



Independent Statistics & Analysis
U.S. Energy Information
Administration

The Availability and Price of Petroleum and Petroleum Products Produced in Countries Other Than Iran

Number 17 in a series of reports required by section 1245(d)(4)(A)
of the National Defense Authorization Act for Fiscal Year 2012

October 30, 2014



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This is the 17th in a series of reports prepared in fulfillment of section 1245(d)(4)(A) of the National Defense Authorization Act (NDAA) for Fiscal Year 2012, as amended. The law requires the U.S. Energy Information Administration (EIA), the statistical and analytical agency within the U.S. Department of Energy, to submit to Congress a report on the availability and price of petroleum and petroleum products produced in countries other than Iran in the two-month period preceding the submission of the report. By law, EIA's data, analyses, and forecasts are independent of approval by any other officer or employee of the U.S. Government. The views in this report, therefore, should not be construed as representing those of the U.S. Department of Energy or other federal agencies. However, EIA consulted with the U.S. Department of the Treasury, the U.S. Department of State, and the intelligence community in the process of developing this report. Readers may review early editions of this report for detailed background and contextual information not repeated here.

September – October 2014 Update

- Global oil markets have loosened considerably since the previous two month-period covering July and August 2014. The combination of robust crude oil supply and weak global demand has pushed crude oil prices to their lowest levels in nearly four years.
- The U.S. Energy Information Administration (EIA) estimates that global oil inventories increased by an average of 0.7 million barrels per day (bbl/d) in September and October, marking the third straight month of rising global oil inventories (**Table 1, Figure 1**). Recent inventory builds are in contrast to this time last year, when global inventories declined by an average of 0.8 million bbl/d in September and October 2013. Increased global crude oil production, particularly from Libya and Iraq, in the past two months, at a time when expectations for global oil consumption are decreasing, has resulted in a looser world oil market compared with conditions over the past year.
- The Brent front month futures contract averaged \$86 per barrel for the five-trading-days ending October 28, about \$16.50 per barrel lower compared with the average price for the five-trading-days ending August 26 (**Figure 2**). The average Brent price in September and October 2014 was also about \$16.50 per barrel lower compared with the same time last year.
- As production increased in both Iraq and Libya, market perceptions about geopolitical risks to near-term supply abated in September and October. Total crude oil production in Iraq averaged almost 3.5 million bbl/d in September and October, 0.3 million bbl/d higher than the previous two-month period because of increased production at Iraq's southern fields and at fields currently controlled under the Kurdistan Regional Government (KRG). Iraq's southern crude oil exports averaged 2.5 million bbl/d in September, almost 0.2 million bbl/d higher than the previous month. EIA estimates that production by the KRG averaged about 350,000 bbl/d in September and October, more than 0.1 million bbl/d higher than the previous two-month period. In Libya, production averaged 0.9 million bbl/d in September and October, 0.4 million bbl/d higher than the previous two-month period. Nevertheless, Libya still faces considerable challenges in ramping up production to its full capacity or even sustaining it at the current level. Despite the recent production increase, the security situation has deteriorated in parts of the country, and the evacuation of foreign workers is inhibiting production levels from reaching capacity at some fields. As a result, there is still significant possibility of intermittent disruptions.
- Although global consumption of petroleum and other liquids¹ increased in September and October compared with the previous 60 days, economic growth estimates were revised down, lowering expectations for future consumption. Consumption from countries within the Organization for Economic Cooperation and Development (OECD) averaged 46.2 million bbl/d, 0.1 million bbl/d higher than the same time last year and 0.2 million bbl/d higher than the average of July and August 2014. Non-OECD consumption averaged 46.2 million bbl/d, 1.2 million bbl/d higher compared with the same time last year and unchanged from the previous two months (**Table 2**).
- Global petroleum and other liquids² production in September and October averaged 93.1 million bbl/d, 0.8 million bbl/d higher than the previous two-month period and 2.7 million bbl/d higher than the same time last year. Production from countries outside of the Organization of the Petroleum

¹ The term "petroleum and other liquids" encompasses petroleum and petroleum products and close substitutes, including crude oil, lease condensate, natural gas liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gain.

² The growth rates referenced in this report may not exactly match corresponding values in tables as a result of independent rounding.

Exporting Countries (OPEC) averaged 56.7 million bbl/d, 2.1 million bbl/d higher compared with the same time last year. Crude oil output from OPEC countries, which averaged 30.3 million bbl/d in September and October, rose by 0.7 million bbl/d compared with the same time last year and 0.4 million bbl/d from the previous two months. Crude oil production increases from Iraq and Libya more than offset lower production from Saudi Arabia (**Tables 3 and 4**).

