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**Title**

California's "Global Warming Solutions Act" of 2006

**Permalink**

<https://escholarship.org/uc/item/6j0249w8>

**Journal**

Oxford Energy Forum, 67

**ISSN**

0959-7727

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**Publication Date**

2006-10-01

## California's "Global Warming Solutions Act" of 2006

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1 October 2006

On 27<sup>th</sup> September 2006, California Governor Arnold Schwarzenegger signed into law the first binding program limiting greenhouse gas emissions in the US. The law—Assembly Bill (AB) 32—grew out of a multi-year effort of legislators, environmental groups, state businesses and the environmental justice community and establishes a framework for the creation of a comprehensive program to limit State emissions of greenhouse gases across all sectors of the economy. The goal of the program is to limit emissions in 2020 to the level they were in 1990, or about a 25% reduction from current levels. In this law, “greenhouse gases” are defined to include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, the same six gases as defined in the Kyoto Protocol.

Implementation will take place over several years through several stages, with full implementation starting in 2012. Detailed rule-making for the law will be the responsibility of the California Air Resources Board (CARB). Starting in 2006, AB32 set December 31 as the cut-off date for companies voluntarily reporting their emissions to the California Climate Action Registry to be grandfathered under that program, making them exempt from any future substantial changes to their emissions reduction programs as a result of new regulations from CARB. In addition, participating companies will get credit for their “early action” under the Registry program when specific emissions targets are set.

In 2007, CARB will publish a list of “early action” measures for the reduction of greenhouse gases that can be implemented before 2010. These measures in turn will be formalized into regulations by 2010 and become enforceable on January 1 of that year. CARB is also required to incorporate the reporting standards protocols of the Climate Action Registry to the extent feasible and to issue their own set at the beginning of 2008. At the same time, the Board is required to report the level of emissions in 1990s and to approve it as the formal 2020 target.

By 1<sup>st</sup> January 2009, CARB is directed to develop a statewide “scoping plan” indicating the maximum amount of emissions reductions that are technologically and economically feasible from specific sources or types of sources. This process will involve consultation with all other agencies with authority over greenhouse gas emissions (such as the Public Utilities Commission), public hearings, along with calculation of economic and non-economic costs and benefits from various measures. AB32 also establishes an Environmental Justice Advisory Committee and Economic and Technology

Advancement Advisory Committee to ensure that emissions of criteria pollutants and cumulative impacts are considered as reduction measures are being considered, and to determine the best targets of state-supported investment in technology research, development and deployment to reduce greenhouse gas emissions.

Finally, by 1<sup>st</sup> January 2011, CARB is required to publish implementing regulations to achieve the 2020 target, to go into effect one year later. The 2011 regulations must take into account the impact on public health and the economy, and specifically includes authority to use market-based mechanisms to achieve declining emissions limits. This includes a “cap and trade” program, which would establish a carbon market in California, but which must avoid the increase in emissions of other pollutants.

Industry and political concerns over the rigidity of reducing emissions to 1990 levels led to the inclusion of a “safety valve” that allows the Governor to suspend the regulations for one year in the case of serious economic challenges or catastrophic events such as an major earthquake.

Although AB32 is far-reaching and impacts nearly every part of the California economy, including its extensive chemical, biotech, oil and gas, agricultural, and health care industries, two main sectors stand out as keys to the programs success: transportation and power generation, which together account for nearly two-thirds of state emissions. Substantial progress in both areas is necessary to achieve the 2020 reduction targets. In the transportation sector, which accounts for 41% of California’s emissions, California has been a national leader in the push to improve vehicle efficiency, promote cleaner fuels, and reduce emissions, but recent policies have encountered stiff resistance from the automotive industry and the Federal government. In 2002, California passed a law requiring the CARB to develop and enact regulations by January 1, 2005 to achieve the maximum possible reduction of greenhouse gas emissions from passenger cars and light trucks, including SUVs. These regulations, collectively reducing emissions by 22% by 2012 and 30% by 2016, have been adopted and take effect in 2009. In late 2004, however, the Alliance of Automobile Manufacturers and California dealers filed suit in Federal court challenging the regulations, arguing that carbon dioxide reductions were primarily an issue of improving fuel economy, and that the Federal government has sole authority to regulate fuel economy. The California attorney general requested the US District Court to dismiss the suit in September 2006, and a hearing on the matter will be held in early 2007. Failure to win the suit or to achieve its dismissal would significantly reduce the possibility of achieving the 2020 target.

