

California Energy Regulatory Update, December 2008

Lon W. House
530.676.8956
www.waterandenergyconsulting.com

PG&E

Buys From Sempra

PG&E announced that it has entered into a long-term agreement with El Dorado Energy, LLC, a wholly-owned subsidiary of Sempra Generation, to purchase 10 megawatts of renewable, photovoltaic solar energy from Sempra Generation's new El Dorado Energy Solar facility in Nevada. The El Dorado Energy solar facility is located on 80 acres adjacent to Sempra Generation's existing gas-fired power plant in Boulder City, Nevada. Power deliveries to PG&E are expected to begin by January 1, 2009. The project will generate up to 23.2 gigawatt-hours of renewable energy annually. That is equivalent to the amount of energy needed to serve more than 3,360 residential homes annually.

More Renewables

The CPUC approved two new renewable energy contracts for Pacific Gas and Electric Company (PG&E), furthering the state's progress towards its 2010 and 2020 renewable energy goals.

The table below provides a brief explanation of the projects:

Generating Facility	Type	Term Years	Capacity (MW)	Energy Deliveries (GWh)	Online Date	Location
San Joaquin Solar 1 and 2	Solar Thermal / Biofuel	20 years	106 MW	700 GWh	06/30/2011	Coalinga, California
Klondike IIIa	Wind	10 years	90 MW	Year 1-5: 263 GWh Year 6-10: 132-263 GWh	12/31/2008	Sherman County, Oregon

Through its agreement with San Joaquin Solar, PG&E will receive deliveries equal to approximately 700 gigawatt hours (GWh) of energy per year. The project, which is owned by Martifer, will generate electricity using a hybrid of solar thermal and biofuel technology and will be located in Fresno County, California.

PG&E's agreement with Klondike IIIa represents new capacity at Iberdrola Renewable's Klondike Wind facility, which PG&E began procuring energy from in

2007. Generation at the expanded project is expected to begin at the end of 2008, thus contributing to PG&E's 2010 Renewable Portfolio Standard (RPS) goal.

SCE

Sued

The state Attorney General has sued Southern California Edison and two property owners to recoup \$7.4 million it cost to fight the Shekell fire in late 2006. The fire, which burned more than 13,000 acres in the Moorpark area, had two origins: a power pole near Happy Camp park and a private power pole on Shekell Road. The lawsuit says Edison was negligent in maintaining its power poles, and that it should be financially responsible for the cost to fight the Happy Camp fire -- about \$5.3 million. The fire that started on the Happy Camp property, north of Moorpark, burned more than 10,000 acres. That fire merged with the Shekell fire, which started about two miles south.

The suit also alleges negligence on the part of property owners Caprock Inc. and Grimes Rock Inc., who maintained a private electrical system on Shekell Road, the location of the start of the first fire, which burned 3,300 acres. The state is seeking \$2.1 million in damages for this fire.

The lawsuit was filed on behalf of the Ventura County Fire Protection District and the California Department of Forestry (Cal Fire).

Cal Fire's November lawsuit was filed just days after U.S. District Judge Valerie Baker sentenced Steven Butcher to 45 months in prison and ordered him to pay the \$101.6 million it cost to fight the 2006 Day fire in the Los Padres National Forest. The homeless and mentally ill man inadvertently started the fire -- one of California's largest wildfires.

Of the 5,488 fires in California in 2006, 352 of them were caused by power lines, according to the State Office of Emergency Services.

SDG&E

Fire Curtailments

SDG&E asked state regulators to review its plan to cut off power to the much of the backcountry during times of high fire risk -- three months after it first tried to implement the idea. When the utility announced the plan in October and told some customers they could lose power during hot, windy weather, it heard protests from water districts, school officials, politicians and consumer activists. The critics said SDG&E's plan would leave parts of the county in the dark, without water and unable to receive information at a critical time. The water districts went to court seeking an injunction.

Hundreds of homeowners and local and state governments have sued the utility over damage caused by last year's fires. CPUC investigators said this year that the Witch Creek, Guejito and Rice Canyon fires were caused by poorly

maintained lines owned by SDG&E and Cox Communications. The companies have disputed those findings.

Rural customers would be subject to losing power during red-flag warnings when humidity is low and winds reach sustained speeds of 35 mph or gusts up to 55 mph. The utility is asking the PUC to change Rule 14, which specifies the conditions under which it would be liable to customers for shutting off their power. Its existing rule requires the company to do everything it can – “reasonable diligence” in legal terms – to keep the lights on. The proposed change adds language that SDG&E “does not guarantee” uninterrupted power to customers and can cut off electricity when it decides safety and emergency conditions warrant.

