



California Public Utilities Commission

RENEWABLES PORTFOLIO STANDARD Quarterly Report

2nd Quarter 2010



I. ABOUT THE RPS AND THIS REPORT

California's Renewables Portfolio Standard (RPS) is one of the most ambitious renewable energy standards in the country

Public Utilities Code Section 399.11 – 399.19, established in 2002 under Senate Bill 1078 (Sher) and modified in 2006 under Senate Bill 107 (Simitian), requires investor-owned utilities (IOUs), electric service providers (ESPs) and community choice aggregators (CCAs) regulated by the California Public Utilities Commission (CPUC) to procure an additional 1% of retail sales per year from eligible renewable sources until 20% is reached, no later than 2010. The CPUC and the California Energy Commission (CEC) are jointly responsible for implementing the program. Governor Schwarzenegger's Executive Orders S-14-08, issued on November 17, 2008, and S-21-09, issued on September 15, 2009, established a further goal of 33% renewable energy by 2020.

The Commission issues this report 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 provide approximately 68% of the state's electric retail sales¹ and analyzing this data provides significant insight into the state's RPS progress.

¹ According to the CEC's *California Energy Demand 2010-2020 Adopted Forecast*.

II. EXECUTIVE SUMMARY

Status of RPS Procurement

- The IOUs collectively served 15.4% of their 2009 electric load with renewable energy, up from 13% in 2008.
- PG&E served 14.4% of its 2009 load with renewable energy, SCE with 17.4%, and SDG&E with 10.5%.
- In the first quarter of 2010, the IOUs submitted 37 renewable contracts for CPUC approval, more than the number of contracts the CPUC approves in an entire year, on average.
- Currently, 36 projects have entered into contracts through the AB 1969 feed-in tariff program.

Highlights of Recent and Upcoming Events

- SCE held its first solicitation in April for the independent power producer portion of its solar PV program and will be reporting the initial results to the Commission on July 1, 2010.
- The Commission authorized PG&E's five-year solar PV program to develop up to 500 megawatts (MW) of solar PV facilities that are 1 to 20 MW in size.
- The Commission held a workshop to discuss implementation issues related to tradable renewable energy credits (TREC's).
- The Commission will issue a proposed decision in the second or third quarter of 2010 which would expand and refine the Commission's feed-in tariff program set forth in Commission Decision (D.) 07-07-027. Program elements may include changes to eligible project size, price, contract terms and conditions, and the procurement process.
- The Commission will begin implementation of Senate Bill (SB) 32 (Negrete McLeod) later this year.
- The Commission will issue a draft work plan for the Renewable Distributed Energy Collaborative (Re-DEC) in the third quarter of 2010 which will identify challenges and solutions associated with connecting large amounts of renewable generation to the distribution grid.

