

Energy Commission
RENEWABLE ENERGY PROGRAM
Summary of Activities
October 1, 2005 – December 31, 2005

New Renewable Facilities Program (NRFP)

The NRFP fosters the development of new in-state renewable electricity generation facilities by providing financial support. With the passage of SB 1038 and SB 1078, the program provides production incentives, referred to as Supplemental Energy Payments (SEPs), for each kilowatt-hour of eligible electricity the facilities generate. SEPs are available to cover the appropriate above-market cost of renewable resources selected by retail sellers to fulfill their Renewables Portfolio Standard (RPS) obligations.

Prior to the passage of the above legislation, the NRFP was funded pursuant to AB 1890 and SB 90 with the intent of providing financial support to prospective new renewable projects. The following summarizes results of the initial NRFP under AB 1890 and SB 90:

- Incentive payments totaling more than \$3.98 million were made during this quarter.
- More than \$131 million is encumbered for participating auction winners.
- Forty-seven projects are currently online and producing electricity, representing 488 megawatts (MW) of new renewable capacity.
- Since its inception in June 1998, the NRFP has paid a total of over \$58 million in production incentives to 45 new renewable generating facilities for 5,964 gigawatt-hours (GWh) of generation.
- Funding Award Agreement REN-98-006, Amendment 1, was approved to assign funding for the Buena Vista Landfill Gas Power Project from the County of Santa Cruz to Ameresco Santa Cruz Energy LLC and increase project capacity from 1.97 MW to 3.2 MW.
- Funding Award Agreement REN-98-049, Amendment 1, was approved to reduce the award to the City of Sunnyvale (at its request) from \$210,448 (18,709,000 kWh) to \$103,968 (9,193,626 kWh).

Renewables Portfolio Standard Program (RPS)

Statutes require retail sellers to increase the renewable content of their electricity sales by at least 1 percent per year, with a goal of serving 20 percent of the state's retail electricity sales with renewables by 2017. California policy accelerates the target to 2010 and the Governor expanded the goal to achieving 33 percent renewables by 2020 for both investor-owned utilities and municipal utilities.

Renewable generators that win a contract through an investor-owned utility's competitive solicitation may be eligible for SEPs from the Energy Commission. Eligible new or repowered facilities priced above the market price referent (MPR) may apply for SEPs from the Energy Commission to pay the difference between the contract price and the MPR. The Energy Commission may set a cap on the amount of SEPs it issues.

- This quarter, Pacific Gas & Electric (PG&E) and San Diego Gas & Electric (SDG&E) continued to negotiate contracts with shortlisted bidders from their 2004 RPS competitive solicitations, and both executed contracts.
- PG&E, SDG&E, and Southern California Edison (SCE) evaluated bids from their 2005 RPS solicitations.

- Recent procurements:
 - SCE received approval for a new solar energy renewable resource procurement contract for 500 MW with SES Solar One LLC (CPUC Resolution E-3967). The contract will start in 2007 with a 1 MW commercialization project. This will be the world's largest solar thermal contract and is the first commercialization of this technology. Full build-out would be between 2010 and 2012. The fixed price does not require supplemental energy payments. For the project to be successful, the vendor needs to build a mass production plant and bring down current costs.
 - The CPUC also approved SCE's request for approval of a new wind energy power purchase agreement (CPUC Resolution E-3963). The contract term is 20 years with an initial on-line date of December 2007 for 22 – 75 MW at a 35 percent capacity factor.
 - SDG&E filed advice letters for 4 renewable contracts:
 - A new 205.5 MW wind project (Pacific Wind) located in Tehachapi. This is a 20-year contract with EnXco.
 - A 15 MW biogas facility (Algonquin, MM Prima Deshecha Energy) with 5 MW of new capacity and 10 MW of existing capacity. This is a 15-year contract.
 - A new 3.75 MW biogas facility (Covanta Power Pacific) for a 10-year term.
 - A new 300 – 900 MW solar thermal facility (SES Solar Two) located in Imperial Valley, similar to SCE's contract for a 500 MW solar thermal facility.
 - The CPUC approved the contracts for the biogas facilities and the solar thermal facility (Resolution Number E-3965), and approval of the wind contract is pending.
- CPUC Activities:
 - On November 18, the CPUC approved a broad brush decision on how the Energy Service Providers (ESPs), Community Choice Aggregators (CCAs) and small multi-jurisdictional utilities will comply with the RPS (Decision 05-11-025). These retail sellers are subject to the same rules as the IOUs for the following: the same targets, the same flexible rules of compliance, the same penalties, and the same reporting to the CPUC on their RPS procurement progress. The decision stated that further investigation was needed to develop implementation rules for the ESPs, CCAs, and small multijurisdictional utilities, which the CPUC initiated December 14. This proceeding will also investigate the use of Renewable Energy Certificates in the RPS.
 - In December, the CPUC adopted D.05-12-042 describing the methodology for calculating the 2005 market price referent to be used in the 2005 RPS solicitation.
- To date, no contracts have been eligible for supplemental energy payments.

