California Public Utilities Commission

RENEWABLES PORTFOLIO STANDARD

Quarterly Report

1st and 2nd Quarter 2012

I. ABOUT THE RPS AND THIS REPORT

California is aggressively bringing renewable generation online to meet its Renewables Portfolio Standard (RPS), one of the most ambitious renewable standards in the country.

California's RPS, codified in Public Utilities Code §§ 399.11 – 399.31[1], requires retail sellers (investor-owned utilities (IOUs), electric service providers (ESPs) and community choice aggregators (CCAs)) regulated by the California Public Utilities Commission (CPUC) to procure 33% of its retail sales per year from eligible renewable sources by 2020. The RPS also requires retail sellers to achieve intermediate RPS targets of 20% from 2011-2013 and of 25% from 2014-2016. The CPUC and the California Energy Commission (CEC) are jointly responsible for implementing California's 33% RPS program.

While the RPS program is the primary vehicle for new utility-scale renewable energy development in California, there are other programs that stimulate development of customer-side renewable generation. The California Solar Initiative (CSI) and Self-Generation Incentive Program (SGIP) provide incentives for customers to install renewable distributed generation technologies that directly serve their on-site load.[2] The electricity generated from power systems installed through CSI and SGIP may contribute to the RPS provided that RPS eligibility requirements established by the CEC are met.[3] Also, generation from these facilities indirectly contributes to the RPS by reducing electricity demand when serving customer load.

The Commission issues this report on the RPS program every quarter pursuant to the 2006 Budget Act Supplemental Report Item 8660-001-0462. This report focuses on California's three large IOUs: Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E). These IOUs currently provide approximately 68% of the state's electric retail sales and analyzing this data provides significant insight into the state's RPS progress.

<u>Please note that the Commission is issuing a combined Q1 and Q2 2012 Report to the Legislature at this time and will issue its regular Q3 2012 RPS Status Report later this year.</u>

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[1] California's 20% RPS by 2020 was established in 2002 under Senate Bill 1078 (Sher) and modified in 2006 under Senate Bill 107 (Simitian). Senate Bill 2 of the First Extraordinary Session (SB 2 (1x)) (Simitian) (Stats. 2011, ch.1) expanded the mandate to a 33% RPS by 2020.

[2] More information on the CSI and SGIP can be found on the CPUC's website: http://www.cpuc.ca.gov/PUC/energy/DistGen/.

[3] In the case of renewable customer generation, the system-owner owns the renewable energy credits (RECs), but could sell the RECs to retail sellers to contribute to the RPS targets.

II. EXECUTIVE SUMMARY

Status of RPS Procurement

- On March 1, 2012, the large IOUs reported in their 2012 RPS Procurement Progress Reports that they served 20.6% of their electricity with RPS-eligible generation in 2011 (up from 17.0% in 2010). PG&E served 20.1% of its 2011 retail sales with RPS-eligible renewable energy, SCE with 21.1%, and SDG&E with 20.8%. Pursuant to the procurement requirements in SB 2 (1X), the IOUs must average 20% renewable energy during the first RPS compliance period (2011-13).
- Since 2003, 2,871 MW of new renewable capacity achieved commercial operation under the RPS program. Over 300 MW of new renewable capacity came online in the first two quarters of 2012, and over 2,500 MW is scheduled to come online before the end of the calendar year.
- The IOUs filed sixteen new contracts for 347 MW of renewable capacity in the first two quarters of 2012. In the same time period, the CPUC approved 48 contracts representing 2,450 MW of renewable capacity, including 34 contracts for projects 20 MW or smaller.

