

Decision 09-06-049 June 18, 2009

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

Application of Southern California Edison Company (U338E) for Authority to Implement and Recover in Rates the Cost of its Proposed Solar Photovoltaic (PV) Program.

Application 08-03-015  
(Filed March 27, 2008)

**DECISION ADDRESSING A SOLAR PHOTOVOLTAIC PROGRAM  
FOR SOUTHERN CALIFORNIA EDISON COMPANY**

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**DECISION ADDRESSING A SOLAR PHOTOVOLTAIC PROGRAM  
FOR SOUTHERN CALIFORNIA EDISON COMPANY**

**1. Summary**

In this decision, we adopt a solar photovoltaic program (SPVP) to install 500 megawatts (MW) of solar photovoltaic (PV) on existing commercial rooftops in the service territory of Southern California Edison Company (SCE or Edison). Under the adopted program, SCE will own, install, operate and maintain 250 MW of distributed solar PV projects primarily in the one to two MW range, located in SCE's service territory, and will seek competitive bids for power purchase agreement (PPA) for electricity from another 250 MW of solar PV rooftops that are owned, installed, operated and maintained by independent power producers (IPPs).

Currently, California has several programs that support the development of renewable energy resources. The Renewables Portfolio Standard (RPS) program, established in 2002 under Senate Bill (SB) 1078, Stats. 2002, ch. 516, and accelerated in 2006 under SB 107, Stats. 2006, ch. 464, requires the investor-owned utilities to procure 20% of their electricity sales from renewable sources by 2010. The RPS program has a variety of procurement vehicles, including competitive solicitations and bilateral contracts. In addition, while the statutes provide for 20% by 2010, a goal of attaining 33% by 2020 has been addressed in other ways. For example, as early as October 2005, the California Energy Commission (CEC) and the Commission jointly adopted the Energy Action Plan II (EAP II) identifying as a key action item the implementation of 33% renewables by 2020. On November 17, 2008, Governor Schwarzenegger established an RPS target of 33% by 2020 for all retail sellers of electricity (Executive Order S-14-08.) On December 11, 2008, the California Air Resources

Board adopted a Scoping Plan for implementation of California's Greenhouse Gas Law (Assembly Bill 32) which includes implementing 33% renewable resources in the electricity sector by 2020. The state and the Commission have also identified clean and renewable distributed generation as a priority resource in the loading order.<sup>1</sup> The Energy Action Plan I specifically called on the state to "promote customer and utility owned distributed generation."<sup>2</sup> Consistent with this objective, in 2007, the California Solar Initiative (CSI) established a goal to install 3,000 MW of solar projects by 2016 via a performance based rebate program. Together, these programs and initiatives are expected to advance the state's renewable energy goals and help lower the cost of solar energy. At the same time, we must continue to embrace innovative programs and new policies that will advance the delivery of renewable energy and support our renewable goals. The adopted SPVP will provide an opportunity for solar projects in the range of one to two MW, which due to the focus of our existing programs have had limited participation in the CSI and the RPS, to contribute to the state's aggressive renewable goals.

Because this is an application of first impression and a new program for utility-owned renewable generation, we will carefully monitor the program's progress, examine ways in which the program can be improved, and fine tune the program when and where appropriate. As discussed in this decision, the evaluation of the adopted SPVP, in particular the role of utility-owned renewable generation, is something that is of ongoing concern to the Commission. Because

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<sup>1</sup> See, e.g. Energy Action Plan II, p. 3.

<sup>2</sup> Energy Action Plan I, pp. 7-8.

we approve here the procurement of both utility-owned renewable generation, and a competitive solicitation for the same type of generation, the program we approve should provide us with important information about the comparative costs and benefits of each form of renewable ownership, among other things. SCE will file annual compliance reports on the status of the program and Energy Division will summarize the results of the program in its reports to the legislature on the RPS program. Thus, we seek to ensure that lessons learned during the implementation of the program are quickly identified and applied to future programs. The ultimate forum for this review shall be the general rate case proceeding, where the entire utility operation is reviewed.

We deny SCE's request for an additional 100 basis points above SCE's adopted rate of return for SCE's portion of this program. SCE bases this request on Pub. Util. Code § 454.3.<sup>3</sup> For reasons described in more detail below, we disagree with SCE's assessment that the utility-owned generation (UOG) portion of the SPVP program meets the criteria established in § 454.3 necessary to grant an increase in SCE's rate of return. The energy generated from the SPVP projects will be counted towards SCE's RPS goal because the generation will serve SCE's electrical load. However, while the output of the projects from this program will count towards the RPS goal, the process for future RPS solicitations remains unchanged. In other words, solicitations for future renewable projects will continue to be through the existing RPS solicitation process. The output of the projects will not count towards the CSI program goals, nor will the SPVP use any

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<sup>3</sup> All section references are to the Public Utilities Code unless otherwise indicated.

part of the CSI program budget because the CSI and the SPVP are fundamentally different in nature.

## **2. Background**

On March 27, 2008, SCE filed this application seeking authorization of its SPVP and associated cost recovery mechanism. In addition, SCE seeks authorization to establish a memorandum account to record the costs associated with the SPVP.

The Division of Ratepayer Advocates (DRA), Recurrent Energy (Recurrent), The Utility Reform Network (TURN), Californians for Renewable Energy (CARE), The California Large Energy Consumers Association (CLECA), Cooperative Community Energy Corporation (CCEnergy), The Solar Alliance and The Vote Solar Initiative (Joint Solar Parties), The Independent Energy Producers Association (IEP), and The California Solar Energy Industries Association (Cal SEIA) filed protests or responses to the application and identified several possible issues for Commission consideration. SCE filed a response on May 8, 2008.

A prehearing conference (PHC) was held on July 10, 2008. The assigned Commissioner and the assigned Administrative law Judge (ALJ) issued a Scoping Memo and Ruling on July 25, 2008, which delineated the scope and the schedule for this application. The following issues were identified:

1. Whether to approve SCE's proposed SPVP and funding either as proposed in the application or with modifications.
  - a) Information that may be useful for evaluating the reasonableness of this proposal will be:
    - Whether the cost estimates are reasonable.
    - Whether elements of SCE's plans are reasonable.
    - What is the cost-effectiveness of the proposed plan.

- What are the benefits to ratepayers.
  - Whether the proposed costs are reasonable in comparison to other RPS projects bidding into SCE's competitive solicitation for renewable energy projects.
  - Whether the proposed costs are reasonable in comparison to other potential utility-owned renewable energy projects.
  - Whether the proposed costs are reasonable in comparison to distributed solar installations under the CSI.
  - How the proposed program complements or conflicts with existing Commission and State policies to promote renewable and distributed generation.
  - Whether the proposed program meets the requirements of Pub. Util. Code § 2775.5.
  - Whether any specific measures or mechanisms should be established to ensure system performance.
2. Whether to approve SCE's proposed cost recovery mechanism and the proposed rate of return.

Issues not in the proceeding:

- SCE's Advice Letter 2226-E requesting authority for a mechanism to recover start-up costs for SCE's SPVP. This Advice Letter will be examined by the Energy Division, and the Commission will address it through a resolution.

Hearings were conducted on November 3 through November 6, 2008.

TURN, The Greenlining Institute (Greenlining), Recurrent, The Solar Alliance, Coalition of California Utility Employees (CCUE), SCE, First Solar, DRA, and CARE filed briefs. DRA, CARE, CCUE, Greenlining, SCE, Solar Alliance, IEP, and City of Victorville and San Joaquin Valley Power Authority filed reply briefs.

A final oral argument was held before the full Commission on March 25, 2009.

### **3. Project Description and Objective**

#### **3.1. Project Description**

The proposed SPVP is a five-year program to install up to 250 MW of one to two MW solar PV facilities within SCE's service territory.<sup>4</sup> SCE proposes to lease commercial rooftops for this program and to install, own, operate, and maintain these facilities.

The proposed program cost includes capital costs of initial installation and operations and maintenance (O&M) costs, including roof lease payments, SCE staffing costs, and other O&M costs associated with the solar PV facilities. SCE estimates the capital cost to be \$875 million with the average cost of the solar PV facilities at about \$3.50/W. SCE also requests a 10% contingency, which would allow it to spend up to \$962.5 million in direct capital costs before being subject to reasonableness review.

SCE provides an estimate for roof lease payments of \$18,000/MW/year, and contends that "the maximum price paid for the roof leases will be a small percentage of the value of the electricity produced."<sup>5</sup> SCE estimates the total O&M costs, including roof lease, for a 1 MW solar PV facility to be \$28,000 per

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<sup>4</sup> SCE's Application states that "SCE envisions the individual Solar PV Program installations to be in the 1 to 2 MW range. As the program proceeds, however, some installations may be larger or smaller than this range due to roof size or circuit loading considerations." (See SCE Application at p. 1.)

<sup>5</sup> SCE's application, pp. 13-14.

year and would roughly double for a 2 MW system. The annual staffing costs are estimated at about \$1.4 million.

SCE proposes a balancing account (SPVPBA) for rate recovery of the SPVP costs. The proposed SPVPBA would operate between 2009 and 2013 and would end with the inclusion of SPVP O&M and capital revenue requirements in SCE's Test Year 2015 general rate case (GRC) revenue requirement or sooner.<sup>6</sup>

SCE requests that no reasonableness review of the SPVP be conducted if its capital expenditures are below an established range. SCE offers to provide testimony supporting the reasonableness of the SPVP O&M costs during the prior calendar year in its annual Energy Resource Recovery Account (ERRA) reasonableness proceeding if its direct capital expenditure on a \$/W average basis exceeds the proposed amount.

SCE also requests an additional 1% over its currently authorized rate of return (ROR) for the SPVP, claiming that according to Decision (D.) 06-05-039, the increased ROR is warranted for utility-owned renewable generation.

Finally, SCE requests that if the CSI goals become mandatory for SCE customers, the capacity under SPVP be credited towards its customers' targets and seeks authority to expand the program to 500 MW if the program is successful.

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<sup>6</sup> Concurrent with its application, SCE filed an advice letter requesting authorization to establish a SPVP memorandum account (SPVPMA) to record the start-up costs associated with the SPVP while this application is pending. SCE proposes to transfer the balance recorded in the SPVPMA to the SPVPBA once SCE's SPVP is approved. SCE's advice letter was approved in Resolution E-4182.

