



Global Warming and California's Economy

California Climate Choices

A Fact Sheet of the Union of Concerned Scientists

GLOBAL WARMING poses significant risks to California's economy, but the latest economic research demonstrates that climate action can be profitable in the Golden State.

The Costs of Inaction

If heat-trapping emissions are not significantly reduced, climate models project that California's snowpack will shrink dramatically leading to less reliable water supplies, more frequent and more extreme heat waves will cause more deaths and increased energy demand, and more wildfires and worsening air quality conditions will impact public health. These global warming-induced impacts could cause serious damage to the California economy.

The July 2006 heat wave offers a glimpse into some of costs that global warming could impose on California. The heat wave caused air quality and public health problems in much of the state: 139 deaths have been attributed to the heat wave. County estimates show that more than 20,000 cows and nearly one million chickens and turkeys died during the heat wave.



The California dairy industry has asked for \$1 billion in disaster relief.

If global warming is not addressed, California's \$30 billion agricultural sector will face substantial challenges, such as the possibility of water supply disruptions made even more hazardous by higher temperatures. Premium wine grape growing, with \$3.2 billion dollars in revenue, is particularly threatened due to the sensitivity of these grapes to changes in climate. A recent study found that if global warming is not controlled, there will be little area left suitable for premium wine grapes in California by the end of the century.

*"The most expensive thing we can do is nothing."
-- Letter signed by 60 California economists calling for action to reduce California's global warming emissions.*

Economic Benefits of Action

Tackling the urgent task of reducing greenhouse gas emissions will not only produce environmental benefits. It can also grow the economy, enhance the competitiveness of California business, lead to innovation, and increase exports in the rapidly expanding clean tech sector.

The emerging research indicates that forward-thinking climate policy can spur economic growth in California. Two independent economic analyses show that policies to reduce heat-

trapping emissions to 1990 levels by 2020 will create jobs and increase economic growth in California.

Projected Economic Impacts of Achieving 1990 Emissions Levels by 2020

	Jobs	Income
Climate Action Team	+83,000	+\$4 billion
UC Berkeley	+17,000 to +89,000	+\$60 billion to +\$74 billion

The State Climate Action Team's economic analysis finds that a portfolio of energy efficiency and other policies will allow the state to meet its goal of reducing global warming emissions to 1990 levels by 2020 while generating an additional 83,000 jobs and \$4 billion in income.

A team of UC Berkeley economists has also studied the question of economic impacts using a state-of-the-art, economy-wide forecasting tool, which enables the tracing of the complex market interactions that a cap on global warming emissions will have across the economy. This study finds that capping emissions at 1990 levels by 2020 can boost the annual Gross State Product (GSP) by \$59 billion and create 17,000 new jobs by 2020.

The Berkeley study further finds that the economic gains could be even larger, \$76 billion in annual GSP and 89,000 new jobs by 2020, if climate policies are specifically designed to create direct incentives for California companies to invest in new innovations.

Not every policy will have a positive economic effect. Tree planting for example will not produce economic benefits. However, the bulk of policies will produce economic benefits, and the net effect will be significantly positive.

Efficiency

Pollution represents waste and is often indicative that resources can be used more efficiently. Numerous studies of businesses implementing greenhouse gas emission reduction strategies, which often have at their core more energy efficient technologies, have found that these strategies are profitable. These investments in energy efficiency quickly pay off and reduce energy costs. Lower costs make businesses more competitive.

Not only will energy efficiency measures save California businesses money, they reduce pressure on energy prices by reducing demand and provide insulation for the California economy against future price shocks in fossil fuels. Energy efficiency measures also save consumers money, and this increases consumer purchasing power for in-state goods and services, which further stimulates economic growth.

Clean Energy

Greater use of clean, renewable energy will be the second pillar of

climate action in California. Clean energy is increasingly cost effective; already wind energy is cheaper to produce than electricity from oil and gas. Greater use of renewable energy will also insulate California business from the increasing costs and volatility that we have come to expect from the oil and gas markets.



Innovation

Climate policies in California send a clear signal that innovation will be rewarded in the marketplace. In this way, climate action will accelerate the already proven inventive capacity of the California economy, and the result will be development of new and lower cost technologies.

Exports

New clean technologies will not only make it easier to reduce emissions, they will also form the basis for important new export markets for

California companies. Venture capital investment in “clean tech” has quadrupled since 2001. The global market for clean energy alone is expected to grow to \$167 billion by 2015.

Historical Evidence

Environmental policy has paid off economically for California before. The State has been a leader in energy efficiency standards for buildings and appliances, which have saved billions in energy costs. An authoritative study by RAND (2000) found that 1998 income per person in California was between \$875 and \$1300 higher due to energy efficiency programs implemented by the State from 1977 onwards. The study also found if there had been no improvement in energy efficiency, the California economy would have been three percent smaller in 1995.

Leadership

California, the rest of the country, and the rest of the world have benefited from California’s environmental leadership in the past. California’s brand of forward-thinking environmental policy is needed now, more than ever, in the effort to catalyze world action on global warming, and to generate the creative solutions that can turn the global warming challenge into an opportunity for abundant, clean energy, energy independence, and a more productive economy.

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