Aggressive Renewable Power Targets

The California Public Utilities Commission (CPUC) is implementing the Renewables Portfolio Standard (RPS), one of the most ambitious renewable energy programs in the country.

The RPS program requires utilities to increase procurement from eligible renewable energy resources by at least 1 percent of their retail sales annually, until they reach 20 percent by 2010. The program will add 6,750 megawatts of new renewable power and reduce CO_2 emissions by 18.7 million metric tons (equivalent to taking approximately 2.8 million cars off the road).

The CPUC's responsibilities for the RPS program, established in 2002 under Senate Bill 1078 and accelerated in 2006 under Senate Bill 107, include:

- Determining annual procurement targets and enforcing compliance.
- Reviewing and approving each utility's renewable energy procurement plan.
- Reviewing utility contracts for RPS-eligible energy.
- Establishing the standard terms and conditions used by utilities in their contracts for eligible renewable energy.

Utilities are making progress toward attaining the 2010 renewable energy target and the CPUC is now identifying the steps necessary to meet even higher goals beyond 2010, such as Governor Schwarzenegger's goal that 33 percent of electricity sales come from renewable sources by 2020.

Renewable energy sources include:

- Biodiesel
- Biomass
- Digester gas
- Fuel cells (using renewable fuels)
- Geothermal
- Landfill gas
- Limited municipal solid waste
- Ocean wave, ocean thermal, and tidal current
- Photovoltaic and solar thermal
- Small hydroelectric (30 megawatts or less)
- Wind

Feed-in Tariffs

The CPUC has made feed-in tariffs available for the purchase of up to 480 megawatts of renewable generating capacity from small facilities throughout California. These feed-in tariffs present a simple mechanism for small renewable generators (under 1.5 megawatts per project) to sell power to a utility at predefined terms and conditions, without contract negotiations. The CPUC expects that participating small facilities will sell their renewable power to utilities and help contribute to California's ambitious environmental and renewable energy goals.

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Go Solar California!

Solar energy is our most abundant renewable resource, and California leads the nation with over 500 megawatts of clean solar energy generated at over 50,000 different locations. The California Solar Initiative helps drive this solar revolution by providing cash rebates for utility customers who install eligible solar systems on the customer side of the meter. The $3.3 billion program will run until the end of 2016, and incentive levels are designed to decline as more megawatts of solar are reserved and installed. The Go Solar California statewide campaign is comprised of three main components:

1) The California Solar Initiative program, managed by the CPUC, provides incentives to existing homes, businesses and non-residential buildings, affordable housing, and solar water heating. The California Solar Initiative has a Research and Development component designed to fund projects that will accelerate the deployment of solar energy in California.

2) The New Solar Homes Partnership, managed by the California Energy Commission, provides partnering opportunities and incentives for builders and developers of new homes that exceed basic energy efficiency standards and include solar as an option on homes.

3) The publicly owned utility programs, developed and administered separately by the state's municipal electric utilities, will offer similar solar programs to their customers.

Self-Generation Incentive Program

The CPUC's Self-Generation Incentive Program (SGIP) provides incentives to support existing, new, and emerging distributed energy resources. The SGIP provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter. Qualifying technologies include wind turbines and fuel cells, as well as advanced energy storage technologies combined with an eligible technology.

The SGIP is one of the largest distributed energy incentive programs in the U.S., with nearly 1,200 projects on-line. Since the inception of the SGIP in 2001, the on-line capacity of distributed generation technologies has grown at an average rate of over 40 megawatts per year. By the end of 2008, the total online capacity of SGIP projects was 330 megawatts. Cogeneration technologies represent over 50 percent of that on-line capacity funded by the SGIP program.

Net Energy Metering

Customers who install small solar, wind, biogas, and fuel cell generation facilities (1 megawatt or less) to serve all or a portion of on-site electricity needs are eligible for the state's net energy metering program. A customer using an eligible technology for on-site generation can send excess energy to the grid, and in return the customer receives a monthly bill credit that can be applied towards electricity consumed during other periods. This program facilitates the use of on-site generation for thousands of California's electricity consumers.

For more information contact the CPUC's News and Public Information Office at
(415) 703-1366 or news@cpuc.ca.gov, or visit www.cpuc.ca.gov.

