



CALIFORNIA RENEWABLE PORTFOLIO STANDARD SUMMARY

A. SUMMARY: The original California renewable portfolio standard (RPS), adopted in September 2002, required that 20 percent of the generation for retail sales be sourced from eligible renewables by 2017. This requirement was accelerated 20 percent by 2010 in September 2006 when the legislature passed SB 107. The California Public Utilities Commission will establish annual procurement targets for each electrical corporation. Retail sellers include electrical corporations, community choice aggregators, and electric service providers. Corporations or persons employing cogeneration technology, the Department of Water Resources, and local publicly owned electrical utilities are exempt from the RPS requirements, although municipal utilities must develop their own RPS policies.

B. APPLICABLE START-UP LEGISLATION/REGULATION

1. Part of Broader Energy Package: No

2. Legislative/Regulatory Intent: In order to attain a target of 20 percent renewable energy for the State of California and for the purposes of increasing the diversity, reliability, public health and environmental benefits of the energy mix, it is the intent of the Legislature that the California Public Utilities Commission and the State Energy Resources Conservation and Development Commission implement the California Renewables Portfolio Standard Program.

Increasing California's reliance on renewable energy resources may promote stable electricity prices, protect public health, improve environmental quality, stimulate sustainable economic development, create new employment opportunities, and reduce reliance on imported fuels. The development of renewable energy resources may ameliorate air quality problems throughout the state and improve public health by reducing the burning of fossil fuels and the associated environmental impacts.

3. Applicable Legislation/Regulation:

9/02 – [SB 1078](#), California Renewables Portfolio Standard Program

9/02 – [SB 1038](#), Renewable Energy

9/02 – [AB 57](#), Electrical Corporations: Procurement Plans

10/03 – [SB 67](#), California Renewables Portfolio Standard Program

9/06 – [SB 107](#), Renewable energy: Public Interest Energy Research, Demonstration, and Development Program

10/07 – [SB 1036](#), Energy: Renewable Energy Resources

10/07 – [AB 809](#), Energy: Renewable Energy Resources

4. Date Enacted: 9/12/2002

5. Date Effective: 1/1/2003

C. RULEMAKING

1. Implementing Authority:

- a. **California Energy Commission (CEC):** The CEC is responsible for
 - Certifying eligible renewable resources that meet program criteria
 - Designing and implementing a tracking verification system. The CEC in partnership with the Western Governors Association is currently developing the Western Renewable Energy Generation Information System (WREGIS), a certification and tracking system that will be available to western states and producers within those states in 2007.

- b. **California Public Utilities Commission (PUC):** The PUC is responsible for developing program implementation rules, which include the following:
 - Set annual procurement targets (APT) for each utility based on the prior year's APT plus an incremental target of at least 1 percent of a utility's retail sales in the prior year. The baseline from which the utilities started was based on the actual percentage of retail sales derived from eligible renewable energy in 2003.
 - Review and approve annual renewable energy procurement plans from retailers, and solicitation protocols (Requests for Offers) of the IOUs, subject to requirements of Program.
 - Establish market prices for electricity. The CPUC shall make specific determinations of market prices after the closing date of a competitive solicitation conducted by an electrical corporation for eligible renewable energy resources.
 - Establish the process followed by covered retailers in selecting "least cost" bidders that "best fit" the retailer's resource needs.
 - Provide standard terms and conditions and review long-term purchase contracts for electricity to be used to meet requirements of law.
 - Approve applications by an IOU to allow construction of new transmission facilities that are necessary in connection with renewable energy.
 - Establish any new policy rules or modifications to existing program requirements within its jurisdiction or as directed by Legislature.

