

# Natural Gas Quarterly Update



July to September 2023

This document uses data from the Pennsylvania Department of Environmental Protection (DEP), the U.S. Energy Information Administration and Natural Gas Intelligence to provide a quarterly update on natural gas production and prices. The table below shows recent trends in quarterly unconventional production volume, well counts and average spot prices for Pennsylvania.

	2022		2023		
	Q3	Q4	Q1	Q2	Q3
Production Volume	1,880	1,857	1,845	1,864	<b>1,870</b>
Growth Rate	-0.6%	-5.1%	-0.4%	0.6%	-0.5%
Avg. Production per Well	0.175	0.170	0.168	0.168	<b>0.169</b>
Growth Rate	-5.1%	-10.0%	-5.3%	-3.7%	-3.8%
New Wells Spud	158	136	120	89	<b>102</b>
Annual Change	47	-18	-27	-45	-56
Average PA Price	\$6.92	\$4.54	\$2.25	\$1.45	<b>\$1.31</b>
Growth Rate	93.5%	12.5%	-45.0%	-78.3%	-81.1%

Note: Growth rates are year-over-year. Production is in billion cubic feet, horizontal wells only. Average PA price (in \$/MMBtu), is a weighted average spot price at two major PA hubs.

Source: Production volume and well counts are reported by DEP. Price data are from Natural Gas Intelligence.

Notable trends for 2023 Q3 include:

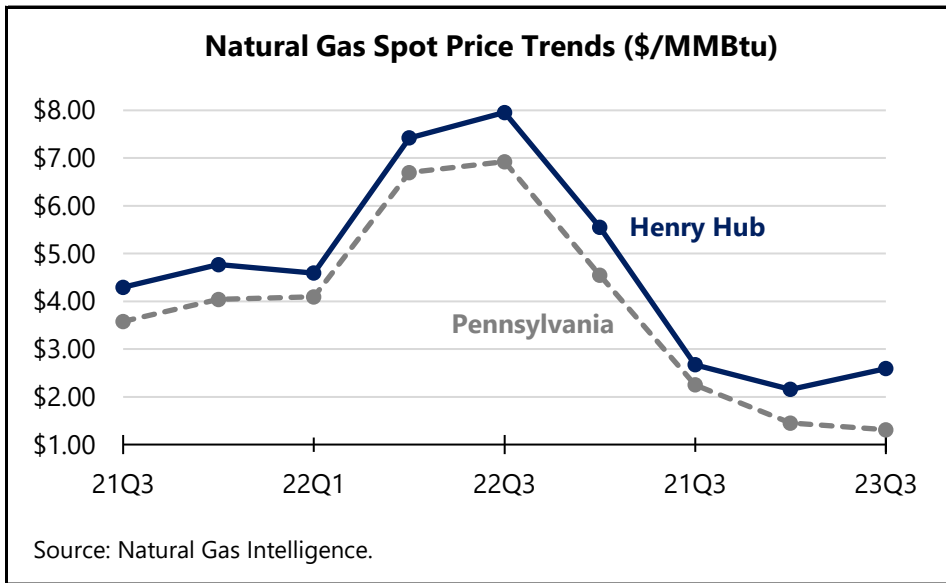
- **Production volume** totaled 1,870 billion cubic feet, a decrease of 0.5% from the prior year.
- **Average production per well** was 0.169 billion cubic feet, a decrease of 3.8% from the prior year. This metric has been relatively stable for the last three quarters after reaching the lowest level on record (since 2015).
- There were 102 **new horizontal wells spud**, a decrease of 56 new wells (-35.4%) from the prior year. If the current pace holds, there will be fewer wells drilled in 2023 than any year in the last decade.
- The **average Pennsylvania spot price** was \$1.31, a decrease of \$5.61 (-81.1%) from the prior year. Regional prices reached the lowest level since 2020 Q3, when mitigation efforts related to COVID-19 caused energy prices to plummet.

The table below compares year-over-year (YOY) growth in quarterly production volume in Pennsylvania to seven other states. The states are listed in descending order based on total production volume in 2023 Q3. The eight states shown account for 86% of nationwide natural gas production. For Pennsylvania, these data differ from the prior page because they include natural gas production from all sources and well types (e.g., conventional). Pennsylvania production growth continued to lag several other top-producing states in 2023 Q3 compared to the prior year. Pennsylvania accounted for 16.8% of national production (not shown) in 2023 Q3. This share peaked in 2021 Q1 at 18.9% and has steadily declined since then.

State	2022		2023		
	Q3	Q4	Q1	Q2	Q3
Texas	7.1%	5.2%	6.2%	6.6%	6.4%
Pennsylvania	-0.7	-5.1	-0.4	1.4	0.6
Louisiana	18.7	14.3	17.0	7.9	3.2
West Virginia	10.6	10.2	10.4	9.3	10.1
New Mexico	15.8	22.9	25.3	18.5	16.2
Alaska	5.3	2.4	0.2	0.8	-9.1
Oklahoma	9.4	7.7	9.6	1.4	-0.8
Ohio	2.0	-4.8	3.3	1.2	-1.7

Source: U.S. Energy Information Administration.

The figure below displays recent trends in natural gas spot prices for the Henry Hub and the average Pennsylvania hub price. For 2023 Q3, the Pennsylvania average was \$1.31 and the Henry Hub was \$2.59, both significant declines from the prior year. The Henry Hub price increased from the previous quarter while the Pennsylvania average hub price continued to decline.



Excess inventory throughout the country caused both prices to fall to their lowest levels since 2020 Q3. For 2023 Q4 (not shown), October and November prices recorded moderate gains, as the Henry Hub price increased to \$2.85 while the Pennsylvania average price increased to \$1.61.

### Staff Acknowledgements

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