC (Daggett Wind), ORNI #21, LLC (ORNI 21), and FSE Blythe 1, LLC (FSE). SCE filed one supplemental advice letter to AL 2198-E in order to include the Independent Evaluation Report for SCE's 2007 renewable resource solicitation. Draft Resolution E-4157 approved the FSE contract. The Commission defers judgment without prejudice on the Daggett Wind contract at this time; this contract will be addressed in a subsequent resolution. The ORNI 21 contract is approved without modifications.

<b>Generating facility</b>	<b>Type</b>	<b>Term Years</b>	<b>MW Capacity</b>	<b>GWh Energy</b>	<b>Online Date</b>	<b>Location</b>
ORNI 21	Geothermal, new	20	30 - 100	250 - 832	June 2012	Wister CA, (Imperial Valley)

The ORNI 21 project is for 20 years of geothermal energy from a new facility, expected to be come online in June 2012. Deliveries from this PPA are reasonably priced and the contract price is fully recoverable in rates over the life of the contract, subject to Commission review of SCE's administration of the contract. While the energy price is at or below the MPR, because of contingencies in this PPA that may bring the total contract price above the MPR, we consider this contract to be above the MPR. All future costs that increase the total contract price above the MPR will be subject to the rules and guidelines established through SB 1036 implementation or other RPS proceedings. Lastly, the PPA contemplates termination or amendments should certain contingencies materialize. SCE should file an Advice Letter with the Commission requesting CPUC approval if any material amendments to the contract are required.

**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**

The California RPS Program was established by Senate Bill (SB) 1078,<sup>1</sup> effective January 1, 2003. It requires that a retail seller of electricity such as SCE purchase a certain percentage of electricity generated by Eligible Renewable Energy Resources (ERR). The RPS program is set out at Public Utilities Code Section 399.11, et seq. Each utility is required to increase its total procurement of ERRs by at least 1% of annual retail sales per year so that 20% of its retail sales are supplied by ERRs by 2017.

The State's Energy Action Plan (EAP) called for acceleration of this RPS goal to reach 20 percent by 2010. This was reiterated again in the Order Instituting Rulemaking (R.04-04-026) issued on April 28, 2004<sup>2</sup>, which encouraged the utilities to procure cost-effective renewable generation in excess of their RPS

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<sup>1</sup> <http://www.energy.ca.gov/portfolio/documents/SB1078.PDF>

<sup>2</sup> [http://www.cpuc.ca.gov/Published/Final\\_decision/36206.htm](http://www.cpuc.ca.gov/Published/Final_decision/36206.htm)

annual procurement targets<sup>3</sup> (APTs), in order to make progress towards the goal expressed in the EAP.<sup>4</sup> On September 26, 2006, Governor Schwarzenegger signed Senate Bill 107<sup>5</sup>, which codified the State's RPS targets to 20 percent by 2010.

### **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 for RPS power purchase agreements in D.04-06-014 as required by Public Utilities Code Section 399.14(a)(2)(D). 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

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<sup>3</sup> APT - An LSE's APT for a given year is the amount of renewable generation an LSE must procure in order to meet the statutory requirement that it increase its total eligible renewable procurement by at least 1% of retail sales per year.

<sup>4</sup> Most recently reaffirmed in D.06-05-039

<sup>5</sup> SB 107, Chapter 464, Statutes of 2006

<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)

Sections 399.14(a)(2)(A) and 399.15(c). On December 15, 2005, the Commission 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 in order for short-term contracts to be used towards RPS compliance.

### **Commission requires certain terms and conditions in all RPS power purchase agreements**

On June 9, 2004, the Commission adopted Standard Terms and Conditions (STCs) for RPS power purchase agreements as required by Pub. Util. Code Section 399.14(a)(2)(D). Of the fourteen STCs adopted in D.04-06-014, the Commission specified five that could be modified by parties, and nine that may not be modified or only modified in part. Two parties jointly filed a petition for modification on this decision, and subsequently an amended petition for modification. The Commission granted relief in substantial part in D.07-11-025, the "Opinion on Amended Petition for Modification of Decision 04-06-014 Regarding Standard Terms and Conditions".<sup>13</sup>

