



Independent Statistics & Analysis
U.S. Energy Information
Administration

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

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

October 31, 2013



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This is the eleventh 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 2013 Update

- The U.S. Energy Information Administration (EIA) estimates that global liquid fuels¹ consumption outpaced supply in September and October 2013, resulting in a 0.3-million-barrel-per-day (bbl/d) average withdrawal in global oil stocks (**Table 1, Figure 1**), which is lower than the average 0.5-million-bbl/d stock draw during July and August.
- Prices fell modestly in September and October relative to the prior 60-day period, reflecting lower consumption coupled with an increase in surplus production capacity. The Brent front month futures price averaged about \$108 per barrel for the five-trading-day period ending October 29, a decrease of about \$3 per barrel compared with the five-trading-day average ending August 27 (**Figure 2**). The drop in U.S. crude oil prices during the same time was larger, as U.S. commercial crude oil inventories grew. The front month futures price for West Texas Intermediate (WTI) settled at an average of \$98 per barrel for the five-days ending on October 29, a decline of about \$8 per barrel since the five-day period ending August 27. In September and October 2013, Brent averaged slightly higher than \$110 per barrel, nearly \$2 per barrel lower than in the September-October period last year (**Table 1**).
- Global liquid fuels² consumption during September and October averaged 0.5 million bbl/d lower than its average during the previous 60-day period, which is consistent with the seasonal pattern marked by both the end of the U.S. driving season and the easing of oil use for electricity generation in the Middle East (**Table 2**). The seasonal decline in global refinery runs resulted in lower crude oil inventory withdrawals in October compared with September and a decrease in backwardation (when near-month prices are higher than farther dated prices) of the Brent futures curve (**Figure 3**). The 1st-13th month spread for the Brent futures curve averaged about \$6 per barrel for the five-trading-day period ending October 29. This is a decrease of about \$2 per barrel compared with the five-trading-days ending August 27 and relatively unchanged compared to this time last year.
- Global liquid fuels supply during September and October was 0.3 million bbl/d lower than the average during the previous 60-day period. The decrease in world oil supply compared with the previous 60-day period reflects a 0.8-million-bbl/d decline in total production from members of the Organization of the Petroleum Exporting Countries (OPEC), namely Iraq, Libya, and Saudi Arabia (**Table 3**). Crude oil output declines from Iraq and Libya reflect unplanned supply disruptions, while cutbacks to Saudi Arabia's production were primarily because of reduced direct burn of crude oil for power generation. Non-OPEC liquid fuels production increased by 0.5 million bbl/d over the previous 60-day period but was more than offset by the decrease in total OPEC output (**Table 4**).
- Global surplus crude oil production capacity in September and October 2013 averaged 1.8 million bbl/d, which is 0.2 million bbl/d above the average during the previous 60-day period but still 0.3 million bbl/d below the year-ago level (**Table 3**). The estimate of effective surplus capacity does not include additional capacity that may be technically available in Iran, but which is offline due to the impacts of U.S. and European Union (EU) sanctions on Iran's ability to sell its oil.

¹ The term "liquid fuels" 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.