### **3.2. Need for Project and Project Objective**

SCE states that the SPVP complements the existing CSI and the RPS and will contribute to both program goals.<sup>7</sup> In SCE's view "while the primary purpose of the program is to help meet the State's ambitious Million Solar Rooftops goal, the Solar PV program will also add to SCE's renewable portfolio."<sup>8</sup> With respect to CSI, SCE states that the SPVP has the potential to add over 80,000 rooftop equivalents in five years or 10% to the overall CSI goal of one million solar rooftops.

SCE also notes that while both the CSI and RPS programs target renewable resources, "neither program is well suited to develop medium-scale PV solar installations in the one to two MW range in the near term due to size and transmission limitations."<sup>9</sup> SCE argues that SPVP fills this gap that the CSI and the RPS programs have left untapped.<sup>10</sup>

Most parties agree that there is a gap in the market for one to two MW distributed solar, but disagree on whether that gap needs to be filled. In particular, they also disagree on whether the proposed SPVP is the best option to fill the gap.

We agree that there is a gap in the development of one to 2 MW wholesale distributed solar projects due to the focus of our existing programs. The CSI is intended for projects of up to 5 MW in size, but because only the first MW of the

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<sup>7</sup> SCE Opening Brief at p. 4.

<sup>8</sup> SCE's Opening Brief p. 5.

<sup>9</sup> SCE's Application at p. 5.

<sup>10</sup> SCE's Application at p. 5.

project is eligible for incentives, most CSI projects tend to be 1 MW or less in size and located where sufficient load exists on site. The RPS competitive solicitation approach is generally utilized by larger installations, due in part to transaction costs.

We also agree that the existing gap in the one to two MW segment of the solar industry may be filled by a variety of policy or legislative options. Indeed, as parties have noted, a feed in tariff (FiT) is currently under review at the Legislature and may result in future legislation, particularly affecting the one to two MW market, which is the subject of this application. The Commission is also considering expanding the current FiT for small renewable generation in Rulemaking (R.) 08-08-009. However, nothing precludes us from taking reasonable steps to address this gap while either the Legislature or the Commission consider other options. We have stated our desire for the California investor-owned utilities (IOUs) to develop renewable generation in California. Renewable generation that is close to load, can be deployed quickly, and requires less transmission is a desirable option.

The State of California has made substantial commitments to renewable energy including renewable distributed generation. The Energy Action Plan I, adopted by the Commission in 2003, identified clean distributed generation as a priority resource for the state, including utility owned distributed generation<sup>11</sup>. The EAP I states, “the state is promoting and encouraging clean and renewable customer and utility owned distributed generation as key component of its

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<sup>11</sup> Energy Action Plan I at p. 7.

energy system.”<sup>12</sup> More recently, the California Air resources Board adopted a scoping plan that specifically identified a target of 33% renewables by 2020 as a key strategy that will help the state achieve its 2020 greenhouse gas emission reduction goal. Consistent with these principles, and given the magnitude of the state’s renewable objectives, we find that the SPVP is a reasonable step to encourage development of more distributed renewable resources in the one to two MW range. The SPVP projects can be located near load, thus avoiding the need to build new transmission facilities and help reduce local congestion. The ability to deploy this technology quickly also can help advance California’s broad goal of developing renewable energy and specifically help make progress toward the state’s emphasis on developing distributed rooftop solar PV projects while other options are being considered. Although we agree with the intent of the SPVP, as discussed below, several modifications to the proposed SPVP are necessary in order to allow more competition consistent with Commission policies. The following sections address these issues.

#### **4. Discussion of the Adopted Plan**

##### **4.1. Summary**

In order to determine whether to adopt the proposed program or a modified proposal, we consider Commission policies applicable to this application and the relevant statute.

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<sup>12</sup> Energy Action Plan I, p. 8

## **4.2. Governing Law and Applicable Policies**

### **4.2.1. Applicability of Commission Policy on Procurement and Utility-Owned Generation**

We first consider whether the SPVP is consistent with Commission's long-term procurement policies.

### **4.2.2. Parties' Positions**

DRA maintains that the SPVP is in conflict with the Commission's policies on long term procurement and on the "competition first" hybrid market structure,<sup>13</sup> because SCE has disregarded the requirements regarding holding a competitive solicitation or a request for offer (RFO) for the entire project. DRA argues that there is no explanation in SCE's application as to why a competitive RFO was not held for turnkey development of the rooftop solar resources.<sup>14</sup> According to DRA, while the approach articulated in D.07-12-052 allows "preferred resources" to be granted an exception from "the competitive markets first" requirement, a showing that the competitive solicitation was infeasible must be made first. DRA argues that SCE has not met this requirement. Moreover, DRA argues that without a competitive solicitation, the Commission is unable to assess whether SCE's proposal is the best deal for the ratepayers.

DRA points to two recent Commission decisions regarding rules for UOG. In D.08-11-004, the Commission found that Pacific Gas and Electric Company (PG&E) failed to follow the rules for UOG set forth in D.07-12-052 and dismissed PG&E's application. In D.07-11,046, the Commission approved the San Diego Gas & Electric Company's (SDG&E) El Dorado plant application, finding that the

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<sup>13</sup> DRA Opening Brief at p. 16.

<sup>14</sup> *Id.*, at p. 6.

utility was able to demonstrate its UOG was the least cost/best fit after subjecting it to a competitive solicitation. While these applications involved fossil fuel plants, DRA argues that D.07-12-052 makes clear that procedural requirements also apply to preferred resources. DRA urges the Commission to deny SCE's application and direct SCE to solicit market-tested projects, UOG or otherwise, that comply with the Commission's long-term procurement policies.

Solar Alliance and Recurrent also take issue with SCE's proposal with respect to competitive solicitation. Solar Alliance argues that SCE has not shown that holding a competitive solicitation would be infeasible. Recurrent explains that a competitive solicitation can solicit a range of products and services such as equipment, design, construction and installation services, turnkey projects, electricity or a combination of the above. In its view, SCE's argument that it would rely on competitive procurement for "most" procurement activities is insufficient. Recurrent would have SCE rely on competitive power suppliers or independent solar energy producers as well. Recurrent argues that SCE has not demonstrated an "extraordinary circumstances" in its application to justify UOG and has made no showing that a competitive RFO is infeasible or that its needs can only be met with utility-owned PV power. For these reasons, Recurrent urges the Commission to reject SCE's application and allow competitive providers to compete for the same opportunities that SCE seeks for itself.

SCE contends that the Commission decision in D.07-12-052 is irrelevant to the approval of its application. According to SCE's witness, the proposed SPVP

is a market transformation program that does not need to clear the extraordinary hurdle set in D.07-12-052.<sup>15</sup>

#### **4.2.2.1. Discussion**

The Commission has clearly stated its preference for competitive markets for utility procurement of conventional generation. In D.07-12-052, the Commission noted that it favors a competitive market first approach while acknowledging that certain unique circumstances may warrant some form of utility ownership.<sup>16</sup> The Commission stated in D.07-12-052 that it would consider UOG applications by the IOUs outside of an RFO on a case-by-case basis, but the applications “must fit into a unique circumstance, which are limited to market power mitigation, reliability, preferred resources, expansion of existing facilities, or be a unique opportunity, as described in the decision.”<sup>17</sup> Also, in addressing the circumstances for UOG outside the RFO process, the Commission stated that “...all long-term procurement should occur via competitive procurements, rather than through preemptive actions by the IOU, except in truly extraordinary circumstances.”<sup>18</sup> In cases where a utility requests a UOG because of a “truly extraordinary circumstance,” the Commission required that IOUs make a showing that holding a competitive RFO would be infeasible.<sup>19</sup>

However, we note that while D.07-12-052 referred to preferred resources, it also acknowledged that “there are additional factors associated with utility

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<sup>15</sup> SCE Opening Brief at pp. 24-25.

<sup>16</sup> D.07-12-052 at p. 209.

<sup>17</sup> *Id.*, Ordering Paragraph 31.

<sup>18</sup> D.07-12-052 at p. 202 (emphasis in the original).

<sup>19</sup> *Id.*

ownership of renewable and other loading order or non-conventional resources that have not been fully vetted in this proceeding.”<sup>20</sup> Therefore, we find that the applicability of the policy framework for UOG articulated in D.07-12-052 to renewable resources is unclear. In comments to the Proposed Decision (PD), DRA argues that the PD is incorrect in this regard.<sup>21</sup> DRA’s comments seem to suggest that the same policies that apply to evaluating fossil UOG should automatically apply to renewable and distributed UOG. We are aware of our policies regarding fossil UOG and PPAs. However, as stated in D.07-12-052, there are additional factors that distinguish renewables from fossil generation and would require further consideration. DRA also seems to argue that if the Commission believes it does not have clear policy framework for renewable UOG, it should not be setting new policies without fully vetting those issues.<sup>22</sup>

We disagree with DRA’s assertion that adoption of this program constitutes new policy with respect to utility ownership, specifically as it relates to renewable and distributed generation. The Commission clearly articulated its interest and intent in supporting utility owned clean and renewable distributed generation in the EAP I. The Commission has also repeatedly pushed utilities to consider development and ownership of renewables to meet RPS goals:

“Nonetheless, we encourage IOUs to actively assess the feasibility of utility ownership, and pursue such ownership when and where it makes sense.” (D.07-02-011, p. 25 *mimeo.*)

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<sup>20</sup> D.07-12-052, footnote 233 at p. 194.

<sup>21</sup> DRA Comments at p. 8.

<sup>22</sup> See DRA Comments at p. 9.

