“Environmentally Friendly Drilling” a Goal for Texas Entrepreneur

by Sue Smith-Heavenrich
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One of the constant topics brought up at Tioga County Landowners Group meetings is how – and whether – gas companies can reduce their impact on the environment. When NY State Department of Environmental Conservation (DEC) called for comments on their draft Supplemental Generic Environmental Impact Statement (SGEIS), group spokesman Nick Schoonover sent a long list of technologies that Tioga County landowners wish to see included in new regulations. High on the list: closed loop systems that would eliminate the need for frack pits, multiple wells per site, biodegradable fracking chemicals such as used for ocean drilling, and “green completions” that reduce the amount of methane emissions.

Members of the landowners group should be pleased to learn that they are not alone in their quest for lower-impact drilling. Dr. Richard Haut, founder and senior research scientist at Houston Advanced Research Center (HARC), recently visited Cornell to promote what he calls “environmentally friendly drilling systems”.

Extracting energy requires trade-offs, Haut said. “We want clean air, but we also like the convenience of electricity.” But, he added, our need for energy doesn’t cancel out the equally important need to develop resources in a safe and environmentally friendly manner.

“Industry has already adopted safety as a core value,” Haut said. The question he raised is how to encourage industry to adopt what he calls “environmentally friendly drilling” as a core value?

In the context of industrialized gas drilling, Haut says, “environmentally friendly” has come to mean “developing energy resources in a manner that minimizes impact on the environment”. For example, drilling companies should consider such issues as land use, biodiversity fragmentation and ways to protect water sources, Haut said.

He listed a number of specific problems that drillers need to face: water withdrawal during droughts, coastal issues, and impacts of urban drilling on noise and air quality. Haut even showed examples of technological solutions. What he failed to do, however, was clearly define how companies could implement those low-impact alternatives.

Clearly, Haut embraces the idea that drilling is coming and the only question is how to minimize the damage. Right now, he says, about 50 percent of all wells drilled into shale, tight gas and coal-bed methane formations use hydro-fracking. In 2035 that number will rise to 75 percent. “Unfortunately, the typical frack site is an accident waiting to happen,” Haut said.

Another issue that shows some potential is how companies deal with flowback and produced waste fluids. Haut described closed loop systems and showed examples of mobile treatment units, but never went into detail about available technology or technology under development.

Haut’s most interesting proposal was an “Environmental Friendly Scorecard”. Imagine something similar to the required nutrition labels found on packages of chips and the

sides of cereal boxes – or the scorecard for Leadership in Energy and Environmental Design (LEED) certification developed by the U.S. Green Building Council.

An EFD (environmentally friendly drilling) scorecard would do for gas drilling what LEED certification does for construction: identify specific attributes of the activity and list measurable ways to minimize the impact.

Such a scorecard might include action items in six areas impacted by drilling: air, water, well site, waste management, biodiversity and habitat, and social structure. Each scorecard would list “prerequisites” – things that must be addressed before the well can be drilled – and “credits” – actions for which a driller could receive “points” that would add up to the EFD score.

Take water as an example. Before water credits could be earned, a driller would have to file an acceptable storm water management plan and conduct integrity testing of cement casings. Then, Haut said, drillers could earn credits by increasing their setbacks from streams and water sources – though he didn’t specify any distances – and reducing their water use.

“Environmentally friendly drilling” sounds good to those looking for alternatives to messy industrialized gas extraction activities. But the problem with Haut’s approach is that it reflects the worldview that shale gas development is inevitable, says Cornell engineering professor Tony Ingraffea. To say that drilling companies just have to “do it right” is an admission that the thousands of shale gas wells already made, and those underway now, are not being “done right”, says Ingraffea.

As for the EFD scorecard, that’s just a way to “greenwash” gas extraction, says Hilary Acton. While his ideas have merit, technologies that lower the environmental impact are not necessarily “environmentally friendly”.