

# Syria Oil Almanac

a publication from OpenOil

# Contents

## Articles

|                                                            |           |
|------------------------------------------------------------|-----------|
| <b>Historical Overview</b>                                 | <b>1</b>  |
| Origins and Evolution of Syrian Oil Industry               | 1         |
| Impact of Sanctions on Syria                               | 3         |
| Organization of Arab Petroleum Exporting Countries (OAPEC) | 5         |
| <b>Energy Industry Background</b>                          | <b>6</b>  |
| Syrian Hydrocarbon Reserves                                | 6         |
| Other Extractives Industries in Syria                      | 7         |
| Dependence on Extractives Revenues                         | 8         |
| The 'Energy Mix'                                           | 10        |
| The 'Energy Mix' in Syria                                  | 12        |
| Energy Governance Weak Points                              | 13        |
| Natural Gas                                                | 15        |
| Natural Gas Flaring                                        | 17        |
| Crude Oil Qualities                                        | 18        |
| Crude Oil Qualities in Syria                               | 20        |
| Export Land Model                                          | 22        |
| Offshore Drilling                                          | 24        |
| Oil Field Depletion                                        | 26        |
| Oil Field Depletion in Syria                               | 27        |
| Enhanced Recovery Techniques                               | 28        |
| Oilfield services industry                                 | 30        |
| Unconventional Energy Sources                              | 31        |
| Shale gas                                                  | 33        |
| <b>Regulatory Framework</b>                                | <b>34</b> |
| Overview of Oil and Gas Regulation in Syria                | 34        |
| Syrian Ministry of Petroleum and Mineral Resources         | 35        |
| Licensing rounds held in Syria                             | 35        |
| <b>State-owned Entities</b>                                | <b>37</b> |
| Syrian Gas Company(SGC)                                    | 37        |
| Syrian Petroleum Company (SPC)                             | 37        |
| Other State-owned entities in Syria                        | 39        |

|                                                |           |
|------------------------------------------------|-----------|
| <b>International Entities</b>                  | <b>40</b> |
| Overview of international entities in Syria    | 40        |
| China National Petroleum Corporation           | 41        |
| ConocoPhillips                                 | 44        |
| ConocoPhillips Operations in Syria             | 47        |
| Gulfsands Petroleum                            | 48        |
| Gulfsands Petroleum Operations in Syria        | 49        |
| Marathon Oil Corporation                       | 51        |
| OMV                                            | 54        |
| ONGC Videsh                                    | 58        |
| PetroCanada/Suncor                             | 61        |
| Shell                                          | 64        |
| Shell Operations in Syria                      | 67        |
| Sinopec                                        | 68        |
| Sinopec Operations in Syria                    | 69        |
| Tatneft                                        | 70        |
| Tatneft Operations in Syria                    | 71        |
| Total                                          | 72        |
| Total Operations in Syria                      | 75        |
| <b>Joint Ventures in Syria</b>                 | <b>77</b> |
| Al Furat Petroleum Company (AFPC)              | 77        |
| Other Joint Ventures in Syria                  | 78        |
| <b>Oilfield service companies</b>              | <b>80</b> |
| Oilfield services companies operating in Syria | 80        |
| <b>Oil and Gas Fields</b>                      | <b>82</b> |
| Jbessa Field                                   | 82        |
| Karatchuk Field                                | 82        |
| Omar Field                                     | 83        |
| Rumailan Field                                 | 84        |
| Souedieh Field                                 | 85        |
| Thayyem Field                                  | 86        |
| Other Oil and Gas Fields in Syria              | 87        |
| <b>Key Infrastructure</b>                      | <b>88</b> |
| Overview of Infrastructure in Syria            | 88        |

|                                                        |            |
|--------------------------------------------------------|------------|
| Banias Refinery                                        | 89         |
| Homs Refinery                                          | 90         |
| Banias Terminal                                        | 91         |
| Latakia Terminal                                       | 91         |
| Tartous Terminal                                       | 92         |
| Arab Gas Pipeline (AGP)                                | 92         |
| Islamic Gas Pipeline                                   | 94         |
| Kirkuk-Banias Pipeline (IPC)                           | 95         |
| Tapline Oil Pipeline                                   | 96         |
| <b>Energy Access</b>                                   | <b>97</b>  |
| Power Generation in Syria                              | 97         |
| Liquid Petroleum Gas (LPG)                             | 99         |
| LPG in Syria                                           | 100        |
| <b>Regional Dynamics</b>                               | <b>101</b> |
| Eastern Mediterranean Offshore Prospects               | 101        |
| Syria-Russia                                           | 103        |
| <b>Social and Environmental Impacts</b>                | <b>105</b> |
| Environmental Impacts of Syrian Extractives Industries | 105        |
| <b>Resource Transparency Opportunities</b>             | <b>107</b> |
| EITI                                                   | 107        |
| Global Witness                                         | 110        |
| Natural Resource Charter (NRC)                         | 112        |
| Resource Curse                                         | 114        |
| Resource Transparency Movement                         | 118        |
| Revenue Watch Institute (RWI)                          | 120        |
| Transparency International                             | 121        |
| Transparency of Contracts                              | 122        |
| Transparency of Global Oil Companies (TI Report)       | 123        |
| WikiLeaks                                              | 125        |
| <b>References</b>                                      |            |
| Article Sources and Contributors                       | 127        |
| Image Sources, Licenses and Contributors               | 129        |

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# Historical Overview

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## Origins and Evolution of Syrian Oil Industry

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### Origins of Industry

Although Syria awarded its first oil concessions to foreign firms during the 1930s, it did not emerge as an oil producer until the late 1960s. Until the sharp increase in oil prices in the early 1970s, Syria earned more from fees for the international pipelines that crossed its territory, such as Tapline coming from Saudi Arabia and the Kirkuk-Banias pipeline coming from Iraq, than from domestic oil production.

In 1956 a US company discovered oil at Qarah Shuk (now known as the Karatchuk field) and in 1959 a West German firm discovered the Souedieh field, located around 15 kilometres south of Karatchuk.<sup>[1]</sup>

### Nationalization in the 1960s

In 1964 the Syrian government nationalised the oil industry and in the late 1960s the Syrian General Petroleum Company (SGPC) brought the Karatchuk and Souedieh fields on stream with Soviet assistance. The oil at these fields is both of a heavy API grade and sour (with a high sulphur content). The two fields continued to produce oil into the 1980s.

Syria became a net oil exporter in 1968 following the completion of a 663-kilometre pipeline to transport oil to the Tartous Terminal on the Mediterranean coast.<sup>[1]</sup>

### Expansion in Production in 1970s

The state-owned Syrian Petroleum Company (SPC) was established in 1974 and was subsequently responsible for granting permission to international oil companies to explore and invest in the oil and gas sector according to production sharing contracts.<sup>[2]</sup>

During the 1970s oil exploration intensified in Syria. The SPC discovered the large Rumailan field, as well as several smaller fields producing smaller amounts of heavy crude. However the launch of operations at the Jubaysah field in 1975, where oil with an API gravity of 40.2, suggested that Syria may in the future discover large quantities of light crude.

Western companies returned in 1977 when Pecten, a Shell subsidiary won a concession in north-central Syria. Chevron, Pennzoil, and Marathon Oil also won exploration concessions in the 1980s. The SPC also continued exploration and drilling to bring the small Qayrik, Wahab, Sa'id and As Safih fields on stream by the mid-1980s.<sup>[1]</sup>

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## Discovery of Light Crude in the 1980s

The discovery of large light crude fields in the mid-1980s, particularly Pecten's discovery of the Thayyem Field in 1984, boosted the role that oil played in the Syrian economy. Output began to expand rapidly and by 1994 oil exports of \$2.06 billion accounted for nearly 60% of Syria's total exports.<sup>[3]</sup>

The light oil now being uncovered had an API gravity of 36 with a low sulphur content, which allowed Syria to reduce its own imports of the crude required for use in domestic refineries. By the mid-1980s Syria had two domestic pipeline systems and two refineries.<sup>[1]</sup>

Syria's natural gas was discovered in conjunction with oil exploration operations. Although into the 1980s most natural gas was flared, the country began exporting small quantities of liquid petroleum gas (LPG) in late 1981. Marathon also made two gas discoveries in 1982 and 1985 at Sharif-2 and Ash Shair 1.<sup>[1]</sup>

The Al Furat Petroleum Company (AFPC), Syria's most prominent joint venture, was established in 1985 between the Syrian Petroleum Company (SPC), Shell and PetroCanada.<sup>[4]</sup>

## Decline in Production in the 1990s

According to the figures in the *BP Statistical Review*, Syria's oil production levels did not rise significantly through the 1990s (rising from 407,000 bpd in 1990 to 548,000 in 2000).<sup>[5]</sup>

Since the mid-1990s Syrian oil production and exports have been declining while domestic oil demand has been steadily rising, partly as a result of the country's policy of petroleum product subsidies. According to the *Middle East Economic Survey* Syria spent \$3 billion on petroleum product subsidies in 2010. The Syrian government had announced a plan to phase out these subsidies prior to the 2011 uprising, however the political events forced a delay.<sup>[6]</sup>

## Impact of international sanctions from 2004

Since 2004 various sets of international sanctions have been imposed on the Syrian regime by the US and the EU, with implications for the country's extractives industries.

*Main article: Impact of Sanctions on Syria*

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# Impact of Sanctions on Syria

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## Overview

Since 2004 Syria has been subject to various US economic sanctions under the Syria Accountability Act, imposed for Syria's alleged support of terrorist activities, involvement in Lebanon, weapons of mass destruction programs, and US accusations of its destabilizing role in Iraq.<sup>[1]</sup> Further sanctions were imposed by the US and the EU in 2011 in response to governmental brutality against protesters in the country.<sup>[2]</sup>

## 2004 US Sanctions

In May 2004, US President George W. Bush imposed sanctions on Syria banning all exports excluding food and medicine, freezing the assets of Syrians and Syrian entities and banning Syrian flights between Syria and the US. The sanctions excluded energy investment in the country.<sup>[3]</sup> The motives for these sanctions was alleged Syrian support for Lebanese opposition group Hezbollah and Palestinian group Hamas,<sup>[4]</sup> both listed on the US State department's list of terrorist groups.<sup>[5]</sup>

In early 2008 President Bush ordered expanded economic sanctions against Syrian officials and their associates.<sup>[4]</sup>

## Oil Embargo 2011-12

In 2011 several countries imposed sanctions on Bashar al-Assad's regime in an attempt to force the Syrian government to stop using violence against anti-government demonstrators. Russian opposition meant that, as of September 2011, UN sanctions were not possible, however the US and the EU made the decision to impose their own.<sup>[6]</sup>

The US already had sanctions in place against Syria before the unrest began, however in September the EU also placed an arms embargo on Syria and in September 2011 banned imports of Syrian oil. Italy won a concession allowing it to fulfil existing contracts until 15 November 2011.

BBC reports suggested that the EU sanctions had the potential to have a greater impact on the regime than other sanctions, given that before the ban 90% of oil exports from Syria went to the EU, primarily to Germany, Italy and France.<sup>[7]</sup> However Michael Lynch, president of Strategic Energy and Economic Research, suggested that "there is certainly someone who will buy (the oil)", arguing that countries could buy refined products from Caribbean refiners without knowing the origin of the oil.<sup>[8]</sup>

Those energy companies that chose to withdraw their investments from Syria suffered financially. According to report by *Counterpunch*, French companies such as Total were the largest losers, and Shell also suffered greatly. The withdrawal of these European energy companies created an opportunity for some state-owned companies from countries which rejected the sanctions, such as Chinese CNPC and Indian ONGC.<sup>[9]</sup>

According to comments by Oil Minister Sufian Alao in January 2012, Western sanctions on Syrian oil exports had cost the country \$2 billion since September 2011.<sup>[10]</sup>

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# Organization of Arab Petroleum Exporting Countries (OAPEC)

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| Want to teach yourself about IOCs and NOCs? | "Teach Yourself Oil" Companies and Markets <sup>[1]</sup> |
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OAPEC was founded in Beirut in January 1968 by Kuwait, Libya and Saudi Arabia with the aim of protecting their interests and coordinating their oil trade. The long term objective was fostering economic integration among Arab countries.

As of March 2012 OAPEC had ten members: Algeria, Bahrain, Egypt, Iraq, Kuwait, Libya, Qatar, Syria and United Arab Emirates. These countries accounted for around one quarter of total world oil production as of 2012 and the General Secretariat is based in Kuwait.

