

# Energy

## Oil Markets Stabilizing, but OPEC Supply Raises Concerns Second Quarter 2015

Oil prices ticked up and volatility declined during second quarter 2015. However, significant downside risks to prices remain because of supply increases by the Organization of Petroleum Exporting Countries (OPEC), in particular by Iraq and Saudi Arabia. The lifting of sanctions on Iran also has the potential to introduce another 700,000 barrels per day (kb/d) to the global market by the end of 2016, possibly depressing global prices by \$5–15 per barrel. In the U.S., the drop in rig counts has slowed, but production continued to grow during the second quarter, though growth is expected to level off in the second half of 2015.

### Prices: Up from the Bottom, but Not Out of the Woods

Oil prices picked up during the second quarter. West Texas Intermediate (WTI), the domestic benchmark, climbed 24 percent to finish the quarter at \$60 per barrel, while Brent, the global benchmark, rose 11 percent to \$61 per barrel (Chart 1). However, the path upward has been unsteady, with prices oscillating week to week. The OVX, a measure of oil market volatility, declined somewhat during the quarter, but remains at an elevated level. The price differential between WTI and Brent narrowed to almost zero from more than \$6 per barrel, as the U.S. shows signs of slowing future production growth and output from OPEC increased strongly.

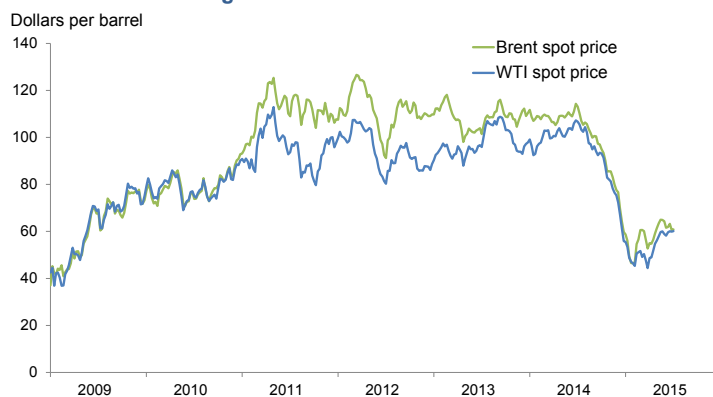
The Energy Information Administration (EIA) has revised its price forecasts for 2015 and 2016 since the first quarter. Forecasts for the 2015 annual average WTI price were revised upward by \$3 from their March estimate to \$55 per barrel. Upward revisions to 2016 OPEC production have led the EIA to lower its 2016 price forecasts by \$8 per barrel for both WTI and Brent. Brent is expected to average \$67 in 2016, and WTI is forecasted to average \$62. There is further downside risk to prices if sanctions on Iran are lifted and additional Iranian production comes to market.

Retail gasoline prices climbed 14 percent during the second quarter, ending at \$2.80 per gallon. However, prices still remain 28 percent below the second quarter 2014 average (Chart 2). Some of the increase is due to seasonal factors such as increased demand and refineries switching to the more expensive summer blend of gasoline. However, rising crude prices and unplanned refinery outages on the West Coast and in the Midwest have also put upward pressure on the price of gasoline. Gasoline prices are expected to decline in the second half of the year as the summer driving season ends and refinery outages are resolved. The EIA forecasts retail gasoline to average \$2.52 in third quarter 2015 and \$2.33 in the fourth quarter.

### The Tide of Global Oversupply Rises

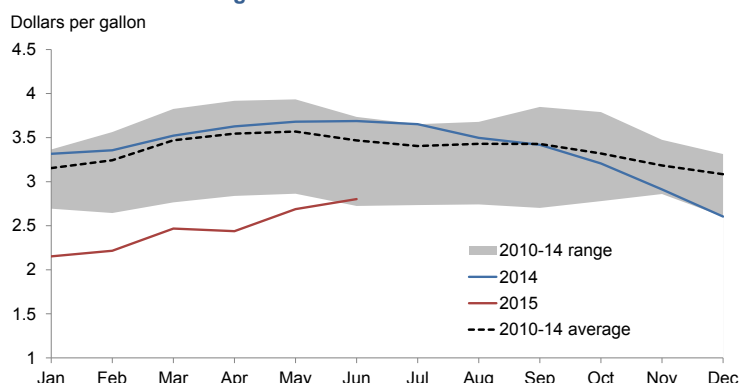
Global oversupply increased during the second quarter as OPEC output grew strongly and U.S. production continued to increase. Driven by record output, forecasts from the EIA for 2015 global production were revised upward significantly, due mainly to OPEC production (Chart 3). While the EIA had

