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## 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		Percentage Decrease
	2008	2023	
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

Estimated  
**339,000**  
Pennsylvania jobs

## 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	Overhead lamp/bulbs
Blood pressure cuff tubing	Oxygen saturation finger probe
Chair	Oxygen wall to tubing adapter
Code cart/wheels	Patient education packets
EKG Leads	Plastic patient belonging bag
EKG wire covers	Plastic slip cover for mattress
End-Tidal carbon dioxide cable	Plastic-lined pillows
Fluorescent light covers	Stethoscope label
Infectious waste container	Stethoscope tubing
IV Pole wheels and hook	Suction canister
IV pump	Suction tubing
IV pump power cord	Thermometer
Laminated charts	Thermometer probe covers
Monitor/cables	Trash bag
Nasal canula	Trash can
Ophthalmoscope	Wall oxygen dial
Otoscope	Wall suction dial
Otoscope covers	Yankauer suction

### Items found in an ER code cart

AED	Needle caps
Alcohol swab packaging	Non-rebreather mask
Ambu bag	Oral airways
Atomizer	Oxygen tank dial
Code cart lock tab	Pacer pads
CPR back board	Plastic cart housing
Endotracheal tubes	Plastic cover over tip of scissors
Exam gloves	Plastic syringes
Intubation blade	Plastic tape
IV catheters	Portable suction pump
IV fluid bags	Saline flushes
IV tubing	Sharps container
Lubrication	Syringe caps
Medication ampules	Tourniquets
Medication bottles	Venti-mask
Nasopharyngeal airways	

### Other medical devices used on a daily basis

Adhesive foam	Patient socks/grip bottoms
Bedpan	Peripheral venous catheter
Bleach wipe containers	Plastic boxes of gauze
Crutch pads/grips	Plastic medicine cups
Date stickers	Plastic packaging on medications
Hemovac drain	Pyxis machine
IV caps	Skin barrier packaging
Jackson Pratt drain	Sterile gowns
Medical glue	Sterile packaging
Nasogastric tubes	Sutures
Ostomy bags and appliance	Three-way stopcocks
Patient call bell	Urinary catheters
Patient room phone	Walkers/canes