

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

RESOLUTION E-4546

November 8, 2012

R E S O L U T I O N

Resolution E-4546. Changes to the Renewable Auction Mechanism for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company.

PROPOSED OUTCOME: This Resolution approves changes to the Renewable Auction Mechanism for Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company. Specifically, this Resolution modifies guaranteed energy performance requirements; increases certainty around the amount of resource adequacy benefits a project will provide for SCE; adopts dual time of delivery factors; modifies the program rules regarding the eligibility of existing projects; standardizes treatment of generation in excess of contracted quantities; and simplifies the program by eliminating variable deposit amounts for different sized projects. This Resolution authorizes the third Renewable Auction Mechanism solicitation to be held in accordance with the adopted program changes.

ESTIMATED COST: There are no expected costs associated with the changes made to the Renewable Auction Mechanism adopted by this Resolution.

By Southern California Edison Company's advice letter 2759-E filed July 12, 2012; San Diego Gas & Electric Company's advice letter 2392-E filed August 3, 2012; and Pacific Gas and Electric Company's 4100-E filed August 16, 2012.

SUMMARY

This Resolution implements changes to the Renewable Auction Mechanism (RAM) for the three investor-owned utilities (IOUs): Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E). In Decision (D.) 10-12-048 (the Decision or RAM Decision), the California Public Utilities Commission (CPUC or Commission) adopted a two-year program with the purpose of lowering transaction costs and promoting the development of system-side renewable distributed generation (DG), which is defined as projects up to 20 megawatts (MW) in size. The Commission approved Resolution E-4414 on August 18, 2011 to adopt RAM program implementation details, bidding protocols, and a standard power purchase agreement for each IOU.

This Resolution approves in part, and denies in part, SCE's advice letter 2759-E, SDG&E's advice letter 2392-E, and PG&E's advice letter 4100-E. The approved substantive changes to the RAM Program shall apply to all three of the IOUs, while the approved non-substantive changes shall apply only to the specific terms modified by the utility filing the modification.

There are two exceptions to the treatment of these issues. Based on feedback received by the Commission in comments to the issuance of the draft version of this resolution, the substantive changes proposed by SCE that concern contractual obligations to provide RA benefits, and the mechanism for enforcing a Seller's obligation to provide these benefits, are approved as an option, but not a requirement, for each utility. PG&E and SDG&E have the option to adopt SCE's proposal, as approved by this resolution, but may also choose to maintain their existing approaches to this issue pursuant to Resolution E-4489 as previously approved by the Commission.

This Resolution also adopts one additional modification related to the eligibility of existing projects to participate in RAM, as proposed by Energy Division staff. These changes will take effect prior to commencement of the third RAM solicitation, which is scheduled to close on December 21, 2012.

Within 7 days of the effective date of this Resolution, PG&E, SCE, and SDG&E shall each file a Tier 1 advice letter with the Energy Division demonstrating compliance with the substantive changes approved in this Resolution as applied to the RAM Program, in addition to the non-substantive modifications approved for each utility.

The changes made herein that alter the RAM Program Rules, as established by D.10-12-048 and modified by Resolution E-4414 and Resolution E-4489, are summarized in Appendix D of this Resolution.

BACKGROUND

On December 18, 2010, the CPUC approved a new procurement mechanism called the Renewable Auction Mechanism (RAM) in D.10-12-048. The Decision ordered the investor-owned utilities (IOUs) to procure up to 1,000 megawatts (MW) of system-side renewable distributed generation (for individual projects up to 20 MW in size) through a reverse auction using a standard contract. The Decision ordered the IOUs to hold four auctions over two years and directed the IOUs to submit their bidding protocols and standard contracts through a Tier 3 advice letter to implement the Decision's requirements. On February 25, 2011, the IOUs submitted advice letters for approval of their bidding protocols and standard power purchase agreements. The Commission adopted Resolution E-4414 in August 2011, approving with modifications the utilities' RAM implementation advice letters. In Resolution E-4489, which followed the first RAM solicitation, the Commission modified RAM program components related to Buyer's termination rights and permitted an option for Sellers to bid projects as either energy-only or with full capacity deliverability status.

In D.10-12-048, the Commission provided staff authority to suggest modifications to the RAM program based on experience. Specifically, Ordering Paragraph 5 of the Decision states:

The IOUs shall hold a program forum once per year, beginning after the initial RAM auctions are conducted to discuss program design and implementation, and provide opportunities for stakeholder comments. In organizing these forums, the utilities should consult with Energy Division staff and at a minimum notify the service list to this proceeding or subsequent proceedings. The IOUs may use the stakeholder feedback from each forum to develop and submit an advice letter seeking modifications to the RAM program. Similarly, Energy Division may issue a resolution on its own motion to propose program modifications based on information from these program forums or the annual reports developed pursuant to Ordering Paragraph 3 above...

NOTICE

Notice of SCE's advice letter 2759-E, SDG&E's advice letter 2392-E, and PG&E's advice letter 4100-E was made by publication in the Commission's Daily Calendar.

SCE states that copies of advice letter 2759-E were mailed and distributed in accordance with Section IV of General Order 96-B.

SDG&E states that copies of advice letter 2392-E were mailed and distributed in accordance with Section IV of General Order 96-B.

PG&E states that copies of advice letter 4100-E were mailed and distributed in accordance with Section IV of General Order 96-B.

PROTESTS

Between July 26, 2012 and August 1, 2012, the Commission received timely protests to SCE's advice letter 2759-E from STS HydroPower Ltd. (STS), Clean Coalition, Silverado Power LLC (Silverado), Recurrent Energy (Recurrent), and the Solar Energy Industries Association (SEIA). SCE replied to the protests on August 8, 2012.

On August 23, 2012, the Commission received one timely response to SDG&E's advice letter 2392-E from Silverado.

On September 5, 2012, the Commission received timely protests to PG&E's advice letter 4100-E from SEIA and from Clean Coalition. PG&E replied to the protests on September 12, 2012.

DISCUSSION

The following discussion summarizes the modifications sought by SCE, SDG&E, and PG&E. The substance of the protests and responses from parties are summarized by issue and addressed in this section. In addition, Energy Division staff is also proposing one additional modification on its own motion to clarify the rules regarding the eligibility of existing facilities to participate in RAM.

This section is divided into two parts:

- (a) Substantive Proposed Changes to the RAM Program, and
- (b) Non-substantive Proposed Changes to Individual IOU RAM Pro Forma PPAs.

Substantive Proposed Changes to the RAM Program

Each of the three IOUs filed advice letters seeking substantive changes to the RAM program before the third auction, which pursuant to this Resolution shall close on December 21, 2012. The changes adopted in this section impact the RAM program universally, and thus will apply to all three IOUs regardless of which utility proposed the modification. There are two exceptions to this, as noted above. The changes summarized in Items (3) and (4) in the matrix below dealing with “Flexibility in Bidding Resource Adequacy” and enforcement of a Seller’s obligation to provide resource adequacy are approved, but only as an option and not as a requirement. PG&E and SDG&E have the option to adopt this approach, but are also authorized to maintain their existing approaches to handling this issue as previously approved by the Commission pursuant to Resolution E-4489.

Energy Division evaluated the necessity of these changes to the RAM program based on the following criteria:

- Consistency with Decision 10-12-048, as modified by Resolution E-4414 and Resolution E-4489.
- Evidence that these changes will improve the RAM program.

Table 1. Summary of Proposed Substantive Changes to the RAM Program for All IOUs

Subject of Change	Existing RAM Program	Proposed Revision to RAM	Source of Change	Disposition
(1) <i>Termination; Excessive Upgrade Costs</i>	No mechanism to protect ratepayers from excessive increases in upgrade costs.	<ul style="list-style-type: none"> • Proposes a unilateral termination right for Buyer in the event that expected ratepayer reimbursed transmission system upgrade costs increase over estimates provided by Seller when it bid into the solicitation by the lesser of: (a) \$100,000 or (b) 25%. • Creates a buy down right for Seller to cover upgrade costs in excess of the threshold to 	SCE advice letter 2759-E (Section A.)	Deny without prejudice

Subject of Change	Existing RAM Program	Proposed Revision to RAM	Source of Change	Disposition
		avoid termination.		
(2) <i>Guaranteed Energy Performance</i>	RAM Decision adopts a minimum performance requirement for RAM projects of 140% of expected annual generation over two years of production for all projects, regardless of technology.	<p>SCE proposes guaranteed minimum energy performance requirements that recognize the unique characteristics of various technology types. SCE proposes:</p> <ul style="list-style-type: none"> • <u>Wind</u>: 140% of expected annual generation over two years of production • <u>Solar</u>: 170% of expected annual generation over two years of production • <u>Baseload</u>: 90% of expected annual generation over one year of production <p>PG&E proposes similar requirements, with one change: 160% for solar.</p>	SCE advice letter 2759-E (Section G.); PG&E advice letter 4100-E	Approve with Modification
(3) <i>Flexibility in Bidding Resource Adequacy</i>	Pursuant to Res. E-4489, projects bidding into RAM 2 could bid energy-only or fully deliverable. Projects bidding fully deliverable were required to state the date by which FCDS would be obtained.	SCE proposes allowing developers to designate the amount of RA benefit provided each month of the calendar year for the duration of the PPA term. The RA provided may be less than the Net-Qualifying Capacity (NQC) of the facility, but not more.	SCE advice letter 2759-E (Section K.)	Approve with modification to allow IOUs the option of adopting this approach.

Subject of Change	Existing RAM Program	Proposed Revision to RAM	Source of Change	Disposition
(4) <i>Liquidated Damages for Failure to Meet RA Obligation</i>	No explicit guidance on the issue of damages if a Seller fails to meet its RA obligations.	SCE proposes the creation of a liquidated damages term fixed at the Capacity Procurement Mechanism (CPM) price in the event that a Seller fails to meet its RA obligations pursuant to its PPA.	SCE advice letter 2759-E (Section K.)	Approve with modification to allow IOUs the option of adopting this approach.
(5) <i>Changes to Time of Delivery (TOD) Factors</i>	SCE's existing RAM PPA includes one set of TOD factors, regardless of whether the project is interconnected as energy-only or fully deliverable.	SCE proposes creating two sets of TOD factors: (a) energy-only TODs and (b) fully deliverable TODs. This would be consistent with Re-MAT and, SCE contends, allow the utility to differentiate the value of the energy that a project provides during the term of the PPA.	SCE advice letter 2759-E (Section C.)	Approve
(6) <i>Eligibility of Existing Resources</i>	Pursuant to Res. E-4414, the Commission authorized both new and existing projects to participate in RAM.	Energy Division staff proposes modification of the eligibility rules for existing projects to participate in RAM. Existing projects may only participate in RAM if: <ul style="list-style-type: none"> The project's existing contract term is scheduled to expire within 24 months of the expected date of Commission approval of PPAs originating from the RAM auction in which the facility seeks to bid. 	Change raised on Energy Division staff's own motion	Approve