- The total volume of production that is offline due to unplanned outages in OPEC and non-OPEC countries is estimated to be 2.9 million bbl/d in both September and October, virtually unchanged from the average during the previous 60-day period. EIA's estimates of unplanned outages account for crude oil only among OPEC producers and all liquid fuels among non-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. In Iraq, roughly 400,000 bbl/d was offline in September because of planned maintenance on southern export terminals, but this volume was excluded from EIA's disruption estimate because markets were made aware of the loss beforehand.
- Global disruptions were mainly driven by higher outages among OPEC producers in September and higher non-OPEC outages in October. OPEC crude oil supply disruptions reached 2.3 million bbl/d in September, the highest level since at least January 2009 from when EIA has tracked OPEC disruptions, and remained close to that level in October (**Figure 4**). Non-OPEC outages fell in September for the second consecutive month, but increased in October because of new outages in the United States, Brazil, Canada, and Colombia. EIA estimates that unplanned disruptions averaged 0.6 million bbl/d among non-OPEC producers and 2.3 million bbl/d among OPEC members for September and October (**Figure 5**).
- Because Libya has experienced several major swings in production since June, estimates of the monthly average disruption can obscure developments over shorter time periods. At the beginning of September, Libya's production was very low. Rising production over the course of that month led October to start with significantly higher production levels, resulting in an estimated average disruption during October that is closer to the August average level than to the higher average level for September. Towards the end of October, however, Libyan production again declined sharply.
- Iran's liquid fuels production averaged 3.5 million bbl/d in September and October, of which 2.8 million bbl/d was crude oil. Iran's liquid fuels production remains well below the three-year average of 4.0 million bbl/d (**Table 1**). Production in September and October was 0.2 million bbl/d above the output level during the same period last year, which mostly reflects the timing of sanctions imposed on Iranian oil exports in 2012. Sanctions enacted by the EU, which not only banned all imports of Iranian oil, but also barred all EU insurance companies from providing protection and indemnity coverage to vessels that carry Iranian oil became effective in July 2012, resulted in precipitous declines in Iranian production in subsequent months.
- EIA has revised the preliminary estimates for July and August 2013 liquid fuels production, consumption, and stock draws published in the previous edition of this report. World liquid fuels production was revised upward by 0.1 million bbl/d to average 90.7 million bbl/d, while the estimate for global liquid fuels consumption was also revised upward by 0.3 million bbl/d to average 91.1 million bbl/d. Inventory net withdrawals for July and August averaged 0.5 million bbl/d, which was 0.2 million bbl/d higher than previously estimated. Surplus crude oil production capacity averaged 1.7 million bbl/d in July and August, about 0.5 million bbl/d lower than previously estimated. The change resulted from an upward revision to total OPEC crude oil production, stemming mostly from Saudi Arabia. EIA confirmed that Saudi Arabia's production remained at a higher level during that period in response to higher-than-normal global supply disruptions, particularly in August.

Tables

Table 1. Summary of Estimated Liquid Fuels Quantities and Prices

	September 2013	October 2013	September – October 2013 Average	September – October 2012 Average	2010 – 2012 Average
Total Global Liquid Fuels					
Total Global Liquid Fuels Production (a) (million bbl/d)	90.4	90.4	90.4	89.0	87.9
Total Global Liquid Fuels Consumption (b) (million bbl/d)	90.8	90.5	90.7	89.7	88.4
Biofuels Production (c) (million bbl/d)	2.3	2.0	2.1	2.1	1.8
Biofuels Consumption (c) (million bbl/d)	1.8	1.8	1.8	1.8	1.7
Iran Liquid Fuels Production (million bbl/d)	3.4	3.5	3.5	3.3	4.0
Iran Liquid Fuels Consumption (million bbl/d)	1.8	1.7	1.8	1.6	1.7
Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran					
Production (d) (million bbl/d)	84.7	84.9	84.8	83.7	82.1
Consumption (d) (million bbl/d)	87.2	87.0	87.1	86.3	85.0
Production minus Consumption	-2.5	-2.0	-2.3	-2.6	-2.9
World Inventory Net Withdrawals Including Iran (million bbl/d)	0.4	0.2	0.3	0.7	0.5
Estimated OECD Inventory Level (e) (million barrels)	2,623	2,621	2,622	2,698	2,690
Surplus Production Capacity					
OPEC Surplus Crude Oil Production Capacity (f) (million bbl/d)	1.7	2.0	1.8	2.1	3.0
Oil Price Level					
WTI Front Month Futures Price (g) (\$ per barrel)	106.23	100.77	103.43	91.83	89.62
Brent Front Month Futures Price (h) (\$ per barrel)	111.25	109.43	110.32	112.20	100.98
RBOB Front Month Futures Price (i) (\$ per gallon)	2.73	2.63	2.68	2.89	2.62
Oil Price Time Spread					
WTI 1st - 13th Month Futures Spread (\$ per barrel)	11.92	7.10	9.45	-1.60	-3.16
Brent 1st - 13th Month Futures Spread (\$ per barrel)	9.10	6.71	7.88	6.58	1.31

Note: The term "liquid fuels" 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 since 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 blendstock for oxygenate blending traded on the NYMEX.