Western Renewable Energy Generation Information System (WREGIS)

The Energy Commission is working with the Western Governors' Association, state and provincial representatives, and renewable energy market participants to design and implement a regional renewable energy tracking system (WREGIS) as required by RPS statutes.

- The Energy Commission continues to develop details of the contract with the Western Electricity Coordinating Council (WECC) as the institutional home of the WREGIS.
- The Department of General Services (DGS) released the Request for Proposals (RFP) for the WREGIS software and operations and maintenance on September 19, 2005.
- DGS held a Bidder's Conference for the WREGIS RFP in Hearing Room A of the Energy Commission on October 18, 2005.
- The Interim WREGIS Committee, composed of the chairs from the Operational Rules Committee and the Institutional Committee, along with a member from WECC, were responsible for conducting the election of the permanent WREGIS Committee. The election was conducted electronically on November 16, 2005. A run-off election was necessary and took place November 17-18, 2005.

- There have been eight addenda issued to the WREGIS RFP.
- Draft proposals were submitted on December 27, 2005. Staff held confidential discussions with all bidders who submitted draft proposals.
- The Energy Commission estimates that WREGIS will be operational in early 2007.

Existing Renewable Facilities Program (ERFP)

This program provides production incentives of up to 1.0 cent per kilowatt-hour to biomass, solar thermal, and wind facilities. Payments are tied to market prices, with no payments made if the market price is above a predetermined target price.

- During this period, about \$6.5 million in payments were made for 1,110 GWhs of generation for August through October 2005.
- To date, payments totaling \$223.0 million have been made to existing facilities for generation from January 1998 through October 2005.
- ERFP rollover funds — those remaining after payments have been made and rolled over to the next payment cycle as available funds — total \$31.7 million.
- 378 facilities are registered as renewable suppliers, with 102 eligible for funding from the ERFP.
- At the Business Meeting on November 30, 2005, the Energy Commission adopted the following revisions to the ERFP Guidebook:
 - Increase the target price for tier 1 biomass facilities only, by \$0.008/kWh for November 2005 through April 2006 generation, and by \$0.005/kWh for May and June 2006 generation.
 - Increase the cap for tier 1 biomass facilities only by \$0.005/kWh for November 2005 through June 2006 generation.
 - The increased target prices and cap will apply to generation produced from November 1, 2005, through June 30, 2006, only.

Emerging Renewables Program (ERP)

The ERP provides consumers of electricity in investor-owned utility service territories with a financial incentive to offset the cost of purchasing and installing new renewable energy systems at their homes and businesses.

- During this quarter, payments totaling \$11.8 million were made for 820 installed systems, representing nearly 3.9 MW of capacity.
- During the fourth quarter, approximately 2,392 reservation requests were received representing about \$42 million in rebates and 15 MW of capacity.
- Payments to date total \$234 million for 15,630 systems, representing approximately 64 MW of distributed generation capacity.
- Funds encumbered for 5,260 systems total \$82 million, representing 26.9 MW of capacity. Because the ERP can encumber funds that will be collected through 2006, and \$60 million from 2007 through 2011 (authorized by AB 135), a total of over \$43 million remains available for rebates.
- Beginning in January 2005, Assembly Bill 135 (Reyes, Statutes of 2004) authorized the use of \$60 million of program funds that will be collected beginning in 2007.
 - Pilot Performance-Based Incentive Program (PBI)

This pilot program began in January 2005 as a possible long-term option for building the PV market in CA. With a budget of \$10 million, the program offers a rebate level of \$0.50 per kWh based on the energy production of the installed solar PV system. The initial reservation period is

one year to install the PV system. Quarterly performance payments are made over a three-year period.

