

California Gets Fracked

Big Oil is rushing to extract fossil fuel from the state's underground shale formation. But will it contaminate — and waste — portions of our water

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Inside a nondescript building in Sacramento, an auctioneer prepared to lease thousands of acres of public land that could ultimately reap billions of dollars in profits for the winning bidders. The December auction at the federal Bureau of Land Management building also was met with a formal protest lodged by the San Francisco-based Center for Biological Diversity. The environmental group contended that the bureau hadn't completed

thorough environmental assessments prior to leasing the land. Protesters had gathered outside as well. One burst into the auction, yelling, "Mother Earth isn't for sale!" The outburst elicited a few chuckles from the group of assembled bidders; the auctioneer then moved on.

During the bureau's previous quarterly auction, many parcels went unsold. The interest shown by the oil and gas industry had

been lukewarm. But things were different at this auction. The bureau offered up a total of 17,832 acres for lease, and all of the land was bid on and sold. In fact, all the parcels drew multiple bidders during the auction, which generated a total of \$104,099 in revenue for the federal government. Going forward, busy auctions like this one likely will become the norm.

At the heart of the expected land-rush in California is the Monterey Shale, a huge underground geologic formation that stretches from San Francisco to San Luis Obispo and contains a rich deposit of fossil fuel. The formation snakes through eleven counties, but unlike the shale formations in the Northeast and Rocky Mountains, the Monterey Shale is not coveted for its natural gas, but for the oil it contains. No one knows exactly how much oil is in there, but upper-limit estimates from IHS Cambridge Energy

Research Associates predict that there are 400 billion barrels of oil — an estimated 15.5 billion barrels of which are recoverable using current technology.

Extracting much of that oil won't be as simple as drilling some wells, however. Nestled in rock formations thousands of feet below ground, the oil can only be retrieved through hydraulic fracturing — a controversial process better known as fracking. Over the past few years, fracking has exploded around the country, spurring a natural gas boom. Fracking allows gas and oil companies to access fossil fuels that were once thought to be unrecoverable, thus fueling a belief that the nation could someday become energy independent.

But fracking also has sparked a heated backlash from environmentalists. The process involves injecting millions of gallons of water and chemical solvents under high pressure deep into the earth to break apart the shale and release the trapped gas or oil. The freed fossil fuel then travels back up a well, encased in cement. But fracking also poses numerous health and environmental risks.

Oil and gas industry officials are quick to downplay these

threats — and are eager to capitalize on the country's vast underground resources. "Fracking has been used for more than sixty years — more than 1.2 million times in this country — with no proven cases of water contamination," said Dave Quast, the California field director for Energy in Depth, an industry-sponsored trade group. "Suddenly there's a focus on hydraulic fracturing because of a completely irresponsible documentary called Gasland. What we need is more domestic energy production — we're the fourth-largest energy-producing state, and we want to continue that. We don't see any of these problems, and we're looking at tens of thousands of jobs, billions in economic activity."

Despite industry claims, however, there have been numerous documented cases of environmental contamination associated with fracking. In 2009, a jury awarded \$8.5 million in damages to Starrh and Starrh Cotton Growers of Kern County after finding that improperly stored fracking wastewater by Aera Energy LLC had contaminated the groundwater and killed an entire orchard of almond trees.

A 2011 EPA study found carcinogens commonly associated with hydraulic fracturing in two test wells in

Wisconsin, including a toxic solvent called 2-Butoxyethanol. A later study revealed that the leaks in the test wells were not caused by cement casing failure, which is common to hydraulic fracturing, but by upward migration through rock fissures, which the industry had long claimed was impossible. In March 2012, a Cornell University study confirmed devastating impacts on pets and livestock in lands surrounding fracking outfits, including stillbirths, sterility, and death.

Drinking-water sources in Fresno, Bakersfield, Coalinga, Avenal, McKittrick, San Luis Obispo, San Benito, Monterey, Ventura, and Santa Barbara, and Orange County stand in the potential fracking zone, and are at risk of contamination by methane, benzene, and other carcinogens.

The amount of water consumed by fracking also presents a serious environmental challenge in a state with a water-shortage problem. A June 2012 report published by the Oakland-based Pacific Institute detailed the extreme water usage associated with fracking. Though the industry often reports usage at 1 to 2 million gallons per well, the study found that the average water usage in the Marcellus Shale region (Northwestern

United States) was 4.5 million gallons per well. Some wells in Texas were found to have required 13 million gallons of water each. This extreme consumption of water, very little of which is recoverable, will likely pit Big Oil against agriculture, consumers, and the environmental community.

