

RESIDENTIAL ENERGY COST ANALYSIS FOR GREATER PENNSYLVANIA REGION



Based on data from the U.S. Energy Information Administration (EIA), prices in the broader Middle Atlantic region follow patterns comparable to those in Pennsylvania, offering an indication of expected household energy cost trends across the Region. When analyzing the cost of energy for Pennsylvania households, state prices and use are only available through January 2026. Modeling future energy prices is available only from the EIA for the Middle Atlantic Census Region.

In 2025, the average EIA-reported residential prices in Pennsylvania were:

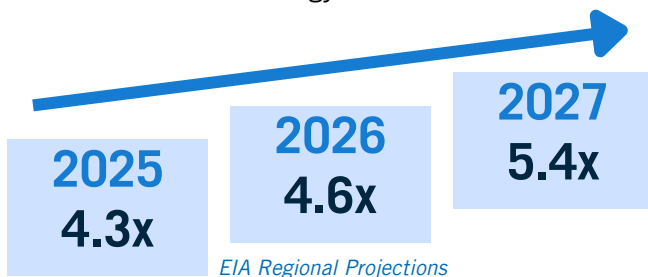
Natural Gas

\$15.04 per Mcf

Electricity

19.30 Cents per kWh

Electricity costs **3.9 times** as much as natural gas on an energy-equivalent basis in Pennsylvania. The Middle Atlantic regional average is 4.3x in 2025 and is expected to widen, based on [AGA analysis](#) of the EIA Short-Term Energy Outlook:

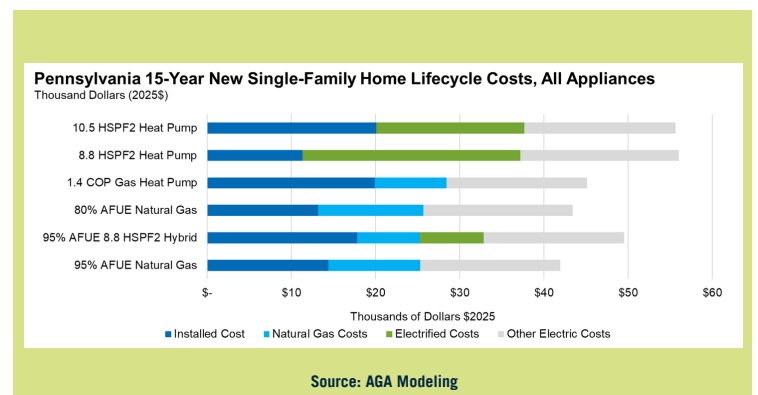
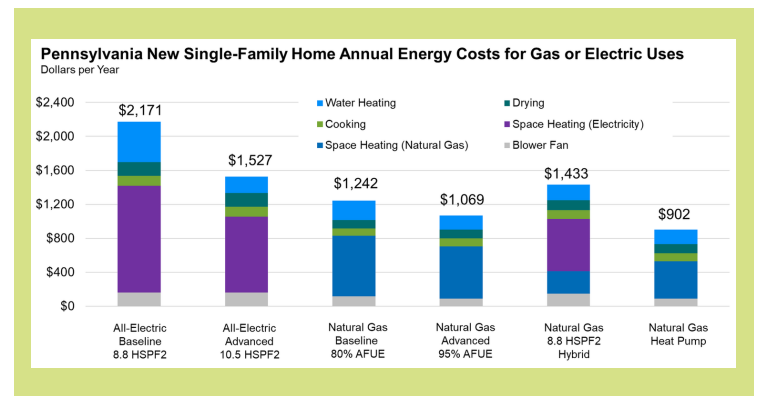


Seasonal patterns make natural gas even more attractive for space heating, especially when combined with other natural gas appliances. While the average electricity-to-gas price ratio in the state is around 4.0x in 2024, it may drop to about 2.1x in summer and rise to about 4.4x in the winter months.

Pennsylvania First-Year and Lifecycle Cost Analysis

Using the methodology outlined in the AGA Building for Efficiency report¹, estimated heating costs were calculated for typical new single-family homes in the Greater Pennsylvania area. **A family living in a new single-family home with natural gas could save between \$458 and \$929 per year compared with an all-electric, air-source heat pump. Over the life of the equipment, households could save between \$5,000 and \$12,000 with natural gas.**

¹ <https://www.aga.org/research-policy/building-for-efficiency/>



Impact of Winter Storm Fern on Energy Use & Energy Bills

This winter, much of the eastern United States experienced colder-than-normal weather, with temperatures staying below freezing for extended periods. In Pennsylvania and the surrounding region, January and February averaged about 4°F below normal. A change of 4 degrees was enough to move the average from above to below freezing for most of the winter. **During Winter Storm Fern, from January 22 to January 30, temperatures were approximately 9°F below normal**, with some of the coldest conditions occurring during the peak morning hours and single-digit temperatures persisting through much of the day.