Note: October prices include data through the morning of October 30, 2013.

Source: U.S. Energy Information Administration.

Table 2. International Liquid Fuels Production, Consumption, and Inventory Estimates

	September 2013	October 2013	September – October 2013 Average	September – October 2012 Average	2010 – 2012 Average
Production (million barrels per day) (a)					
OECD (b)	24.0	24.3	24.2	22.2	21.9
U.S. (50 States)	12.6	12.5	12.5	11.4	10.3
Canada	4.3	4.3	4.3	3.8	3.6
Mexico	2.9	2.9	2.9	2.9	3.0
North Sea (c)	2.8	3.1	2.9	2.5	3.4
Other OECD	1.6	1.5	1.6	1.6	1.6
Non-OECD	66.4	66.1	66.2	66.8	66.1
OPEC (d)	35.6	35.5	35.5	36.4	35.7
Crude Oil Portion	29.8	29.7	29.7	30.7	30.2
Non-crude liquids	5.8	5.8	5.8	5.8	5.5
Former Soviet Union (e)	13.4	13.5	13.4	13.4	13.3
China	4.5	4.6	4.5	4.5	4.3
Other non-OECD	12.9	12.6	12.7	12.5	12.7
Total World Production	90.4	90.4	90.4	89.0	87.9
Non-OPEC Production	54.8	54.9	54.9	52.6	52.3
Consumption (million barrels per day) (f)					
OECD	45.6	45.6	45.6	45.8	46.5
U.S. (50 States)	18.5	18.5	18.5	18.5	18.9
U.S. territories	0.3	0.3	0.3	0.3	0.3
Canada	2.3	2.2	2.3	2.3	2.3
Europe	13.9	13.9	13.9	13.9	14.2
Japan	4.3	4.3	4.3	4.4	4.5
Other OECD	6.3	6.4	6.3	6.4	6.3
Non-OECD	45.2	45.0	45.1	44.0	41.9
Former Soviet Union	4.8	4.7	4.7	4.6	4.3
Europe	0.7	0.7	0.7	0.7	0.7
China	10.8	10.9	10.8	10.5	9.8
Other Asia	10.9	11.0	11.0	11.0	10.7
Other non-OECD	18.1	17.5	17.8	17.1	16.4
Total World Consumption	90.8	90.5	90.7	89.7	88.4
Inventory Net Withdrawals (million barrels per day)					
U.S. (50 States)	-0.2	0.0	-0.1	-0.1	0.0 (d)
Other OECD	0.2	0.0	0.1	0.5	0.1
Other Stock Draws and Balance	0.4	0.1	0.2	0.3	0.4
Total Stock Draw	0.4	0.2	0.3	0.7	0.5
End-of-period Inventories (million barrels)					
U.S. Commercial Inventory	1,129	1,128	1,128	1,119	--
OECD Commercial Inventory	2,623	2,621	2,622	2,698	2,690

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) Former Soviet Union = 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.

g) The estimate is -0.03 million bbl/d.

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 Liquid Fuels Production Estimates