Highlights of Recent and Upcoming Events

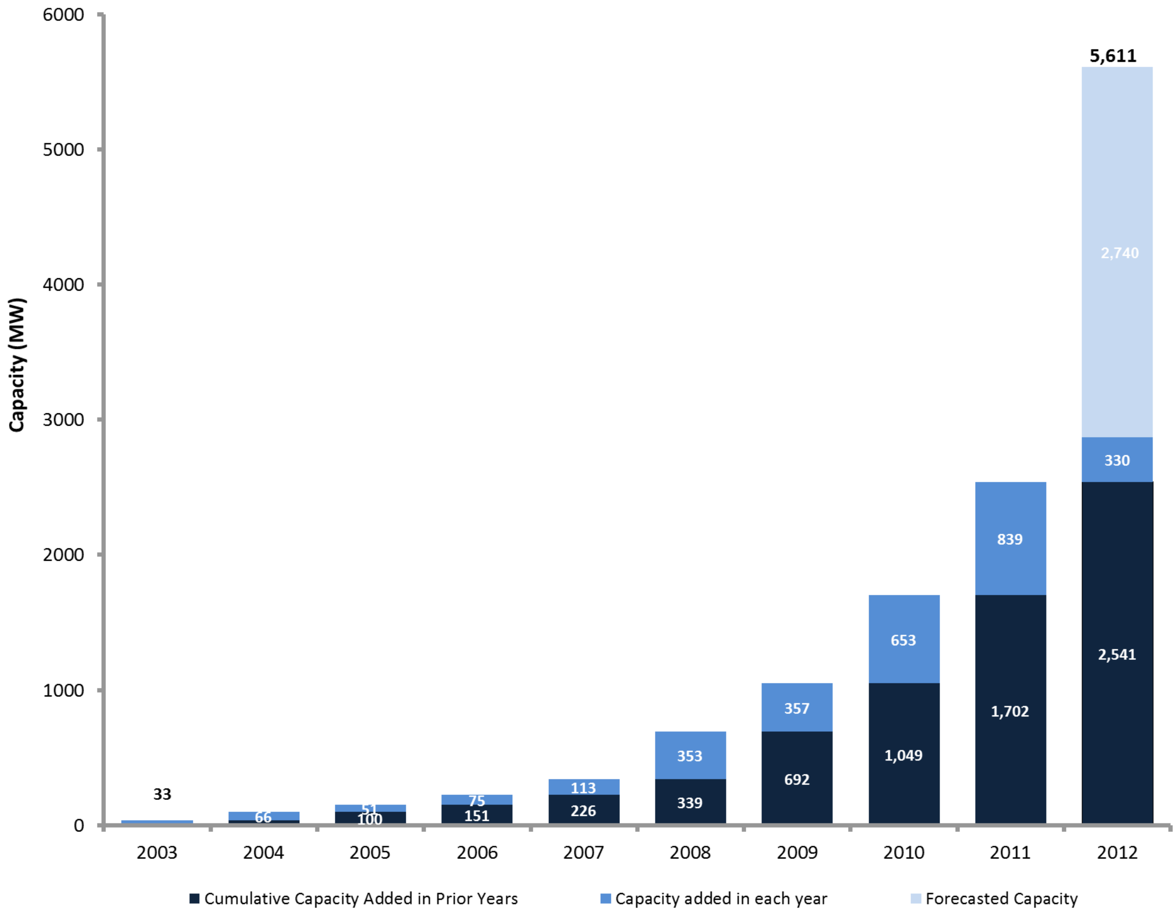
- On March 16, 2012, fourteen parties to the Distributed System Interconnection Settlement Process filed a settlement in CPUC Rulemaking (R.) 11-09-011 proposing significant reforms to the CPUC-jurisdictional Electric Rule 21 interconnection tariff. The Commission is expected to consider the settlement in Q3 2012 via a Commission Decision.
- In April 2012, the Commission approved 13 contracts for 145 MW of new renewable capacity executed by the IOUs resulting from the first Renewable Auction Mechanism (RAM) solicitation. The second RAM solicitation closed on May 31, 2012.
- On May 24, 2012, the Commission unanimously approved Decision (D.) 12-05-035 addressing program pricing and design for the revised Section 399.20 Feed-in-Tariff program.
- On June 21, 2012, the Commission unanimously approved D.12-06-038 establishing new compliance rules for the RPS program pursuant to Senate Bill 2 (1X) (Simitian, 2011).

