Decision 13-05-033 May 23, 2013

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 PARTIALLY GRANTING SOUTHERN CALIFORNIA EDISON COMPANY'S PETITION FOR MODIFICATION OF DECISION 12-02-035 (SOLAR PHOTOVOLTAIC PROGRAM)

1. Summary

This decision partially grants Southern California Edison Company's (SCE) petition for modification of Decision (D.) 12-02-035 regarding the Solar Photovoltaic Program (SPVP).

The SPVP, adopted in 2009 (D.09-06-049), is a 500 megawatt (MW) solar photovoltaic generation program, with 250 MW utility-owned generation (UOG) and 250 MW owned by independent power producers (IPP). As modified by D.12-02-035, the total program remains at 500 MW, but with no more than 125 MW designated for utility ownership, no more than 125 MW designated for IPP ownership, and 250 MW transferred to the Renewable Auction Mechanism (RAM) program.

SCE now petitions to reduce the utility ownership portion from 125 MW to 91 MW, with the 34 MW differential transferred to the RAM program. We grant the petition as to the reduction of the UOG portion of the SPVP and the reallocation of the 34 MW to RAM. As modified, the UOG portion of the

program will be no more than 91 MW of utility ownership, with 34 MW direct current (31 MW alternating current) procured through the RAM program. We do this to reduce costs, promote simplicity and maximize program efficiency. We reduce our previous finding of the total amount of reasonable program costs to track the program changes adopted here. We also make conforming changes to the RAM program by modifying D.10-12-048. SCE's petition also requested that the Commission, under Rule of Practice and Procedure 16.4(h), issue an immediate order staying SCE's UOG obligations pending the disposition of its petition. This request is now moot and is therefore denied. This proceeding is closed.

2. Background

On June 22, 2009, we adopted a Solar Photovoltaic Program (SPVP) for Southern California Edison Company (SCE). (*See* Decision (D.) 09-06-049 in Application 08-03-015.) The SPVP is a five-year program to develop 500 megawatts MW) of direct current (DC) electricity procured from solar photovoltaic (PV) facilities on existing commercial rooftops using plants generally in the size range of one to two MW per project. As originally approved the SPVP was composed of 250 MW of utility-owned generation (UOG) and 250 MW of power purchase agreements with independent power producers (IPP).

On December 17, 2010, we adopted the Renewable Auction Mechanism (RAM) as part of the Renewables Portfolio Standard (RPS) program. (*See* D.10-12-048 in Rulemaking 08-08-009.) RAM is a procurement mechanism for utility purchases from IPPs of alternating current (AC) electricity generated by

IPPs using eligible renewable facilities from 1 to 20 MW per project.[1] Our initial implementation of RAM is in a two-year program for the three largest investor-owned utilities (IOUs) to purchase at least 1,000 MW and SCE's portion is 498.4 MW. Due to the Commission's approval of previous modifications of the Solar PV programs of San Diego Gas & Electric Company (SDG&E) and SCE, the RAM program is now at 1,299 MW. (*See* D.12-02-002 and D.12-02-035.)

On February 16, 2012, we partially granted an SCE petition for modification of SPVP, with conforming changes to RAM. (*See* D.12-02-035, which modified both D.09-06-049 (SPVP) and D.10-12-048 (RAM).) As modified, the SPVP remained a five-year 500 MW program, but was adjusted to no more than 125 MW of UOG (with no less than 115 MW without additional Commission authorization), no more than 125 MW of IPP ownership (with no less than 115 MW without additional Commission authorization), and with the remaining 250 MW DC (equivalent to 225 MW AC) procured through RAM.[2] We directed SCE to file a Tier 2 advice letter no later than 180 days before the end of

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[1] Eligible renewable facilities are determined by the California Energy Commission (CEC). Eligible facilities include Solar PV, wind, biomass, geothermal, and several other types. (*See* RPS Eligibility Guidebook, Sixth Edition, CEC, Efficiency and Renewable Energy Division, Publication Number: CEC-300-2012-006-CMF; August 2012 at 12.)

[2] The capacity in SPVP is DC, while the capacity in RAM is AC. We use a factor of 0.9 to convert DC to AC, thereby transferring 250 MW DC (equal to 225 MW AC) from SPVP to RAM. (D.12-02-035 at 22 (footnote 23).) With the transfer of 225 MW AC to RAM, SCE's total RAM procurement obligation became 723.4 MW (i.e., 498.4 MW plus 225 MW). Consistent with our authorization to do so, SCE applied 98 MW from its 2010 Renewable Standard Contract (RSC) Program to its RAM obligation, leaving 625.4 MW for RAM (i.e., 723.4 less 98). (*See* D.10-12-048 at 30; Advice Letter 2785-E dated October 1, 2012.)

the five-year SPVP if SCE plans to either own less than 115 MW of UOG or procure less than 115 MW from IPPs.

On May 1, 2012, SCE filed Advice Letter 2724-E seeking authorization to reduce the UOG allocation by 15 MW, from 125 MW to 110 MW. On June 13, 2012, the Director of the Energy Division denied the request.

On July 27, 2012, SCE petitioned to modify D.12-02-035. By the August 27, 2012 deadline, three responses were filed: support by the Division of Ratepayer Advocates (DRA), partial support by the Solar Energy Industries Association (SEIA), and opposition by the Clean Coalition. On September 6, 2012, SCE filed a reply.

3. Timing of Petition

A petition for modification must be filed within one year of the effective date of the decision proposed to be modified or, absent sufficient justification by petitioner for the delay, the petition is subject to summary denial. (Rule 16.4(d) of the Commission's Rules of Practice and Procedure.) The effective date of D.09-06-049 is June 22, 2009 (the day it was issued), while the petition was filed on July 27, 2012, nearly three years later. SCE's petition is eligible for summary denial, but we decline to do so.