In 1986 Tunisia submitted a request for withdrawal and the Ministerial Council agreed to suspend the country's rights and obligations.<sup>[2]</sup>

## External Links

Official Website: OAPEC <sup>[3]</sup>

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# Energy Industry Background

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## Syrian Hydrocarbon Reserves

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### Oil

Syria is the only relatively significant crude oil producing country in the Eastern Mediterranean region, which includes Jordan, Lebanon, Israel, the West Bank, and Gaza.<sup>[1]</sup> 70% of Syria's oil and gas output is concentrated in the north-eastern region of Deir Ez Zour.<sup>[2]</sup>

According to the *BP Statistical Review of World Energy*, as of 2010 Syria had proven reserves of 2.5 billion barrels, representing 0.2% of global reserves. It was producing 385,000 barrels per day (bpd) of oil, accounting for 0.5% of global production.<sup>[3]</sup>

Syria is not a big oil exporter, however oil is critical to its political economy, as it is a less restricted revenue flow for the regime than others.<sup>[4]</sup>

### Natural Gas

According to the *BP Statistical Review of World Energy*, as of 2010 Syria had proven reserves of 9.1 trillion cubic feet of gas, representing 0.1% of global reserves. It was producing 7.8 billion cubic metres (bcm), an increase of 37.3% on 2009 figures and accounting for 0.2% of global production.<sup>[5]</sup>

Historically, Syria's gas reserves have been treated as a poor hydrocarbon relative to oil, as successive governments prioritized oil and considered natural gas as useful primarily to fire power plants and industrial furnaces, or to be used as feedstocks for other industries. Hence the Syrian gas sector was not sufficiently developed to replace oil as a dominant primary energy source.<sup>[5]</sup>

As of 2008 it was estimated that three quarters of Syria's gas reserves are owned by the Syrian Petroleum Company (SPC), including around 3.6 tcf across several fields in the Palmyra area, 1.6 tcf at the AFPC fields, 1.2 tcf at Souedieh, 0.8 tcf at Jbessa, 0.7 tcf at Deir Ez Zour and the remainder at Hol, Ghona and Marqada.

Around half of Syria's natural gas is non-associated and the remainder is associated. Syria's newest gas discoveries include a modest discovery by INA at Hayyan, in the Palmyra area.<sup>[6]</sup> While much of its oil is exported to Europe, Syria's natural gas is used in reinjection for enhanced oil recovery (EOR) and for domestic electricity generation.<sup>[7]</sup>

Syria's has announced intentions to increase the level of natural gas production over the coming years as part of a strategy to substitute natural gas for oil in power generation and to free up as much oil as possible for export.<sup>[6]</sup>

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## Other Extractives Industries in Syria

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Aside from oil and gas reserves, Syria holds the 11th largest global reserves of phosphate, a type of rock with high concentrations of phosphorus and a key ingredient used in fertilizer. According to the Syrian investment agency, phosphate is the country's sixth largest national industry.<sup>[1]</sup>

While crude oil and phosphate rock have been Syria's main contributions to the world supply of minerals in recent years, other raw and processed mineral commodities produced in Syria include cement, gypsum, industrial sand (silica), marble, natural crude asphalt, nitrogen fertilizer, phosphate fertilizer, salt, steel, and volcanic tuff.<sup>[2]</sup>

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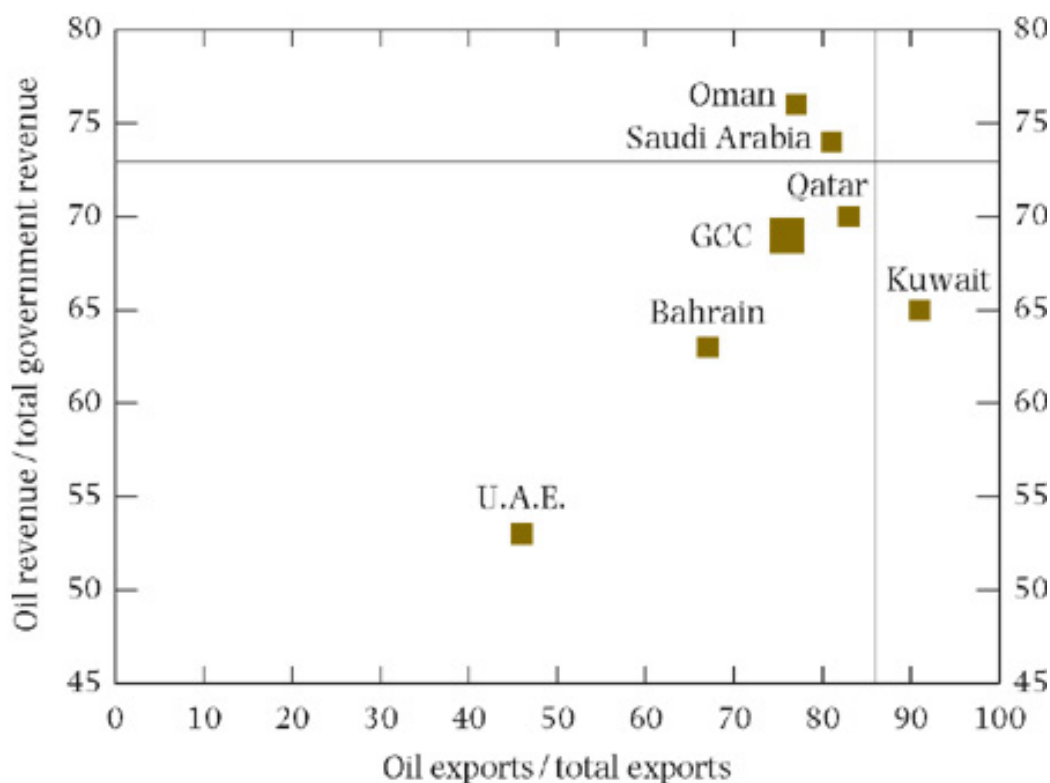
# Dependence on Extractives Revenues

|                                                  |                                                 |
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|--------------------------------------------------|-------------------------------------------------|

Political scientist Michael Ross describes oil dependence as 'the ratio of oil, gas and coal exports to GDP'. By this definition, the most highly oil dependent state in 1995 was Angola (68.5%), followed by Kuwait (49.1%). The most highly mineral-dependent states were Botswana (35.1%) and Sierra Leone (28.9%).

High levels of dependence can make states more susceptible to symptoms of the so-called Resource Curse, such as a higher propensity for violent conflict, weak institutions and stunted economic development.<sup>[1]</sup> A UN paper investigating patterns of resource dependency between 1960-1990 found a correlation between countries exhibiting high levels of fuel and mineral dependency and negative per capita annual growth rates over that period.<sup>[2]</sup>

However as can be seen in the figure below, there are two different measures of oil revenue dependence, the first being the ratio of oil revenues to fiscal revenues, or the total income of the government and the second is the ratio of oil revenues to total exports. The IMF estimated in 2003 that, of the Gulf producers, the United Arab Emirates shows the least oil dependence, with oil accounting for just over half of government income, and just under half of exports.<sup>[3]</sup>



Qatar, by contrast, showed a ratio of 70% of government revenues, and 80% of total exports. The International Monetary Fund identified at least 30 countries where revenues from oil and gas accounted for at least 25% of government income during the period 2005-8 and where sufficient information was available for meaningful analysis:

Algeria, Angola, Azerbaijan, Bahrain, Bolivia, Brunei, Cameroon, Chad, Congo, Ecuador, Equatorial Guinea, Gabon, Indonesia, Iran, Kazakhstan, Kuwait, Libya, Mexico, Nigeria, Norway, Oman, Qatar, Russia, Saudi Arabia, Sudan, Timor-Leste, Trinidad and Tobago, UAE, Venezuela, Vietnam, and Yemen.<sup>[4]</sup>

It is important to note that oil revenue dependence is not related to the quantity of oil produced or exported. Yemen, which exported around 448,000 barrels of oil a day (bpd) in 2003, displayed a higher degrees of dependence on oil

revenues than Saudi Arabia, which exported around 10.2 million bpd over the same period, or over twenty times more.<sup>[5]</sup>

## Dependence on Extractives Revenues by Country

### Colombia

*Main article: Dependence on extractives revenues in Colombia*

### Ghana

*Main article: Dependence on extractives revenues in Ghana*

### Iran

*Main article: Dependence on extractives revenues in Iran*

### Iraq

*Main article: Dependence on extractives revenues in Iraq*

### Libya

*Main article: Dependence on extractives revenues in Libya*

### Niger

*Main article: Dependence on extractives revenues in Niger*

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# The 'Energy Mix'

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|                                               |                                                  |
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|-----------------------------------------------|--------------------------------------------------|

## What is the 'energy mix'?

The 'energy mix' refers to the distribution of consumption per energy source from one region to another. Each country uses energy differently, defining its own energy mix.<sup>[2]</sup>

According to the *BP Statistical Review*, in 2010 oil consumption accounted for 34% of the world's primary energy; coal accounted for 30% of the mix; gas contributed 24%; hydro-power contributed 6.5% and non-hydro renewables (including biofuels) contributed 1.8%.<sup>[3]</sup> BP's *Energy Outlook 2030* report highlights three key trends shaping the modern energy economy: industrialisation; urbanisation and motorisation. These trends are led by:

- increased energy consumption.
- increased efficiency of energy use in production and consumption.
- increasing diversification of sources of energy.
- increased demand for clean and convenient energy at the point of use.<sup>[4]</sup>

## Historical trends

One source of power has always dominated the energy mix. In the pre-industrial age wood dominated, during the industrial revolution coal dominated and oil has dominated the 20th century. By 2030 BP predicts that natural gas will gain in importance, however energy efficiency will mean that economic growth will be far less energy intensive across the globe.<sup>[4]</sup>

The first great wave of industrialisation was powered by coal, a fuel which remained dominant until after the Second World War. The next major transition came with electricity and the internal combustion engine, which allowed diversification away from coal. Coal gradually came to be replaced as the principal fuel in power generation by natural gas and renewable energy sources.<sup>[4]</sup>

However between 2000-2011 coal's share of the energy mix increased by 4% on the back of strong growth in China, most of whom's growth in the 21st century has come from burning coal. Coal consumption in 2011 was up by 7.6% and was growing faster than at any time since 2003.<sup>[3]</sup>

## Future projections

The IEA predicts that the share of natural gas in the global energy mix will increase from 21% in 2011 to 25% in 2035 and the share of coal will decline. However according to their report, an increased share of natural gas in the energy mix is far from enough to avoid an average global temperature rise of less than 2 C, as although gas is estimated to replace some coal and oil in the mix it will also displace some nuclear power, thereby increasing greenhouse gas emissions.<sup>[5]</sup>

According to BP's estimates, the fuel mix will change relatively slowly due to long asset lifetimes. However the fastest growing fuels will be renewables, which are expected to grow at 8.2% per year between 2010-2030. Among fossil fuels, gas is expected to grow at the fastest rate (2.1% per year). Their outlook predicts that oil will continue a long decline in market share and that recent gains by coal in market share, due to rapid industrialisation in China and India, will be reversed by 2030.<sup>[4]</sup>

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## Unconventional energy sources

The *Petroleum Economist* predicts that unconventional resources such as shale gas and coal bed methane will play a critical role in meeting global energy demand in the future, the "game changer" being the rise of unconventional gas in the US. However nearly 75% of the world's total unconventional resources lie outside North America.<sup>[6]</sup>

According to the IEA's 2011 report 'Are we entering a golden age of gas?', unconventional gas resources are now estimated to be as large as conventional resources, and unconventional gas now makes up around 60% of marketed production in the US.<sup>[5]</sup>

KPMG, in their report *Shale Gas - A Global Perspective* argue that this resource has the potential to turn the world's energy industry on its head and to displace fossil fuels in the energy mix of selected locations, including China, America, Argentina, Mexico and South Africa,<sup>[7]</sup> potentially slowing the development of renewable resources. However the industry must first face considerable reputational and regulatory obstacles.<sup>[8]</sup>

## Renewable energy sources

Renewable energy includes such sources as wind, photovoltaic and thermal solar, tidal and wave power, among others. The renewable energy industry is still in its infancy in terms of its contribution to the global mix, but while the global contribution is still minor, it shows a high growth rate. Wind power, for example, showed growth rates above 30% between 1997-2007.<sup>[9]</sup> However, demand for fossil-based energy, such as coal and oil, has outpaced demand for clean energy.<sup>[10]</sup>

## The 'Energy Mix' around the globe

### Colombia

*Main article: The 'Energy Mix' in Colombia*

### Ghana

*Main article: The 'Energy Mix' in Ghana*

### Iraq

*Main article: The 'Energy Mix' in Iraq*

### Libya

*Main article: The 'Energy Mix' in Libya*

### Syria

*Main article: The 'Energy Mix' in Syria*

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## The 'Energy Mix' in Syria

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*This article about is a stub. You can help to improve the wiki guide by expanding it.*

In 2007 Syria's energy mix was: 69% Oil, 27% Natural Gas, 4% Hydroelectricity.<sup>[1]</sup>

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# Energy Governance Weak Points

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## Pre-Production Stage

### Exploration Licenses

Oil and gas production often works in two stages, with licenses awarded to explore given regions at the initial stage, and then separate arrangements being made once oil or gas is discovered. Given that prediction is so difficult, and the potential rewards are so great, even the license to explore certain areas can present an opportunity for corruption. For example, in 1999 Nigeria granted a series of exploration licenses for offshore exploration to companies which did not have any experience in oil production.<sup>[1]</sup> In Libya meanwhile, it was lucrative exploration contracts which were at stake when BP faced an outcry in 2010 over links made by the press between the company and the release of Lockerbie bomber Ali al-Megrahi,<sup>[2]</sup> who was released on 'compassionate grounds' by the Scottish government. BP denies any lobbying that linked Libyan prisoners to commercial contracts.<sup>[3]</sup>

### Production Awards

Once discoveries have been made, the right to produce presents a further opportunity for corruption. In some cases, the company which made the discovery has already agreed terms to go ahead and produce the oil. But especially in post-conflict countries, licenses may be obtained without due process. A 2004 review of companies extracting minerals in Liberia found that only 45 out of 70 operating companies were in possession of proper licenses.<sup>[4]</sup> In other cases, officials in host governments can use the threat of renegotiation or revocation of production rights to extort illegal payments from companies. Many economists regard auctions as the best way to manage both corruption and asymmetry of information between governments and companies at the production award stage.<sup>[5]</sup> Nevertheless, corruption is possible even in the context of an auction process, since a company and a government official can collude over subsequent modifications and renegotiations to the contract.

