

September 2019

Oil prices eroded in August but rose sharply in mid-September due to an outage in Saudi Arabia. Total mining employment in Texas continues to weaken. Natural gas prices remain at low levels, but natural gas production continues to rise in U.S. shale basins. Utilities are driving gas demand in the U.S., while exports continue to grow.

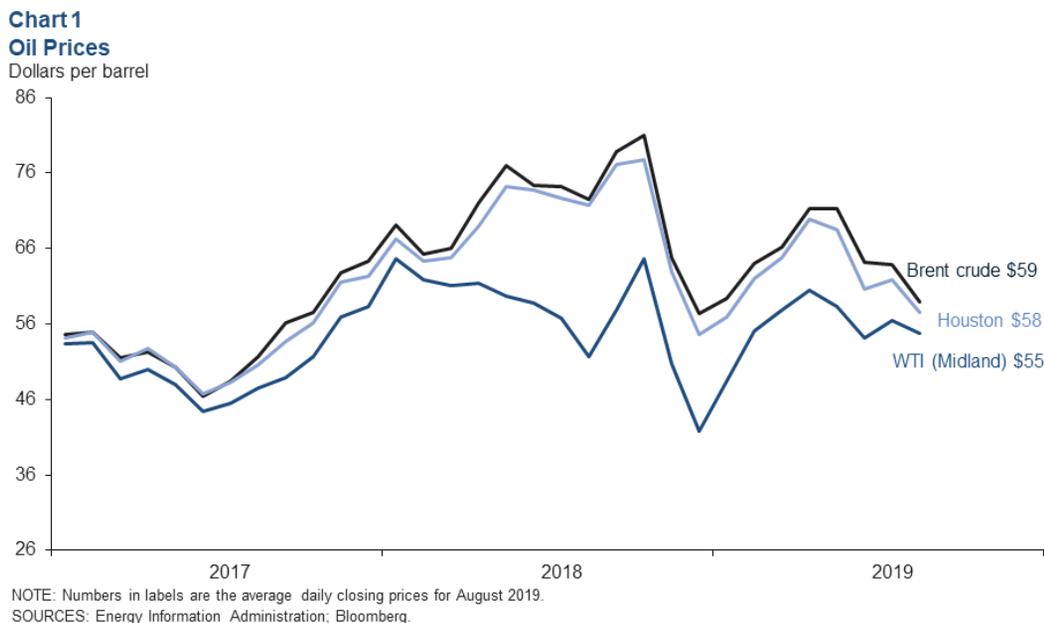
Production Outage in Saudi Arabia

Saudi Arabian crude production was cut by roughly 5.7 million barrels per day (mb/d) on Saturday, Sept. 14, when a drone attack reportedly damaged the Abqaiq crude processing facilities. The sudden loss of 5 percent of global supplies caused Brent crude to rise from a \$60 closing on Friday, Sept. 13, to \$69 late Monday, Sept. 16. West Texas Intermediate (WTI) priced in Cushing, Oklahoma, rose from \$55 on Friday to \$63.

The extent of the damage and the timeline for repairs were unknown at the time of this writing, but commercial crude inventories and potential releases from global strategic petroleum reserves may help to mitigate the supply loss in the short to medium term.

