

Reducing Oil Use in California

A Pathway to Cut Petroleum Consumption 50 Percent by 2030

HIGHLIGHTS

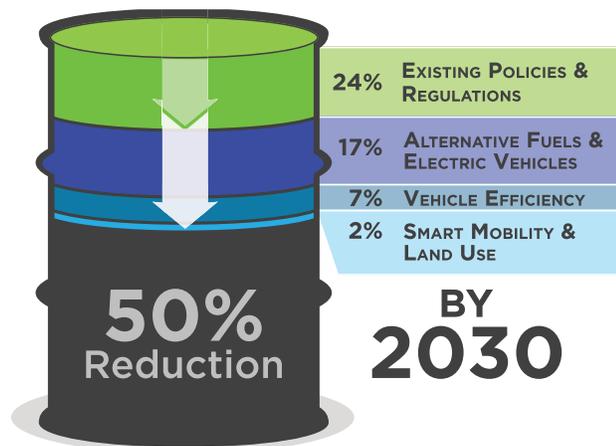
Reduced oil use means greater benefits to public health, the economy, and the climate. With strategies already in place predicted to reduce annual oil consumption by 24 percent between 2015 and 2030, the state is now pursuing a reduction of 50 percent in that period. A new analysis demonstrates that this goal is achievable, as long as California continues its bold leadership and makes smart investments—especially those that help extend and strengthen existing measures for increasing vehicle efficiency and electrification, expanding the availability of low-carbon fuels, and improving transportation planning.

Reducing oil consumption rewards California residents in many ways. It helps prevent the worst impacts of global warming, saves consumers money, and protects public health—particularly in communities most harmed by air pollution. Moreover, the policies that are delivering oil reductions are also increasing clean-vehicle, fuel, and transportation choices (UCS 2014).

Oil use declined in California by 15 percent from 2007 to 2013 (EIA 2015), thanks in part to a suite of successful state strategies to curb pollution and help slow climate change. They include rigorous emissions standards for new vehicles, a requirement that automakers produce electric cars, incentives to help consumers purchase clean vehicles, a policy to scale up the use of clean fuels, better land use and transportation planning to improve communities’ walkability and access to transit, and a flexible market-based cap on carbon emissions.

In 2015, to build on the progress already made in reducing oil use and carbon emissions from cars and trucks, California Governor Jerry Brown established the goal of cutting the state’s current oil consumption by up to 50 percent by 2030. To explore the options for meeting this challenge, we engaged ICF International, a respected consulting firm. Its resulting analysis, *Half the Oil: Pathways to Reduce Petroleum Use on the West Coast*, finds that measures now in place are expected to reduce oil consumption from 16.8 billion gallons of gasoline equivalent (GGE)* in 2015 to 12.7 billion GGE in 2030—a 24 percent reduction (ICF 2016). However, most of the associated measures do not extend all the way to 2030. For example, fuel efficiency and tailpipe emissions standards for light-duty cars and trucks do

Strategies to Achieve 50 Percent Petroleum Reduction by 2030



By extending and enhancing existing strategies, California could cut its oil use in half by 2030. These efforts could help reduce pollution and mitigate climate change.

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* Gasoline gallon equivalent—a measure used to equate different fuel types—is the amount of a given fuel having the same energy content as one gallon of gasoline.

not require improvements beyond 2025. Similarly, the state's present low-carbon fuel standard plateaus in 2020.

A Pathway to Half the Oil

The ICF analysis demonstrates that Governor Brown's goal could be achieved with many of the fuels and technologies already available today. In other words, by extending and in some cases enhancing the strategies that California is now employing to lower carbon emissions and air pollution, the state can cut its oil use in half by 2030. Below we briefly describe some of the key elements of this pathway (For a fuller analysis, visit www.ucsusa.org/WestCoastOil):

- **Existing policies and regulations (4.1 billion GGE saved; 24 percent reduction).** Fully implement California's existing measures for clean fuels, improved vehicle efficiency, vehicle electrification, and better land use and transportation planning.
- **Alternative fuels and electric vehicles (2.8 billion GGE saved; 17 percent reduction).** Steadily raise the market share of battery electric and hydrogen fuel cell vehicles, from today's 3 percent of new light-duty vehicle sales up to 28 percent in 2030; and expand deployment of zero-emissions technology in delivery trucks and freight trucks at major ports. In addition, increase the use of lower-carbon liquid fuels—renewable diesel, renewable gasoline, ethanol, and biodiesel—and natural gas (roughly half of which would be biomethane sourced from organic waste).
- **Vehicle efficiency (1.2 billion GGE saved; 7 percent reduction).** Beyond 2025, continue to improve the fuel economy and lower the global warming emissions of conventional light-duty vehicles by 5 percent per year (a rate similar to those of existing standards); establish new heavy-duty truck standards that require the consumption of 40 percent less fuel in 2025 than in 2010, plus an additional annual reduction of 2.5 percent continuing to 2030; and pursue other efficiency strategies, such as ensuring that replacement tires are fuel efficient.

- **Smart mobility and land use (0.4 billion GGE; 2 percent reduction).** Enhance and expand regional transportation and land use planning in urban areas to achieve an 8 percent reduction in vehicle miles by 2030.

Note that this pathway is but one of many scenarios that could achieve a 50 percent reduction in California's oil consumption. There are multiple combinations of strategies for meeting this goal.

UCS Conclusions

By providing the state's residents with more clean transportation choices—including options such as electric vehicles, lower-carbon fuels, and improved transit—California can indeed halve its oil use and enjoy the resulting economic, health, and climate benefits. However, success requires that governments and businesses exert bold leadership and make smart investments. Areas of focus should include low-carbon fuel production and infrastructure, consumer incentives for clean vehicles, the scaling up of clean-vehicle manufacturing, greater focus on sustainable freight systems, and support of research, development, and demonstration for fielding new and superior technologies.

For more information and to download the ICF report, *Half the Oil: Pathways to Reduce Petroleum Use on the West Coast* visit www.ucsusa.org/WestCoastOil.

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