III. PROGRESS TOWARDS A 20% RPS BY 2010

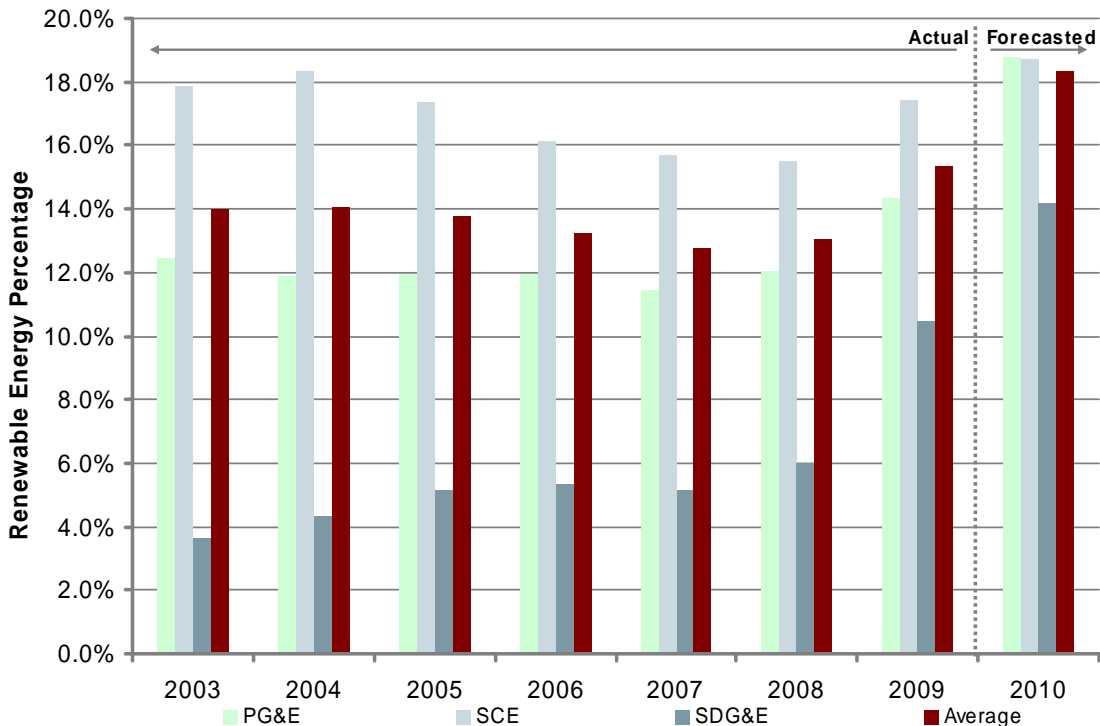
RPS Generation to Date

In 2009, the utilities collectively served 15.4% of their load with renewable energy, a 2.4 percentage point increase from 2008. PG&E increased renewable procurement by 2.4 percentage points, SCE by 1.9, and SDG&E by 4.5. These increases are due to a number of factors: 1) new renewable capacity was installed in late 2008 and early 2009; 2) small RPS-eligible hydroelectric facilities generated more in 2009 than in 2008; 3) utility customers used less power in 2009 than in 2008, so the utilities' renewable energy procurement accounted for a greater percentage of retail sales; and 4) the utilities entered into a number of contracts with existing facilities. Based on the contracts signed to date, the utilities are expected to be at about 18% in 2010 and 21% in 2011.

Although renewable deliveries increased 2.4 percentage points between 2008 and 2009, renewable deliveries have only increased 1.4 percentage points, since the start of the program. While over 1,000 MW of new renewable capacity have come online, this has not resulted in an equivalent increase in the utilities' renewable percentages. This is due to increases in load (the more electricity customers consume, the more renewables the utilities have to buy), expiration of renewable contracts, and decreases in generation from existing resources – namely small hydroelectric facilities. If these factors were held constant, the additional 1,000 MW would have resulted in the utilities having 18% renewables rather than 15%.

Figure 1 illustrates individual and aggregated renewable energy percentages, since the beginning of the RPS program. The forecasted percentages for 2010 are based on utility forecasted renewable procurement and the CEC's load forecast.

Figure 1. RPS Generation



Source: California Public Utilities Commission, 2nd Quarter 2010

Table 1 illustrates actual renewable deliveries for the years 2003-2009. The “Target” row shows the amount of renewable energy the utilities are required to purchase each year and the “RPS-Eligible” row shows the amount of renewable energy the utilities actually purchased. The next row calculates the renewable percentage, and the fourth row shows whether the utility is running a deficit or surplus. Utilities are allowed to bank any surplus renewable energy purchases for use in subsequent years and must make up any deficits they incur. The blue text indicates an increase, and the red text indicates a decrease.

The California Energy Commission (CEC) is responsible for verifying RPS procurement claims. The CEC describes its findings of those claims in an annual RPS procurement verification report. Once the CEC adopts a final verification report, the CPUC determines if obligated entities are in compliance with the RPS requirements. The CEC has verified claims for 2004 and 2005 and will release a 2006 report soon. Data in the following table for 2006-2009 is self-reported by the IOUs and has not been verified by the CEC.