- Global surplus crude oil production capacity averaged 2.2 million bbl/d in September and October, 0.2 million bbl/d more than the previous two-month period and 0.4 million bbl/d more than this time last year (**Table 3**). Surplus production capacity tends to seasonally increase this time of year as Saudi Arabia, the only significant surplus capacity holder, reduces production in order to offset decreases in their own domestic consumption. The estimate of effective surplus capacity does not include additional capacity that may be technically available in Iran, but which is offline because of the effects of U.S. and European Union (EU) sanctions on Iran's ability to sell its oil.
- The Brent futures curve moved into deeper contango (when near-term prices are less than longer-dated ones) in September and October, in line with estimates that global inventories continued to build over the previous two-month period. The 1st-13th month spread for the Brent futures curve averaged about -\$3.50 per barrel for the five-trading-days ending October 28, about \$2.50 per barrel lower than the five-trading-day-period ending August 26 (**Figure 3**).
- OPEC crude oil supply disruptions averaged almost 2.1 million bbl/d in September and October, 0.4 million bbl/d lower than the previous two-month average and 0.3 million bbl/d lower than the same time last year. Fewer disruptions in Libya and Iraq during September and October more than offset new disruptions in the Neutral Zone shared by Kuwait and Saudi Arabia (**Figure 4**). Unplanned supply disruptions among non-OPEC producers averaged less than 0.6 million bbl/d in September and October, almost 0.1 million bbl/d lower than the previous two-month average and almost 0.2 million bbl/d lower than the same time last year. A majority of the non-OPEC production outages remain in South Sudan, Syria, and Yemen (**Figure 5**). EIA's estimates of unplanned outages account for all liquid fuels among non-OPEC producers, but include crude oil only among OPEC producers. These estimates of unplanned outages exclude normal maintenance and reflect the level of volumes shut in relative to an assessment of effective production capacity, which is periodically updated.
- Iran's petroleum and other liquids production averaged 3.4 million bbl/d in September and October, of which 2.8 million bbl/d was crude oil. Iran's liquid fuels production remains below the previous three-year average of 3.6 million bbl/d, but 0.2 million bbl/d higher than the year-ago level of 3.2 million bbl/d (**Table 1**). Iran's petroleum and other liquids production increased by 0.1 million bbl/d compared with the previous two-month period because gas processing facilities returned to operation after undergoing maintenance.
- EIA has revised the preliminary estimates of petroleum and other liquids production and consumption for July and August 2014 published in the previous edition of this report. Global petroleum and other liquids production was revised upward by 0.3 million bbl/d to average 92.3 million bbl/d, while global consumption remained virtually unchanged at 92.2 million bbl/d. EIA now estimates that global oil inventories grew 0.4 million bbl/d in August after declining by 0.2 million bbl/d in July.

Tables

Table 1. Summary of Estimated Petroleum and Other Liquids Quantities and Prices

	September 2014	October 2014	September – October 2014 Average	September – October 2013 Average	2011 – 2013 Average
Global Petroleum and Other Liquids (million barrels per day)					
Global Petroleum and Other Liquids Production (a)	93.1	93.0	93.1	90.3	89.3
Global Petroleum and Other Liquids Consumption (b)	92.6	92.1	92.4	91.1	89.4
Biofuels Production (c)	2.3	2.2	2.3	2.2	1.9
Biofuels Consumption (c)	1.9	1.9	1.9	2.0	1.8
Iran Liquid Fuels Production	3.4	3.4	3.4	3.2	3.6
Iran Liquid Fuels Consumption	1.7	1.7	1.7	1.8	1.7
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran (million barrels per day)					
Production (d)	87.5	87.4	87.4	84.9	83.7
Consumption (d)	89.0	88.5	88.7	87.4	85.8
Production minus Consumption	-1.6	-1.1	-1.3	-2.5	-2.1
World Inventory Net Withdrawals Including Iran	-0.5	-0.9	-0.7	0.8	0.1
Estimated OECD Inventory Level (e) (million barrels)	2,654	2,666	2,660	2,666	2,659
Surplus Production Capacity (million barrels per day)					
OPEC Surplus Crude Oil Production Capacity (f)	2.1	2.2	2.2	1.8	2.4
Oil Price Level					
WTI Front Month Futures Price (g) (\$ per barrel)	93.03	84.80	89.12	103.25	95.77
Brent Front Month Futures Price (h) (\$ per barrel)	98.57	88.30	93.69	110.30	110.43
RBOB Front Month Futures Price (i) (\$ per gallon)	2.59	2.26	2.43	2.68	2.86
Oil Price Time Spread					
WTI 1st - 13th Month Futures Spread (\$ per barrel)	3.09	2.68	2.90	9.32	0.41
Brent 1st - 13th Month Futures Spread (\$ per barrel)	-2.44	-3.59	-2.99	7.82	4.86

Note: The term "petroleum and other liquids" encompasses crude oil, lease condensate, natural gas liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gains, which are important to consider in concert due to the inter-related supply, demand, and price dynamics of petroleum, petroleum products, and related fuels.

