



# Fossil fuel exploration subsidies: United States

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This country study is a background paper to the report **The fossil fuel bailout: G20 subsidies for oil, gas and coal** by Oil Change International (OCI) and the Overseas Development Institute (ODI).

For the purpose of this report, exploration subsidies include: national subsidies (direct spending and tax expenditures), investment by state-owned enterprises and public finance. The full report provides a detailed discussion of technical and transparency issues in identifying exploration subsidies, and outlines the methodology used in this desk-based study.

The authors would welcome feedback on the full report and on this country study, to improve the accuracy and transparency of information on G20 government support to fossil-fuel exploration.

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Australia  
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Canada  
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Indonesia  
Italy  
Japan  
Republic of Korea  
Mexico  
Russia  
Saudi Arabia  
South Africa  
Turkey  
United Kingdom  
**United States**

## Background

United States (US) oil and gas exploration, production and reserves are increasing – the result, in large part, of the hydraulic fracturing (fracking) technology that has enabled the development of vast shale reserves in recent years. Oil and gas reserves have increased by 35% since 2008, reaching 92.5 billion barrels of oil equivalent (BOE) at the start of 2014. Public and private expenditure on exploration for oil and natural gas in the US has grown even more rapidly, increasing by 63% since 2008 to reach \$38.3 billion in 2012, before dropping slightly in 2013 (Figure 1) (Rystad Energy, 2014).

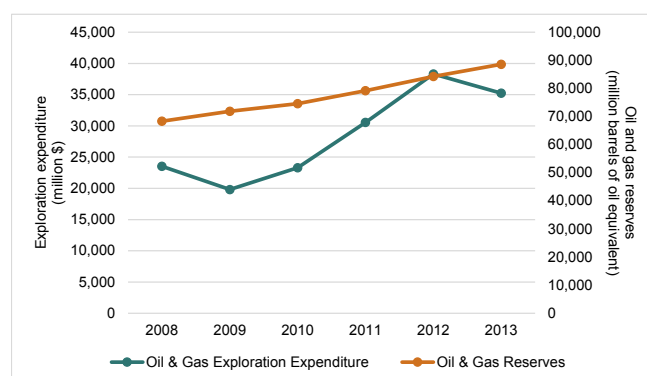
Between 2008 and 2013, natural-gas production increased by 20% and oil production increased by 44%, offsetting the downward trend in coal production (US EIA, 2013). As a result of these increases, the US is now the world's largest producer of both oil and natural gas, ahead of Saudi Arabia and Russia (Smith, 2014).

Although President Obama has pledged to tackle climate change and eliminate fossil-fuel subsidies, he champions the oil and gas boom as the centrepiece of his Administration's 'All of the Above' energy strategy.

## National subsidies

The US provides \$5.1 billion in annual national subsidies that support fossil-fuel exploration (Table 1). Some US states also provide significant subsidies for fossil-fuel exploration that are not discussed in this paper. The Organisation for Economic Co-operation and Development (OECD) provides estimates for state-level fossil-fuel subsidies in 10 states: Alaska, California,

**Figure 1. Oil and gas exploration expenditure and reserves in the US**



Source: Rystad Energy, 2014

Colorado, Kentucky, Louisiana, Oklahoma, Pennsylvania, Texas, West Virginia and Wyoming (OECD, 2013).

The US has two subsidies directed specifically at fossil-fuel exploration. The amortisation (accelerated writing off) of geological and geophysical expenditures, worth \$110 million in 2013, allows oil and gas companies to recover costs of seismic surveys and exploration drilling through income-tax deductions. The expensing of exploration and development costs, worth \$26 million in 2013, allows coal companies to deduct exploration costs from their income-tax payments (OMB, 2014).