We are convinced by the petitioner that the petition could not reasonably have been filed earlier. The information upon which petitioner relies has been the result of both SPVP implementation and PV market development over time. We are also persuaded by SCE that dynamic changes in the Solar PV market have continued to occur since the issuance of D.12-02-035, which modified D.09-06-049. The earlier petition did not fully reflect those recent changes. We are persuaded that adequate reasons justify our consideration of the petition on its merits, and we decline to issue a summary denial.

4. Petition and Responses

We first briefly summarize the petition, parties' responses, and SCE's reply.

SCE petitions for two modifications:

1. SPVP: a reduction of 34 MW-DC[3] in the UOG portion (from 125 MW to 91 MW); and
2. RAM: an increase of 31 MW-AC (by reassigning the 34 MW-DC from SPVP to RAM).

In support, SCE says that when it first proposed SPVP in 2008 the Solar PV market was much smaller than it is today and Solar PV prices were not competitive with other renewable sources. SCE states that it proposed SPVP with four initial goals: 1) market transformation, 2) improved processes, 3) development of a PV installation workforce, and 4) advancement of PV industry knowledge. (Petition at 9.) SCE asserts that SPVP has accomplished these goals, with the market now transformed and Solar PV a competitive technology. Claiming that the UOG portion in particular has been successful, SCE identifies about 25 new UOG solar plant projects totaling approximately 91 MW that are now energized, under construction, or expected to be built.[4]

SCE says, however, that it is now less economic and more difficult to build UOG Solar PV projects. For example, SCE claims it is currently possible to

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[3] SCE indicates that the 34 MW consists of 18 MW of ground-mount projects and 16 MW of rooftop projects. (Petition at 11.)

[4] Of the 91 MW, SCE says 7 MW are ground-mounted (energized) and 84 MW are rooftop (energized, in construction, or expected to be built). Of the 84 MW rooftop facilities, SCE reports 65 MW are energized, 10 MW are under construction (with expected operation in mid-August 2012), and 9 MW appear to be viable. (Petition at 1, 4-5; SCE Reply to Responses at 1.)

purchase generation from Solar PV technology at less cost than the cost of UOG. These purchases, according to SCE, are possible through any one of several programs, such as the RAM, Feed-in-Tariff (FIT)/Renewable Market Adjusting Tariff (ReMAT), or net energy metering (NEM). Further, SCE reports that its UOG SPVP commitments have changed and that it is more difficult to build UOG Solar PV, largely due to a reduction in the number of viable sites, scheduling issues, and relatively high UOG costs. SCE states it is compelled to inform the Commission that several of its UOG projects are at risk and may not be developed as UOG under SPVP. SCE estimates that reducing the UOG portion of SPVP by 34 MW will save SCE ratepayers about $100 million in capital costs, plus $1.4 million per year in operation and maintenance expenses. SCE concludes that it is in the best interests of SCE's ratepayers for the Commission to quickly reallocate a portion of the UOG component from SPVP to RAM.

DRA agrees, arguing that the IOU Solar PV programs have price caps that are exorbitantly high and uncompetitive. DRA says SCE is right that it is not in the best interest of ratepayers to continue with the current UOG portion of SPVP. In addition, DRA claims a transfer of 34 MW DC to RAM will save administrative costs and provide a clearer path for developers regarding contracting opportunities with IOUs. DRA also indicated that SCE should clarify if it intends to include the additional 31 MW AC in the peaking as-available category.

SEIA partially agrees with SCE, saying SEIA does not object to the reduction in MW allocated to the UOG portion. According to SEIA, however, those MW should not be transferred to RAM but should be transferred to the IPP portion of SPVP, thereby maintaining the SPVP goal of robust competition for rooftop projects near load centers.

Clean Coalition opposes SCE's petition. Clean Coalition contends that SCE's proposed changes fail to support the program's original goals (including development of projects in the one to two MW range, and securing benefits of generation that is close to load). Clean Coalition also asserts that SCE's proposal is not adequately justified by estimated savings. Clean Coalition concludes that the successful SPVP program should not be abandoned without good cause.

SCE replies, pointing out the Commission has already rejected shifting SPVP MW from UOG to the IPP portion of SPVP. SCE also clarified that it will assign the reallocated 31 MW AC to the peaking as-available category of RAM.

5. Discussion

We partially grant SCE's petition to modify the SPVP by reducing the UOG portion of the SPVP from 125 MW to 91 MW and transferring 34 MW DC (31 MW AC) to SCE's RAM program. Other SPVP program and solicitation parameters remain unchanged. We do this to reduce costs, promote simplicity, and maximize program efficiency. Consistent with D.12-02-035, we reassign the remaining the 34 MW DC to the RAM program to procure this capacity, subject to RAM parameters and protocols that are in effect at the time of contracting.[5] We also reduce the total cost estimates we previously found reasonable to parallel the reduction in the UOG portion (from 125 MW to 91 MW).

5.1. Modification of the UOG Portion of the SPVP

We first consider whether or not to make any changes to SPVP. In support, the petitioner and DRA claim that conditions have substantially

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[5] For procurement via RAM we change the 34 MW in SPVP to 31 MW in RAM. This converts the DC capacity used in SPVP to AC capacity used in RAM.

changed since the approval of the SPVP as well as the subsequent modification of the program by D.12-02-035. SCE claims that the circumstances that the Commission previously relied upon when it previously modified the SPVP are still present, justifying further modification. (Petition at 10.) The Clean Coalition disputes the necessity for any modifications, arguing that further modification will undermine the original goals of the SPVP. (Clean Coalition Response at 2.)

We find for the reasons below that limited modifications are reasonable based on changed conditions. Our modification of the SPVP in 2012 was justified based in part on reductions in Solar PV costs over several years and the availability of other programs providing development opportunities for distributed Solar PV projects in the size of one to two MW. (D.12-02-035 at 7-9.) We find that these same conditions continue today. While we would normally frown upon such piecemeal reductions, we are persuaded that continuing changes in the solar market and the potential savings - both financial and administrative - justifies the small reduction today.

