BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

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Order Instituting Rulemaking to Continue Implementation and Administration of California Renewables Portfolio Standard Program.	)))))	Rulemaking 11-05-005 (Filed May 5, 2011)

SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) 2012 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN

VOLUME 1

PUBLIC VERSION

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May 23, 2012

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE

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Order Instituting Rulemaking to Continue Implementation and Administration of California Renewables Portfolio Standard Program.	)))))	Rulemaking 11-05-005 (Filed May 5, 2011)

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Pursuant to the *Assigned Commissioner's Ruling Identifying Issues and Schedule of Review for 2012 Renewables Portfolio Standard Procurement Plans Pursuant to Public Utilities Code Sections 399.11 et seq. and Requesting Comments on New Proposals*, dated April 5, 2012 (the "Ruling"), Southern California Edison Company ("SCE") respectfully submits its 2012 Renewables Portfolio Standard ("RPS") Procurement Plan.[1]

SCE's 2012 RPS Procurement Plan consists of the written plan (the "RPS Written Plan") and appendices thereto. The appendices include:

- Confidential/Public Appendix A - Redline of RPS Written Plan
- Confidential Appendix B - Project Development Status Update
- Confidential/Public Appendix C - Quantitative Information

[1] SCE is concurrently filing a Motion for Leave to File its Confidential 2012 Renewables Portfolio Procurement Plan Under Seal, which requests a Commission order granting leave to file the confidential version of Volume 1 of SCE's 2012 RPS Procurement Plan under seal.

- Confidential/Public Appendix D - Standard Cost Quantification Table
- Public Appendix E.1 - 2012 Procurement Protocol
- Public Appendix E.2 - Redline of 2012 Procurement Protocol
- Public Appendix F - Least-Cost Best-Fit Methodology
- Public Appendix G.1 - 2012 Pro Forma Renewable Power Purchase and Sale Agreement
- Public Appendix G.2 - Redline of 2012 Pro Forma Renewable Power Purchase and Sale Agreement

SCE will file responsive comments to the seven proposals outlined in the Ruling concurrently herewith. SCE submits these documents for consideration and approval by the Commission.

Respectfully submitted,

JENNIFER TSAO SHIGEKAWA
CATHY A. KARLSTAD

/s/ Cathy A. Karlstad
By: Cathy A. Karlstad

May 23, 2012

VERIFICATION

I am a Manager in the Renewable and Alternative Power Department of Southern California Edison Company and am authorized to make this verification on its behalf. I am informed and believe that the matters stated in the foregoing pleading are true.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this **23rd day of May, 2012**, at Rosemead, California.

/s/ Kathleen M. Sloan
By: Kathleen M. Sloan

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SOUTHERN CALIFORNIA
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(U 338-E)

2012 Written Plan

May 23, 2012

PUBLIC VERSION

2012 Written Plan

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I. INTRODUCTION AND OVERVIEW OF 2012 RPS PLAN

On April 5, 2012, the California Public Utilities Commission ("Commission" or "CPUC") issued the Assigned Commissioner's Ruling Identifying Issues and Schedule of Review for 2012 Renewables Portfolio Standard ("RPS") Procurement Plans Pursuant to Public Utilities Code Sections 399.11 et seq. and Requesting Comments on New Proposals (the "Ruling"). That Ruling requires retail sellers to file a RPS procurement plan for 2012 (the "2012 RPS Plan") according to the schedule set forth therein and details the specific topics to be covered in such 2012 RPS Plans. Additionally, the Ruling includes seven proposals for revising the procurement planning and review process and solicits feedback on these proposals. Southern California Edison Company ("SCE") provides this 2012 Written Plan and appendices hereto, which together comprise SCE's 2012 RPS Plan. Concurrently herewith, SCE is also filing comments on the seven proposals.

In planning for renewable procurement in 2012 and beyond, SCE must take the regulatory framework established by the new 33% RPS statute into account. Senate Bill ("SB") 2 (1x) was enacted in the First Extraordinary Session of the Legislature on April 12, 2011, and became effective on December 10, 2011. SB 2 (1x) made significant changes to the RPS program, including departing from the prior structure of annual RPS goals and moving to multi-year compliance periods. The overall percentage of required procurement from renewable resources was also increased from 20% to 33%, with interim procurement targets established for each multi-year compliance period ("New Procurement Targets").[1]

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[1] *See* Cal. Pub. Util. Code § 399.15(b)(1)-(2); Decision ("D.") 11-12-020 at 23-25 (Ordering Paragraphs 1-4). In particular, as implemented by the Commission in D.11-12-020, the new RPS procurement quantity requirements applicable to all retail sellers are as follows: (1) 20% of overall retail sales for the first compliance period from 2011-2013; (2) 21.7% of 2014 retail sales plus 23.3% of 2015 retail sales plus 25% of 2016 retail

SB 2 (1x) also established three portfolio content categories of renewable electricity products that may be used to satisfy the State's RPS goals.[2] The first portfolio content category ("Category 1") includes products from renewable generators with a first point of interconnection to the Western Electric Coordinating Council transmission system within the boundaries of a California Balancing Authority Area ("CBA"), or with a first point of interconnection with the electricity distribution system used to serve end users within the boundaries of a CBA, or where the renewable generation is dynamically transferred to a CBA, or scheduled into a CBA on an hourly basis without substituting electricity from another source. The second portfolio content category ("Category 2") includes firmed and shaped products, and the third portfolio content category ("Category 3") includes all other renewable products, including unbundled renewable energy credits ("RECs").

Furthermore, SB 2 (1x) made several other changes to the RPS program's structure. Among other things, SB 2 (1x) removed deficits associated with any previous RPS for retail sellers procuring at least 14% of retail sales from eligible renewable energy resources in 2010,[3] permits banking of excess procurement across compliance periods subject to certain conditions,[4] grants a waiver of compliance under certain circumstances,[5] determines that contracts signed

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sales for the second compliance period from 2014-2016; (3) 27% of 2017 retail sales plus 29% of 2018 retail sales plus 31% of 2019 retail sales plus 33% of 2020 retail sales for the third compliance period from 2017-2020; and (4) 33% of retail sales in each year thereafter.

[2] The Commission adopted D.11-12-052 implementing and further defining the portfolio content categories on December 21, 2011. Retail sellers are subject to a minimum portfolio content category target (varying by compliance period) for Category 1 products and a maximum portfolio content category target (varying by compliance period) for Category 3 products. The remainder may be satisfied by Category 2 products. Accordingly, SCE's renewable procurement must consider both the New Procurement Targets and the portfolio content category targets under the new 33% RPS program.

[3] Cal. Pub. Util. Code § 399.15(a).

[4] *Id.* § 399.13(a)(4)(B).

[5] *Id.* § 399.15(b)(5).

prior to June 1, 2010 count in full toward RPS procurement requirements,[6] and directs the Commission to establish a cost limitation for each electrical corporation.[7] However, these provisions have not yet been implemented by the Commission.[8] Accordingly, SCE's procurement needs and planning may change as SB 2 (1x) is fully implemented by the Commission.

Through SCE's analysis of its renewable net short position and procurement needs, as discussed herein, SCE has determined that it has a long-term renewable procurement need. In its 2012 RPS Plan, SCE proposes using a targeted solicitation process that meets SCE's need for specific resources. Specifically, SCE intends to narrow its next solicitation to Category 1 products. Likewise, SCE will emphasize a need for projects with later commercial on-line dates given that SCE does not have a near-term renewable procurement need. SCE also plans to require projects to have, at least, a completed Interconnection Study as demonstrated by a completed System Impact Study, Facilities Study, a Phase I or Phase II Interconnection Study, documentation showing that the project has passed Fast Track screens, or a signed Interconnection Agreement in place in order to submit a proposal, and a Phase II Interconnection Study (or equivalent or better) completed prior to entering into the contract. In this way, SCE will engage with developers of projects further along in the development cycle and have more accurate information about the costs of interconnection upgrades prior to contract execution. These changes to SCE's solicitation process will enable SCE to procure resources that minimize costs and maximize value to SCE's customers. Additionally, this process will target the most

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6 *Id.* § 399.16(d).

7 *Id.* §§ 399.15(c)-(d).

8 On April 24, 2012, Administrative Law Judge Simon issued a Proposed Decision Setting Compliance Rules for the Renewables Portfolio Standard Program. That proposed decision has not yet been approved by the Commission.

viable proposals that fit SCE's portfolio, thus focusing the efforts of both SCE and renewable developers on the most promising project proposals.

II. ASSESSMENT OF RPS PORTFOLIO SUPPLIES AND DEMAND

A. Description of SCE's Portfolio and Forecast of Need

In 2011, SCE procured 21.1% of its retail sales from RPS-eligible resources. To date, SCE's RPS-eligible deliveries and executed renewable procurement contracts have resulted from SCE's various large RPS solicitation Requests for Proposals ("RFPs"), SCE's Renewables Standard Contract ("RSC") Program, the utility-owned generation and independent power producer portions of SCE's Solar Photovoltaic Program ("SPVP"), the Public Utilities Code Section 399.20 feed-in tariff ("FiT") program, the Renewable Auction Mechanism ("RAM") program adopted by the Commission, qualifying facility ("QF") contracts, utility-owned small hydro projects, and bilateral negotiations. Additionally, SCE has issued its 2011 RPS solicitation and received a robust response of over 1,400 proposals. SCE is currently negotiating contracts with sellers resulting from that solicitation.

SCE's forecast of its renewable procurement position and need included as Appendix C – Quantitative Information – is based on the New Procurement Targets for the 33% RPS program and SCE's most recent bundled retail sales forecast. The forecast assumes that all of SCE's executed contracts will be approved by the Commission and incorporates current expected on-line dates for all projects that are not yet on-line. Moreover, as discussed in more detail below, SCE's forecast accounts for potential issues that could delay RPS compliance, project development status, the minimum margin of procurement, and other potential risks through the use of a 60% success rate for delivered energy from contracts that are executed but not yet on-line. SCE assumes a 100% success rate for projects that are currently on-line. SCE also includes

additional generation from existing mandatory procurement programs such as the RAM program, the FiT program, and SCE's SPVP at a 100% success rate and 100% recontracting of existing contracts with projects 20 MW and less.

As shown in Appendix C, SCE anticipates a procurement quantity requirement for the first compliance period of [redacted] kWh and RPS-eligible procurement of 51.3 billion kWh, for a net long position of about [redacted] kWh. In the second compliance period, SCE forecasts a procurement quantity requirement of [redacted] kWh and RPS-eligible procurement of 64.6 billion kWh, for a net long position of about [redacted] kWh. In the third compliance period, SCE forecasts a procurement quantity requirement of 99 billion kWh and RPS-eligible procurement of 88 billion kWh, for a net short position of about 11 billion kWh. SCE also forecasts a net short position for 2021 and 2022. Whether and to what extent SCE's anticipated net long positions may be carried forward to cover future net short positions will depend on the RPS compliance rules adopted by the Commission, which are still being implemented. Accordingly, SCE does not have a short-term renewable procurement need, but it does anticipate a longer term need for additional RPS-eligible resources.

Even given SCE's short-term procurement position, SCE has concerns about the barriers to achieving the State's RPS goals in the long-term. Based on SCE's experience in RPS solicitations to date, transmission availability will continue to be an impediment to bringing new renewable resources on-line.[9] Increased procurement activity (i.e., execution of more contracts) will not accelerate the planning, permitting, and construction processes for new transmission and transmission upgrades. While SCE will continue to seek and contract for renewable resources,

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[9] The Commission has repeatedly recognized this in its Quarterly Reports to the Legislature. *See, e.g.*, Renewables Portfolio Standard Quarterly Report at 10 (Q3 2010); Renewables Portfolio Standard Quarterly Report at 8 (Q2 2010); Renewables Portfolio Standard Quarterly Report at 8 (Q1 2010); Renewables Portfolio Standard Quarterly Report at 7 (Q4 2009).

SCE expects most project proposals to be limited by the scarcity of transmission. Additionally, the long and complicated process for siting and permitting of renewable generation projects, the continued uncertainty surrounding the federal production and investment tax credits, a heavily subscribed interconnection queue, developer performance issues, curtailment, and lack of flexibility in established regulatory processes related to procurement are all major challenges to meeting California's renewable energy goals. These procurement goals will not be achieved without addressing these significant challenges. SCE addresses the impediments to reaching the State's RPS goals and the steps SCE is taking to mitigate these impediments in more detail in Section III below.

B. SCE's Plan for Achieving RPS Procurement Goals

In its 2012 RPS procurement activities, SCE intends to contract for renewable energy necessary to achieve the State's RPS goals, taking into account the renewable energy procured through SCE's prior RPS solicitations and other procurement mechanisms, success rate assumptions for executed contracts that are not yet on-line, as well as future RPS solicitations that are expected to take place. Generally, SCE's planned procurement activities for 2012 will include seeking resources to augment those already under contract to fulfill its need in the latter half of the decade.[10] SCE plans to utilize a variety of procurement options to help meet the State's RPS goals including the RAM program, the FiT program, SCE's SPVP, QF standard contracts, bilateral negotiations with competitive renewable energy projects, and any new processes approved by the Commission. Furthermore, as discussed in Section XII below, SCE

[10] SCE will also utilize banking of excess procurement and any other final RPS compliance rules implemented by the Commission, as appropriate.

may also sell bundled renewable energy, RECs, or other renewable energy products to maximize value to its customers and optimize its portfolio.

All of the procurement in SCE's renewable portfolio to-date is from contracts executed prior to June 1, 2010 or Category 1 products. SCE prefers Category 1 products because they provide the most flexibility and certainty for SCE's customers. SCE forecasts that it will meet its RPS procurement quantity requirements primarily through Category 1 products. SCE may procure Category 2 or 3 products as needed to meet compliance period needs, while staying within the limits set by SB 2 (1x) as implemented by the Commission.

In SCE's prior experience meeting the 20% renewable energy goal, it is prudent to contract with projects early on in the process to support the development of needed transmission. SCE considers its net short position in the third compliance period in light of how long it takes to bring new projects on-line, how far in the future the short position exists, how many solicitations SCE anticipates being able to complete in order to meet the short position. SCE then makes a pro-rata allocation of SCE's need over the remaining anticipated solicitations. For example, if SCE is short 300 GWh/year over the measured time period, and SCE anticipates being able to conduct three solicitations, it would solicit 100 GWh/year in each of the three solicitations.

SCE determines its need for resources with specific deliverability characteristics (such as peaking, dispatchable, baseload, firm, and as-available) through its least-cost best-fit analysis ("LCBF") approach. SCE uses its LCBF methodology to compare project profiles, including duration, location, technology, on-line date, viability, deliverability and price, to estimate the value of each project to SCE's customers and its relative value in comparison to other proposals. This process ensures that each project selected most cost-effectively aligns with SCE's

procurement needs. SCE's LCBF approach is described in more detail in Section VIII and Appendix F.1 – Least-Cost Best-Fit Methodology.

III. POTENTIAL COMPLIANCE DELAYS

Six primary factors will challenge achievement of the RPS goals established under SB 2 (1x): (1) permitting, siting, approval, and construction of transmission and renewable generation projects; (2) the uncertainty surrounding the federal production and investment tax credits; (3) a heavily subscribed interconnection queue; (4) developer inexperience and performance issues; (5) curtailment; and (6) regulatory inflexibility. SCE discusses each of these potential issues that could cause compliance delays, in turn, below and describes the steps it has taken to mitigate the impacts of these challenges.

A. Permitting, Siting, Approval, and Construction of Transmission and Renewable Generation Projects

The lack of sufficient transmission infrastructure and the prolonged process for permitting and approval of new transmission lines continues to be the most significant impediment to reaching California's RPS goals. SCE has received relatively few proposals from renewable generators that do not require significant transmission upgrades or new transmission development for the renewable energy to be deliverable. Based on the market responses in SCE's RPS solicitations and other renewable programs, lack of adequate transmission infrastructure and the lengthy process of siting, permitting, and building new transmission continues to be a real and complicated impediment to bringing new renewable resources on-line.

The challenges surrounding transmission are only compounded as the State's RPS goal increases from 20% by 2010 to 33% by 2020, which represents a 65% increase in procurement

of renewable energy without taking into account load growth.[11] The Commission has stated that "[s]erving 33% of California's energy needs with renewable sources will require an infrastructure build-out on a scale and timeline perhaps unparalleled anywhere in the world."[12] Indeed, the Commission noted that the "magnitude of the infrastructure that California will have to plan, permit, procure, develop, and integrate in the next ten years is immense and unprecedented," including approximately $115 billion in new infrastructure investment in an uncertain financial environment, including seven major new transmission lines (in addition to the four major new transmission lines needed to reach 20% renewables).[13]

Over the past few years, SCE has taken several actions to address the impediment of transmission to achieving California's renewable energy goals. For example, SCE has attempted to expedite the permitting and construction of renewable transmission facilities by: (1) proactively providing the upfront financing for needed transmission network upgrades, (2) seeking authorization to record costs associated with interconnection and environmental studies for renewable projects, (3) providing leadership to the California Independent System Operator's ("CAISO") reform of the Large Generator Interconnection Procedures, (4) requesting authority to study the feasibility of developing transmission capacity to deliver output from potential renewable resources. Despite these efforts, SCE expects that transmission will continue to be an impediment to achieving the State's RPS goals.

The long and complicated permitting process for renewable generation facilities is also a barrier to meeting the State's RPS goals. The Commission has observed that most RPS project delays "are due to lack of transmission or generation permitting at the county, state, or federal

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[11] If load growth is taken into account, this percentage is even higher.
[12] Renewables Portfolio Standard Quarterly Report at 3 (October 2008).
[13] 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results at 1-4 (June 2009).

level."[14] Moreover, the Commission also noted that environmental concerns, legal challenges, and public opposition can impact the timeline for bringing renewable generation and transmission projects on-line.[15]

B. Uncertainty Surrounding the Federal Production and Investment Tax Credits

Another factor that could jeopardize the ability of SCE and other retail sellers to reach the State's RPS goals is the uncertainty surrounding the federal production and investment tax credits. Renewable procurement contracts often have no-fault termination rights if the tax credits are not extended. Sending signals to the renewables market that these credits will be available over the long-term will stimulate sustained investment in renewable resources rather than the "boom and bust" cycle induced by the uncertainty regarding whether the federal tax credits will be available.

The American Recovery and Reinvestment Act of 2009 ("ARRA 2009") extended the production tax credit for wind until the end of 2012, and for other technologies until the end of 2013.[16] The investment tax credit for solar was also extended until the end of 2016. In Section 1603 of the ARRA 2009, the U.S. Treasury Department launched a new program whereby eligible energy property can receive a cash grant (the "Cash Grant") in lieu of the investment tax credit. The Cash Grant has been well received by renewable generation developers. To qualify for the Cash Grant, the construction of the eligible property had to begin by December 31, 2010, and the property must be placed "in service" based on a schedule dependent on the type of

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[14] Renewables Portfolio Standard Quarterly Report at 7 (Q4 2009).
[15] 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results at 4 (June 2009).
[16] *See* American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5 (2009).

generation (by January 1, 2013 for large wind and January 1, 2017 for solar).[17] These aggressive construction and in-service requirements have led the generation community to place increasing political pressure on regulatory bodies such as the Commission, the California Energy Commission ("CEC"), the Bureau of Land Management, along with SCE, to expedite the regulatory process to enable generators to come on-line sooner in order to take advantage of this stimulus program.

The expiration dates set forth in the ARRA have not been extended beyond these dates and the "on again, off again" nature of these tax credits continues to be a barrier to renewable development. In particular, the expiration of the production tax credit for wind at the end of 2012 currently impacts any newly proposed wind generating facilities given the time needed for Commission approval of contracts, siting, permitting, construction, and development of needed transmission. Additionally, the uncertain future of the federal production and investment tax credits will likely continue to be a long-term barrier to meeting the RPS goals.

Although the uncertainty associated with production tax credits and investment tax credits was outside the control of California state agencies, SCE's policy advisors in Washington, D.C. worked with senators and legislators advocating for the extension of these tax credits. SCE also supported California Assembly Joint Resolution 50 that urged the U.S. Senate and President to extend the credits. As explained above, the ARRA 2009 extended the production tax credit for wind until the end of 2012, and for other technologies until the end of 2013. The investment tax credit for solar was also extended until the end of 2016.

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[17] *See* Payments for Specified Energy Property in Lieu of Tax Credits under the American Recovery and Reinvestment Act of 2009, U.S. Treasury Department Guidance Document (July 2009) (available at http://www.treasury.gov/recovery/docs/guidance.pdf).

C. A Heavily Subscribed Interconnection Queue

A heavily subscribed CAISO interconnection queue is also a major barrier to achieving the State's RPS goals. In its recent requested tariff amendment, CAISO estimated that it would take "as long as six to eight years from October 1, 2010 to complete the studies for all small generators currently in the ISO's queue under the ISO's current SGIP [Self-Generation Incentive Program] process."[18] As of May 8, 2012, SCE had over 850 interconnection requests, comprising more than 27,000 MW, inclusive of CAISO and Wholesale Distribution Access Tariff ("WDAT") requests. Although the CAISO's interconnection reform effort is currently being implemented, whether or not the reforms will meet the expectations and goals of all stakeholders remains to be seen.

To address the interconnection queue impediment, SCE played a leadership role among California Participating Transmission Owners in the stakeholder process that lead to reforms of the CAISO Large Generator Interconnection Procedures, which were approved by the Federal Energy Regulatory Commission ("FERC") in 2008 and are currently being implemented. In addition, SCE is heavily involved in the Rule 21 settlement process, which will reform the interconnection process for renewable generators interconnecting under Rule 21. SCE has also been supportive of generator interconnection reform at the CAISO, including the integration of transmission and generator interconnection planning ("TPP/GIP").

D. Developer Inexperience and Performance Issues

Achieving California's renewable energy goals is also dependent on the strong performance by renewable developers. SCE has executed contracts with a large number of

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[18] Tariff Amendment to Revise Generator Interconnection Procedures at 5 (October 19, 2010) (available at http://www.caiso.com/2834/2834c11a4c2f0.html).

developers. To qualify for the RPS program, these developers must plan for, permit, construct, and operate their facilities according to milestones set forth in the contracts. Hurdles encountered during these activities require developers to alter their milestone schedules, and new developers do not necessarily know how to navigate the interconnection and permitting processes. For example, SCE has recently had to terminate several contracts due to performance issues on the part of inexperienced developers. To the extent that delays and termination events occur, the amount of delivered energy on which SCE can rely to reach the State's goals may be affected.

To proactively address development performance issues, SCE continues to reach out and communicate with project developers on a regular basis, discuss options and the status of project development, and provide guidance and direction as appropriate. SCE has also made several modifications to its solicitation materials in response to lessons learned from developers in previous solicitations. To overcome some of the development barriers, SCE has created an option to have SCE act as Scheduling Coordinator, allowed for delivery points at the point of interconnection with the transmission provider's electric grid, and tailored certain terms and conditions to address market changes in equipment availability and supply. SCE also intends to add a requirement for future solicitations that projects have at least a completed Interconnection Study (as demonstrated by a completed System Impact Study, Facilities Study, Phase I or Phase II Interconnection Study, documentation showing that the project has passed Fast Track screens, or a signed Interconnection Agreement) in order to be shortlisted and a Phase II Interconnection Study (or equivalent or better) prior to execution of the contract. By ensuring that shortlisted projects have completed interconnection studies, the risk of project failure due to interconnection issues could be mitigated.

SCE has also worked with developers to overcome local opposition to renewable projects through active education with city governments regarding the State's goals and the importance of renewable energy in California. Furthermore, SCE continually educates the renewable development community on its procurement opportunities. In order to explain SCE's various renewable contracting opportunities, SCE speaks to developers at industry-wide symposiums (e.g., American Wind Energy Association, the U.S. military's Enhanced-Use-Lease, Geothermal Resources Council, Solar One), hosts bidders' conferences in connection with each RPS solicitation and other programs, fields countless individual inquiries, hosts outreach sessions for diverse business enterprises, and participates in developer forums.

To maximize contracting opportunities, SCE voluntarily implemented its RSC Program, and in 2009 and 2010, executed 35 contracts resulting from that program for approximately 459 MW of renewable energy.[19] This program has since been replaced by the Commission's implementation of the RAM program. SCE also implemented a competitive solicitation offering long-term power contracts to independent solar photovoltaic ("PV") power providers as part of SCE's SPVP.

E. Curtailment

Congestion at the transmission and generation levels is increasing and curtailment events are becoming more and more common. Under the Generator Interconnection Agreements between CAISO, the transmission provider and a project developer, projects are able to come on-line as an energy-only ("EO") resource until associated deliverability interconnection upgrades are complete. Until the upgrades are complete, this large number of EO projects may result in the CAISO curtailing these projects at any time and to any degree for reliability purposes.

[19] Four of those contracts for about 65 MW were subsequently terminated.

Several of SCE's contracted wind projects in the Tehachapi region in Kern County, California, for example, have been forced to curtail deliveries significantly in order to accommodate transmission construction and maintenance and system reliability in this area. SCE expects that this same issue will occur in the Devers Colorado River area during the construction phases of that transmission project. Due to the significantly larger scale of the Devers Colorado River line, the potential curtailment risk could be much greater in scope.

