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U.S. Energy Information  
Administration

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

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

April 25, 2013



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This is the eighth 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 are encouraged to consult previous editions of this report for detailed background and contextual information not repeated here.

## March – April 2013 Update

- The U.S. Energy Information Administration (EIA) estimates that global liquid fuels<sup>1</sup> consumption outpaced production in March and April 2013, resulting in a 1.1-million-barrel-per-day (bbl/d) average draw in global oil stocks (**Table 1, Figure 1**). Despite consumption exceeding production, crude oil prices were lower during the two-month period, reflecting weaker expectations for global economic growth. The Brent front month futures price reached its lowest level since July 2012, averaging about \$99 per barrel for the five-day period ending April 23, about \$15 per barrel lower compared with the five-day average ending February 26 (**Figure 2**). The average Brent price for March and April 2013 is nearly \$16 per barrel below its average for the same two-month period last year (**Table 5**).
- Global liquid fuels consumption during March and April decreased by an average of 0.2 million bbl/d<sup>2</sup> from its average during January and February, consistent with typical seasonal patterns. However, average world consumption in March and April 2013 was 1.1 million bbl/d higher than the same time period last year and the three-year average (**Table 1**). Non-OECD countries accounted for nearly all of the increase in total world consumption over year-ago levels and the three-year average (**Table 2**). On the other hand, European members of the Organization for Economic Cooperation and Development (OECD) saw consumption decrease by 0.3 million bbl/d on average during March and April 2013 compared with the same time period last year.
- Global liquid fuels production during March and April increased by an average of 0.2 million bbl/d from its average during January and February, mainly as a result of a slight increase in production from countries outside of the Organization of the Petroleum Exporting Countries (OPEC). However, world supply decreased by an average of 0.8 million bbl/d in March and April 2013 compared to year-ago levels, mainly due to a decline in OPEC production, which more than offset increases in non-OPEC production. OPEC liquid fuels production fell by 1.2 million bbl/d in March and April 2013 compared with last year, as a result of lower crude oil output in Saudi Arabia, Iran, and to a lesser extent, Nigeria and Algeria. The overall decrease occurred despite increased crude production in Iraq and higher OPEC non-crude liquids output (**Table 3**).
- The total volume of production that is off line due to unplanned outages in non-OPEC countries averaged 0.9 million bbl/d in March and April 2013, virtually unchanged from the previous two-month period. Unplanned non-OPEC outages continue to exceed the more typical levels that prevailed in the fourth quarter 2011 (**Figure 3**). During March and April, increased outage volumes in Yemen and Syria offset much of the declining shut-in volumes in China, the North Sea, Australia, and to a lesser extent, South Sudan.
- Iran's liquid fuels production averaged 3.4 million bbl/d in March and April 2013, of which 2.8 million bbl/d was crude oil, remaining flat compared with the January and February 2013 production level. Nonetheless, Iran's liquid fuels production remains well below its year-ago level of 3.8 million bbl/d and the three-year average production total of 4.0 million bbl/d (**Table 1**).

<sup>1</sup> The term "liquid fuels" encompasses petroleum and petroleum products and close substitutes, including crude oil, lease condensate, natural gas plant liquids, biofuels, coal-to-liquids, gas-to-liquids, and refinery processing gain.

<sup>2</sup> The growth rates referenced in this report may not exactly match corresponding values in tables as a result of slight differences in rounding.