Groundbreaking Energy Efficiency Goals

Building on California's proud history in energy efficiency, in 2005 the California Public Utilities Commission (CPUC) created the most ambitious energy efficiency and conservation program in the history of the utility industry in the U.S. That decision authorized $2 billion in energy efficiency funding for 2006-2008 for the state's utilities, reaffirming that cost-effective energy efficiency is the state's least expensive and most environmental resource, as well as the first line of defense against power shortages.

Energy Efficiency: A Way of Life

In September 2009, the CPUC approved $3.1 billion for energy efficiency programs administered by the States's investor-owned utilities for 2010-2012, the largest commitment ever made by a state to energy efficiency, further confirming the state's leadership. The programs:

- **Avoid the construction of three 500 megawatt power plants, save almost 7,000 gigawatt-hours of electricity and 150 million metric therms of natural gas, and avoid 3 million tons of greenhouse gas emissions.**
- **Create between 15,000 and 18,000 new jobs.**
- **Launch the nation's largest home retrofit program.**
- **Provide $175 million to launch California's Big Bold Energy Strategies for zero net energy homes and commercial buildings.**
- **Provide more than $260 million in funding for 64 cities, counties, and regional agencies for local efforts targeting public sector building retrofits and leading edge energy efficiency opportunities.**

What is Energy Efficiency?

Energy efficiency typically refers to the installation of technologies or tools and associated behavioral management to eliminate energy losses in homes, businesses, or in new construction. Energy efficient homes require less energy consumption while maintaining comparable service and comfort, thereby saving consumers money on their utility bill.

Long-term, the CPUC is utilizing Big, Bold Energy Efficiency Strategies to make energy efficiency an integral part of "business as usual" in California. In 2008 the CPUC adopted a statewide energy efficiency plan through 2020 that lays out strategies to achieve greater levels of efficiency across all electric and natural gas use. The plan includes working toward goals for all new residential construction in California to be zero net energy by 2020; all new commercial construction will follow by 2030.

To encourage utilities to invest in energy efficiency, the CPUC established a risk/reward program. It provides financial incentives to ensure that energy efficiency is viewed as a core part of a utility's operations by affording meaningful earnings for shareholders. The shareholder "reward" side of the incentive is balanced by the risk of financial penalties for possible substandard performance in achieving the CPUC's energy savings goals. California also utilizes "decoupling," which allows utilities to retain expected earnings even as energy efficiency programs reduce sales.

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Groundbreaking Energy Efficiency Goals (continued)

As part of the utilities' 2010-2012 energy efficiency efforts, the CPUC's goals include:

- Widespread benchmarking of energy use by commercial and institutional buildings.
- Comprehensive energy efficiency retrofit of homes to produce energy savings.
- Workforce education and training to expand knowledge and green jobs.
- Expansion of on-bill financing to help small businesses and government facilities take energy efficiency actions more easily.

Energy Savings Through Water Efficiency

Water conservation and efficiency offers energy use savings potential. By saving water and the associated energy to deliver it or heat it, or treating it more efficiently, it is possible to produce significant energy savings. The CPUC oversees several pilot programs and activities to test effective approaches for reducing energy consumption related to water use.

Low Income Energy Efficiency

Conserving energy and saving money on utility bills is especially important to the state's low income households. The CPUC's Low Income Energy Efficiency (LIEE) program provides services at no cost to low income households who meet income guidelines, shown below.

Household Size	LIEE Income Limit
1 to 2	$30,500
3	$35,800
4	$43,200
5	$50,600
6	$58,000
Each additional	$7,400

(effective to May 31, 2010)

Services available include efficient lighting, attic insulation, energy efficient refrigerators, energy efficient furnaces, weather-stripping, caulking, low-flow showerheads, water heater blankets, and door and building envelope repairs, which reduce air infiltration.

Water and Energy

A California Energy Commission report found that water-related energy use accounts for about 19 percent of the state's electricity, 30 percent of its natural gas, and 88 billion gallons of diesel fuel per year.

Supporting California's Goals

Energy savings from improved energy efficiency helps to support California's climate goals. The landmark Global Warming Solutions Act (Assembly Bill 32) sets greenhouse gas reduction goals for the state. Energy efficiency contributes to reaching these goals by reducing fossil fuel consumption from power plants and customers' on-site natural gas use. Energy efficiency also contributes to reaching the goals of Governor Schwarzenegger's Green Building Initiative, which requires that state buildings reduce their energy consumption by 20 percent.

