

## SUNY debate weighs fracking merits, risks

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CORTLAND — Professors from Cornell and Syracuse universities took on opposing viewpoints during a debate Sunday at SUNY Cortland on the controversial process of hydraulic fracturing used in natural **gas drilling**.

Tony Ingraffea, a civil and environmental engineering professor at Cornell University who has studied hydrofracking, said the entire process — from transportation of the water, to the treatment and disposal of waste fluids after the injection — carries risks of air and water contamination.

Donald Siegel, an earth sciences professor at Syracuse University and a hydrogeologist, argued that injecting the chemically treated water underground to release the **gas** is highly unlikely to pollute water sources and said there are very few actual cases of reported problems in the industry.

Hydrofracking injects chemically treated water and sand into underground shale under high pressure to free **gas**.

There is a statewide moratorium on the process until July.

Siegel said there have only been 14 known instances of a homeowner's water supply being affected by hydraulic fracturing in natural **gas drilling** operations on 1,100 Marcellus Shale wells.

Of those, he said only about three were hard to repair.

The water supplies were affected because **gas** migrated through failing cement casings, a problem both he and Ingraffea acknowledged Sunday.

This translates to a 0.3 percent risk, said Siegel, which he said he finds acceptable.

But Ingraffea compared that risk to the aviation and bridge industries, saying a 0.3 percent risk would be an unacceptable standard. The aviation industry has a 99.9999 percent reliability standard, said Ingraffea, adding the bridge industry's level of security is even higher.

Ingraffea said the real concerns people should have about the **drilling** operations are the cumulative impact of hundreds of thousands of frack jobs that will come to the region should the technology be allowed to proceed.

Whereas in traditional **gas** extraction there is one well per pad, or drill site, with hydraulic fracturing there would be eight wells on a pad, said Ingraffea. Multiplying the amount of

fracking that will take place on these sites will amount to about 44 million gallons of fracking fluid being used and millions of gallons of waste fluid that must be disposed of.

This is an unprecedented event and the consequences cannot be known, Ingraffea said.

“The first 1,000 Marcellus Shale **gas** wells that will be developed will consume more fluid and produce more waste than all the previous **gas** wells in New York state,” said Ingraffea.

Siegel argued that the most dangerous hazards associated with the industry come from the potential for problems arising from **drilling** near old, uncapped well sites. Siegel said there are about 40,000 undocumented abandoned **gas** wells in the state and they are largely in northern and southwestern New York, and not in the Southern Tier.

**Drilling** near existing well sites has been known to cause explosions on drill sites, with documented cases of geysers shooting into the air as a result.

Seismic investigations should be a standard part of any permitting requirement to ensure there are no such wells in the area, agreed both professors.

Ingraffea urged people to consider what risks to their health and to the air quality they are willing to accept and to continue researching the issue from all sides.

Siegel said people must educate themselves and resist the urge to pick one side and blindly stick to it.

The audience packing the Old Main auditorium ranged from people who hailed from Pennsylvania, to the Binghamton and Syracuse areas.

Mary Rodriguez, who is part of a **gas drilling** awareness coalition in Luzerne County, Pa., said she came to hear both sides of the issue as it is one that hits close to home. Rodriguez has grandchildren at a school in Luzerne County that is slated to have a compressor station put 1,500 feet away as Chief Oil & **Gas** seeks to drill in the area.

The coalition plans to educate people on **gas drilling**.

“Considering there are 2,800 students at that school, even a 0.1 percent risk is too much with kids in the area, and the health problems that are involved,” Rodriguez said.

Rodriguez said she would have liked the debate to more completely address the issue of what would be done with waste water that results from the fracking operations.

James Little came from the Binghamton area to hear the debate. Little thought Ingraffea pointed out valid concerns about the potential problems the industry could cause in the future.

Little said he is looking to sell property in Endicott so he can move to the Cortland County area, where he thinks **gas drilling** might not be as pervasive.

Almost 50 percent of land in Cortland County is leased by gas companies.

Abram Loeb from Chenango County, wore a “No Fracking” pin and said he wants a complete ban on the process.

“I don’t believe it is an acceptable risk ... there is no safe way to ensure there won’t be human error,” Loeb said after the debate.