Frequent curtailment events such as these may impact SCE's ability to meet its RPS compliance goals due to lessened renewable energy deliveries. Additionally, the curtailments could impact the ability of owners of operating renewable projects to maintain adequate revenue to service their debt, and may create a chilling effect on future financing of projects under development until the transmission upgrades are complete.

SCE has kept these project owners informed of the latest transmission outage schedules, and has worked to mitigate the financial impacts of these curtailments on these projects. The mitigation efforts include discussion with the CAISO to evaluate curtailment need on the basis of all projects in a transmission area, instead of on a project-by-project basis, and proposing more effective allocation methods that take into account each resource's actual, current generating potential. When the CAISO establishes an operating level that may require curtailment, it calculates the allowable capacity on the transmission line during a set period of time. That capacity is then often distributed on a pro-rata basis to each project to operate up to the appropriate percentage of its contract capacity. Because not all resources peak at the same time, imposing fixed maximum generation levels results in significant over-curtailment. Since all of the generators on the Tehachapi Renewable Transmission Project system are new and have modern control systems, it is quite practical to automate this process and send each project a

real-time signal representing its individual cap. In this scenario, as long as the unrestricted output from all of the projects is less than the system limit, the projects may operate at 100% of the intermittent resource output.

SCE resolved a similar problem with the legacy QF generators in the Tehachapi area by combining them all into one group and curtailing them as a group. In this case, the generators were connected to the distribution system, so the curtailments were administered by SCE, not the CAISO. SCE worked with the generators to develop an arrangement under which some generators with modern control systems curtail on behalf of all generators in the group. This allows the other generators to continue to generate at full output while generators with modern control systems curtail only when coincident generation on the system exceeds the limit. Even for curtailing generators, the amount of curtailment under this arrangement is less than it would have been without the arrangement. This collaborative solution has helped SCE ensure safety and reliability while reducing expected curtailments by approximately 90%.

F. Regulatory Inflexibility

The investor-owned utilities ("IOUs") need the ability to make changes to their commercial documents to reflect changes in the renewable energy market. The credit and financing markets can undergo significant changes in the time between the filing and approval of the RPS procurement plans that necessitate changes to the IOUs' solicitation materials. Changes can also be required because of new regulatory developments. It does not benefit any party to require the IOUs to issue solicitations with stale commercial documents that require substantial modifications before they can be executed. To the contrary, such inflexibility tends to increase transaction costs and commercial disputes and results in expensive litigation. SCE suggests that

the Commission consider ways to streamline the approval process so that IOUs can react more quickly to market and regulatory changes and reflect those changes in their solicitation materials.

IV. PROJECT DEVELOPMENT STATUS UPDATE

SCE has attached as Appendix B – Project Development Status Update, a written status update on the development of all RPS-eligible projects currently under contract but not yet delivering generation. Some of the information in this status update has been reported to SCE by its counterparties. The status of these projects impacts SCE's renewable portfolio position and procurement decisions by allowing SCE to adjust its procurement once it is determined that projects will or will not meet their contractual obligations.

V. RISK ASSESSMENT

SCE describes the risk of projects failing to build or having construction delays in Section III above.

VI. QUANTITATIVE INFORMATION

Appendix C - Quantitative Information – provides a quantitative analysis of SCE's renewable procurement need through 2022, based on the following assumptions:

- 100% success rate for any project already on-line until the expiration date of the associated contract;
- 60% successfully delivered energy with respect to projects with executed contracts that are not yet on-line;
- 100% success rate for projects originating from the mandated programs referred to as "Program Generics" in Appendix C, such as SCE's SPVP, the FiT program, and the RAM program; and

- 100% success in re-contracting with projects 20 MW or less.

Appendix C details SCE's assessment of its multi-year portfolio supplies in place to meet the goals established in SB 2 (1x) and establishes SCE's net long and short positions during the first three compliance periods.

VII. MINIMUM MARGIN OF PROCUREMENT

SCE's renewable procurement efforts will be guided by its forecast of its renewable procurement needs, as described in Section II and Section VI and Appendix C.

SCE currently accounts for the risk of project failure associated with projects that are not yet on-line by assuming 60% delivered energy from such contracts. This 60% success rate is modeled to represent project development success rates as well as any contingency that would make meeting the State's RPS goals less likely (e.g., delays due to transmission, curtailment, material shortages, load growth beyond that which is forecasted, or less than expected output from resources). SCE uses this 60% assumption to calculate its net short/net long position. At this time, it also provides an appropriate minimum margin of procurement "necessary to comply with the renewables portfolio standard to mitigate the risk that renewable projects planned or under contract are delayed or cancelled."[20] Moreover, SCE procures based on a forecast using the 60% success rate so SCE's procurement takes into account these risks. SCE has used other success rates in the past and expects that this success rate may need to be modified in the future, to reflect changes to SCE's portfolio.

The Commission should avoid mandating a method for IOUs to calculate the minimum margin of procurement and should not attempt to impose a one-size-fits-all approach. As many of the projects in SCE's portfolio become operational, SCE will face different risks. The risks

[20] Cal. Pub. Util. Code § 399.13(a)(4)(D).

associated with project failure will be replaced by less significant risks of projects generating below full capacity. Similarly, SCE expects that the portfolio risk picture is not the same for each IOU. For example, risks may vary depending on whether a portfolio contains a high proportion of contracts that are online (as discussed above) or depending on the various technologies being used (e.g., geothermal technology, which provides a fairly firm resource versus wind or solar technologies, which are more intermittent). For these reasons, each IOU should have the authority to revise its approach to calculating the minimum margin of procurement through its RPS procurement planning process and each IOU should have the flexibility to calculate this margin based on its unique portfolio make-up and procurement needs.

Accordingly, in order to comply with SB 2 (1x), the Commission should require each IOU to include a methodology for calculating its minimum margin of procurement within its RPS procurement plan. The Commission should then approve each IOU's methodology, assuming it is reasonable and justified, as the minimum margin of procurement for that IOU. Each IOU should have the ability to modify its methodology through the process already in place for updating its RPS procurement plan.

VIII. BID SOLICITATION PROTOCOL, INCLUDING LCBF METHODOLOGIES

A. Bid Solicitation Protocol

SCE has included its 2012 Procurement Protocol as Appendix E.1. The 2012 Procurement Protocol includes, among other things:

- SCE's preferred on-line dates and contract term lengths.
- Deliverability characteristics and locational preferences.
- Requirements for each proposal submission.
- A description of the type of product SCE is soliciting.

- A schedule of key dates related to the 2012 RFP.
- SCE's 2012 Pro Forma Renewable Power Purchase and Sale Agreement ("Pro Forma"), attached hereto as Appendix G.1.

A list of important changes in the 2012 RPS Plan from the 2011 version (including changes to the Procurement Protocol and Pro Forma) can be found in Section XIII.

B. LCBF Methodology

In its LCBF evaluation process, SCE performs a quantitative assessment of each proposal individually and subsequently ranks them based on each proposal's benefit and cost relationship. The result of the quantitative analysis is a merit-order ranking of all complete and conforming proposals' net levelized cost that help define the preliminary shortlist. In parallel with the quantitative analysis, SCE will conduct an in-depth assessment of the top proposals' qualitative attributes. These qualitative attributes are considered to either eliminate non-viable proposals or add projects with high viability to the final shortlist, or to determine tie-breakers, if any. By taking many quantitative and qualitative factors into consideration, SCE ensures that it will select projects best suited for its portfolio in order to meet customer needs and attain the State's RPS goals. This process is described in SCE's LCBF Methodology, which is attached as Appendix F.1.

Moreover, SCE's time-of-delivery ("TOD") factors in its contract are intended to reflect the value of energy and capacity that SCE uses in the valuation of projects as part of the LCBF evaluation process. SCE has established new factors, which are included in SCE's 2012 Pro Forma at Exhibit J. SCE expects to update these values shortly before the launch of its RFP. Thus, in order to align the TOD factors with SCE's valuation of projects, SCE will adjust, if needed, the TOD factors filed with this 2012 RPS Plan to reflect any of these changes.

IX. ESTIMATING TRANSMISSION COSTS FOR THE PURPOSE OF RPS PROCUREMENT AND BID EVALUATION

In its next RFP solicitation, SCE proposes to base transmission costs on the estimated cost of reimbursable network upgrades, meaning network upgrades funded by the IOUs' customers and attributable to individual projects. To participate in the RFP, SCE will require potential sellers to have an existing Interconnection Study (e.g., Facilities Study, Phase I or documentation demonstrating that the project has passed the Fast Track screens) or an equivalent or better study, or a signed Interconnection Agreement. For resources that do not have an existing interconnection to the electric system, transmission costs applicable to the project will be based on the applicable completed Interconnection Study (e.g., System Impact Study, Facilities Study, or a Phase I or Phase II Interconnection Study) or Interconnection Agreement, at a minimum. SCE also intends to add a requirement that projects must have completed a Phase II Interconnection Study (or equivalent or better) prior to execution of the contract. These changes will provide more certainty around potential network upgrade and interconnection costs, and a more accurate evaluation of such costs in the LCBF evaluation process.

For certain projects, SCE will need to rely on CAISO's annual transmission plan to determine interconnection upgrade costs for fully deliverable projects. This is because of the way that CAISO is reforming the Generator Interconnection Procedure ("GIP").[21] For Queue Cluster 5 and beyond, the CAISO, in conjunction with the CPUC, will determine, in its annual transmission plan the amount of transmission needed to interconnect fully deliverable generation in order for the State to reach its RPS goals. For projects in these queue clusters, the generators will have the option to proceed down an interconnection path whereby the generator is not

[21] The CAISO has adopted the reform and it is currently before FERC for approval.

required to fund (on a reimbursable basis) the Deliverability Network Upgrades identified in the CAISO's annual transmission plan.[22] Under this option, Deliverability Network Upgrades identified in a project's Interconnection Study will still be funded by IOUs' customers, but that Interconnection Study will not quantify the Deliverability Network Upgrades costs. Instead, they will be quantified in the CAISO's annual transmission plan. Because these costs will represent additional costs to the IOUs' customers in contracting with a project, SCE will account for these network upgrade costs in its evaluation of projects that are part of Queue Cluster 5 and beyond. More specifically, SCE will use the network upgrade costs identified in the CAISO's annual transmission plan and attribute the appropriate amount of cost to that project, if applicable.[23]

In order to be able to rely on these CAISO cost estimates, SCE should have the ability to align its RPS procurement schedule with the adoption of the CAISO's annual transmission plan. The transmission plan is typically adopted by the CAISO's board in March/April. In order to determine the transmission adder for fully deliverable projects in Queue Cluster 5, SCE proposes to have the ability to align its solicitation schedule with the release of the CAISO's annual transmission plan.

Finally, it is important to note that these costs are only applicable to those projects that intend to interconnect with Full Capacity Deliverability Status ("FCDS"). No additional information, outside of a project's Interconnection Study, is needed to determine a transmission adder for an Energy-Only project.

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[22] Generators can also choose to fund these upgrades directly. In such instances, the transmission adder for these costs will be zero because the IOUs' customers do not pay for these upgrades.

[23] To the extent these costs are avoidable (meaning that in the event the project is not built, the transmission upgrade will not occur and SCE's customers will not incur costs), SCE will not include them.

X. CONSIDERATION OF PRICE ADJUSTMENT MECHANISMS

Pursuant to Public Utilities Code Section 399.13(a)(5)(E), RPS procurement plans are required to include consideration of mechanisms for price adjustments associated with the costs of key components for eligible renewable energy resource projects with on-line dates more than 24 months after the date of contract execution. SCE does not plan to solicit a specific type of indexing structure in its solicitation materials. As in SCE's 2011 RFP, SCE intends to include an option that a seller may submit an indexed pricing bid so long as the seller also includes a fixed contract price. Sellers may propose a price indexed to commodities, equipment, cost of financing, etc., and may also consider placing price ceilings and floors on the indexed price.

In the past, SCE has had mixed results using indexed pricing and price adjustment mechanisms. Some of the contracts that include these provisions have been based on changes in specific costs, such as the market price of wind turbines or diesel fuel costs for biomass transportation. Structuring the index and drafting the contract language to accurately reflect fluctuations in a project's costs has, in some cases, proven difficult.

XI. SUMMARY OF COST QUANTIFICATION RESULTS

SCE has attached as Appendix D – Standard Cost Quantification Table, a spreadsheet containing the actual expenditures per year for all Commission-approved RPS-eligible generation for every year from 2003 to 2011, and a forecast of future expenditures SCE may incur every year from 2012 through 2020. These expenditures are reported by technology for each year. At the direction of the Energy Division, SCE has reported the expenditures for the forecast years, 2012 through 2020, in two categories: (1) contracts and generation that are approved by the Commission; and (2) contracts that are executed but not yet approved by the Commission. For all forecast years, SCE has assumed a 100% success rate for all projects that

are not yet on-line. Finally, SCE reported the rate impacts in cents per kWh for each year for actual and forecast data.

XII. OTHER RPS PLANNING CONSIDERATIONS AND ISSUES

As part of its overall procurement strategy, SCE is considering engaging in the sale of bundled renewable energy, unbundled RECs, or other renewable energy products to other retail sellers or third party purchasers. In an effort to optimize SCE's renewable portfolio and provide customers with the most value from the portfolio, SCE seeks the authority to: (1) potentially hold a competitive solicitation seeking proposals from interested buyers to purchase a bundled product, unbundled RECs, or other renewable energy products from SCE; (2) execute bilateral renewable energy transactions subject to the Commission's review and approval of completed transactions; and (3) submit such completed sales contracts for approval through the filing of a Tier 2 advice letter under certain circumstances.

With respect to the authority to submit sales contracts through Tier 2 advice letters, the Commission should permit the IOUs to obtain approval for the resale of renewable energy from existing facilities through a Tier 2 advice letter because there are very few issues for the Commission to consider in connection with such transactions. The current Tier 3 advice letter process was established to review the purchase of renewable energy by the IOUs from, for the most part, generating facilities that have not yet been constructed. This review process necessitates not only a showing that the price is reasonable under the agreement, but also a demonstration that the project is viable. As evidenced by the Energy Division's advice letter template, the viability review requires a large amount of information regarding interconnection, technology, financial wherewithal of the seller, and many other details.

Given that these concerns are not part of a resale of renewable energy from existing facilities, SCE proposes to streamline the approval process for these transactions. Under such transactions, the principal issues are whether the IOU has obtained a reasonable price and has excess renewable energy to sell. Given that these two issues should be relatively straightforward, it is appropriate to allow for a quicker approval process for these transactions.[24]

Furthermore, allowing Tier 2 advice letter approval of renewable energy sales from existing facilities will allow the IOUs to maximize the value of these sales for their customers. Currently, the Commission approval date for a sales transaction is not known or knowable at the time a transaction is executed and can occur several months after the date that the contract was signed. As such, IOUs are required to structure resale transactions so that deliveries begin after Commission approval is obtained or the buyer will have to risk taking delivery of a less-valuable compliance product.[25] While IOUs can include language in resale contracts to allocate risks accordingly, the additional risk will create additional transaction costs and reduce the value of the product being sold. Finally, this delay in the approval process makes it very difficult for IOUs to use resale transactions to make up for procurement shortfalls existing at the end of a compliance period.

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[24] If more complicated issues arise in connection with a specific sales transaction, the Energy Division would still have the ability to suspend the Tier 2 advice letter and determine that approval through a Commission resolution is required.

[25] One of the conditions set forth in D.11-12-052 for a resold Category 1 product to continue to count as a Category 1 resource is that "[t]he resale contract transfers only electricity and RECs that have not yet been generated prior to the effective date of the resale contract," meaning that electricity and RECs that have been generated prior to the effective date of the resale contract would no longer count as Category 1. D.11-12-052 at 36. The decision adds that, for IOUs, the "effective date" is "the date that Commission approval of the resale contract is final." *Id.* at 36, note 69.

XIII. IMPORTANT CHANGES FROM 2011 RPS PLAN

SCE's 2012 RPS Plan includes important changes to: (1) SCE's 2012 Procurement Protocol; and (2) SCE's 2012 Pro Forma.[26] Those changes are summarized below and shown in the redlines of these documents included as Appendices E.2 and G.2.[27]

A. Important Changes to SCE's 2012 Procurement Protocol

1. SCE Will Only Consider Proposals for Category 1 Products

Because there is no limitation on the amount of Category 1 products that may be procured for RPS compliance, Category 1 resources provide more certainty and flexibility to SCE than Category 2 or Category 3 products. Accordingly, SCE's procurement protocol only requests proposals for renewable energy that qualifies under Category 1. Historically, the overwhelming majority of proposals SCE has received in past solicitations have been for Category 1 products. Therefore, SCE does not anticipate that restricting the solicitation to Category 1 products will negatively impact competition. At this time, limiting the pool to Category 1 products makes practical sense for SCE. Limiting the solicitation to Category 1 products will target proposals that are more likely to result in executed contracts, thus focusing the efforts of both SCE and renewable developers on the most promising project proposals. Accordingly, it will save SCE and sellers time by simplifying the solicitation and evaluation process.

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[26] SCE has changed its 2012 Written Plan from its 2011 Written Plan in accordance with the requirements of the Ruling, including following the general format set forth in the Ruling.

[27] The redline of SCE's 2012 Procurement Protocol is included as Appendix E.2 and the redline of SCE's 2012 Pro Forma is included as Appendix G.2.

2. SCE Will Require Completed Interconnection Studies from Sellers in its Solicitation

In 2011, SCE's solicitation was open to all sellers regardless of where they were in the interconnection process. In contrast, SCE intends to add a requirement for its 2012 solicitation that projects have at least a completed Phase I Interconnection Study (as demonstrated by a completed System Impact Study, Facilities Study, a Phase I or Phase II Interconnection Study, documentation showing that the project has passed fast Track Screens, or a signed Interconnection Agreement) in order to be shortlisted and a Phase II Interconnection Study (or equivalent or better) completed prior to execution of the contract. Upon reviewing the Phase II Interconnection Study, SCE may decide to remove the project from the shortlist, if the network upgrade costs are too high. If SCE decides to execute a contract, the parties would execute the contract before the Seller is required to post security as part of the Phase II process. Sellers who were not able to complete Phase II Interconnection Studies within this timeframe may bid into the next solicitation.

Through this approach, SCE will have more information regarding the project's transmission costs and customer value at an early stage in the solicitation and will have more information about the transmission and interconnection risks prior to entering into the contract. Likewise, the Commission will also have a better idea of the project's transmission cost at an early stage, and any risks associated with those costs and timing of the interconnection. This requirement also provides a deadline by which the solicitation process must end. Finally, by ensuring that shortlisted projects have completed interconnection studies, the risk of project failure due to interconnection issues could be mitigated.

3. SCE Will Allow for More Flexibility in Bidding Resource Adequacy

As part of the 2012 solicitation, sellers will have the option of bidding a project as an Energy-Only ("EO") interconnection or based on an interconnection with Full Capacity Deliverability Status ("FCDS").[28] Sellers can also choose the date the project will obtain FCDS, including a date after the commercial operation date ("COD"). Those projects bid as EO will receive a congestion adder in the valuation process during the periods the project has an EO status. Those projects that bid with FCDS will not.

Separate and apart from the interconnection status contemplated for the project, sellers will also have the ability to designate the amount of Resource Adequacy ("RA") benefits, if any, the seller will provide for each month of the year during the contract term. This amount can be less than the expected Net Qualifying Capacity ("NQC") of the project, but cannot be greater than the expected NQC. Seller may also propose to provide RA benefits from sources other than the project, but will still be limited by the quantity of RA benefits the seller can provide by the expected NQC of the project.

In addition, Seller may also designate the years it will provide RA benefits during the contract term, including a period that covers the life of the agreement or subset thereof. This allows seller to bid projects with RA benefits beginning at a time later than the COD.

Based on the seller's bid, the contract will reflect, in the form of contract obligations, the bid details regarding interconnection status, quantity of RA benefits, and the years RA benefits will be provided. In other words, if seller submits a proposal with FCDS on a date certain, the seller will be obligated to obtain FCDS by that date. Similarly, if seller's bid is based on the

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[28] Consistent with Section XIII(a)(2), if a project is bid with FCDS, the Project must have an Interconnection Study based on an interconnection seeking FCDS. Without such a study, the Project cannot be bid as an FCDS project.

provision of a certain quantity of RA benefits during certain years of the agreement, then the contract will provide for RA performance requirements that reflect the seller's proposal.

SCE's changes create more flexibility for bidders and ensure that the valuation of a project is consistent with the benefits SCE's customers are expected to receive. Under this new structure, the seller is able to bid the type of interconnection, how much RA it intends to provide, and when it will be able to provide it. The new structure will also allow for a seller to make proposal whereby the RA is provided from a source other than the generating facility. Under SCE's previous solicitation, it was assumed that the seller would always provide the full NQC of RA from the facility, and be interconnected as a fully deliverable resource prior to COD. This structure eliminates these inflexible requirements and allows the seller to provide proposals that better fit the expected project.

4. SCE May Require Shortlisted Bidders to Refresh Their Price Terms Prior to Determining the Successful Sellers

As described in detail in SCE's 2012 Procurement Protocol, after evaluating each proposal, SCE will select the best proposals for inclusion on a shortlist. SCE is considering implementing a solicitation structure whereby SCE negotiates with shortlisted projects to completion based on a set timeline, then requests each seller to refresh its pricing and executes contracts with a subset of the projects that provide the most value to SCE's customers. At this time, SCE has not determined whether it will implement this solicitation structure. Based on available resources at the time of solicitation launch, SCE will make this determination.

SCE is considering this structure because the negotiation process can take a significant amount of time. During this period prices can fall. The structure outlined above provides benefits to SCE's customers because it allows SCE to take advantage of price drops over the

negotiation period. This process prevents proposal price terms from becoming stale and also shortens the time between contact execution and Commission approval, thereby reducing the risk of the Commission rejecting a contract due to a discrepancy between the price term and the market price.

B. Important Changes to SCE's 2012 Pro Forma

1. Curtailment: Sections 3.12, 4.01, and 4.02, and Associated Definitions

SCE's economic curtailment language from the 2011 Pro Forma is thorough and detailed. The economic curtailment language included in SCE's 2011 Pro Forma ties SCE's right to curtail without payment to prices in the day-ahead market. The language also includes certain rights for the seller and SCE regarding real-time bidding instructions. Whether seller is paid or not under the real-time scenarios depends on what instructions are given, whether the instructions are followed, and market prices. SCE has streamlined the economic curtailment language in its 2012 Pro Forma.

The language in SCE's proposed 2012 Pro Forma provides SCE with more options for handling curtailment events, should curtailments prove necessary. Specifically, the 2012 language allows SCE to curtail sellers for any reason, without payment, up to a megawatt hour curtailment cap (i.e., 50 hours for every megawatt hour of contract capacity). SCE can curtail in excess of the cap with payment to the seller for the amount of energy that could have been delivered, absent the curtailment, thus, maintaining revenue certainty for the project in order to facilitate financing of the project. As with the 2011 language, any amounts over the cap that SCE pays for but does not receive as the result of curtailment during the term of the contract, may, at SCE's election, be delivered at the end of the contract term subject to a two-year payback limitation. SCE's 2012 language also maintains the potential exception of excluding

on-peak hours – SCE must pay for any energy curtailed during on-peak hours, regardless of the cap. Finally, SCE's ability to curtail due to emergencies, instructions from the CAISO or instructions from the transmission or sub-transmission provider remains unchanged.

SCE has been successful in incorporating this language into contracts with current sellers in its portfolio.

2. Changes to SCE's TOD Factors -- Exhibit J

SCE modified its TOD factors for the 2012 Pro Forma. Exhibit J to the 2012 Pro Forma also provides two different sets of TOD allocation factors: EO TOD factors and FCDS TOD factors.[29] These TOD factors adjust the amount of payment a generating facility receives based on which hour the project delivers its power. Over an entire year, both sets of TOD factors result in an adjustment factor of 1.0 to the contract price. The only difference between the TOD factors is that payment under the FCDS TODs is "peakier" (i.e., FCDS TODs are higher than EO TODs during the on-peak period, but lower than EO TODs in the off-peak period). SCE will apply the set of TOD factors that is applicable to the type of interconnection contemplated under the agreement. Thus, if a project is interconnected as EO, it will receive the EO TODs; if it is interconnected as FCDS, it will receive the FCDS TODs.

It is important to note that SCE's valuation is based on post-TOD contract payment. Thus, which sets of TOD factors the project uses is irrelevant in the selection of projects. Instead, TODs are intended to reflect the difference in value of the energy provided to SCE *during the term of the contract*. For example, if a project is interconnected as an FCDS resource, it will likely also provide RA benefits, and will likely be evaluated as if the project was going to provide RA benefits. The "peakier" TODs for an FCDS are intended to align payment *during*

[29] SCE may update these factors prior to launching its RFP.

the term of the contract with the value SCE expected from the generating facility coming out of the evaluation.

3. Resource Adequacy Bidding Flexibility: Sections 3.01, 3.02, Exhibit J, and Associated Definitions

SCE has added provisions to the 2012 Pro Forma specific to projects that deliver RA and projects that do not deliver RA. As stated above, SCE will allow sellers to determine how many RA benefits the project will provide and over what years the project will provide it. Based on this proposal, SCE will evaluate a project accordingly. In other words, the amount of RA benefits a project receives in the valuation will be based on the amount and years indicated by the seller. However, to align the valuation of a project with the actual performance under a contract, the 2012 Pro Forma provides for RA performance requirements reflective of the amount of RA benefits the seller proposes.[30] More specifically, in the event the seller is unable to provide the amount of RA benefits indicated in the contract, the bidder will have the choice to either: (1) pay a fixed liquidated damages amount[31] at the Capacity Procurement Mechanism ("CPM") price (escalated by 2% per annum) at the time seller submits its proposal, or (2) have an obligation to provide replacement RA from another source to SCE. This change is aligned with the additional bidding flexibility described in Section XIII.A.3, above.

