

Can No-Water Fracking Quiet Critics?

Erica Gies, Independent environment reporter, founder of ThisWeekInEarth.com



File under: not clean tech, but cleaner tech.

As hydraulic fracturing for natural gas has boomed in recent years, so too have the ranks of local activists, spurred by the new noise, air, traffic, and water pollution in their backyards. In fact, today the New York Department of Environmental Conservation is holding one in a series of public hearings on proposed regulations to better govern the practice in that state, home to one of the largest natural gas reserves, the Marcellus play.

But perhaps frackers, who inject high-pressure fluid into rocks deep underground to release natural gas, are beginning to improve themselves.

Yesterday I wrote about Canadian companies experimenting with butane and propane to produce Alberta's tar sands more efficiently. It turns out that frackers are also looking to propane to reduce water use.

Water has been one of the key points of contention over fracking, both because the practice pollutes water with chemicals, salts, and radioactivity and because it consumes lots of H₂O: up to 13 million gallons to open a single well, according to an administrator on Texas Water Development Board cited by [Bloomberg reporter Joe Carroll](#). I've written about [innovations to reduce pollution](#) before and will again, but reducing water consumption is also critical if fracking is to achieve [the potential its boosters claim](#).

Water shortages and conflicts are on the rise due to increasing population and climate change-caused fluctuations in precipitation that are making drought more frequent and severe in some places.

One of those places is Texas, where this summer's mega-drought invoked comparisons with the 1930s Dust Bowl, as ranchers sold their emaciated animals for a song and agricultural losses soared to more than \$5 billion.

As a result, gas industry projects in Texas had to scale back, as energy producers scrambled to find sufficient water. Other key fracking areas like New York, Pennsylvania, and Ohio are less obviously prone to drought, but climate models predict more frequent and longer heat waves during Northeast and Midwest summers, including severe drought in some regions (as well as more frequent flooding in spring).

Some gas companies are responding to this threat to production by innovating ways to frack with less water use. The following technologies were outlined in [Drilling Contractor](#), the official magazine of the International Association of Drilling Contractors, so take the rosy enthusiasm with a grain of salt.

- Instead of water, Calgary-based [GasFrac](#) pumps liquefied propane gas (LPG), which is actually a thick gel. The gel purportedly turns to vapor underground, then returns to the surface with the gas. GasFrac says it can then be collected and possibly reused. The company also claims that the gel does not carry drilling chemicals back to the surface, a problem with traditional fracking.
- Houston-based [Baker Hughes](#) is using a "foam," called VaporFrac, to reduce water use, purportedly by 95 percent.

These technologies are in their infancy, and many questions about efficacy, impacts, and cost remain to be answered before they could move into widespread use. And of course, reducing water consumption does not mitigate concerns about prolonging our reliance on fossil fuels or the inherently ugly nature of extractive industry, especially for local neighbors.

But for the gas companies, although such technologies are currently more expensive than water, they offer the promise of reducing myriad headaches and expenses, including costs for hauling water and sand, repairing roads damaged by heavy truck use, and managing water pollution, including “produced” water disposal.