

The following column by Dennis Luna, which explains the economic and environmental benefits of hydraulic fracturing, was published in the September 16th issue of the San Fernando Valley Business Journal.

Don't Cap The Fracking Gusher

By Dennis R. Luna

Political leaders, environmental activists and other public figures are calling for a ban on “fracking” oil and gas wells, because “it is imperative that all Californians be protected,” as one declared in this publication recently.

What is fracking? Is it dangerous? What would a ban mean for California and America?

First, some history: fracking has been used in California for the past 60 years, in tens of thousands of oil and gas wells. The number of Californians injured by fracking in all that time: zero.

“Fracking” is shorthand for hydraulic fracturing, the practice of pumping water, sand and chemicals down a well under high pressure. The pressure creates small cracks, or fractures, a few dozen yards long, in rock layers thousands of feet below the surface. Oil and gas trapped in that rock flows through those cracks to the well.

The intense pressures at those depths would soon close the cracks without the grains of sand in the fracking fluid to prop them open. Chemicals in the fluid act as lubricants to help the sand slip into the cracks, prevent corrosion and aid the process in other ways.

In a gallon of fracking fluid, almost all of the mixture is water, plus about a cup of sand and about half an ounce of chemicals. Those might include ethylene glycol (used in antifreeze for cars), acetic acid (Vitamin C), guar gum (used in baked goods), ethanol (alcohol) or other, less familiar chemicals.

Can fracking fluids migrate into fresh water aquifers and pollute our drinking water? No. All fresh water aquifers are near the surface – no more than several hundred feet down. Oil and gas wells are far deeper than that – typically a mile or more below ground level. The wells are separated from fresh water aquifers near the surface by layers of hard rock. Wells also have multiple layers of steel casing and concrete, to keep oil and gas isolated from water supplies. California drilling regulations have required these safety measures since the 1930s.

The cracks created by fracking deep in an oil or gas well can't reach the aquifers far above, through thousands of feet of rock. Imagine leaving your house to hike two miles – the length of many oil wells. The cracks produced by fracking typically are no longer than the length of your driveway.

To further safeguard our water supply, local water quality agencies in California drill monitoring wells near active oil fields. Their findings to date: no adverse impacts on aquifers.

Environmentalists, and landowners, want to know what chemicals are used in fracking. The industry voluntarily lists all of them on a public website, www.FracFocus.com.

What would a ban on fracking mean to California? With wind and solar power providing only a small percentage of our needs, we would have to get much more of our electricity from coal-fired power plants, which put twice as much carbon into the atmosphere as cleaner-burning natural gas obtained by fracking. We'd also be a much poorer state, with fewer jobs.

The Monterey Shale, a rock formation that covers 1,750 square miles from Kern County to Modesto, contains an estimated 15 billion barrels of oil – two thirds of America's entire shale-oil reserves.

A University of Southern California study says development of the Monterey Shale would add half a million to almost 3 million new jobs in California, boost the state's economy by 2.6% to 14%, and generate \$4.5 billion to \$24 billion in additional tax revenue for cash-strapped state, local and county governments.

North Dakota is in the midst of just such a shale-powered boom. Unemployment there is so low that fast-food restaurants pay twice the minimum wage and offer sign-on bonuses to workers. Texas, Colorado, Oklahoma and New Mexico are also seeing the positive effects of greatly increased oil production because of fracking.

California's oil and gas could also change global politics. America has not been energy-independent for more than 40 years.

But because of fracking, U.S. production of oil and gas has gone up substantially in the past five years. This boom in oil and gas production promises to end our dependence on foreign imports in as soon as four years.

Unless, of course, we adopt policies that will prevent America's imminent energy independence from happening.

Acting on unfounded fears, do we ban a technology that has been used safely in California for more than half a century, and turn our backs on the jobs, income, taxes and geopolitical benefits that abundant oil and gas can deliver?

The answer clearly is no, especially if want to promote a strong and healthy economy not only for today, but for the next generation.

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