Subject of Change	Existing RAM Program	Proposed Revision to RAM	Source of Change	Disposition
(7) <i>Excess Deliveries</i>	SCE's Exhibit S attempts to address this issue in its existing RAM PPA, but according to SCE, reduction amounts were open to negotiation and difficult to implement.	<ul style="list-style-type: none"> SCE proposes zero payment to Seller for any energy delivered in excess of 110% of the contract capacity. SCE also proposes reduced payment at 75% of the PPA price for any generation in excess of 115% of the contract generation on an annual basis. 	SCE advice letter 2759-E (Section D.)	Approve
(8) <i>Remove Separate Provisions Previously Applied to Projects of 1-5 megawatts (MW)</i>	D.10-12-048 created separate Project Development Security (PDS) and Delivery Term Security (DTS) payments for projects 1-5 MW and for projects 5-20 MW.	The Re-MAT Decision ordered the IOUs to prohibit projects sized below 3 MW from eligibility for RAM. PG&E now proposes to eliminate the separate PDS and DTS payments for any projects greater than 3 MW but less than 5 MW that seek to bid into RAM.	PG&E advice letter 4100-E (Section A.)	Approve
(9) <i>Commercial Operation Deadline</i>	RAM projects must attain COD within 24 months of CPUC approval, subject to one 6-month extension for regulatory delay.	RAM projects must attain COD within 36 months of CPUC approval, subject to one 6-month extension for regulatory delay.	SCE advice letter 2759-E (Section E.); PG&E advice letter 4100-E	Deny

Subject of Change	Existing RAM Program	Proposed Revision to RAM	Source of Change	Disposition
(10) <i>Simplified Curtailment Provisions</i>	SCE's existing RAM PPA includes "complicated" economic curtailment language based on its 2011 RPS Pro Forma—SCE's right to curtail for economic reasons based on CAISO pricing in day-ahead market.	SCE proposes a "simplified" provision that allows the utility to curtail sellers regardless of CAISO prices, capped at a max. of 50 hours annually. Any curtailment beyond 50 hours would result in SCE remitting full payment to the Seller as if it had delivered energy.	SCE advice letter 2759-E (Section B.)	Deny without Prejudice
(11) <i>Adding two more RAM Procurements (RAM5 and RAM6)</i>	RAM Decision ordered the IOUs to hold 4 RAM auctions over two years.	SCE proposes to add two more RAM auctions, RAM5 and RAM6, for the limited purpose of allowing the utility to backfill procurement for any RAM projects that have failed. SCE proposes that the Commission expressly sunset the RAM program after RAM6.	SCE advice letter 2759-E (Section I.)	Deny
(12) <i>Obligations of Energy Only Sellers</i>	Res. E-4489 created an option for Sellers to bid a project into RAM as energy-only. That resolution explicitly prohibits an IOU from requiring an energy-only Seller to pursue a deliverability study.	PG&E proposes that the CPUC authorize the utility to require an energy-only Seller to pursue deliverability via the "annual [CAISO] process" to evaluate whether the Seller can provide RA benefits at minimal cost. PG&E proposes capping the Seller's cost responsibility in this pursuit at \$50,000, which the Seller should reflect in its RAM bid price.	PG&E advice letter 4100-E (Section C.)	Deny

Subject of Change	Existing RAM Program	Proposed Revision to RAM	Source of Change	Disposition
(13) <i>Buyer Curtailment Hours</i>	PG&E's current RAM PPA authorizes Buyer curtailment of 100 hours annually, whereby Seller is paid for the energy that would have been delivered.	PG&E proposes increasing the Buyer curtailment authorization from 100 hours annually to 250 hours. PG&E would continue to pay the Seller for energy that would have been delivered.	PG&E advice letter 4100-E (Section G.)	Deny without Prejudice

(1) Termination; Excessive Upgrade Costs

In Resolution E-4414, implementing the RAM Program, the Commission rejected proposals from SCE and SDG&E to impose transmission network upgrade cost caps on Sellers bidding into the RAM solicitation. At the time, the Commission found that the cost caps proposed by the IOUs were “arbitrary and could unnecessarily limit competition.”¹

In Resolution E-4489,² the Commission ordered the utilities to further engage stakeholders on the issue of how to protect ratepayers from excessive increases in transmission network upgrade costs at their respective RAM Program Forums. The utilities held these forums between May and June 2012 and raised this issue with stakeholders.

In advice letter 2759-E, SCE now seeks Commission authorization to create a unilateral termination right in its RAM PPAs to protect ratepayers from excessive increases in transmission network upgrade costs. SCE proposes that the Commission authorize the utility to terminate a RAM PPA if reimbursable transmission network upgrade costs increase over the estimate provided at the time of RAM bid selection by more than the lesser of: (a) \$100,000 or (b) 25%. Additionally, SCE proposes creating a corresponding buy down right for Sellers that trigger this termination right, whereby the Seller may choose to buy down

¹ Commission Resolution E-4414, Discussion Section, *Network Upgrade Cost Cap*, p. 18.

² Commission Resolution E-4489, OP 4, p. 19.

any otherwise reimbursable transmission network upgrade costs in excess of the cap. This would allow the Seller to avoid termination, while still capping ratepayer exposure to unbounded increases in upgrade costs.

SEIA, Silverado, and Recurrent filed protests to AL 2759-E opposing SCE's proposed termination rights on the basis that, among other things, the utility failed to demonstrate that excessive increases in upgrade costs are an existing problem that needs to be addressed to improve RAM. While the Commission agrees that the utility failed to demonstrate existing cases where ratepayers have been exposed to excessive increases in upgrade costs, the Commission disagrees that, therefore, such a provision is not needed to improve RAM.

Clean Coalition offered its support for this provision in its protest filed to AL 2759-E, with the proposed modification that the Commission should require greater transparency regarding when a utility opts to exercise the termination right.

In the draft issuance of this resolution, Commission staff proposed authorizing the IOUs to include a unilateral termination right in their RAM PPAs to protect ratepayers from future exposure to these increased transmission network upgrade costs.

In comments submitted on the draft resolution, Clean Coalition, Recurrent, LSA, and SEIA stated their opposition to the inclusion of this termination right as drafted. These parties argued that there has been no showing of evidence that this termination right is necessary to solve an existing problem; that real-world upgrade costs should serve as the basis for the trigger thresholds; that the Commission should impose a clear sunset date on a utility's ability to exercise this right; and that there might exist potential hurdles in the implementation of the Seller buy down right that the Commission has not yet identified.

As a result of this opposition, the Commission is not including authorization for this unilateral termination right in the RAM PPA at this time. The Commission continues, however, to support the concept of protecting ratepayers from unbounded exposure to potential increases in transmission network upgrade costs that occur *after* a project has been selected in a RAM auction and a utility has executed a RAM PPA. To this end, the Commission will revisit this issue after the close of the third RAM auction in a more comprehensive manner in an

effort to develop consensus among parties on the best way to implement this type of ratepayer protection in the future.

Accordingly, while the Commission continues to support the creation of a mechanism that would protect ratepayers from unbounded exposure to potential increases in reimbursable transmission network upgrade costs, the Commission denies SCE's request to include a unilateral termination right at this time.

(2) Guaranteed Energy Performance

In D.10-12-048, the Commission considered the establishment of guaranteed energy performance requirements for RAM projects. In that decision, the Commission found that “[i]t is appropriate to require performance consistent with good utility (or prudent electrical) practices.”³ To that end, the Commission adopted Energy Division’s recommendation to require a guaranteed energy performance requirement of 140% of a project’s expected annual generation over two years production “as a simple and straightforward approach.”⁴ The decision noted, at the time, that this requirement was the same as SCE’s approach in its RPS Pro Forma PPA.

In AL 2759-E, SCE notes, however, that the performance requirement in its RPS Pro Forma PPA actually varies by technology type and that a performance requirement of 140% of expected annual generation over two years production is the value used *only* for wind projects. SCE contends that such a value is far too low for non-wind projects, such as solar and baseload projects, where such a low value “would amount to no requirement at all.”

As such, SCE proposes aligning the guaranteed energy performance requirements in RAM with those of its RPS Pro Forma PPA to better align the requirements with the significant performance differences that exist between technology types. SCE proposes the following guaranteed energy performance requirements, consistent with its RPS Pro Forma PPA:

- Wind: 140% of expected annual generation over two years production

³ D.10-12-048, § 9.2.4.2, p. 60.

⁴ *Id.*

- Other non-wind intermittent (e.g., solar): 170% of expected annual generation over two years production
- Baseload: 90% of expected annual generation over one year production

Silverado filed comments in support of SCE's request, with one proposed modification. Silverado contends that 160% is the appropriate value for solar projects, and not 170%.

In AL 4100-E, PG&E also requested that the Commission adopt changes to the guaranteed energy performance requirements to better align the requirements with the actual energy delivery profiles of various technology types. PG&E proposes the following requirements:

- Wind: 140% of expected annual generation over two years production
- Other non-wind intermittent (e.g., solar): 160% of expected annual generation over two years production
- Baseload: 90% of expected annual generation over one year production

PG&E also proposes to exempt small hydro projects from having to meet any guaranteed energy performance requirement. PG&E states in its advice letter that it seeks this change because of feedback from parties that the output from small hydro facilities can vary dramatically from year to year, making it impossible for such a project to secure financing when burdened by any type of guaranteed energy production requirements.

The Commission still believes, as it did when adopting D.10-12-048, that it is appropriate to impose minimum performance obligations on RAM projects. And the Commission agrees with SCE and PG&E that it would improve RAM to adjust guaranteed energy performance requirements so that they better align with the actual performance characteristics of various technology types.

Accordingly, the Commission modifies D.10-12-048 as follows:

Conclusions of Law 35: RAM product performance should, ~~in addition,~~ require the following minimum deliveries of 140% of expected annual net energy production based on two years of rolling production:

- 140% of expected annual net energy production based on two years of rolling production for as-available non-peaking projects.

- 160% of expected annual net energy production based on two years of rolling production for as-available peaking projects.
- 90% of expected annual net energy production based on one year of rolling production for baseload projects.

Additionally, there should be no minimum guaranteed energy performance requirement for small hydro projects seeking to participate in RAM.

Appendix A, 4. RAM Standard Contract, Performance Obligation:

From:

“Minimum deliveries of 140% of expected annual net energy production based on two years of rolling production.”

To:

~~“Minimum deliveries of 140% of expected annual net energy production based on two years of rolling production for RAM~~
product performance:

- As-Available Non-Peaking: 140% of expected two-year production
- As-Available Peaking: 160% of expected two-year production
- Baseload: 90% of expected one-year production

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

(3) Flexibility in Bidding Resource Adequacy

Resolution E-4489⁵ created the option for Sellers participating in RAM to bid their projects as either energy-only or with full capacity deliverability status (FCDS). At the time, the Commission concluded that it would be unreasonable to require Sellers to attain FCDS before the commercial operation date, but rather required that Sellers state in their PPAs a date certain by which they would attain full deliverability.⁶

⁵ Resolution E-4489, OP 5, p. 19.

⁶ *Id.*

In AL 2759-E, SCE proposes requiring additional certainty from Sellers who seek to bid their projects with FCDS. Rather than simply stating a date by which a project will achieve full deliverability, SCE proposes that Sellers be required to designate which specific months over the course of its RAM PPA that its project will provide the utility with resource adequacy benefits. Additionally, SCE seeks to further clarify the RAM program rules by prohibiting a project from procuring resource adequacy from a third-party to meet its obligations under its RAM PPA.