Production (million barrels per day)	September 2013	October 2013	September – October 2013 Average	September – October 2012 Average	2010 – 2012 Average
Crude Oil					
Algeria	1.2	1.2	1.2	1.2	1.3
Angola	1.7	1.7	1.7	1.7	1.8
Ecuador	0.5	0.5	0.5	0.5	0.5
Iran	2.8	2.8	2.8	2.7	3.5
Iraq	2.8	2.8	2.8	3.1	2.6
Kuwait	2.6	2.6	2.6	2.6	2.4
Libya	0.4	0.6	0.5	1.5	1.2
Nigeria	2.1	2.1	2.1	2.0	2.1
Qatar	0.7	0.7	0.7	0.7	0.8
Saudi Arabia	10.1	9.8	9.9	9.8	9.3
United Arab Emirates	2.7	2.7	2.7	2.7	2.5
Venezuela	2.2	2.2	2.2	2.2	2.2
OPEC Total	29.8	29.7	29.7	30.7	30.2
Non-crude liquids					
	5.8	5.8	5.8	5.8	5.5
Total OPEC Supply	35.6	35.5	35.5	36.4	35.7
Crude Oil Production Capacity					
Africa	5.4	5.5	5.4	6.4	6.3
South America	2.7	2.7	2.7	2.7	2.7
Middle East	23.4	23.4	23.4	23.7	24.3
OPEC Total	31.5	31.6	31.6	32.8	33.2
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	1.7	2.0	1.8	2.1	3.0
OPEC Total	1.7	2.0	1.8	2.1	3.0

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 due to the impacts 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 Liquid Fuels Production Estimates

Production (million barrels per day)	September 2013	October 2013	September – October 2013 Average	September – October 2012 Average	2010 – 2012 Average
North America	19.7	19.6	19.7	18.1	16.9
Canada	4.3	4.3	4.3	3.8	3.6
Mexico	2.9	2.9	2.9	2.9	3.0
United States	12.6	12.5	12.5	11.4	10.3
Central and South America	5.4	5.1	5.2	5.0	4.8
Argentina	0.7	0.7	0.7	0.7	0.7
Brazil	3.2	2.9	3.0	2.9	2.7
Colombia	1.0	1.0	1.0	1.0	0.9
Other Central and South America	0.5	0.5	0.5	0.5	0.5
Europe	3.7	4.1	3.9	3.5	4.3
Norway	1.7	2.1	1.9	1.7	2.0
United Kingdom (offshore)	0.7	0.8	0.8	0.6	1.1
Other North Sea	0.3	0.3	0.3	0.2	0.3
Former Soviet Union (FSU) (a)	13.4	13.5	13.5	13.4	13.3
Azerbaijan	0.9	0.9	0.9	0.9	1.0
Kazakhstan	1.6	1.6	1.6	1.6	1.6
Russia	10.5	10.5	10.5	10.4	10.3
Turkmenistan	0.3	0.3	0.3	0.3	0.2
Other FSU	0.3	0.3	0.3	0.2	0.2
Middle East	1.1	1.1	1.1	1.3	1.4
Oman	0.9	0.9	0.9	0.9	0.9
Syria	0.1	0.1	0.1	0.2	0.3
Yemen	0.1	0.1	0.1	0.2	0.2
Asia and Oceania	9.0	9.1	9.0	9.1	9.0
Australia	0.5	0.5	0.5	0.5	0.6
China	4.5	4.6	4.5	4.5	4.3
India	1.0	1.0	1.0	1.0	1.0
Indonesia	1.0	1.0	1.0	1.0	1.0
Malaysia	0.6	0.6	0.6	0.6	0.6
Vietnam	0.3	0.3	0.3	0.4	0.3
Africa	2.5	2.5	2.5	2.3	2.5
Egypt	0.7	0.7	0.7	0.7	0.7
Equatorial Guinea	0.4	0.4	0.4	0.3	0.3
Gabon	0.2	0.2	0.2	0.2	0.2
Sudan (b)	0.3	0.3	0.3	0.1	0.4
Total non-OPEC liquids	54.8	54.9	54.9	52.6	52.3
OPEC non-crude liquids (c)	5.8	5.8	5.8	5.8	5.5
Non-OPEC + OPEC non-crude liquids	60.6	60.7	60.6	58.3	57.8

a) Former Soviet Union = Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

b) Sudan production represents total production from both Sudan and South Sudan.

