

## Energy

## Oil Prices Retreat Following a Brief Uptick

## First Quarter 2015

Energy markets remained volatile during the first quarter, with oil prices rising temporarily before falling again to new lows. Rig counts in the U.S. plunged, with Texas leading the fall. However, U.S. oil production continued to grow, causing the price differential between West Texas Intermediate (WTI), the domestic benchmark, and Brent, the global benchmark, to increase. Growth in global oil production is expected to continue to outpace demand growth until late 2015.

## Prices

Oil prices bounced up temporarily during first quarter 2015 before continuing their downward slide (*Chart 1*). WTI edged up to \$52 per barrel but finished the quarter at \$48.79, nearly \$7 below its final 2014 price. Brent nearly reached \$61 before falling \$6 and ending the first quarter at \$55.01. Price movements were volatile, with daily price swings reaching 4 to 5 percent as markets reacted to news regarding rig counts and inventories. The Energy Information Administration (EIA) expects Brent crude prices to average \$56 per barrel in the second quarter and increase to an average of \$67 in the fourth quarter. WTI is expected to remain \$5 to \$7 below Brent for the rest of the year.

The differential between Brent and WTI narrowed nearly to zero as prices continued to plunge during the earlier part of the quarter, but it has recently widened significantly due to diverging patterns of supply and demand outside the U.S. Supply originating in the Middle East has been driven down somewhat by issues in Libya and Iraq, influencing the brief lift in Brent prices in February, while U.S. production has grown and inventories have continued to accumulate in Cushing, Okla., putting downward pressure on the price of WTI.

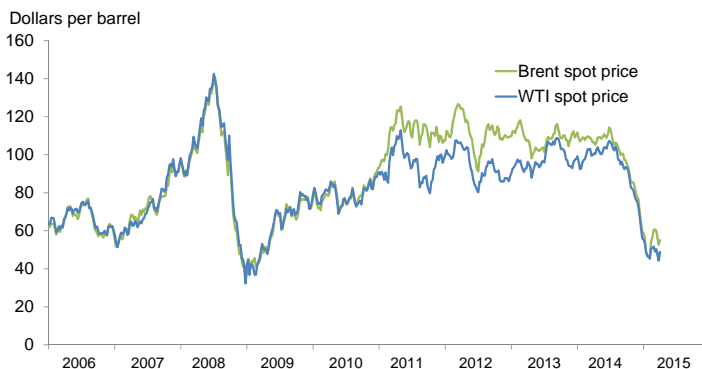
Retail gasoline averaged \$2.27 per gallon during the first quarter, down from an average of \$2.93 in fourth quarter 2014. Gasoline prices are expected to increase over the next few months as the summer driving season kicks off. However, the EIA forecasts an average of only \$2.73 per gallon in 2015. The average price of diesel also declined, falling from an average of \$3.65 per gallon in the fourth quarter to \$2.95 in the first.

## International Supply and Demand

Global oil production significantly outpaced consumption in 2014, but the imbalance is expected to improve in late 2015 (*Chart 2*). Estimates show that supply growth slowed in first quarter 2015, increasing 1.8 percent year over year, compared with 3.2 percent in fourth quarter 2014. Production is expected to expand by 1.1 million barrels per day (mb/d) in 2015 to 94.1 mb/d, while demand is expected to grow by less than 1 mb/d to 93.1 mb/d.