No parties filed comments in opposition to SCE's proposal, while Silverado filed comments in support.

SCE and PG&E each filed comments to the draft resolution on this issue. In its comments, SCE seeks a modification to this provision to clarify that the Seller must indicate the *amount* of resource adequacy benefit that it will provide over the course of its PPA term. The Commission agrees that this change should be made and has modified this resolution accordingly.

PG&E, on the other hand, has asked the Commission not to impose this provision on the entire RAM program, such that PG&E and SDG&E would also be required to adopt it. PG&E has stated its preference to continue accounting for a Seller's RA obligations in the same manner that it did for projects that bid into RAM2, pursuant to prior Commission guidance in Resolution E-4489.

Recognizing the lack of consensus on adoption of SCE's proposed approach, the Commission authorizes the IOUs to either adopt SCE's proposal or to maintain the previous approach outlined in Ordering Paragraph 5 of Resolution E-4489.

The Commission notes, however, its preference for increasing the standardization of the RAM Program and that it will seek input from stakeholders in the future on the issue of whether the utilities should have uniform policies regarding the manner in which Sellers account for their RA obligations.

The Commission finds that SCE's proposal to increase flexibility in bidding RA is reasonable. The proposed change will benefit ratepayers by providing greater certainty over when a utility will be, or will not be, receiving resource adequacy benefits from a particular project that received its RAM PPA on the basis of its expected achievement of full capacity deliverability status.

Accordingly, the Commission modifies Resolution E-4489 as follows:

Ordering Paragraph 5. Revise Full Capacity Deliverability Status.

Producers have two options, either to bid their projects as energy-only or to bid their projects with Full Capacity Deliverability Status. ~~Producer~~ The utility is authorized to require a Seller bidding a project with FCDS to either: (a) provide a date certain of when it will be able to achieve full capacity deliverability, or (b)-designate the amount of resource adequacy benefit, if any, the Seller will provide for each month of the year during the contract term in the instances where Producer chooses to bid its project with Full Capacity Deliverability Status. Additionally, a Seller may not procure resource adequacy benefits from a third-party to meet its obligations under the RAM PPA, nor may its resource adequacy benefits be greater than the Net Qualifying Capacity (NQC) of its facility. Achieving Full Capacity Deliverability Status shall not be a condition precedent to commercial operation.

(4) Liquidated Damages for Failure to Meet RA Obligations

In AL 2759-E, SCE proposes that a Seller be required to pay fixed liquidated damages if the Seller fails to meet its monthly RA obligations as defined in its RAM PPA. SCE contends that such a provision would allow the utility to enforce the Seller's obligation to achieve full deliverability where such a promise to achieve that status was a fundamental element of a project's bid evaluation and subsequent bid selection. In other words, without such a provision, according to SCE, "a seller's bid would get the full benefit of RA in the valuation process, but [would] have no contractual obligations to actually provide that amount of RA."

No parties filed comments in support of SCE's proposal, but Silverado stated its strong opposition to the liquidated damages term on the grounds that the utility holds significant influence over when, or whether, a project ultimately attains full capacity deliverability status.

In the draft issuance of this resolution, the Commission proposed approving SCE's request with modification. The Commission proposed to authorize the utilities to impose actual, direct losses associated with the cost of acquiring replacement RA, rather than authorizing the imposition of liquidated damages.

SCE, SEIA, and LSA addressed this issue in their comments filed on the draft resolution. Parties argued that imposing non-fixed damages on a Seller for failing to meet its RA obligations would pose a financing risk in a way that fixed damages would not. The Commission acknowledges this potential financing risk and approves SCE's proposal to seek fixed damages.

Additionally, SEIA and LSA seek a modification that the Seller should only be liable for these damages if the Buyer demonstrates that the Seller failed to meet its RA obligations. The Commission declines to adopt this modification at this time but requests that the parties raise this issue in the future in a forum that allows for more stakeholder input.

The Commission finds that it is reasonable for a utility to expect a Seller to meet its contractual obligations pursuant to the RAM PPA.

Accordingly, the Commission approves SCE's request and authorizes the IOUs to either: (a) maintain the same approach for enforcing RA obligations that they implemented pursuant to Resolution E-4489, or (b) to seek liquidated damages from a Seller if the Seller fails to meet its RA obligations pursuant to its RAM PPA.

(5) Changes to Time of Delivery (TOD) Factors

Resolution E-4414, implementing the RAM Decision, originally required that all projects bidding into a RAM auction must apply for a deliverability study.⁷ The Commission modified this approach in Resolution E-4489 as a result of the challenges that renewable distributed generation projects were facing when maneuvering through the deliverability study process. In Resolution E-4489,⁸ the Commission created an option for Sellers to bid a project into RAM as either energy-only or as fully deliverable. If a project bid as fully deliverable, the utility could not require that the Seller achieve FCDS before its commercial operation date. Rather, the utility could require the Seller to set a date certain in its RAM PPA by which it would achieve full deliverability.⁹

⁷ Resolution E-4414, OP 12, p. 46.

⁸ Resolution E-4489, OP 5, p. 19.

⁹ *Id.*

The Commission did not provide guidance in that Resolution, however, on whether a utility could differentiate its payments to a Seller dependent on whether or not the project had actually attained full deliverability status. For instance, if a project bid into RAM as fully deliverable, then executed a PPA in which it stated that it would not attain full deliverability until four years after commercial operation begins, it was unclear if the utility could differentiate payments to such a Seller for those intervening four years until it attained FCDS. The Commission understands that the three IOUs may have been approaching this scenario differently, potentially resulting in uneven results across the RAM program.

In AL 2759-E, SCE now proposes that the Commission authorize the utilities to create dual time of delivery (TOD) factors, one set for energy-only payments and another for full capacity deliverability status payments. SCE notes in its advice letter that a similar approach has already been adopted for the revised Section 399.20 Feed-in-Tariff program, for which the Commission recently adopted new program rules in D.12-05-035 earlier this year.

SEIA protested AL 2759-E and opposed this change on the grounds that such a change would be needlessly complex and detract from the simplicity of the RAM program. Silverado, on the other hand, in response to AL 2759-E supported the change in concept while expressing concern that the Sellers will be largely reliant on the utilities to complete the required deliverability studies, achieve FCDS, and obtain the higher TOD payments.

In comments filed on the draft issuance of this resolution, SCE seeks for the Commission to modify this provision slightly, such that the Seller should only begin receiving the higher full deliverability TOD payments only if the terms of its PPA actually obligate the Seller to be fully deliverable. The Commission agrees that the existence of higher TOD factors for becoming fully deliverable should not provide an incentive for the Seller to attain that status sooner than it agreed to do so in its PPA.

The Commission acknowledges that creating dual TOD factors would increase the complexity of the RAM Program. That said, creating dual TOD factors is a necessary change given the option created by Resolution E-4489 for participants in RAM to bid projects as either energy-only or fully deliverable.

The Commission finds that SCE's proposal to create dual TOD factors is reasonable, that it is consistent with the Commission's recent treatment of this issue in the Feed-in-Tariff program, and that the result would benefit ratepayers by allowing the utilities to differentiate payments to Sellers based on whether a project is actually providing resource adequacy benefits.

Accordingly, the Commission modifies D.10-12-048 as follows:

Conclusions of Law 19. Rates for RAM should be all-in energy rates adjusted by either energy-only or full capacity deliverability status time of delivery (TOD) factors dependent on whether or not the project has attained full deliverability capacity status, is actually providing resource adequacy benefits at the time of payment, and the Seller is contractually obligated to provide resource adequacy benefits.

(6) Eligibility of Existing Resources

The RAM Decision did not address whether or not existing projects would be eligible to participate in RAM. That said, Resolution E-4414, implementing the RAM Decision, addressed this issue and found that existing generators are eligible for RAM without restriction.¹⁰

After observing the results of the first two RAM auctions, however, Energy Division staff has recognized the potential for ratepayers to be disadvantaged by allowing existing generators to participate in RAM without restriction. This potential has also been raised by The Utility Reform Network (TURN) at multiple procurement review group (PRG) meetings in recent months.

One potential concern arises over the possibility that an existing project currently under contract with one utility may seek to secure a higher price through a RAM PPA with another utility, possibly to the disadvantage of ratepayers of the first utility. While this outcome may be the result of a legitimate market arbitrage opportunity, it is not necessarily a desired result for the RAM program. This outcome is also less certain than it may first appear, given that the existing facility may need to negotiate a termination of its original agreement with the first utility before it can meet its obligations pursuant to its RAM PPA. Energy

¹⁰ Resolution E-4414, OP 5, p. 42.

Division staff believes that the RAM program rules should address the issue of whether existing projects may participate in future auctions without restriction.

The scenario outlined above has the potential to become a more widespread concern because of the significant number of Qualifying Facilities (QFs) operating pursuant to existing agreements with the three IOUs that are scheduled to expire within the next few years. As a result, this could create an incentive for QFs to try and take advantage of the scenario outlined above to secure a higher price through RAM before the expiration of its existing contract term, to the disadvantage of ratepayers.

To address these concerns, Energy Division proposes on its own motion the following modification to RAM's program eligibility rules for existing facilities. Existing facilities should remain eligible for RAM subject to the following limitation:

- An existing facility may participate in RAM without restriction if the existing facility is not currently delivering energy pursuant to an existing contractual agreement with PG&E, SDG&E, or SCE; or if such an agreement exists but it is scheduled to terminate within 24 months of the proposed effective date of the utility's PPAs from that RAM auction, as estimated by that utility's RAM Bidding Protocol.

Energy Division staff believes that this modification would provide an opportunity for existing facilities to continue to participate in RAM, while simultaneously protecting ratepayers and promoting the selection of viable projects that will be able to deliver energy pursuant the terms of their RAM PPAs.

The Commission acknowledges that a large number of existing RAM-eligible projects, representing a sizeable capacity, are currently delivering energy pursuant to agreements scheduled to expire within a few years. As such, the approach adopted in this Resolution should be considered an interim approach to address this issue pursuant to the two remaining scheduled RAM auctions. A sustainable and comprehensive long-term procurement solution for these expiring RAM-eligible facilities will be addressed by the Commission at a future date.

PG&E suggested one modification to this provision in its comment on the draft resolution. PG&E recommended requiring that the existing agreement terminate

within 24 months of the *effective date of the PPA* rather than within 24 months of the date when bids are due for the auction. The Commission believes that PG&E's recommendation better aligns with the intent of this provision, given that RAM projects must demonstrate they can achieve commercial operation within 24 months of PPA approval. As such, this resolution has been modified accordingly.

Additionally, SDG&E raised an issue over whether or not existing projects need to meet the same RAM viability requirements as new projects as it concerns having a Phase I interconnection study or having passed FastTrack. SDG&E seeks Commission approval of its approach, which is to require existing projects to sign an affidavit attesting that they will not alter the "operating characteristics" of the facility and that they will continue to utilize their existing interconnection agreement. While this issue is not directly related to this proposed provision, it is tangentially related and the Commission finds SDG&E's approach to require existing facilities attest that they will not alter their operating characteristics to be reasonable.

