



## Country Study

# Fossil fuel exploration subsidies: Turkey

Shakuntala Makhijani

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.

Argentina  
Australia  
Brazil  
Canada  
China  
France  
Germany  
India  
Indonesia  
Italy  
Japan  
Republic of Korea  
Mexico  
Russia  
Saudi Arabia  
South Africa  
**Turkey**  
United Kingdom  
United States

## Background

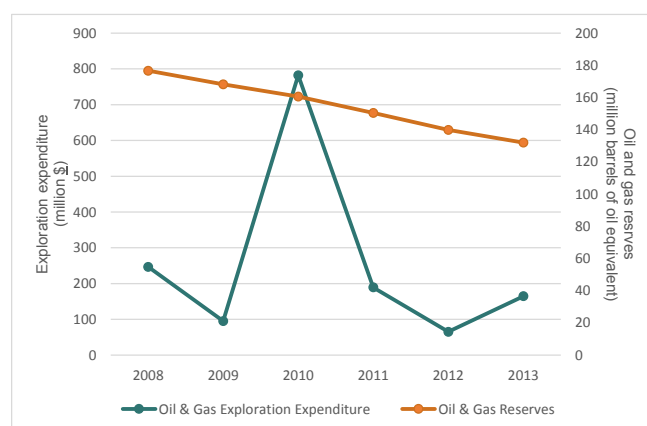
Although Turkey is not historically a major fossil-fuel producer and has comparatively small reserves, the Turkish Government is in the midst of a major coordinated exploration programme to expand the country's fossil-fuel reserves. In 2013, the Turkish Petroleum Law was revised in order to 'enable expedient, continuous and effective exploration, development and production of petroleum resources,' including revised rules for exploration licensing and new principles for exploration data-gathering and sharing (Turkish Petroleum Law, 2013).

Since 2008, oil and gas exploration expenditure has varied widely, from a low of \$65 million in 2012 to a high of \$782 million in 2010, and reserves have declined steadily (see Figure 1). Despite the relatively low amount of exploration spending in 2013, the Turkish Government had approved a \$500 million exploration budget for Turkish Petroleum Corporation (TPAO), the country's state-owned oil and gas company, that year (see 'State-Owned Enterprises section') (Ministry of Development, 2013).

In contrast to its oil and gas reserves, Turkey's coal reserves have expanded considerably, the vast majority being lignite, the most polluting and lowest quality type of coal. The Turkish Government declared 2012 the 'year of coal' with the objective of using all of its existing coal resources by 2023 and expanding its ongoing coal exploration programme to discover new reserves (Burgess, 2012).

Compared to accounting within the oil and gas sector, coal reserves accounting can vary widely depending on definitions and data sources, and reporting is inconsistent. Nevertheless, it is clear that exploration measures are increasing the amount of identified coal deposits in Turkey.

**Figure 1. Oil and gas exploration expenditure and reserves in Turkey**



Source: Rystad Energy, 2014

The Turkish Government reports that Turkey has 15.4 billion metric tons of coal resources as of January 2014, of which 5.8 billion tons have been discovered since the Government-sponsored expansion of exploration activities in 2005. The Ministry of Energy and Natural Resources (MENR) further notes that only 40% of the country has been explored for coal, suggesting that additional exploration support and activities will occur (MENR, 2014).

## National subsidies

The Turkish Government provides over \$500 million in national subsidies for fossil-fuel exploration each year (Table 1).

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

Subsidy	Subsidy type	Targeted fossil-fuels	Estimated annual amount (million \$)	Timeframe for subsidy-value estimate	Stage
<b>Direct spending</b>					
Support to TPAO for exploration (Ministry of Development, 2013)	Direct spending	Oil and gas	\$500	2013	Exploration
Exploration activities by the Ministry of Energy and Natural Resources (MENR, 2010a)	Direct spending	Oil, gas and coal	\$16 to \$24	2010-2014	Exploration
<b>Tax expenditure</b>					
Value-added tax (VAT), corporate tax, and special consumption tax exemptions for goods and services for oil exploration (OECD, 2013)	Tax exemption	Oil	N/A*	N/A*	Exploration
<b>Total annual national subsidies</b>			<b>\$516 to \$524</b>		<b>Exploration</b>

\*Information not available.