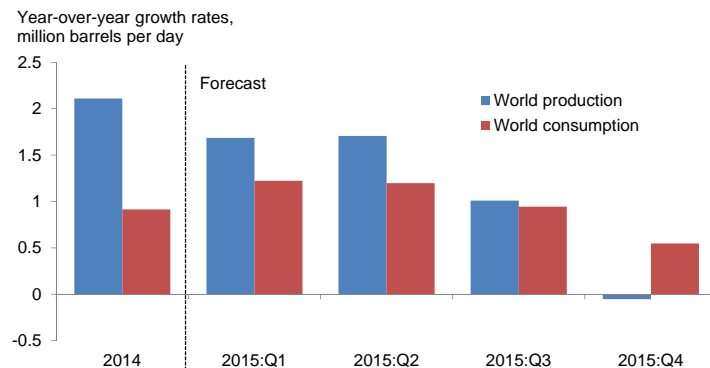
While production has not yet slowed in the U.S., international supply has been pressured by an escalation of violence in Libya, which is now operating at an estimated 30 to 40 percent of

**Chart 1**  
Oil Prices Continue to Slide



SOURCE: Wall Street Journal.

**Chart 2**  
Supply–Demand Balance Expected to Improve by Late 2015



SOURCE: Energy Information Administration.

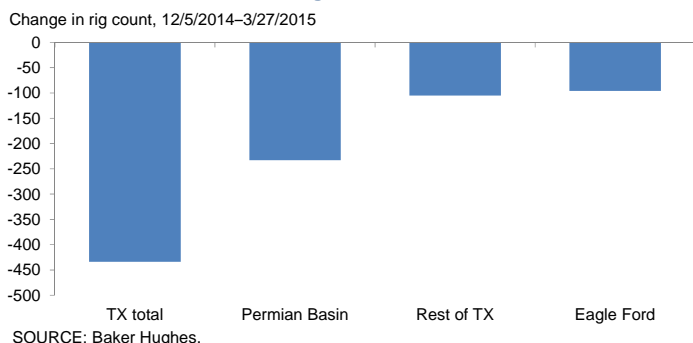
capacity, and by severe weather in Iraq, which has slowed production and exports in the southern part of the country. Saudi Arabian production remains high, and the country continues to dismiss calls from other members of the Organization of the Petroleum Exporting Countries to cut production.

World consumption of petroleum and other liquids grew 1 percent in 2014, coming in at 92.2 mb/d. First-quarter consumption is estimated to have grown 1.3 percent year over year, up from 1 percent in fourth quarter 2014. The EIA has revised its 2015 global demand forecast downward in the last couple of months due to economic slowdowns in Russia and China, although demand is still expected to grow at a slightly faster pace of 1.1 percent year over year.

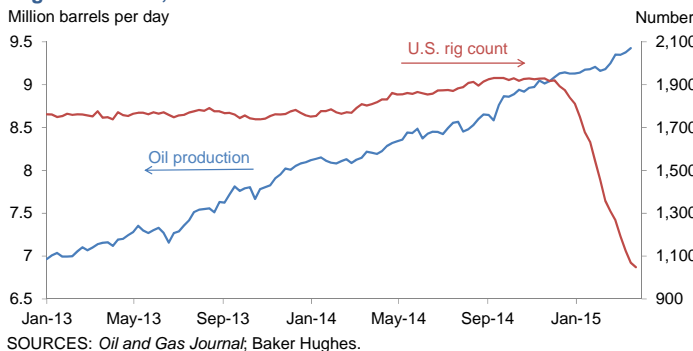
## U.S. Energy Indicators

Drilling activity fell sharply during the first quarter. The U.S. rig count dropped 45 percent from its peak on Dec. 5, 2014, and stood at 1,048 rigs—the lowest number since late 2009. Oil rigs

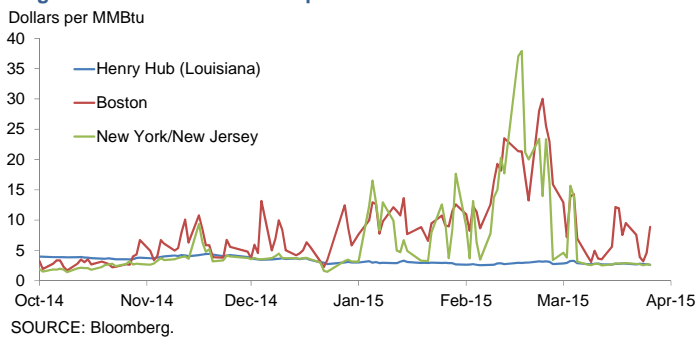
**Chart 3**  
Permian Basin Leads Texas Rig Count Decline