(a) Production includes crude oil (including lease condensates), natural gas liquids, other liquids, and refinery processing gains.

(b) Consumption of petroleum by the OECD countries is synonymous with "products supplied," defined in the glossary of the EIA Petroleum Supply Monthly, DOE/EIA-0109. Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel, and loss, and bunkering.

(c) Biofuels production and consumption are based on EIA estimates as published in the International Energy Statistics. Biofuels production in the third quarter tends to be at its highest level in the year as ethanol production in Brazil reaches its seasonal peak and is typically lowest in the first quarter as seasonal production falls in the South/South-Central region of Brazil.

(d) Global production of petroleum and petroleum products outside of Iran is derived by subtracting biofuels production and Iran liquid fuels production from global liquid fuels production. The same method is used to calculate global consumption outside of Iran.

(e) Estimated inventory level is for OECD countries only.

(f) EIA defines surplus oil production capacity as potential oil production that could be brought online within 30 days and sustained for at least 90 days, consistent with sound business practices. This does not include oil production increases that could not be sustained without degrading the future production capacity of a field. It also does not include additional capacity that may be available in Iran, but which is currently offline due to the impacts of U.S. and EU sanctions on Iran's ability to sell its oil.

(g) WTI refers to West Texas Intermediate crude oil traded on the New York Mercantile Exchange (NYMEX), owned by Chicago Mercantile Exchange (CME) Group.

(h) Brent refers to Brent crude oil traded on the Intercontinental Exchange (ICE).

(i) RBOB refers to reformulated blend stock for oxygenate blending traded on the NYMEX.

Note: October prices include data through market close on October 28, 2014.

Source: U.S. Energy Information Administration.

Table 2. Global Petroleum and Other Liquids Production, Consumption, and Inventory Estimates

	September 2014	October 2014	September – October 2014 Average	September – October 2013 Average	2011 – 2013 Average
Production (million barrels per day) (a)					
OECD (b)	25.7	25.8	25.8	23.9	22.6
U.S. (50 States)	14.3	14.4	14.3	12.8	11.2
Canada	4.4	4.4	4.4	4.1	3.9
Mexico	2.8	2.8	2.8	2.9	2.9
North Sea (c)	2.7	2.7	2.7	2.6	3.1
Other OECD	1.6	1.5	1.6	1.5	1.6
Non-OECD	67.4	67.3	67.3	66.4	66.7
OPEC (d)	36.4	36.4	36.4	35.7	36.2
Crude Oil Portion	30.3	30.2	30.3	29.6	30.2
Non-crude liquids	6.1	6.1	6.1	6.1	6.0
Eurasia (e)	13.7	13.7	13.7	13.6	13.4
China	4.5	4.5	4.5	4.5	4.4
Other non-OECD	12.8	12.7	12.7	12.6	12.6
Total World Production	93.1	93.0	93.1	90.3	89.3
Non-OPEC Production	56.7	56.7	56.7	54.6	53.1
Consumption (million barrels per day) (f)					
OECD	46.2	46.3	46.2	46.1	46.1
U.S. (50 States)	18.8	19.0	18.9	19.3	18.8
U.S. territories	0.3	0.3	0.3	0.3	0.3
Canada	2.4	2.3	2.3	2.4	2.4
Europe	14.2	14.1	14.2	13.9	13.9
Japan	4.2	4.2	4.2	4.1	4.6
Other OECD	6.3	6.4	6.3	6.0	6.2
Non-OECD	46.5	45.9	46.2	45.0	43.3
Eurasia	4.8	4.7	4.8	4.7	4.5
Europe	0.7	0.7	0.7	0.7	0.7
China	11.3	11.0	11.2	10.8	10.2
Other Asia	11.2	11.4	11.3	11.0	11.0
Other non-OECD	18.5	18.0	18.2	17.7	16.9
Total World Consumption	92.6	92.1	92.4	91.1	89.4
Inventory Net Withdrawals (million barrels per day)					
U.S. (50 States)	-0.1	-0.1	-0.1	0.2	0.0
Other OECD	-0.1	-0.3	-0.2	0.0	0.1
Other Stock Draws and Balance	-0.2	-0.5	-0.4	0.6	0.0
Total Stock Draw	-0.5	-0.9	-0.7	0.8	0.1
End-of-period Inventories (million barrels)					
U.S. Commercial Inventory	1,134	1,136	1,135	1,126	--
OECD Commercial Inventory	2,654	2,666	2,660	2,666	2,659

- a) Production includes production of crude oil (including lease condensates), natural gas liquids, biofuels, other liquids, and refinery processing gains.
- b) OECD = Organization for Economic Cooperation and Development: Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.
- c) North Sea includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.
- d) OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.
- e) Eurasia = Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan. Estonia is included in "Other OECD" totals.
- f) Consumption of petroleum by the OECD countries is synonymous with "products supplied," defined in the glossary of the EIA Petroleum Supply Monthly, DOE/EIA-0109. Consumption of petroleum by the non-OECD countries is "apparent consumption," which includes internal consumption, refinery fuel and loss, and bunkering.