III. PROGRESS TOWARDS A 33% RPS BY 2020

New Renewable Capacity Added in 2012

Since 2003, 2,871 MW of new renewable capacity achieved commercial operation under the RPS program. Over 300 MW of new renewable capacity came online in the first two quarters of 2012 and another 2,740 MW of capacity is forecasted to reach commercial operation by the end of the calendar year. 2011 showed the greatest year-to-year increase in the capacity of renewable generation achieving commercial operation since the beginning of the program, and 2012 is already on track to far surpass 2011.

Figure 1. RPS Capacity Installed Since 2003, By Year[4]



Source: California Public Utilities Commission, 2nd Quarter 2012

[4] Figure 1 only includes new capacity under contract for 10 years or more.

RPS Contracting Activities in 2012

Since 2002, the CPUC has approved more than 200 contracts for over 18,500 MW of renewable capacity. As Table 1 below shows, the CPUC approved 48 additional contracts in the first and second quarters of 2012 for 2,450 MW of capacity. Note that the CPUC approved 36 contracts for a total capacity of 273 MW in the second quarter, resulting in an average contract size of only 7.5 MW. Most of this capacity resulted from the Commission's approval of renewable distributed generation (DG) projects executed from the first RAM auction.[5]

Table 1. IOU RPS-Eligible Contracts Approved and Submitted in 2012

		PG&E		SCE		SDG&E		Large IOU Total	
		Number of Contracts	MW	Number of Contracts	MW	Number of Contracts	MW	Number of Contracts	MW
Q1	Approved	3	341	4	961	5	875	12	2,177
	Submitted	4	62	7	67	2	15	13	144
Q2	Approved	4	62	7	67	25	144	36	273
	Submitted	0	0	0	0	3	203	3	203
Total	**Approved**	**7**	**403**	**11**	**1,028**	**30**	**1,019**	**48**	**2,450**
	Submitted	**4**	**62**	**7**	**67**	**5**	**218**	**16**	**347**

[5] For more information on the Renewable Auction Mechanism, visit the Commission's RAM website found here: www.cpuc.ca.gov/RAM

IV. PROGRAM UPDATE

This section of the RPS Status Report provides an update on several critical program advancements that have occurred over the first two quarters of 2012. These include updates on:

- System-Side Renewable Distributed Generation Programs and Policies
- Assigned Commissioner Ruling for the 2012 Procurement Plans
- Third 33% RPS Implementation Decision Establishing New RPS Compliance Rules

SYSTEM-SIDE RENEWABLE DISTRIBUTED GENERATION[6]

System-side renewable distributed generation (DG) will play an important role in achieving a 33% RPS by 2020. Consequently, the CPUC is aggressively pursuing the procurement of renewable DG. Specifically, the CPUC has implemented the following programs for procurement of renewable DG up to 20 MW in size:

- The Commission is implementing the **revised Section 399.20 Feed-in-Tariff** (FIT) for renewable DG projects up to 3 MW. The existing FIT program, for projects up to 1.5 MW, has approximately 170 MW under contract.
- The Commission established the **Renewable Auction Mechanism** (RAM), a simplified market-based procurement mechanism for renewable projects up to 20 MW in size. Procurement through RAM occurs in twice-annual auctions designed to result in highly viable, cost-effective contracts for 1,299 MW of renewable DG over two years.
- The Commission continues to oversee the procurement of solar DG through the IOU-specific **solar PV programs** designed to procure up to 1,000 MW over five years. SCE's program is for primarily rooftop solar PV projects between 1-2 MW; PG&E's program targets primarily ground-mount solar PV projects between 1-20 MW; and SDG&E's program targets primarily ground-mount solar PV projects between 1-5 MW.

Updates on each of these three programs are discussed below.

Revised Section 399.20 Feed-in-Tariff (FIT)

Assembly Bill (AB) 1969 (Yee, 2006) added Section 399.20 to the Public Utilities Code's RPS statute, which created the existing renewable FIT program for projects up to 1.5 MW. The purpose of the feed in tariff program is to stimulate the development of small-scale renewable DG by streamlining the process for generators to sell power wholesale to the IOUs through a standard contract without having to engage in timely contract negotiations.