- Global surplus capacity increased by an average of 0.8 million bbl/d in March and April 2013 compared to the year-ago level, but it still remains 0.2 million bbl/d lower than the historical three-year average (**Table 3**). The estimate of effective surplus crude oil production capacity does not include additional capacity that may be technically available in Iran, but which is off line due to the impacts of U.S. and European Union (EU) sanctions on Iran's ability to sell its oil.
- Based on the global balance between production and consumption, net global inventories, including those held in emerging market economies, fell by 1.4 million bbl/d and 0.7 million bbl/d in March and April, respectively (**Table 2**). The net inventory withdrawals during March and April 2013 mark a return to a typical seasonal inventory change pattern. However, the stock draw during these two months is in sharp contrast to the unusual 0.9-million-bbl/d increase in total stocks recorded during March and April 2012.
- The greater spare production capacity and smaller inventory draws in March and April 2013 compared with January and February 2013 support a looser international crude oil market and a decrease in backwardation (when near-month prices are higher than farther dated prices) in the Brent futures curve. For the five-day period ending April 23, the 1<sup>st</sup>-13<sup>th</sup> month time spread for the Brent futures curve was under \$3 per barrel, a decrease of about \$5 per barrel since the five-day period ending February 26 (**Figure 4**). It is the lowest amount of backwardation in the Brent futures curve since July 2012.
- EIA has slightly revised the preliminary estimates for January and February 2013 liquid fuels production and stock draws published in the previous edition of this report. World liquid fuels production was revised down by 0.2 million bbl/d to average 88.1 million bbl/d for the two month period, as global stock draws increased by the same amount to average 1.5 million bbl/d. The change in total production was mainly the result of numerous small revisions throughout the world.

## Tables

**Table 1. Summary of Estimated Liquid Fuels Quantities and Prices**

Item	March 2013	April 2013	Mar – Apr 2013 Average	Mar – Apr 2012 Average	2010 – 2012 Average
<b>Total Global Liquid Fuels</b>					
Total Global Liquid Fuels Production (a) (million bbl/d)	88.2	88.3	88.3	89.1	87.8
Total Global Liquid Fuels Consumption (b) (million bbl/d)	89.6	89.0	89.3	88.2	88.2
Biofuels Production (c) (million bbl/d)	1.5	1.7	1.6	1.6	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	3.4	3.4	3.8	4.0
Iran Liquid Fuels Consumption (million bbl/d)	1.8	1.7	1.7	1.7	1.7
<b>Petroleum and Petroleum Products Produced and Consumed in Countries Other Than Iran</b>					
Production (d) (million bbl/d)	83.3	83.3	83.3	83.6	82.0
Consumption (d) (million bbl/d)	86.0	85.5	85.8	84.7	84.8
Production minus Consumption	-2.7	-2.3	-2.4	-1.1	-2.8
World Inventory Net Withdrawals Including Iran (million bbl/d)	1.4	0.7	1.1	-0.9	0.4
Estimated OECD Inventory Level (e) (million barrels)	2,580	2,578	2,579	2,650	--
<b>Surplus Production Capacity</b>					
OPEC Surplus Crude Oil Production Capacity (f) (million bbl/d)	2.8	2.8	2.8	2.0	3.0
<b>Oil Price Level</b>					
WTI Front Month Futures Price (g) (\$ per barrel)	92.96	91.63	92.37	104.84	89.62
Brent Front Month Futures Price (h) (\$ per barrel)	109.54	103.42	106.80	122.61	100.98
RBOB Front Month Futures Price (i) (\$ per gallon)	3.12	2.84	3.00	3.30	2.62
<b>Oil Price Time Spread</b>					
WTI 1st - 13th Month Futures Spread (\$ per barrel)	1.88	2.00	1.93	-0.93	-3.16
Brent 1st - 13th Month Futures Spread (\$ per barrel)	6.41	3.37	5.05	7.21	1.31

Note: The term "liquid fuels" encompasses crude oil, lease condensate, natural gas plant 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 plant 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 2011 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 tends to be 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: April prices include data through market close on April 23, 2013.

Source: U.S. Energy Information Administration.