Note: The sum of individual countries or regions may not add to the totals because of independent rounding.

Source: U.S. Energy Information Administration.

Table 3. OPEC Crude Oil (Excluding Condensates) and Other Liquids Production Estimates

Production (million barrels per day)	September 2014	October 2014	September – October 2014 Average	September – October 2013 Average	2011 – 2013 Average
Crude Oil					
Algeria	1.2	1.2	1.2	1.2	1.2
Angola	1.7	1.7	1.7	1.7	1.7
Ecuador	0.6	0.6	0.6	0.5	0.5
Iran	2.8	2.8	2.8	2.7	3.1
Iraq	3.4	3.5	3.5	2.9	2.9
Kuwait	2.6	2.5	2.6	2.6	2.6
Libya	0.8	0.9	0.9	0.5	0.9
Nigeria	2.1	2.0	2.0	2.0	2.1
Qatar	0.8	0.8	0.8	0.7	0.8
Saudi Arabia	9.6	9.5	9.6	9.9	9.6
United Arab Emirates	2.7	2.6	2.6	2.7	2.6
Venezuela	2.2	2.2	2.2	2.2	2.2
OPEC Total	30.3	30.2	30.3	29.6	30.2
Non-crude liquids	6.1	6.1	6.1	6.1	6.0
Total OPEC Supply	36.4	36.4	36.4	35.7	36.2
Crude Oil Production Capacity					
Africa	5.7	5.8	5.7	5.3	5.9
South America	2.8	2.8	2.8	2.7	2.7
Middle East	24.1	24.0	24.0	23.4	24.0
OPEC Total	32.5	32.5	32.5	31.4	32.6
Surplus Crude Oil Production Capacity (a)					
Africa	0.0	0.0	0.0	0.0	0.0
South America	0.0	0.0	0.0	0.0	0.0
Middle East	2.1	2.2	2.2	1.8	2.4
OPEC Total	2.1	2.2	2.2	1.8	2.4

OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Libya, and Nigeria (Africa); Ecuador and Venezuela (South America); Iran, Iraq, Kuwait, Qatar, Saudi Arabia, and the United Arab Emirates (Middle East).

a) EIA defines surplus crude oil production capacity as potential oil production that could be brought online within 30 days and sustained for at least 90 days, consistent with sound business practices. This does not include oil production increases that could not be sustained without degrading the future production capacity of a field. It also does not include additional capacity that may be available in Iran, but which is currently offline because of the effects of U.S. and EU sanctions on Iran's ability to sell its oil.

Note: The sum of individual countries may not add to the totals because of independent rounding.

Source: U.S. Energy Information Administration.

Table 4. Non-OPEC Petroleum and Other Liquids Production Estimates

Production (million barrels per day)	September 2014	October 2014	September – October 2014 Average	September – October 2013 Average	2011 – 2013 Average
North America	21.5	21.6	21.5	19.8	18.0
Canada	4.4	4.4	4.4	4.1	3.9
Mexico	2.8	2.8	2.8	2.9	2.9
United States	14.3	14.4	14.3	12.8	11.2
Central and South America	5.3	5.2	5.3	5.2	4.9
Argentina	0.7	0.7	0.7	0.7	0.7
Brazil	3.1	3.0	3.0	3.0	2.7
Colombia	1.0	1.0	1.0	1.0	1.0
Other Central and South America	0.5	0.5	0.5	0.5	0.5
Europe	3.7	3.6	3.6	3.6	4.0
Norway	1.8	1.7	1.8	1.7	1.9
United Kingdom (offshore)	0.7	0.7	0.7	0.7	0.9
Other North Sea	0.2	0.2	0.2	0.2	0.2
Eurasia (a)	13.7	13.7	13.7	13.6	13.4
Azerbaijan	0.8	0.8	0.8	0.9	0.9
Kazakhstan	1.7	1.7	1.7	1.7	1.6
Russia	10.6	10.6	10.6	10.6	10.4
Turkmenistan	0.3	0.3	0.3	0.3	0.2
Other Eurasia	0.2	0.2	0.2	0.2	0.2
Middle East	1.3	1.3	1.3	1.2	1.4
Oman	1.0	1.0	1.0	1.0	0.9
Syria (b)	0.0	0.0	0.0	0.1	0.2
Yemen	0.1	0.1	0.1	0.1	0.2
Asia and Oceania	9.0	9.0	9.0	8.8	9.0
Australia	0.5	0.5	0.5	0.4	0.5
China	4.5	4.5	4.5	4.5	4.4
India	1.0	1.0	1.0	1.0	1.0
Indonesia	0.9	0.9	0.9	0.9	1.0
Malaysia	0.7	0.7	0.7	0.6	0.7
Vietnam	0.3	0.3	0.3	0.3	0.3
Africa	2.3	2.3	2.3	2.4	2.4
Egypt	0.7	0.7	0.7	0.7	0.7
Equatorial Guinea	0.3	0.3	0.3	0.3	0.3
Gabon	0.2	0.2	0.2	0.2	0.2
Sudan and South Sudan	0.3	0.3	0.3	0.3	0.3
Total non-OPEC liquids	56.7	56.7	56.7	54.6	53.1
OPEC non-crude liquids (c)	6.1	6.1	6.1	6.1	6.0
Non-OPEC + OPEC non-crude liquids	62.8	62.8	62.8	60.7	59.1