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[30] In the past, SCE's valuation gave full RA credit to projects without any contractual commitments (beyond the attainment of FCDS) to actually provide RA to SCE. Thus, a project could be selected and receive a contract with SCE based on a certain expected amount of RA that project would provide over the life of the agreement, but not actually provide that level of RA.

[31] This amount will be fixed at the time of contract execution and will not float or be indexed to future changes in the CPM.

4. Seller's Buy Down Rights: Section 2.04(a)(iii)

In order to protect SCE's customers from excessive network upgrade costs, SCE's 2012 Pro Forma provides for a right to terminate the contract if the reimbursable network upgrade costs in an Interconnection Study or agreement for a project exceed a certain amount.[32] This is substantially the same provision that SCE had in its 2011 Pro Forma. In response to certain market concerns, SCE has added language to its 2012 Pro Forma that gives sellers, in lieu of termination, the right to pay the excess network upgrade costs without reimbursement from the IOUs' customers. This provision allows sellers to avoid termination and step in and keep the contract in place if it makes economic sense for them to do so.

5. Excess Deliveries: Section 1.06(c)

Section 1.06(c) of the 2012 Pro Forma provides for a reduced or no payment for deliveries in excess of threshold amounts. During any hour, if the seller delivers energy in excess of 110% of the contract capacity, then the seller will not be paid for the excess amounts (above 110%) delivered in that hour. The basis of this limitation is to ensure that the seller has not installed capacity in excess of contract capacity. In addition, Section 1.06(c) provides that if the seller delivers more than 115% of the expected annual net energy production within a year, then seller is paid 75% of the contract price for all deliveries above this amount for the remainder of that year. This new provision gives sellers additional incentive to bid their contract capacity and capacity factors correctly. It also helps to make sure that SCE receives and pays only for the energy SCE has contracted for, and not for amounts over what SCE expects under the contract. In addition, it is important to note that this concept existed in SCE's 2011 Pro Forma, and

[32] It is important to note that this termination right expires after the provision of the Interconnection Study or agreement. In other words, under this provision, the seller would not be subject to termination for cost overruns or cost changes during the actual construction of the transmission upgrade.

replaces the former Exhibit S. Similar to SCE's new language above regarding deliveries in excess of 115%, Exhibit S of the 2011 Pro Forma provided for a reduction in pricing based on increases in the capacity factor. The amount of reductions was left open to negotiations and proved difficult for SCE and the seller to come to agreement. Thus, in order to avoid these negotiations, SCE has included a set excess amount and price reduction in the agreement.

APPENDIX A

Redline of RPS Written Plan

SOUTHERN CALIFORNIA
EDISON

An *EDISON INTERNATIONAL* Company

(U 338-E)

~~2011~~2012 Written Plan

May ~~4, 2011~~23, 2012

PUBLIC VERSION

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2012 Written Plan

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2011 Written Plan

1. Overview: An assessment and discussion of:

1.1. Supplies and demand to determine the optimal mix of RPS resources

I. INTRODUCTION AND OVERVIEW OF 2012 RPS PLAN

Southern California Edison Company ("SCE") has completed its 2008 Renewables Portfolio Standard ("RPS") solicitation, executing fifteen contracts resulting from that solicitation. SCE also received a robust response to its 2009 RPS solicitation, executing eight contracts with a maximum capacity of approximately 850 MW. On April 5, 2012, the California Public Utilities Commission ("Commission" or "CPUC") issued the Assigned Commissioner's Ruling Identifying Issues and Schedule of Review for 2012 Renewables Portfolio Standard ("RPS") Procurement Plans Pursuant to Public Utilities Code Sections 399.11 et seq. and Requesting Comments on New Proposals (the "Ruling"). That Ruling requires retail sellers to file a RPS procurement plan for 2012 (the "2012 RPS Plan") according to the schedule set forth therein and details the specific topics to be covered in such 2012 RPS Plans. Additionally, the Ruling includes seven proposals for revising the procurement planning and review process and solicits feedback on these proposals. Southern California Edison Company ("SCE") provides this 2012 Written Plan and appendices hereto, which together comprise SCE's 2012 RPS Plan. Concurrently herewith, SCE is also filing comments on the seven proposals.

Additionally, in 2009, 2010, and 2011, SCE executed 35 contracts resulting from its Renewables Standard Contract ("RSC") Program, 36 contracts resulting from its Solar Photovoltaic Program ("SPVP"), and eight contracts resulting from bilateral negotiations.[1] Moreover, SCE executed two contracts pursuant to the California Renewable Energy Small Tariff

("CREST") program. For purposes of SCE's 2011 RPS Procurement Plan, SCE assumes that all of the contracts executed at this time will be approved by the California Public Utilities Commission ("Commission" or "CPUC").In planning for renewable procurement in 2012 and beyond, SCE must take the regulatory framework established by the new 33% RPS statute into account. Senate Bill ("SB") 2 (1x) was enacted in the First Extraordinary Session of the Legislature on April 12, 2011, and became effective on December 10, 2011. SB 2 (1x) made significant changes to the RPS program, including departing from the prior structure of annual RPS goals and moving to multi-year compliance periods. The overall percentage of required procurement from renewable resources was also increased from 20% to 33%, with interim procurement targets established for each multi-year compliance period ("New Procurement Targets").[1]

SB 2 (1x) also established three portfolio content categories of renewable electricity products that may be used to satisfy the State's RPS goals.[2] The first portfolio content category ("Category 1") includes products from renewable generators with a first point of interconnection to the Western Electric Coordinating Council transmission system within the boundaries of a California Balancing Authority Area ("CBA"), or with a first point of interconnection with the

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1 Four of the RSC Program contracts, seven of the SPVP contracts, and one of the contracts resulting from bilateral negotiations have since been terminated.

1 *See* Cal. Pub. Util. Code § 399.15(b)(1)-(2); Decision ("D.") 11-12-020 at 23-25 (Ordering Paragraphs 1-4). In particular, as implemented by the Commission in D.11-12-020, the new RPS procurement quantity requirements applicable to all retail sellers are as follows: (1) 20% of overall retail sales for the first compliance period from 2011-2013; (2) 21.7% of 2014 retail sales plus 23.3% of 2015 retail sales plus 25% of 2016 retail sales for the second compliance period from 2014-2016; (3) 27% of 2017 retail sales plus 29% of 2018 retail sales plus 31% of 2019 retail sales plus 33% of 2020 retail sales for the third compliance period from 2017-2020; and (4) 33% of retail sales in each year thereafter.

2 The Commission adopted D.11-12-052 implementing and further defining the portfolio content categories on December 21, 2011. Retail sellers are subject to a minimum portfolio content category target (varying by compliance period) for Category 1 products and a maximum portfolio content category target (varying by compliance period) for Category 3 products. The remainder may be satisfied by Category 2 products. Accordingly, SCE's renewable procurement must consider both the New Procurement Targets and the portfolio content category targets under the new 33% RPS program.

electricity distribution system used to serve end users within the boundaries of a CBA, or where the renewable generation is dynamically transferred to a CBA, or scheduled into a CBA on an hourly basis without substituting electricity from another source. The second portfolio content category ("Category 2") includes firmed and shaped products, and the third portfolio content category ("Category 3") includes all other renewable products, including unbundled renewable energy credits ("RECs").

On April 12, 2011, a bill significantly modifying California's existing RPS program, Senate Bill ("SB") 1X 2, was signed into statute.[2] Upon implementation of SB 2, SCE expects the RPS program to depart from the current structure of annual RPS goals and move toward a multi-year RPS program where goals are established for the end of a number of years.[3] As a percentage of retail sales, SB 2 establishes the following renewable procurement goals for retail sellers: 20% for 2011 through 2013, 25% by 2016, and 33% by 2020 and annually thereafter.[4] SB 2 also removesFurthermore, SB 2 (1x) made several other changes to the RPS program's structure. Among other things, SB 2 (1x) removed deficits associated with any previous RPS for retail sellers procuring at least 14% of retail sales from eligible renewable energy resources in 2010,[5][3] permits banking of excess procurement,[6] across compliance periods subject to certain conditions,[4] grants a waiver of compliance under certain circumstances,[7] and establishes a prospective procurement structure and grandfathers[5] determines that contracts signed prior to June 1, 2010.[8] Additionally,

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[2] For ease of reference, SCE refers to the bill as "SB 2" in this 2011 Written Plan.
[3] *See* SB 2, Cal. Pub. Util. Code § 399.15(b)(1)-(3).
[4] *See id.*
[5][3] *See* SB 2, Cal. Pub. Util. Code § 399.15(a).
[6] *See* SB 2, Cal. Pub. Util. Code § 399.13(a)(4)(B).
[4] *Id.* § 399.13(a)(4)(B).
[7] *See* SB 2, Cal. Pub. Util. Code § 399.15(b)(5).
[5] *Id.* § 399.15(b)(5).
[8] *See* SB 2, Cal. Pub. Util. Code § 399.16.

SB 22010 count in full toward RPS procurement requirements,[6] and directs the Commission to establish a cost limitation for investor-owned utilities ("IOUs").[9] At the time of the filing of SCE's 2011 RPS Procurement Plan, these provisions are pending Commission implementation. Accordingly, SCE may need to modify its RPS Procurement Plan once the Commission has established the implementation details of SB 2.each electrical corporation.[7] However, these provisions have not yet been implemented by the Commission.[8] Accordingly, SCE's procurement needs and planning may change as SB 2 (1x) is fully implemented by the Commission.

Generally, SCE's planned procurement activities for 2011 will include seeking resources to augment those already under contract to the extent necessary to ensure that SCE continues to meets the State's overall renewable energy goals. As discussed in more detail below, SCE considers "Base Case" and "High Need Case" procurement scenarios. SCE's Base Case and High Need Case both assume a 33% renewable energy goal. SCE intends to procure renewable resources based on the High Need Case.

Through SCE's analysis of its renewable net short position and procurement needs, as discussed herein, SCE has determined that it has a long-term renewable procurement need. In its 2012 RPS Plan, SCE proposes using a targeted solicitation process that meets SCE's need for specific resources. Specifically, SCE intends to narrow its next solicitation to Category 1 products. Likewise, SCE will emphasize a need for projects with later commercial on-line dates given that SCE does not have a near-term renewable procurement need. SCE also plans to require projects to have, at least, a completed Interconnection Study as demonstrated by a completed System Impact Study, Facilities Study, a Phase I or Phase II Interconnection Study, documentation

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6 *Id.* § 399.16(d).

9 *See* SB 2, Cal. Pub. Util. Code § 399.15(c)-(d).

7 *Id.* §§ 399.15(c)-(d).

8 On April 24, 2012, Administrative Law Judge Simon issued a Proposed Decision Setting Compliance Rules for the Renewables Portfolio Standard Program. That proposed decision has not yet been approved by the Commission.

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showing that the project has passed Fast Track screens, or a signed Interconnection Agreement in place in order to submit a proposal, and a Phase II Interconnection Study (or equivalent or better) completed prior to entering into the contract. In this way, SCE will engage with developers of projects further along in the development cycle and have more accurate information about the costs of interconnection upgrades prior to contract execution. These changes to SCE's solicitation process will enable SCE to procure resources that minimize costs and maximize value to SCE's customers. Additionally, this process will target the most viable proposals that fit SCE's portfolio, thus focusing the efforts of both SCE and renewable developers on the most promising project proposals.

II. ASSESSMENT OF RPS PORTFOLIO SUPPLIES AND DEMAND

A. Description of SCE's Portfolio and Forecast of Need

In 2011, SCE procured 21.1% of its retail sales from RPS-eligible resources. To date, SCE's RPS-eligible deliveries and executed renewable procurement contracts have resulted from SCE's various large RPS solicitation Requests for Proposals ("RFPs"), SCE's Renewables Standard Contract ("RSC") Program, the utility-owned generation and independent power producer portions of SCE's Solar Photovoltaic Program ("SPVP"), the Public Utilities Code Section 399.20 feed-in tariff ("FiT") program, the Renewable Auction Mechanism ("RAM") program adopted by the Commission, qualifying facility ("QF") contracts, utility-owned small hydro projects, and bilateral negotiations. Additionally, SCE has issued its 2011 RPS solicitation and received a robust response of over 1,400 proposals. SCE is currently negotiating contracts with sellers resulting from that solicitation.

SCE's forecast of its renewable procurement position and need included as Appendix C – Quantitative Information – is based on the New Procurement Targets for the 33% RPS program and SCE's most recent bundled retail sales forecast. The forecast assumes that all of SCE's

executed contracts will be approved by the Commission and incorporates current expected on-line dates for all projects that are not yet on-line. Moreover, as discussed in more detail below, SCE's forecast accounts for potential issues that could delay RPS compliance, project development status, the minimum margin of procurement, and other potential risks through the use of a 60% success rate for delivered energy from contracts that are executed but not yet on-line. SCE assumes a 100% success rate for projects that are currently on-line. SCE also includes additional generation from existing mandatory procurement programs such as the RAM program, the FiT program, and SCE's SPVP at a 100% success rate and 100% recontracting of existing contracts with projects 20 MW and less.

As shown in Appendix C, SCE anticipates a procurement quantity requirement for the first compliance period of [redacted] kWh and RPS-eligible procurement of 51.3 billion kWh, for a net long position of about [redacted] kWh. In the second compliance period, SCE forecasts a procurement quantity requirement of [redacted] kWh and RPS-eligible procurement of 64.6 billion kWh, for a net long position of about [redacted] kWh. In the third compliance period, SCE forecasts a procurement quantity requirement of 99 billion kWh and RPS-eligible procurement of 88 billion kWh, for a net short position of about 11 billion kWh. SCE also forecasts a net short position for 2021 and 2022. Whether and to what extent SCE's anticipated net long positions may be carried forward to cover future net short positions will depend on the RPS compliance rules adopted by the Commission, which are still being implemented. Accordingly, SCE does not have a short-term renewable procurement need, but it does anticipate a longer term need for additional RPS-eligible resources.

~~SCE's plan is intended to permit SCE to procure enough renewable energy to reach the State's renewable energy goals; however, there are significant barriers to achievement of these~~

goalsEven given SCE's short-term procurement position, SCE has concerns about the barriers to achieving the State's RPS goals in the long-term. Based on SCE's experience in RPS solicitations to date, transmission availability will continue to be a seriousan impediment to bringing new renewable resources on-line.[10][9] Increased procurement activity (i.e., execution of more contracts) will not accelerate the planning, permitting, and construction processes for new transmission and transmission upgrades. While SCE will continue to seek and contract withfor renewable resources that can provide near-term deliveries, SCE expects most project proposals are expected to be limited by the scarcity of transmission. Additionally, the long and complicated process for siting and permitting of renewable generation projects, integrating intermittent renewable resources, the continued uncertainty surrounding the federal production and investment tax credits, a heavily subscribed interconnection queue, developer performance issues, curtailment, and lack of flexibility in established regulatory processes related to procurement are all major challenges to meeting California's renewable energy goals. These procurement goals will not be achieved without addressing these significant challenges. SCE addresses the impediments to reaching the State's RPS goals and the steps SCE is taking to mitigate these impediments in more detail in Section III below.

The magnitude of a 33% renewable energy goal increases the challenges to reaching the State's goals. The Commission has stated that a 33% renewable energy goal is "highly ambitious, given the magnitude of the infrastructure buildout required."[11] Indeed, the Commission found that reaching the 33% goal will require $115 billion in new infrastructure investment in an uncertain

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[10][9] The Commission has repeatedly recognized this in its Quarterly Reports to the Legislature. *See, e.g.*, Renewables Portfolio Standard Quarterly Report at 7 (Q4 2009)10 (Q3 2010); Renewables Portfolio Standard Quarterly Report at 7 (July 2009); Renewables Portfolio Standard Quarterly Report at 7 (July 2008); Renewables Portfolio Standard Quarterly Report at 5 (April 2008)8 (Q2 2010); Renewables Portfolio Standard Quarterly Report at 8 (Q1 2010); Renewables Portfolio Standard Quarterly Report at 7 (Q4 2009).

[11] 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results at 1 (June 2009).

~~financial environment, including seven major new transmission lines (in addition to the four major new transmission lines needed to reach 20% renewables).[12] The "highly ambitious" 33% renewable energy goal will not be achieved without addressing significant challenges including, among other things, the challenges discussed above. SCE addresses the impediments to reaching the State's renewable energy goals in more detail in Section 2 below.~~

~~Finally, SCE enters into contract discussions with renewable developers based on evaluation of project proposals relative to other proposals received in the solicitation. Generally, this process results in a diverse portfolio of technologies. After evaluating proposals based on quantitative factors, SCE evaluates proposals based on qualitative factors. This process is described in SCE's 2011 Written Description of Renewables Portfolio Standard Proposal Evaluation and Selection Process and Criteria ("2011 LCBF Written Report"), which is attached as Appendix A. For example, SCE considers proposals' delivery start dates, term lengths, and resource types in conjunction with SCE's current portfolio of renewable contracts and renewable energy needs. With respect to resource type, if the quantitative evaluation results in a suboptimal mix (e.g., all wind projects ranked as the best proposals), SCE will apply its qualitative methodology to balance the mix of resources. By taking many quantitative and qualitative factors into consideration, SCE ensures that it will select projects best suited for its portfolio in order to meet customer needs and attain the State's renewable energy goals.~~

~~1.2. The use of compliance flexibility mechanisms~~

~~Under the current RPS program structure, SCE has utilized its surplus procurement bank balance and earmarking of future deliveries from RPS contracts to satisfy part of its RPS goals.[13] Flexible compliance under SB 2 will be an implementation item to be addressed by the Commission. Although the outcome of SB 2's implementation is unclear at this time, SCE intends~~

~~[12] *Id.* at 1-4.~~

~~[13] *See* Southern California Edison Company's (U 338-E) March 2011 Compliance Report Pursuant to California Renewables Portfolio Standard (March 1, 2011).~~

~~to utilize flexible compliance mechanisms as permitted under the Commission's implementation of SB 2.~~

~~1.3. A bid solicitation setting forth relevant need, online dates, and locational preferences, if any~~

~~SCE's 2011 solicitation materials are provided as Attachments 2-1 through 2-11 to SCE's 2011 RPS Procurement Plan. SCE's 2011 Procurement Protocol includes, among other things, information related to relevant need, on-line dates, and locational preferences.[14]~~

~~2. Workplan to Reach 20% By 2010 and 33% by 2020: A showing on each IOU's workplan to reach 20% by 2010, and 33% by 2020, including but not limited to:~~

~~In its 2011 RPS solicitation, SCE intends to contract for the balance of~~

B. SCE's Plan for Achieving RPS Procurement Goals

In its 2012 RPS procurement activities, SCE intends to contract for renewable energy necessary to achieve the State's ~~renewable energy~~RPS goals, taking into account the renewable energy procured through SCE's ~~2009~~prior RPS ~~solicitation~~solicitations and other procurement mechanisms ~~and~~, success rate assumptions for executed contracts that are not yet on-line~~. To this end, SCE has developed a Base Case and a High Need Case of its renewable procurement needs. Both the Base Case and the High Need Case assume a 33% renewable energy goal as set forth in SB 2. Under both scenarios, SCE assumes a 20% goal for 2011 through 2013, a straight-line to a 25% goal in 2016, and a straight-line to a 33% goal in 2020 and beyond.[15] The Base Case and High Need Case also assume that deficits from the past RPS program do not carry over and the use of banking. The Base Case uses the current expected on-line dates for all projects and assumes 100% delivered energy from contracts that are executed but not yet on-line. The High Need Case~~

~~[14] The 2011 Procurement Protocol is Attachment 2-1 to SCE's 2011 RPS Procurement Plan.~~

~~[15] As noted above, SB 2 sets renewable procurement goals of an average of 20% for 2011 through 2013, 25% by 2016, and 33% by 2020 and annually thereafter. *See* SB 2, Cal. Pub. Util. Code § 399.15(b)(1)-(3). A straight-line progression to 25% in 2016 and 33% in 2020 is not required by the statute.~~

~~uses the current expected on-line dates for all projects and assumes 60% delivered energy from contracts that are executed and not yet on-line. This 60% success rate is modeled to represent project development success rates as well as any contingency that would make meeting the State's renewable energy goals less likely (e.g., delays due to transmission, material shortages, load growth beyond that which is forecasted, or less than expected output from resources). Appendix B shows SCE's current RPS-eligible energy forecast in the Base Case scenario and Appendix C shows SCE's current RPS-eligible energy forecast in the High Need Case scenario.[16]~~

~~Both the Base Case and High Need Case project a need for additional renewable energy deliveries in the future. In order to procure to meet the State's 33% renewable energy goal, SCE intends to use the High Need Case to inform its procurement activities for the 2011 solicitation. SCE believes it is prudent to do so given its experience in meeting the 20% renewable energy goal and the need to contract with projects early on in the process to support the development of needed transmission.~~

~~Along with its 2011 RPS solicitation, SCE plans to utilize other~~, as well as future RPS solicitations that are expected to take place. Generally, SCE's planned procurement activities for 2012 will include seeking resources to augment those already under contract to fulfill its need in the latter half of the decade.[10] SCE plans to utilize a variety of procurement options to help meet the State's ~~renewable energy goals including SCE's SPVP, the Renewable Auction Mechanism ("RAM") program adopted by the Commission, which will replace SCE's RSC Program, the CREST program, qualifying facility ("QF")~~RPS goals including the RAM program, the FiT program, SCE's SPVP, QF standard contracts, bilateral negotiations with competitive renewable energy projects, and any new processes approved by the Commission.

~~[16] Although both forecasts show an annual procurement target, SB 2 changes the structure of the RPS program from annual goals to multi-year goals. *See* SB 2, Cal. Pub. Util. Code § 399.15(b)(1).~~

[10] SCE will also utilize banking of excess procurement and any other final RPS compliance rules implemented by the Commission, as appropriate.

~~Since 2002, SCE has secured contracts for over 9,500 MW of renewable generation, as shown in the following table:[17]~~

~~**Procurement Mechanism**~~	~~**Maximum Contract MW**~~
~~Large RPS Solicitations~~	~~7,840~~
~~Bilateral Negotiations~~	~~1,212~~
~~RSC~~	~~405~~
~~SPVP~~	~~43~~
~~CREST~~	~~2~~
~~QF~~	~~34~~
~~Total~~	~~9,536~~

~~While SCE's intentions are to procure to a 33% renewable energy goal, there are significant barriers preventing SCE from achieving that goal.~~

~~**2.1. Identification of any impediments that remain to reaching 20% by 2010, and 33% by 2020**[18]~~Furthermore, as discussed in Section XII below, SCE may also sell bundled renewable energy, RECs, or other renewable energy products to maximize value to its customers and optimize its portfolio.

All of the procurement in SCE's renewable portfolio to-date is from contracts executed prior to June 1, 2010 or Category 1 products. SCE prefers Category 1 products because they provide the most flexibility and certainty for SCE's customers. SCE forecasts that it will meet its RPS procurement quantity requirements primarily through Category 1 products. SCE may procure Category 2 or 3 products as needed to meet compliance period needs, while staying within the limits set by SB 2 (1x) as implemented by the Commission.

In SCE's prior experience meeting the 20% renewable energy goal, it is prudent to contract with projects early on in the process to support the development of needed transmission. SCE considers its net short position in the third compliance period in light of how long it takes to bring

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~~[17] Data are current as of April 26, 2011. This table excludes terminated contracts.~~

new projects on-line, how far in the future the short position exists, how many solicitations SCE anticipates being able to complete in order to meet the short position. SCE then makes a pro-rata allocation of SCE's need over the remaining anticipated solicitations. For example, if SCE is short 300 GWh/year over the measured time period, and SCE anticipates being able to conduct three solicitations, it would solicit 100 GWh/year in each of the three solicitations.

SCE determines its need for resources with specific deliverability characteristics (such as peaking, dispatchable, baseload, firm, and as-available) through its least-cost best-fit analysis ("LCBF") approach. SCE uses its LCBF methodology to compare project profiles, including duration, location, technology, on-line date, viability, deliverability and price, to estimate the value of each project to SCE's customers and its relative value in comparison to other proposals. This process ensures that each project selected most cost-effectively aligns with SCE's procurement needs. SCE's LCBF approach is described in more detail in Section VIII and Appendix F.1 – Least-Cost Best-Fit Methodology.

III. POTENTIAL COMPLIANCE DELAYS

Six primary factors will challenge achievement of ~~a 33% renewable energy goal~~the RPS goals established under SB 2 (1x): (1) permitting, siting, approval, and construction of transmission and renewable generation projects; (2) ~~integrating intermittent renewable resources; (3)~~ the uncertainty surrounding the federal production and investment tax credits; (~~4~~3) a heavily subscribed interconnection queue; (~~5~~4) developer inexperience and performance issues; (5) curtailment; and (6) ~~lack of flexibility in the~~ regulatory ~~process to pursue all procurement~~

~~18 Given the enactment of SB 2, the discussion in this section focuses on impediments to reaching 33% by 2020.~~

options.[19]inflexibility. SCE discusses each of these potential issues that could cause compliance delays, in turn, below and describes the steps it has taken to mitigate the impacts of these challenges.