2. Rulemaking Completed to Date:

- 3/03 – CEC issues [Committee Order on RPS Proceeding and CPUC Collaborative Guidelines](#) (Docket # 03-RES-1078)
- 6/03 – CPUC issues [Decision 03-06-071](#) initiating the implementation of the RPS
- 4/04 – CPUC issues order instituting new RPS proceeding, [Rulemaking 04-04-026](#)
- 6/04 – CPUC issues three implementation decisions
[Decision 04-06-014](#), [Decision 04-06-015](#), and [Decision 04-06-013](#)
- 7/04 – CPUC issues [Decision 04-07-029](#), on least-cost and best-fit criteria
- 12/04 – CPUC issues [Ruling for Phase 2 of RPS program](#)
- 2/05 – CPUC issues [Ruling releasing renewable avoided cost calculation](#)
- 5/05 – CPUC issues [Decision 05-05-011](#) on participation in RPS program by distributed generation systems
- 7/05 and 10/05 – CPUC issues decisions approving 2005 short- and long-term RPS plans of the IOUs ([Decision 05-07-039](#) and [Decision 05-10-014](#))
- 11/05 – CPUC issues [Decision 05-11-025](#), establishing framework for RPS program participation by non-IOU retailers
- 12/05 – CPUC issues [Decision 05-12-042](#), establishing methodology for calculating 2005 market price of renewable energy
- 4/06 – CPUC issues [Resolution E - 3980](#) setting the Market Price Referent for the IOUs' 2005 solicitations
- 5/06 – CPUC issues [Decision 06-05-039](#) approving IOU 2006 renewable energy plans and solicitation packages
- 10/06 – CPUC issues [Decision 06-10-019](#) setting the ground rules for the participation of ESPs and CCAs.
- 10/06 – CPUC issues [Decision 06-10-050](#) adopting the reporting and compliance methodology for the RPS program.
- 5/07 – CPUC issues [Decision 07-05-028](#) setting rules regarding the use of short-term contracts.
- 7/07 – CPUC issues [Decision 07-07-027](#) adopting tariffs and standard contracts for water, wastewater, and other customers generating RPS-eligible electricity.

9/07 – CPUC issues [Decision 07-09-024](#) adopting a greenhouse gas adder to be included in the 2007 MPR.

D. TARGETS AND TIMETABLES

1. Brief Overview: Retailers subject to program requirements must increase their use of generation derived from eligible renewable resources at a rate determined by the CPUC, and no less than one percent per year, reaching 20 percent no later than 2010. The schedule below applies to investor-owned utilities; electric service providers and community choice aggregators are not subject to procurement requirements until 2006.

2. Schedule

Year	Percent of total sales derived from renewable energy
2004	At least 1 % > than base load renewable use
2005-2010	At least 1 % > previous year
2010	20 % of total sales

- 3. Treatment of Existing Capacity:** Eligible facilities placed in operation after September 26, 1996, and facilities operational prior to that date that were qualifying small power production facilities (QFs) under CFR Title 18 either located in California, or that began selling electricity to a California electrical corporation prior to September 26, 1996, under a Standard Offer Power Purchase Agreement authorized by the CEC. Certain new hydropower facilities are not eligible. Existing MSW combustion located in Stanislaus County and operational prior to September 26, 1996 is eligible to meet the RPS. In addition, a geothermal generation facility originally commencing operation prior to September 26, 1996 is also RPS eligible.
- 4. Sunset Clause:** The legislation does not have a sunset provision. Retailers must maintain a 20 percent renewable energy portfolio beyond the 2010 target year.

E. ELIGIBLE FUELS AND TECHNOLOGIES

- 1. Eligible Resource:** Eligible renewable energy resources fall into four categories.
- (i) Facilities meeting the definition of ‘in-state renewable electricity generation technology’ as defined in CPUC Code 383.5. Specifically:
- Biomass: Facilities generating electricity from biomass energy shall be considered an in-state renewable electricity generation technology facility to the extent that they report to the commission the types and quantities of biomass fuels used and certify to the satisfaction of the commission that fuel utilization is limited to the following: (A) Agricultural crops and agricultural wastes and residues. (B) Solid waste materials such as waste pallets, crates, dunnage, manufacturing, and construction wood wastes, landscape or right-of-way tree trimmings, mill residues that are directly the result of the milling of

lumber, and rangeland maintenance residues. (C) Wood and wood wastes that meet all of the following requirements: (i) Have been harvested pursuant to an approved timber harvest plan prepared in accordance with the Z'berg-Nejedly Forest Practice Act of 1973 (Ch. 8 commencing with Sec. 4511), Pt. 2, Div. 4, Public Resources Code). (ii) Have been harvested for the purpose of forest fire fuel reduction or forest stand improvement. (iii) Do not transport or cause the transportation of species known to harbor insect or disease nests outside zones of infestation or current quarantine zones, as identified by the Department of Food and Agriculture or the Department of Forestry and Fire Protection, unless approved by those agencies.