“We do not require IOUs to build RPS resources in order to meet RPS Programs goals but we note, as we have before, that we expect IOUs to consider the option. For example, in enforcing the 20% by 2010 requirement, we will take into account whether or not each IOU undertook all reasonable actions to comply, including building and owning RPS resources.” (D.08-02-008, p. 32 *mimeo.*)

However, parties are correct that the Commission has, as a general policy matter, established a strong preference for programs that rely on market competition and the cost discipline market competition provides. Absent a demonstration that it would be infeasible for SCE to procure a portion of the SPVP solar electricity from IPPs, and consistent with the Commission’s strong desire to develop resources through competitive markets wherever feasible, we modify SCE’s proposed SPVP so that 50% of the total SPVP quantity is owned, installed and operated by IPPs. We agree with Solar Alliance that “competition will provide both SCE and independent project developers with a strong incentive to offer the best possible price to ratepayers and to operate their respective projects as efficiently as possible.”<sup>23</sup>

Although we generally encourage competitive procurement, we recognize that while there are varying risks and rewards for IPP and UOG projects, one particular benefit of UOG is that it is dedicated to the ratepayers throughout the useful life of the facility. As we move toward reducing greenhouse gas emissions in the energy sector, renewable UOG will continue to play an important role in meeting California’s energy needs with alternative clean energy. Given the importance and urgency California has placed on developing

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<sup>23</sup> Solar Alliance Opening Brief at p. 25.

renewable resources, allowing both utility and IPPs to participate in the development of the SPVP projects is a balanced approach at this time. The adopted SPVP will create opportunities for IPPs to compete for fully half of the one to two MW projects of the targeted quantity of rooftop solar projects under the SPVP while preserving the economies of scale that are created by a single entity owning a large portion of the project. Deployment of the SPVP should generate useful information regarding the comparative costs and benefits of both types of project ownership to inform future decision making.

#### **4.2.3. Applicability of Pub. Util. Code § 2775.5**

Pub. Util. Code § 2775.5 requires electric and gas corporations to obtain the Commission's authorization when they seek to manufacture, lease, sell, or otherwise own or control any solar energy system and seek to recover the costs and expenses from the ratepayers. Specifically, section (e) requires any electric utility proposing to own solar facilities to include an affirmative showing that the program will not restrict competition, or restrict growth in the solar energy industry, or unfairly employ in a manner which would restrict competition in the market for solar energy systems any financial, marketing, distributing, or generating advantage which the corporation may exercise as a result of its authority to operate as a public utility.

Section (b) requires the Commission to deny authorization if it finds that:

“the proposed program will restrict competition or restrict growth in the solar energy industry or unfairly employ in a manner which would restrict competition in the market for solar energy systems any financial, marketing, distributing, or generating advantage which the corporation may exercise as a result of its authority to operate as a public utility.”

The statute also requires that “before granting any such authorization, the commission shall find that the program of solar energy development proposed by the corporation will accelerate the development and use of solar energy systems in this state for the duration of the program.”<sup>24</sup>

Moreover, the statute requires that:

“The costs and expenses of implementing a program of solar energy development proposed pursuant to this section shall not be passed through to the ratepayers of an electrical or gas corporation unless the commission finds and determines that it is in the ratepayers’ interest to do so.”<sup>25</sup>

Finally, the statute mandates the Commission to ensure that the abovementioned criteria are met throughout the length of the program. Specifically, subsection (c) provides that:

“The commission shall suspend or terminate any authorization granted pursuant to this section whenever it finds and determines that the program of solar energy development no longer qualifies for the authorization under subdivision (b).”

#### **4.2.3.1. Parties’ Position**

SCE contends that the proposed SPVP will increase, rather than decrease competition, and that it will not harm the competitive market. According to SCE, the proposed SPVP expands the solar industry by increasing short-term supply and is likely to increase long-term supply by increasing labor

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<sup>24</sup> Section 2775.5(b).

<sup>25</sup> Section 2775.5(f).

productivity and improving system design.<sup>26</sup> SCE also argues that installations under the proposed SPVP are a small fraction of the total potential.

First Solar also argues that the proposed SPVP is a small percentage (less than 1%) of the recent increase in the state's RPS goals, and as such will leave "ample room" for others to participate. First Solar supports SCE's SPVP and views it as a means to expand the solar industry. First Solar argues that the SPVP will encourage competition because SCE will plan to use a competitive bidding process in several aspects of project development.<sup>27</sup>

Recurrent argues that SCE's application does not meet the requirements set forth in Pub. Util. Code § 2775.5(b), (e), and (f). First, Recurrent argues that SCE has failed to make an affirmative showing as required by section (e) that its application would not restrict competition or growth or unfairly employ public utility advantages to restrict competition. Recurrent argues that the Commission should deny SCE's application on that basis alone.

Beyond that, Recurrent argues that SCE's application does not meet the requirements of § 2775.5(b), because SCE will likely become the exclusive lessee of commercial rooftops in its territory, and the SPVP will result in restricting competition in the market for roof leases.

Finally, with respect to the requirement of § 2775.5(f) that the proposal be in the ratepayers' interest, Recurrent argues that SCE's proposal to pass program costs and expenses to its ratepayers is not in the ratepayers' interest because

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<sup>26</sup> SCE Reply Brief at pp 23-24.

<sup>27</sup> First Solar Opening Brief at p. 20.

SCE's exclusive role in developing PV projects in its territory would eliminate competition that drives innovation and lowers costs.

Greenlining also believes that SCE's application violates § 2775.5(f). Based on the anticipated output and the estimated costs of the proposed project, Greenlining argues that the proposed project has a "large price tag and so little tangible return"<sup>28</sup> that it cannot be deemed to be in the ratepayers' interest.

Solar Alliance believes that SCE's SPVP is in violation of § 2775.5, because SCE's status as a public utility would restrict growth of and the competition within the rooftop solar PV market. CARE contends that the SPVP is inconsistent with § 2775.5 because it places the utility in direct competition with companies participating in CSI for rooftops and grid access.<sup>29</sup>

#### **4.2.3.2. Discussion**

After careful review of § 2775.5, we conclude that it does not preclude either the program as initially proposed by SCE or as amended and adopted in this decision. We do not believe SCE's proposal, or the program as adopted here, constitutes a request by the utility to manufacture, lease, sell, or otherwise control any solar energy system as that term is defined in the statute. Central to this conclusion is the language contained in subsection 2775.5(d) which specifically creates a distinction between "solar energy system" as used throughout § 2775.5 and "electric plant" as defined by § 217.

Subsection 2775.5(d) defines solar energy system as "equipment which uses solar energy to heat or cool or produce electricity and which has a useful life of at least

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<sup>28</sup> Greenlining's Opening Brief at p. 8.

<sup>29</sup> CARE Opening Brief at p. 12.

three years.” This section goes on to say that the term “solar energy system,” as defined, does “not include an *electric plant* (italics added) as defined by section 217.” Section 217 states that an electric plant “includes all real estate, fixtures and personal property owned, controlled, operated, or managed in connection with or to facilitate the production, generation, transmission, delivery, or furnishing of electricity for light, heat, or power, and all conduits, ducts, or other devices, materials, apparatus, or property for containing, holding, or carrying conductors used or to be used for the transmission of electricity for light, heat, or power.”

Given the breadth of the definition of electric plant, we find it necessary to define a boundary between the terms “solar energy system” and “electric plant.” Absent such a distinction, the breadth of the definition provided in § 217 for electric plant, if taken at face value, would appear to include solar energy systems, rendering much of § 2775.5 moot to the extent it specifically addresses the Commission’s duty with respect to solar energy systems. Therefore, we do not believe it reasonable to interpret electric plant in such a broad way. In order to reconcile these two definitions we herein adopt the view that the term “solar energy systems” as used in § 2775.5 are those systems that use solar energy to heat, cool, or produce electricity and which are either themselves manufactured by the utility, and/or are sold or leased by the utility to third parties. In contrast, an electric solar system that is owned and/or operated by the utility for purposes of meeting its own load would be considered an electric plant, and thus would be exempt from the requirements set forth in § 2775.5.

In our view, § 2775.5 was specifically introduced as a way to prevent the IOUs from leveraging their monopoly position should they seek entry into the market for the manufacture, lease and/or sale of solar energy systems. Given the

definition of an electric plant and the clear exemption for electric plant from the requirements of § 2775.5 as provided in subsection 2775.5(d), we do not believe it was intended to address utility procurement of solar energy or ownership of solar facilities as a way to meet their own load requirements or renewable energy obligations. In light of this view, we believe the 250 MW of 1-2 MW projects SCE has proposed to build do not qualify as solar energy systems under § 2775.5 as SCE is not proposing to manufacture the technology itself nor does SCE intend to sell or lease these systems to third parties. Rather it has proposed building and owning solar projects using a third party technology and using the resulting energy generated from those projects to satisfy its own load requirements. In other words, each SCE's project would qualify as an electric plant, which is exempt from § 2775.5.

However, because this decision adopts a modified program which includes both a UOG and a PPA component, we also need to address whether the PPA component of the program would be subject to § 2775.5. As stated above, § 2775.5 is applicable only to solar energy systems owned and controlled by an electric or gas corporation. Under a PPA, the utility contracts for the energy produced by a solar facility that is owned and operated by a third party. A PPA is a contractual arrangement for the procurement of energy from a facility owned and operated by a third party and not, owned and controlled by the utility. Therefore, a PPA falls outside the bounds of § 2775.5.

In comments Recurrent argues that authorizing SCE to lease 100% of the roof space associated with this program is in violation of the statute because it eliminates competition in that segment of the market. As explained above, we do not believe § 2775.5 is applicable to this program. That said, we believe that Recurrent's argument has merit on policy grounds. We have, therefore,

modified Section 4.5 to allow IPPs to secure roof space on their own. In addition, the program we adopt today is different from SCE's proposed SPVP in that it requires SCE to procure 50% of the SPVP's capacity from IPPs. Had we found Pub. Util. Code § 2775.5 applicable, we believe the adopted SPVP would still comply with all sections of Pub. Util. Code § 2775.5. Below, we will first discuss the requirements of § 2775.5(b) and then address the remainder of the statute.

Section 2775.5(b) requires the Commission to consider whether the SPVP restricts competition. As explained above, the one to two MW solar energy market has not been developed yet under our current policies. As Solar Alliance has stated, "SCE's program will be the only viable market option for rooftop solar PV systems in the one to two MW range."<sup>30</sup> Because the adopted SPVP will allow for significant competition throughout the solar energy industry value chain, including competition for ownership and operation of the solar generating facilities, it will not restrict competition in solar energy industry. However, in comments to the PD, Recurrent disagrees with this finding and argues that allowing for some competition as proposed in the PD does not meet the statute's requirement of whether the proposed program restricts competition. Recurrent further argues that allocating 35% of the relevant market to the regulated utility as proposed in the PD establishes dominance for the regulated utility in violation of the statute. In addition, in Recurrent's view, competition would be further eliminated if SCE is allowed to recover costs at \$.27/kWh which is a much higher value than the Market Price Referent (MPR), at which IPP bids are capped. Recurrent also points out that authorizing SCE to lease 100% of the roof space is

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<sup>30</sup> Solar Alliance's Opening Brief at p. 26.

in violation of the statute because it eliminates competition in that segment of the market.