## Production Stage

### Import licenses, dues, levies

Once a company is producing in the country, the host government has a range of tools by which it can effectively change conditions for operating companies, which have now sunk large investments and so have incentives to keep producing even in the face of extra burdens. This is known to the economists as a "time-inconsistency" problem.<sup>[6]</sup> This ability to hold the company to ransom over its sunk investment can either be exploited for public interest - as when the government of Abdul Karim Qassem raised port fees in Basra Oil Terminal by 1200% overnight as part of its struggle with the Iraq Petroleum Company in the 1960s,<sup>[7]</sup> or it can be used for private gain by influential officials in the host government.

Among such blocking tools are licenses to import equipment needed to produce, such as has happened in Angola,<sup>[8]</sup> transit fees in ports and along pipelines, such as happened in the Iraqi industry when it fell into disagreement with neighbouring Syria, and more recently between Ukraine and Russia,<sup>[9]</sup> and changes in various forms of corporate and other taxes.

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## Support Service Contracts

The oil industry, in line with trends in the rest of the global economy over recent decades, has taken to outsourcing aggressively. This means that even when a top level operating license has been granted under public scrutiny through an auction process, the primary operator then issues contracts, which could be worth hundreds of millions of dollars, to other companies who in turn implement various activities to fulfil the contract with the host government. Since these contracts are between two private sector companies, they usually fall outside the scope of any governmental audit or integrity agency.<sup>[10]</sup>

## Cost Recovery Accounting

Many oil contracts make provisions for an oil company to recovery the heavy investment it has made to discover and then produce oil and gas. This is typically on a sliding scale over time, whereby a large portion of oil revenues are awarded to the company to cover their costs at the outset, but the proportion gradually diminishes over time.<sup>[11]</sup> Big oil companies often have sophisticated accounting methods at their disposal and can, for example, find ways to increase costs and decrease profits in one country with relatively high taxation, transferring the profits to another country where corporate taxes are lower. In some cases, multinational companies engage in complex transactions between several subsidiary companies across different legal jurisdictions. This is known as "transfer pricing", which can result in above market "costs", which they can then reclaim out of the oil revenues created by their production.<sup>[12]</sup>

All of these issues can be disputes between a host government and an oil company, as was seen in Indonesia in 2009-10 with cost recovery accounting.<sup>[13]</sup>

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# Natural Gas

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## What is natural gas?

About 85% of natural gas produced from conventional wells is methane, a highly flammable compound made up of one carbon atom and four hydrogen atoms.<sup>[1]</sup> It is colourless and, in its pure form, odourless. As the gas has no odour, gas companies often add a chemical to the gas to give it a distinctive smell so that gas leaks may be detected by smell.<sup>[2]</sup>

The units of measurement used for natural gas are generally based on volume and measured in cubic feet (a cubic foot being one foot long, by one foot wide, by one foot deep). This volume is usually expressed in BCF (billion cubic feet), TCF (trillion cubic feet) and MCF (thousand cubic feet).<sup>[3]</sup>

According to the US Department of Energy, for many years natural gas was considered worthless and discarded, and is still released by flaring today in many countries.<sup>[2]</sup>

Natural gas can be found as either associated gas, non-associated gas, wet gas (a type of non-associated gas) or coal bed methane.<sup>[1]</sup>

## Non-associated gas

Non-associated gas is gas which is found in reservoirs which do not contain significant quantities of crude oil.<sup>[4]</sup> It often occurs at greater depths where heat has split all of the hydrocarbons into smaller, lighter gas molecules. Shale gas is one type of unconventional non-associated gas.<sup>[1]</sup>

## Associated gas

Associated gas is found in association with crude oil, either dissolved in the oil or as a "cap" of free gas above the oil. Where it cannot be used, associated gas is either reinjected into the well, flared or vented.<sup>[1]</sup>

## Coal Bed Methane

Coal bed methane (CBM) or coal seam gas (CSG) is the natural gas extracted from coal beds during underground coal mining.

*Main article: Coal Bed Methane (CBM)*

## History of Natural Gas

In the absence of pipelines, through the 1800s the natural gas which was found was used almost exclusively as a fuel for lamps. However the invention of the "bunsen burner" in 1885 proved that gas could be used to provide heat for cooking and warming buildings.

The construction of pipelines allowed natural gas to be brought to new markets. One of the first substantial pipelines was built in 1891 in the US, however few pipelines were built until after the Second World War in the 1940s.<sup>[5]</sup>

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## Role of natural gas in the energy mix

The International Energy Association estimated in 2011 that natural gas could overtake coal and rival oil by 2035 to account for over 25% of global energy demand.<sup>[6]</sup>

According to the London-based *Petroleum Economist*, the growing interest in gas as an element in today's energy mix represents a "structural shift in energy markets." Natural gas holds several benefits as a fuel for a low-carbon future, including:

- the lowest carbon footprint of all fossil fuels.
- a shorter lead time to build gas-fired power plants and greater operational flexibility.
- ability to reduce greenhouse gas emissions by 25% in the transport sector compared to traditional motor fuels.<sup>[7]</sup>

The International Energy Agency (IEA) also points out that gas can help to diversify energy supply and so improve energy security.<sup>[8]</sup>

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# Natural Gas Flaring

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Gas flaring is the disposal by burning of unwanted associate natural gas released from an oil field by burning it. It is widely used where there is no infrastructure to make use of the gas. However it is widely recognized as a waste of energy and as environmentally dangerous in contributing carbon emissions to the atmosphere.<sup>[1]</sup>

The top four "flarers" internationally by the Global Gas Flaring Project (GGFP)'s 2011 statistics were Russia, Nigeria, Iran and Iraq. However according to *Iraq Oil Report*, gas flaring is a global problem on the descent as producing countries are increasingly magnetising the gas in a maturing market for the fuel. Between 2009-2012 the practice saw a 22 percent decrease on a global level, despite outliers such as Iraq where the level increased.<sup>[2]</sup>

## Gas Flaring Around the World

### Ghana

*Main article: Natural Gas Flaring in Ghana*

### Iraq

*Main article: Natural Gas Flaring in Iraq*

### Uganda

*Main article: Natural Gas Flaring in Uganda*

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# Crude Oil Qualities

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## Density

Oil density is generally expressed in degrees using an API scale. This is a specific gravity scale developed by the American Petroleum Institute (API), designed to measure the relative density of various petroleum liquids. The measure is expressed in degrees and most values fall between 10° and 70° API gravity.<sup>[1]</sup> The specific gravity of oil is its relative density to water at 60° Fahrenheit.<sup>[2]</sup>

## Light Oil

Otherwise known as "conventional oil", light oil has an API gravity of 22° or over.<sup>[3]</sup>

For example, Saudi Arabia's new blend of super light crude has an API gravity of 44°.<sup>[4]</sup> The oil produced from Libyan fields is also typically very "light" and the country's nine export grades have API gravities that range from 26-43.3°.<sup>[5]</sup>

## Heavy Oil

Heavy oil is a dense, viscous oil with low API gravity. Definitions vary, but it is generally accepted that the upper limit for heavy oils is 22°API. In Venezuela for example, the Bachaquero Heavy Crude Oil has an API gravity of 17°.<sup>[6]</sup>

Heavy oils are usually not recoverable in their natural state through a well or using ordinary production methods. Most need to be heated or diluted so that they can flow into a well or through a pipeline.<sup>[3]</sup>

## Extra Heavy Oil

Extra heavy oil has an API gravity of less than 10°.<sup>[3]</sup>

## Bitumen

Otherwise known as "oil sands", bitumen shares many attributes of heavy oil but is even more dense and viscous.<sup>[3]</sup>

## Sulphur Content

Crude oil can also be measured in terms of sulphur content (ranging from "sweet" to "sour"). "Sweet" crude is usually defined as oil with a sulphur content below 0.5 percent, while "sour" crude has a sulphur content of 0.5 percent or over.<sup>[7]</sup>

## Impact on Refining

The density and "sourness" of crude oil feedstocks affects the amount of processing and conversion necessary to achieve what is known as an optimal mix of products. Light, sweet crude demands a higher price than heavier, sourer crude as it requires less processing and produces a greater percentage of value-added products, such as gasoline, diesel and aviation fuel. Heavier grades of fuel generally require additional processing to produce lighter products.<sup>[7]</sup>

## Crude oil blends

Blended crude is a mixture of crude oils, blended in the pipeline to create a crude with specific physical properties. This may be to reduce viscosity and ease transportation, or alternatively to create added value compared to the raw crude.<sup>[8]</sup>

Oil producing countries, particularly those with a many different qualities of crude from their fields, must decide which brand they will put on the international market. There are around 160 crude grades marketed globally as of 2012. In order to optimise investments in pipelines and storage facilities, countries tend to reduce the number of marketable streams by blending different oil grades. For example, the 'Brent blend' in fact comes from the blending of 15 different grades of oil from the North Sea.<sup>[9]</sup>

## Crude oil qualities around the globe

### Iran

*Main article: Crude Oil Qualities in Iran*

### Iraq

*Main article: Crude Oil Qualities in Iraq*

### Libya

*Main article: Crude Oil Qualities in Libya*

### South Sudan

*Main article: Crude Oil Qualities in South Sudan*

### Syria

*Main article: Crude Oil Qualities in Syria*

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## Uganda

*Main article: Crude Oil Qualities in Uganda*

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# Crude Oil Qualities in Syria

## Grades of Crude Oil

Syrian fields produce two different grades of crude oil, the "Souedieh" grade (or Syrian Heavy) and another lighter grade, known as "Syria Light", which is light and sweet and has similar characteristics to Libyan oil.<sup>[1][2]</sup>

The table below shows the characteristics of the two Syrian crudes:

| Crude       | API Gravity | Sulphur Content |
|-------------|-------------|-----------------|
| Syria Light | 38          | 0.68%           |
| Souedieh    | 22-24       | 3.9%            |

[3]

Prior to the 1980s and discoveries of light crude around Deir Ezzor, the oil produced in Syria was of a heavy grade. However the discovery of large light crude fields at this time attracted international interest and several consortiums were formed, most significantly the Al Furat Petroleum Company.<sup>[4]</sup>

As of 2011, heavy oil accounted for around 60% of Syria's oil production<sup>[1]</sup> and oil exports from Syria were of the Soueidie grade, since local refineries needed the Syrian Light grade to process for products for the domestic market.<sup>[5]</sup>

## Implications for Refining Infrastructure

A sulphurous or sour crude such as the Souedieh grade poses challenges when it comes to refining and puts serious demands on refining capacity.<sup>[6]</sup>

According to a report commissioned by the Syrian National Council, relatively few refineries around the world are adapted to handle crude grades as sour and heavy as the Syrian heavy grade.<sup>[5]</sup> The majority of refineries capable of refining heavy sour crude are located in the USA and the EU, however as of 2011 China was in the process of upgrading many refineries to be able to handle heavy crude.<sup>[6]</sup>

When it came to imposing sanctions on the Syrian regime in 2011, analysts in Europe believed that the heavy characteristics of Syrian crude meant that the EU boycott could have a significant impact in starving President Assad's regime of revenues. The bulk of the oil was being sent to Europe for refining and energy economist Robin Mills commented at the time that "I'm sure Syria could find someone else to sell it to, but with great difficulty, and at a heavy discount".<sup>[7]</sup>

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# Export Land Model

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## Overview

The Export Land Model (ELM) is a simple mathematical model describing how rising consumption by oil producing nations, combined with peak production in those nations, accelerates the decline in net global exports.<sup>[1]</sup>

## Theory

Under this theoretical model, high oil prices produce rapid economic growth in "Export Land" countries (oil-exporting countries), subsequently causing a growth in domestic energy demand in order to power the many cars, houses and businesses being bought. In turn this increase in demand constrains how much oil these countries can sell on the world market. Demand projections by CIBC in 2007 suggested that for many oil-producing countries, including Saudi Arabia, Kuwait and Libya, internal oil demand would double in a decade.<sup>[2]</sup>