Additionally, many subsidies that are aimed at oil and gas producers are used at least partly to subsidise exploration activities. The deduction for intangible drilling costs, worth \$3.5 billion in 2013, provides a 100% tax deduction for costs that are not directly part of the final

**Table 1. America's national subsidies**

Subsidy	Subsidy type	Targeted fossil fuels	Estimated annual amount (million \$)	Timeframe for subsidy-value estimate	Stage
<b>Tax expenditure</b>					
Deduction for intangible drilling costs	Tax deduction	Oil and gas	3,500	2013	Extraction (including exploration)
Percentage depletion allowance	Tax deduction	Oil, gas and coal	900	2013	Extraction (including exploration)
Domestic manufacturing deduction	Tax deduction	Oil, gas and coal	587	2013	Extraction (including exploration)
Amortisation (accelerated write off) of geological and geophysical expenditures	Tax deduction	Oil and gas	110	2013	Exploration
Expensing of exploration and development costs	Tax deduction	Coal	26	2013	Exploration
<b>Total annual national subsidies</b>			<b>5,123</b>		<b>Extraction (including exploration)</b>

Source: OMB, 2014

operating oil or gas well (such as labour costs, survey work and ground clearing), including oil and gas exploration and development costs (OMB, 2014).

The percentage depletion allowance, worth \$900 million in 2013, allows independent fossil-fuel producers to deduct 14% to 15% of large investment costs, including for exploration, from income taxes (OMB, 2014).

Finally, the domestic manufacturing deduction, worth \$587 million in 2013, allows fossil-fuel producers to claim a tax break intended for US manufacturers to prevent job outsourcing (OMB, 2014). Because this tax deduction applies to fossil-fuel producers as a whole, it can be used to benefit exploration activities.

## Public finance

### Domestic

We did not identify domestic public finance for exploration in the US.

### International

US public finance for overseas fossil-fuel exploration totaled over \$5.6 billion from 2010 to 2013 – an annual average of \$1.4 billion – and was dominated by financing from the US Export-Import Bank (ExIm). The US provides billions of dollars in loans and guarantees each year for

overseas oil and gas exploration projects through ExIm and, to a much smaller extent, the Overseas Private Investment Corporation (OPIC) (ExIm, 2014; OPIC, 2014).

Notably, OPIC has instituted measures to limit greenhouse gas emissions from projects that it funds, resulting in a far smaller amount of exploration (\$53.4 million), and overall, fossil fuel financing compared with ExIm, which lent \$5.5 billion to exploration projects from 2010 to 2013 (Tables 2 and 3).

The US also contributed an annual average of \$120.9 million to fossil-fuel exploration projects from 2010 to 2013 through its shares in the World Bank Group, European Bank for Reconstruction and Development and Asian Development Bank, which range from 10.1% to 22.8% depending on the institution (Oil Change International, 2014).<sup>1</sup>

## Major companies

### Oil and gas

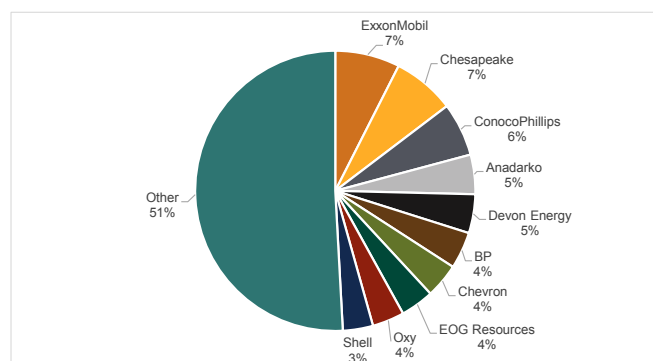
In 2013, oil and gas companies in the US made \$310 billion in revenue from upstream operations. The net income for the US industry totaled nearly \$11 billion that year, and when companies that experienced losses are excluded, the amount of profit increases to \$24.6 billion.

**Table 2. ExIm fossil-fuel exploration financing, 2010 to 2013**

Project	Country	Year	Financing amount (million \$)	Stage
Pemex projects	Mexico	2013	1,500	Extraction (including exploration)
Pemex projects	Mexico	2012	1,200	Extraction (including exploration)
Oil and gas drilling	Mexico	2010	1,000	Extraction (including exploration)
Pemex onshore and offshore projects	Mexico	2011	1,000	Extraction (including exploration)
Ecopetrol operations	Colombia	2011	460	Extraction (including exploration)
Offshore drilling in Mexico	Mexico	2012	132	Extraction (including exploration)
PANUCO offshore drilling rig	Mexico	2011	128	Extraction (including exploration)
Kemerovo (Siberia) coal mining	Russia	2012	66	Extraction (including exploration)
Oil drilling equipment	Nigeria	2013	26	Extraction (including exploration)
Offshore drilling	Nigeria	2011	20	Extraction (including exploration)
<b>Total ExIm exploration financing, 2010 to 2013</b>			<b>5,532</b>	<b>Extraction (including exploration)</b>
<b>Average annual ExIm exploration financing</b>			<b>1,383</b>	<b>Extraction (including exploration)</b>