- The PBI received 19 applications during the quarter representing approximately \$4.75 million in reserved funds and over 1,500 kW of capacity.
- As of December 31, 2005, a total of \$3,550 had been paid on 1 system (7.7 kW of solar capacity).
- Since the beginning of the PBI, 31 applications have been received totaling \$7.45 million in reservations and 2.2 MW of capacity.

- Affordable Housing Program

Solar PV systems installed on affordable housing projects and meeting defined criteria are offered rebates 25 percent higher than the standard ERP rebate, not to exceed 75 percent of the system cost.

- During this quarter, payments of \$86,114 were made to 10 affordable housing projects.
- 250 projects are pending completion for 715 kW of capacity.
- A total of \$1.03 million has been paid for 95 completed projects representing 212 kW of generating capacity as of December 31, 2005.

- Solar Schools Program

In May 2004, \$4.5 million in incentives was offered for the installation of PV systems for eligible public and charter schools. By June 30, 2004, the Solar Schools Program closed after all funds were awarded. The program is funded equally by the Energy Commission's Emerging Renewables Program (\$2.25 million) and the California Attorney General's Alternative Energy Retrofit Account (\$2.25 million). Solar Schools Program participants receive double the current ERP rebate.

- During this quarter, the program paid over \$1.096 million to 9 schools resulting in more than 171 kW of installed solar capacity.
- As of December 31, 2005, 15 schools had completed their PV projects with an additional 16 schools scheduled for completion in early 2006.
- Payments at the end of the quarter total \$1.972 million for approximately 318 kW of solar capacity. The Solar Schools Program represents a total of 700 kW of renewable electricity capacity.

- Updated public information concerning the ERP continued to be made available on the Energy Commission's website.

California Solar Initiative (CSI)

The CSI is a \$2.9 billion solar incentive program to be jointly administered by the CPUC and Energy Commission from 2007 through 2016. The CSI will replace the solar components of both the ERP and the CPUC's Self-Generation Incentive Program.

- A CPUC Draft Decision was issued on December 13, 2005 on the CSI. Energy Commission staff provided supporting information, drafts, and comments on material used in preparation of the Draft Decision.

Consumer Education Program

This program awards grants and contracts to increase public awareness of renewable energy and its benefits, and to help build a consumer market for renewable energy and emerging renewable technologies. Consumer Education funds are also used for tracking and verifying renewable energy purchases under the RPS.

- A work authorization for \$74,848 was developed under the Renewable Energy Program's technical support contract with KEMA to conduct a series of photovoltaic installation and inspection training workshops. The workshops targeted builders, installers, inspectors, and other building officials. A total of six workshops were held in the Central Valley locations of Stockton, Chico, Modesto, and Fresno in October, November, and December 2005.
- At the California Building Officials (CALBO) Education week from October 3-7, 2005 in Concord, Energy Commission staff managed a booth and provided handouts and notices of photovoltaic inspection training classes. Staff provided similar support and additional notices of training classes for two subsequent CALBO Education weeks in Ontario and Modesto, California, in October and November, respectively.
- A grant agreement for \$50,000 was developed with the Rachus Institute for the Solar Decathlon 2005 project. The Solar Decathlon was a competition among 18 colleges and universities from around the globe, featuring team-designed and built solar homes, and held on the National Mall in Washington, D.C. in October 2005. The Rachus Institute is developing the educational element of the project – a video and book. The video will highlight California's representative, the California Polytechnic State University, San Luis Obispo team, designing and constructing an 800-square foot solar home as part of the competition. The book will include floor plans, elevations, heating & cooling strategies, electrical specifications, material specifications, computer modeling results, and interior and exterior photos. As a result of the competition, the Cal Poly team placed third overall; first in the performance of energy-efficient appliances and lighting category; and second in architecture, dwelling, and comfort design category.

In October 2005, the Rachus Institute submitted a video outline as part of their deliverable. No payments were made to the Rachus Institute this quarter.

- Payments totaling \$11,676 were made during this period for consumer education activities
- Payments of \$94,682 were made during this period for WREGIS activities.
- Consumer Education disbursements since the beginning of the program total over \$5.2 million.