Table 1. Actual Renewable Energy Deliveries in Gigawatt Hours (GWh)

		2003	2004	2005	2006	2007	2008	2009
PG&E	Target (GWh)	7,097	7,808	8,529	9,253	10,017	10,807	11,623
	RPS-Eligible Procurement (GWh)	8,828	8,575	8,650	9,114	9,044	9,819	11,441
	RPS GWh as % of Bundled Sales	12.4%	11.9%	12.0%	11.9%	11.4%	12.0%	14.4%
	Cumulative Deficit/Surplus (GWh)	1,731	2,498	2,619	2,480	1,507	519	337
		2003	2004	2005	2006	2007	2008	2009
SCE	Target (GWh)	11,254	11,960	12,690	13,440	14,228	15,023	15,833
	RPS-Eligible Procurement (GWh)	12,615	13,375	13,042	12,708	12,467	12,574	13,619
	RPS GWh as % of Bundled Sales	17.9%	18.3%	17.4%	16.1%	15.7%	15.5%	17.4%
	Cumulative Deficit/Surplus (GWh)	1,361	2,776	3,128	2,396	635	-1,814	-4,028
		2003	2004	2005	2006	2007	2008	2009
SDG&E	Target (GWh)	296	447	605	765	933	1,104	1,278
	RPS-Eligible Procurement (GWh)	550	678	825	900	881	1,047	1,784
	RPS GWh as % of Bundled Sales	3.7%	4.3%	5.2%	5.3%	5.2%	6.0%	10.5%
	Cumulative Deficit/Surplus (GWh)	254	485	705	840	788	731	1,237
		2003	2004	2005	2006	2007	2008	2009
TOTAL	Target (GWh)	18,647	20,215	21,824	23,458	25,178	26,934	28,734
	RPS-Eligible Procurement (GWh)	21,993	22,628	22,517	22,722	22,392	23,440	26,844
	RPS GWh as % of Bundled Sales	14.0%	14.1%	13.8%	13.2%	12.7%	13.0%	15.4%
	Cumulative Deficit/Surplus (GWh)	3,346	5,759	6,452	5,716	2,930	-564	-2,454

Contracting Activities in the First Quarter of 2010

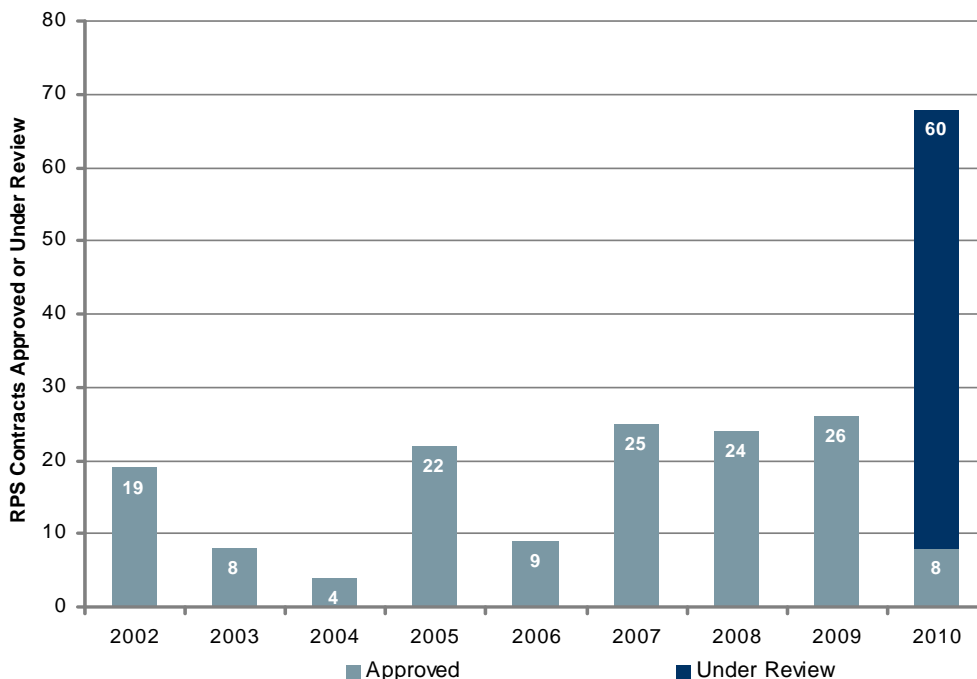
The IOUs are contracting with renewable projects at an unprecedented rate. In the past five years, the CPUC has approved an average of 23 renewable contracts per year. In the first quarter of 2010 alone, the IOUs submitted 37 contracts for CPUC review. The IOUs are requesting approval of over 50 contracts before the end of the year which is twice as much as the utilities have requested in prior years. Over a dozen of these projects are requesting American Recovery and Reinvestment Act (ARRA) funding, and many will need Commission approval in 2010 to secure financing.

