

California's Greenhouse Gas Emissions Reduction Initiative

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California Public Utilities Commission
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Executive Order S-3-05

- On June 1, 2005 Governor Schwarzenegger announced his Greenhouse Gas Initiative at the United Nations World Environment Day 2005
- The Governor signed Executive Order S-3-05 establishing greenhouse gas emissions targets for the state.

Note: the full text of S-3-05 and the Governor's speech can be found at www.climatechange.ca.gov

The Governor's CO₂ Emissions Targets

Date	CO₂ Emission Goals
2010	2000 levels (reduction of 59 million tons)
2020	1990 levels (reduction of 145 million tons)
2050	80% of 1990 Levels

Economic Implications of Global Warming and the Governor's Policy

- Global Warming will result in severe damage to the state's economy through sea level rise, rising temperatures, and threats to water supply
- The economic benefits of a carbon reduction policy are potentially large:
 - The policy will lead to investments in research and development into new technologies and the creation of a new industry
 - Businesses, government agencies and schools will save millions of dollars in utility bills by investing in energy efficiency measures.

Climate Action Team

- Governor Schwarzenegger established the Climate Action Team to implement emissions reduction programs.
- Led by the Secretary of the California Environmental Protection Agency
- Member agencies : Business, Transportation and Housing Agency; Air Resources Board; Energy Commission; Integrated Waste Management Board; Agriculture; the Resources Agency and; the Public Utilities Commission.
- Cap and Trade Working Group: Will provide recommendations to the Governor on a carbon cap and trade system.

POTENTIAL STRATEGIES TO REDUCE GREENHOUSE GAS EMISSIONS IN CALIFORNIA

Estimated GHG Savings for Considered Strategies (in Million Metric Tons CO₂ equivalent)

Strategy	Sector	2010	2020	Description of Strategy
Vehicle Standards	Automobile	1	30	Vehicle GHG emissions regulations.
Accelerated Renewable Portfolio Standard	Energy	5	11	Renewable energy goal of 20% of sales by 2010 and 33% of sales by 2020.
Zero Waste/High Recycling Programs	Waste Management	7	10	Increased recycling and waste reduction in the residential, commercial, and construction and demolition debris sectors.
Natural Gas Efficiency	Energy	1	6	Further gas efficiency savings
Appliance Efficiency Standards	Energy	3	5	Standards are proposed for a dozen or so new appliances not currently regulated.
Fuel-efficient Tires and Inflation Programs	Automobile	3	3	Initiatives to encourage use of low-rolling-resistance tires and the maintenance of adequate tire pressure
Solar PV Buildings Initiative	Energy	0.4	3	1 million new solar homes within 13 years and commercial installations
Diesel Anti-idling	Transportation	1	2	Reduced idling times and use of truck-stop electrification
Reduced Venting and Leaks in Oil and Gas Systems	Oil and Gas	1	1	reduced methane emissions in oil and gas production, processing, transmission, and distribution.
Green Buildings Initiative	Building and Facility Efficiency	not yet estimated		Program to reduce energy usage by 20 % in government and commercial buildings
Hydrogen Vehicles	Automobile	not yet estimated		Hydrogen fuel-cell vehicles
Total Reductions		23	70	

California's Energy Action Plan II

- Collaborative effort by California Public Utilities Commission and the California Energy Commission
- Reinforces “Loading Order” of resource additions established in EAP I
 - Energy efficiency and demand response are preferred resources
 - Renewables
 - Clean fossil-fired generation
- New section on Research, Development and Demonstration of new technologies for energy efficiency, renewables, clean fuels and GHG reduction
- New section on achieving Governor's GHG reduction targets
- New section on transportation fuels

CPUC Energy Efficiency Program

- Total Cumulative Savings Goals through 2013 established in Decision 04-09-060
 - 26,508 Gwh,
 - 6,892 MW, and
 - 444 MMth/yr
- IOUs' 2006-2008 Program Applications will exceed goals:¹
 - 7,443 GWh/yr (109% of target)
 - 1,525 MW Peak (104% of target)
 - 121,989 Mth/yr (109% of target)
- Total net benefits to ratepayers of \$2.3 Billion from 2006-2008 Programs
 - Average cost per kWh \$0.030
 - Average cost per therm \$0.212
- Cumulative lifetime electricity savings of measures installed in 2006-2008 will reduce GHG emissions by over 30 million tons
- Demand Response programs will result in over 2450 MW of peak savings in Summer 2005 primarily from aging, inefficient peaker plants

¹ Source for 2006-2008 Program year data, NRDC, "Comments of NRDC on Pacific Gas and Electric Company, Southern California Gas Company, Southern California Edison Company, and San Diego Gas and Electric Company's Applications for Approval of their 2006-2008 Energy Efficiency Programs and budgets" (A.05-06-004).

Renewable Portfolio Standards

- Renewable Portfolio Standard of 20% by 2010 and 33% by 2020 for all Load Serving Entities
 - Estimated GHG emissions reductions of 11 MMT
 - In 2004 approx. 13% of total IOU load served by eligible resources, equals 22,500,000 MWh/yr.
 - 2005-2006 IOU contracts add over 600 MW of new generation
- PUC Workplan on achieving 33% goal
 - Energy Foundation Study
 - Rulemaking on new transmission for renewables
 - EAP II Emphasis on encouraging municipal utilities to meet RPS