As a result of the D.07-11-025, the non-modifiable terms and conditions that must be in every RPS power purchase agreement include: CPUC Approval, RECs and Green Attributes, Eligibility and Applicable Law. The Commission also required that pending advice letters with contracts which have not yet been approved or

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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://docs.cpuc.ca.gov/WORD\\_PDF/FINAL\\_DECISION/75354.PDF](http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/75354.PDF)

rejected should be amended to comply with D.07-11-025. Most recently, the Commission compiled the most updated STCs in D.08-04-009<sup>14</sup>, and excluded the supplemental energy payments term. As a result, there are now thirteen STCs of which four are non-modifiable.

**Pursuant to SB 1036, above-MPR costs can now be recovered in rates**

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>15</sup> of long-term RPS-eligible contracts executed through a competitive solicitation.<sup>16</sup> The statute required that developers seeking above-market costs apply to the CEC for supplemental energy payments (SEPs).

The mechanism for awarding above-market costs to eligible renewable energy contracts negotiated through a competitive solicitation was modified by SB 1036, which became effective on January 1, 2008.<sup>17</sup> SB 1036 authorizes the CPUC to provide above-MPR cost recovery through electric retail rates for contracts that 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 that would have been collected through January 1, 2012. In addition, pursuant to SB 1036, Pub. Util. Code § 399.15(d)(2) provides that:

“The above-market costs of a contract selected by an electrical corporation may be counted toward the cost limitation if all of the following conditions are satisfied:

- (A) The contract has been approved by the commission and was selected through a competitive solicitation pursuant to the requirements of subdivision(d) of Section 399.14.
- (B) The contract covers a duration of no less than 10 years.
- (C) The contracted project is a new or repowered facility commencing commercial operations on or after January 1, 2005.

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<sup>14</sup> [http://docs.cpuc.ca.gov/WORD\\_PDF/FINAL\\_DECISION/81269.PDF](http://docs.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/81269.PDF)

<sup>15</sup> “Above-market costs” refers to the portion of the contract price that is greater than the appropriate market price referent (MPR).

<sup>16</sup> Pub. Util. Code 399.15(d)

<sup>17</sup> Chapter 685, Statutes of 2007 (SB 1036)

(D) No purchases of renewable energy credits may be eligible for consideration as an above-market cost.

(E) The above-market costs of a contract do not include any indirect expenses including imbalance energy charges, sale of excess energy, decreased generation from existing resources, or transmission upgrades.”

The CEC and CPUC are currently working collaboratively to implement SB 1036, which has an effective date of January 1, 2008.

### **SCE requests approval of three renewable energy contracts**

On December 31, 2007, SCE filed Advice Letter (AL) 2198-E requesting Commission approval of three renewable power procurement contracts: Daggett Ridge Wind Farm, LLC (Daggett Wind), ORNI #21, LLC (ORNI 21), and FSE Blythe 1, LLC (FSE).

The ORNI 21 and FSE PPAs resulted from SCE’s 2007 solicitation for renewable bids, which was authorized by D.07-02-011, and Daggett Wind resulted from SCE’s 2006 solicitation for renewable bids, which was authorized by D.06-05-039. The Commission’s approval of ORNI 21 will authorize SCE to accept future deliveries of incremental supplies of renewable resources and contribute towards the renewable energy procurement goals required by California’s RPS statute.<sup>18</sup> Procurement from ORNI 21 is expected to contribute approximately 250 GWh to 832 GWh towards SCE’s APT in 2012.

### **The three proposed contracts will be evaluated separately**

In AL 2198-E, SCE requests approval of three new renewable energy contracts: Daggett Wind, ORNI 21, and FSE. The Commission has decided to address these three contracts in separate resolutions. Draft Resolution E-4157<sup>19</sup>, issued on June 10, addresses the FSE contract. This resolution will address the ORNI contract, and a future resolution will address the Daggett Wind contract.