At the CPUC, customers and others affected by the shutoff plan will be able to comment, and hearings could take place as early as April. SDG&E said it wants a decision from the CPUC by July so it can cut off power during any Santa Ana event after Sept. 1. In part, that's because many areas burned in the 2003 Cedar fire have grown back. Outages could last from 12 to 72 hours and residents would be notified through the Reverse 911 system and calls from SDG&E. Special efforts would be made to notify people who rely on electricity for medical devices – some of whom could be contacted up to seven times, the utility said.

CPUC

(A06-08-010) Sunrise Powerlink

The CPUC approved plans to build a \$1.9-billion Sunrise transmission line. Meeting in San Francisco, voted 4-1 to approve a proposed decision by President Michael Peevey to allow San Diego Gas & Electric Co. to use ratepayer funds to build 123 miles of new high-voltage lines.

The commission's dissenter, Dian Grueneich, couldn't persuade her colleagues to support an alternative decision. It would have authorized the line, but only if SDG&E, a unit of San Diego-based Sempra Energy, complied with strict requirements that it be filled with electrons from “green” sources. Developers, who want to invest millions of dollars in power plants to generate alternative energy, say they won't be able to secure financing without a commitment from the state that the line will be available to carry their electricity to market. The Sunrise plan, which has been before the commission for three years, has solid backing from state, local and ethnic chambers of commerce, many San Diego County governments and labor unions. But it has garnered equally strong opposition from environmental groups, consumer advocates and rural communities that lie along the line's path, roughly paralleling the U.S.-Mexico border.

The commission's approved the alternative route. The utility originally wanted to run the line through Anza-Borrego Desert State Park, a vast preserve that spans portions of Riverside, San Diego and Imperial counties.

(R.06-04-010) Energy Efficiency

The CPUC authorized energy efficiency payments for the state's investor owned utilities for their energy efficiency programs. In 2007, the CPUC adopted a Risk Reward Incentive Mechanism. Utilities earn a percent of the total cost savings resulting from the deployment of energy efficiency if they meet at least 85 percent of the goals. However, if a utility's performance falls below 65 percent of goal, they are subject to penalties. Between 85 percent and 65 percent, the utilities are in a "deadband", neither earning rewards nor paying penalties.

The energy efficiency programs are on a three-year cycle and utilities file interim claims each year throughout the cycle. Under the existing framework, these interim claims are subject to verification by the CPUC's Energy Division. Due to the delays that have been encountered in the completion of the Energy Division's verification reports, and the adverse impacts these delays have on the effectiveness of the incentive mechanism in motivating the utilities to aggressively pursue energy efficiency, the decision determined that utility claims can serve as a reasonable basis for authorizing some interim payments immediately.

To reduce the risk of overpayment, the decision significantly increases the percent of the interim claims that are held-back from 35 percent to 65 percent. This yields interim incentives of \$41.5 million, \$24.7 million, \$10.8 million, and \$5.2 million for Pacific Gas and Electric Company, Southern California Edison, San Diego Gas and Electric Company, and SoCal Gas respectively. In addition, the decision changes the policy by which the incentive payments are true-up at the close of the three year cycle. For the 2006-2008 program cycle, the decision eliminates the existing approach whereby the utilities could continue to earn additional incentives even if on review their performance was found to fall in the deadband. As with the increased holdback adopted by today's decision, reinstating the deadband will significantly reduce the risk of overpayment.

(R.08-03-008) California Solar Initiative, Self-Generation Incentive Program and Other Distributed Generation Issues

The commission also temporarily suspended rate collection for the California Solar Initiative from SDG&E and Edison ratepayers, due to a surplus [D08-12-004]. The revenue collected exceeds the solar incentives and program administration costs—SDG&E expects a \$90 million overcollection at the end of the year and Edison expects \$343 million.

No Climate Change Institute

The commission vacated its spring decision creating an institute on climate change. The unanimous ruling cited a September law that barred the CPUC from collecting money for the effort (AB 1338). The commission approved the California Institute for Climate Solutions in April, planning to use \$60 million per year of ratepayer funds over the next decade for various universities and labs to research ways to cut greenhouse-gas emissions.

ARB

Approves Blueprint

The initial plan to cut the state's emissions by 15% from today's level over the next 12 years, bringing them down to 1990 levels. While the plan is specifically focused on the 2020 goal, it will put the state on course to meet a larger goal of lowering greenhouse gas emissions to 80 percent of 1990 levels by 2050.