The Commission maintains, as it did in Resolution E-4414 implementing RAM, that existing projects should still remain eligible to participate in RAM. The Commission also recognizes, however, the potential harm to ratepayers of allowing these existing facilities to participate without reasonable restrictions.

Accordingly, Resolution E-4414¹¹ should be modified as follows:

Ordering Paragraph 5. The investor-owned utilities shall allow existing and new projects to participate in each auction. Existing projects, however, may only participate subject to the following limitation:

An existing facility may participate in RAM without restriction if the existing facility is not currently delivering energy pursuant to an existing contractual agreement with PG&E, SDG&E, or SCE; or if such an agreement exists but it is scheduled to terminate within 24 months of the proposed effective date of the

¹¹ Resolution E-4414, OP 5, p. 42.

utility's PPAs from that RAM auction, as estimated by that utility's RAM Bidding Protocol.

(7) Deliveries in Excess of Contracted Quantities

Decision 10-12-048 established a maximum eligible project size of 20 MW for projects to participate in RAM.¹² At the time, the Commission did not explicitly provide the IOUs with authority to enforce this maximum eligible project size other than to prohibit participation in a RAM auction if a project exceeded the maximum size.

In advice letter 2759-E, SCE proposes two provisions related to this concern. The first is a new term that would allow the IOUs to enforce RAM's maximum project size eligibility after contract execution, and the second is a modified term that would allow the IOUs to enforce the contracted generation pursuant to the terms of the RAM PPA. SCE proposes the following two provisions:

- a) **Zero Payment:** For a RAM project's output during any settlement interval or TOD period *in excess of 110%* the maximum possible output from the project's contracted capacity.
- b) **Reduced Payment at 75% of the PPA Price:** For each MWh of delivered energy from a RAM project *in excess of 115%* the annual generation of the project's contracted annual generation deliveries.

SCE notes in its advice letter that item (b) above has already been conceptually included in its RAM Pro Forma PPA, as previously adopted by the Commission, within Schedule S. SCE states that this proposed modified term is an attempt to achieve the same result but through use of a simpler, non-negotiable mechanism.

Silverado and STS Hydro each filed protests in opposition to SCE's proposal on the basis that such provisions would be unfair to developers of intermittent resources who are unable to control for years in which "good weather" results in increased output, or "bad weather" results in decreased output. The Commission disagrees with the protestants and agrees with SCE that it is the responsibility of Sellers to incorporate the potential for variable generation

¹² D.10-12-048, OP 1, p. 94.

resulting from intermittent weather into their energy forecasts when bidding their projects.

While D.10-12-048 did not directly address these concerns, PG&E raised this issue in its RAM implementing advice letter, advice letter 3809-E, filed in compliance with D.10-12-048. In that advice letter, PG&E filed its proposed RAM PPA, including Section 1.63 that proposed a definition of “delivered energy” pursuant to its RAM contracts.¹³ PG&E proposed that delivered energy “shall not include volumes delivered in excess of 20 MWh per hour.”¹⁴

In Resolution E-4414, the Commission addressed protests from parties responding to PG&E’s proposed Section 1.63 that argued PG&E’s definition was too strict and should allow for some flexibility. The Commission ultimately found that PG&E should modify its PPA to allow “sellers to deliver up to 110% of contract capacity.”¹⁵

In comments to the draft issuance of this resolution, SDG&E recommended that the Commission modify this provision to measure 110% of the contracted capacity based not only on any settlement interval but over any TOD period. The Commission finds that SDG&E’s requested modification is reasonable and this resolution has been modified accordingly.

The Commission finds that SCE’s proposal to remit zero payment for output during any settlement interval or TOD period in excess of 110% of the contracted capacity is functionally equivalent to the term approved for PG&E in Resolution E-4414. Accordingly, the Commission approves SCE’s proposed term to stop payment for output in excess of 110% of contract capacity and authorizes the other IOUs to adopt the same.

Additionally, SCE’s proposal to reduce payments to 75% of the PPA price for any generation on a one-year rolling basis in excess of 115% of the contracted quantity of annual generation is reasonable and consistent with its previous RAM Pro Forma PPA as approved by the Commission. The utilities should

¹³ PG&E Advice Letter 3809-E, Appendix C., RAM form PPA, Section 1.63.

¹⁴ *Id.*

¹⁵ Resolution E-4414, Findings and Conclusions 48, p. 44.

reasonably expect that Sellers will faithfully deliver energy in the quantities that they have contractually agreed to deliver. This type of certainty is necessary for utility planning and scheduling purposes.

That said, SCE's proposal also provides some degree of flexibility in recognition of the year-to-year variability of certain renewable resources, allowing full payment for deliveries up to 15% greater than contracted quantities and allowing for continued payment, albeit at a reduced rate, if a resource delivers energy that far exceeds its contracted quantity.

The Commission finds that SCE's proposed provision to remit a reduced payment equal to 75% of the PPA price for energy deliveries in excess of 115% of contracted annual generation is reasonable. Accordingly, the Commission approves SCE's request and authorizes the other IOUs to adopt the same.

(8) Separate Terms for 3-5 MW Projects

The RAM Decision addressed the issue of whether security and performance deposit requirements for RAM projects should vary dependent on the size of the project.¹⁶ At the time, the Commission looked to precedent established by existing programs, such as the lower security deposit requirements for projects less than 2 MW in SCE's solar photovoltaic program (SPVP) and lower deposit requirements for projects less than 10 MW in PG&E's photovoltaic (PV) program. As a result, the Commission ultimately adopted two levels of security deposits for RAM projects, \$20/kW for RAM projects between 1MW and 5 MW, and either \$60/kW or \$90/kW for projects larger than 5 MW, depending on technology type.¹⁷

Additionally, the Commission adopted two levels of performance deposits for RAM, one for projects between 1 MW and 5 MW and another for projects larger than 5 MW. The performance deposit for the smaller projects was set to the same value as the security deposit (i.e., the \$20/kW security deposit would convert into

¹⁶ D.10-12-048, §§ 9.2.2.2 and 9.2.3, pp. 53-57.

¹⁷ *Id.*

a \$20/kW performance deposit).¹⁸ The performance deposit for projects larger than 5 MW was set to 5% of the value of expected project revenues.¹⁹

The Commission noted in D.10-12-048 that Energy Division should adjust these requirements via a Resolution if staff found that the requirements are “undermin[ing] the goal of promoting a sufficiently competitive market, or that they are not serving their intended purpose.”²⁰

In advice letter 4100-E, PG&E now proposes eliminating these separate deposit terms for projects smaller than 5 MW. PG&E notes that D.12-05-035, adopting programs rules for the revised Section 399.20 Feed-in-Tariff, ordered the IOUs to modify their RAM programs such that projects 3 MW and smaller (i.e., those projects eligible for the revised Feed-in-Tariff) will no longer be eligible to participate.²¹ As a result, projects smaller than 3 MW may no longer participate in RAM. PG&E contends that it would simplify administration of the RAM program to now eliminate the separate deposit terms for projects sized between 3 MW and 5 MW.

No parties filed comments in support of or in opposition to PG&E’s proposed change.

In comments to the draft issuance of this resolution, SEIA raised a tangential issue related to this proposal. SEIA seeks for the CPUC to reinstitute the 1 MW minimum project eligibility size for the third RAM auction in light of the fact that the revised Feed-in-Tariff program (the rules for which were adopted in D.12-05-035) is not yet effective. While the Commission acknowledges that the revised Feed-in-Tariff, or Re-MAT, is not yet effective, it is beyond the scope of this resolution to alter Ordering Paragraph 7 of D.12-05-035, which raised the minimum eligible project size for RAM from 1 MW to 3 MW. Therefore, the minimum eligible project size for the third RAM auction shall be 3 MW, as ordered by D.12-05-035 and implemented via utility compliance advice letter filings.

¹⁸ *Id* at 56-57.

¹⁹ *Id.*

²⁰ *Id* at 55.

²¹ D.12-05-035, OP 7, p. 125.

The Commission finds that, in light of the changes ordered by D.12-05-035 to prohibit the participation of projects sized 3 MW and less in RAM, and in the absence of opposition to PG&E's request, PG&E's request to eliminate separate deposit amounts for projects smaller than 5 MW is reasonable and would serve to simplify administration of the RAM Program.

Accordingly, the Commission modifies D.10-12-048 as follows:

Conclusion of Law 32. A RAM development deposit of ~~\$20/kW for projects 5 MW and smaller, and a \$60/\$90 per kW for intermittent and baseload resources, respectively, for projects greater than 5 MW and up to 20 MW in size~~ should be adopted, with this deposit either refundable upon achieving COD or applied to the subsequent performance deposit; it should be due on the date of contract execution in the form of cash or a letter of credit from a reputable U.S. bank; and it should be forfeited if the project fails to come on line within ~~18~~ 24 months (or with one six-month extension if granted by the IOU).

Conclusion of Law 33. ~~For projects less than 5 MW, a RAM performance deposit should be adopted equal to the development deposit; for projects 5 MW and larger, a~~ A performance deposit should be adopted of 5% of expected total project revenues.

Appendix A, 4. RAM Standard Contract, Contract Terms and Conditions:

- **Development Deposit:** ~~\$20/kW for projects 5 MW and smaller, and a \$60/\$90 per kW for intermittent and baseload resources, respectively, for projects greater than 5 MW and up to 20 MW in size, 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:**
 - ~~For projects less than five MW: conversion of development deposit to performance deposit~~
 - ~~For project five MW and larger: 5% of expected total project revenues~~

(9) Commercial Operation Deadline

The RAM Decision established the guiding principle that RAM should be designed to attract “projects that are more viable because they are further along in the project development process . . . [the Commission] find[s] that the best approach is to set meaningful time limits.”²² To achieve this goal, that decision adopted a commercial operation deadline for Sellers of 18 months from the date that the party executed its RAM PPA.²³ Based on feedback from parties, the Commission modified this requirement slightly in Resolution E-4414, adopting a deadline of 18 months from the date of Commission approval of the PPA, rather than from the date of PPA execution.²⁴

Based on the results of RAM 1 (showing that nearly one-third of projects bidding into SCE’s RAM auction were ruled ineligible because they required an additional 0 to 3 months to attain commercial operation), Resolution E-4489 then extended the deadline to attain commercial operation from 18 months to 24 months after CPUC approval.²⁵ In that Resolution, the Commission found that clear evidence had demonstrated that it would improve RAM to extend the deadline by an additional six months.²⁶

SCE (in advice letter 2759-E) and PG&E (in advice letter 4100-E) each requests that the Commission now extend the deadline for projects to achieve commercial operation by another 12 months, to 36 months from the date of Commission approval.

Recurrent, Clean Coalition, and SEIA filed protests in opposition to an extension of the commercial operation deadline by an additional 12 months. Those parties argued that the IOUs have provided no reason for extending the deadline, and that to do so would simply result in less viable projects becoming eligible to participate in RAM. The Commission agrees with these parties.