5.1.1. The Solar PV Market has Continued to Change Substantially

The SPVP has achieved significant success in meetings its programmatic goals, playing an important role in the transformation of the Solar PV market. Since its inception, thousands of MWs of Solar PV has been installed on both the customer and utility side of the meter, with an even larger amount contracted for and slated to come online over the next few years.[6] A technology that was

[6] As of July 27, 2012, the date of the filing of SCE's petition for modification, SCE indicates the addition of over 450 MW of customer owned NEM sites through its California Solar Initiative program and the execution of over 2000 MW of Solar PV contracts. (Petition at 9.)

initially considered far too expensive to be a significant part of the IOUs' RPS portfolios has achieved a marked reduction in price that now allows it to effectively compete in the renewable energy procurement market.

Solar PV prices have fallen since the inception of the SPVP and have continued to fall since SCE's previous petition for modification in February 2011. As explained further below, a program modification offers the best opportunity to take advantage of the PV market changes and secure savings for ratepayers. SCE estimates that a reduction of 34 MW in the UOG portion of the SPVP would generate nearly a $100 million savings in capital spending and $1.4 million/year in operations and maintenance (O&M) expenses. (Petition at 3 and 11.)

D.12-02-035 identified that prices for executed contracts in SCE's 2009 and 2010 RSC program were below the applicable market price referent (D.12-02-035 at 7-8.) Subsequent solicitations in other renewable programs indicate that this trend has continued. Evidence of decreasing PV costs is provided by the recent adoption of $89.23/MWh, a rate significantly lower than the $260.00/MWh authorized cost cap for the SPVP, as the initial offer price for the FIT program's ReMAT. (D.12-05-035 at 43-44.) The initial ReMAT offer price was calculated using a weighted average of the highest executed RAM contract from each IOU's first RAM auction.[7] While not all FIT contracts will be executed at this price, it provides a strong indication of current prices since it is based on the *highest* prices of the executed RAM contracts from each IOUs' first RAM auction.

The Clean Coalition questions whether any actual savings will result from the modifications, indicating that SCE's cost savings analysis is flawed because it

[7] The starting price will be adjusted for time of delivery factors.

is calculated based on the cost cap of $260.00/MWh. (Clean Coalition Response at 3.) We disagree. Although it possible, or even likely, that the final cost of the rooftop PV installed under the UOG portion of the SPVP will be less than the authorized cap, there is no guarantee of this. SCE is authorized to incur costs under the program up to the cap of $260.00/MWh and, while we assume that SCE would endeavor to secure the UOG capacity as cost-effectively as possible, ratepayers are at risk for the full amount under the cap if any unexpected cost overruns occur.[8]

In this challenging economic environment it is imperative that we ensure that ratepayer funds are used as effectively as possible and the reallocation of MWs from the UOG portion of the program will help ensure this cost effective use. We pledged in adopting SPVP that we would carefully monitor program progress, examine ways in which the program could be improved, and adjust the program as appropriate. Modifications to SPVP are now necessary and appropriate to capture valuable savings.

5.1.2. The 34 MW Reduction will not Undermine the Intent of the SPVP

Part of the Commission's motivation in adopting SPVP was to reduce the gap in development of one to two MW wholesale distributed Solar PV projects. Opponents of the proposed modification contend that a reduction would undermine the Commission's intent to advance Solar PV projects in this category. We are not convinced.

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[8] Furthermore, if costs exceed the cap, SCE is still authorized to recover these costs overruns subject to a reasonableness review. (D.09-06-049 at Ordering Paragraph 1.)

SPVP, as modified, would still advance the specific projects at issue here by mandating 216 MW for projects in the one to two MW range, with SCE targeting 184 MW for rooftop projects.[9] Furthermore, other programs have been created or modified, however, that provide support to the one to two MW Solar PV market segment, including rooftop projects. For example, the Commission is currently administering the FIT program, which involves the three largest IOUs. D.12-05-035 adopted a new pricing mechanism and program rules for the revised FIT program, increasing the eligible project size from 1.5 MW to 3 MW and creating the ReMAT, a mechanism that allows the FIT price to adjust every other month based on market conditions. D.12-05-035 also increased the overall statewide size of the FIT program to 750 MW, divided between the IOUs and the public-owned utilities. The IOU-share of MWs under the revised FIT program is 493.6 MW, with SCE allocated 226 MW. Rooftop Solar PV is eligible to participate in the FIT program.

Also, rooftop Solar PV projects in the one to two MW size may participate via other programs and methods, such as annual RPS solicitations, Qualifying Facility, and bilateral negotiations. Additionally, the NEM caps have been raised (allowing for more development of behind the meter solar installations), and opportunities improved for customers to sell excess power to the utility at a reasonable rate (if unable to use all the Solar PV generated on-site).[10] Each of

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[9] 80% of the SVPV must be rooftop projects. Therefore, the minimum amount of rooftop PV projects required under the program would be 173 MW based on a reduced program capacity of 91 MW, SCE indicated it will complete 184 MW of rooftop projects. (Petition at 2.)

[10] Assembly (AB) Bill 920 (2009) and AB 510 (2010), amending Pub. Util. Code § 2827.

these new programs, or program changes, reduces the gap in development of one to two MW wholesale distributed solar projects that in part initially motivated our adoption of SPVP.

5.1.3. The UOG SPVP Program Moving Forward

We continue the SPVP, but reduce the UOG portion to 91 MW. We remain committed for now to SPVP advancing distributed small rooftop Solar PV in the one to two MW size range. While we reduce the UOG portion to no more than 91 MW as proposed, we expect SCE to develop 91 MW, or as close to 91 MW as reasonable. We also expect SCE to explain in its periodic SPVP reports if it is not on target to achieve 91 MW of UOG and, if that is the case, to explain what steps it is taking to achieve that goal.[11] If SCE plans to own less than 91 MW of UOG by the end of year five, SCE must file a Tier 2 advice letter seeking authorization. The advice letter must be filed no later than 180 days before the end of year five.

