

U.S. NATURAL GAS PRODUCTION BY PRODUCING REGION AND STATE, AND THE CONTRIBUTION OF OIL AND GAS EXTRACTION TO THESE STATES' GDP

U.S. Natural Gas Production Delivers Formidable Energy Security And Economic Benefits Both Domestically And Globally.

WASHINGTON/NEW YORK, April 24, 2024 – During 2023, three U.S. regions comprised of 11 states produced an average of 107 BCF/d (billion cubic feet per day), or 95% of the total amount of 113 BCF/d of U.S. marketed natural gas.

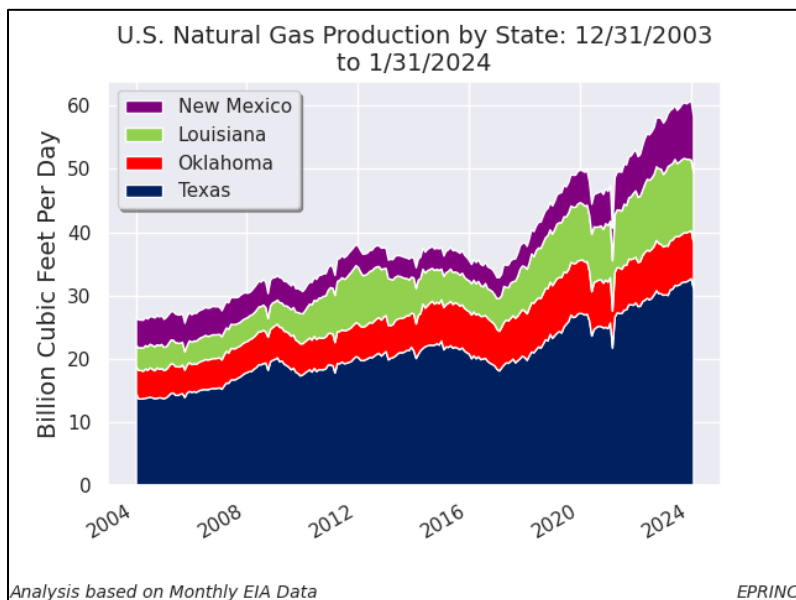
Grouped into Appalachia (Ohio, Pennsylvania, and West Virginia), U.S. Gulf Coast-Oil Patch (Louisiana, New Mexico, Oklahoma, and Texas), and Rocky Mountain-Plains (Colorado, North Dakota, Utah, and Wyoming), each region exhibits different production and growth profiles (*Table 1*).

Table 1

Natural Gas Production Summary			
	2023 Billion Cubic Feet per Day	Percentage of U.S. Production	20-Year Annualized Production Growth
United States	113.1	100.0%	3.9%
<i>Appalachian Natural Gas Producing States</i>			
Ohio	6.2	5.5%	16.8%
Pennsylvania	20.9	18.5%	21.3%
West Virginia	8.9	7.8%	15.6%
Region Total	35.9	31.8%	18.5%
<i>Oil Patch / USGC Natural Gas Producing States</i>			
Louisiana	11.8	10.4%	6.2%
New Mexico	8.7	7.7%	3.9%
Oklahoma	7.7	6.8%	2.9%
Texas	31.6	27.9%	4.1%
Region Total	59.8	52.9%	4.2%
<i>Rocky Mountain / Plains Natural Gas Producing States</i>			
Colorado	5.0	4.4%	3.5%
North Dakota	3.1	2.7%	16.4%
Utah	0.8	0.7%	0.7%
Wyoming	2.6	2.3%	-2.2%
Region Total	11.46	10.1%	2.2%
Three Region Total	107.2	94.8%	4.4%
<i>Analysis based on EIA Data</i>			<i>EPRINC</i>

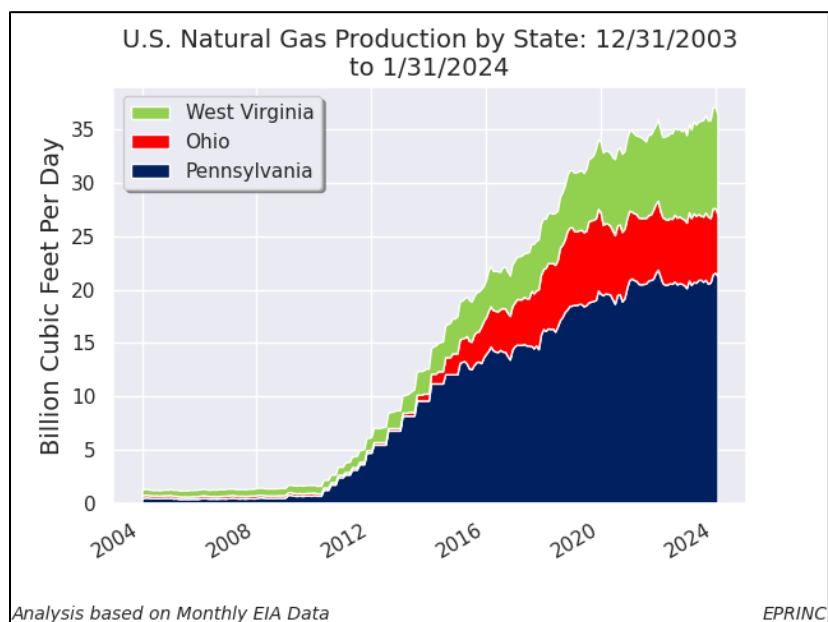
By far, the U.S. Gulf Coast-Oil Patch Region dominates current natural gas production producing 53% of the 2023 national total. Overall, the region's annualized 20-year production growth has been 4.2%. Each state, to varying degrees has been a beneficiary of the shale revolution with Louisiana leading the region with annual growth of 6.2% (*Figure 1*).