To address Recurrent's specific concern regarding roof space lease, we have modified § 4.5 to allow IPPs to secure roof space leases on their own. We have also expanded the size of the program so that IPPs are allowed to compete for the same program capacity as SCE. Furthermore, as discussed later, we have clarified that the cap for IPP bids is at 100% of the Levelized Cost of Electricity (LCOE) not the MPR as Recurrent asserts. Given these revisions, we believe SCE would be prevented from using its utility status to create unfair competitive advantages, or as Solar Alliance has noted, "to corner this portion of the solar PV market."<sup>31</sup> Thus, the adopted SPVP meets the requirement of Pub. Util. Code § 2775.5 with respect to competition.

Section 2775.5(b) also requires the Commission to consider whether the SPVP restricts growth. Considering the novel nature of the adopted SPVP program, its impact on the growth of the solar energy industry is speculative at this time. Therefore, the adopted SPVP complies with Pub. Util. Code § 2775.5(b) with respect to growth.

Another requirement of Pub. Util. Code § 2775.5(b) is to consider whether the SPVP unfairly employs in a manner which would restrict competition in the market for solar energy systems any financial, marketing, distributing, or generating advantage which the corporation may exercise as a result of its authority to operate as a public utility. We find that the adopted SPVP does not use advantages afforded to SCE as a public utility to restrict competition in the

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<sup>31</sup> *Ibid.*

solar energy systems market. The adopted SPVP will solicit competitive bids from solar equipment manufacturers that are active in the market for solar energy systems in SCE's territory and will only enhance the market for solar energy systems of one to two MW by creating a new market opportunity that currently does not exist. Therefore, the adopted SPVP is in compliance with this portion of the statute.

The next requirement in Pub. Util. Code § 2775.5(b) is to determine if the SPVP will accelerate the development and use of solar energy systems in the state for the duration of the program. Parties who argue that the proposed SPVP does not comply with this part of the statute mainly argue that the SPVP will not accelerate the development and use of solar in California because of the lack of competition for ownership of solar generation facilities. Recurrent contends that "competitive solar providers are more than capable of accelerating California's solar development to meet its renewable goals."<sup>32</sup> It states that "competitive markets drive developers to seek new technologies, to negotiate better prices, to find highest value sites, and/or to accept lower return to gain market shares,"<sup>33</sup> which will accelerate the development and use of solar in California.

The statute requires that we find whether the proposed program of solar energy development will accelerate the development and *use of solar energy systems* in the state for the duration of the program. Whether other programs are capable of delivering the same result is irrelevant and does not become a factor in this determination. Here, we need to focus only on the SPVP to determine

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<sup>32</sup> Recurrent's Opening Brief at p. 18.

<sup>33</sup> *Ibid.*

whether it meets the requirement of Pub. Util. Code § 2775.5. We find that because the adopted SPVP proposes to introduce 500 MW of new solar PV rooftop systems, the influx of the new installations will contribute to the development and use of solar PV systems in the range of one to two MW in the state. Moreover, the wide deployment of these rooftops is likely to spur the development of rooftop PV system parts and related equipment. As such, the adopted SPVP is consistent with this requirement of Pub. Util. Code § 2775.5(b).

Finally, Pub. Util. Code § 2775.5(f) requires that before the Commission passes the costs and expenses of implementing a solar program to the ratepayers, it finds and determines that it is in the ratepayers' interest to do so. We find that the adopted SPVP is in the interest of ratepayers because it would help promote the development of additional renewable projects on existing rooftops. It would also help expand the one to two MW solar market which under current policies has been effectively under-developed. Moreover, the economies of scale and installation efficiencies resulting from deploying large MWs and multi-year projects will provide benefits to the ratepayers. Additional benefits include the fact that generation can be located near load and can be quickly deployed because there is no need to construct new transmission facilities or to conduct extensive environmental review. The Commission has also acknowledged the benefits of renewable UOG and the role that it can play in meeting the objectives of the RPS and driving down the costs of renewable generating technologies. In D.08-02-008, the Commission stated, "First, there may be a unique and important role for utility-owned RPS generation. Utility-owned generation from renewable energy resources, for example, can put downward pressure on what are otherwise increasing renewable energy prices." This is further enhanced in the adopted SPVP where a portion of the power will be procured using competitive

solicitation to ensure the best possible price to ratepayers. Finally, by pursuing this program, the state will have an opportunity to better understand the implications of interconnecting significant amounts of distributed renewable generation to the grid and the comparative costs and benefits of different renewable energy deployment options.

#### **4.3. Comparison of the SPVP with CSI and RPS**

The scoping ruling identified as within the scope of this proceeding the issue of whether SCE's proposed cost estimates are reasonable compared with projects participating in the CSI program and projects bidding into SCE's competitive solicitation under the RPS program.

##### **4.3.1. Comparison with Projects Participating in California Solar Initiative**

SCE argues that the SPVP is less expensive both from the ratepayer perspective and the societal perspective. From the societal perspective, SCE compares the \$3.50/W cost target of the SPVP with the \$6.78/W historic CSI average installed cost for projects of comparable size and arrives at the conclusion that the SPVP provides a 48% savings over CSI projects. For comparing costs from the ratepayer perspective, SCE uses TURN's calculations of the CSI direct subsidy payment and Net Energy Metering (NEM) subsidy, and arrives at CSI subsidy payment of \$2.38/W and a NEM subsidy of \$2.45/W. Subtracting the CSI and NEM subsidies from the total installed cost of \$6.78/W for a typical large CSI projects, SCE arrives at a total customer cost of \$1.95/W.

Subtracting this customer cost from the societal savings of \$3.28/W, SCE states that SPVP saves ratepayers \$1.33/W compared with the CSI program.<sup>34</sup>

CCUE agrees with SCE that the proposed SPVP would install rooftop solar PV projects at a lower cost than the CSI program, \$3.54/W for SCE (including O&M) versus \$6.56-8.07/W for CSI. CCUE rejects the argument that CSI is less expensive from the ratepayer's perspective. In its view, ratepayers pay for more than just the CSI rebates. CCUE argues that the cost of private investment made by CSI customers and net metering should also be considered as ratepayer costs and that "the net-metering costs more than offset the apparent non-participating ratepayer benefit of only having to pay for part of the cost of PV installed under the CSI program."<sup>35</sup>

DRA disputes SCE's contention that the SPVP will cost less to ratepayers than installations under the CSI. In DRA's view, SCE's comparison is flawed for several reasons. First, DRA argues that the appropriate point of comparison between the SPVP and the CSI program should be the costs to the ratepayers and not the total installed cost of projects. DRA argues that SCE ratepayers are not burdened with the entire cost of CSI installation. Rather, they pay only for roughly 24% of the installed costs or \$1.55/W. Since SCE's ratepayers pay only 24% of the total installed cost of a CSI project, DRA argues that the cost of the SPVP should be compared with 24% of the average cost of comparable size CSI projects.

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<sup>34</sup> SCE Rebuttal Testimony at pp. 20-22.

<sup>35</sup> CCUE Direct Testimony at pp. 10-11.

DRA further notes that the ratepayer-funded portion of CSI installed costs is set to decline over time. In addition, DRA argues that larger CSI projects are paid only for the actual system output, while the SPVP is not. Finally, DRA argues that the \$3.76/W cost of the SPVP does not include O&M costs, including project management, rooftop lease and inverter replacement – costs that are included in the CSI costs.<sup>36</sup>

Likewise, TURN argues that when comparing the CSI cost to the SPVP, “the appropriate comparison is between the cost of SCE’s project and the ratepayer subsidy to privately owned solar installations.” TURN uses 35% as the portion of CSI installations funded by ratepayers, translating into an installed cost subsidy of \$2.38/W for large commercial systems. TURN also notes that the CSI program includes a ratepayer subsidy for net energy metering, which TURN estimates to be 36% of the installed cost of the system.<sup>37</sup>

While Greenlining agrees with this statement, it believes the argument goes beyond this simple comparison. Greenlining argues that because the SPVP is not a replacement for CSI, it makes little difference to ratepayers that the SPVP may be less costly than CSI.

#### **4.3.2. Comparison with Projects Bidding into Renewables Portfolio Standard**

While TURN offers argument for cost comparisons between the SPVP and CSI installations above, it believes that the most relevant comparison of SCE’s project costs is to the price of power procured from renewable projects under the

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<sup>36</sup> DRA Direct Testimony at p. 8.

<sup>37</sup> TURN Direct Testimony at p. 14.

RPS program.<sup>38</sup> TURN argues that SCE's project is "far more expensive than most of the projects selected through the RPS process." TURN points out that although price information on specific RPS projects is confidential, most of the projects selected through the RPS solicitations are priced at or below the MPR."<sup>39</sup> TURN also rejects SCE's argument that RPS projects may incur additional transmission costs. In TURN's view, transmission upgrade costs are already incorporated into RPS bids and utilities' evaluations of the bids.

DRA also argues that the SPVP is not competitive when compared with the cost of projects bidding into the RPS program, noting that projects approved via the RPS program have been near or below the MPR. DRA states that "even with the MPR adjusted up to reflect time of delivery (TOD) adjustment at \$0.135/kilowatt-hour, SCE's program is still twice as expensive as RPS projects."<sup>40</sup>

CCUE sees the SPVP as a way to achieve the goal of 33% RPS by 2020. It argues that "the 33% RPS requires that a large range and volume of new renewable generation be built."<sup>41</sup>

SCE argues that comparison to the RPS program is inappropriate.<sup>42</sup> SCE agrees with DRA that the SPVP is not competitive with projects bidding into the RPS solicitation, but believes that RPS procurement is not the point of the SPVP.

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<sup>38</sup> *Id.*, at p. 10.

<sup>39</sup> TURN Direct Testimony, pp. 10-11.

<sup>40</sup> DRA Opening Brief, p. 9.

<sup>41</sup> CCUE Opening Brief at p. 6.