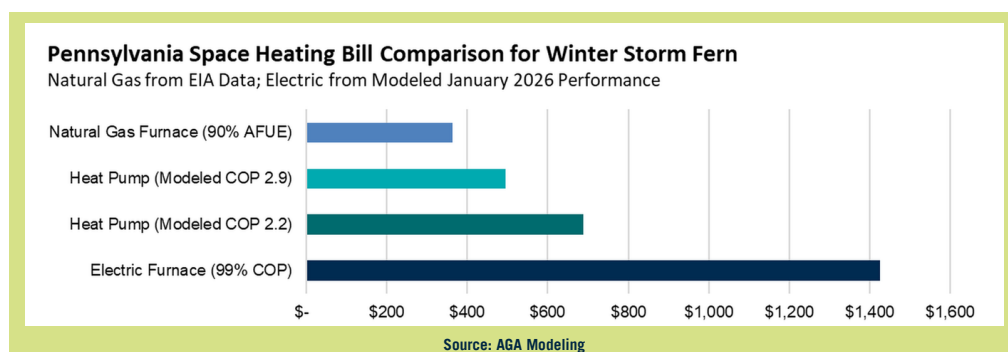
Monthly Pennsylvania Energy Price Comparison

Month	Natural Gas Price \$/Mcf	Electricity Price cents/kWh	Natural Gas Price \$/MMBtu	Electricity Price \$/MMBtu	Electricity to Gas Ratio
January-25	\$12.51	\$17.56	\$12.06	\$51.47	4.3x
February-25	\$12.87	\$18.00	\$12.41	\$52.75	4.3x
March-25	\$15.24	\$18.42	\$14.70	\$53.99	3.7x
April-25	\$16.18	\$18.96	\$15.60	\$55.57	3.6x
May-25	\$19.67	\$19.29	\$18.97	\$56.54	3x
June-25	\$23.20	\$19.69	\$22.37	\$57.71	2.6x
July-25	\$27.74	\$19.51	\$26.75	\$57.18	2.1x
August-25	\$27.47	\$19.93	\$26.49	\$58.41	2.2x
September-25	\$26.59	\$20.46	\$25.64	\$59.96	2.3x
October-25	\$18.42	\$20.49	\$17.76	\$60.05	3.4x
November-25	\$15.31	\$20.16	\$14.76	\$59.09	4x
December-25	\$13.91	\$20.08	\$13.41	\$58.85	4.4x
January-26	\$14.21	\$20.19	\$13.70	\$59.17	4.3x
February-26	\$14.49	\$20.30	\$13.97	\$59.49	4.3x
March-26	\$16.67	\$20.92	\$16.08	\$61.31	3.8x

Average Energy Costs During Winter Storm Fern

Cold weather like this can significantly affect home energy use and bills. **Natural gas heating systems commonly perform near their rated efficiency during cold weather.** By contrast, air-source heat pumps for space heating tend to lose efficiency and capacity during very cold periods, necessitating backup electric resistance heat.

A heat pump for space heating might have an average January operating performance of 220% to 295%, but during the cold weather storm, it may have dropped to between 170% and 250% or as low as even 99% if only resistance was in use, which is likely for many households with older or minimum efficiency heat pumps.



Given that electricity costs 4.3 times more per unit of delivered energy than natural gas in January 2026, **households relying on electric heat may face significantly higher energy bills during severe winter weather than households using natural gas heating.**

Comparing the efficiency range of space heating appliances and average costs, electric bills for space heating could have been 1.4 to 4.0 times higher during the storm than the average natural gas heating bill. **The average natural gas space-heating cost in Pennsylvania in January was \$363.²** Heat pumps might have increased average heating costs during that month to \$132 to \$325 compared to natural gas, and as much as \$1,062 with only backup electric heating.

² Average natural gas space heating bill for January 2026 based on average household consumption that month minus average summer consumption in 2025 to reflect only space heating use and not a mix of other appliances.