The Turkish Government engages in direct spending for fossil-fuel exploration. Its 2013 budget included support worth \$500 million for oil and gas exploration by TPAO (Ministry of Development, 2013).

MENR has undertaken an extensive fossil-fuel exploration campaign over the past decade. The Ministry's 2010-2014 five-year plan includes \$16.3 to \$23.9 million per year for its own oil, gas and coal-exploration activities, including a focus on deep-water offshore oil and gas exploration in the Black Sea (MENR, 2010a).

Past projects illustrate the types of exploration activities in which MENR is engaged. Between 2005 and the end of November 2010, the Ministry conducted a cumulative 657,000 metres (m) of coal-exploration drilling, of which 101,000 m at 119 sites were drilled in 2010 alone (Yildiz, 2011). In addition, a total of 1,424 oil and gas exploration wells were drilled in Turkey through 2009, resulting in the discovery of 23 natural gas and 102 oil fields (MENR, 2010b).

As part of this exploration work, the Turkish Government has increased the budget for the General Directorate of Mineral Research and Exploration (MTA) since 2005 for fossil-fuel basin surveys. MTA activities over this time period include:

- the purchase of 15 new exploratory drilling machines for drilling depths of 750 to 1,500 metres
- an increase in exploration licenses from the 25 issued in 2004 to 613 in 2010
- the development of mineral survey maps for the Thrace, Central Anatolia, Mediterranean and Eastern Black Sea regions through the Geology Data Bank (Yildiz, 2011).

Since 1984, goods and services required for oil and gas exploration have been exempt from Turkey's value-added tax (VAT), corporate tax and special consumption tax (OECD, 2013).

## Investment by state-owned enterprises

The Turkish Government also invests in oil and gas exploration through the activities of state-owned oil company Turkish Petroleum Corporation (TPAO). Although the Turkish Government budgeted \$500 million to TPAO for exploration in 2013, according to the Rystad database on upstream oil and gas activities, TPAO's actual exploration spending that year totaled \$24.3 million, mostly in Turkey (Rystad Energy, 2014).

From 2003 to 2012, TPAO expanded exploration in Turkey, especially in the Black Sea and Mediterranean offshore, through:

- 85,000 km of two dimensional (2D) and 16,000 km<sup>2</sup> of three dimensional (3D) offshore seismic surveys
- a Joint Operating Agreement with Shell for three offshore exploration licenses in offshore Antalya
- exploration for unconventional resources, including shale gas, in partnership with Shell
- farm-out of exploration licenses in the Mersin and Iskenderun Bays to other companies
- 176,222 m of cumulative drilling across 107 exploratory wells, resulting in the discovery of 44 oil wells and 7 natural-gas wells (TPAO, 2013).

Through the Turkish Government's five-year plans (including the most recent: 2010-2014 and 2014-2018), MENR places a particular focus on the expansion of TPAO's exploration and production activities both within Turkey and overseas, including partnerships and acquisitions in Azerbaijan, Georgia, Iraq, Libya and Syria,<sup>1</sup> and in the Aegean, Caspian, Mediterranean and Black Seas (MENR, 2010a).

Turkey has two state-owned coal mining companies, Turkish Coal Enterprises (TKI) and Turkish Hard Coal Enterprises (TTK) that explore for and produce lignite and hard coal in the country. Data on coal-exploration expenditure by these companies was not publicly available, although the 2010-2014 MENR strategic plan states that TTK invested 32.4 million Turkish Lira (\$15 million) in hard-coal mining in 2009 (MENR, 2010a). Since 2002, most of Turkey's coal mines have been effectively privatised (see 'Major companies' section).