<sup>42</sup> SCE Rebuttal Testimony, October 3, 2008.

Therefore, according to SCE, the SPVP should not be compared with RPS projects since the two programs are designed to achieve different goals. SCE contends that it does not evaluate projects aimed at meeting the CSI goals against projects submitted in the RPS solicitation process, as they are entirely separate goals in California.

#### **4.3.3. Discussion**

We appreciate the parties' effort to respond to our inquiry, and their analysis on the cost comparison between the CSI and RPS projects. Parties provided a variety of analyses on how to compare the cost of SPVP with the cost of RPS and CSI projects and what components to consider when comparing CSI costs to the SPVP. The stark disagreement among the parties on the cost comparison however, suggests that because of the difference in the project size and the accompanying cost components, as well as differences in the goals of the various programs being compared, it is difficult to make a reasonable comparison of the SPVP with CSI and RPS. We find that neither the CSI nor the RPS provides a proper benchmark for determining whether the cost of the SPVP is reasonable.

Although price information for specific RPS projects is confidential, parties have presented testimony that RPS projects are generally less expensive than the SPVP. The LCOE of the SPVP is at \$260/MWh. Comparing the LCOE with the MPR, the benchmark for the RPS program, indicates that energy from the SPVP is twice as expensive as the MPR, adjusted for time of delivery. However, we note that simply comparing the direct costs of the SPVP with RPS contract costs or the MPR does not reasonably account for the differences in the costs and benefits of the two programs.

The benefits of the SPVP as a large, wholesale power option include the fact that generation can be located near load, and deployed quickly without the need to build new transmission facilities while also potentially serving to reduce local congestion and line losses. Transmission costs and line losses associated with RPS projects can be considerable. As an example, the Commission recently approved the Sunrise transmission line, with an expected cost of \$1.883 billion (D.08-12-058, p. 293), which is anticipated to allow for development of up to 1900 MW of renewable resources (D.08-12-058, p. 6), or roughly \$1/W just for the transmission necessary to access the renewable resources. Because there is no need to construct new transmission or to engage in extensive environmental review, the SPVP program facilitates the immediate construction of new renewable resources, without the cost or delay created by the traditional need for new transmission for larger scale RPS resources.

Likewise, comparing the cost of the SPVP with the CSI projects does not provide an appropriate benchmark. CSI costs include several components that the SPVP does not. Most notably, the CSI serves customers who utilize most of the generation on site and obtain a significant subsidy through net metering of their generation. In addition, CSI projects retain any renewable credits associated with their generation, i.e., CSI generation does not count towards a utility's RPS goals, whereas SPVP generation does.

However, we agree with TURN and DRA that SCE's estimate of the per-watt installed cost for the SPVP excludes many cost categories we would want to consider before making a comparison with other projects, such as taxes, O&M, and SCE's return on rate base. We also reject SCE's comparison of the estimated per-watt installed cost of the SPVP with average historical costs of large CSI-funded projects. The comparison relies only on historical CSI data.

CSI program costs are projected to decline in the future in accordance with the CSI decisions related to declining CSI incentives. SCE's comparison does not reflect this projection.

For all these reasons, we determine that comparing SPVP with RPS and CSI with a reasonable level of certainty or accuracy is not possible or reasonable here due to differences in project size and cost components of CSI and RPS, and the different objectives of each respective program. The modified SPVP allows for independent solar competitors to participate in the program and will provide more program data and cost data for our future program review.

#### **4.4. Proposed Alternatives of Other Parties**

Several parties have proposed alternatives to SCE's SPVP. Some aspects of the proposals are more thoroughly addressed in other parts of this decision, but below, we provide a summary of the proposed alternatives.

##### **4.4.1. TURN's Proposal**

TURN would have the Commission deny SCE's application or in the alternative limit the SPVP to two years with total installation of 50 MW. TURN recommends that the Commission authorize SCE to install 10 MW per year for five years, for a total of 50 MW of solar installations. In TURN's view a smaller project may be "better to promote engineering design efficiencies and to train installation contractors without overheating the market."<sup>43</sup> TURN acknowledges that the installed cost for a smaller project may be slightly higher due to lower volume discounts, but believes the lower total cost justifies the small premium on a unit basis. TURN also recommends a cost-sharing mechanism to protect

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<sup>43</sup> TURN Opening Brief at p. 3.

against cost over-runs. TURN recommends that any capital cost between \$3.85/W and \$4.62/W be shared between the ratepayers and shareholders 80/20 without the requirement for a reasonableness review. Likewise, TURN recommends that any cost savings in capital costs below \$3.50/W be shared 80/20 between ratepayers and shareholders. Under TURN's proposal, recovery of costs above \$4.62/W would require a reasonableness review. TURN recommends that we authorize SCE to combine the costs over the lifetime of the program for cost sharing purposes.

#### **4.4.2. DRA's Proposal**

DRA recommends denying SCE's application and addressing the one to two MW solar "gap" instead through Commission and legislative initiatives. DRA proposes that if the Commission approves SCE's proposal, it should only allow single or small groups of projects to proceed at a time, and should also consider each via an advice letter process. DRA also recommends several program modifications to validate estimated costs of the SPVP project installations and rooftop leases with actual cost data. Additionally, to avoid conflict with CSI, DRA recommends that we require all SPVP projects verify that the entire on-site load is too small to take full advantage of CSI and NEM.

#### **4.4.3. Solar Alliance' Proposal**

Solar Alliance advocates dividing the SPVP between SCE and independent solar companies. Under the Solar Alliance's proposal, SCE would develop and own 125 MWs and the independent solar industry would develop and own the other 125 MWs of the SPVP. The power from independently-owned projects would be sold to SCE under wholesale power purchase agreements and the projects would receive payments only for power actually produced. The operational performance of projects developed under pay-for-performance terms

will then be compared to those developed by the utility. Solar Alliance contends that its proposal would provide important additional comparative information to the Commission and the industry that would not be generated if SCE is allowed to own all the SPVP projects.

#### **4.4.4. Recurrent's Proposal**

Recurrent proposes that we deny the Application and establish a FiT for rooftop solar PV that would be based on the MPR but include adders for factors such as time of day, location, reduced emissions, etc. SCE would be free to participate in the FiT but would be required to provide information on its distribution system to other parties.

#### **4.4.5. CARE's Proposal**

CARE recommends a ratemaking proposal that is addressed in Section 6.1 of this decision. CARE urges the Commission to encourage SCE to add solar power plants to the existing power plant sites within its service area subject to a cost sharing proposal.<sup>44</sup>

#### **4.4.6. Greenlining's Proposal**

Greenlining recommends denying the application, but if approved, Greenlining requests linking the reasonableness review of the program to supplier diversity and low-income issues. Specifically, Greenlining requests that if the Commission approves SCE's application, it would require SCE to demonstrate improvements in the outreach and enrollments of its low-income programs. Greenlining also recommends that the Commission consider

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<sup>44</sup> CARE Opening Brief at p. 9.

measures of cost-efficiency and cost-effectiveness in the annual reasonableness review of SCE's SPVP.

#### **4.5. The Adopted SPVP**

Parties who oppose the proposed SPVP generally argue against the SPVP's costs and the inconsistency of the program with Commission policy and § 2775.5. Certainly, cost is an important issue in this application. Another important issue is that California has set aggressive goals to develop more renewable energy and pursuing the lowest cost renewable energy is an important goal. At the same time, we recognize that in achieving our renewable goals, we must look beyond the limited resources and, as much as possible, continue to seek out opportunities for innovative programs and new policies that will advance the delivery of renewable energy and support our renewable goals.

As we noted above, the matter of how the SPVP costs compare to the cost of the CSI and RPS program cannot be reasonably resolved at this time. We thus look to other characteristics that can help us determine the reasonableness of the proposal. We find that the potential for building renewable projects on existing structures, thus minimizing environmental impacts, avoiding transmission upgrades, short-term cost reductions, program design that encourages technological improvements and the potential to deliver on-peak energy close to load are characteristics that set rooftop solar PV apart from other renewable technologies and make it unique. Other favorable attributes of the program include the use of resources that would otherwise remain idle and economies of scale and installation efficiencies that would result from deploying large MWs and multi-year projects.

However, as discussed above, to allow a greater number of solar industry competitors to participate in this segment of the solar PV market, we modify the

proposed SPVP to allow 50% of the solar generation projects to be subject to competition among industry participants. One of the stated goals of the SPVP is market transformation, yet as proposed, the SPVP is unlikely to achieve that. Market transformation would be more likely achieved if there is access to the market and significant competition exists between multiple project developers.

Originally, we proposed to split the SPVP 65/35 between SCE and IPPs, with SCE to develop 160 MW of the adopted SPVP and solicit bids from IPPs for 90 MW of SPVP projects. We allocated a higher portion of the proposed capacity to SCE than Solar Alliance had proposed to influence the likelihood that SCE will achieve its cost targets, while allowing competition to provide a portion of the MW capacity. In comments to the PD, several parties advocated increasing the quantity of projects developed by the solar IPPs. Solar Alliance proposes increasing the MW allocation for the PPA portion of the project to the same amount as the utility-owned portion for equal treatment. First Solar and CCUE also support increasing the total capacity of the program and support even more increase so that SCE would maintain the 250 MW in addition to the solar IPP's share. IEP proposes offering the entire 250 MW for competitive bid and allowing SCE to develop projects only if bids do not come in lower than SCE's LCOE.<sup>45</sup> DRA and Recurrent suggest a similar process for the PPAs and UOG to compete against each other.

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<sup>45</sup> LCOE is the average cost of the program per kilowatt-hour to SCE's ratepayers over the 20-year depreciable life of the equipment. LCOE is found by dividing the present value of the revenue requirement by the present value of the electricity produced by the systems over the life of the program.

Regarding the cost for the UOG portion of the SPVP, SCE contends that both TURN and Solar Alliance's proposals to reduce the size of the SPVP would eliminate SCE's ability to achieve its estimated costs. According to SCE, Solar Alliance's proposal would result in a 40% increase in installed cost for the SPVP (based on worldwide elasticity of demand) or possibly a 90% increase in the installed cost for the SPVP. SCE also argues that TURN's proposal would make it impossible for SCE to meet its cost target of \$3.50/W. SCE alleges that cutting the program in half would almost double the cost from \$3.5/W to \$6.49/W.<sup>46</sup>

SCE's argument that it cannot meet its cost target if the program is reduced is not persuasive. SCE has almost reached its 5-year cost projection in the first year with only a 2 MW installation. This has been achieved absent the benefits of a long-term or annual commitment and a more experienced workforce. In addition, SCE has indicated that it anticipates that it will meet the cost goal of \$3.85/W in 2009.