5.2. Reallocation of the 34 MW reduction to the UOG Portion of the SPVP

In its petition for modification, SCE proposed that the 34 MW DC (31 MW AC) UOG residual within SPVP be reallocated to RAM to mirror the transfer of capacity from SPVP to RAM previously authorized in D.12-02-035. SCE claims that procurement of these residual MWs through the RAM program will allow for the procurement of lower cost renewables, while still meeting the goals of SB 2(1x). DRA fully supports SCE's proposal, while the Solar Energy Industries Association supports a reduction of the UOG program as long as the program reduction is transferred to the IPP portion of the program rather than

[11] Annually, on July 1 of each year, SCE files an SPVP compliance report. (*See* D.09-06-049 at 38-39, and Ordering Paragraph 4.)

RAM. The Clean Coalition generally opposes the reduction, contending the SPVP should not be changed, but indicates that, if granted, any reduction should be reallocated the IPP portion of the program.

We will grant SCE's request to reallocate the 34 MW UOG reduction to the RAM program. We adopt the equivalent of a 34 MW DC (31 MW AC) increase in RAM, including the provision that this increment be procured consistent with existing RAM protocols. A major reason for our approval of the modification is the potential of significant cost savings. We agree with DRA and SCE that the RAM program is a more competitive procurement program than the SPVP and provides the opportunity to procure lower-cost renewables for ratepayers. As DRA also says, consolidating the 34 MW with RAM will reduce developer confusion and enhance administrative efficiency. Additionally, reallocation to the RAM program is consistent with our disposition in D.12-02-035 regarding SCE's prior petition to reduce the SPVP. Lastly, stakeholders are familiar with RAM, with three auctions having already closed (November 2011, May 2012, and December 2012) and additional auctions planned. We will use existing RAM protocols without changes, subsets or preferences so that RAM remains a simple, efficient, consistent and reasonably stable procurement opportunity.

SEIA and the Clean Coalition argue that the reallocated 34 MW should be transferred to the IPP portion of SPVP rather than the RAM program because this would support the SPVP goal of robust competition for rooftop projects near load centers. We disagree. The requested 34 MW reduction consists of an 18 MW reduction of ground-mount PV and 16 MW of rooftop PV. Parties have not provided compelling evidence that the relatively small reduction in rooftop PV in the UOG portion of the SPVP will materially affect the level of competition for rooftop projects near load centers. Even if the petition for modification is granted, a minimum of 173 MW of rooftop PV is still mandated under the SPVP, with SCE indicating that it intends to have 184 MW.[12] This amount of rooftop PV in the program should continue to support robust competition, especially when considering that other programs (FIT/ReMAT, NEM, Qualifying Facility, and bilateral negotiations) available to rooftop PV projects will also support robust competition.

The modifications to SPVP adopted here do not change our commitment to advancing small sized rooftop solar. With today's order, however, we take the important additional step of increasing the amount of capacity subject to competition by more than one type of solar project, since RAM allows all types of solar facilities to participate. We also increase the amount of capacity subject to competition by projects up to 20 MW. We do this with the goal of enhancing the downward pressure on prices from all renewable project sizes and technologies, including small rooftop solar, for the benefit of consumers and the state.

5.3. Cost Reasonableness

A reduction in the UOG portion also requires reassessing our previous reasonableness finding with respect to certain costs. In 2009, we found SCE's cost estimates for a 250 MW UOG program reasonable. (D.09-06-049 at 35-36.) Those estimates over the 2008 through 2014 program period were approximately $41.31 million (2008 dollars) in O&M expenses, and $962.5 million (2008 dollars) in direct capital expenditures ($875.0 million (2008 dollars) in

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[12] A reduction of 34 MW would reduce UOG portion to 91 MW and the IPP portion remains at 125 MW, for a total 216 MW. Based on D.12-02-035's reduction of the requirement of rooftop PV to at least 80% of the program total, 173 MW will be mandated for rooftop PV.

direct capital plus a 10% contingency). This is based on a project cost target of $3.50 per watt with a 10% contingency ($3.85 per watt including contingency), with costs in excess of $3.85 per watt subject to a reasonableness review. (D.09-06-049, Ordering Paragraph 1.)

In D.12-02-025, we reduced SCE's authorized expenditures by half, reducing the reasonable cost estimates over the 2008 through 2014 program period to approximately $20.655 million (2008 dollars) in O&M expenses, and $481.25 million (2008 dollars) in direct capital expenditures ($427.5 million (2008 dollars) direct capital plus a 10% contingency). These total costs were again based on $3.50 per watt ($3.85 per watt including contingency), with costs in excess of $3.85 per watt subject to a reasonableness review. (D.12-02-035 at 16-17.)

We will further reduce SCE's authorized expenditures in proportion to its requested UOG program reduction and find it reasonable to follow the same methodology as used D.12-02-025. A reduction from 125 MW to 91 MW equates to a 27.2% reduction. Therefore, we reduce the reasonable cost estimates over the 2008 through 2014 program period to approximately $15.036 million (2008 dollars) in O&M expenses, and $350.35 million (2008 dollars) in direct capital expenditures ($318.5 million (2008 dollars) direct capital plus a 10% contingency). These total costs are based on $3.50 per watt ($3.85 per watt including contingency), with costs in excess of $3.85 per watt subject to a reasonableness review.

If SCE develops less than 91 MW, the reasonable total cost estimates will be based on the number of watts times $3.50 per Watt ($3.85 per Watt including contingency), with costs in excess of $3.85 per Watt subject to a reasonableness review.

