Hydrofracking is proven technology whose risks can be managed

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By Mike Doyle / New York State Petroleum Council

Clean, safe drinking water is essential to life and health and not to be taken for granted. So it's understandable why people in our state have concerns about the use of hydraulic fracturing. However, what is known about hydraulic fracturing — a process for developing natural gas trapped behind shale or rock — suggests that risk of contamination is extremely small. What we know also suggests that the benefits of employing hydraulic fracturing — especially in the Marcellus Shale region in New York, which contains vast amounts of natural gas — would be substantial for workers, landowners, local communities in the Southern Tier, the state and the nation.

Hydraulic fracturing may sound complicated, but the concept is relatively simple. The process involves injecting fluids into a development well to fracture rock or shale in order to produce natural gas. The fluids used are more than 99 percent water and sand with three additives: a friction reducer similar to canola oil; a chemical such as chlorine to kill bacteria; and a lubricant similar to those found in personal care products. The pressure of the fluids cracks the shale and the sand props open the fissures to allow the natural gas to move to and up the well.

The process is highly regulated and monitored by the state. Before a natural gas well can be drilled, the state approves the engineering design and site plan. It then monitors the drilling operations. In New York, even more stringent rules affecting oil and natural gas development are now being finalized.

Despite these safeguards some concerns have been raised particularly about the safety of drilling near drinking water sources, including the New York City watershed located in the Marcellus Shale. But the public and policymakers should be made aware that wells are drilled away from drinking water wells, usually at depths well below any likely presence of usable groundwater. And, when a well is drilled, steel casing and surrounding layers of concrete provide another layer of protection to keep the gas produced and any accompanying fluids safely inside the well bore.

The process of hydraulic fracturing is not new although the technology has been improved and has been used in the United States for more than 60 years in more than one million wells. In fact, no investigation by any state or federal agency has demonstrated that hydraulic fracturing has caused ground water contamination.

The public need not rely on the industry's testimony, however. The safety of hydraulic fracturing has been monitored and examined by numerous state agencies and regulators. New York's Department of Environmental Conservation recently noted there was "no record of any documented instance of groundwater contamination caused by hydraulic fracturing for gas well development in New York, despite the use of this technology in thousands of wells across the state during the past 50 or more years."

The Marcellus Shale holds very large supplies of natural gas critical to meeting future U.S. energy demand and reducing greenhouse gas emissions. Natural gas heats homes, generates electricity and powers vehicles. It is employed in the manufacture of wind turbine pylons and solar arrays. It is the primary component of fertilizer used to grow crops for making biofuels. And, it produces little more than half as much greenhouse gas emissions as coal.

In 2008, two geoscientists, including Gary Lash from the State University of New York College at Fredonia, estimated that the Marcellus Shale may contain more than 50 trillion cubic feet of recoverable natural gas. That's equivalent to more than 40 years of the state's current consumption.

Not only will the development of the Marcellus Shale help the environment through increased production and use of clean-burning natural gas, it will also bring substantial economic benefits. The New York State Commission on State Asset Maximization indicates that development of the Marcellus Shale would place downward pressure on natural gas prices, lowering energy costs for New Yorkers. It would also create jobs, provide needed income to upstate landowners, and increase state revenue from taxes and landowner leases and royalties.

This is why the development of the Marcellus Shale is important. The public should know that this highly regulated industry is committed to protecting the water supply, and history has demonstrated it can do so.

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