One prominent example of a country which has swung from being a net exporter of oil to a net importer in recent years is China. China became a net importer 1993 as a result of flattening production against sharply increasing consumption figures.<sup>[3]</sup> For example, in 2008 Chinese consumers bought 5.5 million vehicles (cars, minivans and SUVs), up from just 1.6 million in 1997, with demand expected to continue growing. In 2008 the Chinese government attempted to reduce demand for oil by increasing gas and diesel prices by 46 US cents.<sup>[4]</sup>

## Impact of Subsidies

According to Richard Posner, the most substantial subsidies on petroleum products are usually found in oil-producing countries, such as Saudi Arabia, Iran, Russia, Venezuela, Indonesia and the UAE. He asserts that in Saudi Arabia, subsidies made buying a litre of petrol cheaper than buying a bottle of water. This results in increased demand and increased consumption of oil where subsidies are offered.<sup>[5]</sup>

According to economist Jeff Rubin, exports from OPEC (the Organization of Petroleum Exporting Countries) are likely to fall as the countries which make up the organization face increasing consumption among their own populations. As a consequence such countries begin to "cannibalize their own export capacity".<sup>[6]</sup>

## Consequences for Global Energy Security

A 2007 report by CIBC World Markets estimated that "soaring internal rates of oil consumption" in Russia, Mexico and OPEC member countries would reduce crude exports by as much as 2.5 million barrels per day (bpd) by 2010, accounting for 3% of global demand. Fatih Birol, chief economist at the International Energy Agency (IEA), rated consumption growth among oil exporters as the second greatest threat to meeting the world's oil needs. Analysts have said this phenomenon is likely to lead to big market shifts and an increased focus on the exploitation of unconventional resources such as Canada's tar sands.<sup>[2]</sup>

These implications of the ELM are particularly concerning for countries which import a large percentage of their oil imports, such as the US, where 70% of the country's oil needs are imported. It can also have the effect of creating greater international competition for the remaining supplies of oil.<sup>[7]</sup>

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## Criticisms of the ELM

While he does not dispute the basic tenets of the theory, the author of the *Peak Oil Debunked* blog casts some doubt on the figures underpinning Jeffrey Brown's model.<sup>[8]</sup>

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# Offshore Drilling

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## Overview

Offshore wells are drilled in much the same way as their onshore counterparts—with several allowances for the offshore environment, such as a subsea drilling template which allows for accurate drilling while allowing for movement of the drilling platform.<sup>[1]</sup>

There are two basic types of offshore drilling rigs: those that can be moved from place to place, allowing for drilling in multiple locations, and those rigs that are permanently placed. Moveable rigs are often used for exploratory purposes because they are much cheaper to use than permanent platforms. Once large deposits of hydrocarbons have been found, a permanent platform is built to allow their extraction.<sup>[2]</sup> In addition to the drilling template, a blowout preventer is installed on the sea floor. This system, much the same as that used in onshore drilling, prevents any oil or gas from seeping out into the water.<sup>[2]</sup>

New depth records for drilling reached 7,625 feet in the Gulf of Mexico, and Shell Oil's platform "Troll," which stands in the North Sea in 1,000 feet of water, 1,500 feet high, became one of two man-made objects visible with the naked eye from the surface of the moon.<sup>[3]</sup>

A report by the National Research Council found that offshore oil and gas drilling was responsible for just 2% of the petroleum spilled in North America's oceans, compared with 63% from natural seepage and 22% from municipal and industrial waste. Coast Guard reports show that the amount of oil spilled in U.S. waters dropped from 3.6 million barrels in the 1970s to less than 500,000 in the 1990s.<sup>[4]</sup>

The offshore oil industry was the focus of much attention following the Deepwater Horizon rig explosion in April 2010 which killed 11 people and unleashed the largest offshore oil spill in U.S. history. In its wake, the US federal authorities clamped down on offshore oil activity, instituting a six-month moratorium on deep-water drilling.<sup>[5]</sup>

## History

In the late 19th century, after drilling a large number of wells, early oilmen noticed that those nearest the ocean were the best producers.<sup>[3]</sup> However, the executor and the date of the first offshore rig is contested, with some sources naming T.F. Rowland as the inventor of offshore drilling as he was the owner of a patent for his offshore drilling rig design in 1869<sup>[2]</sup> and others citing H.L. Williams as the executor of the first offshore drilling well in 1887, in Summerland, California. Williams' first well extended about 300 feet into the Pacific ocean.<sup>[3]</sup> USA Today puts the date of the first U.S. offshore oil production as 1896, also in California.<sup>[4]</sup>

The first offshore well out of sight of land was completed in 1947 off the coast of the Gulf of Mexico by the Kerr-McGee Corporation<sup>[6]</sup>, and marked the beginning of the modern offshore industry as it is known today. By 1949, 11 offshore fields were found in the Gulf of Mexico with 44 exploratory wells.<sup>[3]</sup>

The Second World War also sparked technological progress with regards to the offshore oil industry after its conclusion, including the work of the US Army's oceanography and weather service, which created a corps of well-trained specialists who forecast wind, wave, and soil conditions. In addition, it sparked improvements in communications which could be adapted for use offshore, as well as vessels designed for the war which could be purchased at low prices after the war.<sup>[6]</sup>

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## Worldwide Operations

The offshore industry was key to Brazil's energy reserves, with the the 2007 discovery of the Tupi field some 200 miles (320 kilometers) south of Rio de Janeiro in the Atlantic Ocean. According to energy consultants *IHS-CERA*, Brazil has nearly 48 billion barrels of oil in water of depths of 2,000 feet or greater.<sup>[7]</sup>

In Africa, the two biggest offshore layers have been Angola and Nigeria. New offshore producers include Ghana with the Jubilee field, Sierra Leone, and Liberia.<sup>[7]</sup>

While the Gulf of Mexico has been producing offshore for many years, IHS CERA say that the Gulf still holds nearly 13 billion barrels of recoverable deepwater oil.<sup>[7]</sup>

As of February 2012, there were 113 mobile offshore drilling units in the Gulf of Mexico region, 118 in the Europe/Mediterranean Sea region, 72 units in offshore West Africa, and 121 in the Middle East offshore market.<sup>[8]</sup>

## Opposition and Controversy

The debate about offshore drilling stems from questions over how much oil potentially could be recovered from underwater fields versus the time and cost, both in dollars and environmental impact, related to that process.<sup>[9]</sup>

The prospect of offshore drilling in the Arctic has been a source of controversy despite the fact that the oil is believed to lie less than 500 metres below the surface of the ocean. However, environmentalists say weather conditions would make it difficult to respond in the event of an oil spill, and say the potential results of an oil spill make the risks of drilling for offshore oil unfeasible. Despite this, Norway has been carrying out Arctic exploration.<sup>[7]</sup>

In Brazil, Margot Stiles, a marine scientist with the conservation organization Oceana, said research funded by Petrobras has helped to discover the deep-sea corals and other ecological treasures in Brazil's offshore drilling region. But she fears the company's operations could put that ocean environment in jeopardy. "We've been working to limit offshore oil drilling because we just don't see that it's safe," she said. "After the Gulf oil spill people definitely have a greater appreciation for the limits of deep sea drilling technology, and the limits of what we can do to keep things safe."<sup>[7]</sup>

Environmental groups say that pollution from offshore rigs causes a wide range of health and reproductive problems for fish and other marine life and exposes wildlife to the threat of oil spills that would devastate their populations.<sup>[10]</sup>

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## Oil Field Depletion

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*This article about Oil Field Depletion is a stub. You can help to improve the wiki guide by expanding it.*

Oil field depletion refers to the decline in an oil field's production over time,<sup>[1]</sup> when a field's recoverable resources become exhausted and production is reduced due to the physical limitations of the reservoir.<sup>[2]</sup> Depletion is a natural process by which an oil field produces an increasing volume of oil until output eventually hits a peak, after which the volume that can be pumped out of that field gradually declines.<sup>[3]</sup>

The analysis of depletion rates is a key element in forecasting the future production of oil reservoirs.<sup>[2]</sup> A metric often used to determine the remaining lifespan of an oil reserve is the 'reserves-to-production ratio', used to forecast the future availability of a resource.<sup>[4]</sup>

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# Oil Field Depletion in Syria

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Syrian oil production and exports have been in decline since the mid-1990s.<sup>[1]</sup>

Oil field depletion is a major challenge facing Syria over coming years, as oil output and production continues to decline due to technological problems coupled with the depletion of reserves. Since peaking at 590,000 barrels per day (bpd) in 1996, Syrian oil output fell to an estimated 460,000 barrels per day (bpd) in 2004 as older fields, such as the large Jebisseh field discovered in 1968, reached maturity.<sup>[2]</sup> By 2006 output levels had fallen to just 376,00 bpd.<sup>[3]</sup>

Combined with rising consumption levels, oil field depletion and decreasing exports, may lead to Syria becoming a net oil importer once again in the near future.<sup>[2]</sup>

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# Enhanced Recovery Techniques

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## Overview

The life of an oil well goes through at least three distinct phases, with various techniques employed to keep oil production at maximum levels. Enhanced oil recovery (EOR) is the third and most advanced stage in this process, whereby oil is forced into the well-head where it can be pumped to the surface. EOR can substantially improve the efficiency of extraction.<sup>[1]</sup>

EOR can refer to any method of increasing oil production from a reservoir, using sophisticated technological techniques to add energy to a reservoir to stimulate oil production and increase recovery factor, or the amount of the reservoir's total oil that is extracted.<sup>[2]</sup> EOR also has some considerable drawbacks, including the relatively high cost of its implementation and, in some cases, the unpredictability of its effectiveness.<sup>[3]</sup>

According to the *Petroleum Technology Transfer Council*, about 10 percent of all oil produced in the United States in 2009 was through enhanced recovery techniques.<sup>[4]</sup>

## Three stages of oil field development

In the first stage of an oil field's development, oil is forced out by pressure generated from gas present in the oil (also known as associated gas).<sup>[1]</sup> The natural pressure of the reservoir, or gravity, drives oil into the wellbore, combined with artificial lift techniques such as pumps which bring the oil to the surface. Only about 10 percent of a reservoir's original oil in place is typically produced during primary recovery.<sup>[3]</sup>

In the secondary stage, the reservoir is flooded with water or injected with gas to maintain sufficient pressure levels to displace oil and drive it to the production wellbore.<sup>[1]</sup> This stage extends a field's productive life and results in the recovery of 20 to 40 percent of the original oil in place.<sup>[3]</sup>

EOR refers to the tertiary stage of development, which involves the introduction of fluids that reduce the viscosity, or thickness, of the oil and improve its flow. A variety of fluids are used for this purpose. These fluids typically consist of gases that are miscible (form a homogeneous mixture) with oil, steam, air or oxygen, polymer (long-chained molecule) solutions, gels, or microorganism formulations. Tertiary recovery enables producers to extract up to or over half of a reservoir's original oil content, depending on the reservoir and the technique used.<sup>[1]</sup>

## Categories of EOR techniques

The primary categories of EOR are thermal recovery, gas injection and chemical injection.<sup>[3]</sup>

Thermal EOR has historically been the most widely applied.<sup>[1]</sup> This method involves the introduction of heat, most commonly in the form of steam, into a reservoir to reduce the viscosity of the oil to be extracted.<sup>[3]</sup>

Gas injection uses gases such as nitrogen or carbon dioxide that expand in a reservoir to push additional oil to the production wellbore. Other gases can also be used to dissolve in the oil to lower its viscosity and increase its flow rate.<sup>[3]</sup> Other gases, such as hydrocarbon gases and flue gases (the combustion exhaust gas of a power plant, for example), can also be used in this method of EOR.<sup>[1]</sup>

Chemical EOR generally involves the flooding of a reservoir with water-soluble polymers, or long-chained molecules, to help reduce the surface tension that often prevents oil from moving through a reservoir.<sup>[3]</sup> This effects a more efficient displacement, and therefore better recovery, of moderately viscous oils.<sup>[1]</sup>

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A number of other EOR processes have also evolved, including the injection of carbonated water, microorganisms, foams, alkaline, and other substances. These have shown varying degrees of promise but require additional development to enter into more common use.<sup>[1]</sup>

According to the US Department of Energy in December 2011, thermal techniques accounted for over 40 percent of EOR production in the United States, gas injection accounted for nearly 60 percent, and chemical techniques accounted for about one percent.<sup>[3]</sup>

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# Oilfield services industry

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Oilfield services companies assist drilling companies in the oil industry in setting up oil and gas wells. Such companies may manufacture, repair or maintain the equipment used in oil extraction and transport. Services can include seismic testing (mapping the geological structure beneath the ground), transport services (such as movement of land and water rigs) and directional services (such as angled or horizontal holes).<sup>[1]</sup> National Oil Companies (NOCs) and international oil companies (IOCs) often lack such technical and geological skills and so turn to service companies.<sup>[2]</sup>

According to a 2010 report by GBI Research, the global oilfield services industry has witnessed considerable growth in recent years, is expected to become \$200 billion industry by 2015 (an increase on \$140 billion in 2008). In part this is due to the growth in activity in offshore fields around the world. However the global economic downturn in 2009 did lead to a period of slower growth.<sup>[3]</sup>

## Major Trends

### Unconventionals and Offshore Drilling

Industry observers predict that the burgeoning unconventional energy industry will create a boost in demand for the services industry. Production of shale oil and other unconventionals brings logistical and technological challenges and demands a huge increase in the number of rigs supplied. A surge in offshore drilling activity is also predicted to boost demand. The *Economist* reported, for example, that America's Halliburton was planning to boost its workforce of 60,000 by 25% over 2011. Dahlman Rose, a bank, estimated that global exploration budgets would rise by around 14% in 2011 to \$533 billion.

