

RETTEW joins gas rush

*Local firm lands
consulting pacts*

Drilling natural gas from under the Marcellus shale formation could turn out to be a bigger energy boom for Pennsylvania than either coal or timbering.

Lancaster is one of only 18 Pennsylvania counties in which the Marcellus formation is not found below the surface. But at least one local company is plugged into the energy rush and the controversy that swirls around it.

Lancaster-based RETTEW consultants has become a significant and growing player in helping mostly out-of-state drilling and pipeline companies descending on Pennsylvania navigate the state's multilayered permitting system.

RETTEW, with 200 employees and seven offices in Pennsylvania and New York, has active contracts with six big players in the early stages of the Marcellus shale exploration. The company says it is bound by confidentiality agreements not to list its clients.

In addition to its consulting work, which now involves about two dozen staffers and new hires, RETTEW has designed its own water-treatment facility that would remove the brine from wastewater used to fracture rock and tap the gas a mile or more underground. The recovered salt could be used on slick roads.

Treating this backwater, which soaks up salt from ancient ocean bottoms, is one of the key issues hindering full-bore drilling.

Somewhat removed from the drilling action in western, northcentral and northeastern Pennsylvania, RETTEW inserted itself into the mix.

"We have people in the office who have hunting cabins or otherwise own property in the Marcellus shale region," explained Mark P. Lauriello, RETTEW president, "and they would come back and tell stories about everything that is happening and being approached by companies wanting to lease their properties.

"We said, 'Holy cow, there is every indication that this thing is huge and how can we capitalize, how do our services line up with their needs?'"

When RETTEW was one of 28 entities invited to a natural-gas summit convened by the state in 2008, it had its foot in the proverbial door.

RETTEW works with a variety of state and federal agencies to help its clients get approvals

for activities such as water use, mapping of natural resources, construction drawings, sedimentation and erosion-control plans and other environmental permits.

Recent studies indicate Marcellus shale deposits and recoverable gas are even more vast in Pennsylvania than initially believed.

"Based on the way things are turning out with the early wells, the yield is just incredible," Lauriello said.

One estimate predicts there is enough natural gas in Pennsylvania's Marcellus deposits to provide all of Pennsylvania's energy needs for 113 years. But the gas would be distributed much more widely than just Pennsylvania.

A Penn State study in August estimated Marcellus shale wells in the state spawned \$2.3 billion in total market dollars for all goods, services and wages in 2008. That is expected to rise to \$3.8 billion by the end of 2009 and balloon to \$13.5 billion when the wells are flowing full-tilt by 2020.

"It's mind-boggling, really," Lauriello said.

"This puts Pennsylvania front and center in terms of national energy independence. Not that this is going to be the silver bullet. But when you think of renewable energy like wind and solar, I think natural gas plays a really huge role."

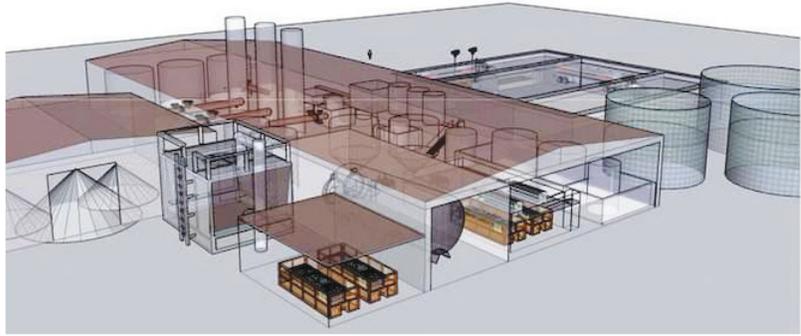
Drillers are still adapting to Pennsylvania's geology, and advances in technology for so-called horizontal drilling may help companies tap gas in marginal areas, boosting gas outputs even more than projected now, added Randy M. Wood, a geologist and director of RETTEW's natural gas and energy group.

But can they do it safely? Can they clean up vast amounts of water tainted in the underground fracturing process?

Marcellus gas drilling has been blamed in several stream-pollution incidents in recent months.

Wood insists the drilling can be done safely.

"The industry is working very hard to re-use and recycle water as much as they can," he said.



This drawing shows a proposed plant for treating wastewater resulting from the extraction of natural gas in the Marcellus shale formation in Pennsylvania. Below are Randy Wood, left, and Mark Lauriello of RETTEW with jars of untreated and treated wastewater.



He believes that as water-treatment options are tightened on the state and federal levels, a number of methods will be deployed, including on-site treatment facilities at the wellhead, regional brine-treatment facilities and existing sewage-treatment plants.

The projected Marcellus boon was a key consideration in Pennsylvania's rancorous budget negotiations.

The budget requires more state forest land to be leased for gas drilling to generate revenue. And Gov. Ed Rendell dropped his insistence that a severance tax be placed on gas extraction to protect resources and aid local communities.

Wood predicts a severance tax will be levied by the state when the industry is firmly in place.

"It was premature at this time because the wells were not producing yet," he said.

And no way will a tax drive natural-gas explorers away, he said.

RETTEW intends to follow.

"We see that as a very significant part of our business model going forward," Wood said.

Added Lauriello, "Let's face it. There aren't too many sectors of the economy that have much going on, and this is one of the few."

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