6. Conclusion

We approve the petition to the extent provided herein, and deny it in every other respect. Specifically, we modify D.09-06-049, D.10-12-048 and D.12-02-035 to accomplish the following:

1. Reduce the 125 MW UOG portion to no more than 91 MW, with the other parameters unchanged; require SCE to file a Tier 2 advice letter for authorization if UOG procurement will be less than 91 MW by the end of year five.
2. Procure the remaining amount of UOG SPVP through the 34 DC MW (31 MW AC) of RAM procurement, with an increase in SCE's total RAM allocation from 723.4 MW to 754.4 MW. All other RAM parameters and protocols are unchanged.
3. Reduce the reasonable cost estimates for 91 MW of UOG over the 2008 to 2014 program period to approximately $15.036 million (2008 dollars) in O&M expenses, and $350.35 million (2008 dollars) in direct capital expenditures ($318.5 million (2008 dollars) direct capital plus a 10% contingency). These costs are based on $3.50 per watt ($3.85 per watt including contingency), with costs in excess of $3.85 per watt subject to a reasonableness review. If SCE develops less that 91 MW of UOG, the reasonable total cost estimates are based on the number of watts times $3.50 per watt ($3.85 per watt including contingency), with costs in excess of $3.85 per watt subject to a reasonableness review.

Because this decision only changes the SPVP and RAM programs going forward, we do not need to change the language in D.09-06-049, D.10-12-048 and D.12-02-035. Rather, to implement the changes adopted today, we only need to modify each program effective today. We do that by adopting appendices attached to this order that summarize each program, as modified.

7. Comments on Alternate Proposed Decision

On April 23, 2013, the alternate proposed decision of Commissioner Florio in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. On May 13, 2013, opening comments on the alternate proposed decision were filed by DRA, SCE, Independent Energy Producers and SEIA. Clean Coalition filed reply comments on May 17, 2013. The length of Clean Coalition's reply comments were not in compliance with Commission's Rules and therefore only a portion was considered. On May 20, 2013, reply comments were filed. As required by our rules, comments must focus on factual, legal, or technical errors and, in citing such errors, must make specific references to the record. Comments which fail to do so, or which merely reargue positions taken in the proceeding, are given no weight (Rule 14.3.) We have reviewed the comments and determined that there is a need to make one change to the alternate proposed decision. Clean Coalition indicated that the RAM program no longer allows projects under 3 MW. The alternate proposed decision has been changed to reflect this.

8. Assignment of Proceeding

Mark J. Ferron is the assigned Commissioner and Maryam Ebke is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. Since the SPVP was approved in 2009, Solar PV costs have fallen and other programs have been created or modified that provide support for the one to two MW market segment, including rooftop Solar PV facilities.

2. Modifications to SPVP are necessary to offer the best opportunity to secure savings for ratepayers resulting from falling PV costs, and may be designed to complement changes in other conditions and programs.

3. SPVP, as modified, neither cancels the SPVP nor completely disrupts the market.

4. SPVP, as modified, still targets a minimum of 173 MW for rooftop Solar PV in the one to two MW size range.

5. SPVP, as modified, increases competitive pressure on rooftop owners and rooftop PV developers to reduce costs to compete with ground-mounted PV and other renewable facilities.

6. The current trend of industry price reductions, and SCE's recent successes in bringing down costs, supports a directly proportional reduction in the costs previously found reasonable by the Commission for the UOG portion of SPVP.

7. Consolidating 34 MW DC (equal to 31 MW AC) of SPVP with RAM will reduce developer confusion and enhance administrative efficiency.

8. Using RAM protocols promotes simplicity, efficiency and continuity.

9. Nothing presented here justifies reconsidering recently adopted solicitation parameters, or consideration of other solicitation parameters in a new advice letter.

Conclusions of Law

1. Petitioner reasonably justifies why the petition was not filed within 12 months of the effective date of the decision proposed to be modified.

2. The Commission should reasonably, responsibly, and appropriately respond to market and industry changes, including changes that permit SPVP modifications to enhance downward pressure on costs and prices for all renewable projects across a range of sizes and technologies, and should take

reasonable opportunities to consolidate and simplify programs with overlapping goals.

3. The July 27, 2012 SCE petition for modification of D.12-02-035 should be granted in part, and denied in all other respects, in order to capture savings while promoting simplicity, maximizing program efficiency and minimizing market disruption.

4. The petition should be granted to the extent that it:

   a. Reduces the 125 MW UOG portion to no more than 91 MW but other parameters remain unchanged.

   b. Procures the remaining 34 MW DC UOG (31 MW AC) through RAM, subject to existing RAM protocols and procedures.

   c. Requires SCE to develop 91 MW of UOG, or as close as reasonable, with SCE explaining in periodic SPVP reports why it is not on target to achieve 91 MW if that is the case, and what steps SCE is taking to achieve 91 MW.

   d. Proportionately reduces the total costs previously found reasonable.

5. The petition should be denied as to SCE's request that the Commission under Rule 16.4(h) issue an immediate order staying SCE's obligations under D.12-02-035 to develop a 125 MW UOG SPVP, pending disposition of the petition for modification.

6. This order should be effective today so that the modified program may proceed expeditiously and thereby reduce costs, promote simplicity, maximize efficiency and minimize disruption.

O R D E R

IT IS ORDERED that:

1. The July 27, 2012 Southern California Edison Company petition for

modification of Decision 12-02-035 is granted in part, and denied in all other respects.

2. The Solar Photovoltaic Program (as adopted in Decision (D.) 09-06-048 and modified herein) is summarized in Attachment 1. The Renewable Auction Mechanism program (as adopted in D.10-12-048, as modified in Resolutions E-4414, E-4489, and E-4546, and as further modified herein) is summarized in Attachment 2. The modifications, as summarized in Attachments 1 and 2, are adopted.

3. Southern California Edison Company's petition under Rule 16.4(h) for an immediate order staying its Utility-Owned Generation obligations under Decision 12-02-035 pending disposition of the petition for modification is denied.

