

Natural Gas from Pennsylvania: Affordable Energy, Clean Air, Economic Growth and Thousands of Vital Products

America's shale energy revolution has made the United States the largest oil and natural gas producer in the world, and Pennsylvania has emerged a leader in this growth. Pennsylvania's natural gas production increased by nearly 130 percent between 2013-2022 (3.259-7.439 trillion cubic feet or TCF), and now supplies well over 20 percent of the nation's demand for natural gas.

The benefits that come along with this staggering growth in production are equally impressive. Learn more below:

The Pennsylvania Public Utility Commission (PUC) has estimated that the average Pennsylvania family has been saving \$1,200 annually in energy costs since the production of natural gas from the Marcellus Shale formation started increasing, around 2009. This chart tells part of the story, first noting the "Purchased Gas Cost" for six major natural gas distribution companies in 2008. The most recent PUC filings for those companies is provided in the middle column, followed by the price decrease between the two dates. The average price drop among those suppliers between 2008 and in their most recent PUC filing in 2023 is 45 percent.

Cost Savings to Families, 2008-2023					
Utility	PGC per/MCF 2008 2023		Percentage Decrease		
PECO	\$11.10	\$6.72	-39%		
NFG	\$10.34	\$5.97	-42%		
PGW	\$10.56	\$5.05	-52%		
Columbia	\$10.25	\$6.27	-39%		
Peoples	\$9.53	\$3.39	-64%		
UGI	\$11.79	\$7.52	-36%		

Source: Pennsylvania Public Utility Commission

Pennsylvania's air is the cleanest it has been in decades due to the greater use of natural gas for electricity production.

This chart, showing statewide air monitoring results from the U.S. Environmental Protection Agency between 2000-2021, shows the steep drop in important air pollutants known as "National Ambient Air Quality Standards" that have been monitored by the states and USEPA since 1970.

Air Quality Improvements in Pennsylvania, 2000-2021					
NAAQS Pollutant	2000	2021	Percentage Decrease		
Carbon Monoxide	108,493	53,838	-50%		
Nitrogen Oxides	291,784	75,358	-74%		
Particulate Matter -10	38,719	11,829	-66%		
Sulfur Dioxide	996,088	56,863	-94%		
Volatile Organic Compounds	41,791	23,468	-44%		

Source: USEPA Air Emissions Inventory



Oil and Gas Development and Processing: Economic Growth, Tax Payments and Essential Products.

It is estimated that more than 339,000 Pennsylvania jobs are connected to the state's energy development industry, and those workers typically make \$20,000/year more than the state's average wage earner.

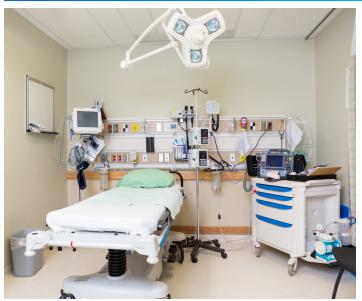
In addition to the billions of dollars in state and local taxes paid by natural gas developers and service companies, more than \$2.2 billion has been allocated in Impact Fees that reach every county in the state, even those without drilling activity.

Royal Dutch Shell's \$6 billion ethane cracker facility in Beaver County, which became operational in late 2022, is the largest single investment in the Commonwealth since World War II. It provided more than 6,000 jobs during construction and now employs a trained workforce of more than 600 people. Approximately 70 percent of the nation's polyethylene customers are located within 700 miles of the Pittsburgh area, making it a strategic location to serve those markets as well as attract new companies that make the thousands of consumer, industrial, commercial and medical products derived from polyethylene.



Everyone knows oil is refined into gasoline and natural gas is used to heat our homes and cook our food. Oil and natural gas are also essential to the production of an estimated 6,000 consumer products we use on a regular basis, with the number of products continuing to grow. It is estimated that the average U.S. citizen uses the equivalent of three gallons of refined petroleum-based products every day.

Stow, Ohio family - Photo courtesy of National Geographic and the Ohio Oil & Gas Energy Education Program



Advanced medicine would not be possible without the use of thousands of plastic-based materials. Oil and natural gas are processed to make items ranging from a simple band-aid to life-saving products like pacemakers, insulin pumps, heart defibrillators and artificial joints. The number of items derived from oil and gas found in a typical emergency room, shown above, demonstrates the essential role petroleum products play in modern medicine and beyond.

Items in a typical emergency room

Blood pressure cuff
Blood pressure cuff tubing
Chair
Code cart/wheels
EKG Leads
EKG Leads
EKG wire covers
End-Tidal carbon dioxide cable
Fluorescent light covers
Infectious waste container
IV Pole wheels and hook
IV pump
IV pump power cord
Laminated charts
Monitor/cables
Nasal canula
Ophthalmoscope
Otoscope
Ottoscope
Ottoscope

Overhead lamp/bulbs
Oxygen saturation finger probe
Oxygen wall to tubing adapter
Patient education packets
Plastic patient belonging bag
Plastic slip cover for mattress
Plastic-lined pillows
Stethoscope label
Stethoscope label
Stethoscope tubing
Suction canister
Suction tubing
Thermometer
Thermometer probe covers
Trash bag
Trash can
Wall oxygen dial
Wall suction dial
Yankauer suction

Items found in an ER code cart

AED
Alcohol swab packaging
Ambu bag
Atomizer
Code cart lock tab
CPR back board
Endotracheal tubes
Exam gloves
Intubation blade
IV catheters
IV fluid bags
IV tubing
Lubrication
Medication ampules
Medication bottles
Nasopharyngeal airways

Needle caps
Non-rebreather mask
Oral airways
Oxygen tank dial
Pacer pads
Plastic cart housing
Plastic cover over tip of scissors
Plastic syringes
Plastic tape
Portable suction pump
Saline flushes
Sharps container
Syringe caps
Tourniquets
Venti-mask

Other medical devices used on a daily basis

Adhesive foam
Bedpan
Bleach wipe containers
Crutch pads/grips
Date stickers
Hemovac drain
IV caps
Jackson Pratt drain
Medical glue
Nasogastric tubes
Ostomy bags and appliance
Patient call bell
Patient room phone

Patient socks/grip bottoms
Peripheral venous catheter
Plastic boxes of gauze
Plastic medicine cups
Plastic packaging on medications
Pyxis machine
Skin barrier packaging
Sterile gowns
Sterile packaging
Stutures
Three-way stopcocks
Urinary catheters
Walkers/canes