

# Should California Develop the State's Large Petroleum Resources?

California is among the most aggressive jurisdictions in the world in its pursuit of public policies to reduce emissions of greenhouse gases. While the Trump administration in Washington is reversing the Obama administration's climate policy achievements, California and other subnational entities are taking the lead in the development and implementation of meaningful domestic policies to mitigate the impact of human activity on the climate system.

However, California is a producer of crude oil. Is this inconsistent, or even counterproductive? Advocates have criticized Governor Jerry Brown, and proposed a ban on crude oil production within the state in furtherance of California's climate policies. The thinking goes, crude oil production leads to environmental impacts, so how can it be allowed? The logic is flawed, and the prohibition — if adopted — would impose tremendous costs on the state with little or no environmental benefit.

As California has developed its climate policies, the need to balance the benefits of these policies with their economic and human consequences has always been a challenging issue. Achieving aggressive climate goals will not be cheap, so designing sensible, effective policies is critical. Simply adopting any and all restrictions that might achieve some emission reductions would unnecessarily raise the human cost of limiting GHG emissions.

At its heart, the climate problem arises because of carbon dioxide emissions associated with the use of energy and related services. We heat our homes in the winter and cool them in the summer using electricity and natural gas. We use gasoline

to get to work and take vacations. As each country or state — including California — tries to reduce its GHG emissions, the policies and regulations adopted to achieve this end nearly always target the activities that lead to emissions: the generation of electricity, the use of transportation, and the conditioning of our living and working spaces.

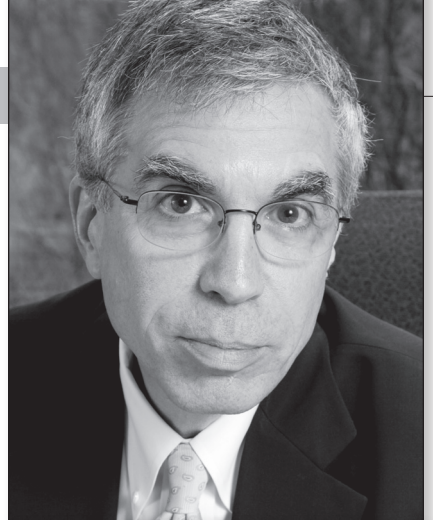
The proposed ban on crude oil extraction would flip this on its head, focusing instead on the supply of a fossil fuel. But the simple reality is that the sources of fossil fuel supply are so ubiquitous that crude oil from other regions of the world will replace supplies from California, if California chose not to supply its own ongoing needs. Oil and gas used to heat

homes and to power vehicles comes not only from California, but from most every region of the globe. Many of these regions have expanding supplies of crude oil

due to technological improvements, including the Bakken shale of North Dakota, and vast supplies available with relatively little effort, such as in the Middle East.

Advocates claim that reduction of California crude oil production would reduce global consumption of crude — a claim of questionable validity. But that is not even the right question. There are many things that can be done to reduce GHG emissions, and a sensible, affordable, and sustainable policy will be one that achieves reductions at the lowest cost. Even if restricting California's oil production might reduce global crude consumption, California would certainly bear all of the economic consequences of this policy, as the state would then rely solely on crude oil imports.

In fact, a restriction on Califor-



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nia's crude production is unlikely to reduce GHG emissions within the state. California's total GHG emissions are limited by the cap of its GHG cap-and-trade system. The most a restriction on California's crude production can do is to increase costs, while achieving little or no incremental improvement in the emissions that cause climate change.

Moreover, supply-side restrictions can limit technological progress that can have very positive economic and environmental consequences. The same advocates oppose fracking, but the innovative combination of hydraulic fracturing in shale and horizontal drilling has led both to tremendous economic benefits by expanding supplies of low-cost domestic energy and reducing energy imports, and to environmental benefits by allowing lower-carbon natural gas to displace higher-carbon coal in the generation of electricity across the United States.

By focusing on policies aimed at achieving the appropriate policy goal of reducing GHG emissions — rather than trying to choose winners and losers among technologies and energy sources used to achieve those goals — California can achieve its climate policy goals in ways that are environmentally effective, economically sensible, and ultimately sustainable. In my view, Governor Brown merits compliments rather than criticism for Sacramento's progressive environmental and energy policies.