²² D.10-12-048, § 9.2.1.2, p. 51.

²³ *Id* at 90.

²⁴ Resolution E-4414, OP 18, p. 46.

²⁵ Resolution E-4489, OP 5, p. 19.

²⁶ *Id* at 18.

Additionally, Silverado noted its support for the proposed change.

In comments to the draft issuance of this resolution, PG&E requested that the Commission reconsider the realities of delays in interconnecting RAM projects and provide for a 12 month extension for regulatory delay, rather than a 6 month extension. The Commission acknowledges PG&E's request but declines to adopt it at this time in an effort promote one of RAM's guiding principles, that is, the execution of PPAs with projects that can achieve commercial operation quickly.

Neither SCE nor PG&E provides any evidence that an extension of the commercial operation deadline would benefit the RAM program. As such, and to maintain consistency with the guiding principles for RAM as established by D.10-12-048, the Commission finds that parties have not provided sufficient evidence to justify extending the deadline for RAM projects to achieve commercial operation. Accordingly, the Commission denies the request to extend the deadline from 24 months to 36 months.

(10) Simplified Curtailment Provisions

In its existing RAM PPA, SCE has linked Buyer curtailment rights for economic reasons to CAISO pricing in the day-ahead market. In advice letter 2759-E, SCE proposes to simplify this economic curtailment mechanism. SCE now seeks to impose a maximum of 50 hours of economic curtailment, without payment, annually on Sellers. SCE would pay the Seller as if energy had been delivered for any economic curtailment beyond the 50-hour annual cap. This provision would cap the Seller's exposure to unpaid curtailment, but would leave uncapped the total number of hours that a facility could be curtailed with payment.

Silverado protested this advice letter and stated its opposition to this term on the grounds that it prefers the existing curtailment term, and that this revised term would result in higher RAM bid prices as Sellers adjust their prices to account for a guaranteed 50 hours of lost revenues.

Recurrent protested this advice letter and opposed this provision on the basis that it is premature to adopt the change because SCE has proposed the same language for in its 2012 RPS Procurement Plan currently under review by the Commission. The Commission disagrees that inclusion of this term in the 2012 RPS Procurement Plan is sufficient basis for rejecting this proposal, as terms

proposed for the non-negotiable RAM PPA must be evaluated on their own merits.

In advice letter 4100-E, PG&E has also requested authority to modify its economic curtailment provision in its RAM PPA. PG&E, however, has proposed a different approach, as addressed in Section (13) below.

The Commission acknowledges the challenges in establishing provisions to authorize economic curtailment ordered by the Buyer, particularly given the uncertainty in forecasting market conditions into the future. While the Commission recognizes that the utilities have a need for these provisions, the Commission finds that the record on SCE's specific economic curtailment proposal is insufficient. The Commission will seek to address this issue in a more comprehensive manner at a future date.

Accordingly, SCE's request to adopt simplified economic curtailment provisions is denied without prejudice.

(11) Adding Two More RAM Procurements (RAM 5 and RAM 6)

The RAM Decision initially authorized the three IOUs to hold four RAM auctions over two years.²⁷ Furthermore, the decision also established an initial RAM program cap of 1,000 MW allocated across the three IOUs.²⁸ The Commission noted in that Decision, however, that it "may adjust our 1,000 MW cap at any time based on evidence of response and need. . . [and that] RPS program targets are minimums, not maximums."²⁹

In advice letter 2759-E, SCE proposes that the Commission now authorize the addition of a RAM5 and RAM6 auction, presumably to occur in late 2013, 2014, or beyond. SCE contends that these additional auctions should not carry with them an increase in the size of the RAM program, but rather should be utilized by the IOUs for the sole purpose of backfill RAM procurement for any projects from the first four auctions that may have, by that time, failed. SCE proposes that

²⁷ D.10-12-048, § 7.2, p. 33.

²⁸ *Id* at OP 1, p. 94.

²⁹ *Id* at § 7.1.3, p. 28-29.

the RAM program should then sunset after RAM6, and that the Commission should excuse any remaining unsubscribed RAM capacity targets at that time, if any exist.

Silverado filed a response to SCE's advice letter offering its support for this request. SEIA also supports the request, but seeks a modification to clarify that the IOUs must procure 100% of their RAM authorizations before the program sunsets. Recurrent also supports the concept of expanding RAM, but notes its preference for such an expansion to occur in a more thoughtful manner.

The Commission maintains, as it did in D.10-12-048, that the RAM program targets are minimums, not maximums. As such, the Commission agrees with SCE that the three utilities should be given an opportunity to procure replacement RAM projects should any projects from the first four authorized auctions fail, and it agrees with SEIA that the IOUs must procure at least 100% of the RAM capacity targets authorized by the Commission.

The Commission also agrees with Recurrent that RAM should be expanded in a more thoughtful, comprehensive manner, rather than as a piecemeal attempt designed only to address potential RAM project failures.

For these reasons, SCE's request to add two additional RAM auctions at this time is denied and the Commission will revisit expanding the authorization for RAM at a future date.

(12) Obligations of Energy-Only Sellers

In Resolution E-4489, the Commission created an option for Sellers to bid a project into RAM as energy-only.³⁰ At the same time, the Commission also explicitly prohibited an IOU from requiring an energy-only Seller to pursue a deliverability study.³¹

PG&E now proposes that the Commission authorize the IOUs to require energy-only Sellers to pursue deliverability via the "annual [CAISO] process" to evaluate whether the Seller can provide RA benefits at minimal cost. PG&E

³⁰ Resolution E-4489, OP 5, p. 19.

³¹ *Id.*

proposes capping the Seller's cost responsibility in this pursuit at \$50,000, which the Seller should reflect in its RAM bid price.

Clean Coalition, in its protest filed to advice letter 4100-E, opposed PG&E's request and noted that PG&E provided no justification for imposing this requirement at this time. SEIA also opposed PG&E's request on the basis that it is contrary to previous Commission orders on RAM and would unfairly burden smaller developers.

The Commission notes that PG&E is correct that ratepayers benefit when an energy-only Seller becomes fully deliverable without the need for transmission network upgrades. This pathway is available through the CAISO's Annual Full Capacity Deliverability Option, as set out in the CAISO Tariff, Appendix Y, § 8.2. That process costs \$10,000 and is designed to identify whether an energy-only Seller may obtain Full Capacity Deliverability Status, as defined in the CAISO Tariff, without additional cost in the form of transmission network upgrades. This pathway provides additional RA benefits without incurring transmission network upgrade costs for ratepayers.

In addition, the CAISO is currently developing a second pathway to Full Capacity Deliverability Status for distributed generation resources in its Resource Adequacy Deliverability for Distributed Generation proposal.³² Through a new annual modeling effort, this process will similarly identify substations within the electric system at which a generating facility interconnected to, or seeking interconnection to, the distribution system may become fully deliverable without triggering transmission network upgrades. The Commission notes that this pathway will only be made fully available once the CAISO has received approval for tariff language from the Federal Energy Regulatory Commission (FERC), and this Commission has developed program rules for allocation to CPUC-jurisdictional load-serving entities and eligible resources.³³ Additionally, in the Commission's development of the allocation

³² See,

<http://www.caiso.com/informed/Pages/StakeholderProcesses/DeliverabilityforDistributedGeneration.aspx>.

³³ The development of allocation rules will take place within the Commission's Resource Adequacy proceeding, Rulemaking 11-10-023.

rules for the new Resource Adequacy Deliverability for Distributed Generation proposal, the considerations may include application fees or other seller costs, eligibility, and priority order.

Given the initiatives at the CAISO and ongoing efforts of the Commission, it is premature to implement a \$50,000 cost requirement on RAM participants as proposed by PG&E.

For the reasons stated above, PG&E's request to require energy-only sellers to pursue full deliverability, subject to a \$50,000 cost cap, through the CAISO's "annual process" is denied.

(13) Buyer Curtailment Hours

In its existing RAM PPA, PG&E limited Buyer curtailment for economic reasons to a maximum of 100 hours annually with payment. PG&E would not curtail a Seller beyond 100 hours annually.

In advice letter 4100-E, PG&E now proposes to increase the maximum allowed annual economic curtailment by Buyer from 100 hours to 250 hours.

Clean Coalition protested this proposal on the grounds that PG&E did not clearly articulate whether it would continue to pay the Seller for those additional 150 hours of economic curtailment, or whether PG&E was merely proposing to increase the cap without increasing the hours of payment. PG&E responded to Clean Coalition's protest to clarify that it would, in fact, pay the Seller as if energy had been delivered up to the full 250 hours of maximum allowable economic curtailment.

As addressed above in Section (10), SCE currently takes a different approach to economic curtailment in its RAM PPA, and its proposed modification would continue to take a different approach from what PG&E is proposing.

In comments to the draft issuance of this resolution, PG&E reiterated its desire for the Commission to authorize its proposal to change its buyer curtailment provisions. For the same reasons cited previous in the draft resolution, and for the reasons cited above in Section (10) as it relates to SCE's request, the Commission maintains the position proposed in the draft resolution.

As was the case with SCE's proposal, the Commission finds that the record on PG&E's specific economic curtailment proposal is insufficient. The Commission will seek to address this issue in a more comprehensive manner at a future date.

Accordingly, PG&E's request to increase the maximum allowable hours of economic curtailment is denied without prejudice.

Non-Substantive Proposed Changes to Individual IOU RAM Pro Forma PPA

In addition to the substantive proposed changes to the RAM Program addressed above, SCE, SDG&E, and PG&E have also requested several non-substantive changes to their individual RAM Pro Forma PPAs and RAM Bidding Protocols. Many of these changes originated from stakeholder input at the IOUs' RAM Program Forums. The utilities have also proposed a number of changes to their RAM PPAs to make them consistent with their Draft 2012 RPS Pro Forma PPAs.

The changes adopted in this section do not impact the RAM program universally, and thus will only apply to the particular IOU that proposed the modification.

In comments to the draft issuance of this resolution, SDG&E raised additional non-substantive issues for which it seeks approval in Appendix B of this resolution. The Commission reviewed these changes, finds them to be reasonable, and has modified Appendix B accordingly.

The non-substantive changes proposed by each of the three utilities are summarized in detail in the appendices at the end of this Resolution. These summaries can be found here:

- **Appendix A:** SCE's Proposed Non-Substantive Changes
- **Appendix B:** SDG&E's Proposed Non-Substantive Changes
- **Appendix C:** PG&E's Proposed Non-Substantive Changes

The Commission notes that few of the protests or responses filed to the IOUs' advice letters addressed the non-substantive issues considered in this section. That said, Silverado offered its full support, without additional commentary, for Items 1 - 5 in Appendix A, as filed by SCE in Section H of advice letter 2759-E. Silverado also offered its support of Item 8 in Appendix B, as filed by SDG&E in Section C. of advice letter 2392-E.

Additionally, SEIA offered its support in concept for PG&E's request to modify its letter of credit requirements for banks providing financing to RAM projects (Item 13 in Appendix C, as filed by PG&E in Section B of advice letter 4100-E),

but took issue with PG&E's "confusing implementation" of the new requirements. The Commission does not believe SEIA's protest to PG&E's implementation of its letter of credit requirement warrants denial of the otherwise reasonable request.

