

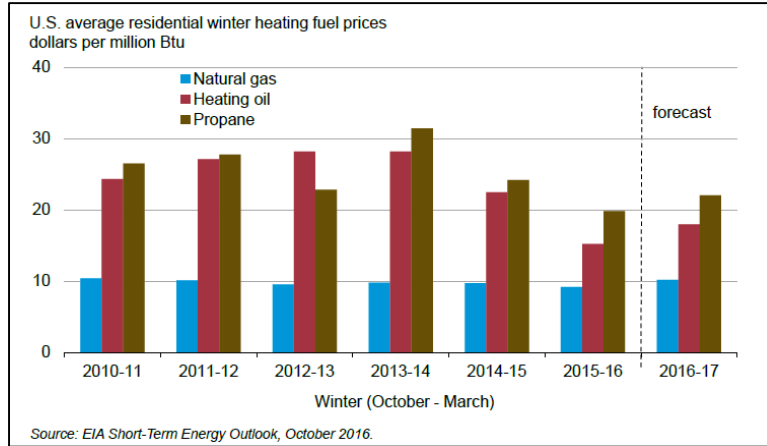


Why Should I Convert to Natural Gas?

In Central Pennsylvania, there are many excellent reasons to consider converting your home or business to natural gas if it is available to you. In this sheet, we answer some common questions asked about converting.

Is Natural Gas a Cost-effective Energy Source?

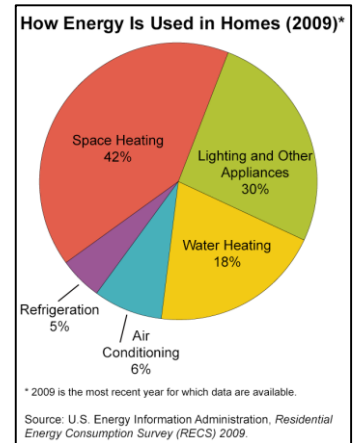
Although costs of most heating energy types have declined in recent years, natural gas prices have been consistently cost-effective and stable. On average in the U.S. for residential users, natural gas currently costs about 40% less as compared to heating oil, over 50% less as compared to propane, and savings are predicted by the U.S. government to continue.



How Much will it Cost to Convert my Home?

Before addressing conversion costs, it is first useful to consider how energy is used in the average home. As shown in the chart to the right, the highest volume of energy-related costs is from heating of residential space. When combined with water heating and air conditioning, 2/3 of annual energy usage is from direct heating and cooling needs.

While costs for heating and cooling vary by size of dwelling, type of heating/cooling system currently in use and other factors, a local study performed by the Centre County Office of Planning and Community Development (*Rural Gasification in Centre County*, Centre County Planning and Community Development Office, 11/29/2012) developed estimates to convert or replace furnaces, boilers, and appliances from heating oil and electric to natural gas. Updated with 2016 data, the following table shows some of the costs of conversion and the period needed to meet the return on investment (ROI).



Savings/Year ▶ ▼ Appliance	Compared to Oil Cost of Conversion/ROI Period	Compared to Electric Cost of Conversion/ROI Period
Furnace/Boiler	\$1,500-10,000 cost For a \$5,000 furnace, ROI is 10.5 years	\$1,500-10,000 cost For a \$5,000 furnace, ROI is 14.5 years
Dryer	----	\$300-800 cost For a \$500 dryer, ROI is 8.8 years
Water Heater	\$500-\$1,000 cost For a \$750 water heater, ROI is 7.5 years	\$500-\$1,000 cost For a \$750 water heater, ROI is 6 years

SEDA-COG Natural Gas Nonprofit Cooperative, Inc.

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What will my Annual Residential Savings Be?

One Pennsylvania natural gas distribution company noted in 2014 that the average annual cost of natural gas to residential customers is \$1,670 per year, and average savings per year with natural gas is \$2,000 compared to propane and \$1,300 compared to fuel oil. The Centre County study mentioned above also provided estimates of average savings to residential customers (again updated with 2016 data). The following table shows annual savings after conversion.

Savings per Year ▶ ▼ Appliance	Compared to Oil	Compared to Electric
Heater	\$ 475	\$ 345
Dryer	----	\$ 57
Water Heater	\$ 100	\$ 122
Total	\$ 575	\$ 524

Most natural gas distribution companies serving Pennsylvania have online cost calculators designed to allow potential customers to input dwelling or business information and estimate their annual energy costs and savings with natural gas.

What about Cost Savings for my Business?

One local utility has estimated a savings of between 45% to 58% for businesses using natural gas as compared to #2 grade heating oil and #6 grade heating oil (Wentzel and Burgis, "Converting Your Business to Natural Gas," https://www.ugi.com/wp-content/uploads/2015/08/UGI%20Oil%20Conversion%20Webinar_09242013.pdf).

Is Natural Gas a Clean Energy Source?

Yes, natural gas is a clean energy source, especially compared to coal and heating oil. While moving toward completely renewable energy sources is the long-term goal, it will be some time before that becomes a reality, especially for larger energy users. Natural gas is a smart "bridge fuel" that can improve the quality of the environment. Since 2008, usage of natural gas for power generation in Pennsylvania has resulted in a 75% decrease in emissions of sulfur dioxide, a 25% decrease in nitrogen oxide, a 45% decrease in particulate matter, and a 27-year low in carbon dioxide (Spigelmyer, "State of the Upstream Market", Upstream PA 2016 Conference). This has helped large users better meet clean air standards.

Are there Other Significant Benefits to Converting to Natural Gas?

The Centre County report also identified some of the additional benefits related to converting to natural gas:

- Energy improvements can increase the value of your house value by up to 10%.
- Natural gas is delivered more efficiently with less transported energy loss as compared to electricity.
- Some natural gas sources are considered to be renewable, such as gas produced from landfills.

Are there Benefits Specifically Related to Using Pennsylvania Natural Gas from Pennsylvania?

Yes! Pennsylvania has an abundant long-term supply of high-quality natural gas from the Marcellus Shale formation, and transportation distances are accordingly less. In addition, Pennsylvania natural gas is less prone to fluctuations in price and supply by foreign or out-of-state producers. Also, using Pennsylvania natural gas helps to create and maintain well-paying jobs in the Commonwealth, both directly in the natural gas industry and for businesses that use it.

Is Using Natural Gas in my Home or Business Safe?

The American Gas Association reports that between 1987 and 2007 the amount of natural gas traveling through distribution pipelines has increased by almost 25%, with approximately 760,000 miles of new pipeline, while the number of reportable incidents on distribution pipelines per mile has decreased in the last 10 years by 40% (<https://www.aga.org/fact-sheets/pipeline-safety>). The federal Pipeline Hazardous Materials Safety Administration (PHMSA, www.phmsa.dot.gov) is responsible for ensuring national pipeline safety, while the Pennsylvania Public Utility Commission (PUC, www.puc.pa.gov) is responsible for safety-related inspections and programs at the state level.

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