



JUST THE FACTS

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Pennsylvania's Conventional Oil & Gas Producers Vital to Rural Energy Users & Local Economies

Pennsylvania's conventional oil and natural gas developers – going back 165 years to Drake's well – have been leaders in developing new technologies, supporting local economies and providing energy to communities in the region. They are just as important today: supplying natural gas to areas far from interstate transmission lines and supporting the last two U.S. refineries that make Pennsylvania Grade Crude oil demanded by manufacturers across the country.

The challenges facing these producers merit a deeper review, especially for people with little or no understanding of the logistics of transporting natural gas and oil to end users.

Natural Gas Production and Use

Conventional natural gas producers meet the needs of many smaller towns in rural areas of western Pennsylvania – and those towns do not have other viable sources available to them. It is cost prohibitive to transport significant amounts of gas large distances from maxed-out interstate transmission lines, pressuring conventional producers to meet demand and sometimes requiring coordination to keep up with demand. It is not unusual during periods of extended cold for supplies to be allocated to meet residential heating needs at the expense of some manufacturers.

An important fact about these regional systems holds true and is a concern: locally produced natural gas is the least expensive option for residential, commercial and industrial users. The issues facing the conventional gas industry come from several angles. Drilling costs have roughly doubled in the past 15 years. Securing scarce equipment and skilled labor is a challenge, made worse with the federal government's incentives to plug orphan wells. Finally, small producers must comply with state regulations much more applicable to the shale gas industry.

Oil Production and Use

Oil extracted from Drake's Well in 1859 earned the name "Pennsylvania Grade Crude Oil" for its superior lubricating qualities, and it continues to be produced to this day in shallow formations primarily in the Appalachian Basin. Most companies drilling for this valuable crude oil, as well as those supporting them, are small businesses operated by multiple generations of families.

The market for this valuable oil is limited to the last two Pennsylvania Grade Crude refineries still standing. One is owned by the American Refining Group, Inc. (ARG), located in Bradford, Pennsylvania and the other is owned by Ergon, located in Newell, West Virginia. Both refineries depend on Pennsylvania Grade Crude oil to manufacture high-quality specialty products shipped throughout North America, including specialty lubricants for industrial, automotive and agricultural applications, as well as intermediates that are further refined to make cosmetics, emollients, health care and several other consumer products.



Pennsylvania's conventional oil and gas producers add \$1.4 billion in annual economic value to the Commonwealth, with a workforce of 5,600 earning \$241 million each year. ARG purchased Witco's Bradford Refinery in 1997, after Witco announced plans to close it. This refinery processed its first barrel of oil in 1881 and is the oldest continuously operating refinery in North America. ARG's economic impact to McKean County has been estimated at \$123 million annually. The company's 350 employees process approximately 10,000 barrels of oil per day, supporting an additional 190 indirect and induced jobs. ARG also relies on a significant number of local contractors to conduct plant maintenance and complete capital improvements.

ERGON's Newell refinery, constructed in 1975 and purchased by the company in 1997, employs around 200 refinery workers, as well as around 290 people who work in purchasing, hauling, terminaling and royalty payments in support of the refinery and the region. That headcount can grow during periods of maintenance with specialized contractors on site to complete maintenance, repairs and upgrades.

The two refineries receive oil from over 1,000 producers in the Appalachian Basin every month to meet demand. That demand often requires them to buy oil from other producing basins or buy lesser-quality oil that is more expensive to ship and process. Oil produced from shale wells can meet a small portion of the refineries' needs, but requires greater processing than oil from shallow formations.

The current challenges facing producers and refiners are significant. On the production side and consistent with natural gas operators, drilling equipment and skilled labor can be scarce. Conventional oil leases and royalty payments are not as lucrative as those offered by shale producers. The federal government's orphan well plugging incentives are also pulling equipment and manpower away from production, and the state's regulatory structure is increasing costs for compliance.

The net result: fewer conventional oil wells are being drilled in the Appalachian Basin, particularly in Pennsylvania, where the factors cited above are most acute. The costs to drill new wells is often simply uneconomical, even with Pennsylvania Grade Crude reaching prices as high as \$90/barrel.



The Facts

A 2017 economic study commissioned by the Pennsylvania Grade Crude Coalition found the state's conventional industry generated \$1.4 billion in annual economic activity, accounted for 5,600 jobs and paid those workers \$241 million in earnings.

These businesses are also increasingly under pressure from economic and regulatory pressures that need to be recognized by leaders in state and federal government. There are no easy alternatives to the natural gas they provide to these regions of the state, the oil they supply the two specialized refineries or the contributions they make to their local economies.



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