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<sup>18</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>19</sup> [http://docs.cpuc.ca.gov/word\\_pdf/AGENDA\\_RESOLUTION/83993.pdf](http://docs.cpuc.ca.gov/word_pdf/AGENDA_RESOLUTION/83993.pdf)

### **SCE requests “Final CPUC Approval” of PPA**

SCE requests a Commission resolution containing the following findings in order to satisfy the “CPUC Approval” terms in the ORNI 21 Agreement:

1. Approval of the ORNI 21 Contract in its entirety;
2. A finding that any electric energy sold or dedicated to SCE pursuant to the ORNI 21 Contract 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 ORNI 21 Contract counts, in full and without condition, towards 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 ORNI 21 Contract counts, in full and without condition, towards 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 ORNI 21 Contract counts, in full and without condition, towards the requirement in the RPS Legislation that SCE procure 20% (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 ORNI 21 Contract, and SCE’s entry into this PPA, is reasonable and prudent for all purposes, including, but not limited to, recovery in rates of payments made pursuant to the PPA, subject only to further review with respect to the reasonableness of SCE’s administration of the PPA; and
7. Any other and further relief as the Commission finds just and reasonable.

### **SCE’s Procurement Review Group participated in review of the contract**

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. Current participants include representatives from the Commission's Energy Division, the Division of Ratepayer Advocates, The Utility Reform Network, the Natural Resources Defense Council, the Consumers' Union, California Utility Employees, and the California Department of Water Resources.

On June 27, 2007, SCE advised the PRG of its proposed short list of bids for its 2007 RPS solicitation. On September 27, 2007, SCE updated the PRG as to the status of negotiations with bidders into the solicitation. On November 27, 2007, SCE briefed the PRG concerning the successful conclusion of discussions with ORNI 21.

Although Energy Division is a member of the PRG, it reserved its conclusions for review and recommendation on the PPA to the advice letter process.

### **NOTICE**

Notice of AL 2198-E was made by publication in the Commission's Daily Calendar. Southern California Edison states that a copy of the Advice Letter was mailed and distributed in accordance with Section IV of General Order 96-B.

### **PROTESTS**

Advice Letter 2198-E was protested.

SCE's Advice Letter AL 2198-E was timely protested by The Utility Reform Network (TURN) and the Division of Ratepayer Advocates (DRA) on January 22, 2008. Since TURN only protested the Daggett Wind project, TURN's protest will not be considered in this resolution.

SCE responded to the protests of TURN and DRA, on January 29, 2008. The Independent Energy Producers Association (IEP) responded to TURN's protest on January 30, 2008.

**DISCUSSION**

**Description of the project**

The following table summarizes the substantive features of the PPA. See Confidential Appendix C for a detailed discussion of contract price, terms, and conditions:

<b>Generating facility</b>	<b>Type</b>	<b>Term Years</b>	<b>MW Capacity</b>	<b>GWh Energy</b>	<b>Online Date</b>	<b>Location</b>
ORNI #21	Geothermal, new	20	30 - 100	250 - 832	June 2012	Wister CA (Imperial Valley)

The ORNI 21 project represents a new geothermal facility located in the Imperial Valley. ORNI's parent corporation, Ormat Technologies of Israel, is an experienced developer and manufacturer of geothermal energy projects and equipment. SCE has a long established history of purchasing geothermal power from Ormat through qualifying facility (QF) contracts. In addition, the Commission recently approved ORNI 18, a 50-100 MW geothermal project with Ormat.<sup>20</sup> ORNI 21 is a new 30 MW geothermal facility that utilizes a geothermal binary power conversion technology. The project is located in Wister, California in Imperial County.

Approval of ORNI 21 is consistent with the State's objective of supporting renewable technologies, and will ensure California continues to increase its supply of least-cost best-fit renewable resources. The energy price is at or below the 2007 MPR. However, there are certain contingencies in the PPA that may bring the total contract payments above the MPR. Thus, the Commission considers this contract to be above the MPR, and will calculate any above-market costs pursuant to the rules adopted through implementation of SB 1036.

**Energy Division examined the contract on multiple grounds:**

- PPA is consistent with SCE's CPUC adopted 2007 RPS Plan and was executed through a competitive solicitation

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<sup>20</sup> Resolution E-4126, [http://docs.cpuc.ca.gov/Published/Final\\_resolution/80216.htm](http://docs.cpuc.ca.gov/Published/Final_resolution/80216.htm)

- SCE's Bid evaluation process is consistent with CPUC's least-cost best-fit (LCBF) decision
- PPA conforms to CPUC's adopted Standard Terms and Conditions
- The project is viable
- The contract price is reasonable and above the MPR.