Figure 1



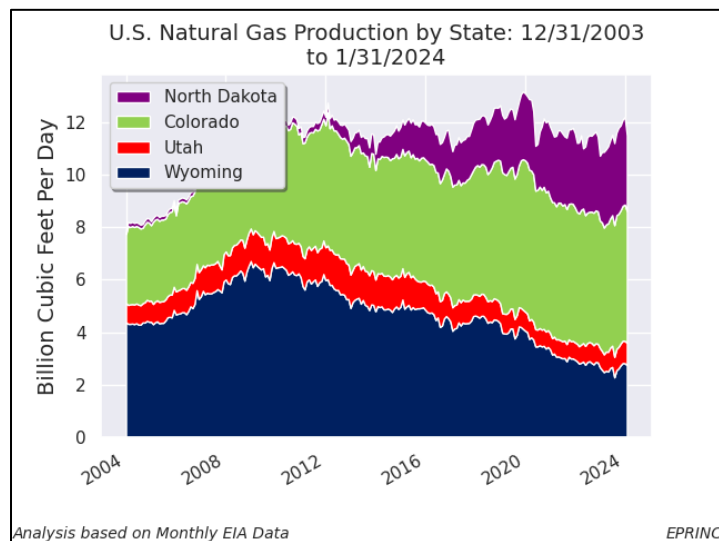
The Appalachian Region has grown the fastest at a yearly rate of 18.5%; in the process, Pennsylvania has become the second largest natural gas producing state at 20.9 BCF/d following Texas' 31.6 BCF/d production (*Figure 2*).

Figure 2



While significant in total at 11.5 BCF/d 2023 production, the Rocky Mountain-Plains Region's production and growth profile is mixed: North Dakota has grown the fastest at an annualized rate of 16.4% during the last 20 years, while Wyoming has been declining yearly at 2.2%. At 5 BCF/d, Colorado is the dominant regional producer (*Figure 3*).

Figure 3



During 2023, the U.S. Bureau of Economic Analysis (BEA) estimated that U.S. GDP grew at a rate of 2.5%. Of that 2.5%, 0.31 (or 12.4% of total) came from mining, quarrying, and oil and gas extraction.

Nine of the states in the three U.S. natural gas producing regions had GDP growth greater than national rate in a range from 2.9% to 5.9%. Ohio, Pennsylvania, and Utah were the exceptions at 1.2%, 2.2%, and 2.5%, respectively (*Table 2*).

Table 2

2023 U.S. & Natural Gas-Producing States GDP			
	Percent change in real gross domestic product by state	Contribution from mining, quarrying, and oil and gas extraction	Percentage contribution of mining, quarrying, oil and gas extraction to GDP
United States	2.5	0.31	12.4%
<i>Appalachian Natural Gas Producing States</i>			
Ohio	1.2	0.11	9.2%
Pennsylvania	2.2	0.08	3.6%
West Virginia	4.7	2.64	56.2%
<i>Oil Patch / USGC Natural Gas Producing States</i>			
Louisiana	3.0	0.61	20.3%
New Mexico	4.1	2.25	54.9%
Oklahoma	5.3	2.57	48.5%
Texas	5.7	1.94	34.0%
<i>Rocky Mountain / Plains Natural Gas Producing States</i>			
Colorado	2.9	0.39	13.4%
North Dakota	5.9	2.96	50.2%
Utah	2.5	0.23	9.2%
Wyoming	5.4	3.11	57.6%
<i>Analysis based on BEA Data</i>		<i>EPRINC</i>	

In these same nine states, the percentage contribution from mining, quarrying, and oil and gas extraction ranged between 13.4% to 57.6%. Notably in Pennsylvania and Ohio, natural gas production growth has flattened since 2019 due to the lack of new takeaway capacity.

“While it has been stated often, America's natural gas bounty has major positive impacts,” said Max Pyziur, EPRINC's Research Director. “It provides energy security domestically and globally; it is the economic foundation of many producing states; it mitigates the U.S. trade deficit; and thanks to an open trading system, U.S. LNG export volumes can be directed quickly via commercial means in response to shifts in weather and industrial demand.”

More information is available at: <https://eprinc.org/chart-of-the-week/>.

--*--

Contact

Max Pyziur
 Director – Research Programs
maxp@eprinc.org
 +1-917-776-7234