A. Permitting, Siting, Approval, and Construction of Transmission and Renewable Generation Projects

The lack of sufficient transmission infrastructure and the prolonged process for permitting and approval of new transmission lines continues to be the most significant impediment to reaching the StateCalifornia's renewable energyRPS goals. SCE has received relatively few proposals from renewable generators that do not require significant transmission upgrades or new transmission development for the renewable energy to be deliverable. Based on the market responses in SCE's RPS solicitations, and other renewable programs, lack of adequate transmission infrastructure and the lengthy process of siting, permitting, and building new transmission continues to be the single greatest issuea real and complicated impediment to bringing new renewable resources on-line.

The challenges surrounding transmission are only compounded as the State's renewable energyRPS goal increases from 20% by 2010 to 33%, by 2020, which represents a 65% increase in procurement of renewable energy. without taking into account load growth.[11] The Commission has stated that "[s]erving 33% of California's energy needs with renewable sources will require an infrastructure build-out on a scale and timeline perhaps unparalleled anywhere in the world."[20][12]

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[19] Notably, the Commission has identified several of these factors as impediments to reaching the State's renewable energy goals. *See* e.g., Renewables Portfolio Standard Quarterly Report at 7 (Q4 2009); Renewables Portfolio Standard Quarterly Report at 7 (July 2009); Renewables Portfolio Standard Quarterly Report at 7 (July 2008); Renewables Portfolio Standard Quarterly Report at 5 (April 2008).

[11] If load growth is taken into account, this percentage is even higher.

[20][12] Renewables Portfolio Standard Quarterly Report at 3 (October 2008).

~~The Commission's 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results report also called a 33% renewable energy goal "highly ambitious, given the magnitude of the infrastructure buildout required."[21]~~ Indeed, the Commission noted that the "magnitude of the infrastructure that California will have to plan, permit, procure, develop, and integrate in the next ten years is immense and unprecedented," including approximately $115 billion in new infrastructure investment in an uncertain financial environment~~ and~~, including seven major new transmission lines (in addition to the four major new transmission lines needed to reach 20% renewables).~~[22]~~[13]

Over the past few years, SCE has taken several actions to address the impediment of transmission to achieving California's renewable energy goals. For example, SCE has attempted to expedite the permitting and construction of renewable transmission facilities by: (1) proactively providing the upfront financing for needed transmission network upgrades, (2) seeking authorization to record costs associated with interconnection and environmental studies for renewable projects, (3) providing leadership to the California Independent System Operator's ("CAISO") reform of the Large Generator Interconnection Procedures, (4) requesting authority to study the feasibility of developing transmission capacity to deliver output from potential renewable resources. Despite these efforts, SCE expects that transmission will continue to be an impediment to achieving the State's RPS goals.

The long and complicated permitting process for renewable generation facilities is also a barrier to meeting the State's ~~renewable energy~~RPS goals. The Commission has observed that most RPS project delays "are due to lack of transmission or generation permitting at the county,

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~~[21] 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results at 1 (June 2009).~~

~~[22] *Id.*~~[13] 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results at 1-~~4.~~4 (June 2009).

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state, or federal level."[23][14] Moreover, the Commission's 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results report also noted that environmental concerns, legal challenges, and public opposition can impact the timeline for bringing renewable generation and transmission projects on-line.[24][15]

Even with investment in new infrastructure, an increase in California's renewable energy goal will also increase the grid reliability and integration issues associated with intermittent renewable resources. The California Independent System Operator's ("CAISO's") recent 20% RPS study showed that the integration of variable energy resources will require increased operational flexibility, an effect expected to be exacerbated by a 33% RPS.[25] The California Air Resources Board has also recognized these barriers to reaching the State's goals, stating that "[a] key prerequisite to reaching a target of 33 percent renewables will be to provide sufficient electric transmission lines to renewable resource zones and system changes to allow integration of large quantities of intermittent wind and solar generation," and that California will need to quickly address transmission and integration issues and permitting difficulties to reach a 33% renewable energy goal.[26]

B. Uncertainty Surrounding the Federal Production and Investment Tax Credits

Another factor that has affectedcould jeopardize the abilitiesability of SCE and other load-serving entities ("LSEs")retail sellers to reach the State's renewable energyRPS goals is the uncertainty surrounding the federal production and investment tax credits. Many renewable generation projects rely on these tax credits, prompting the Commission to call this factor "the number one source of risk to new RPS generation expected to come online by 2010" in July

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[23][14] Renewables Portfolio Standard Quarterly Report at 7 (Q4 2009).

[24][15] 33% Renewables Portfolio Standard Implementation Analysis Preliminary Results at 4 (June 2009).

[25] *See* Integration of Renewable Resources – Operational Requirements and Generation Fleet Capability at 20% RPS (August 31, 2010) (available at http://www.caiso.com/2804/2804d036401f0.pdf).

2008.[27] RPSRenewable procurement contracts often have no -fault termination rights if the tax credits are not extended. Sending signals to the renewables market that these credits will be available over the long-term will stimulate sustained investment in renewable resources rather than the "boom and bust" cycle induced by the uncertainty regarding whether the federal tax credits will be available.

The American Recovery and Reinvestment Act of 2009 ("ARRA 2009") extended the production tax credit for wind until the end of 2012, and for other technologies until the end of 2013.[28][16] The investment tax credit for solar was also extended until the end of 2016. In Section 1603 of the ARRA 2009, the U.S. Treasury Department launched a new program whereby eligible energy property can receive a cash grant (the "Cash Grant") in lieu of the productioninvestment tax credit. This cash grant programThe Cash Grant has been well received by renewable generation developers. To qualify for the Section 1603 cash grant programCash Grant, the "beginning of construction" for of the eligible property must have occurredhad to begin by December 31, 2010, and the property must be placed "in service" based on a schedule dependent on the type of generation (by January 1, 2013 for large wind and January 1, 2017 for solar).[29][17] These aggressive construction and in-service requirements have led the generation community to place increasing political pressure on regulatory bodies such as the Commission, the California Energy Commission ("CEC"), the Bureau of Land Management, along with SCE, to expedite the

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[26] Climate Change Scoping Plan at 45, Appendices, Volume I at C-127-C-128 (December 2008) (available at http://www.arb.ca.gov/cc/scopingplan/document/scopingplandocument.htm).

[27] Renewables Portfolio Standard Quarterly Report at 7 (July 2008).

[28][16] *See* American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5 (2009).

[29][17] *See* Payments for Specified Energy Property in Lieu of Tax Credits under the American Recovery and Reinvestment Act of 2009, U.S. Treasury Department Guidance Document (July 2009) (available at http://www.treasury.gov/recovery/docs/guidance.pdf).

regulatory process to enable generators to come on-line sooner in order to take advantage of this stimulus program.

~~While the ARRA 2009's extension of the tax credits relieved some uncertainty for near-term projects,~~The expiration dates set forth in the ARRA have not been extended beyond these dates and the "on again, off again" nature of these tax credits continues to be a barrier to renewable development. In particular, the expiration of the production tax credit for wind at the end of 2012 currently impacts any newly proposed wind generating facilities given the time needed for Commission approval of contracts, siting, permitting, construction, and development of needed transmission. Additionally, the uncertain future of the federal production and investment tax credits will likely continue to be a long-term barrier to meeting ~~a 33% renewables goal~~the RPS goals.

Although the uncertainty associated with production tax credits and investment tax credits was outside the control of California state agencies, SCE's policy advisors in Washington, D.C. worked with senators and legislators advocating for the extension of these tax credits. SCE also supported California Assembly Joint Resolution 50 that urged the U.S. Senate and President to extend the credits. As explained above, the ARRA 2009 extended the production tax credit for wind until the end of 2012, and for other technologies until the end of 2013. The investment tax credit for solar was also extended until the end of 2016.

C. A Heavily Subscribed Interconnection Queue

~~Heavy subscription to the~~A heavily subscribed CAISO interconnection queue is also a major barrier to achieving the State's ~~renewable energy~~RPS goals. In its recent requested tariff amendment, CAISO estimated that it would take "as long as six to eight years from October 1, 2010 to complete the studies for all small generators currently in the ISO's queue under the ISO's

current SGIP [Self-Generation Incentive Program] process."[30][18] As of February 3, 2011,May 8, 2012, SCE had over 500850 interconnection requests, comprising more than 32,000027,000 MW, inclusive of CAISO and WDATWholesale Distribution Access Tariff ("WDAT") requests. Although the CAISO's interconnection reform effort is currently being implemented, whether or not the reforms will meet the expectations and goals of all stakeholders remains to be seen.

To address the interconnection queue impediment, SCE played a leadership role among California Participating Transmission Owners in the stakeholder process that lead to reforms of the CAISO Large Generator Interconnection Procedures, which were approved by the Federal Energy Regulatory Commission ("FERC") in 2008 and are currently being implemented. In addition, SCE is heavily involved in the Rule 21 settlement process, which will reform the interconnection process for renewable generators interconnecting under Rule 21. SCE has also been supportive of generator interconnection reform at the CAISO, including the integration of transmission and generator interconnection planning ("TPP/GIP").

D. Developer Inexperience and Performance Issues

Achieving the StateCalifornia's renewable energy goals is also dependent on the strong performance ofby renewable developers. SCE has executed contracts with a large number of developers. To qualify for California'sthe RPS program, these developers must plan for, permit, construct, and operate their facilities according to milestones set forth in the contracts. Hurdles encountered during these activities require developers to alter their milestone schedules. To the extent, and new developers do not necessarily know how to navigate the interconnection and permitting processes. For example, SCE has recently had to terminate several contracts due to

[30][18] Tariff Amendment to Revise Generator Interconnection Procedures at 5 (October 19, 2010) (available at http://www.caiso.com/2834/2834c11a4c2f0.html).

performance issues on the part of inexperienced developers. To the extent that delays and termination events occur, the amount of delivered energy on which SCE can rely to reach the State's goals may be affected.

~~Furthermore, in view of these major challenges to achieving the State's renewable energy goals, it is crucial that California expand the supply of renewable resources by allowing the broadest possible market of eligible renewable products. However, lack of flexibility in the regulatory process surrounding two procurement options – unbundled and tradable renewable energy credits ("RECs" or "TRECs") and short-term renewable energy transactions – has impeded progress toward California's goals.~~

~~SCE has supported the use of RECs to help protect electricity customers from limitations in supply. Additionally, RECs provide renewable project owners and LSEs much needed flexibility and options in contracting for renewable energy. Contracting flexibility leads to lower transaction costs in obtaining renewable attributes from renewable resources that have limited access to transmission or are located far from buyers. Ultimately, increased flexibility and lower transaction costs also promote more liquid and price-competitive renewable energy markets and a better and more efficient RPS program in general, which in turn will help lead to more investment in renewable development. Given the importance of the State's renewable energy goals and the challenges facing renewable developers (in developing projects) and LSEs (with regard to RPS compliance), broad markets, including the use of RECs, are important.~~

~~Despite the fact that the Commission has been authorized to allow the use of RECs for California's RPS program since SB 107 took effect in 2007,[31] the Commission did not authorize the use of RECs for compliance with the RPS until it adopted D.10-03-021 in March 2010. The Commission's authorization of RECs in D.10-03-021 was subsequently stayed on May 6, 2010~~

~~[31] *See* Cal. Pub. Util. Code § 399.16.~~

~~pending resolution of two petitions for modification of that decision.[32] On January 13, 2011, the Commission adopted D.11-01-025, which resolved the petitions for modification of D.10-03-021 and lifted the stay on the Commission's authorization of RECs.[33]~~

~~Although RECs may now be used to comply with the RPS, their use is limited. Under the definition of REC-only transactions set forth in D.10-03-021, as modified by D.11-01-025, most out-of-state bundled renewable contracts (including existing contracts) were reclassified as REC-only.[34] The Commission also limited the use of such REC-only contracts by IOUs and electric service providers to 25% of their annual procurement targets and imposed a $50/REC price cap for the IOUs.[35] The restrictions on the use of RECs and out-of-state renewable resources imposed by the Commission are significant limitations on the renewable energy market.~~

~~With the enactment of SB 2, which establishes a prospective procurement structure and grandfathers contracts signed prior to June 1, 2010,[36] SCE expects that there will be changes to the rules surrounding the use of RECs and out-of-state renewable resources. The effect of such rules on SCE's procurement will be dependent on the Commission's implementation of SB 2.~~

~~Finally, although IOUs may enter into short-term renewable energy transactions, the current process for Commission approval of the IOUs' short-term renewable contracts limits the IOUs' ability to utilize short-term renewable transactions. In particular, the current process requiring each RPS contract to be submitted for approval via advice letter or application and reviewed and approved on a contract-by-contract basis does not allow sufficient time to obtain Commission approval of short-term transactions that may begin deliveries shortly after execution. As a result, IOUs are at a competitive disadvantage for short-term contracts with other LSEs whose contracts do not require Commission approval, and IOU customers are unfairly prejudiced,~~

~~[32] D.10-05-018 at 8 (OP 1). The Commission also placed a temporary moratorium on Commission approval of any contracts signed after the issuance of D.10-05-018 that would be defined under D.10-03-021 as REC-only transactions. *Id.* at 8 (OP 2).~~

~~[33] D.11-01-025 at 48 (OP 6-7).~~

~~[34] *Id.*, Appendix A at 11 (OP 6-7).~~

~~[35] *Id.*, Appendix A at 14 (OP 17), 16 (OP 20); D.11-01-026 at 28 (OP 3).~~

~~[36] *See* SB 2, Cal. Pub. Util. Code § 399.16.~~

~~as they will likely end up paying higher prices for renewable energy as a result of this restriction. SCE's customers have already lost out on numerous short-term contracting opportunities due to the length of time needed to obtain Commission approval or because counterparties have withdrawn their offers in favor of contracts with other LSEs who do not have Commission approval requirements for their contracts.~~

~~2.2. What the IOU is doing, or plans to do, to address each impediment, if anything~~

~~Over the past few years, SCE has taken several actions to address the impediment of transmission to achieving California's renewable energy goals. For example, SCE has attempted to expedite the permitting and construction of renewable transmission facilities by: (1) proactively providing the upfront financing for needed transmission network upgrades, (2) seeking authorization to record costs associated with interconnection and environmental studies for renewable projects, (3) providing leadership to the CAISO's reform of the Large Generator Interconnection Procedures, and (4) requesting authority to study the feasibility of developing transmission capacity to deliver output from potential renewable resources. Despite these efforts, SCE still expects that transmission will continue to be a significant impediment to achieving the State's renewable energy goals.~~

~~While the uncertainty associated with production tax credits and investment tax credits was outside the control of California state agencies, SCE's policy advisors in Washington, D.C. worked with senators and legislators advocating for the extension of these tax credits. Additionally, SCE supported California Assembly Joint Resolution 50 that urged the U.S. Senate and President to extend the credits. As explained above, the ARRA 2009 extended the production tax credit for wind until the end of 2012, and for other technologies until the end of 2013. The investment tax credit for solar was also extended until the end of 2016. SCE will continue to support extension of these tax credits in the future.~~

~~To address the interconnection queue impediment, SCE played a leadership role among California Participating Transmission Owners in the stakeholder process that lead to reforms of the~~

~~CAISO Large Generator Interconnection Procedures, which were approved by the Federal Energy Regulatory Commission in 2008 and are currently being implemented.~~

~~Furthermore, to~~To proactively address development performance issues, SCE continues to reach out and communicate with project developers on a regular basis, discuss options and the status of project development, and provide guidance and direction as ~~often as needed~~appropriate. SCE has also made several modifications to its solicitation materials in response to lessons learned from developers in previous solicitations. To overcome some of the development barriers, SCE has created an option to have SCE act as ~~schedule coordinator~~Scheduling Coordinator, allowed for delivery points at the point of interconnection with the transmission provider's electric grid, and tailored certain terms and conditions to address market changes in equipment availability and supply. SCE also intends to add a requirement for future solicitations that projects have at least a completed Interconnection Study (as demonstrated by a completed System Impact Study, Facilities Study, Phase I or Phase II Interconnection Study, documentation showing that the project has passed Fast Track screens, or a signed Interconnection Agreement) in order to be shortlisted and a Phase II Interconnection Study (or equivalent or better) prior to execution of the contract. By ensuring that shortlisted projects have completed interconnection studies, the risk of project failure due to interconnection issues will be mitigated.

SCE has also worked with developers to overcome local opposition to renewable projects through active education with city governments regarding the State's goals and the importance of renewable energy in California. Furthermore, SCE continually educates the renewable development community on its procurement opportunities. In order to explain SCE's various renewable contracting opportunities, SCE speaks to developers at industry-wide symposiums (e.g., American Wind Energy Association, the U.S. military's Enhanced-Use-Lease, Geothermal Resources Council, Solar One), hosts ~~Bidders' Conferences~~bidders' conferences in connection

with each RPS solicitation and other programs, fields countless individual inquiries, hosts outreach sessions for diverse business enterprises, and participates in CEC developer forums.

Finally, in order to gain increased regulatory flexibility to pursue additional procurement options, SCE plans to use RECs as part of its procurement authority as discussed in Section 6.7. To further facilitate the use of RECs in the future, SCE led a stakeholder process, consisting of a wide range of industry participants, to develop a standardized unbundled REC contract for use in the Western Electricity Coordinating Council ("WECC"). The contract is built to be adaptable to meet various state RPS requirements and will hopefully lead to increased liquidity and a robust REC market.

Additionally, toTo maximize contracting opportunities, SCE voluntarily implemented its RSC Program, and in 2009 and 2010, executed 35 contracts resulting from that program for approximately 459 MW of renewable energy.[37][19] However, thisThis program has since been replaced by the Commission's implementation of the RAM program as discussed in Section 6.1.. SCE also implemented a competitive solicitation offering 250 MW of long-term power contracts to independent solar photovoltaic ("PV") power providers in conjunction with 250 MW of utility-owned generation as part of SCE's SPVP, as discussed in more detail in Sections 3 and 6.4. This brings the total generating capacity of the SPVP to 500 MW, the largest solar PV program ever undertaken. In 2010, SCE executed 36 SPVP contracts with the independent power producers for a total of approximately 50 MW-AC.[38]as part of SCE's SPVP.

Finally, in order to address problems with the approval process for short-term renewable contracts, SCE proposed pre-approval for a limited amount of short-term renewable transactions in

[37][19] Four of those contracts for about 65 MW were subsequently terminated.
[38] Seven of those contracts for about 8 MW-AC were subsequently terminated.

both its 2009 and 2010 RPS Procurement Plans.[39] The Commission rejected both of SCE's proposals.[40]

3. Build Own Resources: A showing on the IOU's current consideration of whether or not to build its own renewable generation to reach 20% by 2010, and 33% by 2020

While the RPS program permits renewable utility-owned generation ("UOG"), it does not require such UOG.[41] As explained below, SCE is pursuing renewable UOG through its SPVP. Consistent with the direction provided in the last two General Rate Case decisions (D.06-05-016 and D.09-03-025) described below, SCE's Generation Project Development Division ("PDD") also evaluates the possibility of building other renewable generation resources.

On March 27, 2008, SCE submitted Application ("A.") 08-03-015, seeking authority to spend up to $962.5 million (in 2008 dollars) in customer funds to install 250 MW of UOG solar PV projects on rooftops (and a small percentage of ground mounted projects) at the distribution level of SCE's service territory.[42] The primary purpose of this program is to transform the solar PV market to substantially lower costs through creating demand.

On June 18, 2009, the Commission adopted a 500 MW SPVP in D.09-06-049. The Commission doubled the size of the SPVP to 500 MW by adding 250 MW of solar PV projects

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[39] Southern California Edison Company's (U 338-E) 2009 RPS Procurement Plan, Attachment 1 at 29-30 (September 15, 2008); Southern California Edison Company's (U 338-E) Second Amended 2010 RPS Procurement Plan, Attachment 1 at 30-36 (June 17, 2010).

[40] D.09-06-050 at 43 (OP 9); D.11-04-030 at 28-33.

[41] In D.09-06-018, the Commission reiterated that utility-owned generation is not an RPS program requirement. D.09-06-018 at 49.

[42] On March 27, 2008, SCE also submitted Advice Letter 2226-E seeking authority to record in a memorandum account invoiced costs for outside services, insurance expenses, and any capital-related revenue requirement associated with the first $25 million of direct capital expenditures incurred in the SPVP. SCE expected that this capital expenditure would provide 5 MW of rooftop solar PV electric energy connected at the distribution level in Southern California. On September 18, 2008, the Commission issued Resolution E-4182 approving the establishment of a memorandum account to record the revenue requirement for this first 5 MW of rooftop solar PV facilities.

~~owned by independent power producers ("IPPs").[43] Under its SPVP, SCE completed 21 MW of utility-owned solar PV generation by the end of 2010, with an additional 22 MW of projects under construction and nearing completion. In addition to these projects, SCE plans to complete an additional 25 MW of utility-owned solar PV generation in 2011.~~

~~On February 11, 2011, SCE filed a petition for modification of D.09-06-049 with the Commission. SCE witnessed evidence of a transformed solar PV market through a substantially increased volume of solar PV bids in renewable solicitations outside of the SPVP. In order to afford its customers the benefit of the lower renewable prices associated with these recent solar PV offers, SCE's petition requests that both the UOG and IPP portions of the SPVP be decreased to no more than 125 MW each, and that an IPP revised solicitation be created to solicit 250 MW of solar PV projects not subject to the constraints of the original SPVP. This proposed modification is expected to provide a ratepayer benefit of $300 million present value revenue requirement. SCE has requested a final decision on its petition for modification by June 9, 2011. Until such time as the Commission acts on its petition, SCE is operating the SPVP as required by D.09-06-049.~~

~~In addition to the SPVP, SCE continues to evaluate the possibility of building renewable and other UOG resources in its PDD. In SCE's Test Year 2006 and 2009 General Rate Case decisions, D.06-05-016 and D.09-03-025, the Commission approved SCE's request for cost recovery for certain so-called "support" functions associated with SCE's PDD.[44] These "support" functions include the following: "(1) analyze generation technologies and costs; (2) locate appropriate sites for potential generation development; (3) monitor and participate in generation-related regulatory and legislative activity; and (4) develop and maintain the best option outside negotiation (BOON) for relevant generation technologies."[45] SCE has requested a continuation of PDD funding in the Test Year 2012 General Rate Case application.~~

~~[43] *See* Section 6.4 for a discussion of the IPP portion of SCE's SPVP.~~
~~[44] D.09-03-025 at 40-42.~~
~~[45] *Id.* at 40.~~

~~Thus, base-rate funding was authorized for studying future generation needs, including renewable generation needs. Since the authorization of funding in SCE's Test Year 2006 General Rate Case decision, PDD continues to study various technologies, including renewables, and identify potential generation sites. PDD studied the initial feasibility of solar PV panels to be installed on third party roofs in SCE's service territory. Those studies resulted in the application and Commission approval of the SPVP described above. PDD also evaluated clean fossil fueled distributed generation in the form of fuel cells. Fuel cell generating units have not progressed commercially in California energy markets. The California Governor's Office encouraged PDD to identify several potential fuel cell installation sites on California University campuses, and other state-owned facilities. Once interested University partners were identified, PDD submitted its Fuel Cell Program Application,[46] which was approved by the Commission on April 8, 2010.[47]~~

~~The Commission, however, twice rejected SCE's request to include in rates efforts by PDD to engage in activities such as "develop[ing] and implement[ing] plans to advance projects from the development phase to the construction and operations phase" at specific sites.[48] Therefore, PDD is not currently authorized to use PDD funding to develop renewable generation resources. The costs for any specific proposed projects are only recoverable when those projects have been approved for recovery by the Commission through individual applications.~~

~~**4. Imperial Valley Issues**:~~

~~**4.1. Bidders' Conference**~~

~~In 2009, SCE was required by the Commission to host an Imperial Valley Bidders' Conference in addition to its annual Request for Proposals ("RFP") Bidders' Conference.[49] On July 9, 2009, SCE hosted its Imperial Valley Bidders' Conference in Los Angeles. Despite publicizing this event, attendance was not high. Prior to the Imperial Valley Bidders' Conference,~~

~~[46] *See* A.09-04-018.~~
~~[47] *See* D.10-04-028.~~
~~[48] D.09-03-025 at 40-42.~~
~~[49] D.09-06-018 at 78 (COL 6).~~

~~SCE received numerous questions from confused sellers about the purpose and goal of a separate conference for the Imperial Valley, which provides evidence to justify earlier concern that "a special conference might give the impression that a preference will be given to Imperial Valley developers, and that projects in other areas need not apply."[50]~~

~~4.2. Remedial Measures for 2011~~

~~In its 2009 RFP, SCE noted that its evaluation criteria would consider the benefit of projects locating near approved transmission infrastructure, such as the Sunrise Powerlink Transmission Project ("Sunrise") and the Tehachapi Renewable Transmission Project. SCE received numerous proposals indicating an interconnection point to Sunrise in its 2009 solicitation.~~ [redacted] ~~SCE's experience shows that Imperial Valley sellers are well aware of the solicitation process. SCE will continue to give a preference to projects located near approved transmission projects, including Sunrise, in its 2011 RPS solicitation.~~

~~In D.11-04-030, the Commission held that remedial measures related to Sunrise are not needed in the 2011 RPS Procurement Plans.[51]~~

~~5. Contract Amendments:~~

~~SCE appreciates the Commission's intent to streamline the renewable contract amendment review process.[52] However, the approach that SCE currently uses to determine whether a contract amendment should go into the Energy Resource Recovery Account ("ERRA") reasonableness filing as opposed to an advice letter or application is functional, streamlined, and efficient. In its 2009 RPS Procurement Plan, SCE explained the ERRA process and proposed guidelines for the treatment of renewable contract amendments should the Commission determine further guidelines~~

~~[50] *Id.* at 11.~~

~~[51] D.11-04-030 at 25.~~

~~[52] Amended Scoping Memo and Ruling of Assigned Commissioner Regarding 2010 RPS Procurement Plans ("Scoping Memo"), Attachment A at 5 (November 2, 2009).~~

are necessary.[53] The proposal in the Scoping Memo is similar in some ways to the guidelines SCE proposed in 2009. Unfortunately, some aspects of the Scoping Memo proposal are directly contrary to the goal of streamlining the contract amendment review process. In fact, the Scoping Memo proposal would likely make the review process for renewable contract amendments more complicated, burdensome, and time consuming. If read broadly, the Scoping Memo proposal could significantly increase the number of amendments that must be filed by advice letter, burdening the IOUs, their counterparties, and Commission staff, and delaying the approval of amendments that are required to allow renewable projects to come on-line.