## Public finance

### Domestic

A review of Turkey's state-owned banks and financial institutions did not reveal any publicly available information on fossil-fuel exploration financing.

### International

Turkey contributed \$4.4 million to fossil-fuel exploration projects in 2013 through its shares in the World Bank Group, the European Bank for Reconstruction and Development (EBRD) and the Asian Development Bank (ADB) which are less than 1% for each World Bank institution and the ADB, and 1.2% for the EBRD (Oil Change International, 2014).<sup>2</sup>

As a result of its status as an emerging economy, Turkey receives more financing from multilateral development banks (MDBs) for fossil-fuel exploration than it contributes. For example, in May 2014, the International

1 The current unrest in the Middle East does have implications for these exploration and production activities.

2 Data are based partly on shares of multilateral development banks (MDBs) held by each G20 country from the respective MDB annual reports and replenishment agreements.

Finance Corporation (IFC), the private branch of the World Bank, approved a \$50 million loan to Texas-based TransAtlantic Petroleum for oil and gas exploration and production in Turkey, including 3D seismic surveys and horizontal fracturing (fracking) (IFC, 2014).

## Major companies

### Oil and gas

In 2013, oil and gas companies in Turkey made \$1.5 billion in revenue and \$624 million in profits from upstream operations. State-owned TPAO is the country's largest oil and gas producer, followed by Perenco (an Anglo-French company) and TransAtlantic Petroleum (a Canadian company).

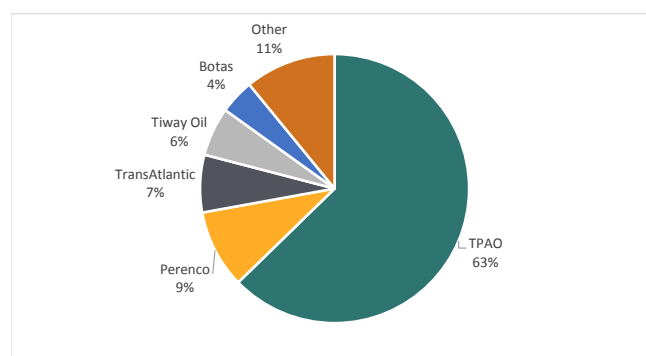
Of the \$1.5 billion in revenue, the Turkish Government received \$131 million in income taxes and a net \$83 million in royalties. In 2013, the share of revenue (aside from royalties) going to income taxes averaged 10% for Turkey's upstream oil and gas industry.<sup>3</sup> Table 2 displays these figures for Turkey's top oil and gas producers: companies that produced over 1,000 barrels of oil equivalent (BOE) per day in 2013.

Turkey's top producers also hold the largest shares of reserves, with TPAO holding by far the largest share with 63% of Turkey's total 135 million BOE of oil and gas reserves at the start of 2014 (Figure 2).

Turkey's oil and gas reserves are falling and exploration expenditure in the country fluctuates by year, with a recent peak of \$564 million in 2010, down to \$209 million in 2013 (Rystad Energy, 2014). The largest exploration spenders vary by year, with Exxon Mobil spending by far the most of any company in the 2010 peak year, and TPAO spending the largest amount in 2013 (Figure 3).

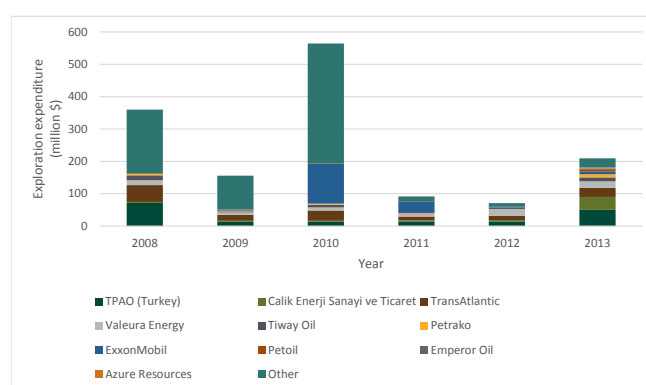
Although Exxon Mobil is not a major producer in Turkey, in 2009 the company signed an agreement with TPAO to operate and own a 50% interest in two

