In Ithaca, NY, where we live, as elsewhere, horizontal drilling and hydraulic fracturing to gain access to shale natural gas (fracking) is a hot-button issue. New York State Governor Andrew Cuomo is considering whether to lift the moratorium on fracking—thereby joining some 20 other states that already allow fracking—and lawsuits are expected to follow that decision, no matter which way it goes.

Supporters, including the American Petroleum Institute, assert that shale gas is a “game changer” for U.S. energy independence, a boon to economically depressed communities, a source of new jobs, and a cleaner “bridge fuel” that can transition us from coal to renewable energy sources.

Opponents warn that fracking is an environmental disaster waiting to happen, citing, among other risks, air and water pollution, the release of radiation and cancer-causing substances, and the acceleration of global climate change as methane and other greenhouse gases escape during fracking. They are concerned as well about the loss of incentives to invest in renewable energy and the degradation of communities.

Like many people, we worry about the physical, biological, human health, environmental, social and economic impacts of fracking. We also believe that good public policy must be evidence-based.

Despite the voluminous reports that have been generated about fracking, there is still a great deal that we do not know. At Cornell, for example, researchers have reached opposite conclusions on whether natural gas from fracking would be better or worse for climate change than burning coal. So Cornell’s Ithaca campus, which is located on the edge of the vast Marcellus Shale deposit, has placed a moratorium on fracking on our own land until we have better information about it.

Research figures prominently into the 20 recommendations put forward last fall by the U.S. Secretary of Energy Advisory Board’s Shale Gas Production Subcommittee, which was charged with “identifying measures that can be taken to reduce the environmental impact and to help assure the safety of shale gas production.” Remarkably, however, the subcommittee proposed that the responsibility for data collection and monitoring fall to federal, state and local agencies.
local governments and to industry itself—inviting public perceptions that lobbyists will influence policies and that the foxes are guarding the henhouse.

In contrast, universities have expertise in all the areas relevant to fracking—social, environmental, human health and economic impacts, technological innovation and sampling design—as well as a commitment to and reputation for rigor and objectivity in research. We believe that universities can bring a reputation for independence to these investigations. And many universities are already collaborating with government and industry to promote economic development and the public good.

We believe that university researchers can—and should—play a pivotal role in investigating issues related to fracking, including the effect of fracking on ground and surface water; the impact of withdrawing the water required for fracking; the implications of wastewater treatment and disposal; the impact on air quality from emissions from vehicle traffic, on-site equipment, and off-site processing facilities; and the changes in environmental and social systems—locally and regionally—that are directly or indirectly related to shale gas production. And they can develop safer, more environmentally friendly and more efficient extraction and processing technologies.

Last month in a Washington Post column New York City Mayor Michael Bloomberg, founder of Bloomberg Philanthropies, and George P. Mitchell, philanthropist and hydrofracking pioneer, offered their foundations’ support to “organizations that seek to work with states and industries to develop common-sense regulations that will protect the environment—and ensure that the [fracking] industry can thrive.” We urge other foundations—and government officials—to enlist universities in the development of evidence-based public policy and safer fracking operations.

We cannot put this genie back in the bottle. Fracking is already being carried out across the country. And shale basins have been identified on six continents, making fracking a truly global issue. The questions before us are not only whether to frack, but how, where and with what safeguards in place.

With natural gas supplies plentiful for now and prices relatively low, we have time to make sound decisions about our shale gas resources. In creative partnership with government and industry, universities can help make sure we get it right.

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