For more information contact the CPUC's News and Public Information Office at (415) 703-1366 or news@cpuc.ca.gov, or visit www.cpuc.ca.gov.

January 2010

An Energy Plan for California

In 2003, the California Public Utilities Commission (CPUC), the California Energy Commission, and the California Power Authority adopted an Energy Action Plan. That plan had an enormous impact – it represented the first time the energy agencies had described a common, unified approach to further the state's energy policy goals.

The Energy Action Plan establishes shared goals and proposes specific actions to ensure that reliable and reasonably priced electrical power and natural gas supplies are achieved and provided through policies, strategies, and actions that are cost-effective and environmentally sound.

The Energy Action Plan supports a "loading order" of preferred resources to meet California's increasing energy needs. Energy efficiency and demand response are first, followed by renewable sources and clean distributed generation. To the extent that these efforts are unable to satisfy increasing energy and capacity needs, the state supports clean and efficient fossil-fired generation. Concurrently, electricity transmission infrastructure must be improved to support the development of renewable energy sources.

Building on the Energy Action Plan, the California Legislature, the CPUC, and other state agencies have taken a number of steps to put California on the map as a state that's committed to innovative and groundbreaking energy initiatives and policies. The CPUC, California Energy Commission, and other state agencies participate in public forums throughout the year to discuss Energy Action Plan implementation efforts.

The Energy Action Plan outlines six sets of actions of critical importance to California:

1. **Optimize energy conservation and resource efficiency**
2. **Accelerate the state's goal for renewable generation**
3. **Ensure reliable, affordable electricity generation**
4. **Upgrade and expand the state's electric transmission and distribution infrastructure**
5. **Promote customer and utility owned distributed generation**
6. **Ensure reliable supply of reasonably priced natural gas**

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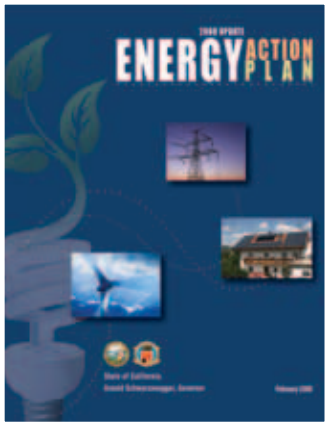
An Energy Plan for California (continued)

"The Energy Action Plan is a very progressive program for California. It recognizes the severe threat global warming presents and adopts an environmentally sensitive, green agenda. It emphasizes reducing per capita electrical use and relying on renewable energy sources such as solar, wind, and biomass, along with greater emphasis on energy efficiency programs to meet California's future energy needs."

– CPUC President Michael R. Peevey

The Energy Action Plan is a living document meant to change with time, experience, and need. In 2005, the CPUC and California Energy Commission, with active participation from other state agencies, adopted a second plan, the Energy Action Plan II, to reflect the policy changes and actions of the ensuing two years. In 2008, the Energy Action Plan was updated to examine the state's ongoing actions in the context of global climate change.



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January 2010

Protecting the Environment
California's Commitment to Clean Energy

California leads the nation in aggressively addressing climate change with policies to reduce greenhouse gases and increase energy efficiency and renewable energy. The landmark Global Warming Solutions Act of 2006 (Assembly Bill 32) established the first-in-the-world comprehensive program of regulatory and market mechanisms to achieve real, quantifiable, cost-effective reductions of greenhouse gases. The Global Warming Solutions Act requires that statewide greenhouse gas emissions be reduced to 1990 levels by 2020. In addition, Governor Schwarzenegger has set a target of reducing emissions to 80 percent below 1990 levels by 2050.

The California Public Utilities Commission (CPUC) and California Energy Commission are providing guidance to the California Air Resources Board (CARB) on how to reduce greenhouse gas emissions from the electricity and natural gas sectors. CARB will implement the Global Warming Solutions Act.

Recognizing that cleaner electricity production is an essential factor in reducing greenhouse gas emissions, the CPUC has been engaged in proactive climate change work since 2004, when it adopted a policy requiring the state's investor-owned utilities to account for the future financial risk associated with greenhouse gas emissions in evaluating new long-term resource investments. This Greenhouse Gas Adder, expressed in dollars per ton of CO_2, is used by utilities in evaluating long-term energy procurement.