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

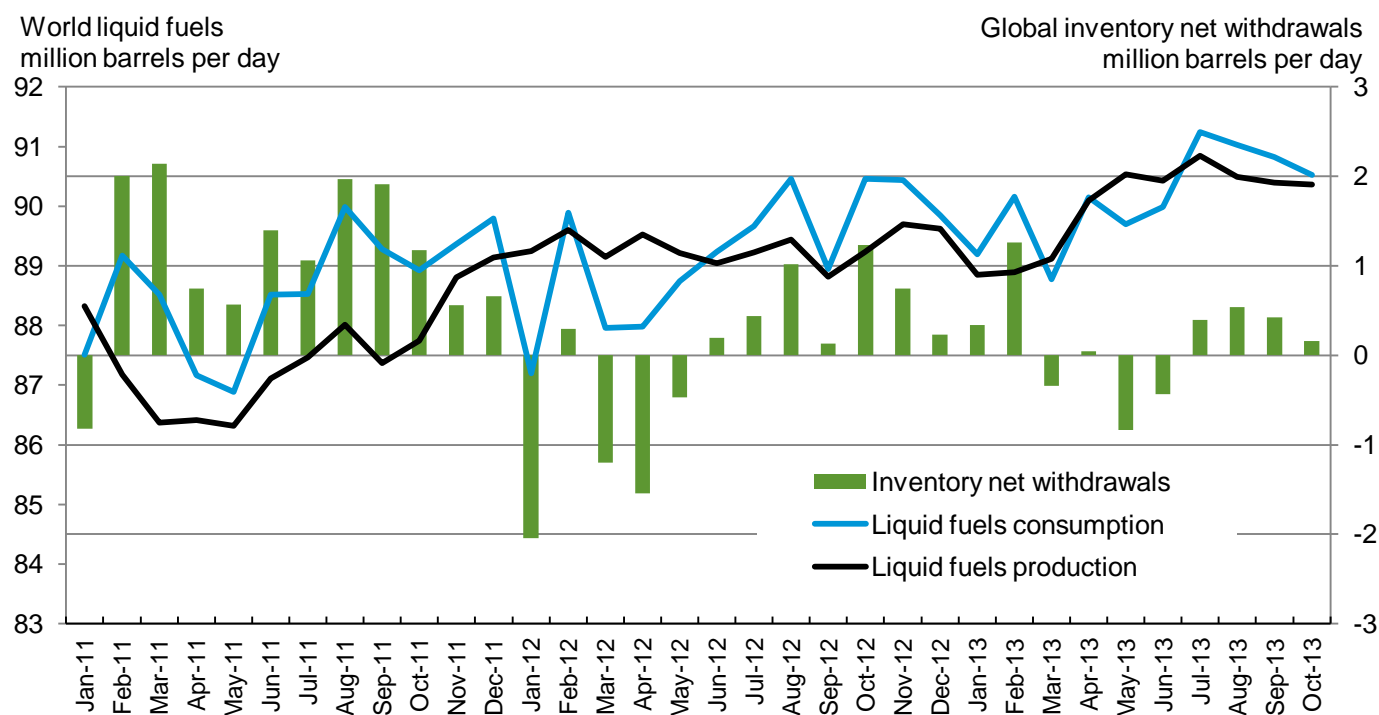
Item	September 2013	October 2013	September – October 2013 Average	September – October 2012 Average	2010 – 2012 Average
Brent Front Month Futures Price (\$ per barrel)	111.25	109.43	110.32	112.20	100.98
WTI Front Month Futures Price (\$ per barrel)	106.23	100.77	103.43	91.83	89.62
Dubai Front Month Futures Price (\$ per barrel)	108.30	106.84	107.55	109.61	98.17
Brent 1st - 13th Month Futures Spread (\$ per barrel)	9.10	6.71	7.88	6.58	1.31
WTI 1st - 13th Month Futures Spread (\$ per barrel)	11.92	7.10	9.45	-1.60	-3.16
RBOB Front Month Futures Price (\$ per gallon)	2.73	2.63	2.68	2.89	2.62
Heating Oil Front Month Futures Price (\$ per gallon)	3.05	2.99	3.02	3.14	2.71
RBOB - Brent Futures Crack Spread (\$ per gallon)	0.08	0.03	0.06	0.22	0.22
Heating Oil - Brent Futures Crack Spread (\$ per gallon)	0.40	0.39	0.40	0.47	0.31

Note: October prices include data through the morning of October 30, 2013.