- a) Eurasia = Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.
- b) The estimates are 0.03 million bbl/d in both months.
- c) OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

Note: The sum of individual countries may not add to regional totals because of independent rounding.

Source: U.S. Energy Information Administration.

Table 5. Crude Oil and Petroleum Product Price Data

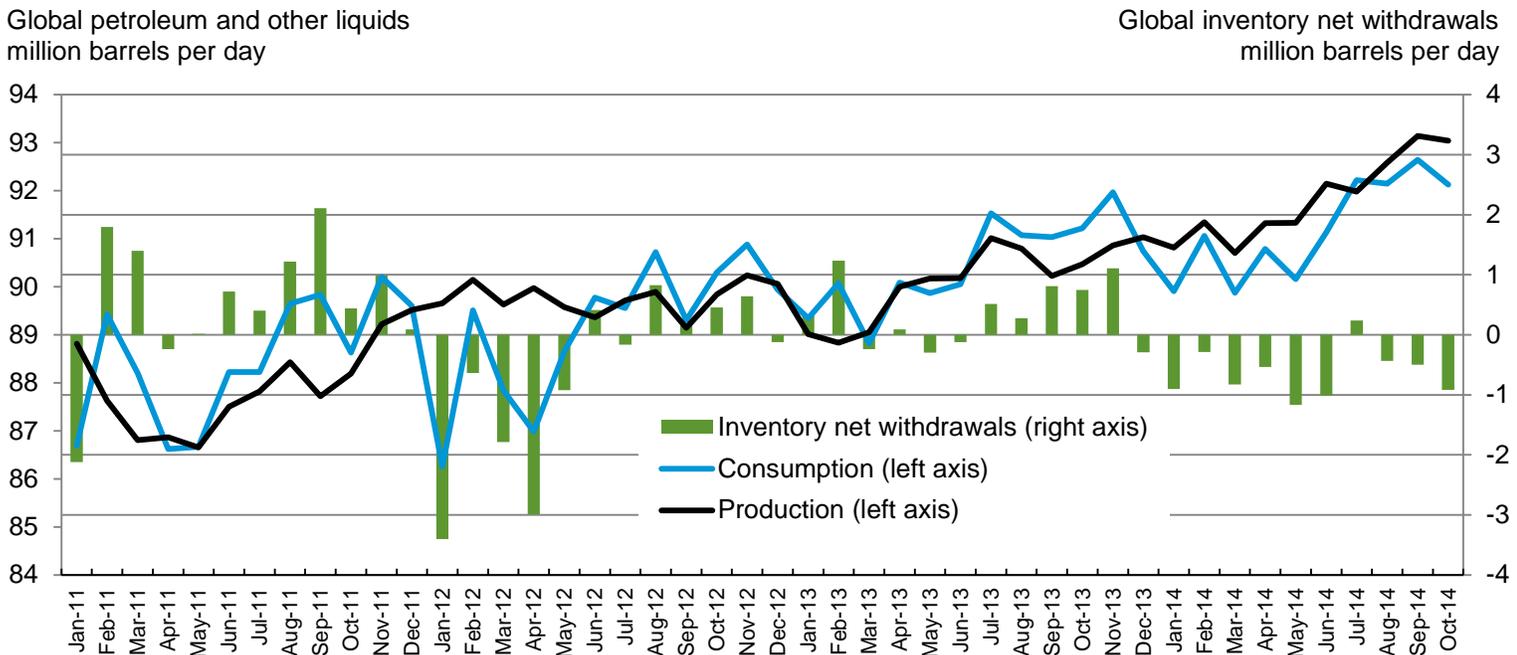
Item	September 2014	October 2014	September – October 2014 Average	September – October 2013 Average	2011 – 2013 Average
Brent Front Month Futures Price (\$ per barrel)	98.57	88.30	93.69	110.30	110.43
WTI Front Month Futures Price (\$ per barrel)	93.03	84.80	89.12	103.25	95.77
Dubai Front Month Futures Price (\$ per barrel)	97.25	87.37	92.56	107.54	107.21
Brent 1st - 13th Month Futures Spread (\$ per barrel)	-2.44	-3.59	-2.99	7.82	4.86
WTI 1st - 13th Month Futures Spread (\$ per barrel)	3.09	2.68	2.90	9.32	0.41
RBOB Front Month Futures Price (\$ per gallon)	2.59	2.26	2.43	2.68	2.86
Heating Oil Front Month Futures Price (\$ per gallon)	2.75	2.53	2.64	3.02	2.99
RBOB - Brent Futures Crack Spread (\$ per gallon)	0.24	0.16	0.20	0.06	0.23
Heating Oil - Brent Futures Crack Spread (\$ per gallon)	0.40	0.43	0.41	0.40	0.36