According to reports in the *Economist* newspaper, America is the centre of the oilfield service boom, where firms pioneered the technique of horizontal drilling in order to access shale oil and shale gas.<sup>[2]</sup>

### Demand for Local Content

According to Ayman Asfari, CEO of UK-based Petrofac, NOCs are increasingly demanding to see "local content" (ie. local operators) playing a part in new contracts for exploration, production and plant construction. This puts international oil companies at a disadvantage and creates an opportunity for oil services companies to build assets with local partners, maintain that asset for a period of time and then "hand it back" to the NOC to run in the long term.<sup>[4]</sup>

## Key Industry Players

According to *Arabian Oil and Gas*, as of 2008 the ten largest oilfield service companies globally were:

1. Schlumberger Limited
  2. Halliburton
  3. Saipem
  4. Transocean Ltd.
  5. Baker Hughes
  6. Fluor
  7. Weatherford International
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8. BJ Services Company
9. Petrofac
10. China Oilfield Services Ltd.

An *Economist* report suggests that by offering a full range of oilfield services, the "big four" of the industry (Schlumberger, Halliburton, Baker Hughes and Weatherford International) enjoy an advantage over smaller firms, as NOCs often prefer to deal with only one firm rather than deal with several.<sup>[2]</sup>

In 2011 a group of business school professors carried out a study to identify the 100 most innovative companies globally. They found that the oilfield services industries accounted for six of the top 100. Two of these were Schlumberger and Halliburton, and a further two were leading drilling equipment companies FMC Technologies and Cameron International. The remaining two were China Oilfield Services and Tenaris SA.<sup>[5]</sup>

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## Unconventional Energy Sources

According to oilfield services provider *Schlumberger*, unconventional resources is an umbrella term referring to oil and natural gas produced by means that do not meet the criteria for conventional production. Unconventional oil consists of a wider variety of liquid sources than conventional oil including oil sands, extra heavy oil, gas-to-liquids and other liquids. In general conventional oil is easier and cheaper to produce than unconventional oil.<sup>[1]</sup> However the qualification criteria for unconventional resources are not fixed and inevitably shift over time depending on the availability of exploration and production technologies, the economic environment and other factors. As of 2011 for example resources such as coal bed methane (CBM), shale gas, fractured reservoirs and tight gas sands are considered unconventional resources.<sup>[2]</sup>

Many industry analysts have pointed to a significant future role for 'unconventionals' in the energy mix in many parts of the world. BP estimates that unconventional gas will account for 57% of US production by 2030, that CBM and shale will account for almost half of Chinese output growth, and that shale and other new gas sources could meet almost 60% of US supply needs by the same date.<sup>[3]</sup> Nevertheless the IEA notes the key constraint on further development of global unconventional energy resources that in most places, exploitation of such resources does not enjoy the degree of social acceptance required in order to flourish, due to environmental and social concerns that have arisen.<sup>[1]</sup>

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# Shale gas

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*This article about Shale gas is a stub. You can help to improve the wiki guide by expanding it.*

Shale gas is natural gas produced from shale formations.<sup>[1]</sup>

According to a report by KPMG, by offering a cheap, carbon-friendly way to help to meet energy needs, shale gas has the potential to turn the world's energy industry on its head. However in order to do this it would have to surmount significant reputational and regulatory hurdles.<sup>[2]</sup>

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# Regulatory Framework

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## Overview of Oil and Gas Regulation in Syria

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Under Syrian law (as of 2011) the government is the major shareholder in the oil and gas sector through its ownership of the Syrian Gas Company (SGC) and the Syrian Petroleum Company (SPC). These two companies maintain a 50% share in every oil and gas project in Syria.<sup>[1]</sup>

The state-owned SPC operates a number of joint ventures with international companies in Syria, the largest of which is the Al Furat Petroleum Company (AFPC).<sup>[2]</sup>

## Production Sharing Model

The state-owned entities interact with the international companies through production sharing contracts (PSCs),<sup>[3]</sup> an agreement which lays down the percentage of production each party will receive once the participating parties have recovered a specified amount of costs and expenses.<sup>[4]</sup>

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# Syrian Ministry of Petroleum and Mineral Resources

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## Overview

Syria's upstream oil production and development has traditionally been the mandate of the Syrian Petroleum Company (SPC), an arm of the Ministry of Petroleum and Mineral Resources.<sup>[1]</sup>

The Ministry is based in Damascus and also oversees Syria's phosphate mining sites.<sup>[2]</sup>

## External Links

Official Website: Syrian Ministry of Petroleum and Mineral Resources <sup>[3]</sup>

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## Licensing rounds held in Syria

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### 2006

In a bidding round held in August 2006, Shell won two of the nine oil and gas concessions offered. According to a leaked US diplomatic cable, executives from a number of international oil companies (IOCs) complained about Shell's aggressive bidding practices, which lowered the competitiveness of their own bids and were more generous than the terms offered previously by a major oil company. Reportedly, Shell offered to upgrade two Syrian refineries at no cost to the Syrian government.<sup>[1]</sup>

### 2007

In mid-2007 Syria held its first offshore licensing round, offering four blocks covering a total area of 5000 square kilometres. However the response was disappointing with only one bid received (by a consortium led by private British firm Dove Energy)<sup>[2]</sup>, and no awards were made.<sup>[3]</sup>

### 2010

On 14 January 2010, the Ministry of Petroleum & Mineral Resources of Syria announced that seven state-owned onshore oil fields had been put on offer for appraisal and redevelopment. International oil companies (IOCs) were invited to bid for Production Sharing Contracts (PSCs) for the fields in the Raqqa Province.

The fields put forward were all heavy crude fields discovered by the Syrian Petroleum Company (SPC), including Tureb West, Halima and Dohal fields (Group 1) and Jaadeen, Zenati, Tal Asfar and Al Haloul fields (Group 2). The final deadline for the submission of bids was extended to the 20 June 2010.<sup>[4]</sup>

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## 2011

Syria's second offshore licensing round, the International Offshore Bid Round 2011, was opened on March 24 2011 by the Syrian Ministry for Petroleum and Mineral Resources.<sup>[5]</sup> It was originally scheduled for closure by October 2011, but was then re-scheduled twice. As of early 2012, there was no new date for completion of the bid round.

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# State-owned Entities

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## Syrian Gas Company(SGC)

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### Overview

The Syrian Gas Company (SGC) is the is the state-owned natural gas company. It was founded in 2003 and since 2009 has come under the umbrella of the General Petroleum Corporation (GPC). Its role is to manage the exploitation, processing, transportation and marketing of natural gas in Syria.<sup>[1]</sup>

### External Links

GPC Official Website: [www.gpc-sy.com](http://www.gpc-sy.com) <sup>[2]</sup>

### References

[1] " Syrian Gas Company ([http://www.gpc-sy.com/index.php?option=com\\_content&view=article&id=205&Itemid=214](http://www.gpc-sy.com/index.php?option=com_content&view=article&id=205&Itemid=214))" *General Petroleum Corporation*, retrieved 13 February 2012.

[2] <http://www.gpc-sy.com>

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## Syrian Petroleum Company (SPC)

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### Overview

The Syrian Petroleum Company (SPC), established in 1974,<sup>[1]</sup> is a state-run entity that controls the country's upstream oil production and development. The company is an arm of the Ministry of Petroleum and Mineral Resources; it is responsible for about half of total production and takes 50 percent stakes in new development projects with foreign partners.<sup>[2]</sup>

According to the official website of the General Petroleum Corporation (GPC), the SPC is now one of several affiliate companies. However the website also states that the GPC was established in 2009 to replace the SPC and the SGC and take over the responsibility for preparing and signing contracts, implementing strategy, building national capacities and supervising the joint venture companies.<sup>[3]</sup>

## Activities

The SPC has undertaken efforts to reverse declining oil production and exports by increasing exploration and production in partnership with foreign companies. The main foreign producing consortium as of December 2011 was the Al-Furat Petroleum Company, which included the SPC at 50% ownership, Shell at 32% and others, including China National Petroleum Corporation.<sup>[4]</sup>

## Impact of 2011-12 Unrest

In September 2011 the EU imposed sanctions on five state-owned firms, including the SPC, in response to increasing violence by Bashar Assad's regime against the Syrian people.<sup>[5]</sup>

## External Links

Official Website: [www.spc-sy.com](http://www.spc-sy.com)<sup>[6]</sup>

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- [4] " Factbox: Syria's energy sector (<http://www.reuters.com/article/2011/08/24/us-syria-oil-idUSTRE77N41L20110824>)" *Reuters*, 24 August 2011.
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- [6] <http://www.spc-sy.com>

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# Other State-owned entities in Syria

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## Mahrukat

The Syrian Company for the Storage and Distribution of Petroleum Production (Mahrukat) is the Damascus-based state-owned distributor.<sup>[1]</sup>

*Official Website:* [www.mahrukat.gov.sy](http://www.mahrukat.gov.sy)<sup>[2]</sup>

## SCOT

The Syrian Company of Oil Transportation (SCOT) was established in 1972.<sup>[3]</sup>

*Official Website:* *SCOT official site*<sup>[4]</sup>

## Sytrol

Sytrol is the state's sole marketer of oil and reports to the Prime Ministers's Office rather than directly to the Oil Ministry as other para-statal companies do.<sup>[5]</sup>

The company was placed on a US sanctions black list in the summer of 2011 and was also black listed by the European Union in December 2011.<sup>[1]</sup>

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- [4] [http://www.gpc-sy.com/index.php?option=com\\_content&view=article&id=206&Itemid=215](http://www.gpc-sy.com/index.php?option=com_content&view=article&id=206&Itemid=215)
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# International Entities

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## Overview of international entities in Syria

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### Overview

International oil companies operating in Syria as of early 2011 included Royal Dutch Shell, India's ONGC, French Total and Chinese CNPC. Many of the IOCs withdrew from Syria in 2011-12 following the uprising against Bashar al-Assad's regime, in order to comply with sanctions imposed by the US and the EU.<sup>[1]</sup>

According to the Syrian Ministry of Petroleum and Mineral Resources, 28 contracts were signed with international companies for exploration and production of oil and gas between 1977 and 2008.<sup>[2]</sup>

Oil production and development in Syria are managed by the Syrian Petroleum Company (SPC), an offshoot of the Ministry of Petroleum and Mineral Resources. International oil companies were allowed to participate in Syria's oil industry in an attempt to stem the country's production decline, notably via the formation of the Al Furat Petroleum Company (AFPC), owned jointly by the SPC, Shell and CNPC.<sup>[3]</sup>

### Chinese Investment in the Industry

China has aggressively targeted Syria's oil and gas sector over recent years, as part of a global energy policy which saw Beijing spend US \$32 billion buying natural resource assets globally in 2009. In 2009 Chinese CNPC also purchased Emerald Energy. According to press reports in *Syria Today*, the Syrian government hoped that Chinese firms could make up for lack of access to up-to-date technology from the US as a result of sanctions since 2004.<sup>[4]</sup>

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# China National Petroleum Corporation

|                                             |                                                           |
|---------------------------------------------|-----------------------------------------------------------|
| Want to teach yourself about IOCs and NOCs? | "Teach Yourself Oil" Companies and Markets <sup>[1]</sup> |
|---------------------------------------------|-----------------------------------------------------------|

|                                  |                                           |
|----------------------------------|-------------------------------------------|
| <b>Type</b>                      | Government-owned Corporation              |
| <b>Founded</b>                   | 1988                                      |
| <b>Headquarters</b>              | Beijing, PR China                         |
| <b>Key people</b>                | Jiang Jiemin (President)                  |
| <b>Revenue</b>                   | US \$352.33 billion (2011) <sup>[1]</sup> |
| <b>Net Income</b>                | US \$16.32 billion (2011) <sup>[1]</sup>  |
| <b>% change on previous year</b> | +13.6%                                    |
| <b>Total assets</b>              | US \$481.07 billion <sup>[1]</sup>        |
| <b>Total equity</b>              | US \$240.53 billion <sup>[1]</sup>        |
| <b>Employees</b>                 | 1,668,072 (2012) <sup>[1]</sup>           |
| <b>Website</b>                   | www.cnpc.com.cn <sup>[2]</sup>            |

## Global Snapshot

Government-owned CNPC is China's largest integrated oil and gas company, with exploration and production projects in China and 30 other countries. It is an oilfield services provider in 50 countries and operates some older refineries and a gas pipeline network in China (including 70% of the country's crude oil pipelines). The CNPC has a network of 18,000 gas stations across China. <sup>[3]</sup>

The organisation was established in 1998 and reorganised in 1998 to become an integrated company. <sup>[4]</sup> CNPC is the controlling shareholder of Petrochina Company Limited. <sup>[5]</sup> In 2009 the company completed more than 1,900 exploration wells and reported proved reserves of more than 1 billion metric tons of oil equivalent. <sup>[3]</sup>

In 2012 CNPC was ranked 6th on CNN's Global 500 list of the world's largest corporations. <sup>[1]</sup> CNPC's 2010 Annual Report notes that CNPC has been seeking a greater international role over the past five years. <sup>[6]</sup> According to the Fortune Global 500, part of CNPC's strength comes from its partnerships with governments of oil-rich countries and the multinational companies that operate there. In 2011 CNPC was working with Russia, Venezuela, Iraq and Qatar, and had partnered with oil majors BP, Total and Shell. <sup>[7]</sup>

## Company Report Highlights

CNPC's 2010 Annual Report <sup>[6]</sup> claims that the company's operating performance exceeded expectations in 2010, with operating income up 41% on the previous year's figures and total profit up 34.5%.