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

Item	March 2013	April 2013	Mar – Apr 2013 Average	Mar – Apr 2012 Average	2010 – 2012 Average
<b>Production (million barrels per day) (a)</b>					
OECD	22.8	22.6	22.7	22.5	21.9
U.S. (50 States)	11.6	11.4	11.5	10.8	10.3
Canada	4.0	4.0	4.0	3.8	3.6
Mexico	2.9	2.9	2.9	3.0	3.0
North Sea (b)	2.7	2.7	2.7	3.3	3.4
Other OECD	1.5	1.6	1.5	1.6	1.6
Non-OECD	65.4	65.7	65.6	66.6	65.9
OPEC	35.6	35.7	35.6	36.8	35.5
Crude Oil Portion	29.8	29.9	29.9	31.3	30.2
Non-crude liquids	5.7	5.8	5.7	5.5	5.4
Former Soviet Union	13.5	13.5	13.5	13.4	13.3
China	4.5	4.5	4.5	4.4	4.3
Other non-OECD	11.9	12.0	12.0	12.0	12.8
<b>Total World Production</b>	<b>88.2</b>	<b>88.3</b>	<b>88.3</b>	<b>89.1</b>	<b>87.8</b>
<b>Non-OPEC Production</b>	<b>52.6</b>	<b>52.6</b>	<b>52.6</b>	<b>52.3</b>	<b>52.3</b>
<b>Consumption (million barrels per day) (c)</b>					
OECD	45.9	44.7	45.3	45.4	46.4
U.S. (50 States)	18.4	18.3	18.3	18.3	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	13.5	13.1	13.3	13.6	14.2
Japan	5.0	4.6	4.8	4.8	4.6
Other OECD	6.3	6.2	6.3	6.1	6.2
Non-OECD	43.7	44.4	44.0	42.8	41.8
Former Soviet Union	4.8	4.8	4.8	4.7	4.6
Europe	0.7	0.7	0.7	0.7	0.7
China	10.6	10.6	10.6	10.2	9.8
Other Asia	10.6	10.8	10.7	10.6	10.2
Other non-OECD	17.0	17.4	17.2	16.7	16.5
<b>Total World Consumption</b>	<b>89.6</b>	<b>89.0</b>	<b>89.3</b>	<b>88.2</b>	<b>88.2</b>
<b>Inventory Net Withdrawals (million barrels per day)</b>					
U.S. (50 States)	0.4	-0.3	0.0	-0.2	0.0 (d)
Other OECD	0.4	0.4	0.4	-0.2	0.1
Other Stock Draws and Balance	0.6	0.7	0.7	-0.5	0.4
<b>Total Stock Draw</b>	<b>1.4</b>	<b>0.7</b>	<b>1.1</b>	<b>-0.9</b>	<b>0.4</b>
<b>End-of-period Inventories (million barrels)</b>					
U.S. Commercial Inventory	1,082	1,092	1,087	1,082	--
OECD Commercial Inventory	2,580	2,578	2,579	2,650	--

*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.*

*OPEC = Organization of the Petroleum Exporting Countries: Algeria, Angola, Ecuador, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.*

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

*(a) Supply includes production of crude oil (including lease condensates), natural gas plant liquids, biofuels, other liquids, and refinery processing gains.*

*(b) Includes offshore supply from Denmark, Germany, the Netherlands, Norway, and the United Kingdom.*