SCE believes the current process for review of renewable contract amendments is working effectively. There is no evidence that a change in that process is required or desirable.

A. **SCE's Current Contract Amendment Process**

Since the early 1980s, all actions taken by the IOUs after contract execution have been within the scope of contract administration. All contract administration activities for RPS contracts, including contract amendments, are subject to review by the Commission. The Commission reviews these matters either through the annual ERRA Reasonableness of Operations review process, advice letters, and/or applications filed by the IOUs. The same general process is used for QF contracts and other contracts for non-renewable resources.

RPS contracts are complex and typically involve the development of new projects, often requiring hundreds of millions of dollars of capital investment and a lengthy development planning horizon. Any number and type of changes may occur over this horizon as well as the terms of the agreements. Many of the contract changes experienced with new generation projects involve revised on-line dates brought about by transmission interconnection issues, site permitting issues, or other unanticipated development hurdles. Contract changes have also been made to address changes in the market or regulatory environment. Most of these amendments are included

[53] Southern California Edison Company's (U 338-E) 2009 RPS Procurement Plan, Attachment 1 at 21-22 (September 15, 2008).

~~in the annual ERRA reasonableness filing. SCE utilizes ERRA for contract amendments when it can provide clear evidence that in agreeing to an amendment requested by a seller, SCE has secured a commensurate ratepayer benefit.[54] The function of the ERRA reasonableness proceeding is to ensure that contract administration actions are reasonable, consistent with Commission directives, administered equally, and consistent with utility and/or industry practice. It is the IOU's burden to demonstrate that its actions are reasonable through clear and convincing evidence.[55]~~

~~For amendments that substantially alter the contract, SCE would likely deem it necessary to submit an advice letter for approval of the contract amendment. Such contract amendments could be something unique to the contract, an increase in the contract price, or other material changes to the terms and conditions of the contract. In some less frequent cases, SCE may determine that an application for approval of a contract amendment is necessary.~~

~~Ultimately, SCE believes that the decision on how to bring an amendment to the Commission for approval should be left to the IOU to evaluate on a case-by-case basis at the time that the amendment arises. This decision is guided by the perceived reasonableness and risk to customers of the contemplated amendment and varies depending upon the time and circumstances. The Commission has established that IOUs must administer their contracts in a prudent manner. In other words, IOUs are expected to engage in those practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition.[56] The prudence standard is intended to include a range of acceptable practices, methods, or acts.[57] To the extent Commission direction on the acceptability of the contemplated action is clear, the IOU will likely feel comfortable with the~~

~~[54] *See* D.88-10-032.~~
~~[55] D.87-07-026 at 19-20; D.88-03-036 at 5.~~
~~[56] D.87-06-021 at 19.~~
~~[57] *See, e.g.,* D.90-09-088 at 14-16.~~

~~reasonableness risk and include such an amendment in the annual ERRA reasonableness filing. However, mandating that IOUs assume reasonableness risk absent upfront achievable standards places an unacceptable risk on the utility.[58]~~

~~Once SCE determines a specific contract amendment should go into ERRA, the information necessary to demonstrate the action is reasonable is assembled and included in the annual ERRA reasonableness filing. The filing is generally submitted on April 1 of each year. The Division of Ratepayer Advocates ("DRA") is an active party in the review process and SCE receives and responds to multiple data requests from DRA. SCE submits specific information related to each request and prepares responses to fully address all questions or concerns. Once all of their data requests are addressed, DRA then submits a recommendation to the Commission. The Commission subsequently issues a decision on SCE's ERRA reasonableness filing.~~

~~In this way, the entire filing is scrutinized for reasonable action and judgment on the part of the IOU. This process has been in place since Decision 85731, April 27, 1976, implementing the Energy Cost Adjustment Clause (which morphed into ERRA in 2003) and is sufficient for most contract amendments. Moreover, the ERRA reasonableness filing is transparent and includes a description of all contract amendments included in the filing. SCE is including a sample of RPS contract amendments from its April 2009 ERRA filing below:[59]~~

~~The current process for review of contract amendments is streamlined and flexible, and allows the IOUs to use their business judgment to apply Commission guidelines to specific amendments on a case-by-case basis. The current process also allows for robust public review of contract amendments. Accordingly, SCE does not believe there is any evidence that a change in the current process is required.~~

~~[58] *See* Cal. Pub. Util. Code §§ 454.5(b)(7), (c)(3).~~

~~[59] ERRA Reasonableness of Operations, 2008, Chapters IX-XIV Public Testimony, A.09-04-002, at 41 (April 1, 2009).~~

~~B. **Concerns with Scoping Memo Proposal**~~

~~SCE has three major concerns with the Scoping Memo proposal. First, the proposal to require contract amendments that result in "(a)ny increase in ratepayer cost that has not been pre-approved" to be submitted via Tier 3 advice letters could require a large percentage of renewable contract amendments (many of which make only minor changes to the contracts) to be approved through the Tier 3 advice letter process.[60]~~

~~For example, SCE has entered into contract amendments with certain sellers in order to address issues related to the implementation of the CAISO's Market Redesign and Technology Upgrade ("MRTU"). In some cases, MRTU will require delivery point changes that may impact line losses and such changes may result in some increased costs to ratepayers. This is a normal cost of doing business and does not increase the energy price paid to the generator, although the generator may receive an overall benefit from lower line losses. Under the current process, this type of contract amendment can be reviewed through the ERRA reasonableness filing. The benefits of a specific contract amendment to ratepayers must be evaluated on an overall basis, and as discussed above, SCE includes a demonstration of the commensurate ratepayer benefit of amendments in its ERRA filing.~~

~~However, under the Scoping Memo proposal, an amendment that may include any increase in ratepayer costs would require a Tier 3 advice letter, even if the amendment provides overall benefits to ratepayers. Given that many more contract amendments are likely to be needed to address MRTU-related issues, the Scoping Memo proposal could lead to a substantial increase in the number of amendments that must be filed through Tier 3 advice letters.~~

~~Another example of a contract amendment that may result in some increased costs to ratepayers, but also commensurate ratepayer benefits, is SCE agreeing to become the scheduling coordinator for a renewable generation project. In its recent Pro Forma Renewable Power Purchase and Sale Agreements, SCE has agreed to take on the activities of scheduling coordinator.~~

~~[60] Scoping Memo at 6.~~

~~There are some additional costs to ratepayers when SCE is the scheduling coordinator. However, there are also commensurate ratepayer benefits such as SCE's ability to manage bidding/scheduling risk, the fact that confidential bidding data does not need to be shared with the seller, and eliminating gaps in the scheduling requirements for the CAISO Participating Intermittent Resource Program. If SCE amends a contract and agrees to become scheduling coordinator it should be able to demonstrate the reasonableness of such amendment in its ERRA reasonableness filing. However, under the Scoping Memo proposal, such amendments would have to be reviewed through a Tier 3 advice letter.~~

~~These types of contract amendments are made in the normal course of contract administration and receive appropriate review in the ERRA process. The IOU has the burden to show reasonableness and commensurate ratepayer benefit through ERRA, and whether the IOU met such standards is subject to public and Commission review. Virtually all types of amendments including the specific ones mentioned here, certain changes in project on-line dates, or amendments to require seller participation in the Western Renewable Energy Generation Information System may broadly be interpreted to result in an "increase in ratepayer cost." While SCE agrees that any increases in contract energy prices should be reviewed through the Tier 3 advice letter process, SCE strongly disagrees that any amendment that could possibly increase ratepayer costs should be filed through a Tier 3 advice letter.[61] This interpretation of the Scoping Memo proposal could lead to virtually all of SCE's contract amendments being reviewed through the Tier 3 advice letter process. This is directly contrary to the goal of streamlining the review process for contract amendments. It also undermines the usefulness of the ERRA reasonableness review process – a process that has been working well for many years.~~

~~Second, SCE is concerned with the Scoping Memo proposal's distinction between "major modification to project milestones," which must be filed via Tier 3 advice letters, and "minor~~

~~[61] For contracts that were allocated above-market funds ("AMFs"), SCE supports submitting any amendments that would increase the amount of AMFs allocated via a Tier 1 advice letter. This will allow Commission staff involved in AMF allocations to more quickly track AMF allocations.~~

~~modification of project milestones," which can be submitted in the ERRA reasonableness filing.[62] There are no examples or direction for what would constitute major versus minor modification to project milestones. Without any direction on how to differentiate between these two types of amendments, it is likely that IOUs will submit most contract amendments that change contract milestones through the advice letter process in an attempt to comply with these guidelines. It would be more useful and practical for the Commission to provide a non-exhaustive list of what it views as routine contract administration to be included in the ERRA reasonableness filing versus what must be filed through the advice letter process. This will give more direction to the IOUs while leaving enough flexibility for IOUs to review specific contract amendments on a case-by-case basis.~~

~~Finally, the Scoping Memo proposal that amendments for additional procurement at a Commission-approved price be filed through Tier 1 advice letters is somewhat vague. Some Commission-approved contracts already include a range of possible capacities. If a contract amendment sets a specific capacity within that range, a Tier 1 advice letter should not be required since the Commission already approved the range of possible capacities. The amendment should be reviewed in the ERRA reasonableness filing.~~

~~SCE interprets additional procurement at a Commission-approved price to include increases in contract capacity beyond the range originally set forth in the contract at the same price already approved by the Commission. Additionally, in the case of contracts for a specific amount of renewable energy (e.g., 500 GWh per year from a specific facility rather than all of the energy from a facility of a specific capacity), additional procurement at a Commission-approved price would include a contract amendment for additional energy at the same price already approved by the Commission. SCE believes that it would be helpful to clarify this category.~~

~~6. Other:~~ ~~Anything else necessary for a full and complete presentation to the Commission of the IOU's 2011 RPS Procurement Plan, as recommended by the IOU for Commission acceptance~~

~~62 Scoping Memo at 6.~~

~~6.1. SCE's RSC Program~~

~~In order to help small renewable energy projects contribute to the State's renewable energy goals, SCE voluntarily initiated its RSC Program to offer standardized contracts to eligible renewable energy facilities with capacities of 20 MW or less. SCE recognized that smaller projects have had difficulties in participating in SCE's annual solicitations. By eliminating the complex negotiation process that is needed for larger projects, these smaller projects are given the opportunity to execute contracts with SCE and contribute to the State's renewable energy goals.~~

~~In 2009, SCE offered two different contracts for facilities with capacities not greater than 5 MW and capacities not greater than 20 MW.[63] The contracts were offered to RPS-eligible resources for terms of 10, 15, and 20 years, and at an energy price set at the applicable Market Price Referent ("MPR"), multiplied by energy allocation factors for SCE's time-of-delivery periods. The contracts were based on a simplified version of the Pro Forma Renewable Power Purchase and Sale Agreement for SCE's RPS solicitation.[64]~~

~~SCE filed an advice letter on July 1, 2009 seeking approval of one RSC Program contract.[65] Late in 2009, SCE received a large number of applications to its RSC Program, representing nearly double the program's goal of 250 MW. SCE completed negotiations and executed contracts with 13 of these projects in late December 2009 and early January 2010.[66]~~

~~Given that applications had greatly exceeded the program cap, SCE initially suspended its RSC Program after executing those contracts and conducted an analysis to review options for restarting the program in 2010. Based on that analysis, and after consultation with its PRG, SCE initiated a revised RSC Program for 2010 with a new goal of 250 MW. The 2010 program did not~~

~~[63] As noted below, the CREST program is available for facilities with capacities up to 1.5 MW.~~

~~[64] SCE's 2009 Renewables Standard Contract materials were filed with the Commission on May 8, 2009. Southern California Edison Company's (U 338-E) Renewables Standard Contract Materials (May 8, 2009).~~

~~[65] The Commission approved the contract in Resolution E-4263. The Commission had previously approved four contracts from SCE's Biomass Standard Contract Program (the predecessor to the RSC Program).~~

~~[66] The Commission subsequently approved 12 of these contracts in Resolution E-4359. One of the contracts was terminated before approval. Two additional contracts have been terminated since approval.~~

~~offer an energy price at the applicable MPR, but instead awarded contracts based on a Request for Offers ("RFO").~~

~~SCE launched the 2010 RSC RFO on August 2, 2010 with a goal of procuring 250 MW of renewable resources, each project not greater than 20 MW. The RFO Instructions asked prospective offerors to submit offers for projects not greater than 5 MW ("RSC5"), or projects not greater than 20 MW ("RSC20"). The RSC5 and RSC20 standard contracts contained similar terms and conditions, except that RSC5 had a lower development security deposit than RSC20, and there was no requirement to post performance assurance under RSC5. The RFO Instructions required generating facilities to be certified as eligible renewable energy resources, to be located within the electric power system of the CAISO, and to be scheduled to commence operation within three years from Commission approval of the contract. The standard contracts were not subject to negotiation, except for changes unique to an offeror's particular project. Offerors could propose contract durations for RSC5 and RSC20 for 10, 15 or 20 years.~~

~~SCE received an extremely robust and competitive response, and decided to create both a short list and a provisional short list. SCE notified each offeror as to its status with respect to the short list or the provisional short list on September 30, 2010, and executed final contracts with the short-listed offerors on November 15, 2010.~~

~~Between the time that the RSC RFO was launched and offers were submitted to SCE, the Commission issued a proposed decision on August 24, 2010 adopting the RAM. As discussed in Section 6.2 below, the RAM is a mandatory competitive procurement process for renewable resources up to 20 MW. The proposed RAM created a duplicative procurement program and directly competed with SCE's RSC Program for the less than 20 MW market segment, creating uncertainty around whether or not SCE should continue to procure renewable resources via its RSC Program. Ultimately, SCE short-listed the 2010 RSC offerors' bids and executed 21 contracts for 258 MW on November 15, 2010. One 20 MW wind contract was subsequently~~

~~terminated; the remaining 20 contracts were solar PV.[67] Now that the RAM has been approved by the Commission,[68] it will replace SCE's RSC Program.~~

~~6.2. RAM Program~~

~~In D.10-12-048, issued on December 17, 2010, the Commission adopted a new procurement process called the RAM to procure renewable energy from projects 20 MW or less that are eligible under the California RPS. The decision ordered SCE, Pacific Gas and Electric Company, and San Diego Gas & Electric Company to implement the RAM, procuring a total of 1,000 MW, allocated across the utilities over a two year period through competitive auctions using standard non-negotiable contracts.[69] On February 25, 2011, SCE submitted Advice 2557-E, which provides RAM procedures and draft standard Power Purchase Agreements in compliance with D.10-12-048. SCE filed a supplement to Advice 2557-E on March 14, 2011 to include a Memorandum from Independent Evaluator Accion Group ("Accion") providing Accion's observations and suggestions regarding Advice 2557-E.~~

~~6.3. CREST Program~~

~~In D.07-07-027, the Commission directed the IOUs to offer a feed-in tariff to eligible renewable energy resources sized 1.5 MW and less. SCE offers this tariff under the CREST contract, which purchases all energy delivered for a 10, 15, or 20-year term at the applicable MPR. The statewide program limit is 500 MW with SCE's portion being 247 MW. SCE has executed two contracts under this tariff for approximately 2 MW.~~

~~On October 11, 2009, SB 32 expanded this tariff up to 3 MW, to be effective January 2010. SCE will continue to offer the existing CREST contract until the Commission has completed the implementation of the legislation.~~

~~6.4. IPP Portion of SPVP~~

~~67 The 20 contracts were submitted for Commission approval in Advice 2547-E.~~

~~68 *See* D.10-12-048.~~

~~69 D.10-12-048 at 29-30. The decision orders SCE to procure 498.4 MW and allows for contracts already executed under SCE's 2010 RSC Program to count towards this target.~~

~~SCE launched its first SPVP RFO for IPPs on March 18, 2010. In the RFO Participant Instructions, SCE listed the following requirements for competing in the procurement process:~~

- ~~The generating facility must be a solar PV electric energy generating facility;~~
- ~~The site on which the offeror's generating facility is located must be within SCE's service territory;~~
- ~~The generating facility must be interconnected to SCE's electric system. The delivery point for a generating facility will be the PNode for the generating facility. In no instance will SCE accept any offer that proposes a generating facility whose interconnection would require any network upgrades;~~
- ~~A single offer may be comprised of the aggregation of multiple generating facilities delivering the products to the same PNode provided that each generating facility has a gross power rating of at least 500 kW DC;~~
- ~~The generating facility may not participate in the California Solar Initiative program or the net energy metering tariff; and~~
- ~~The levelized product price must not be greater than $192.50/MWh.~~

~~On April 19, 2010, SCE received a robust submittal of non-binding offers for both rooftop and ground mount options. SCE evaluated each offer against a set of screening criteria. In addition, to be eligible to submit a binding offer, offerors must either have completed interconnection studies signifying that no transmission level upgrades are necessary, or pass the first nine screens of the WDAT Fast Track process. SCE received binding offers on July 19, 2010 from eligible offerors, which resulted in the execution of 36 contracts for 50 MW AC of solar PV projects in SCE's service territory. Seven of these contracts were subsequently terminated, and the Commission ultimately approved 29 contracts for 43 MW AC.~~

~~SCE held a Program Forum on December 2, 2010 and received input from participants on the SPVP. Based on this input and lessons learned in the 2010 RFO, SCE submitted an advice~~

~~letter to the Commission on April 5, 2011 requesting approval of the Participant Instructions and standard Power Purchase Agreements for use in the 2011 RFO.[70]~~

~~6.5. QF Settlement~~

~~On December 16, 2010, the Commission approved the Qualifying Facility and Combined Heat and Power Program Settlement Agreement ("Settlement") in D.10-12-035. The terms of the Settlement will become effective upon final, non-appealable approval of the Settlement by the Commission and final, non-appealable approval of the joint IOUs' 210(m) application filed March 18, 2011. Pursuant to the Settlement and the Public Utility Regulatory Policies Act of 1978, standard offer contracts will be offered to renewable QFs less than or equal to 20 MW. In addition, the Settlement makes a pricing amendment available to renewable QFs currently under contract. A renewable QF currently holding an SCE standard offer contract will have the opportunity to execute a pricing amendment effective for the remainder of its existing contract term.~~

~~6.6. Interconnection Process – Operating Priority for Fully Deliverable Resources Over Energy-Only Resources~~

~~As part of the interconnection process, sellers select between being "fully deliverable" and "energy-only." By selecting fully deliverable, sellers must pay their network upgrade costs and share in the cost of any deliverability upgrades. The utilities are also able to count fully deliverable sellers toward their resource adequacy requirements. Sellers who select energy-only are unable to provide resource adequacy. These resources pay for their network upgrade costs, but are not obligated to pay any portion of the deliverability upgrades.~~

~~Despite having to pay for deliverability upgrades, fully deliverable sellers receive no operating priority or transmission rights beyond what an energy-only seller would receive. For example, rather than curtail an energy only seller first when downstream congestion requires curtailment, the CAISO makes no distinction between an energy-only and fully deliverable seller. Additionally, the energy-only seller receives the benefit of the additional downstream transmission~~

~~[70] *See* Advice 2571-E.~~

~~availability, paid for by the fully deliverable sellers, without sharing any of the downstream transmission upgrade costs.~~

~~Another LSE's energy-only resource located in the same area as an SCE fully deliverable resource should not be allowed to take advantage of the SCE resource having paid for deliverability upgrades when the other LSE's resource has not shared those costs. That would be unfair to the fully deliverable sellers, who should be given operating priority in the CAISO system since they paid the cost of deliverability upgrades.~~

~~In its 2010 RPS Procurement Plan, SCE requested to amend its 2010 Pro Forma Renewable Power Purchase and Sale Agreement to include the requirement that sellers' interconnection applications provide for full deliverability so that they receive resource adequacy benefits and are obligated to pay their portion of any deliverability upgrades.[71] However, the Commission denied SCE's request.[72] While SCE will not be including this requirement in its 2011 Pro Forma Renewable Power Purchase and Sale Agreement, SCE urges the Commission to address this issue either in this proceeding or in the SB 2 implementation proceeding, so that SCE and the other IOUs be required to include this requirement in their 2012 RPS Procurement Plans. This is an issue that needs to be addressed system-wide.~~

~~6.7. SCE's Planned Use of RECs~~

~~Pursuant to D.10-03-021, as modified by D.11-01-025, the Commission has authorized the use of RECs for compliance with the California RPS program. Along with allowing for the use of REC-only transactions where the LSE only purchases RECs, and not energy, the Commission reclassified most out-of-state bundled renewable transactions as REC-only. The Commission also limited the IOUs' use of such REC-only transactions to 25% of their annual procurement targets and imposed a price cap of $50/REC.~~

~~[71] Southern California Edison Company's (U 338-E) Second Amended 2010 RPS Procurement Plan, Attachment 2-5 at § 2.02(b) (June 17, 2010).~~

~~[72] D.11-04-030 at 20-22.~~

~~SCE intends to use RECs to help meet its RPS targets in accordance with the Commission's decisions on RECs.[73] SCE will solicit proposals for RECs through the 2011 solicitation and has amended its 2011 solicitation materials to allow for the procurement of RECs. SCE may also explore additional compelling REC opportunities through the broader market with requests for information, proposals, or offers. SCE's REC procurement efforts will help SCE meet the State's renewables goals.~~

~~With the passage of SB 2, SCE expects that there will be some changes to the rules surrounding the use of RECs. SCE may need to modify its plan for the use of RECs once the Commission implements SB 2.~~

~~6.8. Process for Modifications to RPS Procurement Plans~~

E. Curtailment

Congestion at the transmission and generation levels is increasing and curtailment events are becoming more and more common. Under the Generator Interconnection Agreements between CAISO, the transmission provider and a project developer, projects are able to come on-line as an energy-only ("EO") resource until associated deliverability interconnection upgrades are complete. Until the upgrades are complete, this large number of EO projects may result in the CAISO curtailing these projects at any time and to any degree for reliability purposes.

Several of SCE's contracted wind projects in the Tehachapi region in Kern County, California, for example, have been forced to curtail deliveries significantly in order to accommodate transmission construction and maintenance and system reliability in this area. SCE expects that this same issue will occur in the Devers Colorado River area during the construction

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~~[73] SCE and several other parties have filed applications for rehearing of D.10-03-021 and D.11-01-025 that are still pending before the Commission. SCE's current intentions with regard to RECs may need to be revisited if those decisions are materially altered.~~

phases of that transmission project. Due to the significantly larger scale of the Devers Colorado River line, the potential curtailment risk could be much greater in scope.

Frequent curtailment events such as these may impact SCE's ability to meet its RPS compliance goals due to lessened renewable energy deliveries. Additionally, the curtailments could impact the ability of owners of operating renewable projects to maintain adequate revenue to service their debt, and may create a chilling effect on future financing of projects under development until the transmission upgrades are complete.

SCE has kept these project owners informed of the latest transmission outage schedules, and has worked to mitigate the financial impacts of these curtailments on these projects. The mitigation efforts include discussion with the CAISO to evaluate curtailment need on the basis of all projects in a transmission area, instead of on a project-by-project basis, and proposing more effective allocation methods that take into account each resource's actual, current generating potential. When the CAISO establishes an operating level that may require curtailment, it calculates the allowable capacity on the transmission line during a set period of time. That capacity is then often distributed on a pro-rata basis to each project to operate up to the appropriate percentage of its contract capacity. Because not all resources peak at the same time, imposing fixed maximum generation levels results in significant over-curtailment. Since all of the generators on the Tehachapi Renewable Transmission Project system are new and have modern control systems, it is quite practical to automate this process and send each project a real-time signal representing its individual cap. In this scenario, as long as the unrestricted output from all of the projects is less than the system limit, the projects may operate at 100% of the intermittent resource output.

SCE resolved a similar problem with the legacy QF generators in the Tehachapi area by combining them all into one group and curtailing them as a group. In this case, the generators were connected to the distribution system, so the curtailments were administered by SCE, not the CAISO. SCE worked with the generators to develop an arrangement under which some generators with modern control systems curtail on behalf of all generators in the group. This allows the other generators to continue to generate at full output while generators with modern control systems curtail only when coincident generation on the system exceeds the limit. Even for curtailing generators, the amount of curtailment under this arrangement is less than it would have been without the arrangement. This collaborative solution has helped SCE ensure safety and reliability while reducing expected curtailments by approximately 90%.