Addressing Climate Change

The CPUC's energy efficiency, demand response, and renewable energy policies are among the most aggressive in the nation and eliminate the need for new power plants and encourage investment in emerging technologies.

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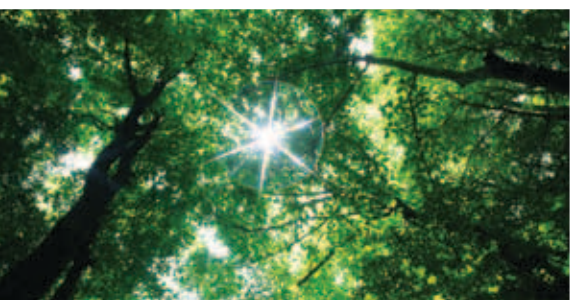

Protecting the Environment (continued)

In 2009, the CPUC initiated steps to understand the energy demand and grid implications of electric and natural gas vehicles, and to consider policies, revised rates, or other actions that can expedite California's transition away from gasoline and diesel fuels.

In 2007, the CPUC adopted an interim Greenhouse Gas Emissions Performance Standard (Senate Bill 1368) in an effort to help mitigate climate change. This first-of-its-kind Emissions Performance Standard is a facility-based emissions standard requiring that all new long-term commitments for generation to serve California consumers are with power plants that have emissions no greater than a combined cycle natural gas turbine plant. That level is 1,100 pounds of CO_2 per megawatt-hour. "New long-term commitment" refers to new plant investments (new construction), new or renewal contracts with a term of five years or more, or major investments by a utility in its existing power plants. A permanent cap on emissions is currently being evaluated by CARB according to the Global Warming Solutions Act.

Climate Action Team

The CPUC is a member of the California Climate Action Team, which is led by the Secretary of the California Environmental Protection Agency. Other California agencies on the team include the Business, Transportation and Housing Agency; the Department of Food and Agriculture; the Resources Agency; the Air Resources Board; and the Energy Commission. The goal of the team is to implement global warming emission reduction programs and report on the progress made toward meeting statewide greenhouse gas targets. For more information visit California's climate change portal at www.climatechange.ca.gov.

For more information contact the CPUC's News and Public Information Office at (415) 703-1366 or news@cpuc.ca.gov, or visit www.cpuc.ca.gov.

January 2010

Ensuring Adequate Electricity Transmission

New transmission infrastructure is necessary for California to meet its ambitious renewable energy goals because most renewable-rich areas are located far from population centers.

The California Public Utilities Commission (CPUC) is responsible for siting and permitting the transmission projects proposed by California's investor-owned utilities.

The CPUC evaluates proposed transmission projects based upon their economic, reliability, or renewable need, and performs the environmental analyses necessary to determine the best route for those lines that it determines are needed.

Identifying Transmission Needs

The CPUC initiated the formation of the California Renewable Energy Transmission Initiative (RETI), a multi-stakeholder collaborative process to identify the most cost-effective renewable resource areas in and around the state and the transmission projects needed to bring those resources to market.

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Ensuring Adequate Electricity Transmission (continued)

The CPUC has streamlined the transmission project permitting process, resulting in more efficient and timely project review. The total of new transmission approved by the CPUC for the state's investor-owned utilities is more than 500 miles, primarily in five major lines carrying 9,000 megawatts (MW), in the past three years with an infrastructure investment of more than $4.5 billion. Projects approved include:

- San Diego Gas and Electric Company's Sunrise Powerlink Transmission Project to support the development of renewable energy in the Imperial Valley, one of the state's richest renewable energy regions.
- Southern California Edison's Tehachapi Renewable Transmission Project to provide access for up to 4,500 megawatts of renewable energy generation, primarily wind from the Tehachapi Wind Resource Area in Kern County, and deliver it to Los Angeles and San Bernardino counties.
- Southern California Edison's Devers-Palo Verde No. 2 (DPV2) transmission line project, which will reduce costs to consumers and increase the reliability of the interstate transmission network.
- San Diego Gas and Electric Company's Miguel Substation and Imperial Valley transmission projects, which will reduce transmission and energy costs to consumers.