The majority of the contracts submitted in the first quarter are long term agreements with solar PV and wind facilities. Fifteen of the contracts are for solar PV projects sized at or below 20 MW. Previously, the solar PV projects submitted by the IOUs were mostly for large projects sized at hundreds of MWs.

Table 2. Utility Contracts Approved and Submitted in the First Quarter of 2010

	PG&E		SCE		SDG&E		Large IOU Total	
	Number of Contracts	MW	Number of Contracts	MW	Number of Contracts	MW	Number of Contracts	MW
Approved	3	302	1	5	0	0	4	307
Submitted	21	1,695	15	288	1	25	37	2,008

Figure 2. Utility Contracts Approved to Date and Contracts Under Review²



Source: California Public Utilities Commission, 2nd Quarter 2010

² Figure 2 does not reflect contracts already approved by the Commission that have filed for amendments.

System-Side Renewable Distributed Generation³

In addition to the annual RPS solicitations, small renewable project developers have access to a number of programs designed to reduce the regulatory transaction costs for smaller projects. The available programs are:

- Feed-in tariffs established by AB 1969⁴
- Southern California Edison's Renewable Standard Contract Program⁵
- Southern California Edison's Solar PV Program⁶
- Pacific Gas and Electric's Solar PV Program⁷

In addition, the Commission is implementing or reviewing the following programs:

- Senate Bill 32 (Negrete McLeod), which authorized expansion of the existing feed-in tariff under Public Utilities Code Section 399.20 and Commission Decision (D.) 07-07-027 to 3 MW.
- San Diego Gas & Electric's Solar PV Program, which is under review.⁸
- Expansion and refinement of the existing feed-in tariff program. Program changes may include eligible project size, price, contract terms and conditions, and the procurement process. A proposed decision is expected in the second or third quarter of 2010.⁹

Progress to date on the feed-in tariffs, SCE Renewable Standard Contract Program, the SCE solar PV program, and the PG&E solar PV program is provided below.

AB 1969 Feed-in Tariff

Assembly Bill (AB) 1969 (Yee) added Public Utilities Code Section 399.20, which authorized tariffs and standard contracts for the purchase of eligible renewable generation from public water and wastewater facilities no more than 1.5 MW. The Commission implemented the legislation through D.07-07-027, which expanded the tariffs to include all RPS-eligible technologies.

³ System-side renewable distributed generation, also known as wholesale renewable distributed generation, is generated and sold directly to a utility. Customer-side generation is built to serve on site load.

⁴ <http://www.cpuc.ca.gov/feedintariff>

⁵ The program is currently over subscribed, but SCE is considering continuation of the program for 2010.

⁶ <http://www.cpuc.ca.gov/SCESolarPVProgram>

⁷ <http://www.cpuc.ca.gov/PUC/energy/Renewables/PGEPVProgram.htm>

⁸ <http://docs.cpuc.ca.gov/published/proceedings/A0807017.htm>

⁹ <http://www.cpuc.ca.gov/PUC/energy/Renewables/FITPhase2.htm>

Senate Bill (SB) 32 further amended Public Utilities Code Section 399.20 to include RPS-eligible projects 3 MW and under. SB 32 must be implemented through a CPUC proceeding before projects can utilize the new tariff. The CPUC will begin implementation later this year.