F. Regulatory Inflexibility

The ~~existing process for Commission approval of the IOUs' RPS Procurement Plans, including solicitation materials, makes it difficult for the solicitation materials to take into account market trends and the lessons learned from the IOUs' contracting experience because the solicitation materials must be filed with the Commission several months before the solicitation is to be issued. As a result of this time lag, the solicitation materials are inevitably out-of-date by the time they are approved by the Commission.~~

~~For example, SCE filed its 2010 RPS Procurement Plan just as it was beginning negotiations with the sellers short-listed in its 2009 RPS solicitation. Therefore, SCE's 2010 solicitation materials could not fully take into account the lessons SCE learned in its 2009 solicitation. Such lessons learned may show SCE that a provision in its solicitation materials requires modification or that a new provision is required. SCE may also learn that one of the changes introduced for a solicitation is not working and should not be included in the next~~

~~solicitation. Additionally, the renewable energy market moves quickly and the IOUs~~investor-owned utilities ("IOUs") need the ability to make changes to their commercial documents to reflect ~~current~~changes in the renewable energy market~~ and regulatory realities~~. The credit and financing markets can undergo significant changes in the time between the filing and approval of the RPS ~~Procurement Plans~~procurement plans that necessitate changes to the IOUs' solicitation materials. Changes can also be required because of new regulatory developments. It does not benefit any party to require the IOUs to issue solicitations with stale commercial documents that require substantial modifications before they can be executed. To the contrary, such inflexibility tends to increase transaction costs and commercial disputes and results in expensive litigation. SCE suggests that the Commission consider ways to streamline the approval process so that IOUs can react more quickly to market and regulatory changes and reflect those changes in their solicitation materials.

~~Going forward, SCE suggests that the Commission create a forum for discussing changes to the schedule for the RPS Procurement Plans to make the process more effective.~~

~~6.9. Discussion of Improvements to the Transmission Ranking Cost Report Process~~

~~For the 2009 RPS solicitation, SCE sent a letter on August 6, 2008 to renewable energy developers requesting that they provide information regarding transmission to be used in SCE's 2009 Transmission Ranking Cost Report ("TRCR"). The deadline for interested parties to respond to this solicitation for information was August 20, 2008. Fifteen developers responded to SCE's information request. These developers identified up to 48 potential renewable resource projects, including 29 in SCE's service territory, for a total of 15,424 MW. There were five developers representing seven projects which provided incomplete or insufficient information. The majority of projects identified in the request for supplemental information were in fact already active projects in the CAISO interconnection queue.~~

~~Based on the revisions to previous conceptual transmission plans to accommodate new interconnection requests of renewable resources made since the last TRCR and additional information obtained in response to SCE's request for information, SCE developed its 2009 TRCR.~~

~~Of those parties which provided information to SCE for its TRCR, xxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxxxx. SCE believes that the current TRCR process provides an extremely rough approximation of transmission cost impacts for proposed generating facilities within SCE's service territory. However, it does not provide sufficient accuracy to make fine distinctions between projects in the proposal evaluation process. Furthermore, SCE has found that estimates in the TRCR are even more speculative for network upgrade costs for generating facilities that will be located at sites within or beyond the service territories of other CAISO transmission providers.~~

~~SCE proposes that the Commission undertake workshops to consider how to make the TRCR process more relevant and useful to the assessment of proposals actually received by the utilities.~~

~~6.10. Consideration of Integration Cost in the Evaluation Process~~

~~Integration costs are indirect costs that result from integrating and operating eligible renewable energy resources. They include the additional system costs required to provide sufficient ancillary service capability including load following and frequency regulation to integrate renewable resources. In D.04-07-029, the Commission required that integration cost adders be zero for the first year of RPS solicitations (i.e., 2004) due to the results from the CEC-commissioned "California Renewables Portfolio Standard Renewable Generation Integration Cost Analysis" ("RGICA") study, published in 2004.[74] The Commission stated that~~

~~[74] D.04-07-029 at 12-14.~~

~~"at present levels of penetration, renewable generation causes no noticeable increase in the cost of these ancillary services, beyond those costs imposed by normal system variability."[75] However, the Commission specifically stated that this was its ruling for the first year of RPS solicitations and that "further addition of intermittent renewables to the system may, in future years, cause us to change this determination."[76] The Commission reiterated the direction to apply a zero adder for integration costs in D.07-02-011 without any analysis of developments since D.04-07-029.[77]~~

~~The CEC RGICA results do not support continuing to use a zero adder for integration costs in the least-cost, best-fit ("LCBF") evaluation process. The RGICA was a multi-year study that analyzed 2002 to 2004 to determine the impact of renewable resources on integration costs over that timeframe. The RGICA results do not take into account any renewable projects that have been completed since 2004, the renewable projects that currently have purchase power contracts but are not yet on-line, or any future procurement needed to comply with the State's renewable energy goals.~~

~~As California continues to procure additional intermittent renewable resources, SCE believes that current levels of intermittent renewables require an increase in the provision of the ancillary services mentioned above, and that an integration study that reflects updated regulatory and procurement expectations should be used as a basis for integration costs. However, in D.11-04-030, the Commission declined to allow the use of non-zero integration cost adders for the 2011 RPS solicitation.[78] The Commission stated that if an adder is developed in Rulemaking 10-05-006, each IOU may file an advice letter seeking to amend its 2011 RPS Procurement Plan for the purpose of using that adder in its LCBF evaluation.[79] In accordance with D.11-04-030, SCE will use a zero integration cost adder in its 2011 RPS solicitation unless the Commission authorizes the use of another adder.~~

~~[75] *Id.* at 13.~~
~~[76] *Id.*~~
~~[77] D.07-02-011 at 56.~~
~~[78] D.11-04-030 at 23.~~
~~[79] *Id.*~~

~~**7. Important Changes: A statement identifying and summarizing the important changes between the 2009 and 2010 Plans.**~~

~~**This Section addresses the important changes between SCE's 2009 RPS Procurement Plan and SCE's 2010 RPS Procurement Plan, as filed on December 18, 2009, and amended on April 9, 2010 and June 17, 2010. SCE has made additional changes in this 2011 RPS Procurement Plan from its Second Amended 2010 RPS Procurement Plan submitted on June 17, 2010. Those changes are discussed in the Summary of Changes Made in SCE's 2011 RPS Procurement Plan section included in the pleading at the beginning of Volume 1 of SCE's 2011 RPS Procurement Plan and are also shown in the redlines included in SCE's 2011 RPS Procurement Plan. They are not reflected in this Section and may supersede provisions discussed in this Section.**~~

IV. PROJECT DEVELOPMENT STATUS UPDATE

SCE has attached as Appendix B – Project Development Status Update, a written status update on the development of all RPS-eligible projects currently under contract but not yet delivering generation. Some of the information in this status update has been reported to SCE by its counterparties. The status of these projects impacts SCE's renewable portfolio position and procurement decisions by allowing SCE to adjust its procurement once it is determined that projects will or will not meet their contractual obligations.

V. RISK ASSESSMENT

SCE describes the risk of projects failing to build or having construction delays in Section III above.

VI. QUANTITATIVE INFORMATION

Appendix C - Quantitative Information – provides a quantitative analysis of SCE's renewable procurement need through 2022, based on the following assumptions:

- 100% success rate for any project already on-line until the expiration date of the associated contract;
- 60% successfully delivered energy with respect to projects with executed contracts that are not yet on-line;
- 100% success rate for projects originating from the mandated programs referred to as "Program Generics" in Appendix C, such as SCE's SPVP, the FiT program, and the RAM program; and
- 100% success in re-contracting with projects 20 MW or less.

Appendix C details SCE's assessment of its multi-year portfolio supplies in place to meet the goals established in SB 2 (1x) and establishes SCE's net long and short positions during the first three compliance periods.

VII. MINIMUM MARGIN OF PROCUREMENT

SCE's renewable procurement efforts will be guided by its forecast of its renewable procurement needs, as described in Section II and Section VI and Appendix C.

SCE currently accounts for the risk of project failure associated with projects that are not yet on-line by assuming 60% delivered energy from such contracts. This 60% success rate is modeled to represent project development success rates as well as any contingency that would make meeting the State's RPS goals less likely (e.g., delays due to transmission, curtailment, material shortages, load growth beyond that which is forecasted, or less than expected output from resources). SCE uses this 60% assumption to calculate its net short/net long position. At this time, it also provides an appropriate minimum margin of procurement "necessary to comply with the renewables portfolio standard to mitigate the risk that renewable projects planned or under

contract are delayed or cancelled."[20] Moreover, SCE procures based on a forecast using the 60% success rate so SCE's procurement takes into account these risks. SCE has used other success rates in the past and expects that this success rate may need to be modified in the future, to reflect changes to SCE's portfolio.

The Commission should avoid mandating a method for IOUs to calculate the minimum margin of procurement and should not attempt to impose a one-size-fits-all approach. As many of the projects in SCE's portfolio become operational, SCE will face different risks. The risks associated with project failure will be replaced by less significant risks of projects generating below full capacity. Similarly, SCE expects that the portfolio risk picture is not the same for each IOU. For example, risks may vary depending on whether a portfolio contains a high proportion of contracts that are online (as discussed above) or depending on the various technologies being used (e.g., geothermal technology, which provides a fairly firm resource versus wind or solar technologies, which are more intermittent). For these reasons, each IOU should have the authority to revise its approach to calculating the minimum margin of procurement through its RPS procurement planning process and each IOU should have the flexibility to calculate this margin based on its unique portfolio make-up and procurement needs.

Accordingly, in order to comply with SB 2 (1x), the Commission should require each IOU to include a methodology for calculating its minimum margin of procurement within its RPS procurement plan. The Commission should then approve each IOU's methodology, assuming it is reasonable and justified, as the minimum margin of procurement for that IOU. Each IOU should have the ability to modify its methodology through the process already in place for updating its RPS procurement plan.

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[20] Cal. Pub. Util. Code § 399.13(a)(4)(D).

VIII. BID SOLICITATION PROTOCOL, INCLUDING LCBF METHODOLOGIES

A. ~~Second Amended 2010 Written Plan and Second Amended LCBF Written Report~~Bid Solicitation Protocol

~~As discussed and explained in Section 2, SCE is now procuring based on a High Need Case assuming a 33% renewable energy goal. As explained in Section 6.1, given the overwhelming response to SCE's RSC Program, SCE re-launched the program in 2010 using RFOs to procure renewable resources from generating facilities not greater than 20 MW. Further, as explained in Section 6.6, all Commission-jurisdictional entities should be allowed to require their contracted resources be connected via fully deliverable arrangements. As discussed in Section 6.7, SCE intends to use RECs toward meeting its RPS targets. SCE also proposes more flexibility to update the RPS Procurement Plans and a workshop to discuss improvements to the TRCR process as discussed in Sections 6.8 and 6.9. Finally, Section 6.10 discusses consideration of integration costs in the evaluation process.~~

~~In addition to the changes discussed above, since SCE filed its LCBF Report as part of its Second Amended 2009 RPS Procurement Plan, SCE made some changes to its LCBF Written Report to clarify the description of its evaluation and selection process and criteria. Some of these changes were included in the LCBF Written Report for SCE's 2009 RPS solicitation submitted to the Commission on December 4, 2009. In particular, proposals' capacity benefits are calculated in accordance with the Commission's updated resource adequacy accounting rules and energy benefits are calculated based on the estimated market value of energy.[80] SCE also made some minor modifications in its Amended LCBF Written Report. For example, the modifications clarify that the same evaluation and selection process will be used for bundled and REC-only contracts, that proposals deemed clear outliers in the evaluation process will not be further reviewed, that the capacity benefits calculated assume a generating facility has full capacity deliverability status, and~~

~~[80] These changes were also made in SCE's 2010 Procurement Protocol.~~

~~the treatment of transmission costs. Finally, SCE has made an addition in its Second Amended LCBF Written Report to include information on the evaluation process for negative pricing risk. SCE also made a minor modification to indicate that interconnection process progress will be considered as an additional qualitative attribute.~~

SCE has included its 2012 Procurement Protocol as Appendix E.1. The 2012 Procurement Protocol includes, among other things:

- SCE's preferred on-line dates and contract term lengths.
- Deliverability characteristics and locational preferences.
- Requirements for each proposal submission.
- A description of the type of product SCE is soliciting.
- A schedule of key dates related to the 2012 RFP.
- SCE's 2012 Pro Forma Renewable Power Purchase and Sale Agreement ("Pro Forma"), attached hereto as Appendix G.1.

A list of important changes in the 2012 RPS Plan from the 2011 version (including changes to the Procurement Protocol and Pro Forma) can be found in Section XIII.

A. ~~2010 Solicitation Materials~~LCBF Methodology

~~1. General Changes~~

~~The changes below affect more than one of the solicitation documents.~~

~~a) Credit and Collateral Provisions~~

~~SCE is making important changes to the credit and collateral provisions of its solicitation materials. First, SCE is increasing its development security requirements from $60.00 per kW to $90.00 per kW for baseload facilities, and from $30.00 per kW to $60.00 per kW for intermittent facilities. SCE believes this increased development period collateral requirement provides a reasonable (albeit not complete) security for SCE customers during the development phase of a~~

~~generating facility. The proposed development security levels are consistent with the overall industry position on allocating project failure risks between project developers and utility customers.~~

~~Second, as a result of SCE's experience with the renewable energy and financial industries and SCE's previous negotiation experience, SCE is restructuring its performance assurance requirement. SCE has modified its solicitation materials to require that sellers' proposals be based upon a tiered performance assurance requirement. This structure begins with a lower performance assurance posting in the early term years (3% of total revenues seller expects to receive), and steps up (to 5% and 6%) for the mid-contract years. Then, the performance assurance level steps down (to 5% and 3%) for the remaining term years. Over the full term of the contract, the performance assurance amount averages 5% of the total revenues, the same as the performance assurance requirement in SCE's 2009 RPS Procurement Plan. However, the modified performance assurance structure reflects the risks related to different delivery terms and is responsive both to changes in SCE's estimated exposure during the contract term and to changes in the renewable energy and financing markets.~~

~~The proposed tiered mechanism for performance assurance is beneficial to both SCE's customers and sellers. SCE customers benefit in that the proposed structure of performance assurance better reflects SCE's estimated exposure during the contract term and brings down the maximum exposure that customers face. Sellers benefit from a lesser total capital requirement in the early years of the delivery term when their access to capital is constrained.~~

~~Third, based upon experience in prior solicitations and document negotiations, SCE is eliminating the seller's debt to equity ratio requirement and the associated definitions. This credit provision often required a significant amount of negotiation and modification of SCE's Pro Forma Renewable Power Purchase and Sale Agreement language without a commensurate benefit to SCE. Additionally, ensuring compliance with this provision required follow-up documentation and verification, which complicates contract administration and management. SCE believes that the financial markets impose discipline on this issue which, combined with SCE's provision~~

~~prohibiting additional debt other than debt for the development, construction and operation of the facility, provides adequate protection for SCE and its customers.~~

~~b) **Changes to Non-Disclosure Agreement Procedure**~~

~~SCE is modifying the procedure for executing non-disclosure agreements ("NDAs") in the 2010 RPS solicitation. In prior years, all sellers were required to submit a redlined version of SCE's pro forma NDA with their initial proposal documents. Because SCE must have an executed NDA before a seller can be informed of its short list status, SCE was required to potentially negotiate NDAs with all sellers – even those which were not going to be placed on SCE's short list – before those who made the short list could be notified. This was a cumbersome and time-intensive process with little benefit to anyone involved in it.~~

~~For the 2010 solicitation, SCE is requiring all sellers to agree to a "Short-term NDA," by checking a box on the 2010 Seller's Proposal Template and Calculator.[81] The Short-term NDA lasts until the latest of three dates: (1) if the proposal is placed on SCE's short list, seller's submission to SCE of its short list deposit, exclusivity agreement, copy of interconnection application, and a long-term NDA; (2) if the proposal is placed on SCE's short list, seller's notification to SCE that seller declines to pursue further negotiations; and (3) SCE's notification to seller that the proposal has not been placed on SCE's short list and SCE does not wish to negotiate the proposal. However, the obligation to keep confidential information submitted under the Short-term NDA survives for five years, so sellers need not fear that SCE will immediately disclose confidential information in their proposals.~~

~~A seller which is chosen for the short list will then submit SCE's "Long-term NDA." The Long-term NDA covers the negotiations related to a seller's proposal and, if the negotiations are successful, is incorporated into the final contract. It is hoped that this procedure will streamline the NDA negotiation process.~~

~~[81] The Amended 2010 Seller's Proposal Template and Calculator is Attachment 2-3 to SCE's Second Amended 2010 RPS Procurement Plan.~~

~~c) Deletion of Alternate Wind Performance Standard~~

~~In the last several RPS solicitations, SCE made available an "alternate wind performance standard" that sellers can consider in making their proposals. SCE discovered, however, that sellers generally do not review, or even consider, the alternate wind performance standard when compiling their proposal packages. Because SCE still recognizes that the alternate wind performance standard may be an appropriate option for a seller pursuing a wind-based renewable power purchase and sale agreement with SCE, SCE decided to take a different approach: instead of posting the alternate wind performance standard language on its website at the time of RFP launch and framing this option in its Procurement Protocol (and other solicitation materials), SCE will thoroughly present and explain this option to the short-listed developers of wind projects during the negotiation phase of the solicitation process. At that point, if a developer decides to pursue this option, SCE will then work with it throughout the negotiations to revise the renewable power purchase and sale agreement appropriately.~~

~~d) RECs~~

~~SCE has amended its solicitation materials to allow for the procurement of RECs. In particular, SCE's 2010 Procurement Protocol enables sellers to offer RECs to SCE.~~

~~A complicating feature of D.10-03-021 is that it created two different types of RECs, which must be treated differently in the Amended 2010 Procurement Protocol: (1) RECs that provide only Green Attributes; and (2) RECs that consist of Green Attributes and bundled energy from an out-of-state facility that neither connects into a California balancing authority nor is dynamically scheduled to a California balancing authority. The former are called "REC Products," while the latter are now referenced in the 2010 Procurement Protocol as "REC-Only Bundled Energy Products." In general, the REC-Only Bundled Energy Products must be treated more like bundled energy transactions than real REC Products. SCE has added various versions of these products (based on the contract terms) to the products already solicited in SCE's 2010 Procurement Protocol and has also made conforming changes in other solicitation materials.~~

~~Additionally, SCE has added the new non-modifiable standard terms and conditions adopted in D.10-03-021 for bundled and REC-only contracts to its 2010 Pro Forma Renewable Power Purchase and Sale Agreement and its 2010 Pro Forma WSPP Confirmations for Firm and As-Available Product and its 2010 Pro Forma EEI Confirmations for Firm and As-Available Product, as applicable. Finally, SCE has added a new 2010 Pro Forma WSPP Confirmation for REC Product.~~

~~e) **Curtailment**~~

~~On May 6, 2010, the Commission held an All-Party Meeting on RPS Curtailment Provisions. At that meeting, the Large-Scale Solar Association ("LSA"), the California Wind Energy Association ("CalWEA"), and other market participants stated that, in their view, a cap on the number of hours a generator could be curtailed without compensation was necessary in order for renewable projects to be financeable.[82] SCE took into consideration the comments made at that meeting, as well as comments made to SCE by generators after the meeting, and modified its previous curtailment proposal to provide sellers with financial certainty during the financing period, and to allow SCE to evaluate market participants' costs for various levels of uncompensated curtailment.~~

~~On May 20, 2010, SCE presented separately to The Utility Reform Network ("TURN"), the Independent Energy Producers Association ("IEP"), and CalWEA/LSA a modified curtailment position whereby SCE capped the seller's uncompensated curtailment based on negative pricing in the CAISO market for each contract year. Specifically, the cap for uncompensated curtailment for each contract year (i.e., the curtailment cap) would be in MWh measured as contract capacity multiplied by a specific number of hours. If the total curtailment based on negative pricing in any contract year exceeded the annual curtailment cap, the seller would be paid for the energy it could~~

~~[82] Curtailments discussed in this section refer only to those that may be directed by SCE as the buyer under the power purchase and sale agreement. A reduction or curtailment ordered by the CAISO or pursuant to the terms of an agreement with a Transmission Provider must be followed and is not covered within the curtailment quantity limits described in this section and/or compensated by SCE under its Pro Forma Renewable Power Purchase and Sale Agreement.~~

~~have delivered but for the curtailments. At the end of the contract term (typically 20 years), if SCE provided prior notice, the seller would then "pay back" the energy SCE paid for, but was not delivered over the term of the contract. The feedback from those meetings was generally positive with three suggested changes: (1) placing a cap on the optional "extended" term where sellers are paying back the energy to SCE's customers; (2) curtailing only at a negative price in the CAISO market, instead of curtailing at zero or a negative price; and (3) compensation to sellers for lost production tax credit ("PTC") revenue.~~

~~SCE evaluated these suggestions and modified its proposal to implement each of these suggested changes. SCE presented its modified proposal to its PRG on May 26, 2010.~~

~~In this Second Amended 2010 RPS Procurement Plan, SCE has included a Second Amended 2010 Pro Forma Renewable Power and Sale Agreement with revised curtailment provisions. The revisions include changes based upon the suggestions discussed above. Additionally, SCE has added a right for SCE to curtail seller's production of energy to the quantity awarded in a day-ahead or real-time schedule, subject to various payment provisions to compensate the seller for the lost production.~~

~~Section 4.02 of the 2010 Pro Forma Renewable Power Purchase and Sale Agreement provides that if a schedule is awarded in the CAISO day-ahead market for energy from the seller's facility, the seller receives the contract price for energy delivered. If SCE curtails seller's production of energy in real-time to the quantity awarded in the day-ahead schedule, the seller still receives the contract price for the energy that could have been delivered but for that curtailment, and the undelivered energy is not included in the curtailment cap discussed below.~~

~~If SCE bids the resource into the CAISO markets and no day-ahead schedule is awarded for the seller's power then, if the day-ahead price is zero dollars or greater, the seller receives the contract price for the energy that could have been delivered. However, if the day-ahead price is less than zero, there is no payment to the seller up to the curtailment cap for the contract year.~~

~~SCE intends to allow sellers to offer three energy prices for their products, each of which is based on a different annual curtailment cap for uncompensated curtailment. The three curtailment~~

~~cap choices will be the contract capacity multiplied by 50, 100, and 200 hours per year. SCE and the seller would then agree to an annual curtailment cap in the contract. If that cap is exceeded in any year, the seller would receive payment for the amount of energy above the cap that could have been delivered but for the curtailment. The amount of curtailment in excess of the curtailment cap for each year will be tracked over the contract term and, at the end of the contract term, SCE will have the option to require the seller to "repay" SCE's customers for that excess curtailed energy by delivering twice the amount of curtailed energy and receiving one-half the contract price for such energy until the earlier of when the total amount of energy is repaid or the seller has delivered energy for two years past the end of the original contract term.~~

~~If no schedule is awarded in the day-ahead market, a seller may request that SCE, as the scheduling coordinator, bid the resource into the real-time market, and may specify a price at which SCE is to bid the energy. If a schedule is awarded as a result, SCE will receive the energy and pay the seller the full contract price for the energy delivered. If the real-time market price is negative, the seller will pay the CAISO charges and costs. If the real-time market price is positive, SCE will receive the CAISO revenue.~~

~~If no award is made in the day-ahead market and the seller does not request that SCE submit a bid into the real-time market, SCE may elect to bid the energy into the real-time market based on the generator's availability schedule. SCE will pay the contract price for the energy delivered if a schedule is awarded. If the seller generates in excess of its awarded real-time schedule, and SCE exercises its right to curtail seller's energy production in excess of the schedule, the excess quantity will be deemed curtailed product subject to the curtailment cap and banking.~~

~~If seller delivers energy after it receives a curtailment instruction from SCE, the CAISO, or another authority, SCE is not obligated to pay the seller for that amount of energy, and the seller will pay all CAISO costs and sanctions, and SCE will keep all CAISO revenues, associated with that delivered energy.~~

~~SCE also modified its 2010 Pro Forma Renewable Power Purchase and Sale Agreement to compensate sellers for lost federal PTCs for curtailment due to negative pricing in excess of the~~

~~curtailment cap in any contract year, if the seller was entitled to receive PTCs and was not eligible for investment tax credits and the reimbursement for lost PTCs was selected in the procurement process.[83] Sellers have the ability to offer contract pricing with and without lost PTCs for curtailment due to negative pricing in excess of the curtailment cap for any contract year.~~

~~These changes from SCE's prior curtailment provisions not only restrict the opportunity for SCE-determined curtailments, but they also "bound" the financial risk to sellers as directed by the Commission at the May 6, 2010 All-Party Meeting.~~

~~In addition to Section 4.02 of the 2010 Pro Forma Renewable Power Purchase and Sale Agreement, SCE modified Sections 1.06, 1.07, 1.08, 1.10, 1.12, and 3.12(f), added definitions for "Actual Availability," "Additional Energy," "Banked Curtailed Energy," "Bid," "Curtailed Product," "Curtailed Return Term," "Curtailed Return Term Notice," "Curtailment Cap," "Dispatch Instruction," "Original Term," "Over-Schedule Generation Curtailment Order," "Over-Schedule Generation Curtailment Amount," "Price Taker," "Real-Time Available Energy," "Real-Time Over-Schedule Generation Curtailment Order," "Real-Time Over-Schedule Generation Curtailment Quantity," "Real-Time Price," and "Unawarded Energy," and modified the definitions of "Lost Output," "Metered Amounts," and "Schedule" to correspond to the new curtailment language.~~

~~Furthermore, SCE has modified its 2010 Procurement Protocol, 2010 Seller's Proposal Template and Calculator, and 2010 Form of Seller's Proposal to explain SCE's modified curtailment provisions and request information from sellers related to curtailment and contract prices for annual curtailment caps of contract capacity multiplied by 50, 100, and 200 hours, as discussed above.~~

~~[83] Second Amended 2010 Pro Forma Renewable Power Purchase and Sale Agreement § 4.02(b)(iii).~~

~~2. Additional Changes in 2010 Procurement Protocol[84]~~

~~a) Additional Condition for the Forfeiture of a Short List Deposit~~

~~SCE has added one additional condition under which a seller will forfeit its short list deposit: seller's breach of its exclusivity agreement.[85] This change was made to serve as a reasonable, serious, and adequate deterrence to simultaneously negotiating the same proposal with multiple utilities (and other buyers of power). Breaches of exclusivity agreements can be costly to SCE's customers, who pay for the negotiating resources.~~

~~b) Term of Agreement~~

~~SCE's 2010 Procurement Protocol complies with the Commission's requirement that SCE accept proposals for contracts with terms exceeding 20 years. While SCE does not discourage proposals with terms longer than 20 years, SCE does require a seller who submits a proposal with a term longer than 20 years to also submit a proposal (for the same generating facility) with a 20-year term.[86] This change was made so that SCE may compare proposals (e.g., expected costs, qualitative factors such as expectation of technology innovation, and portfolio risk tolerances) for contracts of longer than 20 years with the standard term length of 20 years.~~

~~c) Integration Costs~~

~~SCE has modified the quantitative assessment subsection of the Evaluation of Proposals section of the 2010 Procurement Protocol to include a detailed discussion of integration costs.[87]~~

~~d) Locational Preference~~

~~Although SCE will consider and evaluate proposals with out-of-state generating facilities, SCE prefers proposals from facilities whose first point of interconnection within WECC is with a California balancing authority.~~

~~[84] The Second Amended 2010 Procurement Protocol is Attachment 2-1 to SCE's Second Amended 2010 RPS Procurement Plan.~~

~~[85] Second Amended 2010 Procurement Protocol § 3.04(c)(a).~~

~~[86] *Id.* § 2.06(a).~~

~~[87] *Id.* § 5.01(b).~~

3. Additional Changes in 2010 Form of Seller's Proposal[88]

a) E-Binder

SCE will now require sellers to send their proposals electronically, in an e-binder, rather than sending printed copies.[89] This should reduce the enormous amount of paper associated with the RFP process.

b) Delivery Point and Manner of Delivery

SCE is requiring each seller to set forth the delivery point of its proposal with greater specificity.[90] SCE is also requiring a seller to detail its plan for transmitting energy to the delivery point and explain whether the costs of such delivery are included in the energy price. Obtaining this information from prospective sellers will better enable SCE to assess and compare different proposals.

c) Generating Facility Description

The Form of Seller's Proposal has been revised to require sellers to disclose any possible or anticipated manufacturing supply chain constraints or issues associated with producing any major and auxiliary equipment.[91] This change was recommended by SCE's IE to enable better assessment of the PVC component that addresses manufacturing supply chain.