Since 2007, the Legislature has adopted several amendments to Section 399.20, as set forth in SB 380, SB 32, and SB 2 (1X). The CPUC is currently implementing these amendments in R.11-05-005. Most recently, on May 24, 2012, the CPUC adopted D.12-05-035 establishing a market-

[6] The CPUC regulates DG policies and programs on both the customer- and system- (or wholesale) side of the electric meter. Customer-side DG incentive programs include the California Solar Initiative and the Self-Generation Incentive Program. On the system-side of the meter, utilities procure DG resources through a variety of procurement programs, including the annual RPS competitive solicitation, the renewable feed-in tariff, utility solar programs, and the Renewable Auction Mechanism (RAM).

based FIT pricing mechanism called the Renewable Market Adjusting Tariff, or Re-MAT. As discussed below, the CPUC will also adopt a standard contract for the revised FIT program.

Table 2. Comparison of Existing FIT Program and Revised FIT Program

	Existing FIT Program (AB 1969)	Revised FIT Program (SB 32, SB 2 (1X))
Statewide Program Cap:	500 MW (IOUs only)	750 MW (IOUs and POUs)
Maximum Eligible Project Size:	1.5 MW	3 MW
Pricing Mechanism:	Market Price Referent[7]	Re-MAT (described below)

D.12-05-035 Establishes Market-Based FIT Pricing Mechanism: Re-MAT

On May 24, 2012, the Commission adopted D.12-05-035, which addressed program pricing and design for the revised Section 399.20 FIT program.[8] Notably, this decision adopts a new market-based pricing mechanism that rapidly responds to market conditions while also imposing more robust project eligibility criteria to ensure that only viable projects sited near load participate.

The purpose of the Re-MAT is to provide a mechanism where the market determines the price required for technologies in each product type to cover project costs and earn a fair rate of return. By so doing, D.12-05-035 avoids requiring regulators to administratively determine a static FIT price, which would necessarily lack the flexibility to respond to market conditions and capture maximum value for ratepayers. Instead, Re-MAT will deliver cost effective renewable DG to California ratepayers by adjusting the offered price at regular intervals based on market response, and will allow the market to set the price based on the real-time economics of developing projects at this scale.

Table 3. Key Elements of the Re-MAT

Re-MAT Starting Price:	\$89.23/MWh[9] plus time-of-delivery[10] adjustment
Product Types:	Three product types: ▪ **Baseload** (e.g., bioenergy, geothermal) ▪ **Peaking As-available** (e.g., solar) ▪ **Off-peak As-available** (e.g. wind, small hydro) Each product type will start at the same price but adjust independently depending on market response for that type.

[7] The MPR represents the levelized price at which the proxy revenues from a combined-cycle gas turbine (CCGT) exactly equal the expected proxy CCGT costs on a net-present value (NPV) basis.

[8] D.12-05-035 can be found online here: http://docs.cpuc.ca.gov/word_pdf/FINAL_DECISION/167679.pdf

[9] D.12-05-035 establishes a Re-MAT starting price equal to the weighted average of the highest priced executed contract for PG&E, SCE, and SDG&E from the Renewable Auction Mechanism auction held in November 2011.

[10] Each IOU will adjust the payment rate based on the actual energy delivery profile of the specific generator.

Market-Based Price Adjustments:	The Re-MAT price will adjust based on market response for a particular product type. ▪ ***<u>Market Response:</u>*** The Re-MAT price will adjust up if a product type is unsubscribed or minimally subscribed in the previous program period. Similarly, the Re-MAT price will adjust down in the same manner if a product type is fully subscribed in the previous program period. ▪ ***<u>Rate of Adjustment:</u>*** The monthly Re-MAT adjustment mechanism begins at +/- $4/MWh. The rate of the adjustment will increase by an *additional* $4/MWh (e.g., $8/MWh for the second consecutive adjustment) per program period if conditions exist for an adjustment in consecutive program periods. ▪ ***<u>Frequency of Price Adjustment:</u>*** Every two months if appropriate market conditions occurred in prior period.
Fixed PPA Price:	Once a generator accepts an offered Re-MAT price, the payment rate will be fixed for the duration of the PPA.
Cost Containment:	▪ Re-MAT is designed to adjust every two months in response to competitive market activity, resulting in procurement of the most cost effective generation from projects of this size. ▪ At any time during the program, the IOUs may file an Advice Letter to request a temporary suspension of all, or part, of the Re-MAT program by the Director of the Energy Division if market manipulation is discovered.
Project Viability:	To minimize speculative projects, generators will be required to meet specific viability milestones before participating in the FIT program.

