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Fracking's Achilles' Heel

By **JOE NOCERA**

It's not very often that someone starts his career as a geologist and then winds up as governor, but John Hickenlooper, [the governor of Colorado](#), can make that claim. "We had fracking when I was a working geologist in 1981," he told me on Monday. "It was very primitive. What really changed the world is when we got horizontal drilling. It was a technique that allowed you to recover a lot more natural gas."

"But," he added, almost poignantly, "it's been polarizing."

That's for sure. During the last election two weeks ago, [four Colorado communities](#) voted to ban hydraulic fracturing (to use the proper terminology). A fifth town, Longmont, voted against fracking a year ago, [resulting in a lawsuit](#) brought by the oil and gas industry and [joined by the State of Colorado](#). It is a state where the owner of a parcel of land [doesn't necessarily own the mineral rights](#) underground, which is a source of enormous tension. Colorado has [tens of thousands of wells](#) — an economic boon — and also some of the most vocal anti-fracking activists in the country.

Which perhaps helps explain why Monday's announcement that [Colorado has come up with rules](#) to regulate the leakage of methane from fracked wells has not exactly been greeted with hosannas. But it should be.

Methane leakage is the Achilles' heel of hydraulic fracturing. For all the fears that it might contaminate the water supply — a possibility, yes, but not likely — it is methane leakage that can moot the advantage of natural gas as a cleaner fuel than coal. It is well established that when natural gas is combusted, it has both environmental and climate change benefits — starting with the fact that natural gas emits half the carbon of coal. But that advantage disappears when too much methane leaks during any part of the production process. [According to the Environmental Defense Fund](#), "Methane is at least

28 times more powerful than CO₂ as a greenhouse gas over the longer term and at least 84 times more potent in the near term.” (Methane gradually loses its potency as a greenhouse gas over time.) “Our interest in natural gas as a bridge fuel is undermined when methane leaks,” says Dan Grossman, the environmental fund’s Rocky Mountain regional director. A bridge fuel is precisely what many in the environmental movement don’t want, of course. After

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all, natural gas may be cleaner, but it is still a fossil fuel — and thus, in their view, part of the problem because they believe that an abundance of natural gas could delay their long-sought nirvana of a world powered by alternative energy sources.

Meanwhile, here in the real world, new wells are being drilled every day, natural gas is becoming more abundant and the country is coming to depend on it. There is simply no way America is going to turn its back on natural gas.

Which is why the E.D.F. approach makes so much more sense: rather than calling, Don Quixote- like, for an end to fracking, it is working with states like Colorado to make it safer, more transparent and cleaner.

In 2011, for instance, it helped negotiate rules **governing the disclosure** of the chemicals in fracking compounds — a deal that was sealed with Hickenlooper, the industry and E.D.F. representatives sharing a stage. In Wyoming, **it has negotiated rules** to require groundwater testing near wells to detect any possible contamination. In Texas, it was involved **in coming up with regulations** for well integrity. And, on Monday, along with Hickenlooper and some industry players in Colorado, **it announced a set of proposed rules** that would govern — and reduce — methane leakage. In each case, E.D.F. is pushing other states to adopt these rules, which, taken together, would help ensure that natural gas will live up to its promise of being a better, cleaner fuel.

The rules proposed on Monday in Colorado are both tough and sensible. Producers will have to test for leakage on a regular basis, monthly in some cases. They will have to avoid methane venting from wells. They will have to retrofit the valves on wells to minimize leakage. Why would industry go along with tougher regulations? Precisely because so many people are skeptical about fracking. It needs to be able to show that it is going about it in a manner that is safe and environmentally sound.

Shortly after Hickenlooper announced the proposed rules in a press conference, I called Sam Schabacker, the Mountain West regional director for a group called [Food and Water Watch](#). He hadn't yet read the proposed rules, but that didn't stop him. These new rules were just a "smoke screen," he said, designed to fool the public. E.D.F. was giving industry "a veneer of respectability." Then he added, "We believe that fracking is inherently unsafe and should be banned."

Dream on.