4. Changes in 2010 Seller's Acknowledgments

SCE made the changes discussed below in the 2010 Seller's Acknowledgments, a document that each seller must submit as part of its proposal package.[92]

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[88] The Second Amended 2010 Form of Seller's Proposal is Attachment 2-10 to SCE's Second Amended 2010 RPS Procurement Plan.

[89] Second Amended 2010 Form of Seller's Proposal § 3.01.

[90] *Id.* § 4.05.

[91] *Id.* § 4.03(a)(ii)(4).

[92] The 2010 Seller's Acknowledgments is Exhibit C to the Second Amended 2010 Form of Seller's Proposal.

~~a) **Obtaining Necessary Approvals of a Renewable Power Purchase and Sale Agreement**~~

~~The prior language in Seller's Acknowledgments could have been read to require a seller to have obtained all necessary approvals of a renewable power purchase and sale agreement with SCE by the time that seller first submitted its proposal, which always occurs before the commencement of negotiations. SCE modified the language to clarify that seller will obtain all necessary approvals at the conclusion of negotiations.[93]~~

~~b) **Requirement that Seller be Bound by its Proposal**~~

~~The prior language in Seller's Acknowledgements required that a seller agree to be bound by the redlined Pro Forma Renewable Power Purchase and Sale Agreement submitted as part of its proposal. This requirement served to discourage frivolous proposals. The redlined Pro Forma Renewable Power Purchase and Sale Agreements, however, did not meaningfully advance negotiations because the redlines were generally incomplete. SCE now requires a seller to submit an Outline of Contract Terms and Conditions[94] setting forth the key changes that seller seeks to the Pro Forma Renewable Power Purchase and Sale Agreement. Accordingly, SCE's modified language discourages frivolous proposals by requiring seller to make a commitment to negotiate with SCE in good faith.[95]~~

~~c) **Elimination of Requirement that Seller Submit CEC Audits**~~

~~SCE eliminated a requirement that seller submit CEC audits to establish that seller's proposed project is an eligible renewable energy resource.[96] In SCE's experience, these audits occur only once agreement is reached so the audits are better addressed in the renewable power purchase and sale agreement itself.~~

~~[93] 2010 Seller's Acknowledgements ¶ 3.~~

~~[94] The 2010 Outline of Contract Terms and Conditions is Attachment 2-4 to SCE's Second Amended 2010 RPS Procurement Plan.~~

~~[95] 2010 Seller's Acknowledgements ¶ 7.~~

~~[96] *Id.* ¶ 8.~~

~~5. Additional Changes in 2010 Seller's Proposal Template and Calculator[97]~~

~~SCE has integrated the revenue calculator that sellers provide as part of their proposals into the 2010 Seller's Proposal Template and Calculator.[98] Additionally, SCE has modified the 2010 Seller's Proposal Template and Calculator to require each proposal to provide contract prices based on the curtailment caps discussed in Section 7.B.1.e. SCE has also requested that information solicited elsewhere in SCE's 2010 solicitation materials (generally in the 2010 Form of Seller's Proposal) be inputted into the 2010 Seller's Proposal Template and Calculator spreadsheets, and has eliminated some information that is no longer needed. Including additional information in the Seller's Proposal Template and Calculator will reduce manual errors, require validation of information from sellers, and increase efficiency in the review of proposals.~~

~~6. Additional Changes in 2010 Pro Forma Renewable Power Purchase and Sale Agreement[99]~~

~~a) Seller Responsibility for Invoicing~~

~~Beginning with the 2010 Pro Forma Renewable Power Purchase and Sale Agreement, SCE will require sellers to produce a monthly payment invoice in order to receive payment.[100] There are several reasons for this change. First, requiring sellers to invoice SCE creates a check and balance between SCE's payment calculations and the seller's calculations for the desired payment. When sellers invoice SCE, SCE can compare sellers' computations with SCE's, validate the invoices, and pay or dispute accordingly. This modified procedure creates an independent validation for the calculation of payments.~~

~~97 The Amended 2010 Seller's Proposal Template and Calculator is Attachment 2-3 to SCE's Second Amended 2010 RPS Procurement Plan.~~

~~98 SCE has also created a standard 2010 Seller's Proposal Template and Calculator and a non-standard 2010 Seller's Proposal Template and Calculator for projects that are firmed and shaped.~~

~~99 The Second Amended 2010 Pro Forma Renewable Power Purchase and Sale Agreement is Attachment 2-5 to SCE's Second Amended 2010 RPS Procurement Plan.~~

~~100 Second Amended 2010 Pro Forma Renewable Power Purchase and Sale Agreement, Exhibit E.~~

~~Second, paying based on an invoice generated by an independent party (seller) conforms to SCE's standard process for generating, validating, and approving payments. To support appropriate internal controls and the segregation of duties, no payment is made without an invoice and no payments are made for greater than the invoiced amount. Modifying the Pro Forma Renewable Power Purchase and Sale Agreement brings the practice for renewable contracts in line with that used for conventional generation and other SCE payments.~~

~~Third, the procedure is also consistent with industry standards for financial internal control frameworks, COSO (Committee of Sponsoring Organizations also referred to as the Treadway Commission), and GAAP (Generally Accepted Accounting Practices).~~

~~Finally, invoices act as third party documentation that SCE provides to its auditors (internal, external, regulatory, etc.) to support charges recorded on financial statements and financial and operations records.~~

~~b) **Compliance Expenditure Cap**~~

~~The 2009 Pro Forma Renewable Power Purchase and Sale Agreement contained a "Compliance Expenditure Cap," which was a dollar limit on the costs a seller would be required to expend to ensure that the facility maintained its green attributes, capacity attributes, and resource adequacy benefits. The 2009 Compliance Expenditure Cap applied regardless of whether, over the term of the renewable power purchase and sale agreement, there was a change in law governing those requirements.~~

~~The 2010 Pro Forma Renewable Power Purchase and Sale Agreement substantially narrows the circumstances in which the cap applies. It will now apply only to situations where there is both (1) a change in law after the execution of the renewable power purchase agreement that causes the project to be disqualified as an eligible renewable energy resource (or causes its output to fail to meet RPS requirements), and (2) seller has expended "commercially reasonable efforts" to comply with such change in law. The change ensures that the Compliance Expenditure Cap is in line with the Commission's non-modifiable standard term and condition on~~

~~"Eligibility,"[101] as it defines, by a dollar amount, the term "commercially reasonable costs" used in that term.[102]~~

~~c) **Calculation of Energy Replacement Damage Amount**~~

~~The Energy Replacement Damage Amount is a penalty paid by seller when it fails to meet its annual (or two-year) energy delivery obligation.[103] In the 2009 Pro Forma Renewable Power Purchase and Sale Agreement (as well as prior Pro Forma Renewable Power Purchase and Sale Agreements), the formula for calculating the Energy Replacement Damage Amount required the parties to compare the contract energy price with the "Market Price" – a price that is skewed by the predominance of conventional, rather than renewable, generation. The formula in the 2010 Pro Forma Renewable Power Purchase and Sale Agreement will require parties to compare the contract energy price with the "Green Market Price," or the price for renewable energy projects. SCE believes that the prices for renewable energy – not the market price – more accurately represent SCE's damages when a seller fails to deliver renewable energy.~~

~~d) **NERC Requirements**~~

~~In the 2010 Pro Forma Renewable Power Purchase and Sale Agreement section relating to NERC Electric System Reliability Requirements,[104] SCE has added language designed to specify the proper allocation of the roles and responsibilities of SCE as scheduling coordinator for purposes of NERC compliance, and, on the other hand, seller as the generator operator. The language arises from SCE's and the market's experience with the NERC requirements gained in the approximately two and a half years since the requirements went into effect.~~

~~[101] *Id.* § 10.02(b).~~
~~[102] *Id.* § 10.02(e).~~
~~[103] *Id.*, Exhibit F.~~
~~[104] *Id.* § 3.29.~~

~~e) Termination for Failure to Meet Commercial Operation Deadline~~

~~The Pro Forma Renewable Power Purchase and Sale Agreement has been revised to provide that SCE may terminate the renewable power purchase and sale agreement and retain the development security under any one of six specific circumstances, the occurrence of any of which makes it unlikely that seller will be able to meet its commercial operation deadline.[105] The revisions eliminate a termination right which the market indicated was strongly disfavored by lenders, while ensuring that SCE can terminate projects in circumstances which indicate they will never be timely built.~~

~~f) Election of Federal Tax Credit~~

~~In the 2010 Pro Forma Renewable Power Purchase and Sale Agreement, SCE is requiring seller to inform SCE, before execution of the agreement, whether seller will seek an investment tax credit or a production tax credit (or no tax credit at all).[106] There are three reasons for this change, which will affect only those sellers who are able to use either type of tax credit.~~

~~First, commitment to a particular tax credit prevents a seller from using its termination right improperly. The 2010 Pro Forma Renewable Power Purchase and Sale Agreement allows a seller to terminate the agreement if the federal tax credit legislation applicable to seller is not enacted.[107] Requiring a seller to specify which federal tax credit it plans to use prevents seller from terminating its agreement when the other tax credit (the one seller is not using) is not enacted.~~

~~Second, commitment to a particular tax credit prevents a seller from claiming excess direct damages, should there be a dispute between seller and SCE. Under Article 7 of the 2010 Pro Forma Renewable Power Purchase and Sale Agreement, direct damages include the value of any federal tax credits that are lost by seller as a result of SCE's default.[108] Requiring a seller to specify~~

~~[105] *Id.* § 3.06(d).~~
~~[106] *Id.* § 1.12.~~
~~[107] *Id.* § 2.04(a)(ii).~~
~~[108] *Id.*, Article 7.~~

which tax credit it plans to use prevents a seller from claiming, after the fact, that it would have used the tax credit that enabled seller to show the greater loss (and concomitantly, the greater amount of direct damages).

Third, under certain conditions, SCE is accommodating the request from market participants to be compensated for lost federal production tax credits in the event of curtailments due to negative pricing, as discussed in more detail above. SCE will solicit proposals both with and without reimbursement of lost production tax credits due to negative pricing in excess of the curtailment cap for any contract year.

g) **Termination Rights of Both Parties**

In its 2010 Pro Forma Renewable Power Purchase and Sale Agreement, SCE has divided into two sections the right of either party to terminate where seller failed to obtain permits. Each section addresses a different type of permit(s): (1) the CEC pre-certification, and (2) the construction permits.[109] The notice of termination by either party due to a seller's failure to obtain CEC pre-certification is to be provided on or before 13 months after the effective date of the agreement. The right to terminate by either party if seller does not obtain its construction permit has been modified to be open-ended, and agreed to by and between SCE and seller during negotiations, depending on a seller's individual needs. SCE has found through its experience in prior solicitations and document negotiations that the market requires more individually-tailored time periods for terminating contracts where there is a failure to obtain construction permits.

h) **Allocation of Standard Capacity Product Payments and Charges**

SCE has added this new section to address the responsibility of the Standard Capacity Product incentive payments and charges as defined in the CAISO tariff, if applicable.[110]

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[109] *Id.* §§ 2.04(a)(i)(2) and (3).
[110] *Id.* § 3.04.

~~i) **Delivery Loss Factor**~~

~~SCE has further modified the energy payment calculation formula to take into account delivery losses up to and at the delivery point as calculated by CAISO.[111] SCE's deletion of the delivery loss factor calculation beyond the delivery point and the associated definitions mirrors the current CAISO MRTU market.~~

~~j) **Wind and Solar Performance Requirements**~~

~~Based upon experience in prior solicitations and document negotiations, SCE is changing its Pro Forma Renewable Power Purchase and Sale Agreement to accommodate the wind industry and provide for an equitable performance obligation. The performance obligation will be measured over a two-year period (instead of a one-year period) and requires a seller to equal or exceed 140% of the P-50 value in the final wind report.[112] Wind developers had expressed that the 2009 Pro Forma Renewable Power Purchase and Sale Agreement, which had a standard of P-95, was not equitable because the use of a P-95 value disadvantaged those projects that had been collecting data for a longer time, and because studies have shown that California has high wind variability from year-to-year.~~

~~By contrast, SCE's additional experience with solar projects has led SCE to determine that solar variability from year-to-year is minimal. SCE has changed the performance requirement accordingly, to reflect an obligation of 90% of the expected annual energy production.[113]~~

~~k) **Indemnification**~~

~~SCE modified Section 10.03 of the 2010 Pro Forma Renewable Power Purchase and Sale Agreement, which addresses indemnification obligations, to more clearly reflect the very different duties, responsibilities, and risks of SCE and sellers under the agreement. Instead of discussing both parties' indemnification obligations in the same paragraph, such obligations are now discussed in separate paragraphs within the same section. Moreover, the respective~~

~~[111] *Id.*, Exhibit A § 150, Exhibit E § 2.02.~~
~~[112] *Id.* § 3.07(a)(i).~~
~~[113] *Id.*~~

~~indemnification obligations between seller and SCE are not identical: there are more circumstances under which the seller indemnifies SCE than under which SCE indemnifies the seller, reflecting the fact that the seller has more duties under the agreement and the nature of those duties in comparison to the duties of SCE. SCE also added sections addressing the procedure by which indemnification is claimed and provided.~~

~~l) **Elimination of Requirement for Seller to Provide Financial Information for Consolidation**~~

~~In June 2009, the Financial Accounting Standards Board ("FASB") issued SFAS 167 Amendments to FASB Interpretation No. 46(R). The pronouncement is effective starting in 2010. The amendment changes the conditions associated with consolidation, and SCE has determined that the contractual arrangement associated with renewable facilities will not result in consolidation. Therefore, SCE has removed the requirement in Section 3.25, Section 6.01(c)(xviii), and Exhibit P of its 2010 Pro Forma Renewable Power Purchase and Sale Agreement that seller provide its financial information for purposes of consolidating seller's financial information into SCE's financial statements.~~

~~m) **Seller's Estimate of Lost Output**~~

~~SCE modified Exhibit M of the 2010 Pro Forma Renewable Power Purchase and Sale Agreement, which addresses the collection of measurement data and performance of engineering calculations, to set out in separate Exhibits the requirements for different solar technologies. SCE also added the right for SCE to verify all data by inspecting the measurement instruments and reviewing the generating facility operating records.~~

~~8. Redlined Copies:~~ A version of the 2011 Plan that is "redlined" to identify the changes from the 2010 Plan, with a copy for Energy Division, the Administrative Law Judge and any ~~party who requests a copy~~

In its LCBF evaluation process, SCE performs a quantitative assessment of each proposal individually and subsequently ranks them based on each proposal's benefit and cost relationship. The result of the quantitative analysis is a merit-order ranking of all complete and conforming

proposals' net levelized cost that help define the preliminary shortlist. In parallel with the quantitative analysis, SCE will conduct an in-depth assessment of the top proposals' qualitative attributes. These qualitative attributes are considered to either eliminate non-viable proposals or add projects with high viability to the final shortlist, or to determine tie-breakers, if any. By taking many quantitative and qualitative factors into consideration, SCE ensures that it will select projects best suited for its portfolio in order to meet customer needs and attain the State's RPS goals. This process is described in SCE's LCBF Methodology, which is attached as Appendix F.1.

Moreover, SCE's time-of-delivery ("TOD") factors in its contract are intended to reflect the value of energy and capacity that SCE uses in the valuation of projects as part of the LCBF evaluation process. SCE has established new factors, which are included in SCE's 2012 Pro Forma at Exhibit J. SCE expects to update these values shortly before the launch of its RFP. Thus, in order to align the TOD factors with SCE's valuation of projects, SCE will adjust, if needed, the TOD factors filed with this 2012 RPS Plan to reflect any of these changes.

IX. ESTIMATING TRANSMISSION COSTS FOR THE PURPOSE OF RPS PROCUREMENT AND BID EVALUATION

In its next RFP solicitation, SCE proposes to base transmission costs on the estimated cost of reimbursable network upgrades, meaning network upgrades funded by the IOUs' customers and attributable to individual projects. To participate in the RFP, SCE will require potential sellers to have an existing Interconnection Study (e.g., Facilities Study, Phase I or documentation demonstrating that the project has passed the Fast Track screens) or an equivalent or better study, or a signed Interconnection Agreement. For resources that do not have an existing interconnection to the electric system, transmission costs applicable to the project will be based on the applicable completed Interconnection Study (e.g., System Impact Study, Facilities Study, or a Phase I or

Phase II Interconnection Study) or Interconnection Agreement, at a minimum. SCE also intends to add a requirement that projects must have completed a Phase II Interconnection Study (or equivalent or better) prior to execution of the contract. These changes will provide more certainty around potential network upgrade and interconnection costs, and a more accurate evaluation of such costs in the LCBF evaluation process.

For certain projects, SCE will need to rely on CAISO's annual transmission plan to determine interconnection upgrade costs for fully deliverable projects. This is because of the way that CAISO is reforming the Generator Interconnection Procedure ("GIP").[21] For Queue Cluster 5 and beyond, the CAISO, in conjunction with the CPUC, will determine, in its annual transmission plan the amount of transmission needed to interconnect fully deliverable generation in order for the State to reach its RPS goals. For projects in these queue clusters, the generators will have the option to proceed down an interconnection path whereby the generator is not required to fund (on a reimbursable basis) the Deliverability Network Upgrades identified in the CAISO's annual transmission plan.[22] Under this option, Deliverability Network Upgrades identified in a project's Interconnection Study will still be funded by IOUs' customers, but that Interconnection Study will not quantify the Deliverability Network Upgrades costs. Instead, they will be quantified in the CAISO's annual transmission plan. Because these costs will represent additional costs to the IOUs' customers in contracting with a project, SCE will account for these network upgrade costs in its evaluation of projects that are part of Queue Cluster 5 and beyond. More specifically, SCE

[21] The CAISO has adopted the reform and it is currently before FERC for approval.

[22] Generators can also choose to fund these upgrades directly. In such instances, the transmission adder for these costs will be zero because the IOUs' customers do not pay for these upgrades.

will use the network upgrade costs identified in the CAISO's annual transmission plan and attribute the appropriate amount of cost to that project, if applicable.[23]

In order to be able to rely on these CAISO cost estimates, SCE should have the ability to align its RPS procurement schedule with the adoption of the CAISO's annual transmission plan. The transmission plan is typically adopted by the CAISO's board in March/April. In order to determine the transmission adder for fully deliverable projects in Queue Cluster 5, SCE proposes to have the ability to align its solicitation schedule with the release of the CAISO's annual transmission plan.

Finally, it is important to note that these costs are only applicable to those projects that intend to interconnect with Full Capacity Deliverability Status ("FCDS"). No additional information, outside of a project's Interconnection Study, is needed to determine a transmission adder for an Energy-Only project.

X. CONSIDERATION OF PRICE ADJUSTMENT MECHANISMS

Pursuant to Public Utilities Code Section 399.13(a)(5)(E), RPS procurement plans are required to include consideration of mechanisms for price adjustments associated with the costs of key components for eligible renewable energy resource projects with on-line dates more than 24 months after the date of contract execution. SCE does not plan to solicit a specific type of indexing structure in its solicitation materials. As in SCE's 2011 RFP, SCE intends to include an option that a seller may submit an indexed pricing bid so long as the seller also includes a fixed contract price. Sellers may propose a price indexed to commodities, equipment, cost of financing, etc., and may also consider placing price ceilings and floors on the indexed price.

[23] To the extent these costs are avoidable (meaning that in the event the project is not built, the transmission upgrade will not occur and SCE's customers will not incur costs), SCE will not include them.

In the past, SCE has had mixed results using indexed pricing and price adjustment mechanisms. Some of the contracts that include these provisions have been based on changes in specific costs, such as the market price of wind turbines or diesel fuel costs for biomass transportation. Structuring the index and drafting the contract language to accurately reflect fluctuations in a project's costs has, in some cases, proven difficult.

XI. SUMMARY OF COST QUANTIFICATION RESULTS

SCE has attached as Appendix D – Standard Cost Quantification Table, a spreadsheet containing the actual expenditures per year for all Commission-approved RPS-eligible generation for every year from 2003 to 2011, and a forecast of future expenditures SCE may incur every year from 2012 through 2020. These expenditures are reported by technology for each year. At the direction of the Energy Division, SCE has reported the expenditures for the forecast years, 2012 through 2020, in two categories: (1) contracts and generation that are approved by the Commission; and (2) contracts that are executed but not yet approved by the Commission. For all forecast years, SCE has assumed a 100% success rate for all projects that are not yet on-line. Finally, SCE reported the rate impacts in cents per kWh for each year for actual and forecast data.

XII. OTHER RPS PLANNING CONSIDERATIONS AND ISSUES

As part of its overall procurement strategy, SCE is considering engaging in the sale of bundled renewable energy, unbundled RECs, or other renewable energy products to other retail sellers or third party purchasers. In an effort to optimize SCE's renewable portfolio and provide customers with the most value from the portfolio, SCE seeks the authority to: (1) potentially hold a competitive solicitation seeking proposals from interested buyers to purchase a bundled product, unbundled RECs, or other renewable energy products from SCE; (2) execute bilateral renewable energy transactions subject to the Commission's review and approval of completed transactions;

and (3) submit such completed sales contracts for approval through the filing of a Tier 2 advice letter under certain circumstances.

With respect to the authority to submit sales contracts through Tier 2 advice letters, the Commission should permit the IOUs to obtain approval for the resale of renewable energy from existing facilities through a Tier 2 advice letter because there are very few issues for the Commission to consider in connection with such transactions. The current Tier 3 advice letter process was established to review the purchase of renewable energy by the IOUs from, for the most part, generating facilities that have not yet been constructed. This review process necessitates not only a showing that the price is reasonable under the agreement, but also a demonstration that the project is viable. As evidenced by the Energy Division's advice letter template, the viability review requires a large amount of information regarding interconnection, technology, financial wherewithal of the seller, and many other details.

