

Natural Gas Quarterly Update



October to December 2023

This document uses data from the Pennsylvania Department of Environmental Protection (DEP) 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.

Natural Gas Summary: 2023 Q4					
	CY 2023				CY 2023
	Q1	Q2	Q3	Q4	Total
Production Volume	1,845	1,865	1,871	1,939	7,520
Growth Rate	-0.4%	0.7%	-0.5%	4.5%	1.0%
New Wells Spud	120	89	102	110	421
Annual Change	-27	-45	-56	-26	-154
Average PA Price	\$2.25	\$1.45	\$1.31	\$1.69	\$1.68
Growth Rate	-45.0%	-78.3%	-81.1%	-62.8%	-69.9%

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 Q4 include:

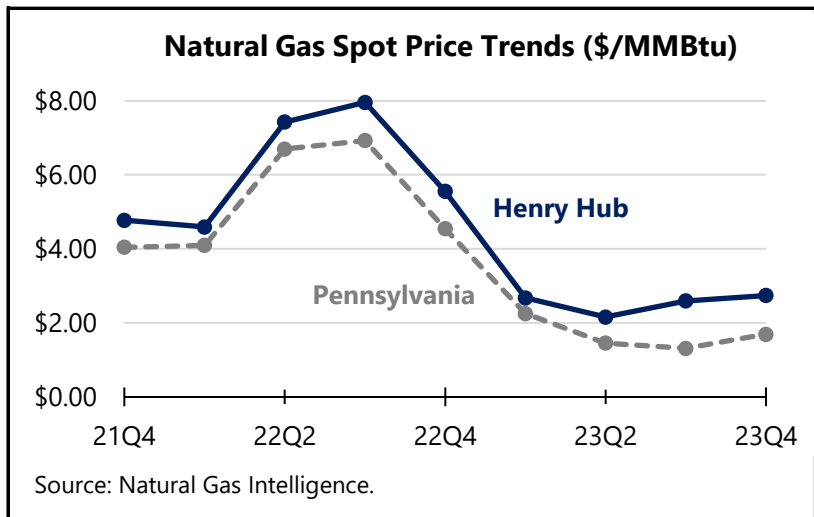
- **Production volume** totaled 1,939 billion cubic feet, an increase of 4.5% from the prior year. This was the strongest annual growth for a quarter since 2021 Q4. Full-year production was up 1.0% compared to 2022, largely due to the fourth quarter gains.
- There were 110 **new horizontal wells spud**, a decrease of 26 new wells (-19.1%) from the prior year. There were 421 wells drilled in 2023, less than any year in the last decade.
- The **average Pennsylvania spot price** was \$1.69, a decrease of \$2.85 (-62.8%) from the prior year. The average price for the full year was \$1.68, a decline of \$3.89 (-69.9%) from the prior year. Low natural gas prices throughout the year were driven by high inventory levels and mild weather.

The table below shows county-level production volume and new wells drilled for calendar year (CY) 2023. Ranked in order of production, the table shows (1) the top-five producing counties, (2) the next five counties combined into one group and (3) remaining counties as a third group. The five counties shown accounted for 72.8% of production volume and 68.2% of new wells for CY 2023. The data show that Washington county recorded a 12.8% decline in production, an outlier among the top five producing counties. Notable year-over-year production gains for other counties not shown include Tioga (+22.8%), Westmoreland (+59.3%) and Indiana (+330.0%). Three of the top five counties recorded significant declines in new wells spud. In total, only 15 of the 33 counties that produced natural gas had new wells spud in 2023.

Top Five Production Counties 2023							
Rank	County	Production			New Wells		
		Amount	Share	Growth	Number	Share	Growth
1	Susquehanna	1,583	21.1%	1.7%	79	18.8%	-40.2%
2	Greene	1,181	15.7	8.9	30	7.1	-51.6
3	Washington	1,153	15.3	-12.8	75	17.8	127.3
4	Bradford	1,133	15.1	1.5	81	19.2	1.3
5	Lycoming	427	5.7	-0.1	22	5.2	-48.8
6-10	Next 5 Counties	1,358	18.1	9.3	90	21.4	-34.3
	All Other	<u>684</u>	<u>9.1</u>	<u>-1.5</u>	<u>44</u>	<u>10.5</u>	<u>-50.0</u>
	Total	7,520	100.0%	1.0%	421	100.0%	-26.8%

Notes: Production amounts are in billion cubic feet, horizontal wells only. Growth rates are year-over-year. The next 5 counties group includes Tioga, Wyoming, Butler, Westmoreland and Sullivan counties.

The adjacent figure displays recent trends in natural gas spot prices for the Henry Hub and the average Pennsylvania hub price. For 2023 Q4, the Pennsylvania average was \$1.69 and the Henry Hub was \$2.74, both significant declines from the prior year. January data show that the Pennsylvania and Henry Hub prices ticked up to \$2.37 and \$3.24, respectively.



Staff Acknowledgements

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