For the most part, the California land rush has operated under the radar, however. A poll released in August by the Public Policy Institute of California showed that 46 percent of Californians have never heard of fracking. Though attention is growing, the energy industry has learned valuable lessons from the fracking fight in the Northeast, and with a potential windfall in the hundreds of billions of dollars, big players like Occidental Petroleum, Chevron, Venoco, and Exxon-Mobil aren't likely to pack it up and go home in the face of protest. They have ample resources at their disposal.

"Oil and gas companies are huge — between 2000 and 2010, they made over a trillion dollars," said Adam Scow, California Campaigns director at Food and Water Watch. "They [spent] \$4 million to stop [state Assembly Bill] 491, which would have brought transparency on fracking. In Congress, they spend \$400,000 a day."

Although the exact amount of fracking that has occurred or is now occurring in California is unclear, new fracking wells are springing up throughout the state. And the officials and agencies responsible for keeping track of what's happening under the ground have given remarkable latitude to Big Oil and Gas, with draft fracking regulations having not appeared in the state until December. Indeed, the state's main regulatory body has shown a startlingly close relationship with energy companies and government officials, from the local level all the way to the governor's office.

Dave Garcia knew a thing or two about fracking. He'd seen the flaming faucet in Gasland, and had read up on the subject. A member of the Sierra Club, he'd kept a close watch on news from around the state. So when he saw trucks rolling in around Chico, heard the construction noise, and saw the activity, his guard was up. As time went by, he grew more and more curious about what was happening. He followed the trucks, snapping pictures of nearby wells.

Unfortunately, when he tried to get more information, he was surprised to find he had few resources at his disposal. That's because the state agency responsible for tracking and regulating hydraulic fracturing

has done little to inform the public. Though Garcia was eventually able to confirm the presence of fifteen fracked wells in the Sutter Butte mountain range, fifty miles south of Chico, getting the whole picture has been next to impossible.

In California, fracking is regulated by the Division of Oil, Gas, and Geothermal Resources (DOGGR), housed within the state Department of Conservation. The agency has permitted fracking without public disclosure of the chemicals used and has limited public access to records about the practice. Close observers describe a inappropriate coziness between DOGGR and the industry. "They're there to help facilitate the extraction of oil and gas," said Bill Allayaud, California director of Governmental Affairs with the Environmental Working Group. "We have contacts in the field, and they often tell us about the relationship between DOGGR and oil industry people working out there. It's not like Fish and Game [or the] Coastal Commission, but more a culture of 'What do you need today, Chevron?'"

The power and influence of oil and natural gas companies also repeatedly beat back efforts in the state legislature to regulate fracking in California.

Then after decades with little oversight, DOGGR released draft regulations concerning fracking in December. State officials immediately hailed the proposed rules.

“The draft regulations build upon the current well construction regulations in California, which are among the strongest in the nation,” said Jason Marshall, chief deputy director of the state Department of Conservation. “With these rules in place, regulators and the public will have disclosure of hydraulic fracturing details and protection of public health. Also, the oil and gas industry will have a clear set of standards for which they will be accountable when they use hydraulic fracturing.”

But many environmental organizations have seized on the public comment period as an opportunity to list the shortcomings in the draft rules. Many groups have quickly come to the conclusion that the proposed regulations are too friendly to industry. Among the criticisms: The rules would only require companies to give a ten-day notice to DOGGR prior before they start fracking. The data a company submits would not be posted on a state website, but on the industry co-sponsored FracFocus website. Public notice of the

chemicals used would not be required until sixty days after fracking operations have ceased. Neither the state nor the energy company involved would be required to notify the public that their land will be fracked. Companies would be able to avoid disclosure by claiming “trade secrets.”

“There is very little regulatory protection — for example, the only ‘new’ requirement for fracking wastewater is that it not be stored in ‘unlined sumps or pits,’” said Kassie Siegel, director of the Climate Law Institute at the Center for Biological Diversity. “The regulations don’t require measures to capture air pollution that increases the risk of cancer, asthma, and other illnesses.”

The oil and gas industry, by contrast, appears to be pleased with the proposed rules. “California’s proposed regulation would require the disclosure of these chemicals while protecting intellectual property, or trade secrets,” wrote Quast of Energy In Depth in a January 14 op-ed in the San Jose Mercury News. “While many additives are everyday chemicals found in household products, others are special additives that oil-field service companies have invested many years and many millions of

dollars developing. ... This occurs across the economy. Think of the white glue that was probably accidentally ingested by thousands of elementary school children. It contains man-made chemicals that the company will not disclose to parents but will disclose to doctors if needed.”