Additionally, SEIA stated its opposition to all of PG&E's requested changes contained in Section H of PG&E's advice letter 4100-E, and summarized as Items 1 - 7 in Appendix C. PG&E requested these changes to align the terms of its RAM PPA with changes recently proposed, but not yet adopted, pursuant to its 2012 RPS Pro Forma PPA. SEIA argues that the Commission should deny these requests on the basis that the requested changes should first be fully vetted through the 2012 RPS Procurement Plan process. The Commission disagrees. The terms and conditions adopted for the RAM PPA are non-negotiable, whereas the terms considered for the large-scale RPS Pro Forma PPA will be negotiable. As such, the Commission finds that the specific terms proposed for the RAM PPA must be evaluated on their merits, as applied specifically to RAM.

The non-substantive modifications, as summarized in Appendix A for SCE, in Appendix B for SDG&E, and in Appendix C for PG&E, proposed by the three utilities are reasonable and are approved.

COMMENTS

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

The 30-day comment period for the draft of this Resolution was neither waived nor reduced. Accordingly, this draft Resolution was mailed to parties for comments on October 2, 2012.

The Commission received timely comments to draft resolution E-4546 on October 22, 2012 from SCE; PG&E; SDG&E; the Solar Energy Industries Association (SEIA); Recurrent Energy; Large-Scale Solar Association (LSA); and NextEra Energy Resources (NextEra).

The Commission also received late filed comments to draft resolution E-4546 on October 25, 2012 from the Clean Coalition. Commission staff accepted these late comments.

Commission staff reviewed all comments submitted on the draft resolution and the content of these comments has been addressed, and the resolution modified accordingly as necessary, in the relevant discussion subsections of this resolution above.

There is one notable exception. NextEra raised four issues in its comments that had not been previously addressed in the draft resolution. Commission staff has the authority pursuant to D.10-12-048 to modify the RAM program through the resolution process by raising issues on its own motion, thus it has the discretion to propose adopting NextEra's suggested changes. That said, Commission staff believes that the issues raised by NextEra are substantive in nature and warrant stakeholder feedback. For this reason, the Commission does not address the substance of the issues raised by NextEra at this time.

The Commission did not seek the submission of reply comments to draft resolution E-4546.

FINDINGS AND CONCLUSIONS

1. The modifications to the Renewable Auction Mechanism program (RAM) proposed by staff are consistent with the direction given in Ordering Paragraph 5 of D.10-12-048.
2. The modifications adopted herein as proposed by Southern California Edison Company's (SCE) advice letter (AL) 2759-E, by San Diego Gas & Electric Company's (SDG&E) AL 2392-E, by Pacific Gas and Electric Company's (PG&E) AL 4100-E, and on the Commission's own motion would improve the RAM program.
3. The third RAM solicitation authorized for SCE, SDG&E and PG&E should be initiated in a timely manner so that the solicitations may close by December 21, 2012.
4. The Commission received timely protests to SCE's AL 2759-E from STS Hydropower Ltd., Clean Coalition, Silverado Power LLC, Recurrent Energy, and the Solar Energy Industries Association. The substance of these protests has been addressed herein.

5. The Commission received a timely response to SDGE's AL 2392-E from Silverado Power LLC. The substance of this response has been addressed herein.
6. The Commission received timely protests to PG&E's AL 4100-E from the Solar Energy Industries Association and Clean Coalition. The substance of these protests has been addressed herein.
7. The Commission continues to support the creation of a mechanism that would protect ratepayers from unbounded exposure to potential increases in reimbursable transmission network upgrade costs.
8. The Commission denies without prejudice SCE's request to include a unilateral termination right at this time.
9. It would improve RAM to adjust guaranteed energy performance requirements so that they better align with the actual performance characteristics of various technology types.
10. SCE's request to create separate guaranteed energy performance requirements dependent on technology type is approved with modification.
11. PG&E's request to create separate guaranteed energy performance requirements dependent on technology type is approved.
12. SCE's proposal to increase flexibility in bidding resource adequacy is reasonable. The proposed change will benefit ratepayers by providing greater certainty over when a utility will be, or will not be, receiving resource adequacy benefits from a particular project that received its RAM PPA on the basis of its expected achievement of full capacity deliverability status.
13. SCE's proposal to increase flexibility in bidding RA is reasonable.
14. SCE's proposal to increase flexibility in RA will benefit ratepayers by providing greater certainty over when a utility will be, or will not be, receiving resource adequacy benefits from a particular project that received its RAM PPA on the basis of its expected achievement of full capacity deliverability status.

15. It is reasonable for a utility to expect a Seller to meet its contractual obligations pursuant to the RAM PPA.
16. The Commission authorizes the IOUs to either: (a) maintain the same approach for enforcing RA obligations that they implemented pursuant to Resolution E-4489, or (b) to seek liquidated damages from a Seller if the Seller fails to meet its RA obligations pursuant to its RAM PPA.
17. Creating dual time of delivery (TOD) factors (i.e., energy-only or fully deliverable) would increase the complexity of the RAM Program. That said, creating dual TOD factors is a necessary change given the option created by Resolution E-4489 for participants in RAM to bid projects as either an energy-only or fully deliverable resource.
18. SCE's proposal to create dual TOD factors is reasonable, consistent with the Commission's recent treatment of this issue in the Feed-in-Tariff program adopted in D.12-05-035, and would benefit ratepayers by allowing the utilities to differentiate payments to Sellers based on whether a project is actually providing resource adequacy benefits pursuant to the terms of its PPA.
19. SCE's request to create dual TOD factors, one for energy-only payments and another for fully deliverable payments, is approved.
20. Existing projects should remain eligible to participate in RAM. The Commission also recognizes, however, the potential harm to ratepayers of allowing these existing facilities to participate without reasonable restrictions.
21. Energy Division staff's proposal to modify the program eligibility rules for existing projects to participate in RAM is approved.
22. SCE's proposal to remit zero payment for output during any settlement interval in excess of 110% of the contracted capacity is functionally equivalent to the term approved for PG&E in Resolution E-4414.
23. SCE's proposed term to stop payment for Seller output in excess of 110% of contract capacity is approved.

24. SCE's proposed provision to remit a reduced payment equal to 75% of the PPA price for energy deliveries in excess of 115% of contracted annual generation is reasonable.
25. SCE's request to reduce energy payments for energy deliveries in excess of 115% of contracted generation is approved.
26. It is beyond the scope of this resolution to alter Ordering Paragraph 7 of D.12-05-035, which raised the minimum eligible project size for RAM from 1 MW to 3 MW.
27. The minimum eligible project size for the third RAM auction shall be 3 MW, as ordered by D.12-05-035 and implemented via utility compliance advice letter filings.
28. In light of the ordered by the Commission in D.12-05-035 to prohibit the participation of projects sized 3 megawatts (MW) and less in RAM, and in the absence of opposition to PG&E's request, PG&E's request to remove separate security and performance deposit terms for projects sized less than 5 MW is reasonable and would serve to simplify administration of the RAM Program.
29. PG&E's request to remove separate security and performance deposit terms for projects sized less than 5 MW is approved.
30. Parties have not provided sufficient evidence to justify extending the deadline for RAM projects to achieve commercial operation.
31. SCE and PG&E's request to extend the commercial operation deadline in RAM is denied.
32. The Commission acknowledges the challenges in establishing provisions to authorize economic curtailment ordered by the Buyer, particularly given the uncertainty in forecasting market conditions into the future.
33. The record on SCE's specific economic curtailment proposal is insufficient.
34. SCE's request to adopt simplified economic curtailment provisions is denied without prejudice.

35. The Commission maintains, as it did in D.10-12-048, that the RAM program capacity targets are minimums, not maximums.
36. The Commission agrees with SCE that the three utilities should be given an opportunity to procure replacement RAM projects should any projects from the first four authorized auctions fail, and it agrees with SEIA that the utilities must procure at least 100% of the RAM capacity targets authorized by the Commission.
37. The Commission also agrees with Recurrent that RAM should be expanded in a more thoughtful, comprehensive manner, rather than as a piecemeal attempt designed only to address potential RAM project failures.
38. SCE's request to add two additional RAM auctions at this time is denied and the Commission will revisit expanding the authorization for RAM at a future date.
39. Given the initiatives at the CAISO and ongoing efforts of the Commission, it is premature to implement a \$50,000 cost requirement on RAM participants to require energy-only sellers to pursue full deliverability as proposed by PG&E.
40. PG&E's request to require energy-only sellers to pursue full deliverability, subject to a \$50,000 cost cap, through the CAISO's "annual process" is denied.
41. The Commission does not believe SEIA's protest to PG&E's implementation of its letter of credit requirement warrants denial of the otherwise reasonable request.
42. The record on PG&E's specific economic curtailment proposal is insufficient.
43. PG&E's request to increase the maximum allowable hours of economic curtailment is denied without prejudice.
44. The specific terms proposed for the RAM PPA must be evaluated on their merits, as applied specifically to RAM.

45. Timely comments were submitted on October 22, 2012 by Pacific Gas and Electric; Southern California Edison; San Diego Gas and Electric; the Solar Energy Industries Association; Recurrent Energy; the Large-Scale Solar Association; and NextEra Energy Resources. Late comments were submitted, and accepted by Commission staff, on October 25, 2012 by the Clean Coalition. These comments have been disposed of in this resolution.
46. The non-substantive modifications, as summarized in Appendix A for SCE, in Appendix B for SDG&E, and in Appendix C for PG&E, as proposed by the three utilities are reasonable to ratepayers and are approved.
47. SCE's AL 2759-E should be approved with the modifications discussed herein.
48. SDG&E's AL 2392-E should be approved with the modifications discussed herein.
49. PG&E's AL 4100-E should be approved with the modifications discussed herein.

THEREFORE IT IS ORDERED THAT:

1. Southern California Edison Company's advice letter 2759-E, San Diego Gas & Electric Company's advice letter 2392-E, and Pacific Gas and Electric Company's advice letter 4100-E are approved with modifications.
2. The modifications adopted in Ordering Paragraphs 3 through 12 shall apply to the Renewable Auction Mechanism (RAM) program universally, and shall be reflected in each of the utility's RAM Pro Forma power purchase agreements (PPAs), RAM Bidding Protocols, and Program Rules, as necessary.
3. The third RAM solicitation authorized for Southern California Edison Company, San Diego Gas & Electric Company, and Pacific Gas and Electric Company shall close by December 21, 2012.
4. The investor-owned utilities do not have the authority at this time to include in its RAM PPA a unilateral termination right for the Buyer in instances

where the cost of ratepayer funds or reimbursed transmission upgrade costs increase over the study estimate provided at the time of the RAM RFO.