*(c) 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.*

*(d) The estimate is -0.03 million bbl/d.*

*Source: U.S. Energy Information Administration.*

**Table 3. OPEC Crude Oil (Excluding Condensates) and Liquid Fuels Supply Estimates**

<b>Production (million barrels per day)</b>	<b>March 2013</b>	<b>April 2013</b>	<b>Mar – Apr 2013 Average</b>	<b>Mar – Apr 2012 Average</b>	<b>2010 – 2012 Average</b>
<b>Crude Oil</b>					
Algeria	1.2	1.2	1.2	1.3	1.3
Angola	1.8	1.8	1.8	1.7	1.8
Ecuador	0.5	0.5	0.5	0.5	0.5
Iran	2.8	2.8	2.8	3.3	3.5
Iraq	3.1	3.2	3.1	2.8	2.6
Kuwait	2.6	2.6	2.6	2.6	2.4
Libya	1.4	1.4	1.4	1.4	1.2
Nigeria	2.0	1.9	1.9	2.1	2.1
Qatar	0.7	0.7	0.7	0.7	0.8
Saudi Arabia	9.0	9.0	9.0	9.9	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
<b>OPEC Total</b>	<b>29.8</b>	<b>29.9</b>	<b>29.9</b>	<b>31.3</b>	<b>30.2</b>
<b>Non-crude liquids</b>	<b>5.7</b>	<b>5.8</b>	<b>5.7</b>	<b>5.5</b>	<b>5.4</b>
<b>Total OPEC Supply</b>	<b>35.6</b>	<b>35.7</b>	<b>35.6</b>	<b>36.8</b>	<b>35.5</b>
<b>Crude Oil Production Capacity</b>					
Africa	6.3	6.3	6.3	6.5	6.3
South America	2.7	2.7	2.7	2.7	2.7
Middle East	23.7	23.8	23.7	24.1	24.3
<b>OPEC Total</b>	<b>32.6</b>	<b>32.7</b>	<b>32.7</b>	<b>33.3</b>	<b>33.2</b>
<b>Surplus Crude Oil Production Capacity (a)</b>					
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	2.8	2.8	2.8	2.0	3.0
<b>OPEC Total</b>	<b>2.8</b>	<b>2.8</b>	<b>2.8</b>	<b>2.0</b>	<b>3.0</b>

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. Source: U.S. Energy Information Administration.

Table 4. Non-OPEC Liquid Fuels Supply Estimates

Production (million barrels per day)	March 2013	April 2013	Mar – Apr 2013 Average	Mar – Apr 2012 Average	2010 – 2012 Average
<b>North America</b>	18.6	18.3	18.5	17.6	16.9
Canada	4.0	4.0	4.0	3.8	3.6
Mexico	2.9	2.9	2.9	3.0	3.0
United States	11.6	11.4	11.5	10.8	10.3
<b>Central and South America</b>	4.5	4.7	4.6	4.5	4.8
Argentina	0.7	0.7	0.7	0.7	0.8
Brazil	2.3	2.4	2.4	2.3	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
<b>Europe</b>	3.7	3.6	3.6	4.3	4.3
Norway	1.7	1.7	1.7	2.1	2.0
United Kingdom (offshore)	0.9	0.9	0.9	1.0	1.1
Other North Sea	0.2	0.1	0.1	0.2	0.3
<b>Former Soviet Union (FSU) (a)</b>	13.5	13.5	13.5	13.4	13.3
Azerbaijan	0.9	0.9	0.9	1.0	1.0
Kazakhstan	1.7	1.7	1.7	1.6	1.6
Russia	10.4	10.4	10.4	10.3	10.3
Turkmenistan	0.3	0.3	0.3	0.2	0.2
Other FSU	0.3	0.3	0.3	0.2	0.2
<b>Middle East</b>	1.2	1.2	1.2	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
<b>Asia and Oceania</b>	8.9	9.0	8.9	8.9	9.0
Australia	0.4	0.5	0.5	0.5	0.5
China	4.5	4.5	4.5	4.4	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	0.4	0.4	0.4	0.4	0.3
<b>Africa</b>	2.3	2.3	2.3	2.3	2.5
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 (b)	0.1	0.1	0.1	0.1	0.4
<b>Total non-OPEC liquids</b>	52.6	52.6	52.6	52.3	52.3
<b>OPEC non-crude liquids (c)</b>	5.7	5.8	5.7	5.5	5.4
<b>Non-OPEC + OPEC non-crude liquids</b>	58.4	58.4	58.4	57.8	57.6

- 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.
- Source: U.S. Energy Information Administration.