**Chart 1**  
Oil Prices Recovering Ground



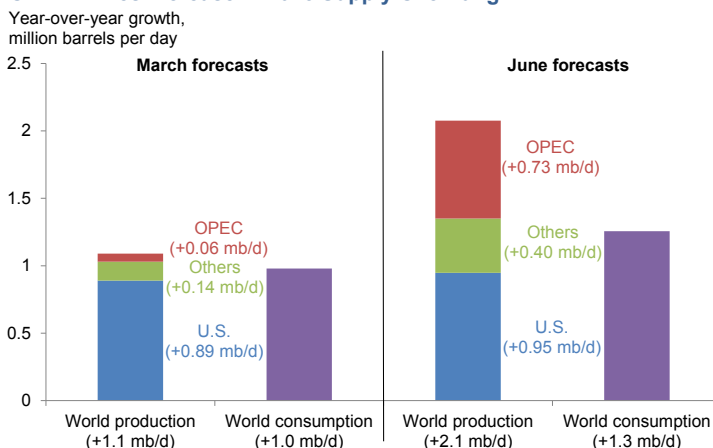
SOURCES: Energy Information Administration; Chicago Mercantile Exchange.

**Chart 2**  
Gasoline Prices Rising



SOURCE: Energy Information Administration.

**Chart 3**  
OPEC Drives Increase in 2015 Supply Overhang



SOURCE: Energy Information Administration.

previously expected the imbalance between supply and demand to improve, with consumption of petroleum outpacing production beginning in first quarter 2016, more recent estimates now show global petroleum supply outpacing consumption through the end of 2016.

In June, OPEC decided to maintain its current output target of 30 million barrels per day (mb/d). This decision is in line with OPEC's new strategy to defend market share rather than maximize profits that began with its decision not to cut production in November 2014. However, in a following news conference, the secretary general stated that the production target is now "an indicator" rather than a ceiling. At the same time, OPEC is already producing 2.1 mb/d above the ceiling, as Saudi Arabia and Iraq produced record levels of crude oil in June.

At the beginning of April, negotiations commenced between Iran and the U.N. Security Council (plus Germany) that could result in the lifting of sanctions against Iran, including those that substantially restrict Iranian oil exports. In a special report, the EIA stated that Iran could release inventories of 30 million barrels of crude onto the market as soon as restrictions are lifted and ramp up production by 700 kb/d by the end of 2016. The EIA estimated that international crude prices could be reduced by \$5-15 per barrel in 2016 if Iran enters the market.

### U.S. Production Still Growing, but Is a Cliff Approaching?

The decline in the U.S. rig count slowed significantly during the second quarter as prices began showing signs of strength. During the first quarter, the U.S. rig count decreased by 792 rigs, a drop of 43 percent. In the second quarter, the count fell by 18 percent, slowing to only a handful of rigs lost per week in the last three weeks of the quarter.

An increase in drilling efficiency led to continued growth in U.S. production during the first month of the second quarter despite falling rig counts (*Chart 4*). Additionally, there are indications that producers began tapping into the backlog of drilled but uncompleted wells. Oil extraction firms have held off on completing wells, but lower completion costs and slightly higher oil prices encourage producers to tap into their "fracklog." Still, the EIA estimates suggest that U.S. crude oil production began to decline in May and June. Producers have turned their focus to core areas of major shale plays, and exploration and drilling in marginal areas have declined. Forecasts for U.S. production in 2016 were also revised down due to downward revisions to future oil prices. A lower price level hurts U.S. shale producers in particular, as they usually have higher production costs than producers in OPEC countries.