In a separate action intended to counter the auto companies’ suit against California’s vehicle emissions reduction target, California’s attorney general filed suit in September 2006 against the major automobile manufacturers—including Ford, Honda, Toyota, DaimlerChrysler, Nissan, and General Motors—claiming damages for the millions of tons of greenhouse gases that their products have emitted in California, citing billions of dollars in damages and seeking to hold the auto makers liable for future damages. Of greatest concern is the impact of global warming on California’s Sierra snow pack, the source of most of the state’s summer water supply and vital to the agricultural sector, the

largest in the country. The outcome of the suit is uncertain, although a similar suit against major utilities brought by eight states in 2004 was dismissed by a Federal court in 2005.

Power generation accounts for 22% of California's emissions, including those emissions generated out-of-state for electricity imports consumed in California. Here, California's successes to-date in promoting renewables and hydropower will likely make future reductions more difficult compared to other parts of the country where coal forms the primary fuel for power generation. Currently, renewables, large hydro, and nuclear power provide 42% of California's in-state generation, with natural gas accounting for another 38%. The balance—coal fired generation—is all from plants physically located out of state but in the California power control area. Imports, which provide 22% of California's power, are largely from the hydro-rich Pacific Northwest and the coal-dominated Southwest. AB32 will prohibit investor-owned utilities from purchasing power from out-of-state sources that do not meet the California emissions standards, effectively extending the impact of California's emissions cap to other states.

Given the relatively low proportion of coal-fired generation in the state power mix, achieving the 2020 target depends heavily on the success of California's Renewable Portfolio Standard (RPS) regulations, which requires investor-owned utilities to generate at least 20% of their power from renewables in 2010, and 33% by 2020, up from the current 10%. Although the public heavily favors the expansion of renewable energy, the RPS itself establishes complex bureaucratic hurdles to its development. Mindful of the chaos in California's deregulated electricity market in 2000 and 2001, when a combination of capacity shortages and market manipulation by traders led to rolling blackouts and widespread economic losses, California regulators now require developers and utilities to work with both the California Energy Commission and the Public Utilities Commission for approvals of any new renewable energy projects, resulting in substantial delays in implementation. As a result, California has added only 240 MW of new renewable energy capacity since 1999, compared to 2,200 MW of new renewable energy capacity in Texas, which has overtaken California as the largest wind power producer in the country.

The California Global Warming Solutions Act of 2006 is likely to set a precedent for adoption in other states. Already, eleven other states and three cities have brought suit against the Environmental Protection Agency to force it to regulate carbon dioxide as a pollutant. The case has gone to the Supreme Court, which will hear arguments and decide on the case in late 2006. In the US Northeast, seven states have agreed to implement the Regional Greenhouse Gas Initiative (RGGI), establishing a cap-and-trade program aimed at reducing utility emissions of carbon dioxide. In establishing its own regulations for implementation in 2012, California is required by AB32 to consider other national and international practices for greenhouse gas reduction, including voluntary programs and the operations of other carbon trading schemes such as the European Trading Scheme (ETS) and the voluntary Chicago Carbon Climate Exchange. Linkages to these programs would likely make California's own program more robust by increasing the size of the potential market for carbon, although the law does not specifically require a cap-and-trade scheme. As the twelfth largest greenhouse gas emitter in the world, California's

response to climate change will provide a foundation for the political consensus to emerge in the US for a national response.