<u>Section 399.20 FIT Contract</u>

On January 10, 2012, Administrative Law Judge DeAngelis and Commissioner Ferron issued a ruling directing the IOUs to work together to create a uniform standard contract for the FIT program. This uniform contract will define standard terms and conditions to implement the amendments to Section 399.20 enacted by SB 380, SB 32, and SB 2 (1X).

Energy Division staff hosted a workshop on February 22, 2012 for stakeholders to review the IOUs' proposed contract. At the request of the IOUs and stakeholders, a follow-up workshop hosted at PG&E was delayed until May 7, 2012. The IOUs were required to file this standard contract with the Commission on July 18, 2012. The Commission will adopt this standard contract later this year, at which point the revised Section 399.20 FIT program will become effective.

Results of the first Renewable Auction Mechanism (RAM) solicitation

In December 2010, D.10-12-048 adopted the Renewable Auction Mechanism (RAM), a competitive solicitation mechanism for system-side renewable DG projects up to 20 MW in size. RAM was created by the Commission to stimulate the development of wholesale renewable DG projects up to 20 MW by lowering transaction costs and procuring cost-effective, viable renewable capacity.

The decision authorized the procurement of 1,000 MW (recently increased to 1,299 MW) of renewable DG over four auctions. Resolution E-4414 implemented RAM in August 2011, and the first RAM auction closed on November 15, 2011. In April 2012, the Commission approved 13 contracts for 145 MW of renewable DG capacity from the first RAM auction. Eleven of the thirteen contracts (122 MW of a total 140 MW) were for solar PV projects. The weighted average price of all of these contracts (post-time-of-delivery adjustment) was less than $90/MWh.

Summary data from the first RAM auction is provided below in Tables 4, 5, and 6.

Table 4. Summary of Cumulative Capacity* of Procurement Targets, Bids Received, and Executed PPAs Across All IOUs from First RAM Auction

	RAM1 Capacity Target (MW)	Bids Received (MW)	Executed PPAs (MW)
Baseload	45	82	9
Peaking As-Available	100	3,274	122
Non-Peaking As-Available	45	22	14

* *Note: Some bids were submitted to multiple IOUs and may be double-counted in these cumulative totals.*

Table 5. Number of Bids and Executed PPAs by Technology Type Across All IOUs

	# of Bids	# of Executed PPAs
Solar PV	235	11
Wind	1	1
Geothermal	3	1
Bioenergy	4	0
Small Hydro	3	0

Table 6. Number of Bids and Executed PPAs by Capacity Size (MW) Across All IOUs

Capacity (MW)	# of Bids	# of Executed PPAs
1-3	40	3
>3-5	15	1
>5-10	41	3
>10-15	30	2
>15-20	117	4

The second RAM auction closed on May 31, 2012 and the IOUs are expected to file their executed contracts from that auction with the CPUC in Q3 2012. The results of the second RAM auction will be reported in the Q3 2012 RPS Status Report. Note, also, that the third RAM auction is currently scheduled to close on November 15, 2012.

Utility Solar Photovoltaic (PV) Programs

In 2009 and 2010, the Commission issued three decisions authorizing solar PV procurement programs for PG&E, SCE, and SDG&E. These decisions authorized the IOUs to own and operate utility-owned solar generation (UOG), as well as to execute solar PV contracts with independent power producers (IPPs) through a competitive solicitation. These programs were originally designed to yield, in total, up to 1,100 MW of new solar PV capacity over five years.

