

LOW-CARBON FUELS IN THE PACIFIC REGION

icct
THE INTERNATIONAL COUNCIL
ON CLEAN TRANSPORTATION



RESEARCH SUMMARY

The Pacific Coast Collaborative (PCC) jurisdictions - California, Oregon, Washington and British Columbia - have adopted, or pledged to adopt, low-carbon fuel policies. Researchers from the International Council on Clean Transportation and E4tech conducted a detailed modeling study of low-carbon fuel technologies and production pathways to estimate the future availability of low-carbon fuels if all PCC states adopted these policies and the effect this might have on greenhouse gas emissions from transportation.

The study shows that by 2030, PCC jurisdictions could see:

25%
less gasoline and diesel consumption

Up to **21%**
less overall carbon intensity of on-road fuels

Visit bit.ly/PacificLCF to review the full report.

PRIMARY CONCLUSIONS

- 1 There would be sufficient fuel available for the PCC jurisdictions to meet low-carbon fuel goals using a mix of technologies, including biofuels, electricity, natural gas and hydrogen.
- 2 Low-carbon fuels could reduce gasoline and diesel use in the Pacific Coast region by around 400,000 barrels per day by 2030. This is about one-quarter of on-road fuel consumption.
- 3 Low-carbon fuels could reduce the overall carbon intensity of on-road transportation fuels in the region by 14-21% by 2030.
- 4 There are many ways to achieve low-carbon fuel goals, success does not rely on the development of any single technology or market.

PACIFIC COAST COLLABORATIVE CLIMATE LEADERSHIP



HISTORY

In 2013, PCC jurisdictions committed to reducing carbon pollution, including policies to reduce carbon in transportation fuels. California adopted a Low-Carbon Fuel Standard in 2010, British Columbia adopted a Low-Carbon Fuel Requirement in 2008. Oregon has completed rulemaking on a Clean Fuels Standard, but needs legislative action to extend its authorization. In Washington, Governor Inslee called for the development of draft regulations for a Clean Fuels Standard.

REDUCING CARBON IN FUELS

At present, oil in the form of gasoline and diesel makes up almost all on-road vehicle fuel. Every gallon of gasoline burned in a car releases almost 20 lb (9 kg) of carbon dioxide into the air, or almost 100 grams of carbon dioxide for every megajoule of energy provided. Low-carbon fuel standards seek to reduce the carbon intensity of vehicle fuels, requiring the state average to decline over time. California and British Columbia have committed to a 10% reduction by 2020. Reductions are made by blending lower-carbon renewable fuels into gasoline or by switching some of the vehicle fleet onto alternative fuels, such as electricity, biodiesel or ethanol.

WHAT THIS MEANS FOR CLIMATE POLICY

Low-carbon fuel policies are a critical element of a comprehensive approach to mitigate climate change. These policies incentivize the commercialization of advanced vehicle and fuel technologies in an immediate and direct way. Low-carbon fuels have significant co-benefits, including reduced dependence on foreign oil and economic stimulus for the agricultural sector. Many low-carbon fuels also reduce hazardous air pollutant emissions, when substituted for petroleum fuels. Like most tools in the climate arsenal, low-carbon fuel policies work best when widely adopted. This study indicates that there will be sufficient supply available to support the four PCC jurisdictions in their climate leadership.



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