### **The PPA is 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>21</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 and bid solicitation materials, including 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. The proposed PPA is consistent with SCE's Commission-approved RPS Plan.

### PPA fits with identified renewable resource needs

SCE's 2007 RPS Plan called for SCE to issue competitive solicitations for electric energy generated by eligible renewable resources from either existing or new generating facilities that would deliver in the near term or long term. The near term need is renewable energy which can be delivered to SCE on or before January 1, 2011. The evaluation criteria favor proposals for renewable energy sales from generating facilities which can begin Initial Operation prior to January 1, 2011. SCE also considered any new or repowered facilities that operate on co-fired fuels or a mix of fuels that include fossil fuel hybrid.

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

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<sup>21</sup> Pub. Util. Code, Section §399.14

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.

While ORNI 21 does not intend to commence deliveries on or before January 1, 2011, ORNI 21 does fit SCE's identified renewable resource needs since SCE also requested projects that can deliver in the long-term. ORNI 21 is expected to commence deliveries by June 2012 and its first point of interconnection is in California.

PPA selection is consistent with RPS Solicitation Protocol

SCE distributed an RFP package that included a procurement protocol, which set forth the terms and conditions of the RFP, requirements for proposals, selection procedures, approval procedures and the RFP schedule. As part of the bid submission, SCE required bidders to submit comments on SCE's *pro forma* agreement, to execute non-disclosure agreements and to send a letter stating that the bidder agrees to be bound by the terms and conditions of the protocol. The protocol also requested that proposals contain complete, accurate, and timely information about the project's supplier, generating facility, and commercial terms and the pricing details of the proposal.

Consistent with D.07-02-011, SCE retained an independent evaluator (IE) to report to SCE's procurement review group about the 2007 RPS solicitation and to ensure that the solicitation was conducted fairly and that the best resources were acquired. According to the IE Report submitted in supplemental AL 2198-E-A, the IE performed his duties overseeing the 2007 solicitation and has provided assessment reports to the PRG and the CPUC. See Appendix E for a detailed discussion of the IE's review of these projects.

SCE says that all proposed agreements were solicited, negotiated and executed in a manner consistent with SCE's 2007 RFP Protocol. All bids offered power from eligible renewable energy resources, submitted the standard forms, agreed to be bound by the protocol and signed a non-disclosure agreement.

**Bid evaluation process consistent with least-cost best fit (LCBF) decision**

The CPUC's LCBF decision<sup>22</sup> directs the utilities to use certain criteria in their bid ranking. It offers guidance regarding the process by which the utility ranks bids in order to select or "shortlist" the bids with which it will commence serious negotiations.

SCE's LCBF bid review process used for its 2007 solicitation is in compliance with the applicable Commission decisions. SCE's LCBF analysis evaluates both quantitative and qualitative aspects of each proposal to estimate its value to SCE's customers and relative value in comparison to other proposals.

Quantitative Assessment

SCE quantitatively evaluates bids based on individual benefit-to-cost (B-C) ratios. It is this B-C ratio that is used to rank and compare each project. The B-C ratios measure total benefits divided by total costs according to the following equation:

$$\text{B-C Ratio} = \frac{\text{Capacity Benefit} + \text{Energy Benefit}}{\text{Payments} + \text{Integration Cost} + \text{Transmission Cost} + \text{Debt Equivalence}}$$

The capacity benefits are assigned based on SCE's forecast of capacity value and a technology-specific effective load carrying capability (ELCC). SCE evaluates the project energy benefits using a production simulation model that compares the total production costs of SCE's base resource portfolio with the total production costs of the portfolio including the proposed RPS project. This calculation takes into account forecasted congestion charges, dispatchability and curtailability. This modeling methodology evaluates the impact of portfolio fit for all projects.