**Figure 2. Turkey's top oil and gas reserve holders' share of total Turkish reserves as of January 2014**



Source: Rystad Energy, 2014

**Figure 3. Oil and gas exploration expenditure in Turkey**



Source: Rystad Energy, 2014

deep-water offshore exploration blocks in the Black Sea (Exxon Mobil, 2009). Shell, which has not been a major player in Turkey's hydrocarbon industry until recently, partnered with TPAO in 2013 to drill the country's first well in search of shale gas (Reuters, 2013).

**Table 2. Turkey's top oil and gas producers' revenues, profits and income taxes, 2013**

Company	Revenue (million \$)	Profit (million \$)	Income Tax Payments (million \$)	Income-tax share of revenue
TPAO	844	450	119	14%
Perenco	226	99	25	11%
TransAtlantic	103	40	3	3%
Tiway Oil	66	26	11	16%
Botas	39	19	5	13%

Source: Rystad Energy, 2014

<sup>3</sup> Income tax share calculated by dividing income tax by revenue, excluding royalties, bonuses, and government profit.

## Coal

Turkey's state-owned TTK oversees anthracite (hard) coal mines, and state-owned TKI oversees lignite mines. Although, technically, Turkish state-owned enterprises own the vast majority of the country's coal mines, about 90% have been effectively privatised through a royalty tender scheme beginning in 2002 that vastly increased coal production in Turkey (Kotsev, 2014). Under this programme, TKI transfers coal-mine management to private companies, which in turn pay royalties to the Turkish Government and provide coal to Turkey's state-owned Electricity Generation Company (EÜAS) (Aksoan et al., 2014). Trade unions, energy experts and political opposition in Turkey claim that safety standards in Turkey's coal mines have weakened under the privatisation scheme, blaming privatisation in part for the May 2014 mine collapse disaster that killed 301 people at the Soma Mine, operated by private company SOMA Komur İşletmeleri since 2005 (Kotsev, 2014; BBC News, 2014).