5. Each of the investor-owned utilities shall adopt the following Guaranteed Energy Performance requirements:
 - 140% of expected annual net energy production based on two years of rolling production for as-available non-peaking projects.
 - 160% of expected annual net energy production based on two years of rolling production for as-available peaking projects.
 - 90% of expected annual net energy production based on one year of rolling production for baseload projects.
 - There should be no minimum guaranteed energy performance requirement for small hydro projects seeking to participate in RAM.
6. For a project bidding with full capacity deliverability status, each of the investor-owned utilities shall require either: (a) that a Seller be obligated to achieve full deliverability by a date certain in its PPA, consistent with the direction given in Resolution E-4489, or (b) that a Seller designate the amount of resource adequacy benefit, if any, the Seller will provide for each month of the year during the contract term. Under either option, the Seller may not supply resource adequacy from a third-party, nor may Seller provide resource adequacy benefits in excess of the Net Qualifying Capacity of its facility.
7. Each of the investor-owned utilities is authorized to include a provision allowing the utility to pursue fixed, liquidated damages if a Seller fails to meet its resource adequacy obligations pursuant to the terms of its PPA. Alternatively, the investor-owned utilities have the option to continue utilizing the same enforcement mechanism that the utility implemented pursuant to Resolution E-4489 to enforce a Sellers obligation to deliver resource adequacy benefits.

8. Each of the investor-owned utilities shall adjust energy payments by either energy-only or full capacity deliverability status time of delivery (TOD) factors dependent on whether or not the project has attained full capacity deliverability status and is providing resource adequacy benefits at the time of payment pursuant to its obligations in its RAM PPA.
9. The RAM program eligibility rules as applied to existing facilities are modified as follows:
 - An existing facility may participate in RAM without restriction if the existing facility is not currently delivering energy pursuant to an existing contractual agreement with PG&E, SDG&E, or SCE; or if such an agreement exists but it is scheduled to terminate within 24 months of the proposed effective date of the utility's PPAs from that RAM auction, as estimated by that utility's RAM Bidding Protocol.
10. Each of the investor-owned utilities shall have the authority to stop payment for output in excess of 110% of the maximum possible output at the facility's contracted capacity during any settlement interval or TOD period.
11. Each of the investor-owned utilities shall have the authority to reduce energy payments to 75% of the RAM PPA price for any energy deliveries in excess of 115% of the facility's contracted annual generation.
12. Separate security and performance deposits for projects sized less than 5 megawatts are eliminated.
13. The deadline for RAM projects to achieve commercial operation shall remain 24 months from the date of CPUC approval of the RAM PPA.
14. Southern California Edison Company shall maintain the term that exists in its previous RAM PPA as it relates to economic curtailment ordered by the Buyer.
15. There shall remain only two additional RAM auctions, as authorized by Decision 10-12-048, unless the Commission orders otherwise.

16. The investor-owned utilities may not require energy-only Sellers to pursue deliverability studies of any kind, unless the Commission orders otherwise.
17. Pacific Gas and Electric Company shall maintain the term that exists in its previous RAM PPA as it relates to economic curtailment ordered by the Buyer.
18. The non-substantive modifications, as summarized in this Resolution in Appendix A for Southern California Edison Company, in Appendix B for San Diego Gas and Electric Company, and in Appendix C for Pacific Gas and Electric Company, are approved.
19. Within 7 days of the effective date of this Resolution, Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall file a Tier 1 advice letter with the Energy Division demonstrating compliance with this Resolution, in particular Ordering Paragraphs 3-12, and may include additional non-substantive changes to the RAM protocols and RAM power purchase agreements.
20. The modifications to Commission Decision 10-12-048, Resolution E-4414, and to Resolution E-4489 contained herein are adopted.
21. The RAM program rules contained in Appendix D are adopted.

This Resolution is effective today.

I certify that the foregoing Resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on November 8, 2012; the following Commissioners voting favorably thereon:

PAUL CLANON
Executive Director

MICHAEL R. PEEVEY
President
TIMOTHY ALAN SIMON
MICHEL PETER FLORIO
CATHERINE J.K. SANDOVAL
MARK J. FERRON
Commissioners

Appendix A

Summary of the Non-Substantive Modifications to RAM Proposed by SCE

Summary of SCE's Proposed Non-Substantive Changes to its RAM Pro Forma PPA

Subject of PPA Change	Relevant RAM Pro Forma PPA Section	Proposed Revision to SCE RAM Pro Forma PPA	Source of Change	Disposition
(1) <i>Federal Tax Credit</i>	Article 1.10 – Once a Seller qualifies for and elects to take a particular federal tax credit (i.e., the ITC or PTC), the Seller cannot later change its selection.	Modify PPA to allow the Seller to switch which federal tax credit (ie, the ITC or PTC) it intends to claim.	SCE advice letter 2759-E (Section H.)	Approve
(2) <i>Access Rights to Seller's Facility</i>	Article 3.18	Buyer shall conform to Seller's safety protocols when visiting the Seller's facility.	SCE advice letter 2759-E (Section H.)	Approve
(3) <i>Flexibility to Utilize Sale/ Leaseback Structure</i>	Article 6.01(b)(iv)	Modify the Events of Default in the PPA regarding Seller's ownership of a site to allow for a sale/leaseback structure to qualify.	SCE advice letter 2759-E (Section H.)	Approve
(4) <i>Representation and Warranty Regarding Seller's Capacity to Deliver Product</i>	Article 10.01(h) – Seller must warrant that it has capacity and ability to make delivery of product as contemplated by the PPA as of the effective date of the agreement.	Deletion of Article 10.01(h) and the particular representation and warranty.	SCE advice letter 2759-E (Section H.)	Approve
(5) <i>Event of Default; Termination of Interconnection Agreement</i>	Article 6.01(b)(xiv) – No comparable cure right currently provided.	Modify termination right to allow for a 30 day cure period for termination or cessation of service necessary for Seller to interconnect, transmit energy, or comply with the CAISO tariff if such termination was through no fault of Seller.	SCE advice letter 2759-E (Section H.)	Approve
(6) <i>Generator Facility ID</i>	Article 1.12	Adding the generating facility ID number if the facility is interconnected within the utility's service territory.	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve

Subject of PPA Change	Relevant RAM Pro Forma PPA Section	Proposed Revision to SCE RAM Pro Forma PPA	Source of Change	Disposition
<i>(7) Reporting Requirements; Final Wind Report and Annual Yield Factor Report</i>	Article 3.12(c)(xii)-(xiii)	Remove requirement for final wind report and annual yield factor report prior to initial synchronization.	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve
<i>(8) Failure to Attain COD</i>	Article 3.06(d)	Replace “Seller has abandoned the Generating Facility” with “the Commercial Operation Date is unlikely to occur before the Commercial Operation Deadline”	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve
<i>(9) Information Requirements; Interconnection</i>	Article 3.17(a)	Expand the Provision of Information requirement concerning updated interconnection studies or agreements.	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve
<i>(10) Reporting Requirements; WMDVBE</i>	Article 3.17(k)	Expand reporting requirements related to women, minority, and disabled veteran owned business enterprises.	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve
<i>(11) Information Requirements; Tax Forms</i>	Article 3.17(l)	Expand Provision of Information requirements concerning tax forms.	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve
<i>(12) Consent to Collateral Assignment</i>	Article 10.05	Require that Seller be responsible for SCE’s costs associated with granting consent to collateral assignment.	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve

Subject of PPA Change	Relevant RAM Pro Forma PPA Section	Proposed Revision to SCE RAM Pro Forma PPA	Source of Change	Disposition
(13) <i>Clarification regarding Arbitrator</i>	Article 12.03	Clarification regarding the Arbitrator's role and authority.	SCE advice letter 2759-E (Section J.: Consistency with 2012 RPS Pro Forma PPA)	Approve
(14) <i>Measurement of Capacity for Purposes of RAM</i>	According to SCE, the Commission has not offered clear guidance on how to measure the "capacity" of a project.	SCE proposes a definition for measuring capacity and seeks the Commission's endorsement. SCE proposes to measure the 20 MW max capacity in RAM based on the "effective capacity" of the generating facility.	SCE advice letter 2759-E (Section F.)	Approve

(END OF APPENDIX A)

Appendix B

Summary of the Non-Substantive Modifications to RAM Proposed by SDG&E

Summary of SDG&E's Proposed Non-Substantive Changes to its RAM Pro Forma PPA and RAM RFO Bidding Protocol

Subject of PPA Change	Relevant RAM Pro Forma PPA Section	Proposed Revision to SDG&E's RAM PPA	Source of Change	Disposition
(1) <i>Effectiveness of Agreement; Condition Precedent</i>	Section 2.2(a)(ii)	Section 2.2(a)(ii), page 18 of the PPA, the term "If Applicable" has been added to differentiate between existing and new projects.	SDGE advice letter 2392-E (Section D.)	Approve
(2) <i>Obligations and Deliveries</i>	Section 3.9	Section 3.9 New Generation Facility, page 33, the term "If Applicable" has been added to differentiate between existing and new projects. Section 3.9(a)(vi), page 33, deleted "each calendar quarter" and replaced it with "the sixth month" to avoid confusion. Semi-annual reports are to be submitted twice a year, not quarterly.	SDGE advice letter 2392-E (Section D.)	Approve
(3) <i>Insurance, Credit, and Collateral Requirements</i>	Section 8.3	Typographical errors. Section 8.3(a)(i) and (ii), page 46, by replacing Section 8.3 with Section 8.4. Should read, "8.3(b)(i)," and "8.3(b)(ii)."	SDGE advice letter 2392-E (Section D.)	Approve
(4) <i>GPS Coordinates for Projects</i>	Exhibit A	Added the phrase, "Provide latitude and longitude of the Project's proposed site (in decimal degree and degrees: minutes: seconds form (e.g. 49.5000°, -123.5000° and 49°30'02"N, 123°30'30"W))" to be consistent with data requested in the 2011 RPS Solicitation Advice Letter Template.	SDGE advice letter 2392-E (Section D.)	Approve

Subject of PPA Change	Relevant RAM Pro Forma PPA Section	Proposed Revision to SDG&E's RAM PPA	Source of Change	Disposition
(5) <i>Project Milestones</i>	Exhibit B	Simplified the milestone schedule by reducing the number of milestones and making it more general to fit all types of generation. Also added the term "If Applicable." Certain Milestones may not apply to existing projects and can be listed as completed (with supporting documentation) and/or removed from the Milestone Schedule prior to execution.	SDGE advice letter 2392-E (Section D.)	Approve
(6) <i>November 2012 RAM solicitation document</i>	<i>November 2012 RAM solicitation document</i>	Adjusting/updating the schedule to accommodate for the November RAM Solicitations. Clarifications to the RFO Confidentiality language. Clarified confidentiality rules for bidders who share common owners or advisors.	SDGE advice letter 2392-E (Section E.)	Approve
(7) <i>Project Description Form</i>	Project Description Form	Updates/clarifications to the form, such as: clarifications to the eligibility criteria, specific information on required easements, and other non-material changes to the form such as re-wording.	SDGE advice letter 2392-E (Section E.)	Approve
(8) <i>Revised Eligibility Requirement to Remove Restriction on Projects Located on Contiguous Land</i>	SDG&E RAM RFO Bidding Protocol	SDG&E proposes to eliminate the provision from its RAM RFO bidding protocol that prohibits projects from siting on contiguous land in an effort to the level the playing field for small developers. SDG&E contends that the provision is difficult to enforce and does not accomplish its intended goal. SDG&E maintains that removal of this provision does not change the fact that Sellers may <u>not</u> sell smaller portions of larger projects into RAM in an attempt to avoid the 20 MW maximum project size.	SDGE advice letter 2392-E (Section C.)	Approve
(9) <i>Provision Related to</i>	Modification to SDG&E's RAM PPA,	According to SDG&E, under its existing PPA the Buyer may be	Comments filed by SDG&E to	Approve

