

The U.S. Energy Information Administration (EIA) is reducing its previous estimate for technically recoverable oil in California's Monterey Shale from 13.7 billion barrels of oil to just 600 million barrels of oil—a dramatic 95.6 percent reduction. Has the oil industry been chasing rainbows in search of illusive "black gold" Monterey oil?

For years, the oil industry has made extensive claims about the job and economic benefits that will come from developing the Monterey Shale using techniques such as hydraulic fracturing ("fracking") and acidization. But according to the LA Times, the EIA now states that its earlier estimate, issued in 2011, "broadly assumed that deposits in the Monterey Shale formation were as easily recoverable as those found in shale formations elsewhere." An EIA analyst stated that experimental techniques including fracking and acidization have not proven effective in developing the uneven subterranean layers of the Monterey Shale.

It remains to be seen whether the EIA's estimate will prove accurate longterm. The rapid growth of horizontally-drilled hydraulic fracturing in the past decade has shown that advances in technology can outpace expectations. U.S. shale oil production increased from an average 0.2 million barrels per day in 2000 to an average of 1.9 million barrels per day in 2012 in certain formations, due in large measure to changes in technology.

Yet for now, the EIA's downgrade changes the risk-reward calculation when it comes to unconventional oil development in California. The oil industry's widely touted economic benefits from increased fracking in California may never materialize. And yet, ongoing fracking for oil continues to pose health, environmental and social costs.

While California's crude oil production has declined in the past 25 years, it is still one of the top producers of crude oil in the nation, accounting for almost one-tenth of total U.S. production. California also ranks third in the nation in petroleum refining capacity. The state will continue to regulate fracking pursuant to SB 4, and gather more information on the risks that it presents through a statewide environmental review process. New proposed

bills such as <u>SB 1132</u> would prohibit fracking, acidization and other oil and gas well stimulation in California until a more comprehensive scientific study is completed and reviewed.

The new EIA estimate also signals that the increase in crude oil moving into California by rail will very likely continue to accelerate. My May 19 <u>op-ed in the *LA Times*</u> explains that the exponential rise in oil-by-rail into California presents significant risks to human health and safety, in addition to environmental consequences. With even less potentially recoverable oil in California, rail and barge imports will continue to rise unless we aggressively reduce demand for petroleum products by, among other actions, driving less and accelerating the use of clean energy alternatives.

This news should propel more investment in renewable energy, electric vehicles, and energy efficiency. A number of recent studies show that California's climate policies developed pursuant to AB32 have spurred job growth and consumer savings. UC Berkeley analysis has shown that California's policies supporting electric vehicles can create over 100,000 new jobs by 2030. NRDC estimates that AB32's transportation measures will reduce per capita fuel costs by 20% by 2020, or nearly \$300 saved annually per person on fuel, compared to business-as-usual without AB32. And the Union of Concerned Scientists noted in 2013 that the U.S. can cut oil use in half in 20 years which would create one million new jobs and reduce climate pollution by 2 billion tons.

In short, this news should refocus our attention to clean energy and the myriad economic, sustainability, and energy security benefits that it provides.