It was not without controversy. The Legislative Analyst's Office, in a report prepared for Republican Assemblyman Roger Niello, declares that "the plan's evaluation of the costs and savings of some recommended measures is inconsistent and incomplete." And economists recruited for a "peer review" come to similar conclusions. "While I support the Governor's broad AB 32 goals, I am troubled by the economic modeling analysis that I have been asked to read," UCLA professor Matthew Kahn wrote. "AB 32 is presented as a riskless 'free lunch' for Californians. These economic models predict that this regulation will offer us a 'win-win' of much lower greenhouse gas emissions and increased economic growth. I would like to believe this claim but after reading through the economic analysis and the five appendices there are too many uncertainties and open microeconomic questions for me to believe this." Kahn's critique that the plan tends to puff up benefits and minimize costs is echoed by another peer reviewer, Harvard University's Robert Stavins: "I have come to the inescapable conclusion that the economic analysis is terribly deficient in critical ways and should not be used by the state government or the public for the purpose of assessing the likely costs of CARB's plans. I say this with some sadness, because I was hopeful that CARB would produce sensible policy proposals analyzed with sound scientific and economic analysis."

Here are some specifics:

- Transportation

Key measures:

- New limits on vehicle emissions
- 10 percent reduction in carbon content in vehicle fuels
- Rules forcing new housing and commercial developments to reduce reliance on automobiles
- Big trucks required to be more aerodynamic; ships in port must use electricity rather than diesel fuel to power operations
- High-speed rail

- Electricity generation

Key measures:

- Produce 33 percent of electricity from renewable sources
- Stricter energy-efficiency requirements
- Produce more electricity from waste heat
- 1 million solar roofs

- Industry

Key measures:

- Energy-efficiency audits
- Reduction of leaks from oil and gas transmission

- Stricter regulation of oil refinery flaring stacks

- Consumers

Key measures:

- New regulations on air-conditioning refrigerants, including new inspections as part of vehicle smog check

- Fees on the sale of industrial gases thought to have a high potential to cause global warming; fee would generate \$300 million to \$1 billion per year and the revenue would be used for programs that reduce the emission of greenhouse gases

- Limits on use in consumer products, including boat horns, pressurized gas dusters and tire inflators.

- New regulations on about 86,000 large commercial and public facilities using air conditioning requiring them to monitor, report and repair leaks from refrigeration and air conditioning equipment.

- Commercial/residential

Key measures:

- New energy-efficiency regulations

- Solar water heaters

- Waste management

- Better control of methane gas releases from landfills

- Cap and trade

Under this system, the state will set limits on the amount of greenhouse gases that each sector of the economy can emit each year. The air board will then issue permits allowing companies within each sector to produce emissions. The permits will either be given away or auctioned, but once they are distributed, they will take on a value of their own, because existing or new companies will not be able to emit greenhouse gases without a permit. The permits will be tradable, so companies that can eliminate some of their emissions for less than the cost of a permit will be likely to do so and then sell their permits to companies that would find it cheaper to buy a permit than reduce their emissions. This flexibility is supposed to lead to a large reduction in emissions at the least possible cost to society. In the end, the cap-and-trade system is expected to reduce emissions by about 35 million metric tons, equivalent to about 6 percent of the greenhouse gas emissions expected by 2020 under the "business as usual" scenario. That reduction would be about 20 percent of the total reductions expected by 2020.

- Offsets

Offsets allow companies that would otherwise be required to reduce emissions to instead pay another entity to do so on their behalf. Depending on how the system is set up, those selling offsets might be limited to California, the western United States, the entire country or be anywhere in the world. The main requirement would be that the sellers be those not otherwise required to reduce their emissions. One example might be timber land owners, who by preserving their forests instead of cutting them can store carbon emissions rather than releasing them. A cement plant that finds it too expensive to reduce its emissions could instead pay a timber company to keep a defined amount of land in its natural

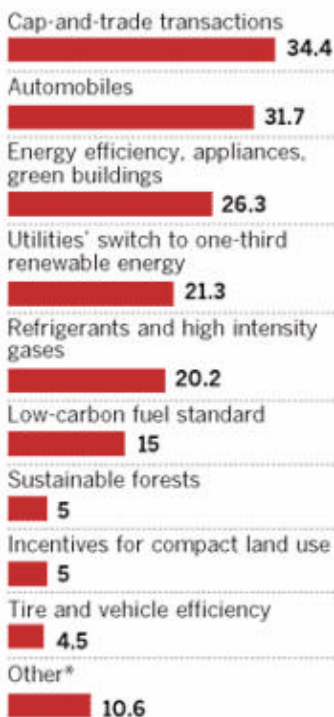
state. Under the air board's plan, no more than 49 percent of the emissions reductions in the cap-and-trade program could come from the purchase of offsets.

Cutting emissions

The California Air Resources Board adopted a blueprint to slash the state's emission of greenhouse gases to 1990 levels by 2020. Where and how the state plans to cut 174 million metric tons:

Proposed cuts, by source

(In millions of metric tons)



* Includes goods movement, port electrification, solar roof program, industrial measures, aerodynamic and hybrid trucks, high-speed rail and landfill methane capture.