The market valuation of each project includes an assessment of the payments, an all-in price for delivered energy adjusted in each time-of-delivery period, and integration costs. By Commission policy (D.04-07-029 and clarified by D.07-02-011), integration cost adders for all proposals must be zero. Further, the transmission upgrade costs are estimated using SCE's transmission ranking cost

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<sup>22</sup> D.04-07-029

report for resources that do not have an existing interconnection to the electric system or a completed Facilities Study.

The benefit-to-cost ratio for the ORNI 21 project was favorable in comparison to the bids in SCE's 2007 solicitations. The initial benefit to cost ratio ranked the highest for all bids in general, and for geothermal projects in particular. See Confidential Appendix A for more detailed bid comparisons.

### **Independent evaluator (IE) oversaw SCE's RPS procurement process**

Consistent with D.07-02-011, SCE retained an IE, Sedway Consulting, to report to SCE's procurement review group about the 2007 RPS solicitation and to ensure that the solicitation was conducted fairly and that the best resources were acquired. According to the IE Report submitted in AL 2198-E-A, Sedway Consulting performed its duties overseeing the 2007 solicitation and has provided assessment reports to the PRG and the CPUC.

In its Independent Evaluator Report, Sedway Consulting concluded that SCE "conducted a fair and effective evaluation of the proposals that it received in response to its 2007 RPS RFO and made the correct selection decisions in its short list." Sedway Consulting performed its own evaluation of all 2007 proposals using its own proprietary model developed to simulate SCE's LCBF ranking results. The IE ranked all proposals using its model and compared the results to SCE's bid ranking results. The IE's ranking results were similar to SCE's, and as a result, Sedway Consulting agreed with SCE's short-listing decisions. In addition, the IE monitored SCE's short-listing discussions, contract negotiations and meetings with management where SCE made decisions, for example, regarding bid prioritizations and negotiation positions. Overall, the IE concludes that SCE conducted a fair and effective evaluation of its 2007 renewable energy proposals.

For the IE's contract-specific evaluation of the ORNI 21 project, see Confidential Appendix E.

### **Consistency with adopted Standard Terms and Conditions (STCs)**

The ORNI 21 contract did not modify any of the non-modifiable STCs and complies with D.08-04-009.

**Contract price is reasonable and fully recoverable in rates**

The levelized energy price for ORNI 21 is at or below the 2007 MPR<sup>23</sup>, but there are certain contingencies that may bring the total contract price above the MPR. As a result, we consider this contract to be above the MPR. While the total costs may exceed the MPR, the project's benefit to cost ratio compares favorably to SCE's 2007 short-listed RPS bids.

The contract complies with the requirements for above-market cost recovery since the contract contingencies meet the requirements pursuant to Pub. Util. Code § 399.15(d)(2) (see above), the contract price is reasonable, the project is viable, and the necessary above-MPR costs of the contract are de minimis. The Commission will determine through implementation of SB 1036 or other proceedings how to calculate the above-market funds needed for contracts whose energy price is at or below the MPR, but due to other contract contingencies, the total costs of the contract could exceed the MPR.<sup>24</sup> Any above market costs needed for this contract will be subject to the rules the Commission establishes through implementation of SB 1036 or other proceedings. This price reasonableness evaluation does not set a precedent for Commission review of other RPS contracts.

We find all of the costs in the contract to be reasonable since ORNI 21 is a viable project. We believe the project is viable for the following reasons: the project developer, Ormat, is an experienced geothermal developer with over 30 years of experience and has built several geothermal facilities in California, other states, and throughout the world.<sup>25</sup> In addition, the project will use binary power conversion technology, a proven geothermal technology that Ormat has developed and that most geothermal projects use when exploiting a geothermal resource with relatively low heat. In addition, the project is located in an area with a known geothermal resource. Lastly, Ormat is self-financing the project and the project is close to securing site-control.

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<sup>23</sup> 2007 MPR, Resolution E-4118  
[http://docs.cpuc.ca.gov/PUBLISHED/Final\\_resolution/73594.htm](http://docs.cpuc.ca.gov/PUBLISHED/Final_resolution/73594.htm)

<sup>24</sup> See Administrative Law Judge Ruling Requesting Post-Workshop Comments on Implementation of SB 1036. <http://docs.cpuc.ca.gov/efile/RULINGS/84374.pdf>

<sup>25</sup> <http://www.power-technology.com/projects/mokai/mokai3.html>

Lastly, the PPA contemplates termination or amendments should certain contingencies materialize. SCE should file an Advice Letter with the Commission requesting CPUC approval if any material amendments to the contract are required.