Accessing Clean Energy

In conjunction with the formation of RETI, the CPUC approved Southern California Edison's request to develop a Renewable Transmission Feasibility Study to access new renewable resources located in western Nevada, Inyo and eastern San Bernardino counties, the Salton Sea area of California, and western Arizona.

Additional information about current transmission projects being considered by the CPUC, environmental review, and the permitting process is available on the CPUC's website at: www.cpuc.ca.gov/PUC/energy/transmission.htm.

For more information contact the CPUC's News and Public Information Office at (415) 703-1366 or news@cpuc.ca.gov, or visit www.cpuc.ca.gov.

January 2010

Harnessing the Power of the Sun Through the California Solar Initiative

California has a goal of installing 3,000 megawatts of new customer-owned, distributed solar projects by 2016 under the California Solar Initiative, moving the state toward a cleaner energy future and helping lower the cost of solar systems for consumers. In 2005, the CPUC began developing the California Solar Initiative under Governor Schwarzenegger's Executive Order and later, in 2006, under state law (Senate Bill 1). California leads the nation in installed solar energy capacity; the state already has over 550 megawatts of grid-connected solar installed in nearly 50,000 locations. The California Solar Initiative helps drive this "solar revolution" by providing cash rebates for utility customers who install eligible solar systems. The $3.3 billion program will run until December 31, 2016, and incentive levels are designed to decline as more megawatts of solar are reserved and installed.

The Go Solar California campaign has three distinct programs, each with a portion of the statewide budget and solar installation goals:

1) The CPUC provides incentives to customers of Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas and Electric Company. These three utilities represent about 75-80 percent

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The California Solar Initiative (continued)

of California's electric use. The incentives provide performance-based payments for solar for existing homes and existing and new commercial, industrial, government, non-profit, and agricultural properties. The budget for this program is $2.167 million over 10 years, and the goal is to reach 1,940 megawatts of installed solar capacity by 2016.

2) The New Solar Homes Partnership, managed by the California Energy Commission, provides incentives for the installation of solar on new residential construction. The budget is $400 million over 10 years, with a goal of 360 megawatts.

3) The Publicly Owned Utilities program requires each municipal utility to offer a solar incentive program, an aggregate commitment of $784 million over 10 years, toward a goal of 700 megawatts.

Since its inception in 2007, the California Solar Initiative has consistently seen record levels of demand for solar rebates. The annual rate for new installed solar capacity nearly doubled in 2008 over 2007. Weekly program demand data, including new rebate applications, installed systems, and system costs can be found at www.CaliforniaSolarStatistics.ca.gov.

The Go Solar California program focuses exclusively on on-site, grid-connected solar that is used by electric customers who want to offset some portion of their own load by installing self-generation. The program does not fund wholesale power plants designed to serve the electric grid or help utilities meet Renewables Portfolio Standard obligations.

For more information visit www.GoSolarCalifornia.ca.gov.

For more information contact the CPUC's News and Public Information Office at (415) 703-1366 or news@cpuc.ca.gov, or visit www.cpuc.ca.gov.

January 2010

Lowering Electricity Peaks Through Demand Response

The California Public Utilities Commission (CPUC) has authorized a suite of demand response programs for utilities that have a combined impact of 2,700 megawatts, equivalent to approximately five large power plants.

Demand response programs allow consumers and businesses to reduce the use of their electricity during times of high energy demand when resources are scarce or expensive. This enhances electric system reliability, reduces power purchases and individual consumer costs, avoids the need to build power plants, and protects the environment.

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Lowering Electricity Peaks Through Demand Response (continued)

Smart Meters, which the CPUC has approved for the state's utilities, replace conventional customer electric meters and represent an integral part of the state's demand response efforts. By providing customers with access to pricing information that more accurately reflects actual market conditions, this technology will give customers greater control over their energy use and bills.

The CPUC is developing time-differentiated rates that reflect the true cost of electricity. Customers on these rates will have the opportunity to lower their bills by reducing their electricity use during the most expensive time of the day when the least efficient and most-polluting power plants would otherwise be operating.

Demand response joins energy efficiency as the state's preferred way to meet electricity demand, as outlined in the state's Energy Action Plan.

For more information contact the CPUC's News and Public Information Office at (415) 703-1366 or news@cpuc.ca.gov, or visit www.cpuc.ca.gov.

January 2010