Subject of PPA Change	Relevant RAM Pro Forma PPA Section	Proposed Revision to SDG&E's RAM PPA	Source of Change	Disposition
<i>Imbalance Charges from the CAISO</i>	Imbalance Charge provision	responsible for certain imbalance charges when it is the Scheduling Coordinator for the project, even when the Seller's facility is not a certified Participating Intermittent Resource. The language in the current PPA puts ratepayers at risk, according to SDG&E, in situations where Seller's forecasted schedule differs drastically from the facility's actual output and results in a CAISO imbalance charge. SDG&E proposes to adopt language similar to that found in Section 4.6 of PG&E's 2012 RAM PPA, as previously approved by the Commission.	Draft Resolution E-4546	
(10) <i>Definition: Delivery Point</i>	Section 3.1(d)	SDG&E proposes to change the definition of "delivery point" for distribution levels projects to: "the point on the CAISO Grid where the Participating Transmission Owner's distribution system interconnects to the CAISO Grid as set forth in their Master Services Agreement, as may be acceptable to Buyer in its reasonable discretion." According to SDG&E, this revised language helps to clarify that SDG&E does not take title to the power until it reaches the CAISO Grid.	Comments filed by SDG&E to Draft Resolution E-4546	Approve
(11) <i>Definition: Guaranteed Energy Production</i>	Section 3.1(e)	SDG&E' proposes to modify its definition of "Guaranteed Energy Production."	Comments filed by SDG&E to Draft Resolution E-4546	Approve

(END OF APPENDIX B)

Appendix C

Summary of the Non-Substantive Modifications to RAM Proposed by PG&E

Summary of PG&E's Proposed Non-Substantive Changes to its RAM Pro Forma PPA and RAM Bidding Protocol

Subject of PPA Change	Relevant Section of PPA or Bidding Protocol	Proposed Revision to PG&E's RAM PPA or Bidding Protocol	Source of Change	Disposition
(1) <i>Outage Reporting</i>	PPA Section 3.7	Minor modification to outage reporting requirements to help ensure that PG&E will be in compliance with RA rules and will be able to count the project capacity toward its RA requirement.	PG&E advice letter 4100-E (Section H – Consistency with 2012 RPS Plan)	Approve
(2) <i>Payments for Baseload Projects</i>	Payment term	Limit payments to baseload projects to 105% of the contract price to prevent a situation where baseload projects significantly alter their energy delivery profile in an attempt to take advantage of Super-Peak delivery periods.	PG&E advice letter 4100-E (Section H – Consistency with 2012 RPS Plan)	Approve
(3) <i>Changes in Terminology</i>	PPA Sections 1.58; 1.133; 1.137; 1.188; and 1.227	To more accurately reflect market protocols, change the phrase “Day-Ahead Schedule” to “Day-Ahead Market” and add definitions for “Integrated Forward Market” and “Real-Time Market”	PG&E advice letter 4100-E (Section H – Consistency with 2012 RPS Plan)	Approve
(4) <i>CAISO Charges</i>	PPA Section 4.5 – Addressing PG&E's responsibility and rights with respect to charges and credits assessed by CAISO to utility in its role as scheduling coordinator	Expand Section 4.5 to clarify that PG&E also has the right to “retain the credits and other payments received as a result of Energy from the Project delivered to the Integrated Forward Market or Real-Time Market, including revenues associated with CAISO dispatches.”	PG&E advice letter 4100-E (Section H – Consistency with 2012 RPS Plan)	Approve
(5) <i>Resource Adequacy</i>	PPA Section 3.3(a) and Appendix X	Minor changes to modify the Seller's obligations by requiring compliance with RA obligations both during the Delivery Term and “in anticipation of” Delivery Term to put Seller on notice that it may need to take actions prior to its delivery of energy.	PG&E advice letter 4100-E (Section H – Consistency with 2012 RPS Plan)	Approve

Subject of PPA Change	Relevant Section of PPA or Bidding Protocol	Proposed Revision to PG&E's RAM PPA or Bidding Protocol	Source of Change	Disposition
(6) <i>Reliability Must Run (RMR) and Capacity Procurement Mechanism (CPM)</i>	PPA Section 4.8(c) – Currently requires Seller with an RMR contract to remit the revenues it receives to PG&E and to invite PG&E to participate in renegotiation of the contract.	To accommodate market changes, PG&E proposes expanding these requirements to CPM contracts as well.	PG&E advice letter 4100-E (Section H – Consistency with 2012 RPS Plan)	Approve
(7) <i>Planned Outages</i>	PPA Section 3.7(b) – Sellers are currently prohibited from scheduling outages during peak months.	PG&E proposes expanding the definition of “peak months” to include the month of May because CAISO includes that month in its definition of “summer months” for RA purposes.	PG&E advice letter 4100-E (Section H – Consistency with 2012 RPS Plan)	Approve
(8) <i>Additional Minor Changes to RAM PPA</i>	Various PPA sections.	PG&E proposes additional minor non-substantive changes “to improve the RAM PPA intent” that PG&E attests do not represent significant changes for Buyer or Seller. These changes apply to the following areas: Guaranteed Energy Production, GHG Reporting Obligations, CAISO Charges, Insurance, FERC standard of review, split Credit Ratings, the transfer and substitution of Letters of Credit, Force Majeure, and related provisions.	PG&E advice letter 4100-E (Section H.)	Approve
(9) <i>Updates to RAM Bidding Protocol and PPA</i>	Various sections	PG&E seeks authority to update its RAM Bidding Protocol and RAM PPA “as market conditions and regulatory rules evolved prior to solicitation issuance.”	PG&E advice letter 4100-E (Section H.)	Approve
(10) <i>Offer Form</i>	Bid submission offer form	Remove pricing columns requiring pricing with and without Investment Tax Credits and Production Tax Credits as the Seller is at risk for the tax credits, so only one price is necessary.	PG&E advice letter 4100-E (Section I.)	Approve

Subject of PPA Change	Relevant Section of PPA or Bidding Protocol	Proposed Revision to PG&E's RAM PPA or Bidding Protocol	Source of Change	Disposition
(11) <i>Confidentiality</i>	RAM Bidding Protocol	Modify RAM bidding protocol language to clarify that Sellers' bid must be kept confidential so that Sellers cannot compare their bids, but that Sellers may share their intent to bid publicly.	PG&E advice letter 4100-E (Section I.)	Approve
(12) <i>Site Attestation Form</i>	Site attestation form	Limit applicability of the site attestation form to projects of 5 MW or less as form only applies to California Solar Initiative and Net-Energy Metering projects whose eligible project sizes are 5 MW and less.	PG&E advice letter 4100-E (Section I.)	Approve
(13) <i>Letter of Credit</i>	Letter of Credit requirements.	Consistent with its Draft 2012 RPS Plan, PG&E seeks to modify its letters of credit requirements for its RAM PPA to reflect current financial market conditions.	PG&E advice letter 4100-E (Section B.)	Approve
(14) <i>Supplier Diversity</i>	Evaluation Protocol. Currently authorizes PG&E to use supplier diversity as an evaluation criterion.	PG&E seeks authorization to require Sellers to comply with PG&E's Supplier Diversity policy, to report on their diverse supply spend, and to make good faith efforts to meet the diverse spend targets included with the Seller's offer.	PG&E advice letter 4100-E (Section F.)	Approve
(15) <i>Response to a Buyer Curtailment Order</i>	Cover Sheet, Prior Section F; PPA Section 3.1(i)(iv)(A)	Modification of cover sheet – Seller will be obligated to respond in real-time consistent with CAISO scheduling/dispatch rules.	PG&E advice letter 4100-E (Section G.)	Approve
(16) <i>Other Curtailment Updates</i>	PPA Sections 1.16, 1.18, and 1.52	Consistent with changes filed in 2012 RPS Plan: <ul style="list-style-type: none"> • Seller required to curtail upon orders from CAISO • Modified definition of "curtailment order" • Modified definition of "buyer curtailment" 	PG&E advice letter 4100-E (Section G.)	Approve

(END OF APPENDIX C)

Appendix D

Summary of RAM Program Rules, Including Cumulative Changes to the Original Rules from Decision 10-12-048, Resolution E-4414, and Resolution E-4489

SUMMARY OF RAM PROGRAM RULES

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, and the new changes adopted herein in Resolution E-4546.

Underlined language reflects additions while strike-through reflects deletions. Only the new changes, or deletions, made by Resolution E-4546 are reflected 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. 1,299 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	170.8 ³⁴
PG&E	420.9	105.2
SDG&E	154.7	20.2
TOTAL	1,299	324.8

- 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.

³⁴ 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
 - 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.
 - 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.

3. Eligibility:

- **Minimum Size:** ~~Minimum contract size of 1 MW, but projects 500 kilowatts and greater can aggregate to meet the minimum contract size of 1 MW. Projects can aggregate as long as they interconnect to the same p node and the contract size does not exceed 5 MW.~~ 3 MW.³⁵
- **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.³⁶
- **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.

³⁵ The changes to RAM's minimum eligible project size rules were not implemented by Resolution E-4546, but rather were ordered by D.12-05-035.

³⁶ 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.

- **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.

4. 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
 - **Length 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:** ~~\$20/kW for projects 5 MW and smaller, and a \$60/\$90 per kW for intermittent and baseload resources, respectively, for projects greater than 5 MW and up to 20 MW in size,~~ 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:**
 - ~~For projects less than five MW: conversion of development deposit to performance deposit~~
 - ~~For project five MW and larger: 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 of 140% of expected annual net energy production based on two years of rolling production 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 Default:** 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

5. 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.

6. Market Elements

- a. **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.
 - i. 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.
 - ii. 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.
- b. **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).

- c. **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
- d. **FERC Certification:** No FERC certification as a QF is required for a project to be eligible for RAM
- e. **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)

7. Regulation and Commission Oversight

- a. **Program modifications:** The Commission can modify any element of the program at any time through a Commission resolution.
- b. **Advice Letter Review:** All executed RAM contracts from each auction are filed with the Commission in one Tier 2 advice letter.
- c. **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.
- d. **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

e. 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)

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

g. Program Forum:

- i. 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 participation³⁷ 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.
- ~~• To encourage broader participation of these underrepresented parties into the second RAM RFO, each IOU should specifically solicit the participation of known developers of baseload and off-peak intermittent projects to attend the Bidders' Conference for its second RAM RFO.~~

8. Implementation Advice Letter³⁸: 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

³⁷ The IOUs should utilize telecom and web-based technologies to facilitate remote participation.

³⁸ These Advice Letters were filed by the IOUs on February 25, 2011 and were approved with modifications by the Commission in Resolution E-4414.

- 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
- 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 APPENDIX D)