In February 2012, summarized in Table 7 below, the Commission adopted D.12-02-002 modifying SDG&E's PV program and D.12-02-035 modifying SCE's PV program. These decisions granted requests by SCE and SDG&E to shift program capacity from their PV programs to RAM in order to minimize ratepayer costs and lower the administrative burden to implement these procurement programs concurrently. PG&E did not request to modify its solar PV program, and therefore its program allocations have not changed, i.e., 250 MW for UOG and 250 MW for IPP.

Table 7. Summary of IOU Solar PV Program Allocations, As Amended by Recent Decisions

	Original Programs		Revised Programs		
	UOG	*IPP*	*UOG*	*IPP*	*Remainder*
SCE *(D.12-02-035)*	250 MW	250 MW	125 MW	125 MW	225 MW to RAM
SDG&E *(D.12-02-002)*	26 MW	74 MW	26 MW	0 MW	74 MW to RAM
PG&E *(No Change)*	250 MW	250 MW	n/a	n/a	n/a

Parties File Rule 21 Interconnection Settlement

On March 16, 2012, fourteen parties to the Distribution System Interconnection Settlement Process filed a settlement in CPUC Rulemaking (R.) 11-09-011, the centerpiece of which is a significantly reformed CPUC-jurisdictional Rule 21 interconnection tariff.[11] In August 2011, upon launching a settlement-driven reform process for Rule 21, the CPUC's goal was to craft transparent rules that provide a clear, predictable path to interconnection for distributed generation while maintaining the safety and reliability of the electric grid. In their motion seeking CPUC approval of the settlement, the settling parties state that the proposed reforms to Rule 21 accomplish that goal.

Specifically, the settling parties state that the proposed reforms to Rule 21 will ensure that the interconnection process better serves the state's procurement and incentive programs for smaller-scale distributed generation located on the distribution system and exporting power to the grid. The parties note that a predictable interconnection process should also serve marketplace innovations that continually bring new generating technologies to market. Finally, the parties state in their motion that the proposed reforms take advantage of California utilities'

[11] *Motion for Approval of Settlement Agreement Revising Distribution Level Interconnection Rules and Regulations*, available at http://docs.cpuc.ca.gov/EFILE/MOTION/162852.PDF.

experience, acquired over the last decade, with interconnecting higher penetration levels of distributed generation.

At the same time, however, not all policy questions could be addressed within the terms of the Rule 21 tariff itself. Issues such as cost-certainty, cost-allocation, and the distribution system's finite capacity to accommodate generation resources will be addressed in Phase 2 of R.11-09-011.

The proposed reforms to Rule 21 are still pending consideration by the CPUC, and a decision is anticipated in the third quarter of 2012.

ASSIGNED COMMISSIONER RULING FOR 2012 PROCUREMENT PLANS

The Assigned Commissioner's Ruling (ACR) issued in R.11-05-005 on April 5, 2012 establishes the scope and schedule for review of the 2012 RPS Procurement Plans. Consistent with §399.13(a)(1), the ACR requires the filing of draft 2012 RPS Procurement Plans (Plans) and sets forth the requirements for the information to be contained in the IOUs' and ESPs' Plans. After the CPUC considers their draft Plans, it will issue a decision on the Plans, after which the IOUs may issue their 2012 RPS Solicitations.

In addition to directing the filing of the 2012 RPS Procurement Plans, the ACR seeks comments regarding several staff proposals that would modify the RPS solicitation and procurement process. The proposals include:

- Extending procurement authorization to two years, instead of one;
- Standardizing least-cost best-fit bid evaluation variables;
- Requiring an independent evaluator report with the procurement plans;
- Incorporating transmission upgrade cost estimates from the California Independent System Operator (CAISO) Generator Interconnection Process into least-cost best-fit evaluations;
- Establishing an end date/time limit for IOUs to negotiate and execute contracts from annual RPS solicitation shortlists; and,
- Restricting the execution of power purchase agreements based on progress in the interconnection study process and available transmission.