In its Exploration and Production activities, CNPC made significant strategic discoveries, contributing to sustained high growth in reserves. Natural gas operations maintained rapid growth, now accounting for 35.4% of domestic production in terms of oil equivalent.

CNPC's overseas business continued to grow in scale as a result of expanding cooperation with host countries and international oil companies, with important cooperation with Russia, Kazakhstan, Turkmenistan, Venezuela and Canada. The company acquired Australia's 'Arrow Energy' and established a presence in Qatar's hydrocarbon exploration in partnership with Shell. In Iraq, the CNPC was continuing its cooperation with BP, Total and Petronas.

Looking ahead to 2011, the first year of the 12th Five Year Plan, CNPC claims to feel positive. The company plans to adapt their development to changes at home and abroad, focusing on the oil and gas business but promoting technological innovation, strengthening safety procedures and environmental protection, and enhancing energy efficiency.

## **Official Accreditations and Global Perceptions**

### **EITI Supporter Status**

As of early 2012, CNPC was not a supporting company of EITI.

### **UN Global Compact**

As of early 2012, CNPC did not participate in the UN Global Compact.

### **CSR Review**

CNPC's CSR Activities are outlined in its 2010 Annual Report<sup>[6]</sup>, and include the following highlights:

- Energy saving and water efficiency measures saved 1.87 million tons of standard coal equivalent and 38.21 million cubic metres of water in 2010.
- During the 11th Five-Year Plan period, CNPC cumulatively saved 9.37 million tons of standard coal equivalent and 302 million cubic metres of water, and met their target one year ahead of schedule.
- In July 2010, CNPC was honoured with 'Outstanding Award for Energy Conservation and Emission Reduction' by the State-Owned Assets Supervision and Administration Commission of the State Council.

### **External Coverage**

- In November 2005 there was an explosion at a CNPC-operated chemical plant in China's Jilin province which forced the downstream city of Harbin to shut down the civilian water supply for five days. Not only the Songhua river but also Russia's Amur river. CNPC was threatened with large economic penalties and compensation for the pollution caused.<sup>[8]</sup>
- In July 2010 oil spilled into the sea at the Xingang port oil storage facility in north-east China, partly owned by CNPC, after the explosion of two crude pipelines, causing the port to be sealed.<sup>[9]</sup>

## Global Operations by Country

### Iraq

*Main article: CNPC Operations in Iraq*

### Libya

*Main article: CNPC Operations in Libya*

### Iran

*Main article: CNPC Operations in Iran*

### Niger

*Main article: CNPC Operations in Niger*

### Syria

*Main article: CNPC Operations in Syria*

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# ConocoPhillips

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|                                    |                                                          |
|------------------------------------|----------------------------------------------------------|
| <b>Type</b>                        | Public Limited Company                                   |
| <b>Traded As</b>                   | NYSE:COP <sup>[1]</sup>                                  |
| <b>Founded</b>                     | 1875 (Conoco Inc.) 2002 (merger with Phillips Petroleum) |
| <b>Headquarters</b>                | Houston, Texas                                           |
| <b>Key people</b>                  | James Mulva (Chairman and CEO)                           |
| <b>Products</b>                    | Oil, natural gas, petroleum, lubricant, petrochemicals.  |
| <b>Revenue</b>                     | US \$251.23 billion (2011) <sup>[2]</sup>                |
| <b>Net Income</b>                  | US \$12.44 billion (2011) <sup>[2]</sup>                 |
| <b>% change over previous year</b> | +9% <sup>[2]</sup>                                       |
| <b>Total assets</b>                | US \$153.23 billion (end 2011) <sup>[2]</sup>            |
| <b>Total equity</b>                | US \$65.73 billion (end 2011) <sup>[2]</sup>             |
| <b>Employees</b>                   | 29,800 (end 2011) <sup>[2]</sup>                         |
| <b>Website</b>                     | www.conocophillips.com <sup>[3]</sup>                    |

## Global Snapshot

According to Forbes, in 2012 ConocoPhillips was the 27th largest company in the world by market capitalisation.<sup>[4]</sup> The company's global production in 2011 averaged 1.62 million barrels of oil equivalent (boe) per day and had proven reserves of 8.4 billion boe at the end of 2011. As of 2012 they had operations in almost 30 countries.<sup>[5]</sup> Conoco has four core activities: petroleum exploration and production; natural gas gathering, processing and marketing (including a 50% interest in DCP Midstream); petroleum refining, marketing supply and transportation; and chemicals and plastics production and distribution (through a 50% interest in Chevron Phillips Chemicals Co).<sup>[6]</sup> Despite being formed following a merger with Phillips Petroleum company in 2002, Conoco can trace its beginnings back to 1875 in Utah when it was founded as the Continental Oil Company. Phillips Petroleum was founded 30 years later. When the two companies joined forces in 2002, they created the third largest energy company in the United States.<sup>[7]</sup>

In July 2011 ConocoPhillips announced that in 2012 it would separate its profitable upstream business from their lower margin downstream activities of refining and marketing. CEO Mulva claimed that 'the integrated structure is no longer creating the value it had done in the past' and argued that this would help to bring a sharper focus to managing both businesses.<sup>[8]</sup> By splitting in two, ConocoPhillips will become the US' largest pure Exploration and Production (E&P) firm, and will be more than twice the size of its nearest competitor, Occidental Petroleum.<sup>[9]</sup>

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## Company Report Highlights

According to ConocoPhillips' Annual Report for 2010<sup>[10]</sup>, as part of a multi-year plan to take decisive actions to create value, the company made the following progress:

The company realized \$15.4 billion in proceeds from asset divestments and continued to increase emphasis on Exploration and Production, to which 86% of capital program was dedicated, with 89% planned for 2011. The company also retired \$5.1 billion in debt over the year, leaving cash free for share repurchases and small, selective asset acquisitions.

To expand opportunities in North America, they added acreage in shale drilling, also expanded activities in Canadian oil sands and broadened their presence in the global liquefied natural gas (LNG) market through the startup of the Qatargas 3 project in 2010.

The financial results reported for the Second Quarter of 2011 revealed a fall in production of 5.5% to 1.64 million bpd, a result which was attributed to the halt in production caused by the war in Libya and to asset sales.<sup>[11]</sup>

## Official Accreditations and Global Perceptions

### EITI Supporter Status

ConocoPhillips is a supporter company of the EITI.

### UN Global Compact

ConocoPhillips is not a participant in the UN Global Compact

### CSR Review

ConocoPhillips' 2010 Annual Report and the official company website<sup>[12]</sup> highlight the following activities on the Corporate Social Responsibility front over recent years:

- Following the Gulf of Mexico oil spill in 2010, ConocoPhillips assisted in response efforts. In order to enhance the industry's ability to meet the highest standards, they joined with three other major energy companies to form the Marine Well Containment Company, which is designing and building equipment to supplement emergency response capabilities.
  - During 2010 the company broadened their matching gift program, inspiring increased contributions and greater volunteerism by ConocoPhillips employees and retirees.
  - At the Humber Refinery, a 120-acre woodland called Mayflower Wood was created, the largest project of its kind in the country. Since 2005, more than 67,000 trees and shrubs from a variety of native species were planted.
  - ConocoPhillips sponsors the St Andrews Prize for the Environment, an annual competition conducted in conjunction with the University of St Andrews in Scotland.
  - On an annual basis, employees are required to certify their personal compliance with the Company Ethics code. As a condition of employment, employees are also responsible for reporting suspected violations of ConocoPhillips policies or the law to the company.
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## External Coverage

- In 2003 ConocoPhillips was among the defendants in a lawsuit filed in the former Soviet republic of Georgia against the construction of the \$3 billion Baku-Tbilisi-Ceyhan pipeline. The lawsuit was brought by an environmental group which alleged that foreign oil companies pressured the environment minister into approving the pipeline without an adequate assessment of the environmental impact of the project.<sup>[13]</sup>
- ConocoPhillips was ranked 13th among U.S. corporate producers of air pollutions by the PERI (Political Economy Research Institute) and in 1998 were ranked as one of the worst polluters in the world.<sup>[14]</sup>
- In February 2010 Conoco, along with fellow oil major BP, pulled out of an influential lobbying group focused on shaping global warming policy. The US Climate Action Partnership had been instrumental in building support in Washington for capping emissions of greenhouse gases.<sup>[15]</sup>

## Global Operations by Country

### Libya

*Main article: ConocoPhillips Operations in Libya*

### Syria

*Main article: ConocoPhillips Operations in Syria*

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# ConocoPhillips Operations in Syria

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## History

In September 2011 ConocoPhillips, in partnership with the Syrian Petroleum Corporation and TotalFinaElf, completed a new integrated natural gas project known as 'Desgas' in the Deir Ez Zour region of Syria. In 1998 the parties signed a \$430 million service agreement for development of the project. The complex utilized previously-flared, 'associated' natural gas from the Deir Ez Zour oil fields, with Conoco as lead operator.

[http://www.mbendi.com/indy/oilg/gas\\_/as/sy/p0005.htm](http://www.mbendi.com/indy/oilg/gas_/as/sy/p0005.htm)

. ConocoPhillips announced in February 2004 that it intended to end its operations at Deir ez-Zour in the future.

## References

# Gulfsands Petroleum

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|                     |                                           |
|---------------------|-------------------------------------------|
| <b>Type</b>         | Public Limited Company                    |
| <b>Traded as</b>    | LSE: GPX <sup>[1]</sup>                   |
| <b>Founded</b>      | 1997 <sup>[2]</sup>                       |
| <b>Headquarters</b> | London (UK) <sup>[2]</sup>                |
| <b>Key People</b>   | Richard John Malcolm (CEO) <sup>[2]</sup> |
| <b>Products</b>     | Oil and gas exploration and production.   |
| <b>Employees</b>    | 43 (2011) <sup>[2]</sup>                  |
| <b>Website</b>      | www.gulfsands.com <sup>[3]</sup>          |

## Company Profile

London-based Gulfsands Petroleum is an independent oil and gas exploration and production company, listed on the London stock exchange. The Group's major focus is on the Middle East and North Africa, where it has exploration and development projects in Syria, oil exploration projects in Tunisia and some development activities in Iraq. Gulfsands also has a portfolio of properties in the USA, offshore in the Gulf of Mexico.<sup>[4]</sup>

Gulfsands moved its headquarters from Houston (US) to the UK in 2008 soon after acquiring its Syrian interests.<sup>[5]</sup>

## Official Accreditations and Global Perceptions

### EITI Supporter Status

As of March 2012, Gulfsands Petroleum was not a supporting company of the EITI.

### UN Global Compact

As of March 2012, Gulfsands Petroleum was a member of the UN Global Compact, having joined in September 2011.<sup>[6]</sup>

### External Coverage

Rami Makhoul is a first cousin of Syrian President Bashar al-Assad, who as of 2011 was estimated to control up to 60% of the country's economy. Gulfsands agreed to share profits from its Syrian operations with Ramak, a holding company owned by Makhoul's family. The UK's *Financial Times* reported that the company had paid more than \$1 million in fees to Ramak. Makhoul also controls the Al Mashreq Investment Fund, which owns a 5.7% stake in Gulfsands.<sup>[7]</sup>

According to figures released by Gulfsands, Ramak was hired to "provide advice and to assist in identifying, evaluating and pursuing E & P opportunities in Syria, including in connection with the successful public tender for Block 26".<sup>[8]</sup> In August 2011 Gulfsands announced it had suspended all payments to interests controlled by Rami Makhoul, following the imposition by the UK of "sanctions against certain individuals and organisations in Syria, including Mr Makhoul".<sup>[9]</sup>

## Global Operations by Country

### Syria

*Main article: Gulfsands Petroleum Operations in Syria*

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## Gulfsands Petroleum Operations in Syria

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### Activities

Gulfsands Petroleum has two producing fields within the same Production Sharing Contract (PSC) area at oil-rich Block 26 in the north-east of Syria, along the border with Iraq.