However, while overstated, SCE's argument is not entirely without merit. The proposed program and associated cost estimates were predicated on a program size of 250 MW. While we are not convinced that the reduction in the total capacity to be deployed pursuant to the program as proposed in the PD would result in as significant an increase in costs as SCE suggests, we agree that reducing the project size could adversely impact price to some degree. Therefore, rather than reduce the program size, we will authorize SCE to deploy 250 MW as originally proposed at a target cost of \$3.50/W subject to a 10%

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<sup>46</sup> SCE Opening Brief at pp. 22-23.

contingency, as described in further detail below. As discussed above, it is appropriate that SCE also solicits an equal amount of solar capacity via PPAs as it seeks to build utility owned projects pursuant to this program. Therefore, this decision authorizes a program of 500 MW of capacity to be split 50/50 between utility ownership and a PPA approach.

Parties also suggest that we apply a cost cap to IPP projects. Recurrent requests clarification whether the market referent price will apply to the competitive portion of the adopted SPVP. DRA recommends that the PPAs' price be capped at SCE's LCOE to ensure price protection. DRA is concerned that lack of a cost cap "exposes ratepayers to an unknown installed cost ceiling and unknown total program costs and revenue requirement."<sup>47</sup>

We share this concern. It is our intent to protect against unreasonable costs. It is also our intent to ensure that generation from IPP and UOG sources are treated on an equal basis. Increasing the capacity of the IPP share of the program to the same level as SCE will help advance our goal of developing more renewable projects, while affording equal and fair treatment to UOG and IPP projects. At the same time, capping the price paid to IPP projects at 100% of SCE's LCOE provides reasonable protection to ratepayers against the total cost of the program.

Therefore, we authorize SCE to own, develop, install, maintain and operate up to 250 MW (50 MW on an annual basis) of solar PV projects of one to two MW range, located in SCE's service territory, primarily on rooftops, and to seek competitive solicitation for electricity from another 250 MW (50 MW on an

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<sup>47</sup> DRA Comments at p. 5.

annual basis) of one to two MW solar rooftop projects that are owned, installed, operated and maintained by IPPs.<sup>48</sup> The SPVP remains as a five year program. However, the 50 MW/year average is not a cap on annual installations and we encourage SCE to accelerate the development of both UOG and IPP projects if practical and without adversely affecting program costs. IPP bids should be capped at prices no greater than 100% of SCE's LCOE. For administrative simplicity, we use SCE's estimated LCOE as a reasonable proxy for this purpose. We clarify that this price only applies to the projects under the SPVP. As noted before, future RPS projects will continue to be evaluated and receive payments according to the existing RPS process.

In approving both a UOG program and an IPP program, we are addressing solely the proposals before us in this proceeding and are not establishing a precedent for other possible UOG or IPP renewable programs. Nor are we establishing modifications to the rules specified in other proceedings regarding the development and acquisition of resources, whether conventional or renewable.

For the 250 MW of the SPVP that will be developed by the IPPs, SCE shall procure this generation consistent with the objectives, parameters and timeframe established for the UOG projects of the SPVP. In comments to the PD several parties opposed the PPA portion of the SPVP and suggested changes to the structure of the competitive solicitation. Solar Alliance suggests that we provide

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<sup>48</sup> We expect the bulk of the SPVP projects to be in the range of one to two MW and also on rooftops with some limited exception for ground-mounted projects. However, in no event should ground-mounted projects be more than 10% of the overall program capacity.

additional directions for the PPA portion of the PD, including allowing the use of a standard offer contract to minimize the time for regulatory review.<sup>49</sup>

Solar Alliance recommends using the Assembly Bill (AB) 1696 standard offer contract as a template.

We agree that a standard offer contract will help expedite the review process, and will also minimize litigation of complex contracting issues. Modeling the SPVP PPA contracts on the existing AB 1969 standard offer contracts seems reasonable and we direct SCE to do so in the advice letter implementing the PPA portion of the SPVP. To the extent SCE believes modifications to the AB 1969 contract are necessary or beneficial, SCE may also provide a modified contract along with the AB 1969 contract in its advice letter.

DRA, TURN and Recurrent recommend that SCE and IPPs submit bids pursuant to an annual competitive RFO process conducted by SCE with the oversight of an Independent Evaluator (IE). Solar Alliance opposes the PD's authorization for SCE to lease all required roof space and requests that we require SCE to provide information regarding locations on its distribution grid that could potentially benefit from distributed generation with IPPs so that IPPs can use the information to site and lease roof spaces for their projects.<sup>50</sup> Solar Alliance also suggests that we adopt an 18-month deadline for IPP projects coming on line and establish a process for under subscription or

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<sup>49</sup> Solar Alliance Comments at p. 10.

<sup>50</sup> Solar Alliance Comments at p. 10 and Reply Comments at p. 5.

oversubscription to RFO process. SCE opposes the roof lease provision in the PD, claiming that it would burden SCE with liability.<sup>51</sup>

We have modified the PD to clarify the PPA portion of the SPVP. In order to ensure that the competitive PPA solicitations are administered appropriately, SCE shall use an IE to oversee the solicitations consistent with and pursuant to the requirements established in D.07-12-052. Other changes are discussed below:

- SCE shall identify locations where distributed solar PV will be desirable, thereby optimizing the locational value of the project sites, and make this information available to potential bidders. SCE should make these locations known to IPPs in a manner that is consistent with consumer privacy, either by identifying circuits and substations or zip codes where distributed generation should be located. SCE is not obligated to lease all the required roof and SCE should not reject a PPA that has negotiated a roof lease on its own.
- SCE shall issue competitive RFOs at least once per year. The RFOs shall seek to procure approximately 20% of the 250 MW each year. The 20% is a guideline only, and is meant to merely ensure that annually the same level of opportunity is provided for IPP project solicitation as the UOG portion. We decline to adopt Solar Alliance's proposal for over or under subscription to RFO solicitation process at this time. We defer that determination to the advice letter process.

Within 30 days of the effective date of this decision, SCE shall file an Advice Letter with the Energy Division outlining the RFO process and timeline, delineating the criteria for evaluating offers received and containing a draft standard 20-year PPA contract for use in the RFO. To encourage expeditious

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<sup>51</sup> SCE Comments at p. 12.

development of these resources and minimize unnecessary costs and delays, we encourage SCE to include in its proposed RFO process a means for expediting Commission review and approval of the resulting contracts, such as the use of Tier 2 advice letters.

We reject DRA's proposal to allow only a single or a small group of projects to proceed at a time via advice letter. Approving small groups of projects would reduce SCE's purchasing power and could drive up the per-watt cost of the SPVP.

We decline to make any determination regarding a FiT here and reject Recurrent's proposal to establish a FiT instead of the SPVP. The Legislature and the Commission are considering FiT outside this proceeding.

We also reject SCE's proposal that it be allowed to count the output of SPVP towards any CSI goals in the future. CSI and the SPVP are fundamentally different programs. CSI is a self-generation program, designed to promote on-site use of solar systems. CSI systems are behind the customers' meters and serve onsite load, and they are not net exporters to the electrical grid. The scope of the CSI is limited to small-scale residential and commercial solar PV applications. The SPVP, on the other hand, is designed for solar PVs installations of one to two MW on sites with large roof spaces, but relatively small loads, and with the specific purpose of feeding the generated electricity to the grid. Unlike the SPVP, CSI energy generated that is beyond customer's load can only be fed into the grid under the net metering program, and while projects in NEM tariffs can export energy during certain times of the day or year, they are prohibited from being net energy exporters on an annual basis. In addition, utility ownership is not included in CSI and IOUs are ineligible to receive CSI

incentives. Because of all these differences, the SPVP will not be counted towards the CSI target.

Furthermore, to ensure there is no conflict between the CSI and the SPVP, we adopt DRA's proposal and direct SCE to target project sites for the SPVP that do not have sufficient on-site load to participate in the CSI program.

Solar Alliance supports this concept, but suggests we require a statement from roof space owners acknowledging that they know and understand the benefits offered through the CSI, but have chosen to lease their roof space for wholesale power production instead.<sup>52</sup> This requirement would provide clarity to the process and may prevent future disputes. We find it appropriate and incorporate it in the adopted SPVP.

We also decline to adopt Greenlining's proposal to require information on supplier diversity and low-income enrollment as part of the adopted SPVP. The Commission has separate processes for monitoring and examining utility supplier diversity and also ensuring that the utilities comply with low-income utility service requirements. The adopted SPVP is not the appropriate vehicle for such review.

## **5. Cost Recovery**

SCE expects to incur approximately \$41.31 million (2008\$) in O&M and \$875.0 million (2008\$) in direct capital expenditures over the 2008 through 2014 program period, and requests that the Commission find reasonable up to \$962.5 million (2008\$) in direct capital expenditures during the 2008 through

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<sup>52</sup> Solar Alliance comments at pp. 4-5.

2014 program period.<sup>53</sup> SCE has also requested authority to establish the Solar PV Program Balancing Account (SPVPBA) to record the difference between: (1) the actual incremental O&M and capital-related revenue requirement and; (2) the recorded Solar PV Program-related revenue. We find these cost estimates reasonable.

DRA in comments to the PD recommends an annual review of SCE's plant operation via a Tier 3 advice letter.<sup>54</sup> DRA also suggests that SCE's lease costs above \$21,000/MW/Year (20% over SCE's estimate) and SCE's annual O&M costs above \$33,000/Year (20% over SCE's estimate) be disallowed.<sup>55</sup> As discussed below, we will review SCE's operation of SPVP (including SCE's maintenance practices and performance of the facilities) in its ERRA proceeding, and review all program costs (including O&M costs) in SCE's GRC. We direct that SCE's lease costs and SCE's annual O&M costs be subject to reasonableness review in SCE's GRC.