THIRD 33% RPS IMPLEMENTATION DECISION ESTABLISHES NEW COMPLIANCE RULES

In D.12-06-038, the Commission implements new compliance rules established by SB 2 (1X). Following the implementation of the new 33% RPS procurement quantity requirements (D.11-12-020) and the new portfolio content categories (D.11-12-052), the compliance decision sets important rules guiding future renewable procurement by retail sellers. Specifically, D.12-06-038 sets rules about procurement from short-term contracts (less than 10 years in length), the requirement that a minimum of procurement must come from statutorily preferred Category 1 resources and rules governing what procurement may qualify as "excess procurement" and be used towards future RPS compliance obligations. The decision also requires retail sellers to file annual RPS compliance reports in August of each year. In a subsequent decision the Commission will establish RPS enforcement rules.

V. RECENT AND UPCOMING EVENTS

Table 8. Recent and Upcoming Events

Timing	Deliverable	Notes
February 22, 2012	Renewable FIT Contract Workshop	ALJ DeAngelis and Commissioner Ferron mailed a Ruling on January 10, 2012, directing the utilities to create one standard contract for the renewable feed-in tariff program. Energy Division staff hosted a workshop to review the utilities' proposal and open a dialogue with stakeholders.
March 16, 2012	Rule 21 Settlement Filed	Fourteen parties to the Distribution System Interconnection Settlement Process filed a settlement in CPUC R.11-09-011. The Commission is expected to issue a decision on the settlement in the third quarter 2012.
March 30, 2012	Renewable Auction Mechanism (RAM) contracts filed	PG&E, SCE, and SDG&E filed their executed contracts from the first RAM auction with the Commission for review and approval.
April 5, 2012	Amended Scoping Memo and Ruling of Assigned Commissioner on 2012 RPS Procurement Plans	The amended scoping memo and assigned Commissioner ruling establish the scope and schedule for Commission consideration of 2012 Renewables Portfolio Standard Procurement Plans.
May 1, 2012	CPUC approved contracts from first RAM	Commission approved contracts for the three IOUs for a cumulative 140 MW of renewable capacity from the first RAM auction.
May 3, 2012	PG&E's second Solar PV Program auction closed	PG&E expects to procure up to 50 MW of capacity from solar PV projects sized 1-20 MW from the second auction.
May 7, 2012	Renewable FIT Contract Follow-up Workshop	The IOUs hosted a workshop to follow-up on feedback received from the February 22, 2012 workshop on the standard renewable FIT contract.
May 23, 2012	Draft 2012 RPS Procurement Plans	The IOUs and ESPs filed their Draft 2012 RPS Procurement Plans with the CPUC.
May 24, 2012	Renewable Feed-in-Tariff (FIT) Decision	The Commission adopted D.12-05-035 to establish a market-based pricing mechanism for the Section 399.20 FIT that adjusts in real-time to market activity and subscription levels.
May 31, 2012	Second RAM auction closed	Bids for renewable projects between 1-20 MW seeking to participate in RAM for PG&E, SCE, or SDG&E were submitted on May 31, 2012.

Timing	Deliverable	Notes
June 12, 2012	Renewable Net Short (RNS) Workshop	Energy Division staff held a workshop at the CPUC to engage the utilities and stakeholders to develop a standard methodology for utilities to calculate their need for new renewable generation to meet the 33% RPS by 2020.
June 21, 2012	Decision Establishing RPS Compliance Rules	The Commission adopted D.12-06-038 to address RPS compliance obligations of retails sellers through 2010 and establish new RPS compliance rules pursuant to SB 2 (1X).
Second Quarter, 2012	RAM Program Forums	PG&E, SCE, and SDG&E held RAM Program Forums in the second quarter 2012. The purpose of these forums was to solicit input and participation from stakeholders on how to improve the RAM program before the third and fourth auctions.
July 20, 2012	SCE's second Solar PV Program RFO closes	SCE expects to procure approximately 50 MW of capacity from solar PV projects sized 1-2 MW from this second auction.
Third Quarter, 2012	Energy Division to Commence Contracts for RPS Support Services	Energy Division issued three requests for proposals for RPS technical support for Cost Containment; Distributed Generation Technical Analysis; and, RPS Program Evaluation. Energy Division expects to commence these contracts in Q3 2012.