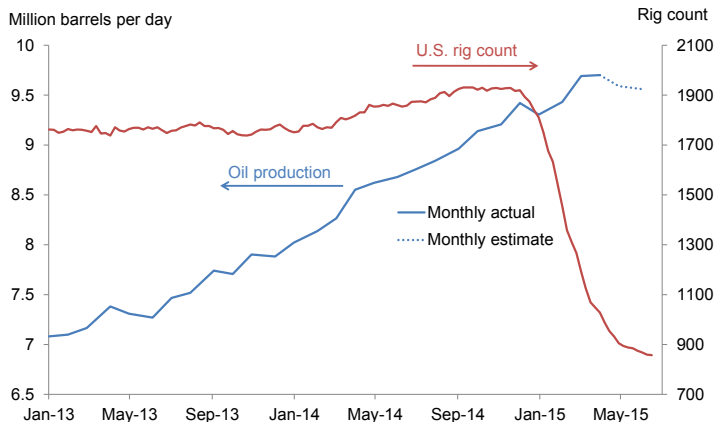
U.S. oil inventories declined notably during the second quarter. This pattern is largely in line with seasonal patterns observed historically, in which increased refinery utilization following maintenance season draws down inventories.

Low gasoline prices and strong employment growth have led to higher U.S. demand for gasoline. Second quarter gasoline supplied was 133 kb/d, or 1.5 percent, higher than in second quarter 2014. Due to falling prices, the EIA estimates that households will spend \$675 less on gasoline this year than in 2014.

### Natural Gas Demand Up, Prices Remain Low

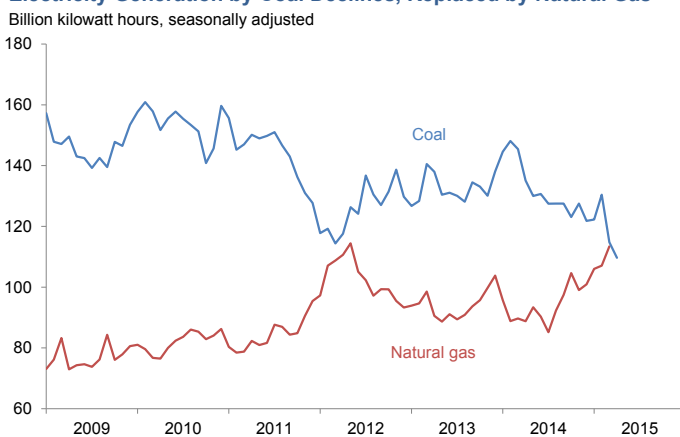
Natural gas prices were slightly lower on average during the second quarter, reflecting seasonally lower demand as the U.S. enters spring and summer. Prices swung between \$2.55 and nearly \$3 per million British thermal units (MMBtu), ending the quarter at \$2.79.

**Chart 4**  
Estimates Indicate U.S. Production Growth Starting to Level Off



SOURCES: Energy Information Administration; Baker Hughes.

**Chart 5**  
Electricity Generation by Coal Declines, Replaced by Natural Gas



SOURCE: Energy Information Administration.

The drop in rig count observed during the first quarter steadied, and rigs hovered at just over 220 rigs for most of the second quarter, about 30 percent lower than the average rig count in second quarter 2014.

Production of dry natural gas from shale plays steadied in April and May. In the Marcellus shale, which produces the largest share of dry shale gas, production grew just over 2 percent in the first five months of 2015, compared with 26 percent growth during 2014. Still, production in the Marcellus, and in the U.S. as a whole, is expected to continue growing as increasing drilling efficiency supports production growth despite price declines.

Cheap natural gas prices are increasing U.S. demand for natural gas. Consumption of natural gas is expected to grow 4.4 percent in 2015, driven primarily by an increase in industrial and electric power consumption. Rising demand for natural gas in electricity generation comes at the expense of demand for coal, which has fallen in recent years as abundant supplies drive down the price of natural gas (*Chart 5*).

—Kristin Davis and Martin Stuermer

### About the Authors

Davis is a senior research analyst and Stuermer is a research economist in the Research Department of the Federal Reserve Bank of Dallas.