

# Opinion: Expanding fracking in Calif. is bad policy

By Michael Brune and Kathryn Phillips

By signing Senate Bill 4, a severely compromised fracking bill, Gov. Jerry Brown has shown a lack of optimism and confidence in California's future at a time when the state has its greatest chance – and need – to move beyond oil and gas to clean energy. This is far less than we expect from a governor with the potential to be a visionary environmental leader.

In May, when questioned about fracking at a news conference, Brown said: "I have to balance my strong commitment to deal with climate change and renewable energy with what could be a fabulous economic opportunity." The governor shouldn't be reducing his commitment to fight climate change, he should reinforce it by replacing fossil fuels with clean energy. The true economic opportunity for California is in solar and wind, and in leading the nation and the world in demonstrating that containing climate disruption is an economic opportunity.



More than 43,000 Californians are employed in the solar-energy industry alone. One of the most successful new businesses in the state builds electric cars, wind energy is growing throughout the state, and our largest, most car-dependent city has set new standards for investment in clean public transit and renewable energy.

Fracking and well stimulation are the so-called "advanced" technologies that inject harsh chemicals and acids deep into the ground to break up and dissolve rock and sand to free hard-to-reach oil and gas deposits. Although SB4 began as a measure to require better regulation and greater disclosure

about fracking, by the time the Legislature passed the bill it had been weakened by amendments that the governor negotiated to dampen oil industry opposition.

An increase in fracking and well stimulation for oil in California will make us more dependent on the fuels that create climate disruption. It will also expand an industrial, polluting drilling process to thousands of square miles of Southern and Central California. By conservative estimates, extracting the estimated 15 billion barrels of oil contained within the Monterey shale formation would result in more than 6 billion metric tons of carbon dioxide pollution.

To put that in perspective, consider that the new federal fuel-economy rules for light-duty vehicles – standards inspired by California's own ground-breaking efforts – are expected to save Americans 12 billion barrels of oil by 2025 and a corresponding reduction in carbon pollution. Opening up the Monterey shale to fracking would more than erase any gains realized from those national fuel-economy standards.

Carbon pollution is not the only problem with fracking and well stimulation, either. A single well typically requires anywhere from 1 million to 5 million gallons of water mixed with harsh chemicals and acids. At some point, much – though not all – of that fluid returns to the surface. But what once was clear water is so hopelessly polluted with chemicals that the industry's response is to inject it into waste wells, where it can never again be used to water crops, serve as drinking water or flow in streams.

In other states, fracking has been responsible for extreme pollution of groundwater and surface water, air pollution and even earthquakes.

Given these negatives, are fracking and well stimulation to extract more oil really the best path for California's economy and environment?

Californians deserve the opportunity to consider this question before our state allows the expansion of fracking. If our labor, water and capital investment are going to be spent on creating more oil at the expense of public health and the environment, what alternatives must we forgo? As an economist would ask, what are the opportunity costs of fracking?

The opportunity costs include greater investment and a faster transition to cleaner fuels and renewable energy. They include jobs that contribute to society and don't come with high-risk exposure to cancer-causing chemicals. By investing our energy and human capital in more oil extraction, we give up opportunities to provide future generations with clean air, clean water and a shot at inheriting a world not devastated by climate change.

Californians are an optimistic, innovative people. The nation and the world look to our state for a vision of the future. But we can't build an economy of the future with fuels from the past. Our political leaders owe us the chance to move beyond fossil fuels and toward the clean energy that will power that future. That's why it's time for the Legislature and the governor to place a moratorium on fracking.

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