## References

- Aksogan, P., Bayram, D. and Çiftçi, I. (2014) Soma Coal Mine Disaster Information Report. Amsterdam: Greenpeace. (<http://priceofoil.org/content/uploads/2014/06/Soma-Coal-Mine-Disaster-Report-GPMED.pdf>)
- BBC News (2014) 'Turkey ends Soma mine disaster rescue, death toll 301'. BBC News, 17 May. (<http://www.bbc.com/news/world-europe-27455367>)
- Burgess, M. (2012) 'Turkey's Love Affair with Coal is a Real Fossil'. Beirut: Climate Action Network (CAN)-International. (<http://www.climatenetwork.org/media/video/turkeys-love-affair-coal-real-fossil-nov-27>)
- Exxon Mobil (2009) 'Turkey Approves ExxonMobil-TPAO Agreement to Explore Black Sea'. Texas: Exxon Mobil Corporation. (<http://news.exxonmobil.com/press-release/turkey-approves-exxonmobil%E2%80%93tpao-agreement-explore-black-sea>)
- IFC (2014) 'Transatlantic: Summary of Investment Information'. Washington D.C.: International Finance Corporation.
- Kotsev, V. (2014) 'Turkey Has One of World's Worst Mining Safety Records, and Experts Say Privatization Is Part of the Problem'. International Business Times, 16 May. (<http://www.ibtimes.com/turkey-has-one-worlds-worst-mining-safety-records-experts-say-privatization-part-problem-1585775>)
- Ministry of Development (2013) Tenth Development Plan (2014-2018). Ankara: Government of Turkey. (<http://www.kalkinma.gov.tr/Lists/Kalkinma%20Planlar/Attachments/12/Onuncu%20Kalk%C4%B1ma%20Plan%C4%B1.pdf>)
- MENR (2014) 'Coal'. Ankara: Ministry of Energy and Natural Resources, Government of Turkey. ([http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=komur\\_EN&bn=511&hn=&nm=40717&id=40729](http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=komur_EN&bn=511&hn=&nm=40717&id=40729))
- MENR (2010a) Ministry of Energy and Natural Resources Strategic Plan (2010-2014). Ankara: Ministry of Energy and Natural Resources, Government of Turkey. ([http://www.enerji.gov.tr/yayinlar\\_raporlar\\_EN/ETKB\\_2010\\_2014\\_Stratejik\\_Planı\\_EN.pdf](http://www.enerji.gov.tr/yayinlar_raporlar_EN/ETKB_2010_2014_Stratejik_Planı_EN.pdf))
- MENR (2010b) 'Petroleum'. Ankara: Ministry of Energy and Natural Resources, Government of Turkey. ([http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=petrol\\_EN&bn=222&hn=&nm=40717&id=40730](http://www.enerji.gov.tr/index.php?dil=en&sf=webpages&b=petrol_EN&bn=222&hn=&nm=40717&id=40730))
- Oil Change International (2014) 'Shift the Subsidies'. Washington D.C.: Oil Change International. (<http://shiftthesubsidies.org>)
- OECD (2013) 'OECD-IEA Fossil-fuel Subsidies and Other Support'. Paris: Organisation for Economic Co-operation and Development. (<http://www.oecd.org/site/tadffss/>)
- Reuters (2013) 'UPDATE 2-Exxon in talks for stake in Turkey's Black Sea block'. Reuters, 11 June. (<http://www.reuters.com/article/2013/06/11/turkey-tpao-idUSL5N0EN2S320130611>)
- Rystad Energy (2014) 'Rystad Energy UCube Upstream Database'. Oslo: Rystad Energy. (<http://www.rystadenergy.com/Databases/UCube>)
- TPAO (2013) 'Basic Activities: Exploration'. Ankara: Turkish Petroleum Corporation, Government of Turkey. (<http://www.tpao.gov.tr/eng/?tp=m&id=78>)
- Turkish Petroleum Law (Law No. 6491) (30 May 2013) (<https://www.kpmg.com/TR/en/IssuesAndInsights/news-and-events/Documents/KPMG-Turkish-Petroleum-Law.pdf>)
- Yildiz, T. (2011) Ministry of Energy and Natural Resources Budget Presentation to Parliament by the Minister of Energy and Natural Resources. Ankara: Government of Turkey. ([http://www.enerji.gov.tr/yayinlar\\_raporlar\\_EN/2011\\_Genel\\_Kurul\\_Konusmasi\\_EN.pdf](http://www.enerji.gov.tr/yayinlar_raporlar_EN/2011_Genel_Kurul_Konusmasi_EN.pdf))



**Overseas Development Institute**  
203 Blackfriars Road  
London SE1 8NJ  
Tel +44 (0)20 7922 0300  
Fax +44 (0)20 7922 0399  
[www.odi.org](http://www.odi.org)  
[info@odi.org](mailto:info@odi.org)



**Oil Change International**  
714 G Street SE Suite 202  
Washington, DC 20003 USA  
Tel: +1 202 518 9029  
Fax: +1 202 330 5952  
[www.priceofoil.org](http://www.priceofoil.org)  
[info@priceofoil.org](mailto:info@priceofoil.org)

Readers are encouraged to reproduce material for their own publications, as long as they are not being sold commercially. As copyright holders, ODI and OCI request due acknowledgement and a copy of the publication. For online use, we ask readers to link to the original resource on the ODI website. The views presented in this paper are those of the author(s) and do not necessarily represent the views of ODI or OCI. © Overseas Development Institute and Oil Change International 2014. This work is licensed under a Creative Commons Attribution-NonCommercial Licence (CC BY-NC 3.0).