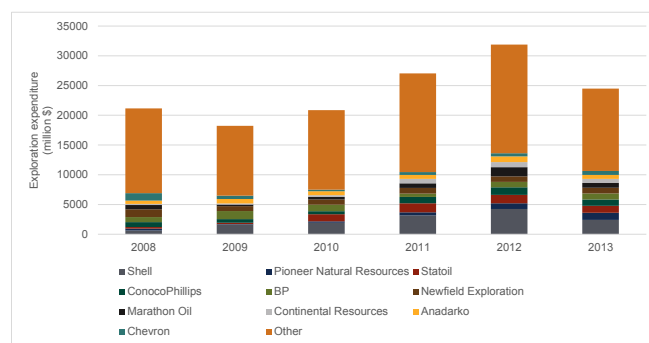
<sup>1</sup> Data are based partly on shares of multilateral development banks (MDBs) held by each G20 country, sourced from the respective MDB annual reports and replenishment agreements.

**Figure 2. The United States' top 10 oil and gas reserve holders' share of total reserves as of January 2014**



Source: Rystad Energy, 2014

**Figure 3. Oil and gas exploration expenditure in the United States**



Source: Rystad Energy, 2014

**Table 3. OPIC fossil-fuel exploration financing, 2010 to 2013**

Project	Country	Year	Financing Amount (million \$)	Stage
Palagua oil field drilling	Colombia	2011	24	Extraction (including exploration)
Expansion of oil production	Colombia	2013	19	Extraction (including exploration)
Oil and gas drilling	Mexico	2011	10	Extraction (including exploration)
<b>Total OPIC exploration financing, 2010 to 2013</b>			<b>53</b>	<b>Extraction (including exploration)</b>
<b>Average annual OPIC exploration financing</b>			<b>13</b>	<b>Extraction (including exploration)</b>

Of the \$310 billion in revenue, the US Government received nearly \$80 billion, of which \$21.5 billion was income tax and the remainder consisted of royalties and bonus payments. This results in an income-tax share of revenue of 9% for the upstream oil and gas industry.

Nearly half of US reserves are held by 10 companies, led by ExxonMobil with 5.6 billion BOE (Figure 2).

The increase in oil and gas reserves was accompanied by growth in exploration expenditure by oil and gas companies in the US. Exploration spending increased by 16% between 2008 to reach \$24.5 billion in 2013, down from a high of \$31.9 billion in 2012 (Figure 3) (Rystad Energy, 2014).

As a result of the lack of publicly available tax-filing information for individual corporations, it is impossible to determine the exact amount of subsidies that each company receives. However, based on the above data on finance, reserves and exploration expenditure, it is possible to identify companies that are likely to be some of the largest beneficiaries of support from the US Government support.

Large multinational corporations (MNCs) play a central role in the US oil and gas industry. Most of these are integrated companies, meaning they engage in all stages of the production process from exploration and

extraction through refining and marketing (although ConocoPhillips recently spun off its refining arm into a separate independent company, Phillips 66). Exxon Mobil, ConocoPhillips, Chevron and BP are all among the top 10 oil and gas producers, as well as reserves holders.

MNCs have also led exploration spending in the US. Since 2009, Shell has consistently spent by far the most of any company on US exploration activities. Statoil, ConocoPhillips, BP and Chevron are other MNCs that are leading exploration spending in the country.