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

Figures

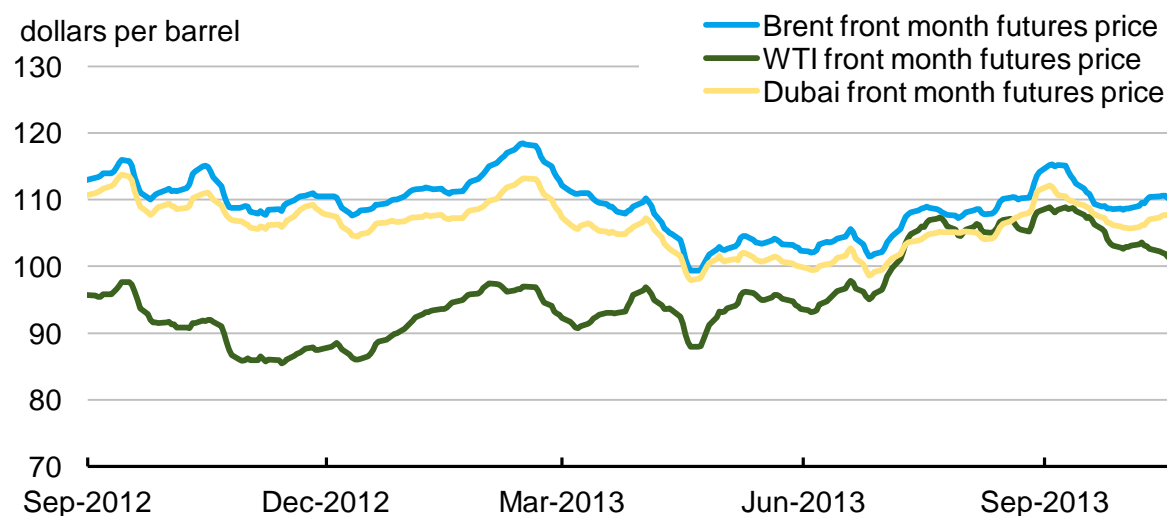
Figure 1. World Liquid Fuels Production, Consumption, and Net Inventory Withdrawals, January 2011 – October 2013



Note: See Table 1 footnotes for definitions of liquid fuels, production, and consumption.

Source: U.S. Energy Information Administration.

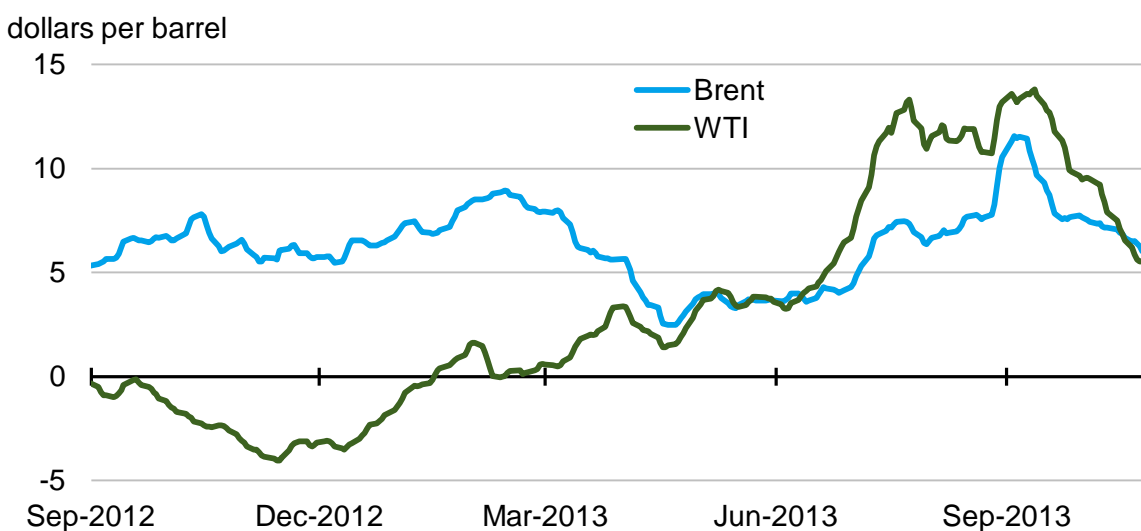
Figure 2. Front Month Crude Oil Futures Prices



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).