## **6. Scope and Timing of Reasonableness Review**

### **6.1. Parties' Positions**

Greenlining argues that "the SPVP is a more costly and less certain means of achieving progress toward the Million Solar Roofs goal, as compared to CSI, and will not result in savings to Edison's ratepayers."<sup>56</sup> Greenlining is concerned that in contrast to the CSI, where the ratepayers only fund incentives given to

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<sup>53</sup> The \$962.5 million includes a 10% adder.

<sup>54</sup> DRA Comments at p. 2.

<sup>55</sup> *Ibid.*

<sup>56</sup> Greenlining Opening Brief at p. 7.

productive installations, there are no performance incentives in the SPVP to protect the ratepayers from the risk that the SPVP might not produce the energy it promised. For that reason, Greenlining recommends that should the Commission choose to approve the application, it should hold SCE to performance standards as part of the annual reasonableness review, so that SCE's ratepayers are not required to pay for installations that are less productive than CSI installations.

TURN recommends that if the Commission authorizes SCE's project as proposed, it would also require some risk-sharing of cost overruns. TURN argues that if SCE cannot deliver the estimated lower capital costs, then it should share the capital cost overruns of up to 20% with its shareholders.<sup>57</sup> Likewise, TURN recommends that any cost savings in capital costs below \$3.50/W be shared 80/20 between ratepayers and shareholders.

CARE also recommends that we adopt a cost sharing mechanism between the ratepayers and the shareholders. CARE advocates that we use here the ratemaking mechanism that was adopted in D.94-05-020.

SCE explains that the review of SPVP will take place in SCE's annual ERRR reasonableness proceedings, where SCE must prove that all its plant operations were reasonable. SCE contends that in the ERRR reasonableness proceedings, the Commission, "after-the-fact," determines if SCE has effectively managed its generating units in order to achieve appropriate system

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<sup>57</sup> TURN recommends that because costs may vary annually, the utility be authorized to combine the costs over the lifetime of the program for purposes of calculating the sharing requirement. (See TURN's Opening Brief, at p. 23.)

performance based on what it knew or should have known at the time.<sup>58</sup> SCE argues that if as part of this review, the Commission finds that the SPVP did not operate in a prudent manner, the Commission could disallow recovery of the replacement power costs (i.e., the replacement power costs would be borne by SCE's shareholders rather than customers). SCE argues that no form of cost sharing or additional incentives are necessary because the review process in ERRRA will create adequate incentives for prudent system performance.<sup>59</sup>

## **6.2. Discussion**

SCE's claimed primary potential benefit of the SPVP is that this project would provide additional MWs of renewable energy. However, several parties contend that as proposed, there is no guarantee that any of the projected power will be actually delivered. Parties are therefore concerned that the ratepayers will be paying for an investment that may never produce the expected benefits, and they encourage us to consider some protection in case the expected benefits from the investments paid by ratepayers are never realized.

As a general matter, the Commission has an ongoing duty to ensure that utility investments result in infrastructure that is used and useful. In the context of utility owned generation, we have long-standing policies and procedures in place under which utility projects are reviewed to make sure that approved investments are being made in a reasonable manner and that the resulting facilities actually fulfill their stated purpose. As SCE points out, in the context of utility generation projects, this review is done in the utilities' annual Energy

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<sup>58</sup> SCE Opening Brief at p. 29.

<sup>59</sup> SCE Opening Brief at p. 29.

Resources Recovery Account proceedings. We see no compelling reason why in the context of the SPVP we should stray from this existing process. While the program is itself new there is nothing about the UOG portion of the program, nor anything parties have presented, to suggest that the ERRA proceeding and the after the fact reasonableness review of operations conducted therein is insufficient to protect ratepayer interests. As SCE notes, should the Commission find in the ERRA proceeding that SCE did not live up to its responsibilities or did not prudently maintain and operate the solar facilities built pursuant to this program, the Commission can disallow recovery of certain costs.

We decline to adopt TURN's framework for sharing cost overruns between ratepayers and shareholders in the event that installation costs exceed \$3.85 a watt. Reasonableness of capital costs, O&M costs and other UOG expenses are typically addressed in a utility's GRC. We see no reason why review of SPVP costs should be different than for other utility owned resources. However, as discussed above, we will use the ERRA proceeding to review SCE's operation of the SPVP plant.

In addition, to help the Commission better understand the impacts of this program, and the comparative costs and benefits of UOG and IPP solar PV generation, the Commission will monitor this program on an ongoing basis. As part of this review, we will examine, among other measures, the result of the competitive solicitation and the number of market participants competing for access to the one to two MW market. We will also monitor the prices received under the PPA portion of the program as well as the costs SCE incurs under the UOG portion of the program. This will provide for a broader comparison between utility owned renewable generation and generation projects that result from the competitive solicitation. Because SCE's GRC occurs only every

three years, in order for the Commission to have timely data to evaluate this program and consistent with the requirements of Pub. Util. Code § 2775.5, SCE shall file an annual compliance report in this proceeding. SCE shall consult with Energy Division to develop the format and content of the report. The information provided in these reports shall be reviewed by Energy Division and shall be reflected in the Commission's reports to the legislature on the RPS program.

The first report shall be filed on July 1, 2010. The report shall include, at a minimum, the following:

- All solicitations issued for PPA contracts;
- A description of all bids received from the PPA solicitations, including name of bidder, location of bid, bid price, and description of proposed facility (generating capacity, type of technology, host customer, host tenant, and on-site load). SCE should indicate the winning bids;
- The total electrical output for all SPVP systems under PPS contract that are currently selling electricity to SCE, for each month of the previous year.
- A calculation of the LCOE for each SCE-owned facility that is completed and interconnected to the grid. SCE should accompany this calculation with workpapers showing actual amounts for all cost and electrical output entries that are used to calculate LCOE;
- Electrical output by month for the previous year for each SCE-owned facility that is completed and interconnected to the grid; and
- A description of all facilities for which work has been initiated or completed in the previous year, including: capital and O&M expenses; generating capacity; description of the site (host customer, host tenant, lease cost and on-site load); progress toward completion.

Resolution E-4182 authorized SCE to establish a memorandum account to record the incremental O&M and capital-related revenue requirement associated with the first \$25 million of direct capital expenditures in the SPVP (SPVPMA). Ordering Paragraph 4 states that the Commission will address rate recovery of the amounts recorded in the SPVPMA when it acts on SCE's SPVP application. SCE shall transfer the balance in the SPVPMA to the SPVPBA for future rate recovery after the Commission reviews the balance in the ERRA proceeding.

## **7. Rate of Return Issues**

### **7.1. Parties' Position**

SCE requests that its investment earn 100 basis points above its authorized ROR. SCE claims that D.06-05-039 allows the Commission to authorize this increase for utility-owned renewable generation.<sup>60</sup> SCE first made its request as follows:

“As authorized in D.06-05-039, SCE calculated the rate of return on rate base using SCE's current authorized rate of return of 8.75%, plus 1%, since this new plant will be utility-owned renewable generation.”<sup>61</sup>

SCE later in its rebuttal testimony noted that its proposal meets the requirements of § 454.3(c), because it will develop a segment of the market that currently lacks production.<sup>62</sup>

DRA and TURN oppose SCE's request on the basis that it does not meet any one of the requirements of § 454.3, although TURN in its opening brief notes that the minimum 50 basis points could be justified, albeit “under the most

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<sup>60</sup> Exhibit SCE-1 at p. 55.

<sup>61</sup> *Id* at p. 54.

expansive reading of the statute.”<sup>63</sup> DRA argues that “the rooftop solar systems that SCE proposes in this application are not experimental in nature, but rather the same basic technology as the other 280 MW of grid-connected solar PV already installed in California.”<sup>64</sup>

TURN also argues that the ability of utilities to avail themselves of the ITC as established by the 2008 federal bailout legislation provides sufficient incentive to the utilities to pursue renewables and therefore the additional incentive offered under 454.3 is unnecessary.<sup>65</sup>

## **7.2. Discussion**

Pub. Util. Code § 454.3 in relevant parts provides that:

The Commission may, after a hearing, approve an increase of from one-half of 1 percent to 1 percent in the rate of return otherwise allowed an electrical corporation on its electric plant for investment by the corporation in facilities meeting the following requirements: ...

(c) ...The facility is experimental and is, in the determination of the commission, reasonably designed to improve or perfect technology for the generation of electricity from renewable resources or to more efficiently utilize other resources in a manner which will decrease environmental pollution from and lower the costs of the electricity generated.

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<sup>62</sup> Exhibit SCE-2 at p. 20.

<sup>63</sup> TURN Opening Brief at p. 26.

<sup>64</sup> Exhibit 404.

<sup>65</sup> TURN Comments at p. 6.

SCE argues that its SPVP investment should earn 100 basis points above its authorized ROR because D.06-05-039 authorized the increased ROR. We disagree.

In D.06-05-039 at p. 28, the Commission acknowledged § 454.3 and stated that:

“a utility may build a renewable resource and, and under appropriate circumstances, earn between 0.5% and 1.0% increased rate of return on the investment. That is, the Legislature has authorized an increased incentive for utility ownership of renewable generation. We think IOUs should consider taking advantage of this law and, where reasonable and appropriate, we will authorize the increased rate of return.”

The sole purpose of the above statement was to signal to the utilities the availability of incentives for the utility-owned renewable generation under circumstances authorized by § 454.3. The decision did not automatically authorize an increased ROR for SCE’s renewable projects. Moreover, § 454.3 requires the Commission to hold hearings before granting an increase in a utility’s ROR. No such hearings were conducted prior to our issuing D.06-05-039. Thus, the Commission did not authorize the increase to SCE’s ROR in D.06-05-039, and that issue should be decided here. We proceed to determine if SPVP qualifies for an increased ROR under § 454.3 and if so, the amount of such increase.

Section 454.3 provides three categories under which projects would be eligible for additional return. The first and the second categories are irrelevant here. We therefore consider whether the SPVP meets the requirement of § 454.3(c), quoted above.

Section 454.3(c) does not define the criteria for assessing whether a facility is experimental. Absent a clear definition, we are left to determine what types of projects might fit this criteria. We can definitively say that the core technology SCE has proposed to deploy is not experimental. As DRA observes, the projects SCE proposes to build under the SPVP rely on the same basic technology as the vast majority of all other grid connected solar PV in California. SCE's arguments, regarding the notion that the projects are experimental because they are targeting a new market segment, are not persuasive. While the program is intended, in part, to facilitate market transformation in a heretofore untapped segment of the energy market, we do not believe that objective fulfills the requirement or intent of 454.3(c). The program is not designed to address or refine the core technology, rather it is about driving the costs of deploying an existing technology down by creating a new market opportunity.