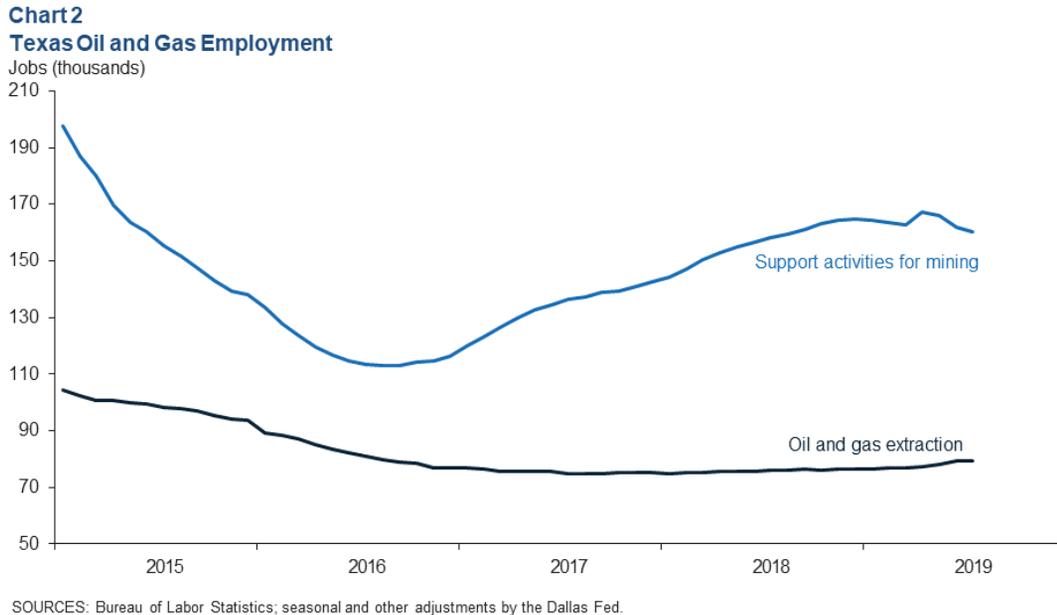
Monthly Oil Prices

Oil prices slid from July to August as concerns over the global demand outlook continued to weigh on market prices (*Chart 1*). Brent crude fell from \$64 to \$59, narrowing the gap with Houston (the Magellan East pipeline price), which fell to \$58. WTI priced in Midland, Texas, fell from \$56 to \$55. The more modest decline is due to an increase in pipeline capacity that is alleviating local bottlenecks.



Employment

Support activities (mostly oilfield services companies) saw employment levels drop for the third consecutive month in July, a cumulative decline of 6,800 jobs (*Chart 2*). The decline comes on the heels of steady erosion in drilling activity. In contrast, oil and gas extraction (mostly exploration and production companies) grew by 2,000 jobs over the three-month period, logging its first substantial net job gain since the 2015–16 oil bust.

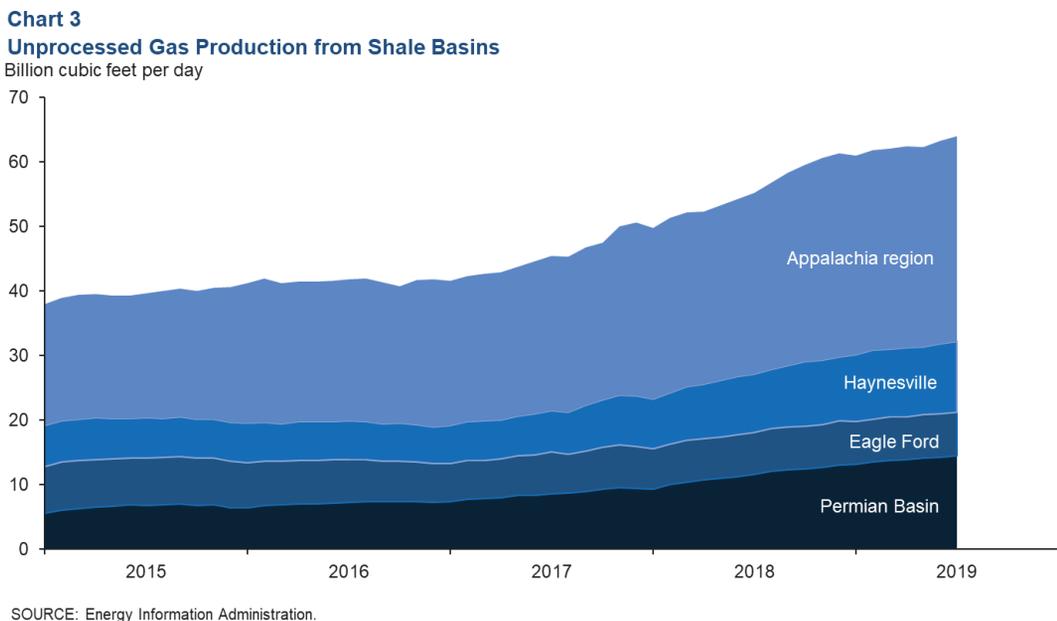


Natural Gas

Shale Gas Production Continues to Grow

Appalachia regional production rose to 31.9 billion cubic feet per day (bcf/d) in July, according to the August 2019 Drilling Productivity Report, and output there is projected to grow an additional 0.8 bcf/d through September (*Chart 3*). Haynesville shale production has also risen this year, reaching 11 bcf/d in July, and it's projected to grow another 0.3 bcf/d through September.

In the liquids-driven plays of the Eagle Ford and Permian, natural gas is co-produced with oil as a by-product. Gas production in the Eagle Ford is essentially flat year to date, while the Permian has seen gas production rise steadily. Production in the Permian was nearly 14.5 bcf/d in July, and it's projected to rise 0.4 bcf/d through September. Gross withdrawals of natural gas in the U.S. were over 106.2 bcf/d in June.

