



Briefing on State Water Project Power and Energy Issues

Background

Veronica Hicks, Chief of the Department of Water Resources (DWR) State Water Project Power and Risk Office, will brief the Commission on State Water Project (SWP) Power and Energy Issues.

Power Use and Production

The power needed to move water through the SWP, makes it a very large power consumer in California, accounting for 4 percent of the state's energy demand. It is also the third largest generator of clean hydroelectric power in California, generating 50 to 60 percent of its annual energy needs. The SWP has 20 pumping plants, four pumping-generating plants, and five hydroelectric power plants.

Operations

The SWP's flexible pumping operations help to manage its power needs. To reduce power costs, the SWP attempts to minimize pumping during on-peak hours when power prices are highest, saving money and reducing peak power demand. As much as possible, maximum pumping is scheduled during off-peak periods when power costs and overall demand are lower. However, in recent years, environmental restrictions and maintenance issues with the pumping and generating plants have limited the SWP's ability to utilize this flexibility.

Energy Efficiency/Green Energy

To reduce its greenhouse gas emissions (GHG), DWR is increasing its energy use from renewable sources and will not renew its contract for power from Reid-Gardner Unit 4, a coal-burning power plant, when the contract terminates in July of 2013. To help replace this energy, DWR recently entered into a contract with Alameda Municipal Power for 33 Megawatts (MW) of renewable energy from an existing geothermal project and landfill gas project. DWR also entered in to a long-term contract for rights to almost 100 MW from the Lodi Energy Center, a new, state of the art natural gas power plant. This new energy source releases 68 percent fewer emissions compared to generation from a coal-fired plant.

Greenhouse Gas Emissions Reduction

DWR met its AB32 goal of reducing GHG emissions to 1990 levels by 2020 a full 12 years ahead of schedule. In fact, DWR will have reduced its emissions to 50% below 1990 levels by the year 2020. By 2050, DWR plans to reduce its GHG emissions by 80 percent below its 1990 level of emissions. From 2007 to 2009, DWR measured, independently verified, and publicly reported its annual "carbon footprint" to the California Climate Action Registry (CCAR) and has been named a "Climate Action Leader" each year for reporting verified GHG emissions. DWR is one of only five state

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agencies that have achieved this status. CCAR has transitioned its registry to The Climate Registry and DWR has reported and independently verified its emissions from 2010 and 2011.

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