U.S. Crude Oil Production in Federal and Non-Federal Areas

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March 20, 2012

Congressional Research Service
7-5700
www.crs.gov
R42432

CRS Report for Congress
Prepared for Members and Committees of Congress

Summary

In 2011, oil prices traded between $85-$110 per barrel and remain high in 2012. Congress is faced with proposals designed to enhance domestic energy supply and security as well as the requirements of environmental statutes. A key question in this discussion is how much oil is produced each year and how much of that comes from federal and nonfederal areas. Oil production has fluctuated on both federal and non-federal lands over the past five years. On non-federal lands, there was a major increase in oil production from 2008-2009 (231,000 barrels per day (b/d)), a significant decline in 2010, then another surge in 2011, increasing total U.S. oil production by nearly 530,000 b/d over 2007 production levels. About 96% of the increase since 2007 took place on non-federal lands, but the federal share of total U.S. production only fell by about two percentage points.

Oil production fluctuated widely in the past five years, thus giving different results when comparing years. For example, when comparing 2010 with 2007, the federal share of the increase over 2007 was about 72% of the total. On federal lands, there was also an increase in production from 2008-2009 and another increase in 2010 (258,000 b/d), then a decline in 2011. Overall, oil production on federal lands is up slightly in 2011 when compared to 2007.

Contents

Figures

Tables

Contacts

Introduction[1]

In 2011, oil prices traded between $85-$110 per barrel and remain high in 2012. Congress is faced with proposals designed to enhance domestic energy supply and security as well as the requirements of environmental statutes. A key question in this discussion is how much oil is produced each year and how much of that comes from federal and nonfederal areas. Oil production has fluctuated on both federal and non-federal lands over the past five years. On non-federal lands, there was a major increase in oil production from 2008-2009 (231,000 barrels per day (b/d)), a significant decline in 2010, then another surge in 2011, increasing total U.S. oil production by nearly 530,000 b/d over 2007 production levels. About 96% of the increase since 2007 took place on non-federal lands, but the federal share of total U.S. production only fell by about 2 percentage points.

This report examines U.S. oil production data for federal and non-federal areas.[2]

U.S. Crude Oil Production: Federal and Non-Federal Areas

Oil production has fluctuated on both federal and non-federal lands over the past five years. On non-federal lands, there was a major increase in oil production from 2008-2009 (231,000 barrels per day (b/d)), a significant decline in 2010, then another surge in 2011, increasing total U.S. oil production by nearly 530,000 b/d over 2007 production levels. (See **Table 1**.) About 96% of the *increase* took place on non-federal lands, but the overall federal share of total U.S. production fell only by about two percentage points over the 2007-2011 timeframe.

Oil production fluctuated widely in the past five years, thus, giving different results when comparing years. For example, when comparing 2010 with 2007, the federal share of the increase over 2007 was about 72% of the total. On federal lands, there was also an increase in production from 2008-2009 and another increase in 2010 (258,000 b/d), then a decline in 2011. Overall, oil production on federal lands is up slightly in 2011 when compared to 2007.

[1] For a broader analysis of OCS leasing and resources, please see CRS Report R40645, *U.S. Offshore Oil and Gas Resources: Prospects and Processes*, by Marc Humphries and Robert Pirog.

[2] For more information on U.S. oil development, see CRS Report R40872, *U.S. Fossil Fuel Resources: Terminology, Reporting, and Summary*, by Carl E. Behrens, Michael Ratner, and Carol Glover; CRS Report R41132, *Outer Continental Shelf Moratoria on Oil and Gas Development*, by Curry L. Hagerty; and CRS Report R40237, *Federal Lands Managed by the Bureau of Land Management (BLM) and the Forest Service (FS): Issues in the 111th Congress*, coordinated by Ross W. Gorte and Carol Hardy Vincent.

Table 1. U.S. Crude Oil Production: Federal and Non-Federal Areas

(Barrels per day)