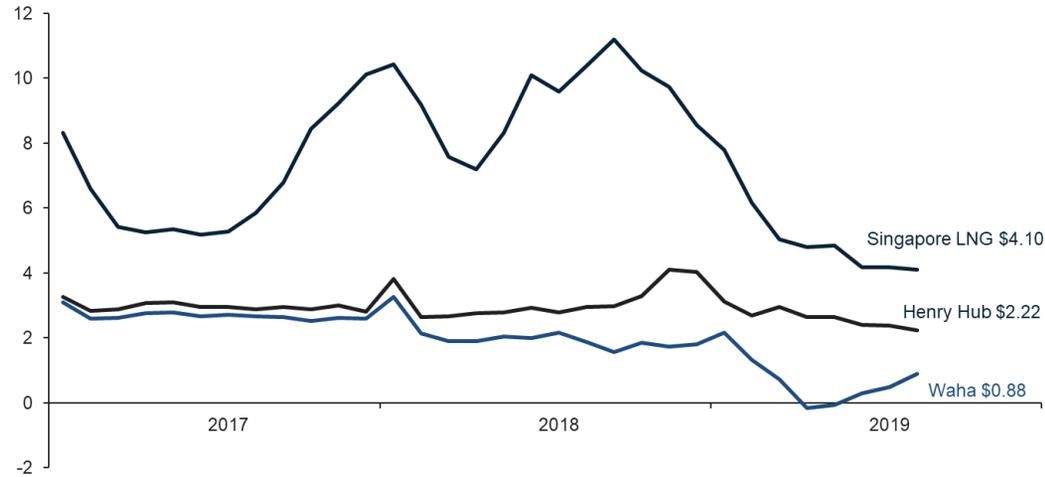


Supply, Global Demand Weigh Down Prices

Permian Basin pipeline capacity for crude is expanding substantially, but natural gas transportation remains constrained. Waha natural gas priced in West Texas averaged 88 cents in August (*Chart 4*). Henry Hub prices have been steadily falling this year, averaging \$2.22 in August. The spot price of liquefied natural gas (LNG) in Singapore has slipped to \$4.10 on rising availability of LNG supplies and reports of slowing demand.

Chart 4
Natural Gas Prices

Dollars per MMBtu



NOTES: Numbers in the labels are the average of daily closing prices in August 2019. LNG refers to liquefied natural gas.
SOURCES: Energy Information Administration; Bloomberg.

Consumption Dips

Seasonally adjusted data show natural gas consumption slowing over the three months ending in June. Electric power, the primary driver of natural gas demand growth since 2017, slipped to 28.6 bcf/d in June—down 11.5 percent from the March peak of 32.3 bcf/d (*Chart 5*). Industrial consumption has been relatively stable the past year, oscillating slightly around 22.8 bcf/d. Consumption growth in other sectors—residential, commercial and vehicles—has varied more widely. Both Industrial and “other” consumption slipped to nearly 22 bcf/d in June.

Chart 5
U.S. Natural Gas Consumption

Billion cubic feet per day (bcf/d)



NOTES: Data are seasonally adjusted, three-month moving averages. Numbers in parentheses are seasonally adjusted consumption levels for June 2019.
SOURCE: Energy Information Administration.

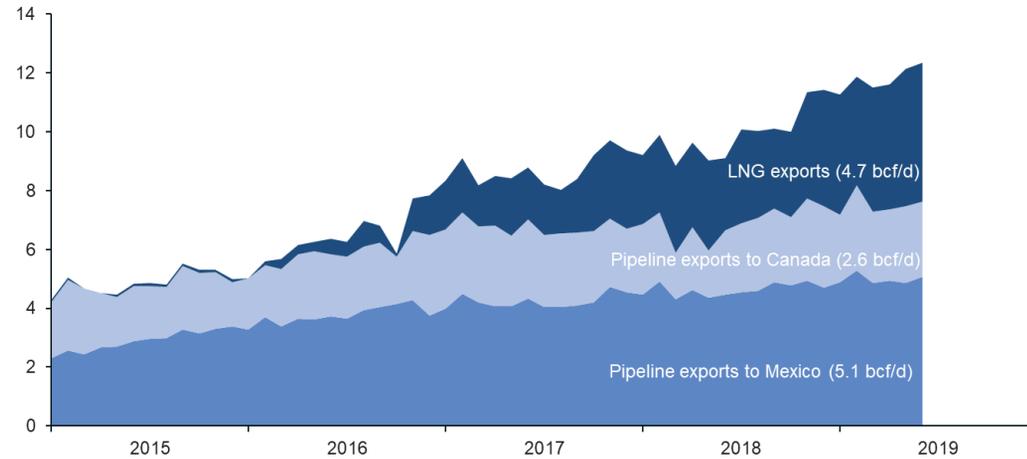
U.S. Exports Rising

LNG exports rose to 4.7 bcf/d in June (Chart 6). Exports to China have fallen to zero as a result of tariffs, but volumes have found other markets such as Japan, South Korea and Chile. Pipeline shipments to Canada increased to 2.6 bcf/d, or about half of the 5.1 mb/d exported to Mexico via pipelines.

Chart 6

U.S. Natural Gas Exports

Billion cubic feet per day (bcf/d)



NOTES: Data are seasonally adjusted where appropriate.
SOURCE: Energy Information Administration.

About Energy Indicators

Questions can be addressed to Jesse Thompson at jesse.thompson@dal.frb.org. *Energy Indicators* is released monthly and can be received by signing up for an email alert. For additional energy-related research, please visit the Dallas Fed's energy home page.