**Table 5. Crude Oil and Petroleum Product Price Data**

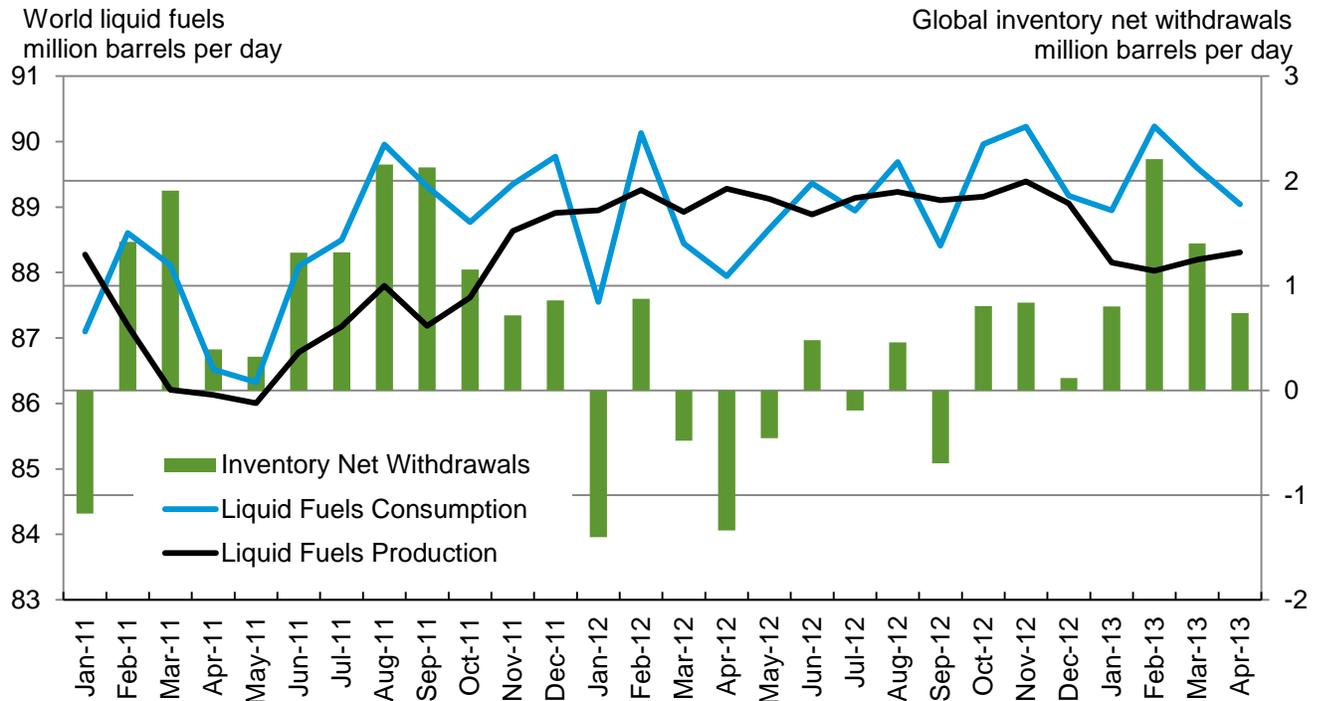
Item	March 2013	April 2013	Mar – Apr 2013 Average	Mar – Apr 2012 Average	2010 – 2012 Average
Brent Front Month Futures Price (\$ per barrel)	109.54	103.42	106.80	122.61	100.98
WTI Front Month Futures Price (\$ per barrel)	92.96	91.63	92.37	104.84	89.62
Dubai Front Month Futures Price (\$ per barrel)	105.53	101.55	103.75	120.19	98.17
Brent 1st - 13th Month Futures Spread (\$ per barrel)	6.41	3.37	5.05	7.21	1.31
WTI 1st - 13th Month Futures Spread (\$ per barrel)	1.88	2.00	1.93	-0.93	-3.16
RBOB Front Month Futures Price (\$ per gallon)	3.12	2.84	3.00	3.30	2.62
Heating Oil Front Month Futures Price (\$ per gallon)	2.93	2.89	2.91	3.19	2.71
RBOB - Brent Futures Crack Spread (\$ per gallon)	0.51	0.38	0.45	0.38	0.22
Heating Oil - Brent Futures Crack Spread (\$ per gallon)	0.32	0.43	0.37	0.27	0.31

Note: April prices include data through market close on April 23, 2013.