A total of 36 projects (34.5 MW) have executed power purchase agreements in the AB 1969 feed-in tariff program. The vast majority of the projects are in PG&E's service territory. Twenty two projects signed contracts in 2009 compared to just eleven in 2008 and three in the first two quarters of 2010.

Table 3. AB 1969 Feed-in Tariff Contracts by Utility

IOU	Contracts	Capacity (MW)
PG&E	32	28.9
SCE	1	1.1
SDG&E	3	4.5
Total	36	34.5

A large number of biogas and small hydroelectric projects have executed contracts through the program. Although there are nine solar PV projects participating in the feed-in tariff program, they are all contracted with the same developer.

Table 4. AB 1969 Feed-in Tariff Contracts by Technology Type

Technology	Contracts	Capacity (MW)
Biogas	13	13.9
Biomass	1	0.8
Solar PV	9	13.4
Small Hydro	13	6.5
Total	36	34.5

Southern California Edison's Renewable Standard Contract Program

Similar to the AB 1969 feed-in tariff program, SCE's standard contract program offers a standard contract at the market price referent¹⁰ for RPS-eligible facilities. Unlike the feed-in tariff, it is available to projects 1-20 MW in size. To date, the program has resulted in 18 executed contracts for 200 MW. By contrast, only one project in SCE's territory has executed a power purchase agreement through the AB 1969 feed-in tariff.

¹⁰ <http://www.cpuc.ca.gov/PUC/energy/Renewables/mps>

Table 5. Executed Contracts from Southern California Edison’s Renewable Standard Contract Program

Technology	Contracts	Capacity (MW)
Biogas	7	19
Solar PV	8	140
Wind	3	44
Total	18	203

Southern California Edison’s Solar PV Program

In 2009, the Commission authorized SCE to build and own 250 MW of solar PV capacity, primarily on commercial rooftops, and to execute contracts for up to 250 MW of generation from similar facilities owned and maintained by independent power producers (IPP) through a competitive solicitation process. SCE held its first solicitation in April for the IPP portion of the program and will be reporting progress of the program to the Commission on July 1, 2010.

Pacific Gas and Electric’s Solar PV Program

On April 22, 2010, the Commission authorized PG&E to build and own 250 MW of solar PV capacity, primarily ground-mounted systems, and to execute contracts for up to 250 MW of generation from similar facilities owned and maintained by IPPs through a competitive solicitation process. On May 24, 2010, PG&E submitted its proposal for implementation and administration of the IPP portion of the program. Implementation of the program will be completed by the end of 2010.

IV. PROGRAM UPDATE

Renewable Distributed Energy Collaborative (Re-DEC)

Re-DEC¹¹ is a stakeholder process that brings together utility grid operators, renewable distributed generation (DG) project developers, and renewable DG technology experts to better understand the issues and identify solutions to interconnecting large amounts of renewable energy on the distribution grid. Re-DEC is currently focused on identifying the most critical interconnection challenges and developing solutions to address these challenges. Since the Re-DEC kick-off meeting on December 9, 2009, CPUC staff and consultants have been working on a draft work plan that explains and summarizes the interconnection challenges identified in the December stakeholder meeting. The work plan also identifies solutions to these problems and prioritizes which challenges to address in the near term. Staff expects a draft work plan to be available for public

¹¹ <http://www.cpuc.ca.gov/PUC/energy/Renewables/Re-DEC.htm>

comment in the third quarter of 2010. After comments are received, staff anticipates forming working groups to implement the solutions identified in the work plan.