Note: October prices include data through market close on October 28, 2014.

Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE), and Dubai Mercantile Exchange (DME).

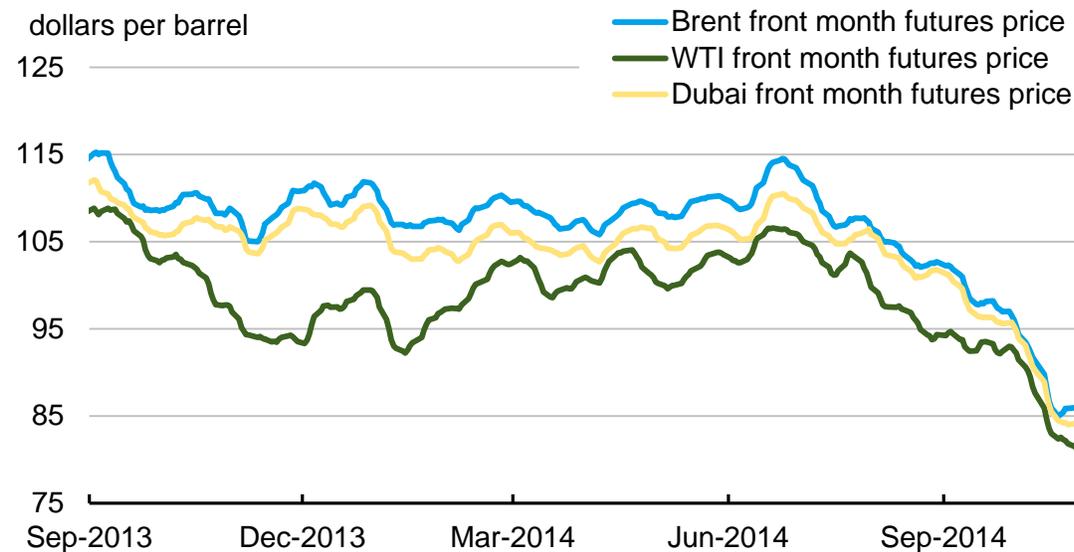
Figures

Figure 1. Global Petroleum and Other Liquids Production, Consumption, and Inventory Net Withdrawals, January 2011 – October 2014



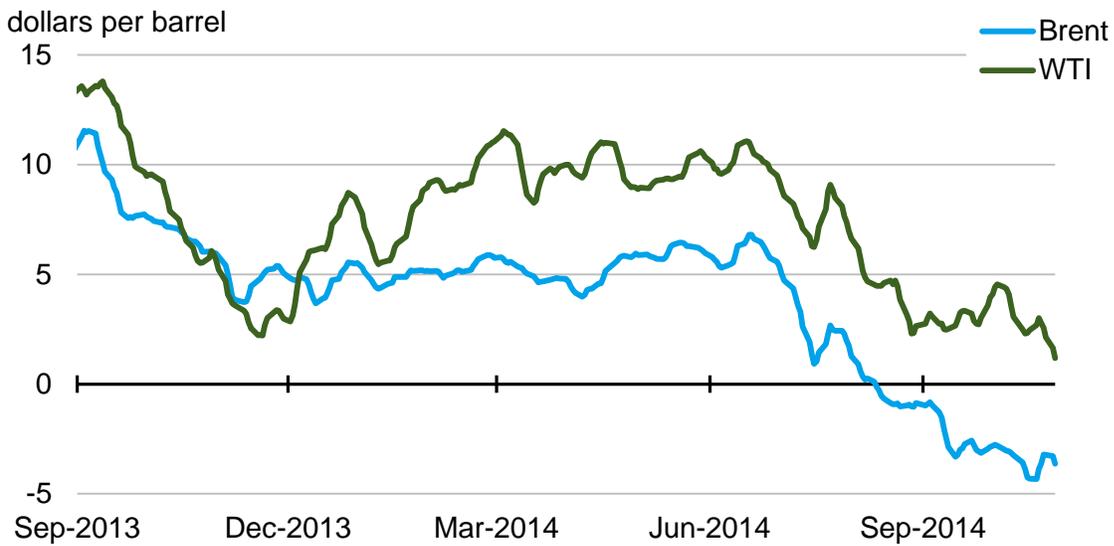
Note: See Table 1 footnotes for definitions of petroleum and other liquids, production, and consumption.
 Source: U.S. Energy Information Administration.