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

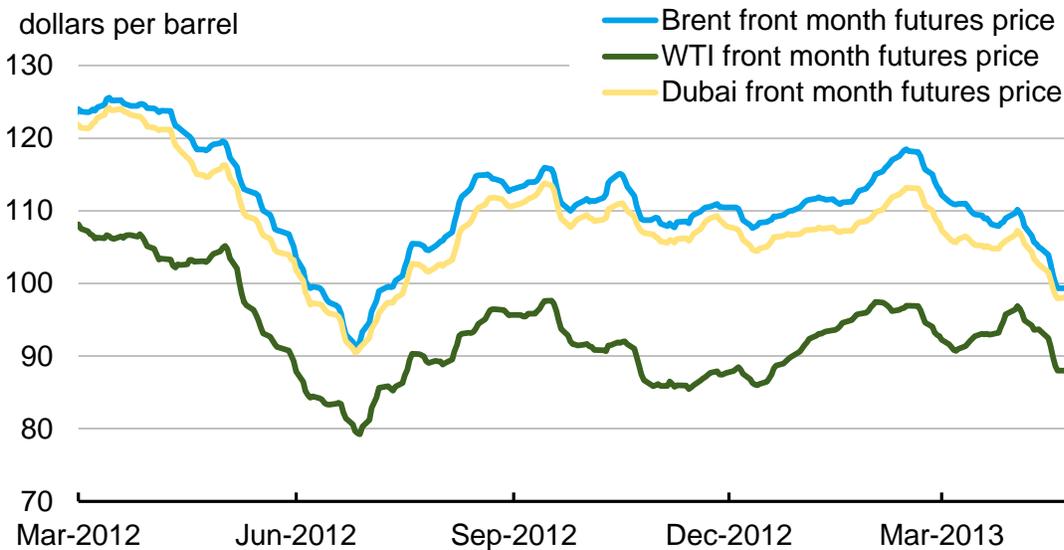
## Figures

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



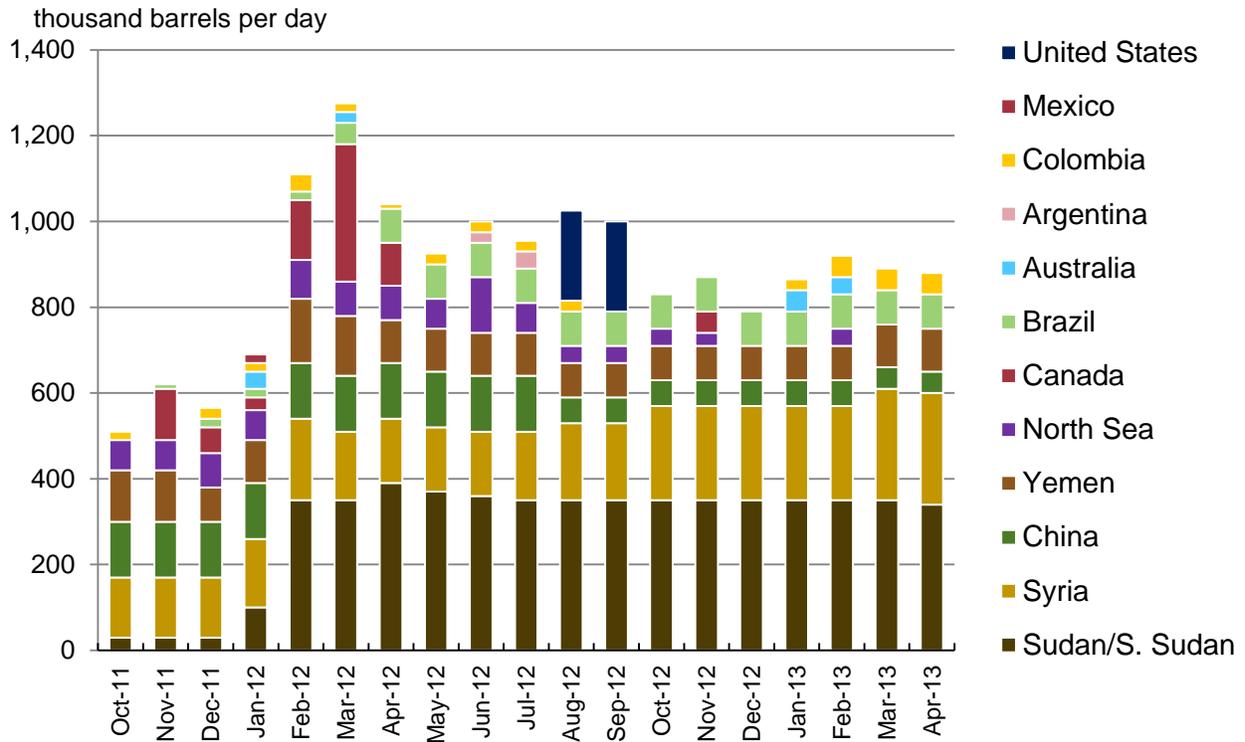
Note: See Table 1 footnotes for definitions of liquid fuels, production, and consumption.  
 Source: U.S. Energy Information Administration.