We disagree with TURN's argument that the availability of the ITC, and the associated increase in the profitability of utility owned renewable projects this provides, should substitute for the additional incentive that can be provided via the authority granted under 454.3. While we do not believe the UOG projects under the SPVP qualify for the increase in the authorized rate of return, we can envision circumstances where the Commission may wish to grant an increase in the rate of return for eligible projects despite the fact that utilities can now take advantage of the investment tax credit.

## **8. Comments on Alternate Proposed Decision**

The alternate proposed decision of Commissioner Bohn in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments are allowed pursuant to Rule 14.3 of the Commission's Rules of

Practice and Procedure. Opening comments were filed on June 9, 2009, and reply comments were filed on June 15, 2009.

### **9. Assignment of Proceeding**

Michael R. Peevey is the assigned Commissioner and Maryam Ebke is the assigned Administrative Law Judge in this proceeding.

### **Findings of Fact**

1. California has a number of existing programs that support the large scale deployment of solar generating technologies, including the California Solar Initiative and the Renewables Portfolio Standard program.

2. The Energy Action Plan I, adopted in 2003, specifically identified the promotion of customer and utility owned clean and renewable distributed generation as a key component of achieving the state's overarching energy objectives.

3. The programs which encourage development of solar energy facilities have left a gap in the one to two MW solar energy market.

4. A variety of legislative or policy options may fill the gap in the one to two MW solar energy market.

5. The SPVP is one possible solution to help address the existing gap in the one to two MW solar energy market.

6. Because new transmission facilities are not required to deploy rooftop solar PV facilities and construction requires little to no environmental review, the SPVP can help advance California's broad goal of quickly developing renewable energy while other options are being pursued.

7. D.07-12-052 referred to preferred resources, but also acknowledged that there are additional factors associated with utility ownership of renewable and

other loading order or non-conventional resources that have not been fully vetted in this proceeding.

8. In D.07-12-052, the Commission intended to reserve its discretion to treat preferred resources, including renewables, differently from conventional resources for purposes of determining if UOG projects are reasonable.

9. The Commission has established a general policy that favors market competition for the procurement of energy resources.

10. The adopted SPVP will create opportunities for independent solar energy producers to compete for 50% of the one to two MW rooftop solar projects covered by SCE's application.

11. The adopted SPVP will allow the Commission to compare and contrast the UOG portion of the program with the PPA portion of the program.

12. The adopted SPVP is in the ratepayers' interest.

13. Neither the CSI nor the RPS provides a proper benchmark for determining whether the cost of the SPVP is reasonable.

14. The adopted SPVP has many favorable attributes.

15. Reducing the UOG portion of the program below 250 MW will adversely impact the ability of SCE to hit the cost targets it identified in its application.

16. The CSI and the SPVP are fundamentally different programs.

17. The RPS and SPVP have similar, but different, objectives.

18. The Commission has an ongoing responsibility to ensure that utility investments result in infrastructure that is used and useful.

19. Should the Commission find in the applicable ERRA proceeding that SCE did not live up to its responsibilities, that the performance of the facilities is unreasonably poor, or that SCE did not prudently maintain and operate the solar

facilities built pursuant to this program, the Commission can disallow recovery of certain costs.

20. The prospect of a reasonableness review should costs exceed \$3.85 per watt coupled with the opportunity the PPA portion of the program provides to compare and contrast the UOG projects with the PPA projects is sufficient to motivate SCE to focus on superior performance and cost.

21. The adopted SPVP seeks to promote deployment of an existing technology into a heretofore untapped market niche.

### **Conclusions of Law**

1. The SPVP is one possible solution to address the existing gap in the one to two MW solar energy market and to help advance renewable development.

2. Pub. Util. Code § 2775.5 does not apply to the SPVP as proposed by SCE or as adopted herein because neither program seeks to allow SCE to manufacture, lease, sell or otherwise own or control any solar energy system as the term solar energy system is defined in § 2775.5.

3. SCE should own, develop, install, operate, and maintain up to 250 MW of the SPVP projects and procure 250 MW of one to two MW projects from independent solar energy producers.

4. SCE should procure the 250 MW of rooftop solar generation from independent solar energy producers consistent with the objectives, parameters and timeframe established for the UOG projects of the SPVP.

5. SCE should target project sites for the SPVP that do not have sufficient on-site load to participate in the CSI program.

6. The output of the SPVP projects should not be counted toward the CSI goal.

7. The energy generated from the SPVP projects should be counted toward SCE's RPS goal.

8. The UOG portion of the SPVP should be subject to cost of service regulation.

9. Review of all SPVP costs should be conducted in SCE's GRC proceeding and review of SPVP performance and SCE's operation of the facilities should be conducted in SCE's annual ERRRA proceeding.

10. Costs above \$3.85/W should be subject to a reasonableness review.

11. SCE should be authorized to establish a balancing account to record the difference between the SPVP's actual and recorded expenses and revenues.

12. The Commission should monitor the SPVP on an ongoing basis to assess the progress and impacts of the program on the wholesale distributed solar energy market. A full review of the SPVP should occur in SCE's GRC proceeding.

13. The adopted SPVP does not meet the criteria of Pub. Util. Code § 454.3 for an increase of 100 basis points.

14. Within 30 days of the effective date of this decision, SCE should file an advice letter with the Energy Division delineating the criteria for selection of the bids, and containing a draft standard 20-year PPA contract for use in the RFO.

15. SCE should file an annual compliance report as described in Section 6.2 of this decision. The first report should be due on July 1, 2010, and subsequent reports filed on July 1 every year thereafter. The filing of the compliance report does not re-open the proceeding.

16. A.08-03-015 should be closed.

## O R D E R

**IT IS ORDERED** that:

1. Southern California Edison Company's solar photovoltaic program is modified as follows:

- 250 megawatt of utility-owned distributed generation (about 50 megawatt annually). Southern California Edison Company to own, install, operate and maintain distributed solar photovoltaic projects primarily in the one to two megawatts, located in Southern California Edison Company's service territory on existing commercial rooftops. Projects cost target at \$3.50/Watt with a 10% contingency.
- 250 megawatt of distributed generation owned by independent power producers (about 50 megawatt annually) to be solicited at least once per year. Bids capped at Southern California Edison Company's estimated levelized costs of electricity. An Independent Evaluator should be secured to oversee the solicitation for the first two years of the program and thereafter if a utility affiliate participates in that process. Contracts will be based on standard 20-year power purchase agreement contracts.
- A five-year program.
- Cost of service treatment for utility-owned generation portion of the program.
- No increase in authorized rate of return.
- Costs in excess of \$3.85 per watt subject to a reasonableness review.

2. Within 30 days of the effective date of this decision, Southern California Edison Company shall file an Advice Letter with the Energy Division delineating the criteria and process for evaluating offers received and containing a draft

standard 20-year power purchase agreement contract for use in the request for offer.

3. Southern California Edison Company shall transfer the balance in the Solar Photovoltaic Program Memorandum Account to the Solar Photovoltaic Program Balancing Account for future rate recovery after Commission's review of the balance in the energy resource recovery account reasonableness proceeding.

4. Southern California Edison Company shall file an annual compliance report in this proceeding as described in Section 6.2 of this decision. The first report shall be filed on July 1, 2010, and subsequent reports filed on July 1 thereafter. The filing of the compliance report does not re-open the proceeding.

5. Application 08-03-015 is closed.

This order is effective today.

Dated June 18, 2009, at San Francisco, California.

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

I reserve the right to file a concurrence.

/s/ Dian M. Grueneich  
Commissioner

**Commissioner Dian M. Grueneich Concurrence on  
CPUC Approval of the SCE Solar PV Application (A.08-03-015)  
June 18, 2009**

Our Commission's approval of this application is a bold move, and I do not take this move lightly. I have seriously considered the ratepayer concerns articulated by The Utility Reform Network, the Commission's Division of Ratepayer Advocates, and others. Notwithstanding those concerns, I am voting in favor of Commissioner Bohn's alternate decision because I believe that commercial-scale rooftop solar photo-voltaic (PV) resources are a critical component to California's Renewable Portfolio Standard (RPS) program that have not yet been adequately deployed. Today's decision will provide ratepayer funding for a program to develop up to 500 megawatts (MW) of commercial-scale rooftop solar PV - a big step towards facilitating the rapid deployment of this technology. By approving both utility-owned and independent power producer projects, we intend to create a pool of information regarding the comparative costs and benefits of these two ownership structures that will inform future Commission decisions.

This Commission needs to focus on commercial-scale rooftop solar PV because this technology should provide a number of deployment benefits that few other renewable resources can match. It is constructed on existing rooftops, and does not require transmission investment. Thus, rooftop solar PV can be deployed quickly with minimal environmental impacts compared to other renewable technologies.

Thus far, for a number of reasons, our RPS program has failed to attract commercial-scale rooftop solar PV projects. I commend Southern California Edison Company (SCE) for taking the initiative to bring this proposal to us.

While imperfect, SCE's proposal provided the framework for us to debate the value of this resource, and to move forward to facilitate deployment of commercial-scale rooftop solar PV in SCE's service area. SCE's proposal highlights that this Commission has not, thus far, developed an overall strategic plan and implementing roadmap to meet California's renewable goals. Instead, we address issues – like this one – piecemeal through isolated utility applications. I sincerely hope that going forward in the next year we focus our efforts on developing a coherent strategic plan to reach our 33% goals.

The issuance last week of the Commission staff's 33% RPS Implementation Analysis Preliminary Results Report is a first step because it acknowledges that there are differing paths to achieving the 33% goals, that many of our RPS policy objectives are mutually exclusive and in conflict with one another, and that the tradeoffs are being decided through isolated decisions in the utility procurement process, rather than through a coherent plan that prioritizes policy choices. We are spending billions of ratepayer dollars on RPS and betting our planet's future on its success. Today we take a useful step, but we must develop, vet in a public process, and adopt, as soon as possible, a coherent plan by this Commission for use of ratepayer dollars to achieve our RPS goals going forward.