The Khurbet East field was discovered in June 2007 and commenced commercial production in July 2008.

The Yousefieh field was Gulfsands' second discovery and was brought on stream in April 2010.

The combined production of the Khurbet East and Yousefieh fields in 2011, prior to the imposition of sanctions, was over 24,000 barrels per day (bpd).<sup>[1]</sup>

### Impact of Uprising 2011

Calculations by London-based *Platform* suggest that as of 2011, Gulfsands was paying Assad's regime in Syria between \$4.5 million and \$8.4 million in revenue and oil each week, providing the regime with a "key capital lifeline" to finance attacks on Syrian citizens.<sup>[2]</sup>

In September 2011, Gulfsands Petroleum was instructed by the Syrian Oil Ministry to reduce production levels at its fields, due to the reduced availability of crude storage capacity in the country. Production levels fell between August and September from 24,100 bpd to 14,500 bpd, falling to only 6,000 bpd in October 2011.<sup>[1]</sup>

Gulfsands was one of the later international oil companies (IOCs) to withdraw from Syria in the face of an increasingly violent uprising in the country in 2011. Even when oil supermajors such as Shell postponed operations in Syria, Gulfsands continued drilling.<sup>[3]</sup>

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However in February 2012 the company decided to end its exploration activity, putting the decision down to a matter of "financial and operational prudence", considering the restrictions placed on obtaining technical services and supplies in Syria as a result of the sanctions.<sup>[4]</sup>

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# Marathon Oil Corporation

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|                                  |                                              |
|----------------------------------|----------------------------------------------|
| <b>Type</b>                      | Public Limited Company                       |
| <b>Traded as</b>                 | NYSE:MRO <sup>[1]</sup>                      |
| <b>Founded</b>                   | 1887                                         |
| <b>Headquarters</b>              | Houston, Texas                               |
| <b>Key people</b>                | Clarence P. Cazalot Jr (President and CEO)   |
| <b>Revenue</b>                   | US \$14.66 billion (2011) <sup>[2]</sup>     |
| <b>Net Income</b>                | US \$2.95 billion (2011) <sup>[2]</sup>      |
| <b>% change on previous year</b> | +14.7% <sup>[2]</sup>                        |
| <b>Total assets</b>              | US \$31.37 billion (end 2011) <sup>[2]</sup> |
| <b>Total equity</b>              | US \$17.16 billion (end 2011) <sup>[2]</sup> |
| <b>Employees</b>                 | 3,322 (end 2011) <sup>[2]</sup>              |
| <b>Website</b>                   | www.marathon.com <sup>[3]</sup>              |

## Global Snapshot

Marathon Oil Company is a Houston-based international energy company engaged in exploration and production, oil sands mining and integrated gas. Its worldwide production operations are focused in North America, Africa and Europe.<sup>[4]</sup>

The company's origins lie in the purchase of the Ohio Oil Company by John D. Rockefeller's Standard Oil Trust in 1889, but the company resumed independent production following its dissolution in 1911. The Ohio changed its name to the Marathon Oil Company in 1962 in honour of its brand name motor fuel. Having been bought out by United States Steel in 1982, the steel business was finally sold off in 2001.<sup>[5]</sup> In May of 2011, Marathon's Board approved the spin-off of its downstream business, Marathon Petroleum Corporation.<sup>[6]</sup>

At the end of 2011 Marathon had proven reserves of 1.8 billion barrels of oil equivalent (boe).<sup>[7]</sup> As of 2012 Marathon was developing strategic growth assets in US unconventional liquid-rich plays and deepwater Angola. Production in these assets was expected to grow at a 25% annual growth rate through until 2015, with liquids accounting for around 70% of the mix.<sup>[8]</sup>

## Company Report Highlights

Marathon's Annual Report for 2010<sup>[9]</sup> reveals that net income of \$2.6 billion was 76% higher than 2009 figures. In the Exploration and Production (E&P) segment, oil and natural gas sales were slightly down on 2009 results, partly due to disappointment at the Gulf of Mexico Droschky development. Net proven reserves for oil and gas producing activities fell slightly by 3.9% on 2009 levels to 1,638 million barrels of oil equivalent (boe).

Other highlights for the year included full operational capacity being reached at the expanded Garyville refinery in Louisiana and the launch of operations at the Athabasca Oil Sands Mining expansion. Over the course of 2010, Marathon also acquired four blocks in the Iraqi Kurdistan Region, where two exploration wells had been established. Largely because of low US natural gas prices, they reduced their current drilling for gas with a renewed focus on liquids.

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## Official Accreditations and Global Perceptions

### EITI Supporter Status

As of December 2011, Marathon was a supporter company of the EITI.

### UN Global Compact

As of December 2011, Marathon was not participating in the UN Global Compact.

### CSR Review

Marathon's 2010 Social Responsibility Report<sup>[10]</sup> highlights the following achievements made over the year:

- Marathon's business is rooted in 'Living Our Values', a philosophy encompassing longstanding commitments to health and safety, environmental stewardship, honesty and integrity, corporate citizenship and a high performance team culture.
- Ethics training includes mandatory computer-based training (CBT) in the first 60 days of employment and biannual thereafter. Marathon achieved 100% participation in required ethics training in 2010, reaching more than 7,300 employees.
- Marathon's comprehensive annual anti-corruption compliance audit program covers operations and outside-operated interests in countries that are not in the Organisation for Economic Co-operation and Development (OECD).
- The company decreased greenhouse gas emissions intensity for the second consecutive year, with 2010 intensity 8% below 2008 levels.
- The overall number of spills increased approximately 14% in 2010, but the total volume decreased 58% compared to 2009. The company claims to investigate spills to identify their causes and take incident-specific corrective actions to prevent recurrence.
- Marathon's major strategic social responsibility project continued to be the Bioko Island Malaria Control Project in Equatorial Guinea.

### External Coverage

- In 2006 the US Environmental Protection Agency (EPA) announced that Marathon had agreed to pay nearly \$38,000 for alleged PCB (polychlorinated biphenyls) violations at its facility at the Spark oil platform off the coast of Alaska. Marathon's activities violated the federal Toxic Substance Control Act (TSCA) by failing to properly register and store two PCB transformers for disposal and reuse.<sup>[11]</sup>
- According to lobbying disclosure forms, in the first quarter of 2011 Marathon spent \$1.08 million on lobbying on a number of foreign policy issues, including "investment by Marathon Oil Corporation in developing energy resources in Equatorial Guinea" and "Equatorial Guinea – U.S. Engagement." In 2010 they spent over \$5 million lobbying on similar foreign policy concerns.<sup>[12]</sup>

## Global Operations by Country

### Iraq

*Main article: Marathon Operations in Iraq*

### Libya

*Main article: Marathon Operations in Libya*

### Syria

*Main article: Marathon Operations in Syria*

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# OMV

|                                  |                                                                   |
|----------------------------------|-------------------------------------------------------------------|
| <b>Type</b>                      | Public Limited Company                                            |
| <b>Traded as</b>                 | WBAG:OMV <sup>[1]</sup>                                           |
| <b>Founded</b>                   | 1956                                                              |
| <b>Headquarters</b>              | Vienna, Austria                                                   |
| <b>Key people</b>                | Gerhard Roiss (CEO)                                               |
| <b>Revenue</b>                   | €35.05 billion (approx. US \$46.54 billion), 2011. <sup>[2]</sup> |
| <b>Net Income</b>                | €1.57 billion (approx. US \$2.08 billion), 2011. <sup>[2]</sup>   |
| <b>% change on previous year</b> | +30%                                                              |
| <b>Total assets</b>              | €28.41 billion (approx. US \$37.72 billion), 2011. <sup>[2]</sup> |
| <b>Total equity</b>              | €13.48 billion (approx. US \$ 17.9 billion), 2011. <sup>[2]</sup> |
| <b>Employees</b>                 | 29,800 (end 2011) <sup>[2]</sup>                                  |
| <b>Website</b>                   | www.omv.com <sup>[3]</sup>                                        |

## Global Snapshot

OMV is one of Austria's largest listed industrial companies.<sup>[4]</sup> Headquartered in Vienna, Austria, it operates in three segments: Exploration and Production (E&P), Refining and Marketing (R&M), and Gas and Power (G&P). The E&P segment engages in the exploration, development and production of oil and gas resources primarily in Romania and Austria, North Africa, the Middle East and the Caspian region. The R&M segment operates the refineries that process oil and gas into petroleum products in Schwechat, Austria; Burghausen, Germany; and Petrobrazi and Arpechim, Romania.<sup>[5]</sup>

Among the acquisitions made by OMV during the 2000s were the acquisition of 25.1% of the Rompetrol Group in 2002 (sold in 2005), the acquisition of a 51 percent stake in the Romanian oil and gas group Petrom in 2004, an 100 percent stake in Borealis, and a 34 percent stake in Turkish oil and gas group Petrol Ofisi.<sup>[6]</sup> In 2008, an attempted hostile takeover of Hungarian oil and gas company MOL by OMV was thwarted and the merger notification withdrawn after the European Commission said it would not accept conditions for the deal proposed by OMV.<sup>[7]</sup> In 2009, OMV went on to sell its remaining stake in MOL to Russian oil producer Surgutneftegaz.<sup>[8]</sup>

During the course of 2010, OMV strengthened its position by increasing its stake in Turkish Petrol Ofisi to 97%. This acquisition is a step in OMV's growth strategy aimed as positioning Turkey as a third hub, besides Austria and Romania. From the company's perspective, Turkey is of strategic importance as it gives access to the resource-rich Caspian basin and Middle East.<sup>[9]</sup> Additionally, OMV were driving the Nabucco gas pipeline project, aimed to increase Europe's security of supply.<sup>[10]</sup>

In 2011 OMV's oil and gas production stood at 288,000 barrels of oil equivalent (boe) per day, with an oil/gas mix of roughly 50/50. Proven reserves were around 1.13 billion boe at year-end. A significant part of production comes from the core countries Romania (about 60%) and Austria (about 13%), with the remainder coming from the international portfolio.<sup>[11]</sup>

## Company Report Highlights

OMV's Annual report for 2010<sup>[12]</sup> reveals that net income in 2010 rose by 61% to €921 million compared to 2009 levels. The company's gearing ratio rose to 46% due to the acquisition of Petrol Ofisi. In Exploration and Production, OMV's proven reserves fell in 2010 by 2.9% to 1153 million boe.

Strategically, OMV claims it is playing an active role in shaping the energy industries of the European growth belt, and that one of their growth thrusts is a regional focus on the South East European and Turkish regions. A major initiative of 2010 was the connection of the Caspian Region and Middle East with Europe and the interlink of OMV markets with the Nabucco pipeline achievement.

OMV's interim financial statements for the Second Quarter of 2011 demonstrate that political turmoil in North Africa and the Middle East adversely impacted results. Clean CCS EBIT (Earnings Before Interest and Tax) decreased by 25% to €468 million, burdened by the loss of production in Libya and Yemen, high exploration expenses and lower refining margins.<sup>[13]</sup>

## Transparency

### EITI Supporter Status

OMV is not a supporter company of the EITI. However, the company states on its website that in the interests of transparency they decide on a country by country basis as to whether they participate in the EITI, based on whether the host government is a member of EITI and fully supports the initiative; whether OMV behaviour is in compliance with national legislation; and whether this form of transparency applies to all active oil and gas companies in the country concerned.<sup>[14]</sup>

### UN Global Compact

OMV has been a participant in the UN Global Compact since 2003.<sup>[15]</sup>

### CSR Review

OMV's Sustainability Review for 2010<sup>[16]</sup> highlights the following achievements:

- The company was placed first among 27 international listed oil and gas companies in a rating of social and environmental responsibility.
  - From 2010 onwards, a percentage of the non-result related variable compensation (bonuses) was to be awarded for achieving sustainability targets.
  - Over 228,000 hours of Health, Safety, Security and Environment (HSSE) training were held (2009:188,000), more than two-thirds of them in Romania.
  - In 2010, OMV faced one blowout of a well in Romania. There were no injuries and no risk to neighbours because of this incident.
  - The Group recorded a total of eight significant hydrocarbon spills (>1,000 liters) and 2,239 minor releases during the year (2009: 21 and 2,650 respectively).
  - The Group's carbon strategy, launched in 2008, aims at reducing greenhouse gas emissions and de-carbonizing of the product portfolio. According to the annual progress evaluation, OMV is well on track.
-

## External Coverage

- When OMV went sold its remaining stake in MOL in 2009 to Russian oil producer Surgutneftegaz the move attracted criticism from some MOL representatives, due to suspicions that OMV had been little more than a front for the Russian group after the 21% stake was bought at twice MOL's trading price on the Budapest bourse on the previous Friday.<sup>[17]</sup>