### **PPA is a viable project**

SCE believes that the viability of the ORNI 21 project is high. The Commission is aware, however, that the project may face some project viability risks. More specifically, the ORNI 21 project may face risks since the project is still in an early development phase, is dependent on the expiring production tax credit, and transmission upgrade needs are unknown. On the other hand, the project is viable, as described below. Thus, the risks are somewhat mitigated, and the project is on balance in the ratepayer interest.

### Project Milestones

The PPA identifies the agreed upon project milestones, including, interconnection agreement, project financing, construction start and commercial operation deadlines.

### Financeability of Resource

ORNI 21 intends to finance the development and construction phases of the project through its own funds. As a result, the viability for financing of this project is high.

### Production Tax Credit (PTC)

ORNI 21 is contingent upon the extension of the federal production tax credit (PTC) as provided in Section 45 of the Internal Revenue Code of 1986, as amended. The PTC is set to expire December 31, 2008, and ORNI 21's expected initial online date is December 2012. The PTC has been extended several times in recent history, and there is potential that it will be extended again. Expiration of the PTC poses a project viability concern for this project since it is uncertain if and when it will be extended.

### Sponsor's Creditworthiness and Experience

ORNI's parent corporation, Ormat Technologies of Israel, is an experienced developer of geothermal energy that has been providing SCE renewable geothermal energy under various qualifying facility (QF) contracts since 1984.

SCE does not anticipate that transmission will be an impediment to the completion of the project. ORNI 21 is located in the Imperial Irrigation District (IID) and recently filed its interconnection application with the IID July 2008. While the interconnection process is in the early stages, Ormat has indicated that meeting the online date should not be a problem.

SCE does not know if upgrades will be needed to SCE's system, but has informed Ormat that upgrades will be required on the CAISO system. The ORNI 21 project, similar to the ORNI 18 project, may not initially deliver the energy to SCE's service territory because transmission upgrades may be necessary to transmit the energy from IID to SCE's territory. However, because the RPS program allows the RPS-eligible energy to be delivered anywhere in California, SCE can remarket the energy until the necessary transmission upgrades are completed. Since the need for upgrades are not yet known, transmission may be a risk.

#### Site-Control

ORNI 21 has nearly completed site control of the location. ORNI 21 has approximately 80% of the leases needed in order to complete development of the project and is close to securing the remaining leases.

#### Fuel/Technology

The capacity factor for the ORNI 21 project is 95%. Technology risk is not a concern since ORNI 21 will use a binary power conversion technology, a proven technology that is employed by most geothermal developers utilizing fuel sources with relatively low heat. Ormat has been primarily responsible for the development of this technology and has successfully developed, financed, constructed and operated projects based on this technology over the past thirty years.

According to Ormat, the quality of the geothermal source for the ORNI 21 project will be able to provide the necessary heat for the output required under the contract. Ormat believes that there is ample resource heat and fluid deliverability to supply and sustain, at the very least, a 30 MW generator, with a good prospect of expanding beyond this minimum. SCE has had several meetings with Ormat's geotechnical and drilling staff regarding the nature of the geothermal reservoir, geothermometry survey results, and resource delivery

expectations. Ormat, however, will only be able to determine the resource's potential beyond 30 MW upon further exploration of the site.

### **The Commission denies DRA's protest**

DRA recommends that the Commission limit its approval of SCE's proposed contracts as follows:

- The Commission should limit its approval of AL 2198-E to only the initial project size for all contracts.
- The Commission should require SCE to disclose whether the prices of the three contracts are above or below the MPR for purposes of SCE's entitlement to SEPs.

The pricing, terms and conditions of the ORNI 21 PPA are the same regardless of whether the developer exercises the expansion option or only builds the initial project capacity. Thus, the Commission does not find a need to limit approval of the ORNI 21 contract to only the initial project size. Commission approval of the contract with the expansion options is in the ratepayer interest since the price is reasonable, the project is viable, and will contribute towards SCE's RPS obligations.