Although additives in white glue have not contaminated entire aquifers or killed many livestock, the point is clear: The industry feels that the proposed regulations are sufficient. To go beyond, to demand that citizens know what’s being injected into the ground, is an unnecessary intrusion.

Throughout the nation, government regulations — and proposed ones — concerning fracking are either weak or nonexistent. Moreover, public agencies in charge of enforcing the rules on the books have been exceedingly lax, environmentalists say. As a result, the Center for Biological Diversity is pursuing multiple lawsuits to compel federal and state authorities to enforce the existing rules. Last August, the environmental group also launched federal litigation challenging the Bureau of Land Management for allegedly failing to properly evaluate hydraulic fracturing’s threats to endangered species on

public land leased for oil and gas activities in California.

Then in October, the Center for Biological Diversity, along with Earthworks, Environmental Working Group, and the Sierra Club, represented by Earthjustice lawyers Will Rostov and George Torgun, filed suit against DOGGR. The suit contends that state regulators violated environmental disclosure and analysis requirements when issuing permits for fracked wells. Last month, the Center for Biological Diversity also argued in court that state regulators have failed to enforce existing California oil and gas laws that cover “any injection” by oil and gas companies into the earth.

“The state is not enforcing its own regulations that require oil and gas companies to comply with a number of requirements prior to conducting any injection,” said Siegel of the Center for Biological Diversity. “The state asserts that fracking is not covered by the regulations. We think this is absurd because fracking is by its very nature ‘injection.’ If we prevail, oil and gas companies would have to disclose detailed information about their injection plans, including all of the chemicals in the fracking fluid, conduct

engineering tests, and submit information to show that the fracking fluid will not contaminate groundwater before they would be allowed to frack.”

Two bills introduced in the current legislative session aim to better define fracking and require more disclosure of the chemicals used. Senate Bill 4 by Senator Fran Pavley and Assembly Bill 7 by Assemblyman Bob Wieckowski would require an operator to file with the supervisor or a district deputy a thirty-day notice of intention to commence hydraulic fracturing treatment containing specified information. The bills would also require the hydraulic fracturing to be completed within one year of the filing of the notice of intention to commence hydraulic fracturing. Further, the bills would require DOGGR, within ten days of the receipt of the notice of intention, to make the notice publicly available, to post it on the division’s website, and to notify the appropriate regional water quality control board. The bills, however, would allow oil and gas companies to withhold “trade secrets” from the public — although they would have to disclose them to state regulators.

Going one step beyond regulation, some legislators, citizen groups, and environmentalists have called for an outright ban on fracking in the state. San Francisco-based environmental organization Food and Water Watch is working on such a bill and is hoping to partner with Assemblywoman Holly Mitchell, who co-sponsored the failed Assembly Bill 978 — a moratorium on fracking that would have gone into effect on January 1 had it passed. Food and Water Watch also is meeting with Bay Area legislators, hoping one or more might co-sponsor the bill.

There are others, meanwhile, who view the conflict over fracking as part of a broader spectrum of issues concerning democracy and the balance of power, especially in relation to corporate control over the decision-making process. “If Californians can’t do anything to stop fracking until faucets in San Louis Obispo can be torched, it’s because people continue to be hypnotized by the regulatory fallacy,” said Ben Price of the Community Environmental Legal Defense Fund. “It places the burden of proof on the community, rather than on the corporations. It says that unless you have data to show that the groundwater will certainly be poisoned,

then you have no grounds for prohibiting the drilling.

“We start from the premise that the people in the community may use their judgment and whatever information they decide to trust, and that they have full authority, based on that judgment, to prohibit chartered corporations from behaving in ways the community judges would pose a greater threat than the people are willing to accept,” he continued.

The Bureau of Land Management, meanwhile, is planning another lease sale in May. Formal protests are unlikely to halt the proceedings; they haven’t done so in the past. In a recent hearing before a Senate rules committee, DOGGR officials implied that regulations would be ready by March of this year. Given the expected timeframes, the agency’s history of industry accommodation, and the “all of the above” energy policy favored by Governor Jerry Brown’s administration, it is unlikely that the draft regulations will be revised significantly before implementation.

“The administration, including state regulators, are not enforcing current law, and they have proposed extremely weak new regulations,” said Siegel. “The Brown administration has consistently favored the interests of the oil and gas industry over the public.”