- Solar thermal
- Photovoltaic
- Wind
- Geothermal
- Existing Small hydropower (30 MW or less)
- Certain conduit hydropower facilities and efficiency upgrades at existing hydropower facilities
- Ocean wave, ocean thermal, or tidal current
- Waste tire
- Digester gas
- Landfill gas
- Municipal solid waste (MSW) conversion is allowed; MSW combustion is not allowed. Solid waste conversion means a technology that uses a non-combustion thermal process to convert solid waste to a clean burning fuel for generating electricity. The only exception is that MSW combustion located in Stanislaus County and operational prior to September 26, 1996 is allowed. In addition, facilities engaging in the combustion of MSW or tires are not eligible for receipt of RPS supplemental funding for above-market costs. Biomass not meeting the requirements of 383.5(d)(6) as specified in SB 1038 is also not eligible for supplemental funding.

(ii) A geothermal generation facility originally commencing operation prior to September 26, 1996.

(iii) Small hydroelectric generation facility of 30 megawatts or less placed in service before September 12, 2002. A new hydroelectric facility is not an eligible renewable energy resource if it will require a new or increased appropriation or diversion of water under Division 2, Part 2 of the California Water Code.

The output of a small hydroelectric generation facility of 30 megawatts or less procured or owned by an electrical corporation as of the date of enactment of this article shall be eligible only for purposes of establishing the baseline of an electrical corporation pursuant to paragraph (3) of subdivision (a) of Section 399.15.

(iv) MSW combustion located in Stanislaus County and operational prior to September 26, 1996.

2. **Special Incentives:** None specified
3. **Exclusions:** MSW combustion is not allowed. The only exception is that MSW combustion located in Stanislaus County and operational prior to September 26, 1996 is allowed. In addition, facilities engaging in the combustion of MSW or tires are not eligible for receipt of RPS supplemental funding for above-market costs. Biomass not meeting the requirements of 383.5(d)(6) as specified in SB 1038 is also not eligible for supplemental funding.
4. **Treatment of Self-Generation:** An October 2002 PUC decision from allows self-generation of renewable energy to count, but the details have not yet been fully determined. A decision was issued 5/05 that declared renewable energy credits from renewable self-generation remain the property of the facility owner; however, the decision does not fully resolve how these credits are to be measured and counted toward utility RPS requirements.
5. **Location of Generating Facilities:** The original authorizing legislation appeared to preclude use of out-of-state generation except from generators with dedicated transmission lines into the state. However, subsequent legislation (SB 67 and SB 107) and a California Energy Commission ruling clarified language to permit eligible out-of-state generation that is delivered into the state.
6. **Eligibility of Green Pricing Programs:** Not specified.

F. COVERED UTILITIES

1. **Classes of Retailers Covered:** All investor owned utilities have been covered by program requirements from the outset. Competitive Energy Service Providers (ESP) and Community Choice Aggregators (CCA) will be subject to provisions of the RPS in 2006 or when current purchasing contracts expire, whichever comes first. Municipal utilities and special districts (e.g., irrigation districts) are “self-regulated” or loosely subject to program targets but not to program regulatory controls.

PUC rules adopted for ESPs and CCAs in November 2005 require compliance with fundamental aspects of the RPS program, including procuring 20 percent of their retail sales from renewable energy sources by 2010, increasing their procurement of renewable energy by at least one percent of their retail sales per year, and reporting to the PUC on their compliance with these requirements. These rules were expanded upon in a subsequent October 2006 decision. Policy mechanisms that may facilitate ESP and CCA compliance, such as renewable energy credits (issues also relevant to IOUs), are being explored but remain unresolved.

