The U.S. Natural Gas and Shale Production Outlook

for
North American Gas Forum
September 29, 2014

by
Adam Sieminski, Administrator
The U.S. has experienced a rapid increase in natural gas and oil production from shale and other tight resources.

U.S. dry shale gas production

- Marcellus (PA & WV)
- Haynesville (LA & TX)
- Eagle Ford (TX)
- Fayetteville (AR)
- Barnett (TX)
- Woodford (OK)
- Bakken (ND)
- Antrim (MI, IN, & OH)
- Utica (OH, PA & WV)
- Rest of US 'shale'

U.S. tight oil production

- Eagle Ford (TX)
- Bakken (MT & ND)
- Spraberry (TX & NM Permian)
- Bonespring (TX & NM Permian)
- Wolfcamp (TX & NM Permian)
- Delaware (TX & NM Permian)
- Yeso-Glorieta (TX & NM Permian)
- Niobrara-Codell (CO, WY)
- Haynesville
- Utica (OH, PA & WV)
- Marcellus
- Woodford (OK)
- Granite Wash (OK & TX)
- Austin Chalk (LA & TX)
- Monterey (CA)

Sources: EIA derived from state administrative data collected by DrillingInfo Inc. Data are through July 2014 and represent EIA’s official tight oil & shale gas estimates, but are not survey data. State abbreviations indicate primary state(s).
U.S. natural gas prices are expected to remain well below crude oil prices

energy spot prices
2012 dollars per million Btu

Source: EIA, Annual Energy Outlook 2014, Reference case
Rig productivity has increased greatly, making rig count no longer correlated with production.

Sources: Natural gas production figures from EIA Short-term Energy Outlook, rig counts from Baker Hughes.
A larger share of new wells produce both oil and natural gas.

Source: EIA based on DrillingInfo
Resource and technology assumptions have major implications for projected U.S. crude oil production beyond the next few years.

Source: EIA, Annual Energy Outlook 2014 Reference case and High Oil and Gas Resource case; Short Term Energy Outlook, September 2014
U.S. shale gas leads growth in total gas production through 2040, when production exceeds 100 billion cubic feet per day.

U.S. dry natural gas production
trillion cubic feet

Source: EIA, Annual Energy Outlook 2014, Reference case
Natural gas consumption growth is driven by electric power, industrial, and transportation use

U.S. dry gas consumption
trillion cubic feet

Source: EIA, Annual Energy Outlook 2014, Reference case

*Includes combined heat-and-power and lease and plant fuel
**Includes pipeline fuel
Manufacturing output and natural gas use grows with low natural gas prices, particularly in the near term.

Source: EIA, Annual Energy Outlook 2014, Reference case
U.S. becomes a net exporter of natural gas in the near future

U.S. dry natural gas
trillion cubic feet per year

Source: EIA, Annual Energy Outlook 2014 Reference case

North American Gas Forum
September 29, 2014
Projected U.S. natural gas trade depends on assumptions regarding resources and future technology advances.

Reference case
- Trillion cubic feet per year
- 2010: 0
- 2015: 2
- 2020: 4
- 2025: 6

High Oil and Gas Resource case
- Trillion cubic feet per year
- 2010: 0
- 2015: 2
- 2020: 4
- 2025: 6

Exports to Mexico
- Billion cubic feet per day
- 2010: 0
- 2015: 2
- 2020: 4
- 2025: 6

Exports to Canada
- Billion cubic feet per day
- 2010: 0
- 2015: 2
- 2020: 4
- 2025: 6

Lower 48 LNG exports
- Billion cubic feet per day
- 2010: 0
- 2015: 2
- 2020: 4
- 2025: 6

LNG imports
- Billion cubic feet per day
- 2010: 0
- 2015: 2
- 2020: 4
- 2025: 6

Source: EIA, Annual Energy Outlook 2014 Reference case and High Oil and Gas Resource case

North American Gas Forum
September 29, 2014
For more information


Annual Energy Outlook | www.eia.gov/aeo

Short-Term Energy Outlook | www.eia.gov/steo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

Today in Energy | www.eia.gov/todayinenergy

Drilling Productivity Report | www.eia.gov/petroleum/drilling/