As for DRA's second point, SCE disclosed in the reply comments that the energy price was at or below the MPR. While the energy price is at or below the MPR, this resolution clarifies that there are certain contract contingencies that may bring the total price of the contract above the MPR.

The Commission rejects DRA's protest on both accounts.

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

Certain contract details were filed by SCE 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. Accordingly, this draft resolution was mailed to parties for comments. No parties files comments 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.07-02-011 directed the utilities to issue their 2007 renewable RFOs, consistent with their renewable procurement plans.
4. 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.
5. Levelized contract prices at or 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.
6. SCE filed Advice Letter 2198-E on December 31, 2007, requesting Commission review and approval of three renewable energy contracts with Daggett Ridge Wind, ORNI 21, and FSE Blythe 1.
7. SCE filed supplemental Advice Letter 2198-E-A on January 11, 2008 to include the IE report.
8. On January 22, 2008, TURN protested the Daggett Wind contract and DRA protested all the contracts in AL 2198-E.
9. It is reasonable for the Commission to evaluate one of the contracts for which SCE requested approval in AL 2198-E and to reserve judgment on the other projects for a subsequent resolution(s).

10. SCE briefed its PRG on its proposed shortlist and status of negotiations for the 2007 RPS solicitation. SCE also briefed the PRG concerning the successful conclusion of discussions with ORNI 21.
11. The Commission has reviewed the proposed contract and finds it to be consistent with SCE's approved 2007 renewable procurement plan.
12. The proposed Seller contract price for the ORNI 21 project at or below above the 2007 MPR released in Resolution E-4118.
13. There are certain contract terms and conditions that may make payments under this contract exceed the MPR.
14. Any contract costs that exceed the MPR will be subject to rules and guidelines established through implementation of SB 1036 and may be factored into the above-market fund calculation.
15. The PPA contemplates termination or amendments should certain contingencies materialize. SCE should file an Advice Letter with the Commission requesting CPUC approval if any material amendments are required.
16. The costs of the contract between SCE and Seller are reasonable and in the public interest; accordingly, the payments to be made by SCE pursuant to the PPA, are fully recoverable in rates over the life of the project, subject to CPUC review of SCE's administration of the PPA.
17. 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.
18. Procurement pursuant to this Agreement is procurement from an eligible renewable energy resource 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.), Decision 03-06-071, or other applicable law.
19. Procurement pursuant to this Agreement constitutes incremental procurement or procurement for baseline replenishment by Buyer from an eligible renewable energy resource for purposes of determining Buyer's compliance with any obligation to increase its total procurement of eligible renewable energy resources that it may have pursuant to the California Renewables Portfolio Standard, CPUC Decision 03-06-071, or other applicable law.

20. The ORNI 21 contract proposed in AL 2198-E should be approved without modifications.

**THEREFORE IT IS ORDERED THAT:**

1. The ORNI 21 contract proposed in AL-2198-E is approved without modifications.
2. The costs of the contract between SCE and Seller are reasonable and in the public interest; accordingly, the payments in the contract to be made by SCE pursuant to the PPA are fully recoverable in rates over the life of the project, subject to CPUC review of SCE's administration of the PPA.
3. Should certain contingencies arise that require material amendments to the PPA, SCE shall file an Advice Letter with the Commission requesting CPUC approval.
4. Any contract costs that exceed the MPR shall be subject to rules and guidelines established through implementation of SB 1036 and may be factored into the above-market fund calculation.
5. 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 July 31, 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**  
Overview of 2007 Solicitation Bids

[REDACTED]

**Confidential Appendix B**  
LCBF Bid Evaluations

[REDACTED]

**Confidential Appendix C**  
ORNI 21 Contract Summary

[REDACTED]

**Confidential Appendix D:**  
Project Viability Matrix

[REDACTED]

**Confidential Appendix E:**  
Independent Evaluator's  
Contract-Specific Assessment

[REDACTED]

**Confidential Appendix F:**  
Project's Contributions Toward RPS Goals

[REDACTED]