Considering the Implications of a 33% RPS in the Utilities' Long-Term Procurement Plans

In late June 2010, the Commission plans to release a report on RPS planning standards for use in the 2010 Long-Term Procurement Plan (LTPP) proceeding. The LTPP proceeding is an umbrella energy planning proceeding that considers available and planned generation resources, energy efficiency and demand response goals, and other factors over a 10-year planning horizon, in order to authorize utility procurement of conventional generation. Because of the very significant impact that a 33% RPS would have on the need for conventional generation within the 2010-2020 planning term, the Commission is carefully considering the range of possible renewable resource portfolios in 2020.

The RPS planning standards report that will be issued in June 2010 will seek party comment on three to five draft sets of renewable generation and transmission resources ("scenarios") that might achieve a 33% RPS. Following a comment period, the Commission will revise and adopt a final set of scenarios for planning purposes in the scoping memo of the LTPP proceeding. The scoping memo, currently scheduled for the third quarter of 2010, is expected to direct the IOUs to file long-term procurement plans containing the conventional resources needed to accommodate this final set of RPS scenarios, as well as adopted standards on energy efficiency, distributed generation, and other key planning inputs.

V. Recent and Upcoming Events

Timing	Deliverable	Notes
April 19, 2010	Bid submissions for Southern California Edison's (SCE) Solar PV Program	SCE held its first solicitation in April for the independent power producer portion of its solar PV program and will be reporting the initial results to the Commission on July 1, 2010.
April 22, 2010	Decision authorizing Solar PV Program for Pacific Gas and Electric Company (PG&E)	Decision (D.) 10-04-052 authorized a five year solar PV program to develop up to 500 megawatts (MW) of solar PV facilities. Pursuant to D.10-04-052, 250 MW will be developed by third-parties and owned by PG&E, and PG&E will execute power purchase agreements for 250 MW with independent power producers.
April 23, 2010	Workshop to implement the decision authorizing tradable renewable energy credits (TREC's), D.10-03-021. ¹²	Parties discussed: 1) a methodology for comparing REC-only contracts to the price cap if the transaction includes both energy and REC's, 2) standards for reviewing and evaluating bundled RPS contracts that utilize dynamic transfer, and 3) how to classify transactions that include firm transmission arrangements as either bundled or REC-only contracts.
May 24, 2010	PG&E's proposal for implementation and administration of the power purchase agreement portion of its solar PV program	Pursuant to D.10-04-052, PG&E filed an advice letter requesting Commission approval of its proposal for the independent power producer portion of its solar PV program. Program implementation will be completed by the end of 2010.
June 18, 2010	Workshop to review draft proposal on Long-Term RPS Planning Standards	The proposal in the 2010 Long-Term Procurement Plan (LTPP) proceeding will present specific inputs, assumptions, and methodologies for developing three to five RPS resource portfolios that achieve a 33% RPS ("scenarios"). The proposal will also present the resulting scenarios, and request comment on the use of those scenarios as inputs to the 2010 LTPP proceeding's determination of IOU need for new conventional generation by 2020.
Second-Third Quarter, 2010	Proposed decision regarding the expansion of the existing feed-in tariff program	The proposed decision would refine the existing feed-in tariff program set forth in Public Utilities Code Section 399.20 and Commission Decision D.07-07-027. Program changes may include eligible project size, price, contract terms and conditions and procurement process.

¹² On May 6, 2010, the Commission voted to stay D.10-03-021.

Timing	Deliverable	Notes
August 2, 2010	August 2010 RPS Compliance Reports	RPS obligated entities, including investor-owned utilities, electric service providers, and community choice aggregators, will be filing reports detailing historical renewable energy deliveries and providing a forecast of renewable energy deliveries out to 2020.
Third Quarter, 2010	Draft Re-DEC work plan	The Renewable Distributed Energy Collaborative (Re-DEC) work plan will identify challenges and solutions associated with connecting large amounts of renewable distributed generation to the grid.
Fourth Quarter, 2010	Proposed decision approving utilities' RPS Procurement Plans	The proposed decision would authorize utilities to hold 2010 RPS solicitations for procuring renewable energy to meet their RPS requirements.