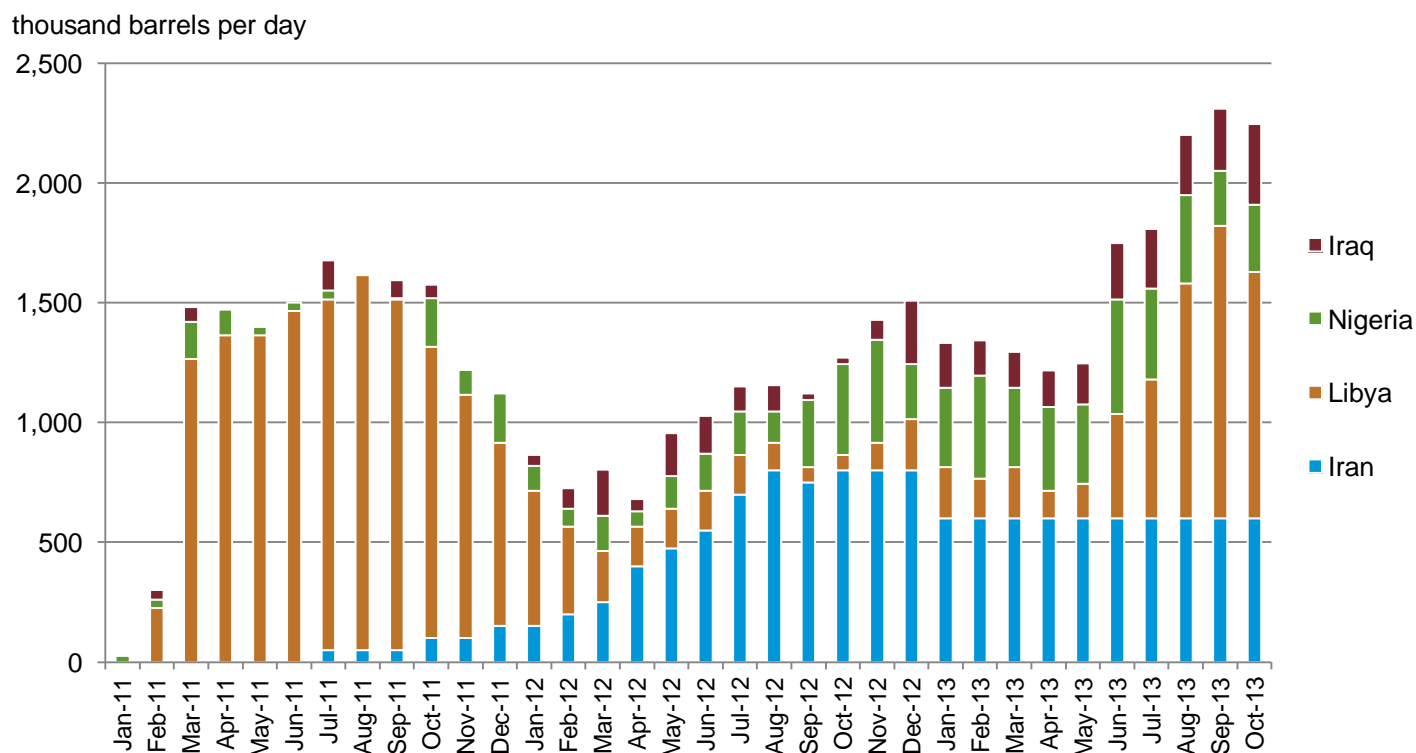
Figure 3. Crude Oil 1st - 13th Month Futures Price Spread



Note: All prices represent rolling 5-day averages.