Figure 2. Front Month Crude Oil Futures Prices



Note: All prices represent rolling 5-day averages.
 Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE) and Dubai Mercantile Exchange (DME).

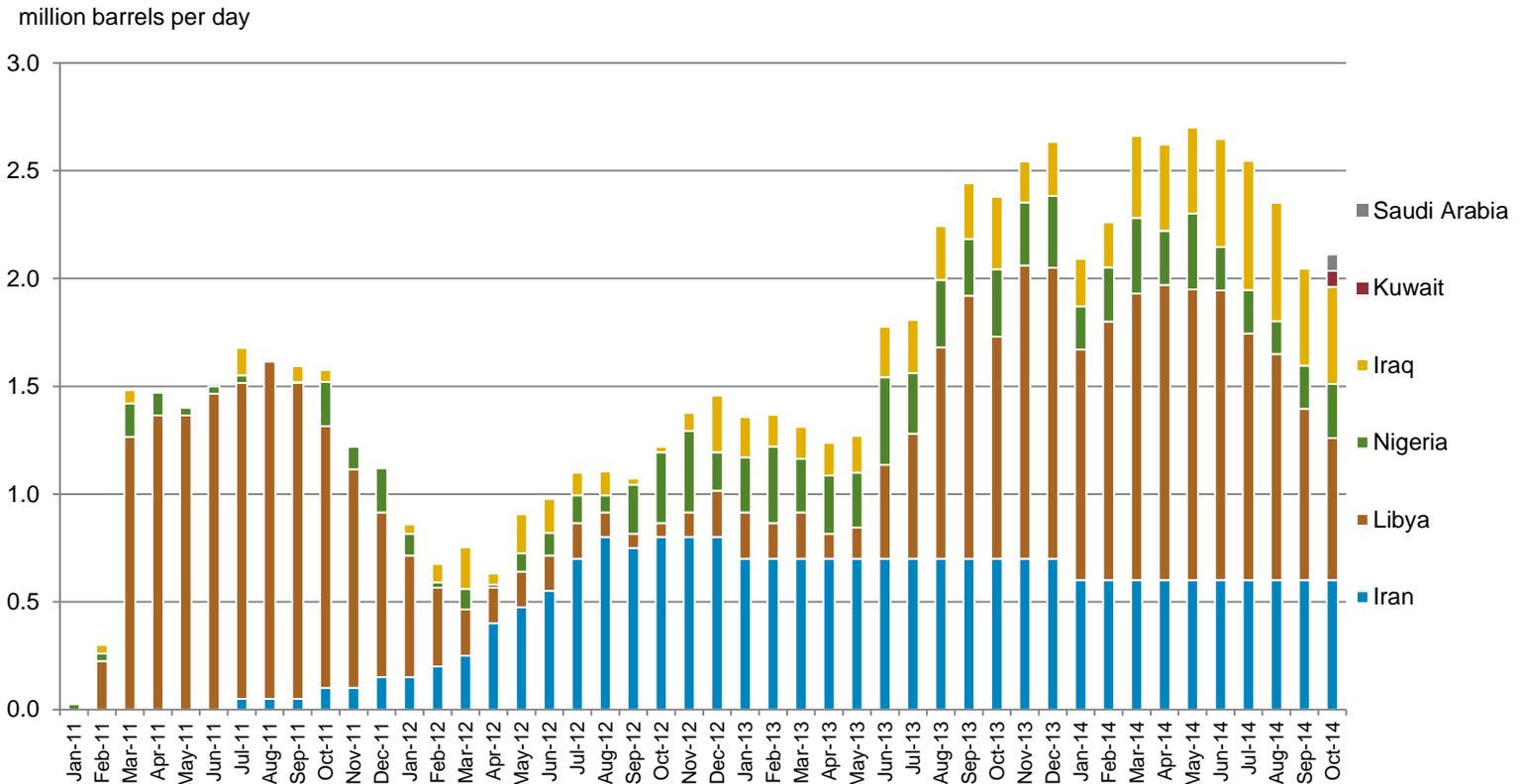
Figure 3. Crude Oil 1st - 13th Month Futures Price Spread



Note: All prices represent rolling 5-day averages.

Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME) and Intercontinental Exchange (ICE).

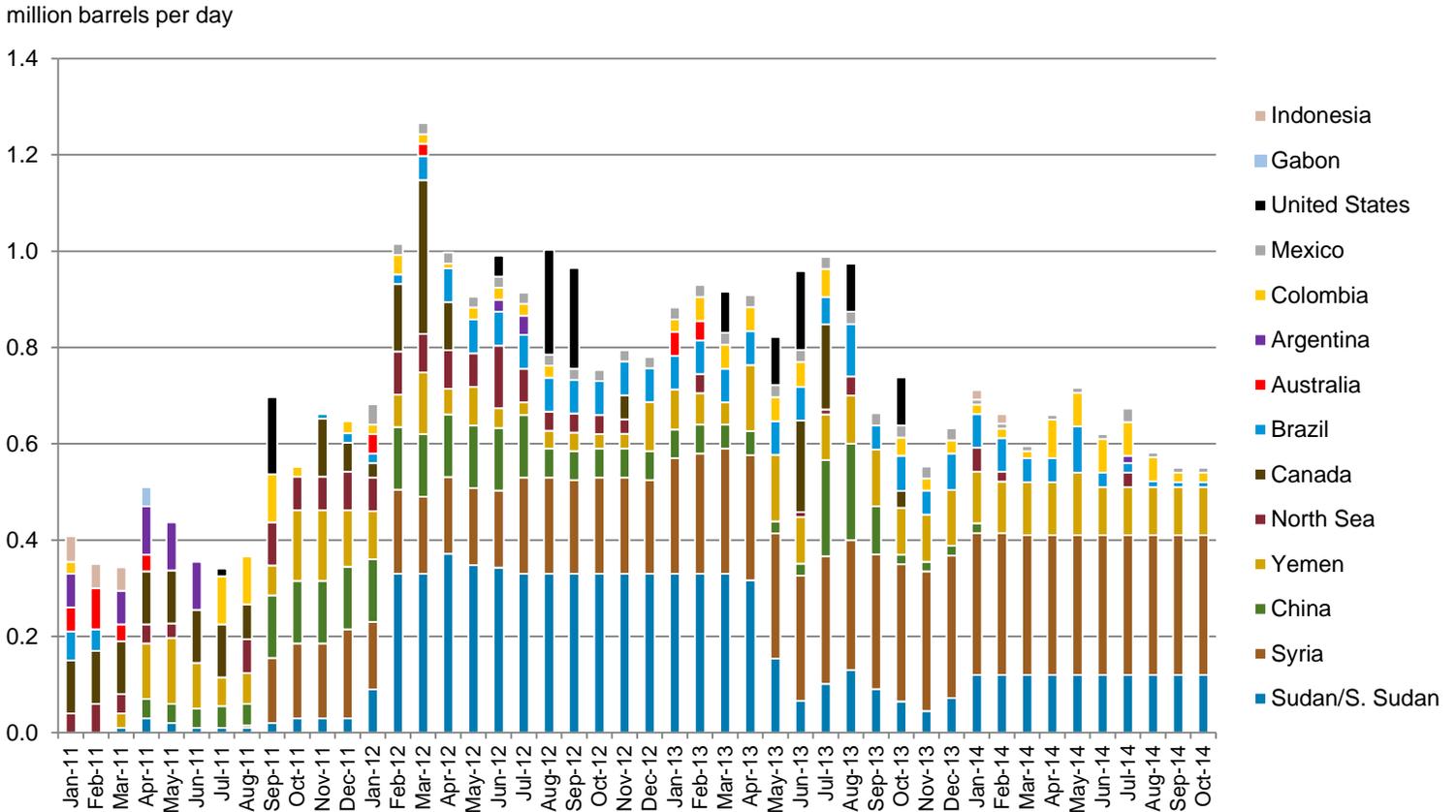
Figure 4. Estimated Unplanned Crude Oil Production Disruptions Among OPEC Producers, January 2011 – October 2014



Note: Estimated unplanned disruptions reflect the level of volumes shut in, accounting for effective production capacity.

Source: U.S. Energy Information Administration.

Figure 5. Estimated Unplanned Petroleum and Other Liquids Production Disruptions Among Non-OPEC Producers, January 2011 – October 2014



Note: Estimated unplanned disruptions reflect the level of volumes shut in, accounting for effective production capacity.
 Source: U.S. Energy Information Administration.