



Issue brief

The Marcellus Shale Industry: myths versus facts

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Myth: Marcellus Shale drillers don't pay taxes.

Fact: According to the Pennsylvania Department of Revenue, the industry has paid \$1.1 billion in taxes since 2006. Like other corporations in Pennsylvania, the industry is subject to many taxes, including the Corporate Net Income tax, sales tax and employee withholdings. The Revenue Department estimated that as of April 2011, those companies have already paid \$238.4 million in taxes.

An additional revenue source is the cost of permit fees, which totaled \$12.5 million in fiscal year 2010-11. In its testimony before state Appropriations committees, the Department of Environmental Protection anticipated collecting \$15.4 million in fees for the current fiscal year to cover the cost of well inspections. DEP estimates approximately 7,000 Marcellus Shale well inspections in 2011, up from 5,000 well inspections in 2010.

In addition, Pennsylvania has received revenue for state forest land leases associated with Marcellus Shale natural gas production. According to the Department of Conservation and Natural Resources, the state received only \$4 to \$5 million annual in drilling revenues from 1947 to 2008. Since 2008, the lease of 138,866 acres generated \$413 million in revenue for the state.

The state also receives payment from Pennsylvania landowners who are paying hundreds of millions of dollars in income taxes on money earned from Marcellus Shale activity.

Myth: The Marcellus Shale Industry primarily employs people from other states.

Fact: According to the Pennsylvania Department of Labor and Industry, 71 percent of new hires in 2010 were from Pennsylvania. In addition, in July 2011 there were 3,500 job postings statewide in the core and ancillary industries.

Myth: The Marcellus Shale Industry pays its employees low wages.

Fact: The average wage in core Marcellus Shale industries is \$69,995 (\$24,500 greater than the statewide average of \$45,491). The average wage in ancillary industries is \$63,967.

Myth: The Marcellus Shale Industry is not regulated.

Fact: The industry is regulated by both state and federal laws. At the state level, oil and gas exploration is regulated under the state's oil and gas laws (Oil and Gas Act, Coal and Gas Resource Coordination Act, and Oil and Gas Conservation Law), and the environmental protection laws that include the Clean Streams Law, the Dam Safety and Encroachments Act, the Solid Waste Management Act, and the Water Resources Planning Act. At the federal level, the industry is subject to provisions of the Safe Drinking Water Act and the Clean Air Act.

Last summer, the Pennsylvania Independent Regulatory Review Commission (IRRC) adopted a new rule mandating an "end of pipe," 500 milligrams-per-liter cap on the concentration of total dissolved solids (TDS) in the disposal of produced water from natural gas production. Other industries must meet a concentration threshold of 2,000 milligrams per liter.

Moreover on April 19th, Secretary Michael Krancer wrote a letter to all well operators to stop the practice of taking waste water to 15 facilities that were grandfathered into state regulations sharply restricting the salty discharges. Nearly all of the drillers met the May 19 deadline to stop using these plants.

Myth: The process of hydraulic fracturing pollutes water and results in methane migration.

Fact: The Marcellus Shale industry is required to case and cement natural gas wells. The casing and cement protects groundwater from the fluids and natural gas that will be contained inside the well, and keeps water from the surface and other geologic strata from mixing with and contaminating groundwater. Failure to properly case and cement the well will result in substantial fines for the driller.

Moreover, two public utilities, Aqua America and PA American Water have completed independent testing of water near well sites. In both cases, these companies found no increase in the level of chemicals or radioactivity.

<http://www.amwater.com/alerts/alert15474.html>

<https://www.aquaamerica.com/News/Pages/AquaCEOtoMarcellusShaleCommissionShalecanbeFutureEconomicBoomtoStateifDoneRight.aspx>

It's also important to note that hydraulic fracturing was first used more than 100 years ago in 1903, and in 1949, the first commercial treatment was performed. Over a 40-year span, engineers and geologists have perfected the process. By the late 1980s, it had been applied more than one million times.

Myth: The state isn't appropriately monitoring the activities of the industry.

Fact: One drilling company was recently fined \$900,000 for a case which occurred in Bradford County. DEP determined that because of improper well casing and cementing in shallow zones, natural gas from non-shale shallow gas formations had experienced gas migration into groundwater and contaminated 16 families' drinking water supplies. DEP found that it was not shale gas, but gas from formations closer to the surface that got into the water.