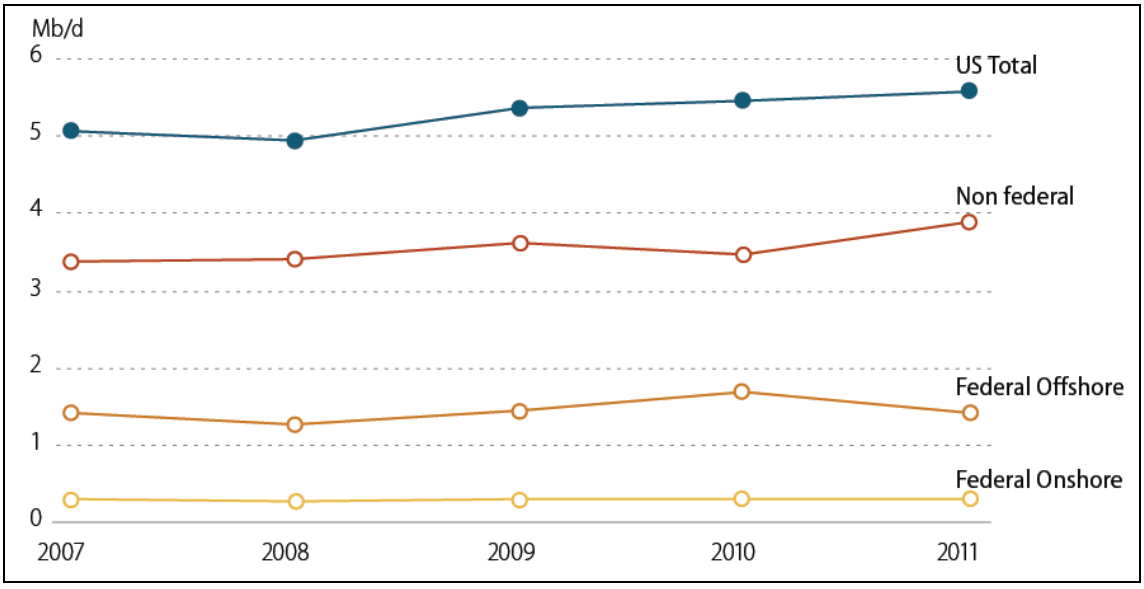
Fiscal Year	U.S. Total	Non-Federal	Total Federal (% of U.S. Total)	Federal Offshore	Federal Onshore
2011	5,590,000	3,876,000	1,714,000 (31)	1,408,000	306,000
2010	5,470,000	3,481,000	1,989,000 (36)	1,693,000	296,000
2009	5,360,000	3,629,000	1,731,000 (32)	1,443,000	287,000
2008	4,950,000	3,398,000	1,552,000 (31)	1,267,000	285,000
2007	5,060,000	3,365,000	1,695,000 (33)	1,408,000	287,000

Source: U.S. Total data from EIA Short –Term Energy Outlook, Release Date February 7, 2012. Federal data obtained from ONRR Statistics, http://www.onrr.gov (using sales year data).

Notes: Consistent with BLM and BOEM statements about onshore and offshore federal production levels as percent of total U.S. crude oil production.

Figure 1. U.S. Oil Production: Federal and Non-Federal Areas, 2007-2011

Million barrels per day (Mb/d)



Source: U.S. Energy Information Administration (EIA), *U.S. Crude Oil, Natural Gas, and Natural Gas Liquids Reserves,* released November 30, 2010, http://www.eia.gov/oil_gas, p.1.

While short-term EIA estimates show oil production continuing to decline in federal offshore areas (Gulf of Mexico only) from 1.32 million barrels per day (mbd) in 2011 to 1.24 mbd in 2013, their longer-term estimates show an increase in OCS oil production overall from 1.4 mbd in 2011 to 2.15 mbd in 2035.[3] Overall U.S. oil production was projected by EIA to rise from 5.59 bpd in 2011 to about 6.1 mbd by 2035.[4] According to these estimates, offshore production alone in 2035 accounts for about 35% of total U.S. crude oil production.

Table 2. EIA Oil Production Projections

(million barrels per day)

Year	OCS	U.S. Total
2011	1.40	5.59
2013	1.24	5.52
2035	2.15	6.1

Source: EIA 2013 projections from Table 4A, *U.S. Crude Oil and Liquid Fuels Supply, Consumption and Inventories,* Short-Term Energy Outlook, February 2012.

Notes: 2013 OCS projection is Gulf of Mexico only.

Oil Lease Data for Federal Lands

According to the BLM and BOEM, there are approximately 76.3 million acres of oil and gas leases in federal areas (onshore and offshore). About 38.3 million acres are located onshore and an additional 38 million acres are located offshore. Approximately 11.5 million federal acres onshore and about 7.4 million federal acres offshore are producing commercial volumes. (See **Table 3**.)

Table 3. Oil Lease Data for Federal Lands, 2011

	Onshore	Offshore
Acreage under lease	38.3 million acres	38 million acres
Acreage with approved exploration or development plan (i.e., acreage in production or exploration)	16.7 million acres	10.5 million acres
Leased acres producing	11.5 million acres	7.4 million acres
Leased acres not in production or exploration	21.6 million acres	27.5 million acres
Number of Leases	50,303	7,061
Producing Leases	22,663	1,651

Source: DOI, *Oil and Gas Utilization – Onshore and Offshore,* Report to the President, March 2011.

[3] EIA, *Annual Energy Outlook*, 2011, p. 36.

[4] EIA, *Annual Energy Outlook*, 2012 Early Release Overview, March 2012, p. 1.

A number of concerns may arise in the oil and gas leasing process that could delay or prevent oil and gas development from taking place, or might account for the relatively large number of leases held in non-producing status. It should be noted that many leases expire without exploration or production ever occurring.

Below is a list of often-cited issues which, individually or in combination, are used to explain why more leases are not producing.

- Rig or equipment availability, particularly offshore;
- High capital costs;
- Skilled labor shortages;
- Leases in the development cycle (e.g., conducting environmental reviews, permitting, or exploring) but not producing;
- Legal challenges that might delay or prevent development;
- No commercial discovery on a lease tract;
- Holding leases (because of the lack of capital or as "speculators") to sell or "farm out" at a later date;
- Ability to secure extensions on non-producing leases; and
- Securing and being able to hold large number of lease tracts, often contiguous, to maximize return on their investment.

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