Although often more limited in their global reach, independent companies play a huge role in US oil and gas exploration. Chesapeake, Anadarko and Devon Energy are three of the five largest oil and gas reserves holders in the US. Independent companies are also among the most active in increasing these reserves through exploration activities. Half of the top 10 companies in terms of US exploration spending are independents: Pioneer Natural Resources, Newfield Exploration, Marathon Oil, Continental Resources and Anadarko.

The top independent US exploration and production companies pay significantly lower US tax rates than the MNCs and integrated companies. This is, in part, because these companies tend to make lower profits than MNCs do on their upstream operations. There is also support from

the US Government that is only available to independent companies. In particular, the partial depletion allowance, valued at \$900 million in 2013, allows independent companies to make tax deductions for large investment expenses, but is not available to integrated oil and gas companies.

## Coal

According to the Energy Information Administration (EIA), just four companies – Peabody Energy, Arch Coal, Alpha Natural Resources and Cloud Peak Energy – were responsible for over half of all US coal production in 2012 (Table 5) (US EIA., 2012).

**Table 5. United States' top 10 coal producers, 2012**

Company	Production (thousand short tons)	Percentage of total production
Peabody Energy Corp	192,563	18.9
Arch Coal Inc	136,992	13.5
Alpha Natural Resources LLC	104,306	10.3
Cloud Peak Energy	90,721	8.9
CONSOL Energy Inc	55,752	5.5
Alliance Resource Operating Partners LP	35,406	3.5
Energy Future Holdings Corp	31,032	3.1
Murray Energy Corp	29,216	2.9
NACCO Industries Inc	28,207	2.8
Patriot Coal Corp	23,946	2.4

Source: U.S. EIA., 2012

**Table 4. The United States' top 10 oil and gas producers' revenues, profits and income taxes, 2013**

Company	Headquarter country	Revenue (million \$)	Profit (million \$)	Income-tax payments (million \$)	Income-tax share of revenue*
ExxonMobil	United States	22,980	2,445	2,683	14%
ConocoPhillips	United States	20,459	3,834	3,311	20%
Chevron	United States	19,497	836	3,004	19%
Oxy	United States	15,938	3,238	1,956	15%
BP	United Kingdom	15,740	2,826	2,972	22%
EOG Resources	United States	14,089	1,384	614	6%
Anadarko	United States	12,719	114	1,011	9%
Chesapeake	United States	12,037	353	557	6%
Devon Energy	United States	10,864	-93	428	5%
BHP Billiton	Australia	8,969	-114	101	1%

Source: Rystad Energy, 2014

\* The income-tax share is calculated by dividing income tax by revenue, excluding royalties, bonuses and government profit.

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## References

- ExIm (2014) 'Annual Reports'. Washington D.C.: US Export Import Bank (<http://www.exim.gov/about/library/reports/annualreports/>)
- OECD (2013) 'OECD-IEA Fossil Fuel Subsidies and Other Support'. Paris: Organisation for Economic Co-operation and Development. (<http://www.oecd.org/site/tadffss/>)
- Oil Change International (2014) 'Shift the Subsidies'. Washington D.C.: Oil Change International. (<http://shiftthesubsidies.org>)
- OMB (2014) 'Budget of the United States Government'. Washington D.C.: Office of Management and Budget, Government Printing Office. (<http://www.gpo.gov/fdsys/browse/collectionGPO.action?collectionCode=BUDGET>)
- OPIC (2014) 'Annual reports'. Washington D.C.: Overseas Private Investment Corporation. (<http://www.opic.gov/media-connections/annual-reports>)
- Rystad Energy (2014) 'Rystad Energy UCube Upstream Database'. Oslo: Rystad Energy. (<http://www.rystadenergy.com/Databases/UCube>)
- Smith, G. (2014) 'US Seen as Biggest Oil Producer after Overtaking Saudi Arabia.' Bloomberg, 4 July. (<http://goo.gl/9rshqB>)
- US EIA (2013) 'International Energy Statistics'. Washington D.C.: US Energy Information Administration. (<http://www.eia.gov/cfapps/ipdbproject/IEDIndex3.cfm?tid=5&cid=53&aid=1>)
- US EIA (2012) 'Major US Coal Producers' Washington D.C.: US Energy Information Administration. (<http://www.eia.gov/coal/annual/pdf/table10.pdf>)



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