Sources: California Air Resources Board, Associated Press. Graphics reporting by MARGOT ROOSEVELT

Strategies the state will use to cut emissions

Carbon trading

- Impose an emissions limit on utilities, refiners, fuels and large industrial sources.
- Allow those large polluters to lower emissions by participating in a cap-and-trade market.

Transportation

- Require automobile manufacturers to make less-polluting vehicles.
- Reformulate transportation fuels to be less carbon-intensive by 2020.
- Give local governments incentives to curb urban sprawl.
- Support efforts to build a high-speed rail system.
- Require ships to turn off their engines while docked.

Trash and recycling

- Capture methane emissions from landfills.
- Increase recycling.

Energy

- Require utilities to get one-third of their electricity from renewable sources by 2020.
- Strengthen energy-efficiency standards for appliances and buildings.
- Use less energy to transport and treat water.
- Fund incentives for solar roof panels and water heating systems.
- Require major industrial facilities to audit their energy use.

Industry

- Require refineries to reduce methane emissions.
- Limit flaring at oil refineries.

Forestry and agriculture

- Better manage forests to store carbon dioxide.
- Support processing of farm and dairy manure.

The California Air Resources Board's (ARB) Small Business Toolkit to facilitate voluntary greenhouse gas emissions reductions is available for review. A draft is now online and can be viewed at <http://www.coolcalifornia.org/business.html>

Adopts Diesel Requirements

The ARB adopted two regulations aimed at cleaning up emissions from the estimated one million heavy-duty diesel trucks that operate in California. The regulations are the first of their kind in the United States.

Beginning January 1, 2011, the Statewide Truck and Bus rule will require truck owners to install diesel exhaust filters on their rigs, with nearly all vehicles to be upgraded by 2014. Owners also must replace engines older than the 2010

model year according to a staggered implementation schedule that extends from 2012 to 2022.

Also adopted, the Heavy Duty Vehicle Greenhouse Gas Emission Reduction measure requires long-haul truckers to install fuel efficient tires and aerodynamic devices on their trailers that lower greenhouse gas emissions and improve fuel economy.

The greenhouse gas reduction measure applies to more than 500,000 trailers, while the diesel regulation applies to about 400,000 heavy duty vehicles that are registered in the state, and about 500,000 out-of-state vehicles that do business in California. Because many heavy duty vehicles are replaced or retired due to normal business practices on a faster schedule than what the new regulation will require, the number of vehicles expected to be retrofitted by 2014 under the rule is about 230,000, while up to 350,000 vehicles would be replaced earlier than normal over the next 15 years.

There are exceptions to the regulation, including low-use vehicles, emergency and military vehicles, and personal use motor homes. School buses would be subject only to requirements for reducing diesel particulate matter and not for engine replacement.

To reduce diesel emissions and improve air quality and public health, the With the new State Bus and Truck rule in place, by 2014, diesel emissions will be 68 percent lower than they would be without the regulation, while emissions of the smog-forming pollutant nitrogen oxides will be 25 percent lower.

CEC

2009 Integrated Energy Policy

The Committee's Final Report on "Forms and Instructions for Submitting Electronic Transmission Related Data" were approved and released.

Renewable Energy Portfolio Standards (RPS)

Public Comments for the December 1, 2008, Staff Workshop: Renewable Energy "Feed-In" Tariffs were made available

ISO

MRTU Someday

The ISO expressed "cautious optimism" that the market redesign and technology upgrade would be ready to launch by April 1, and the grid operator's Board of Governors gave the green light to file a 60-day MRTU "readiness" certification with the Federal Energy Regulatory Commission on Jan. 16th.

FERC

Approves In-Stream Hydrokinetic Project

The Federal Energy Regulatory Commission (FERC) issued its first full license for an in-stream hydrokinetic power project. The project will be located on the Mississippi River, in the output channel of a hydropower dam operated by the City of Hastings, Minnesota. FERC has previously issued only preliminary permits for in-stream, wave, and tidal energy projects, and its only full hydrokinetic license was for a wave energy project. For the Hastings project, Hydro Green Energy will provide two underwater turbines, each carrying a nameplate capacity of 100 kilowatts and an expected power output of about 35 kilowatts. So the project is expected to provide a 70-kilowatt boost in output to the 4.4-megawatt hydropower facility, and the FERC order is technically an amendment to the existing license for the facility.

The turbines will be suspended from a barge, and each turbine will drive a generator that is mounted atop the barge. The barge-mounted power plant is meant to be permanent, but it could easily be removed if any problems are found with the system. The barge will be anchored to the riverbed and tethered about 50 feet downstream from the hydropower dam, the Army Corps of Engineer's Mississippi Lock and Dam No. 2. Recognizing that there is very little operating experience from in-stream hydrokinetic project, FERC is requiring the city to immediately modify turbine operation or to remove the turbines or the barge if any adverse effects on water quality, fish, or diving birds are found.