

## Editorial: California's green future depends on high-tech innovations

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For decades, California has led the nation with its clean and green policies. But inexorable population growth and aggressive greenhouse-gas reduction laws mean the next wave of environmental progress will need to be stronger, faster and more innovative than in the past.

That's the worthy call to action coming from a groundbreaking new report on California's environmental progress and prospects. The study, from the Next 10 foundation of Palo Alto and Collaborative Economics of Mountain View, sets up a "green innovation index" that provides a much-needed report card for evaluating the state's current environmental fervor, activism and economy. Sponsors plan to repeat the study and its useful benchmarks every year.

The Golden State has an unrivaled environmental track record to build on. Starting in the 1970s, California made major strides in energy efficiency, leading to economic benefits and a cleaner environment. Today, California spends the equivalent of just 1.79 percent of its gross domestic product on electricity, about half the percentage in Texas and less than the nation as a whole. The state's per capita greenhouse-gas emissions, which have been dropping steadily even as the economy has grown, are less than half the level elsewhere in the United States and lower than in Germany, the United Kingdom or Japan.

The report's authors rightly conclude that technological innovation holds the key to continuing environmental leadership. Breakthroughs in areas such as solar power and biofuels - many likely to come from Silicon Valley - could change the equation for energy costs and create major new markets and add jobs.

California, which will have a projected population of about 44 million by 2020, already has made a promising start on job growth in clean-technology industries. The state had about 20,000 "green tech" jobs in 2006, up from about 10,000 in 1990, according to the survey. The sharp emissions reductions required under the state's landmark global warming law, AB 32, could spur an additional 89,000 jobs by 2020, the report forecasts.

But major hurdles loom in at least two areas:

- **Car emissions:** Transportation accounts for 41 percent off the state's greenhouse-gas emissions, representing the biggest potential area for reductions under AB 32. But California still must win federal approval to implement a 2002 law requiring cleaner burning cars, and Congress has yet to pass legislation that would raise fuel efficiency standards for cars.
- **Solar costs:** Investment in solar technologies has taken off. But widespread residential adoption won't happen until solar's cost is brought down sharply. That will take leaps in mass production and tech breakthroughs such as moving beyond silicon in solar panels to cheap thin-film technologies. Congress should do its part by extending federal tax credits for installing solar power.

With the latest awareness of global warming, California's policy, technology, markets and consumer behavior are aligned to create a new wave of environmental progress. The state must not rest on its green laurels.