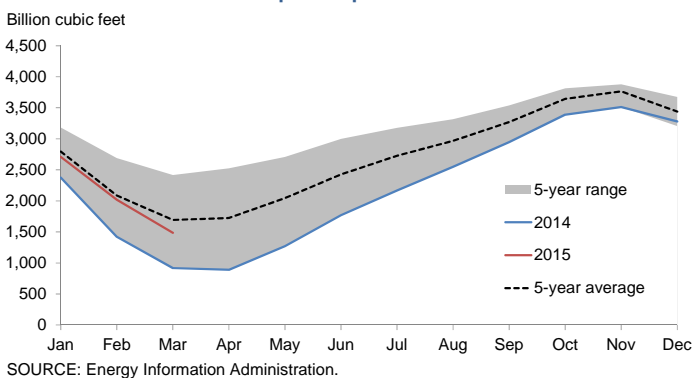
**Chart 4**  
Rig Count Falls, but Production Continues to Grow



**Chart 5**  
Regional Natural Gas Prices Spike



**Chart 6**  
Natural Gas Inventories Ample Despite Cold Weather



fell by 762 to 813 during that time frame, while rigs drilling for gas dropped by 111 to 233 (the remainder were “miscellaneous” rigs). The decline has been concentrated in Texas, which has lost 434 rigs since the beginning of December. Within Texas, more than half of the decline was due to a drop in drilling in the Permian Basin (*Chart 3*).

Oil production continues to grow despite the rig decline (*Chart 4*). Estimates show that U.S. production exceeded 9.4 mb/d by the end of the first quarter, an increase of 200,000 barrels per day from year-end 2014. Production is expected to continue growing into the second quarter before declining in the second half of 2015.

Continued production increases and lower demand due to refinery maintenance are driving up U.S. crude oil inventories, which have increased by more than 70 million barrels since the end of 2014. Over 30 percent of inventory builds have occurred in Cushing, Okla., a major pipeline hub where WTI is priced.

U.S. consumption of petroleum and other liquids grew almost 2 percent year-over-year in the first quarter, nearly double the 1 percent year-over-year growth seen in fourth quarter 2014. This is attributed primarily to growth in consumption of motor gasoline, which rose 2.2 percent year over year, or by 190,000 barrels per day. Total consumption is expected to grow 1.6 percent in 2015, a significant increase from 0.4 percent growth in 2014.

### Natural Gas

Natural gas demand surged during the first quarter due to unusually cold weather in the eastern U.S. Consumption in the Northeast hit record highs in mid-February, when the area consumed over 43 billion cubic feet of natural gas in a single day—approximately 60 percent of the country’s daily production.

The dramatic increase in demand in the Northeast caused regional gas prices to spike, though Henry Hub, the benchmark for U.S. natural gas prices, remained relatively subdued, hovering at or below \$3 per million British thermal units (MMBtu) (*Chart 5*). Last year, harsh winter weather led to a major run-up in natural gas prices nationwide, and Henry Hub climbed to \$6.50 per MMBtu—twice the current price level. This year, however, growing natural gas production in the Marcellus and Utica shale basins has kept inventories from falling to the abnormally low levels seen last year. Inventories remain close to the five-year average, preventing prices from climbing outside of the Northeast (*Chart 6*).

Natural gas prices have declined from their November 2014 peak, when prices were more than 30 percent higher on average than in March 2015. The slump is beginning to affect the number of rigs drilling for gas in the U.S. The natural gas rig count has fallen by more than 100 since the end of 2014. However, drilling in Pennsylvania—the primary source of new U.S. natural gas production and among the lowest-cost producers of U.S. natural gas—has been largely unaffected by the price declines.

—Kristin Davis and Michael Plante

### About the Authors

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