Given that these concerns are not part of a resale of renewable energy from existing facilities, SCE proposes to streamline the approval process for these transactions. Under such transactions, the principal issues are whether the IOU has obtained a reasonable price and has excess renewable energy to sell. Given that these two issues should be relatively straightforward, it is appropriate to allow for a quicker approval process for these transactions.[24]

Furthermore, allowing Tier 2 advice letter approval of renewable energy sales from existing facilities will allow the IOUs to maximize the value of these sales for their customers. Currently, the Commission approval date for a sales transaction is not known or knowable at the time a transaction is executed and can occur several months after the date that the contract was

[24] If more complicated issues arise in connection with a specific sales transaction, the Energy Division would still have the ability to suspend the Tier 2 advice letter and determine that approval through a Commission resolution is required.

signed. As such, IOUs are required to structure resale transactions so that deliveries begin after Commission approval is obtained or the buyer will have to risk taking delivery of a less-valuable compliance product.[25] While IOUs can include language in resale contracts to allocate risks accordingly, the additional risk will create additional transaction costs and reduce the value of the product being sold. Finally, this delay in the approval process makes it very difficult for IOUs to use resale transactions to make up for procurement shortfalls existing at the end of a compliance period.

XIII. IMPORTANT CHANGES FROM 2011 RPS PLAN

~~SCE has included redlines of its 2011 Written Plan and 2011 LCBF Written Report against the versions of those documents included in SCE's Second Amended 2010 RPS Procurement Plan as Appendices D and E.[114]~~SCE's 2012 RPS Plan includes important changes to: (1) SCE's 2012 Procurement Protocol; and (2) SCE's 2012 Pro Forma.[26] Those changes are summarized below and shown in the redlines of these documents included as Appendices E.2 and G.2.[27]

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[25] One of the conditions set forth in D.11-12-052 for a resold Category 1 product to continue to count as a Category 1 resource is that "[t]he resale contract transfers only electricity and RECs that have not yet been generated prior to the effective date of the resale contract," meaning that electricity and RECs that have been generated prior to the effective date of the resale contract would no longer count as Category 1. D.11-12-052 at 36. The decision adds that, for IOUs, the "effective date" is "the date that Commission approval of the resale contract is final." *Id.* at 36, note 69.

~~[114] SCE updated Appendices B and C to this 2011 Written Plan to include an updated bundled sales forecast, updated contract and project-specific information, and different assumptions for the Base Case and High Need Case as discussed in Section 2 above. SCE has not redlined these documents since they are power point files~~[26] SCE has changed its 2012 Written Plan from its 2011 Written Plan in accordance with the requirements of the Ruling, including following the general format set forth in the Ruling.

[27] The redline of SCE's 2012 Procurement Protocol is included as Appendix E.2 and the redline of SCE's 2012 Pro Forma is included as Appendix G.2.

~~Additionally, as part of Attachment 2, SCE has included a redline of all of its solicitation materials with the exception of the 2011 Seller's Proposal Template and Calculator and 2011 Outline of Contract Terms and Conditions, which cannot be redlined since they are excel files.~~

A. Important Changes to SCE's 2012 Procurement Protocol

1. SCE Will Only Consider Proposals for Category 1 Products

Because there is no limitation on the amount of Category 1 products that may be procured for RPS compliance, Category 1 resources provide more certainty and flexibility to SCE than Category 2 or Category 3 products. Accordingly, SCE's procurement protocol only requests proposals for renewable energy that qualifies under Category 1. Historically, the overwhelming majority of proposals SCE has received in past solicitations have been for Category 1 products. Therefore, SCE does not anticipate that restricting the solicitation to Category 1 products will negatively impact competition. At this time, limiting the pool to Category 1 products makes practical sense for SCE. Limiting the solicitation to Category 1 products will target proposals that are more likely to result in executed contracts, thus focusing the efforts of both SCE and renewable developers on the most promising project proposals. Accordingly, it will save SCE and sellers time by simplifying the solicitation and evaluation process.

2. SCE Will Require Completed Interconnection Studies from Sellers in its Solicitation

In 2011, SCE's solicitation was open to all sellers regardless of where they were in the interconnection process. In contrast, SCE intends to add a requirement for its 2012 solicitation that projects have at least a completed Phase I Interconnection Study (as demonstrated by a completed System Impact Study, Facilities Study, a Phase I or Phase II Interconnection Study, documentation showing that the project has passed fast Track Screens, or a signed Interconnection Agreement) in

order to be shortlisted and a Phase II Interconnection Study (or equivalent or better) completed prior to execution of the contract. Upon reviewing the Phase II Interconnection Study, SCE may decide to remove the project from the shortlist, if the network upgrade costs are too high. If SCE decides to execute a contract, the parties would execute the contract before the Seller is required to post security as part of the Phase II process. Sellers who were not able to complete Phase II Interconnection Studies within this timeframe may bid into the next solicitation.

Through this approach, SCE will have more information regarding the project's transmission costs and customer value at an early stage in the solicitation and will have more information about the transmission and interconnection risks prior to entering into the contract. Likewise, the Commission will also have a better idea of the project's transmission cost at an early stage, and any risks associated with those costs and timing of the interconnection. This requirement also provides a deadline by which the solicitation process must end. Finally, by ensuring that shortlisted projects have completed interconnection studies, the risk of project failure due to interconnection issues will be mitigated.

3. SCE Will Allow for More Flexibility in Bidding Resource Adequacy

As part of the 2012 solicitation, sellers will have the option of bidding a project as an Energy-Only ("EO") interconnection or based on an interconnection with Full Capacity Deliverability Status ("FCDS").[28] Sellers can also choose the date the project will obtain FCDS, including a date after the commercial operation date ("COD"). Those projects bid as EO will receive a congestion adder in the valuation process during the periods the project has an EO status. Those projects that bid with FCDS will not.

[28] Consistent with Section XIII(a)(2), if a project is bid with FCDS, the Project must have an Interconnection Study based on an interconnection seeking FCDS. Without such a study, the Project cannot be bid as an FCDS project.

Separate and apart from the interconnection status contemplated for the project, sellers will also have the ability to designate the amount of Resource Adequacy ("RA") benefits, if any, the seller will provide for each month of the year during the contract term. This amount can be less than the expected Net Qualifying Capacity ("NQC") of the project, but cannot be greater than the expected NQC. Seller may also propose to provide RA benefits from sources other than the project, but will still be limited by the quantity of RA benefits the seller can provide by the expected NQC of the project.

In addition, Seller may also designate the years it will provide RA benefits during the contract term, including a period that covers the life of the agreement or subset thereof. This allows seller to bid projects with RA benefits beginning at a time later than the COD.

Based on the seller's bid, the contract will reflect, in the form of contract obligations, the bid details regarding interconnection status, quantity of RA benefits, and the years RA benefits will be provided. In other words, if seller submits a proposal with FCDS on a date certain, the seller will be obligated to obtain FCDS by that date. Similarly, if seller's bid is based on the provision of a certain quantity of RA benefits during certain years of the agreement, then the contract will provide for RA performance requirements that reflect the seller's proposal.

SCE's changes create more flexibility for bidders and ensure that the valuation of a project is consistent with the benefits SCE's customers are expected to receive. Under this new structure, the seller is able to bid the type of interconnection, how much RA it intends to provide, and when it will be able to provide it. The new structure will also allow for a seller to make proposal whereby the RA is provided from a source other than the generating facility. Under SCE's previous solicitation, it was assumed that the seller would always provide the full NQC of RA from the facility, and be interconnected as a fully deliverable resource prior to COD. This structure

eliminates these inflexible requirements and allows the seller to provide proposals that better fit the expected project.

4. SCE May Require Shortlisted Bidders to Refresh Their Price Terms Prior to Determining the Successful Sellers

As described in detail in SCE's 2012 Procurement Protocol, after evaluating each proposal, SCE will select the best proposals for inclusion on a shortlist. SCE is considering implementing a solicitation structure whereby SCE negotiates with shortlisted projects to completion based on a set timeline, then requests each seller to refresh its pricing and executes contracts with a subset of the projects that provide the most value to SCE's customers. At this time, SCE has not determined whether it will implement this solicitation structure. Based on available resources at the time of solicitation launch, SCE will make this determination.

SCE is considering this structure because the negotiation process can take a significant amount of time. During this period prices can fall. The structure outlined above provides benefits to SCE's customers because it allows SCE to take advantage of price drops over the negotiation period. This process prevents proposal price terms from becoming stale and also shortens the time between contact execution and Commission approval, thereby reducing the risk of the Commission rejecting a contract due to a discrepancy between the price term and the market price.

B. Important Changes to SCE's 2012 Pro Forma

1. Curtailment: Sections 3.12, 4.01, and 4.02, and Associated Definitions

SCE's economic curtailment language from the 2011 Pro Forma is thorough and detailed. The economic curtailment language included in SCE's 2011 Pro Forma ties SCE's right to curtail without payment to prices in the day-ahead market. The language also includes certain rights for

the seller and SCE regarding real-time bidding instructions. Whether seller is paid or not under the real-time scenarios depends on what instructions are given, whether the instructions are followed, and market prices. SCE has streamlined the economic curtailment language in its 2012 Pro Forma.

The language in SCE's proposed 2012 Pro Forma provides SCE with more options for handling curtailment events, should curtailments prove necessary. Specifically, the 2012 language allows SCE to curtail sellers for any reason, without payment, up to a megawatt hour curtailment cap (i.e., 50 hours for every megawatt hour of contract capacity). SCE can curtail in excess of the cap with payment to the seller for the amount of energy that could have been delivered, absent the curtailment, thus, maintaining revenue certainty for the project in order to facilitate financing of the project. As with the 2011 language, any amounts over the cap that SCE pays for but does not receive as the result of curtailment during the term of the contract, may, at SCE's election, be delivered at the end of the contract term subject to a two-year payback limitation. SCE's 2012 language also maintains the potential exception of excluding on-peak hours – SCE must pay for any energy curtailed during on-peak hours, regardless of the cap. Finally, SCE's ability to curtail due to emergencies, instructions from the CAISO or instructions from the transmission or sub-transmission provider remains unchanged.

SCE has been successful in incorporating this language into contracts with current sellers in its portfolio.

2. Changes to SCE's TOD Factors -- Exhibit J

SCE modified its TOD factors for the 2012 Pro Forma. Exhibit J to the 2012 Pro Forma also provides two different sets of TOD allocation factors: EO TOD factors and FCDS TOD

factors.[29] These TOD factors adjust the amount of payment a generating facility receives based on which hour the project delivers its power. Over an entire year, both sets of TOD factors result in an adjustment factor of 1.0 to the contract price. The only difference between the TOD factors is that payment under the FCDS TODs is "peakier" (i.e., FCDS TODs are higher than EO TODs during the on-peak period, but lower than EO TODs in the off-peak period). SCE will apply the set of TOD factors that is applicable to the type of interconnection contemplated under the agreement. Thus, if a project is interconnected as EO, it will receive the EO TODs; if it is interconnected as FCDS, it will receive the FCDS TODs.

It is important to note that SCE's valuation is based on post-TOD contract payment. Thus, which sets of TOD factors the project uses is irrelevant in the selection of projects. Instead, TODs are intended to reflect the difference in value of the energy provided to SCE *during the term of the contract*. For example, if a project is interconnected as an FCDS resource, it will likely also provide RA benefits, and will likely be evaluated as if the project was going to provide RA benefits. The "peakier" TODs for an FCDS are intended to align payment *during the term of the contract* with the value SCE expected from the generating facility coming out of the evaluation.

3. Resource Adequacy Bidding Flexibility: Sections 3.01, 3.02, Exhibit J, and Associated Definitions

SCE has added provisions to the 2012 Pro Forma specific to projects that deliver RA and projects that do not deliver RA. As stated above, SCE will allow sellers to determine how many RA benefits the project will provide and over what years the project will provide it. Based on this proposal, SCE will evaluate a project accordingly. In other words, the amount of RA benefits a project receives in the valuation will be based on the amount and years indicated by the seller.

[29] SCE may update these factors prior to launching its RFP.

However, to align the valuation of a project with the actual performance under a contract, the 2012 Pro Forma provides for RA performance requirements reflective of the amount of RA benefits the seller proposes.[30] More specifically, in the event the seller is unable to provide the amount of RA benefits indicated in the contract, the bidder will have the choice to either: (1) pay a fixed liquidated damages amount[31] at the Capacity Procurement Mechanism ("CPM") price (escalated by 2% per annum) at the time seller submits its proposal, or (2) have an obligation to provide replacement RA from another source to SCE. This change is aligned with the additional bidding flexibility described in Section XIII.A.3, above.

4. Seller's Buy Down Rights: Section 2.04(a)(iii)

In order to protect SCE's customers from excessive network upgrade costs, SCE's 2012 Pro Forma provides for a right to terminate the contract if the reimbursable network upgrade costs in an Interconnection Study or agreement for a project exceed a certain amount.[32] This is substantially the same provision that SCE had in its 2011 Pro Forma. In response to certain market concerns, SCE has added language to its 2012 Pro Forma that gives sellers, in lieu of termination, the right to pay the excess network upgrade costs without reimbursement from the IOUs' customers. This provision allows sellers to avoid termination and step in and keep the contract in place if it makes economic sense for them to do so.

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[30] In the past, SCE's valuation gave full RA credit to projects without any contractual commitments (beyond the attainment of FCDS) to actually provide RA to SCE. Thus, a project could be selected and receive a contract with SCE based on a certain expected amount of RA that project would provide over the life of the agreement, but not actually provide that level of RA.

[31] This amount will be fixed at the time of contract execution and will not float or be indexed to future changes in the CPM.

[32] It is important to note that this termination right expires after the provision of the Interconnection Study or agreement. In other words, under this provision, the seller would not be subject to termination for cost overruns or cost changes during the actual construction of the transmission upgrade.

5. Excess Deliveries: Section 1.06(c)

Section 1.06(c) of the 2012 Pro Forma provides for a reduced or no payment for deliveries in excess of threshold amounts. During any hour, if the seller delivers energy in excess of 110% of the contract capacity, then the seller will not be paid for the excess amounts (above 110%) delivered in that hour. The basis of this limitation is to ensure that the seller has not installed capacity in excess of contract capacity. In addition, Section 1.06(c) provides that if the seller delivers more than 115% of the expected annual net energy production within a year, then seller is paid 75% of the contract price for all deliveries above this amount for the remainder of that year. This new provision gives sellers additional incentive to bid their contract capacity and capacity factors correctly. It also helps to make sure that SCE receives and pays only for the energy SCE has contracted for, and not for amounts over what SCE expects under the contract. In addition, it is important to note that this concept existed in SCE's 2011 Pro Forma, and replaces the former Exhibit S. Similar to SCE's new language above regarding deliveries in excess of 115%, Exhibit S of the 2011 Pro Forma provided for a reduction in pricing based on increases in the capacity factor. The amount of reductions was left open to negotiations and proved difficult for SCE and the seller to come to agreement. Thus, in order to avoid these negotiations, SCE has included a set excess amount and price reduction in the agreement.

Document comparison by Workshare Professional on Monday, May 21, 2012 7:44:54 PM

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Total changes	973

APPENDIX B

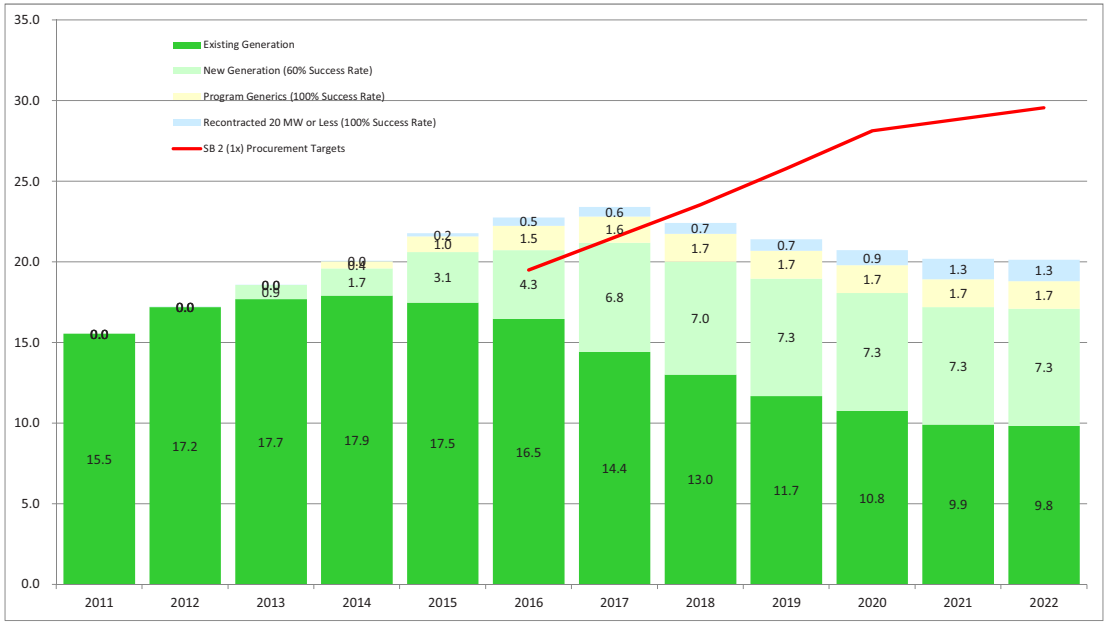
Project Development Status Update

[Confidential]

APPENDIX C

Quantitative Information

Billion kWh	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Bundled Retail Sales	73.8	[redacted]				78.0	79.7	81.2	83.2	85.2	87.4	89.6
SB 2 (1x) Procurement Targets	14.8	[redacted]				19.5	21.5	23.6	25.8	28.1	28.8	29.6
Existing Generation	15.5	17.2	17.7	17.9	17.5	16.5	14.4	13.0	11.7	10.8	9.9	9.8
New Generation (60% Success Rate)	0.0	0.0	0.9	1.7	3.1	4.3	6.8	7.0	7.3	7.3	7.3	7.3
Program Generics (100% Success Rate)	0.0	0.0	0.0	0.4	1.0	1.5	1.6	1.7	1.7	1.7	1.7	1.7
Recontracted 20 MW or Less (100% Success Rate)	0.0	0.0	0.0	0.0	0.2	0.5	0.6	0.7	0.7	0.9	1.3	1.3
Total	15.5	17.2	18.6	20.1	21.8	22.8	23.4	22.4	21.4	20.7	20.2	20.1



Billion kWh	Compliance Period 1	Compliance Period 2	Compliance Period 3	2021	2022
Bundled Retail Sales	[redacted]	[redacted]	329.4	87.4	89.6
SB 2 (1x) Procurement Targets	[redacted]	[redacted]	99.0	28.8	29.6
Existing Generation	50.4	51.9	49.9	9.9	9.8
New Generation (60% Success Rate)	0.9	9.1	28.4	7.3	7.3
Program Generics (100% Success Rate)	0.0	2.9	6.8	1.7	1.7
Recontracted 20 MW or Less (100% Success Rate)	0.0	0.8	2.9	1.3	1.3
Total	51.3	64.6	88.0	20.2	20.1
Pre-June 1, 2010	50.8	57.0	65.9	14.0	13.9
Category 1	0.5	3.9	12.4	3.2	3.2
Category 2	0.0	0.0	0.0	0.0	0.0
Category 3	0.0	0.0	0.0	0.0	0.0
Total *	51.3	61.0	78.2	17.2	17.1

* Forecast of deliveries is for executed contracts only; does not include program generics or recontracted 20 MW or les:

APPENDIX D

Standard Cost Quantification Table

Table 1 (Actual Costs)

		Actual RPS-Eligible Procurement and Generation Costs								
1	**Technology Type**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
2	Biogas	$ 49,239,752	$ 55,218,581	$ 58,024,700	$ 55,842,748	$ 46,391,310	$ 45,669,901	$ 41,319,957	$ 46,567,994	$ 45,003,728
3	Biomass	$ 30,229,214	$ 30,641,340	$ 29,266,687	$ 29,364,748	$ 31,995,803	$ 32,870,627	$ 37,676,121	$ 39,934,586	$ 32,647,359
4	Geothermal	$ 533,787,287	$ 568,528,010	$ 569,145,247	$ 540,276,590	$ 564,191,771	$ 682,923,953	$ 591,094,390	$ 601,071,879	$ 585,397,425
5	Small Hydro	$ 14,680,635	$ 13,351,784	$ 23,129,437	$ 22,350,522	$ 11,682,561	$ 17,217,269	$ 12,197,656	$ 19,239,880	$ 26,057,270
6	Solar PV	$ 2,303	$ 1,077	$ 574	$ 111	$ -	$ -	$ 116,015	$ 6,014,872	$ 6,175,717
7	Solar Thermal	$ 109,767,959	$ 109,176,941	$ 102,333,401	$ 100,464,297	$ 108,126,446	$ 118,442,549	$ 118,633,943	$ 122,739,976	$ 124,859,719
8	Wind	$ 150,501,168	$ 168,906,414	$ 164,098,293	$ 158,644,762	$ 185,560,185	$ 211,157,917	$ 197,306,648	$ 298,846,815	$ 443,074,749
9	UOG Small Hydro	$ 18,919,069	$ 20,783,330	$ 22,004,724	$ 25,476,773	$ 28,921,419	$ 29,624,912	$ 32,852,293	$ 35,084,449	$ 46,523,880
10	UOG Solar	$ -	$ -	$ -	$ -	$ -	$ 1,235,712	$ 3,576,168	$ 10,838,789	$ 30,970,261
11	RECs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	**Total CPUC-Approved RPS-Eligible Procurement and Generation Cost** [Sum of Rows 2 through 11]	**$ 907,127,388**	**$ 966,607,475**	**$ 968,003,063**	**$ 932,420,551**	**$ 976,869,495**	**$ 1,139,142,839**	**$ 1,034,773,190**	**$ 1,180,339,239**	**$ 1,340,710,107**
13	Bundled Retail Sales [kWh]	70,616,552,902	72,964,152,898	74,994,454,104	78,863,139,433	79,505,151,004	80,956,160,306	78,048,183,506	75,141,421,957	73,777,490,034
14	**Incremental Rate Impact** [cents/kWh]	**$ 1.28**	**$ 1.32**	**$ 1.29**	**$ 1.18**	**$ 1.23**	**$ 1.41**	**$ 1.33**	**$ 1.57**	**$ 1.82**

Table 2 (Forecast Costs)

		Forecasted Future Expenditures on RPS-Eligible Procurement and Generation Costs								
1	**Executed But Not CPUC-Approved RPS-Eligible Contracts and Generation Cost**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
2	Biogas	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
3	Biomass	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
4	Geothermal			$ -	$ -	$ -	$ -	$ -	$ -	$ -
5	Small Hydro	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
6	Solar PV									
7	Solar Thermal	$ -	$ -	$ -						
8	Wind	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
9	UOG Small Hydro	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	UOG Solar	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
11	RECs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
12	**Total Executed But Not CPUC-Approved RPS-Eligible Procurement and Generation Cost** [Sum of Rows 2 through 11]									
13	Bundled Retail Sales [kWh]					78,028,000,000	79,719,000,000	81,223,000,000	83,168,000,000	85,241,000,000
14	**Incremental Rate Impact** [cents/kWh]									
15	**CPUC-Approved RPS-Eligible Contracts (Incl. RAM/FIT/PV Contracts) and Generation Cost**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
16	Biogas									
17	Biomass		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
18	Geothermal									
19	Small Hydro									
20	Solar PV									
21	Solar Thermal									
22	Wind									
23	UOG Small Hydro									
24	UOG Solar									
25	RECs	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
26	**Total CPUC-Approved RPS-Eligible Procurement and Generation Cost** [Sum of Rows 16 through 25]									
27	Bundled Retail Sales [kWh]					78,028,000,000	79,719,000,000	81,223,000,000	83,168,000,000	85,241,000,000
28	**Incremental Rate Impact** [cents/kWh]									
29	**Total Incremental Rate Impact (row 14 + row 28)** [cents/kWh]									

Joint IOU Assumption Guidelines for Table Input	
Table 1 Items	**Actual**
Rows 2 – 8, 11	Settlements data from 1/1/2003 to 12/31/2011
Row 9	Annualized capital cost plus applicable O&M in each year
Row 10	LCOE multiplied by actual generation in each year
Row 13	Actual bundled retail sales data reported to the CEC through the annual RPS track forms and the CPUC through the semi-annual RPS compliance report
Row 14	Total Cost / Bundled Retail Sales
Table 2 Items	**Forecast**
Rows 2 -11 and 16-25	Forecast begins on 1/1/2012 • UOG Small Hydro is annualized capital cost plus 2011 O&M escalated at 5% annually • UOG Solar is LCOE multiplied by actual generation in each year
Rows 13 and 27	IOU's most current bundled retail sales forecast
Rows 14 and 28	Total Cost / Bundled Retail Sales

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have this day served a true copy of **SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) 2012 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN (PUBLIC VERSION)** on all parties identified on the attached service list(s). Service was effected by one or more means indicated below:

- ☑ Transmitting the copies via e-mail to all parties who have provided an e-mail address.

- ☑ Placing the copies in sealed envelopes and causing such envelopes to be delivered by hand or by overnight courier to the offices of the Commissioner(s) or other addressee(s).

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Executed this **23rd day of May, 2012,** at Rosemead, California.

/s/ Melissa A.S. Hernandez

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CPUC Home

CALIFORNIA PUBLIC UTILITIES COMMISSION
Service Lists

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