4. Application 08-03-015 is closed.

This order is effective today.

Dated May 23, 2013, at San Francisco, California.

MICHAEL R. PEEVEY
President
MICHEL PETER FLORIO
CATHERINE J.K. SANDOVAL
MARK J. FERRON
CARLA J. PETERMAN
Commissioners

ATTACHMENT 1

SUMMARY OF
SOLAR PHOTOVOLTAIC PROGRAM (SPVP) FOR
SOUTHERN CALIFORNIA EDISON COMPANY

February 2012

Commission Decision 09-06-049 (June 18, 2009) adopted the Solar Photovoltaic Program (SPVP) for Southern California Edison Company. The program was implemented via Resolution E-4299 (January 21, 2010) and subsequently modified by Decision 12-02-035. This attachment summarizes SPVP, as modified by D.13-05-033, but complete terms and conditions are in Commission decisions and resolutions.

1. General Overview

The Solar Photovoltaic Program (SPVP) is a five-year program to develop 500 megawatts (MW) of direct current (DC) renewable generation. It is composed of three parts:

a. Utility-Owned Generation (UOG): up to 91 MW
b. Independent Power Producers (IPP): up to 125 MW
c. Renewable Auction Mechanism (RAM): 284 MW (equivalent to 256 MW alternating current (AC))

The UOG and IPP parts are designed for development of up to 91 MW and 125 W, respectively, of solar photovoltaic (PV) generation on rooftops in the service area of Southern California Edison Company (SCE) from projects primarily in the one to two MW size range, with some exceptions.

The RAM part involves procuring 284 MW DC (256 MW AC) from the original SPVP (adopted in Decision 09-06-049) through RAM. RAM includes projects that would qualify under SPVP, but also includes other eligible renewable projects.

2. Utility-Owned Generation

SCE is authorized to own, develop, install, maintain and operate no less than 91 MW of solar PV projects in the one to two MW range, located in SCE's service area, primarily on rooftops, over a five year program (about 25 MW annually, although SCE is encouraged to accelerate the development if practical and not adverse to program costs). Project costs are subject to cost of service ratemaking treatment, and are capped at $3.50 per Watt with a 10% contingency. Costs in excess of $3.85 per Watt are subject to reasonableness review. No more than 20% (18 MW) may be ground-mounted facilities, and the bulk of SPVP projects must be in range of one to two MW. SCE shall develop 91 MW, or as close to 125 MW as reasonable. SCE shall explain in periodic SPVP reports why it is not on target to achieve 91 MW of UOG if that is the case, and explain what steps it is taking to achieve 91 MW. SCE shall, no later than 180 days before the end of the five year SPVP program, file a Tier 2 advice letter for authorization if UOG procurement will be less than 91 MW by the end of year five.

3. Independent Power Producer

SCE is authorized to procure via competitive solicitation up to 125 MW (but no less than 115 MW absent additional authorization) of solar PV generation owned by independent power producers. The solicitations shall be at least once per year. The generation shall primarily be from rooftop solar PV projects in the one to two MW range, located in SCE's service area, over a five year program (about 25 MW annually, although SCE is encouraged to accelerate the procurement if practical and not adverse to program costs). Bids are capped at SCE's estimated levelized cost of electricity ($0.26 per kilowatthour). No more than 20% (25 MW) may be ground-mounted facilities, and the bulk of SPVP projects must be in range of one to two MW. SCE shall procure 125 MW, or as close to 125 MW as reasonable. SCE shall explain in periodic SPVP reports why it is not on target to achieve 125 MW of IPP if that is the case, and explain what steps it is taking to achieve 125 MW. SCE shall, no later than 180 days before the end of the five year SPVP program, file a Tier 2 advice letter for authorization if IPP procurement will be less than 115 MW by the end of year five.

4. Renewable Auction Mechanism

The RAM component of SPVP involves procuring 284 MW DC of SPVP through RAM (256 MW AC). This 256 MW AC is subject to RAM protocols and practices. Rooftop solar PV facilities in the one to two MW size range are eligible to participate along with all other eligible renewable projects. SCE is encouraged, but not required, to propose RAM products that incorporate SPVP goals for the capacity moved to RAM (e.g., most or all of the 256 MW procured from the non-firm peaking product that does not require significant interconnection upgrades).

(END OF ATTACHMENT 1)

ATTACHMENT 2

SUMMARY OF RAM PROGRAM RULES

March 2013

CPUC Decision 10-12-048 adopted the Renewable Auction Mechanism and established an original set of RAM Program Rules. CPUC Resolution E-4414 adopted these RAM Program Rules with modification. This attachment revises Appendix A of Decision 10-12-048 to reflect the changes to the rules adopted in Resolution E-4414, Resolution E-4489, Resolution E-4546, and the new changes adopted herein.

Underlined language reflects additions while strike-through reflects deletions. Only the new changes, or deletions, made by this decision are so indicated here.

RENEWABLE AUCTION MECHANISM

1. **Price Determination:** Renewable Auction Mechanism (RAM)
   - Projects submit price bids
   - IOUs select projects in order of least-costly first, up to program capacity limit
2. **Auction Design:**
   a. **Program Procurement Requirement:**
      i. 1,330 MW Capacity Limit
      ii. Adjustment to the Program Capacity Limit: May occur in any appropriate proceeding or through a Tier 3 advice letter/Resolution, or a Resolution on the Commission's own motion

iii. **Capacity Allocation for total RAM program and per auction**:

UTILITY	TOTAL PROGRAM (MW)	PER AUCTION (MW)
SCE	723.4 754.4	~~170.8~~ 188.6[1]
PG&E	420.9	105.2
SDG&E	154.7	20.2
TOTAL	**~~1,299~~ <u>1,330</u>**	**~~324.8~~ <u>314</u>**

iv. **Number of Auctions per Year**: Two per year, every six months, held concurrently by all three IOUs; a project may bid into all three auctions.

v. **Amount per auction**: 25% of the total program allocation will be offered in the initial auction; unsubscribed capacity, or drop out capacity, is added to the next auction

vi. **Procurement Requirement:** Each IOU must enter into a standard contract with each winning bidder up to the capacity limits in each solicitation and total program capacity limits. IOUs select on the basis of least costly projects first until the IOU fully subscribes its allocated capacity for that auction. IOUs have the discretion to not enter into contracts if there is evidence of market manipulation or if the bids are not competitive compared to other renewable procurement opportunities. The IOU must submit an advice letter explaining its decision not to enter into contracts.

