

CWA Air Quality Task Force Report by Roberta Alderete, Santa Maria Chapter

California Statute requires a reduction in greenhouse gas (GHG) emissions to 1990 levels by 2020. The State has a long term goal of reducing emissions 80% below 1990 levels by the year 2050. Recently Governor Brown stated his intention for the State to adopt a 2030 GHG emission target to inform policy setting and program development. To support this target, several state agencies and the California Independent System Operator (CAISO) engaged Energy + Environmental Economic (E3) to evaluate the feasibility and cost of a range of greenhouse gas reduction scenarios in California.

The scenarios evaluated resulted in a 26% to 38% reduction in greenhouse gases by 2030 relative to 1990. These scenarios result in 2025 proportional emission reductions that are similar to the recently announced Obama administration goal of reducing U.S. net GHG emission 26% to 28% by 2025, relative to 2005 levels. On a per capita basis GHG emissions are much lower in California than the U.S. in both 2005 and 2025.

All scenarios rely on existing technologies and assume a continuation of current lifestyles and economic growth. The pace of emission reductions requires that key technologies are commercialized, reduced at scale, and achieve broad market adoption in the next 10-15 years.

The average household direct cost of the Straight Line Scenario is found to be \$8 per month in 2030 relative to current policy. This estimate includes all direct effects including changes in the average household's cost of transportation fuel, electricity and natural gas bills as well as the incremental capital outlays on energy efficiency and low-carbon vehicles. If all commercial and industrial costs are assumed to be passed on to households, the average household cost impact is \$14 per month in 2030 relative to current policy.

This study finds that successfully reducing California's greenhouse gas emissions requires significant progress on all the following;

1. Increasing the achievement of energy efficiency in buildings and transportation;
2. Switching to lower carbon fuel sources in buildings and transportation;
3. Producing low carbon electricity;
4. Producing low carbon liquid or gaseous fuels and
5. Reducing non-energy greenhouse gases.

These results are broadly consistent with other studies of low-carbon futures in the United States and the rest of the world. In the long run, actions from other states, the federal government and the international community are needed in order to achieve the levels of carbon reductions evaluated in these scenarios, both in terms of creating markets and economies of scale for low-carbon technologies, and in terms of mitigating the risks of global climate change.

Reference: Summary of the California State Agencies PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios, April 2015