

Natural Gas Quarterly Update



April to June 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.

| Natural Gas Summary: 2023Q2 | | | | | |
|-----------------------------|--------|--------|--------|--------|---------------|
| | 2022 | | | 2023 | |
| | Q2 | Q3 | Q4 | Q1 | Q2 |
| Production Volume | 1,852 | 1,880 | 1,857 | 1,838 | 1,859 |
| Growth Rate | 0.0% | -0.6% | -5.1% | -0.7% | 0.3% |
| Avg. Production per Well | 0.175 | 0.175 | 0.170 | 0.168 | 0.168 |
| Growth Rate | -4.6% | -5.1% | -10.0% | -5.6% | -3.8% |
| New Wells Spud | 133 | 158 | 136 | 120 | 94 |
| Annual Change | 13 | 47 | -18 | -27 | -39 |
| Average PA Price | \$6.70 | \$6.92 | \$4.54 | \$2.25 | \$1.45 |
| Growth Rate | 219.5% | 93.5% | 12.5% | -45.0% | -78.3% |

Note: Growth rates are year-over-year. Production in billion cubic feet, horizontal wells only. Average PA price (in \$/MMBtu) is a weighted average spot price at two major PA hubs.
Sources: Production volume and well counts are reported by DEP. Price data are from Natural Gas Intelligence.

Notable trends for 2023 Q2 include:

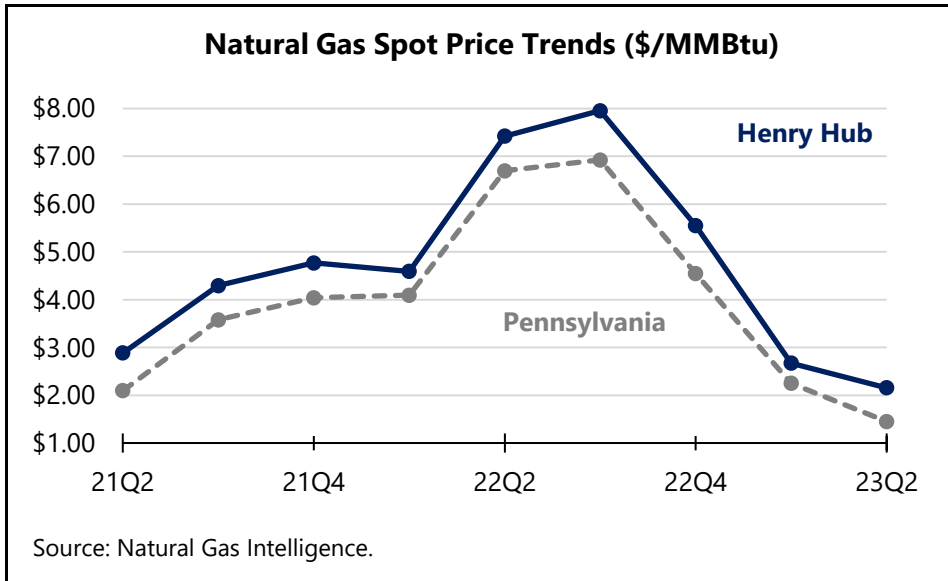
- **Production volume** totaled 1,859 billion cubic feet, an increase of 0.3% from the prior year and the first quarter without a year-over-year production decline since 2022 Q2.
- **Average production per well** was 0.168 billion cubic feet, a decrease of 3.8% from the prior year. This metric was flat from the first quarter after reaching the lowest level since monthly production data became available (2015).
- There were 94 **new horizontal wells spud**, a decrease of 39 new wells (-29.3%) from the prior year. After solid drilling gains in late 2021 and early 2022, there has been a significant slowdown. Data for July and August 2023 show that new wells spud declined 47.6% from the same period in 2022.
- The **average Pennsylvania spot price** was \$1.45, a decrease of \$5.25 (-78.3%) from the prior year. National and regional natural gas prices began to plummet in the fourth quarter of 2022 due to the glut of inventory caused by a mild winter.

The table 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 Q2. The eight states shown account for 86% of nationwide natural gas production. For Pennsylvania, these data differ from data on 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 Q2 compared to the prior year. Pennsylvania accounted for 16.8% of national production (not shown) in 2023 Q2. This share peaked in 2021 Q1 at 18.9% and has steadily declined since then.

| State | 2022 | | | 2023 | |
|---------------|------|------|------|------|------|
| | Q2 | Q3 | Q4 | Q1 | Q2 |
| Texas | 4.8% | 4.0% | 5.5% | 9.1% | 8.7% |
| Pennsylvania | 0.3 | -1.0 | -6.2 | -0.8 | 1.2 |
| Louisiana | 18.7 | 18.6 | 15.2 | 19.5 | 10.2 |
| Alaska | 1.0 | 5.3 | 2.4 | 0.2 | 0.8 |
| West Virginia | 4.7 | 9.6 | 6.8 | 10.4 | 9.5 |
| New Mexico | 18.8 | 17.4 | 22.9 | 25.2 | 17.2 |
| Oklahoma | 6.1 | 8.3 | 8.8 | 11.8 | 1.8 |
| Ohio | -1.0 | 3.1 | -2.4 | 2.9 | 0.8 |

Source: U.S. Energy Information Administration.

The figure displays recent trends in natural gas spot prices for the Henry Hub and the average Pennsylvania hub price. For 2023 Q2, both prices reached their lowest level since 2020 Q3. The Henry Hub peaked at \$7.96 per MMBtu in 2022 Q3 before falling by \$5.80 (-72.9%) over the next three quarters. The decline was largely



due to mild winter weather, which limited demand for heating and increased natural gas inventory throughout the country. Data for July and August show prices remained well below historical averages despite strong demand for cooling. The PA average price for July and August was \$1.16, a decline of \$6.70 from the same period in 2022.

Staff Acknowledgements

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