2. **Share of state sales/capacity/delivered power covered:** Obligated utilities (including publicly owned utilities) account for about 98 percent of total 2006 state electricity sales.
3. **Apportionment of Obligation among Utilities:** Beginning on January 1, 2004 (January 1, 2006, for ESPs and CCAs), each electrical corporation shall increase its total procurement of eligible renewable energy resources by at least an additional one percent of retail sales per year so that 20 percent of its retail sales are procured from eligible sources by 2010. For purposes of setting annual procurement targets, the PUC shall establish an initial baseline for each electrical corporation based on the actual percentage of retail sales procured from eligible renewable energy resources in 2003, adjusted as may be required.
4. **Exemptions by Customer Class:** None specified

G. COST PROVISIONS

1. **Cost Cap for Retailers:** Retail sellers are required to meet renewable targets set by the PUC, provided sufficient funds are available in a “virtual” fund roughly equivalent to \$770 million for the IOUs to cover “just and reasonable” above-market costs for new renewable energy resources. The PUC shall make specific determinations of market prices after utilities receive bids in the annual renewable energy solicitation. If the above-market funds, in combination with the market prices approved by the PUC, are insufficient to cover the above-market costs of eligible renewable energy resources, retail sellers are allowed to limit their annual procurement obligation to the quantity of eligible renewable energy resources that can be procured with available funds. Once these funds are exhausted, an electric corporation shall not be required to enter into long-term contracts with eligible renewable energy resources that exceed the market prices established by the PUC.
2. **Cost Cap for Consumers:** None. Rates are approved by the PUC in regular utility cases, and include procurement costs for renewable energy. The PUC does not regulate rates of ESPs and CCAs.
3. **Cost Recovery Mechanism:** The PUC pre-approves IOU cost recovery for renewable contracts that meet certain RPS standard terms and conditions and are deemed reasonable for rate recovery. Indirect costs associated with the purchase of eligible renewable energy resources shall not be eligible for above-market funds, but shall be recoverable by an electrical corporation in rates, as authorized by the PUC. The PUC can permit retailers to fold increased costs of the RPS into the rate base. The PUC does not regulate rates of ESPs and CCAs.
4. **Supply Contract Requirements:** The RPS requires that retail sellers meet their annual procurement obligations with a minimum percentage of a combination of long-term contracts and contracts for new renewable resources, equal to 0.25

percent of their load in the previous year. These minimum contract standards were established in a May 2007 PUC decision ([Decision 07-05-028](#)). The decision also allowed the use of short-term contracts for RPS compliance. In June 2003, the PUC adopted standard terms and conditions for contracts of 10, 15, and 20 years. These standard terms and conditions were re-compiled in a PUC decision in April 2008.

- 5. Special Funds:** SB 1036 transferred the “Supplemental Energy Payment” funds that had been collected in the New Renewable Resources Account in the Renewable Resource Trust Fund to IOUs to refund to ratepayers. SB 1036 also discontinued future Systems Benefit Charge (SBC) collections for the New Renewable Resources Account. Instead, the legislation established a virtual “above-market fund” to support the above-market cost of long-term contracts for new renewable resources. This above-market fund is equivalent to the amount in New Renewable Resources Account plus the amount of future SBC collections – approximately \$770 million.

H. COMPLIANCE AND ENFORCEMENT

- 1. Certification, Tracking, and Trading Mechanisms:** The CEC shall certify eligible renewable energy resources and design and implement an accounting system to verify compliance with the RPS by retail sellers, to ensure that renewable energy output is counted only once for the purpose of meeting the RPS of California or any other state, and for verifying retail product claims in California or any other state. When it is operational, California is planning to use WREGIS, a voluntary, private certifying and trading arrangement that the CEC and other western states are crafting, for certification and tracking.

The bundled electricity product (i.e. commodity electricity plus renewable energy credit) purchased by a retailer includes all environmental attributes, including any associated carbon emission attributes. Currently, ownership of the attributes belongs to the utilities for QF purchases, and to the customer-generator for DG-based systems.

