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NORTHERN CALIFORNIA'S LARGEST NEWSPAPER

Reduced estimates of oil trapped in Monterey

Pump jacks and wells extract oil from the Monterey Shale in Kern County.
Photo: David McNew, Getty Images

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The amount of oil that can be squeezed from California's vast Monterey Shale formation through fracking, acidizing and other drilling techniques may be far less than originally believed, according to a new estimate from the federal government.

And that change could fundamentally alter the politics of fracking in the Golden State, giving new ammunition to foes of the controversial practice.

For years, the Monterey Shale was thought to be America's largest "tight-oil" formation, with at least 13.7 billion barrels of recoverable crude trapped in a layer of dense rock beneath the San Joaquin Valley. Oil companies touted it as a potential jobs bonanza, with one study claiming its development could boost state tax revenue by $24.6 billion per year.

But according to the U.S. Energy Information Administration, current drilling technologies may be able to extract only 600 million barrels of oil from the Monterey Shale. Unlike tight-oil formations in North Dakota and Texas, the Monterey Shale has been fractured, twisted and folded by California's intense seismic forces, making it difficult to tap.

Gov. Jerry Brown has thrown his support behind fracking in California, citing the economic benefits. He has steadily rejected calls from environmentalists to halt hydraulic fracturing, which uses a high-pressure blend of water, sand and chemicals to crack rocks that contain oil or natural gas.

If the amount of recoverable oil is really just a fraction of previous estimates, Brown's economic argument will be harder to make, opponents say.

"The oil industry has been emphasizing this economic myth of the benefits to California, and the governor has echoed that," said Kassie Siegel, director of the Climate Law Institute at the Center for Biological Diversity, an environmental group that wants to ban fracking. "This finding shows there is no gigantic treasure trove that can be recovered right now."

The revised federal estimate could give momentum to a California Senate bill that would impose a moratorium on fracking, acidizing and other well-stimulation techniques while the state studies their safety. Acidizing, as its name implies, involves pumping powerful acids underground to open oil-bearing rocks. Opponents fear that both fracking and acidizing could taint California's limited water supplies.

The Senate Appropriations Committee is expected to act on the fracking bill - SB1132 from Sens. Mark Leno, D-San Francisco, and Holly Mitchell, D-Los Angeles - by Friday, possibly sending it to the Senate floor for a vote. The legislation faces a May 30 deadline to win Senate approval. Supporters say the timing of the new federal estimate could help their cause.

"All of this points more and more firmly to the need for a statewide moratorium, a timeout," said Kathryn Phillips, director of the Sierra Club in California.

Oil industry representatives, however, doubt that California would halt fracking, regardless of the revised federal estimate. Last year, state legislators considered several bills that would have imposed a fracking moratorium. Instead, they passed legislation that let fracking continue under new regulations while the state studies the potential risks to air and water quality.

"What we found was that, when it got to be time for legislators to get serious about establishing policy, they elected to adopt rigorous regulations that allow fracking to go forward," said Tupper Hull, spokesman for the Western States Petroleum Association, a trade group. "We don't think there's been a fundamental change in that view."

He also noted that the Monterey Shale still contains a lot of oil. The revised federal estimate involved the amount of crude that can be recovered with current technology - not the total amount of oil contained in the formation. Fracking and horizontal drilling - so effective at tapping the pancake-flat rocks beneath North Dakota and Texas - simply don't work as well in California's fractured subterranean geology.

"That does not mean there won't be adaptations that make it work - we just haven't

found them yet," Hull said. "People forget that the boom taking place in Texas and particularly North Dakota did not happen overnight. There were decades of operators trying to understand the technology and the geology."