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

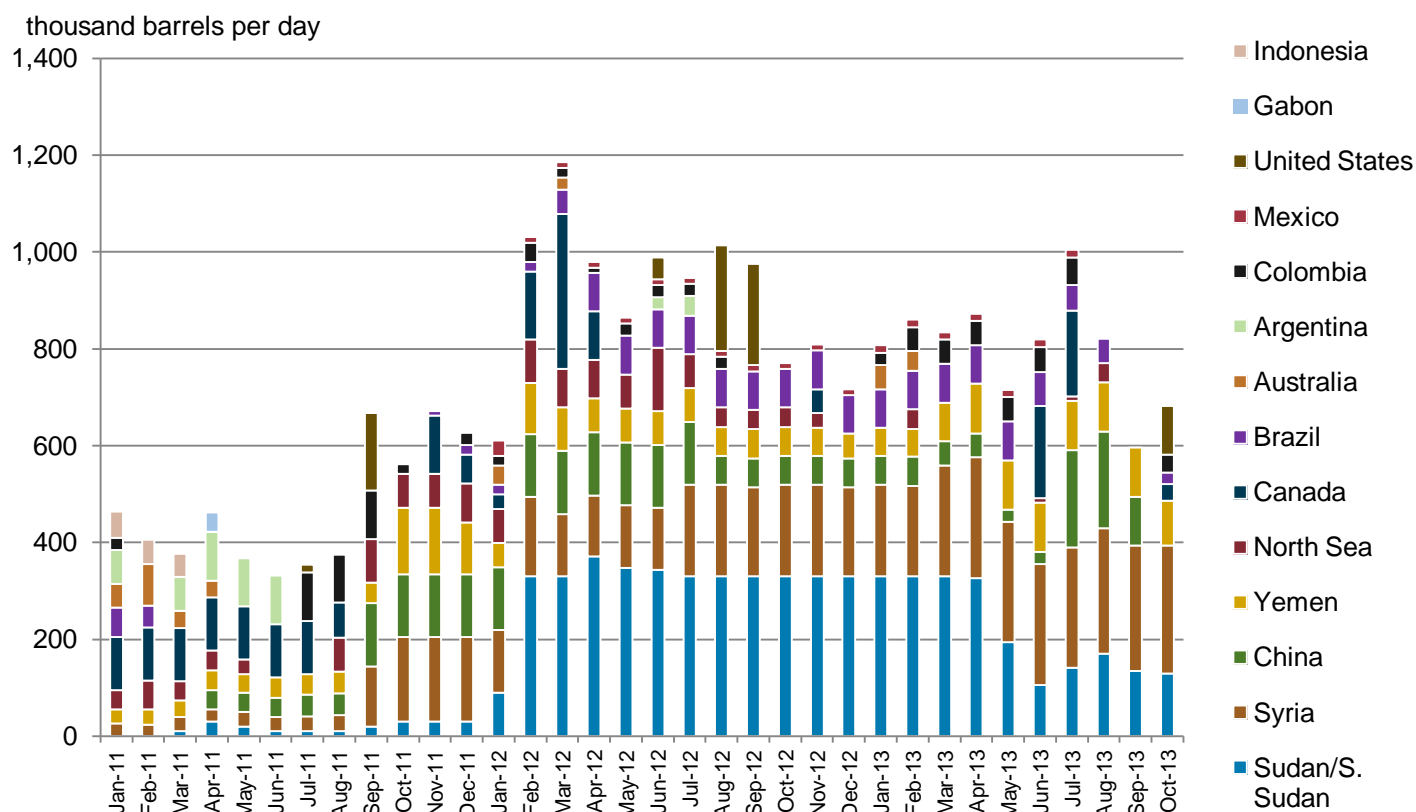
Figure 4. Estimated Unplanned Crude Oil Production Disruptions Among OPEC Producers, January 2011 – October 2013



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 Liquid Fuels Production Disruptions Among Non-OPEC Producers, January 2011 – October 2013



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

Source: U.S. Energy Information Administration.