- 2. Flexibility:** In the event that an electrical corporation fails to procure sufficient eligible renewable energy resources in a given year to meet the RPS target, the electrical corporation shall procure additional eligible renewable energy resources in subsequent years to compensate for the shortfall if sufficient above-market funds are available to cover any above-market costs of eligible renewables. The electrical corporation may carry a deficit for up to three years, and may “bank” excess procurement indefinitely. Electrical corporations can also seek waivers under specific conditions.
- 3. Penalties, Procedures, Powers:** The PUC is permitted to issue penalties for non-compliance through their general authority. In June 2003, the PUC set penalty amount at 5 cents per kWh a retailer is deficient in renewable generation, with an annual cap of \$25 million per utility.

4. **Treatment of emission allowance or reduction credits:** All environmental attributes, including any associated carbon emission attributes, are included in the bundled electricity product (i.e. commodity electricity plus renewable energy credit) purchased by a retailer. The PUC is currently deciding whether a REC embodies a negative carbon emissions value, or if the carbon emissions value is zero.
5. **Escape Clauses:** Retailers that are not creditworthy may be released from their obligations by the PUC to procure resources, but procurement obligations continue to accrue.

Retail sellers are required to meet renewable targets set by the PUC, provided sufficient above-market funds are available to cover any above-market costs for new renewable energy resources. If those funds are insufficient, an electric corporation shall not be required to enter into long-term contracts with eligible renewable energy resources that exceed the market price referent established by the PUC.

I. ADMINISTRATION

1. Administering Entities and Contact Information

California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Phone: (415) 703-2782
Fax: (415) 703-1758
Web site: <http://www.cpuc.ca.gov>

California Energy Commission
1615 Ninth Street
Sacramento, CA 95814-5512
Phone: (916) 654-4058
Web site: <http://www.energy.ca.gov/renewables>

J. REPORTING REQUIREMENTS

1. Reporting and Review Requirements:

- a. **PUC-jurisdictional retailers:** Electrical corporations under PUC jurisdiction must report to the PUC on the previous year progress by March 1, and current year progress to date on August 1. The reporting requirements were established by the PUC in a July 2005 decision.
- b. **Municipal utilities:** Each local publicly owned (municipal) electric utility shall report, on an annual basis, to its customers, (1) expenditures of public goods funds collected for renewable energy resource development, and (2) the resource mix used to serve its customers by fuel type. Because a violation of the Public Utilities

Act or an order of the PUC is a crime under existing law, the RPS legislation will impose penalties for not complying with state-mandated programs by creating a new crime.

- c. **Administrative Entities:** The PUC was obligated to provide the legislature with an assessment of the RPS program by 2003. The [Renewables Committee Final Renewable Resources Development Report](#) (RRDR) (Commission Publication number 500-03-080FD) was released on 11/19/2003. The PUC has issued quarterly RPS status reports to the Legislature since October 2006. These reports are available on the [PUC website](#).

For a full listing of RPS-related reporting, see the [SB 1038 Proceeding Documents Page](#).

2. **Cost Information:** The 2007 benchmark market price for electricity for use in evaluating RPS contracts was 9.572 cents kW/h for a 20-year contract starting in 2008. The “market price referent” to be calculated for each solicitation conducted by an electrical corporation is updated annually. For those competitively solicited long-term contracts that go above the market benchmark, the above-market fund pays the difference—provided there are sufficient funds available. The [2007 Market Price Referent Calculation](#) was released by the CPUC on October 4, 2007 for the 2007 RPS solicitation.

K. STATUS AND SPECIAL NOTES

1. **Status:** The Renewable Resources Development Report [see above] concludes that cost trends for production of renewable electricity suggest that the RPS policy is economically feasible. The report indicated that many renewable technologies are close to cost parity with conventional power sources and that renewable costs have been declining and will continue to do so.

In addition to the 2003 Renewable Resources Development Report, on May 8, 2003, the CEC, PUC, and California Power Authority adopted an [Energy Action Plan](#) that accelerates the renewable-energy target to reaching 20 percent renewable generation by 2010 instead of 2017. The subsequent Energy Action Plan II, which was adopted on September 21, 2005, establishes a goal of achieving 33 percent renewable energy generation by 2020.