[1] SCE has increased its RAM allocation for the second, third, and fourth RFOs. SCE allocated 65 MW for the first RAM RFO.

b. **Products and Selection**

- **Products**: Firm (baseload), non-firm peaking (peaking as-available), and non-firm non-peaking (non-peaking as-available) electricity
    - o IOU shall specify the amount of each product for the initial four auctions in the first advice letter filed pursuant to this order. Utilities are required to solicit and procure capacity up to the capacity limit for each solicitation.
    - o Project must submit eligibility information (e.g., generation profile, project characteristic information) corresponding to the product bid, as established by the IOU
- **Selection**: Products bid into RAM will be bid as either energy-only or with full capacity deliverability status (FCDS); each product is selected on the basis of price, least expensive first until the capacity limit in each solicitation is reached; IOU may normalize (adjust) bids to place bids on an equivalent basis before making least cost selection using method approved, if any, in the advice letter implementing RAM; IOUs should add the estimated transmission upgrade costs to the bids for ranking purposes.
- **Independent Evaluator**: Utilities will employ an Independent Evaluator to assess the competitiveness and integrity of each RAM auction and submit the IE's report with its Tier 2 advice letter requesting approval of contracts resulting from those auctions.

Eligibility:

- **Minimum Size**: 3 MW.[2]
- **Project Vintage**: New and existing projects are eligible for RAM. Existing projects are subject to the limitations imposed by Resolution E 4546.
- **Location**: Combined IOU service territories (e.g. a project bidding into SCE's auction can be located in either PG&E or SDG&E's service territory).
- **Retail Customer/Third Party Ownership**: Seller need not be a retail customer and the facility need not be located on property owned or under the control of a retail customer
- **Utility Applicability**: Southern California Edison Company (SCE), Pacific Gas and Electric Company (PG&E), and San Diego Gas & Electric Company (SDG&E)
- **Project and Transaction Limit**: 20 megawatts (MW)

  This is the maximum size for any project signing a full buy/sell or excess sales transaction through the RAM.[3]
- **Full Buy/Sell or Excess Sales**: Seller may elect either full buy/sell or excess sales
- **Counting Excess Sales**: Capacity associated with the transaction size is applied to the program cap.
- **Seller Concentration**: IOUs have the discretion to apply a seller concentration limit after the bids are received. PG&E is authorized to apply a seller concentration limit of 20 MW per seller per auction.

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[2] The changes to RAM's minimum eligible project size were ordered by D.12-05-035.

[3] If a project elects to pursue excess sales, the total project size, including the capacity associated with the wholesale transaction under RAM as well as the capacity associated with onsite load, is counted as part of the project's capacity for purposes of project eligibility. However, only the capacity associated with the wholesale transaction will count against the capacity limit under RAM.

RAM Standard Contract:

- **Contract Language:** IOUs can use their individual contracts, but should start with a contract that is simple, streamlined, and has already been vetted by stakeholders through another CPUC program.
- **Negotiations**: Price, terms, and conditions are not negotiable.
- **Contract Terms and Conditions**
  - **Length of Contract**: 10, 15, or 20 years
  - L**ength of Time to COD**: Within 24 months of CPUC Approval, with one 6-month extension for regulatory delays. Seller can request a contract extension by providing a 60-day notice prior to the guaranteed commercial operation date.
  - **Development Deposit**: $60/$90 per kW for intermittent and baseload resources, respectively, refundable upon achieving commercial operation or applied to the performance deposit; development deposit is due on the date of the contract execution in the form of cash or letter of credit from a reputable U.S. bank; development deposit forfeited if project fails to come on line within ~~18~~ 24 months or other 6-month extension granted by IOU.
  - **Performance Deposit**:
    - 5% of expected total project revenues
  - **Performance Obligation**:
    - Performance is required to be consistent with good utility (or prudent electrical) practices; project is obligated to have liability insurance against utility losses; the project is liable for an IOU's direct, actual losses; and project must perform consistent with generation profile or other characteristics for the product, to the extent stated in the Commission-adopted contract
    - Minimum deliveries for RAM product performance:
      - As-Available Non-Peaking: 140% of expected annual generation over two years production
      - As-Available Peaking: 160% of expected annual generation over two years production

    - Baseload: 90% of expected annual generation over one year production

  Small hydro projects should be exempt from these minimum performance requirements.

  - **Damages for Failure to Perform**: Damages are limited to actual, direct damages; neither party is liable for consequential, incidental, punitive, exemplary or indirect damages, lost profits or other business interruption damages regardless of cause
  - **Force Majeure and Events of Defau**lt: Each RAM contract shall include a force majeure definition and provision
  - **Insurance**: IOU discretion, submitted in implementation advice letter
  - **Scheduling Coordinator**: Where possible, the contracting IOU shall be the scheduling coordinator for each project using the RAM, and the IOU shall bear the risk of scheduling deviations if the generator provides the IOU with timely information on its availability; the IOU can decline scheduling coordinator responsibilities only upon a written, affirmative request from the seller that the IOU not be the scheduling coordinator, or if unable to perform these duties

Project Viability Requirements

Bidder must demonstrate the following items with its bid. An IOU shall reject a bid that fails to demonstrate the following items. Each IOU shall adopt reasonable definitions and lists, related to:

- **Site Control**: Bidder must show 100% site control through (a) direct ownership, (b) lease or (c) an option to lease or purchase that may be exercised upon award of the RAM contract
- **Development Experience**: Bidder must show that at least one member of the development team has (a) completed at least one project of similar technology and capacity or (b) begun construction of at least one other similar project
- **Commercialized Technology**: Bidder must show the project is based on commercialized technology (e.g., is neither experimental, research, demonstration, nor development)

- **Interconnection Application**: Bidder must show that it has filed its interconnection application. In addition, bidder must have completed a System-Impact Study, Cluster Study Phase 1, or have passed the Fast Track screens.