**Figure 2. Front Month Crude Oil Futures Prices**



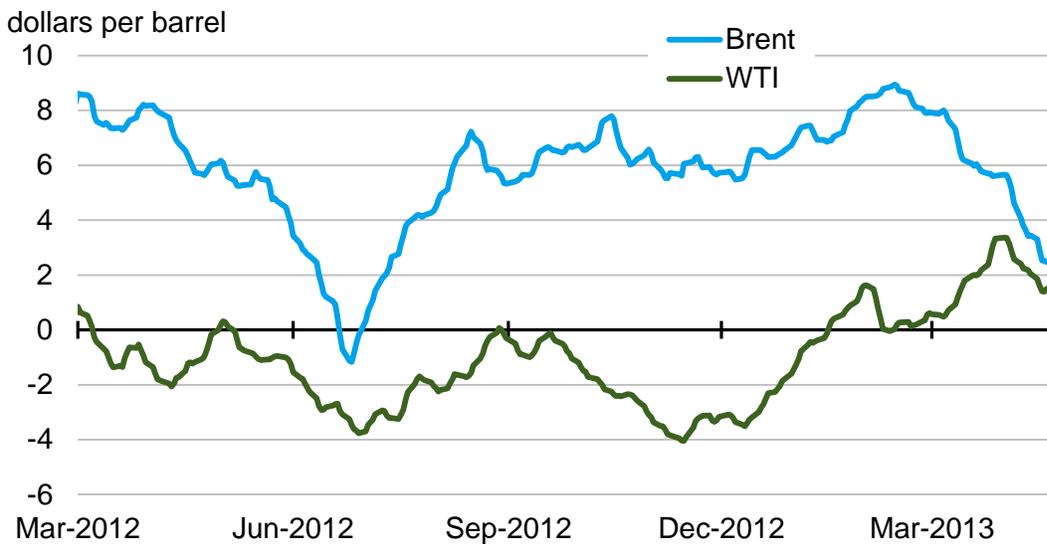
Note: All prices represent rolling 5-day averages.  
 Source: U.S. Energy Information Administration, based on Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE) and Dubai Mercantile Exchange (DME).

**Figure 3. Estimated Unplanned Production Disruptions Among non-OPEC Producers, October 2011 – April 2013**



Source: U.S. Energy Information Administration.

**Figure 4. 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).