Myth: The Marcellus Shale Industry puts poisonous chemicals in the water and refuses to disclose them.

Fact: By accessing the link below, you can see which chemicals are found in fracking fluid. It should be noted that this information was voluntarily provided by industry members and is not required by state law.

http://www.dep.state.pa.us/dep/deputate/minres/oilgas/new_forms/marcellus/Reports/Frac%20list%206-30-2010.pdf

Many states are beginning to following this trend. For example, on June 17, 2011, Texas Governor Rick Perry signed a bill requiring natural gas producers to disclose information about the chemicals used in their hydraulic fracturing fluids. Under the new law, operators are required to "complete the form posted on the hydraulic fracturing chemical registry Internet website of the Ground Water Protection Council and the Interstate Oil and Gas Compact Commission" with respect to the well in which fracking fluids are used.

Myth: I watched the movie *Gasland*. People in Colorado who leased their lands to driller were able to light their water on fire.

Fact: The Colorado Oil and Gas Conservation Commission (COGCC) devoted significant staff and financial resources to thoroughly investigate these cases, and specifically excluded natural gas drilling as a cause of flammable water. The commission determined that, in reality, the source was naturally occurring methane.

<http://cogcc.state.co.us/library/GASLAND%20DOC.pdf>

Myth: I've read several articles which said that the industry didn't really create any new jobs.

Fact: While some news headlines did fail to make the important distinction between new hires and new jobs, the state Labor and Industry Department's Marcellus Shale Fast Facts is clear that 72,000 referred to new hires within the industry and that "new hires" is not the same as job creation. It's also worth pointing out that "new hires" is the metric used by Labor and Industry to report on activity in all other industries in the state, not just natural gas drilling. Therefore, it was consistent in its reporting of employment information. Moreover the most recent data from Labor and Industry reveals that from 4th quarter 2009 to 2nd quarter 2011 there were 93,230 new hires.

And new hire statistics do tell a lot about the health of a particular industry. From the fourth quarter of 2009 to the first quarter of 2010, new hires in the Marcellus industry increased by 43 percent. The goods producing sector increased new hires by only 20 percent, while new hires in the service producing industry saw a 2 percent decrease. The examination of new hires shows robust activity and growth in the Marcellus Shale industry compared to other industries in the Commonwealth. In fact, a recent Penn State University study projects that by 2020, 211,000 new jobs will be created.

Myth: Marcellus Shale drilling activity is ruining the roads.

Fact: While increased level of truck activity that occurs with Marcellus Shale drilling has caused some damage to the roads, the industry has voluntarily invested \$411 million into road improvements since 2008.

Myth: The Marcellus Shale Advisory Commission was an industry/business-backed board.

Fact: The Marcellus Shale Advisory Commission was made up of a variety of different organizational interests. They included environmental groups such as the Pennsylvania Environmental Council and the Nature Conservancy. In addition, the commission included members of local government, as well as members of the Corbett administration.

Myth: The Marcellus Shale natural gas in Pennsylvania is already depleted.

Fact: It is estimated that Pennsylvania is the second largest natural gas field in the world. *U.S. Geological Survey (USGS) issued an updated Marcellus Shale resource assessment, indicating that the "region contains some 84 trillion cubic feet of undiscovered, recoverable natural gas, far more than thought nearly a decade ago,"* as reported by the *Associated Press*. As noted by the AP, the updated USGS figure is "much higher than the last government assessment in 2002, which suggested about 2 trillion cubic feet of recoverable gas."

Not only does Pennsylvania have access to Marcellus Shale, the state also hosts the Utica Shale formation, which is located thousands of feet below the Marcellus.

Myth: I live in a part of the state where wells are not being actively drilled, so I'm seeing no benefit from this industry.

Fact: All Pennsylvanians will benefit from access to a clean burning fuel source that is home grown. In particular, an abundant source of natural gas will help reduce dependency on foreign oil, and strengthen our existing energy mix. The industry also offers direct and indirect opportunities for many Pennsylvania businesses, from equipment manufacturers and suppliers to trucking companies and hotels and restaurants. The industry is helping to strengthen the Commonwealth's economy, while providing new job opportunities for residents.