Market Elements

c. **Preferred Locations**: The IOUs must provide the "available capacity" at the substation and circuit level, defined as the total capacity minus the allocated and queued capacity. The IOUs should provide this information in map format. If unable to initially provide this level of detail, each IOU must provide the data at the most detailed level feasible, and work to increase the precision of the information over time. This information is to be available in the advice letter implementing RAM and updated on a monthly basis.

   - Each IOU should examine DG interconnection screening tools currently used to screen DG interconnection applications. The IOUs should evaluate how individual project studies could be automated to provide the requested data and a reasonable assessment of a DG project's impact on the distribution system.
   - The IOUs should work with parties and Commission staff through the Renewable Distributed Energy Collaborative (Re-DEC) or other forums in order to improve the data, usefulness of the maps, and to discuss other issues related to the interconnection of distributed resources.

d. **Project Milestones**: Sellers shall submit a project development milestone timeline to the IOU upon RAM contract signing, and quarterly progress reports every six months. The only enforceable milestone is the commercial operation data (COD) (subject to a one 6-month extension for regulatory delays).

e. **Relationship to Voluntary and Other Programs**: 1,000 MW capacity limit does not include capacity subscribed under the Existing FIT (up to 1.5 MW, subject to expansion to three MW under SB 32). SCE is permitted to draw down its capacity limit with the 21 contracts it selected in November 2010 from the RSC solicitation, if the CPUC approves these contracts

f. **FERC Certification**: No FERC certification as a QF is required for a project to be eligible for RAM

g. **Conveyance of RECs**: RECs transferred in relationship to the amount of the purchase (for full buy/sell, the IOU buys the RECs coincident with the entire output; for excess sales, the IOU buys the RECs coincident with the purchased excess energy)

Regulation and Commission Oversight

h. **Program modifications**: The Commission can modify any element of the program at any time through a Commission resolution.

i. **Advice Letter Review**: All executed RAM contracts from each auction are filed with the Commission in one Tier 2 advice letter.

j. **Program Evaluation**: RAM to be monitored and evaluated annually, with each IOU filing a report each year. The report shall be filed with ED and posted on the IOU's website. ED shall include RAM program information in the Commission's reports to the legislature on the RPS program.

k. **Data:**

Each annual report shall include information and evaluation on all relevant items and characteristics including but not limited to:

Competition and competitiveness

- Auction design
- Time necessary to complete projects
- Auction timing
- Project status
- Analysis comparing the price and value of contracts with and without resource adequacy.
- Anything else determined by ED to be necessary for a complete report

IOUs shall adopt a uniform report template with guidance from Energy Division

The first report shall include each IOU's proposal for a definition of a competitive market, proposed measurements of RPS markets generally, and proposed measurements of this RAM market specifically

As available over time, each report shall include data on:

Measures of the requirements for a perfectly competitive market
Measures of market power
Seller concentration
Data on each RAM results
Information on the achievement of project development milestones for all executed RAM contracts
Any other information necessary to present a complete report

l. **Public release of aggregated Data:**

i. IOUs and ED shall make the maximum amount of RAM data public, including the following:

Names of participating companies and number of bids per company
Number of bids received and shortlisted
Project size
Participating technologies
Quantitative summary of how many projects passed each project viability screen
Location of bids by county provided in a map format
Information on the achievement of project development milestones for all executed RAM contracts (See Attachment B)

m. **Cost Recovery**: RAM costs may be charged to bundled and departing customers consistent with current practice

n. **Program Forum**:

IOUs will hold a program forum once per year in order to meet with sellers and discuss seller experience participating in an auction. The IOUs are required to:

- Notice all stakeholders of the date, time, location and methods for participation4 for each program forum;
- Issue a request for feedback from all stakeholders after the close of each solicitation in order to inform the agenda for the program forum;
- Provide CPUC staff with a draft of the agenda at least 14 days prior to the program forum;
- At the program forum, the IOUs shall provide sufficient time to address key issues identified in the request for feedback and the independent evaluator's report;
- At the program forum, the IOUs shall provide sufficient time for stakeholders to discuss their experience with the solicitation, interconnection process, or the program in general; and
- The independent evaluator should participate in the program forum.

3. **Implementation Advice Letter**[5]: PG&E, SCE, and SDG&E shall file Tier 3 advice letters within 60 days of the date this order. The implementation advice letters shall include:
   - Procurement protocols
   - RAM standard contract
   - Program implementation details
   - Timing of RAM auctions
   - Specific amounts of capacity and type of resources in each auction over the next two years
   - Explanation of any normalization procedures used for bid selection process

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[4] The IOUs should utilize telecom and web-based technologies to facilitate remote participation.

[5] These Advice Letters were filed by the IOUs on February 25, 2011 and were approved with modifications by the Commission in Resolution E-4414.

- Detailed description of the generation profiles and characteristics that correspond with each product bucket
- Description of how IOU-proposed product eligibility requirements will provide reasonable assurance that a bid for one product will, if selected, deliver energy in a manner that corresponds to the generation profile associated with that
- Identify seller concentration limit, if any
- Provide the preferred locations map and a description of how the maps were computed
- Provide a simple methodology to measure the status of project development milestones

(END OF ATTACHMENT 2)