## Global Operations by Country

### Libya

*Main article: OMV Operations in Libya*

### Iran

*Main article: OMV Operations in Iran*

### Syria

*Main article: OMV Operations in Syria*

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# ONGC Videsh

|                                             |                                                           |
|---------------------------------------------|-----------------------------------------------------------|
| Want to teach yourself about IOCs and NOCs? | "Teach Yourself Oil" Companies and Markets <sup>[1]</sup> |
|---------------------------------------------|-----------------------------------------------------------|

|                     |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|
| <b>Type</b>         | Government-owned Corporation                                                        |
| <b>Founded</b>      | 1965                                                                                |
| <b>Headquarters</b> | New Delhi, India                                                                    |
| <b>Key people</b>   | A.K. Hazarika (Chairman)                                                            |
| <b>Products</b>     | Oil and natural gas exploration, development, production, transportation and export |
| <b>Revenue</b>      | 186.8 billion Indian rupees (US \$3.37 billion) (2011)                              |
| <b>Net income</b>   | 26.9 billion Indian rupees (US \$485.1 million) (2011)                              |
| <b>Net equity</b>   | US \$2.62 billion (2011)                                                            |
| <b>Employees</b>    | 233 (2011) <sup>[1]</sup>                                                           |
| <b>Website</b>      | www.ongcindia.com <sup>[2]</sup>                                                    |

## Overview

### Current Global Profile

ONGC Videsh Limited (OVL) is a wholly-owned subsidiary of the Oil and Natural Gas Corporation Limited (ONGC), the flagship national oil company of India <sup>[3]</sup> and the #3 company in India by market capitalization, according to MoneyControl.com in July 2012. <sup>[4]</sup>

OVL was rechristened on 15 June 1989 from the erstwhile Hydrocarbons India Private Limited, which was incorporated on 5 March 1965. The primary business of OVL is to prospect for oil and gas acreages abroad, including acquisition of oil and gas fields, exploration, development, production, transportation and export of oil and gas. OVL has grown to become the second-largest exploration and production (E&P) company in India both in terms of oil production and oil and gas reserve holdings. <sup>[3]</sup>

According to the company's 2010-2011 Annual Report, OVL has participation either directly or through wholly owned subsidiaries/joint venture company in 33 E&P projects in 14 countries namely Vietnam (2 projects), Russia (2 projects), Sudan (3 projects), Iran (1 project), Iraq (1 project), Libya (1 project), Myanmar (2 projects), Syria (2 projects), Cuba (2 projects), Brazil (6 projects), Nigeria (2 projects), Colombia (6 projects), Venezuela (2 projects) and Kazakhstan (1 project) and is actively seeking more opportunities across the world. Out of 33 projects, OVL is operator in 11 projects and joint operator in 6 projects. <sup>[1]</sup>

## Company Report Highlights

OVL's 2010-2011 Annual Report notes that the the company's consolidated production of Oil plus Oil-Equivalent Gas (O+OEG) increased from 8.870 MTOE in 2009-10 to 9.448 MMT in 2010-11, registering growth of about 6.5%, and marking OVL's highest ever oil and gas production from its overseas assets.<sup>[1]</sup>

The company's proved reserves as of 1st April 2011 stood at 202.908 MTOE (O+OEG), which next to ONGC, was the second largest holding of proved oil and gas reserves by any Indian Company, and its consolidated gross revenue was up by 21% from 2009-10 to 2010-11, with consolidated net profit up by 29% over the same period.<sup>[1]</sup>

OVL's consolidated networth was 145,530 million Indian rupees as of 31 March 2011, compared to 116,449 million Indian rupees in 2010.<sup>[1]</sup>

## Global Snapshot

### EITI

As of early 2012, OVL was not a supporting company of EITI.<sup>[5]</sup>

### UN Global Compact

As of mid 2012, OVL participated in the UN Global Compact through its parent company ONGC; however, despite OVL's investment in many of the most troubled regions in the world, ONGC reports on its human rights activities within India only.<sup>[6]</sup>

### CSR Review

OVL's corporate social responsibility (CSR) activities are outlined in its 2010-2011 Annual Report<sup>[1]</sup>, and include the following highlights:

- The company provided scholarships to four Sudanese students for pursuing course in management and engineering courses
- Contributed US \$100,000 to the Venezuelan government as a mark of solidarity and help to the people of Venezuela to recover from heavy rains
- Contributed US \$2 million for sponsorship of South Sudan Special projects to create an amicable business atmosphere in South Sudan to pursue its business plans and strategies in the future

OVL has framed a CSR Policy for achieving the CSR objectives in all its overseas projects/assets: the 2010-2011 annual report stated that a budget of 0.5% of the previous year's Profit After Tax (PAT) or target as per MOU with ONGC - whichever is higher - would be allocated towards CSR every year from financial year 2011-12 onwards. This budget allocation would be non-lapsable.<sup>[7]</sup>

### External Coverage

- In addition to its abstention from EITI, ONGC has not endorsed industry standards such as the Voluntary Principles on Security & Human Rights, which would oblige the company to respect human rights with regards to the security of their personnel and facilities.<sup>[6]</sup>
- ONGC Videsh is an investor in a gas project in Myanmar where there are well-founded fears, according to Human Rights Watch, that a proposed pipeline will fuel serious human rights abuses.<sup>[6]</sup>
- Egbert G.Ch. Wesselink, Coordinator of the European Coalition on Oil in Sudan (ECOS), told *Project Monitor* in September 2004 that "ONGC Videsh is in business in Sudan because of the war", saying that OVL's takeover of Austrian company OMV's Sudanese assets, the site of widespread human rights abuses, came "at a big war discount". He added that there was "a lot of resentment in Sudan against ONGC Videsh and its business

partners."<sup>[8]</sup>

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# PetroCanada/Suncor

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|                                  |                                                                        |
|----------------------------------|------------------------------------------------------------------------|
| <b>Type</b>                      | Public Limited Company                                                 |
| <b>Traded as</b>                 | TMX:SU <sup>[1]</sup> NYSE:SU <sup>[2]</sup>                           |
| <b>Founded</b>                   | 1919                                                                   |
| <b>Headquarters</b>              | Calgary, Alberta                                                       |
| <b>Key people</b>                | John T. Ferguson (Chairman of the Board), Richard L. George (CEO)      |
| <b>Revenue</b>                   | CAD \$39.33 billion (approx. US \$39.88 billion), 2011. <sup>[3]</sup> |
| <b>Net Income</b>                | CAD \$4.3 billion (approx. US \$4.36 billion), 2011. <sup>[3]</sup>    |
| <b>% change on previous year</b> | +12.4%                                                                 |
| <b>Total assets</b>              | CAD \$74.78 billion (approx. US\$75.83 billion), 2011. <sup>[3]</sup>  |
| <b>Employees</b>                 | 13,026 (end 2011) <sup>[3]</sup>                                       |
| <b>Website</b>                   | www.suncor.com <sup>[4]</sup>                                          |

## Global Snapshot

Suncor Energy became Canada's largest oil company and "flagship Canadian corporation", as described by Suncor's president and CEO Rick George, following a merger with Petro-Canada in 2009. As a result of the arrangement, Petro-Canada investors would receive a 40 percent share of the entity and Suncor shareholders would own the remaining 60 percent of the new firm. Management hoped that as a result of the move, the combination would become a more efficient player and would insulate both from potential foreign takeovers.<sup>[5]</sup>

Suncor has had a track record as an oil sands pioneer since the 1960s, when the Great Canadian Oil Sands project was established in Fort McMurray.<sup>[6]</sup> The company is one of Canada's largest oil sands producers, and Suncor was pumping out 228,000 barrels of oil per day (bpd) from properties in Alberta in 2009.<sup>[7]</sup>

Oil sands aside Suncor Energy, together with its subsidiaries, is involved in the acquisition, exploration, development, production and marketing of crude oil and natural gas in Canada and internationally; transportation and refining of crude oil; and marketing of petroleum and petrochemical products, primarily in Canada. The company's international and offshore segment is active in offshore Newfoundland and Labrador, in the North Sea, as well as in Libya and Syria.<sup>[8]</sup>

## Company Report Highlights

Suncor Energy's Annual Report for 2010 reported that net income for 2010 had risen an impressive 211% on 2009 figures, reaching a level of \$3.571 billion CAD and surpassing results for the previous four years. Production figures for oil sands 2009-2010 remained steady, however the production level for Natural Gas/International and Offshore operations saw a rise of 98.86% to 296.9 thousand barrels of oil equivalent (boe) per day.

2010 marked a pivotal year for Suncor, in that the successful merger with Petro-Canada was implemented and the companies began to realize the resulting synergies and savings. The company also launched a new decade-long growth plan, expected to boost total production to more than 1 million boe per day by 2020.<sup>[9]</sup>

The Second Quarter results released for 2011 revealed that the Exploration and Production business segment contributed 182,700 boe per day of production over this period, compared to 299,500 boe per day over the same period of 2010. This decrease primarily reflected the divestiture of non-core assets, the shut-in of production in

Libya and operational issues at Terra Nova and Buzzard. This did not appear to impact significantly on the bottom line however, as Second Quarter net earnings were \$562 million CAD, compared to \$540 million CAD in the Second Quarter of 2010.<sup>[10]</sup>

## Global Snapshot

### EITI Supporter Status

Suncor is not a supporter company of the EITI. The company commented, as part of a Sustainability Assessment, that 'Suncor supports public accountability by governments and the transparency of revenues as a means to promoting political and economic stability in the regions in which we operate. We acknowledge the work that the Extractive Industries Transparency Initiative does in this regard and, while we have not formally endorsed the initiative, if requested, we will support host countries seeking to implement greater transparency'.<sup>[11]</sup>

### UN Global Compact

Suncor Energy has been a participant in the UN Global Compact since 2001.<sup>[12]</sup>

### CSR Review

Suncor's Sustainability Report claims that the company continues to remain true to their long-standing vision of a 'triple bottom line' ie. the management of the business in ways that enhance social and economic benefits, while striving the minimize the environmental impacts associated with energy development. Suncor's Report on Sustainability 2011<sup>[13]</sup> highlights the following milestones:

- The frequency of employee lost time injuries and recordable injuries continued to decline as employees and contractors embraced their Journey to Zero safety culture.
- Suncor continued to implement a new tailings management approach that is expected to dramatically accelerate the reclamation of tailings ponds and mined lands and reduce the need for future tailings ponds. They also became the first oil sands company to achieve surface reclamation of a decommissioned tailings pond.
- Suncor achieved a greenhouse gas (GHG) emissions intensity reduction at its Refining and Marketing operations. They also continued to actively participate in public policy and stakeholder discussions on energy and the environment, in particular advancing proposals for a national energy strategy for Canada.
- Suncor continued to invest in the regions where they operate by supporting community, educational and environmental programs as well as the charitable giving and volunteer efforts of employees and retirees. Many programs were aimed at advancing opportunities for aboriginal peoples through education, training and cultural awareness initiatives.
- As part of the Oil Sands Leadership Initiative (OSLI), Suncor worked closely with four like-minded companies to make tangible improvements to environmental, social and economic performance in the oil sands industry. In 2010, OSLI investigated new technologies to improve industry-wide reuse of tailings wastewater and to make oil recovery more energy-efficient.

## External Coverage

- In 2009 Suncor was fined a combined \$850,000 in two separate environmental cases. The first penalty was \$675,000 for failing to install pollution control equipment at its Firebag facility near Fort McMurray and failing to tell Alberta Environment about it. The company was also fined \$175,000 in connection with the dumping of undertreated wastewater from a company-owned work camp near Fort McMurray into the Athabasca River.<sup>[14]</sup>

## Global Operations by Country

### Libya

*Main article: PetroCanada/Suncor Operations in Libya*

### Syria

*Main article: PetroCanada/Suncor Operations in Syria*

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# Shell

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|                                    |                                                  |
|------------------------------------|--------------------------------------------------|
| <b>Type</b>                        | Public Limited Company                           |
| <b>Traded as</b>                   | LSE:RDSA <sup>[1]</sup> NYSE:RDSA <sup>[2]</sup> |
| <b>Founded</b>                     | 1907                                             |
| <b>Headquarters</b>                | The Hague (Netherlands), London (UK)             |
| <b>Key People</b>                  | Peter Voser (CEO), Jorma Ollila (Chairman)       |
| <b>Revenue</b>                     | US \$484.49 billion (2011) <sup>[3]</sup>        |
| <b>Net Income</b>                  | US \$31.19 billion (2011) <sup>[3]</sup>         |
| <b>% change over previous year</b> | +52.3% <sup>[3]</sup>                            |
| <b>Total Assets</b>                | US \$345.26 billion (end 2011) <sup>[3]</sup>    |
| <b>Total Equity</b>                | US \$171 billion (end 2011) <sup>[3]</sup>       |
| <b>Employees</b>                   | 90,000 (end 2011) <sup>[3]</sup>                 |
| <b>Website</b>                     | www.shell.com <sup>[4]</sup>                     |

## Global Snapshot

Anglo-Dutch company Shell was ranked in first place on the 2012 Global Fortune 500 list of the world's most valuable companies.<sup>[5]</sup> It engages worldwide in the upstream, downstream and corporate segments, and also has interests in chemicals and other energy-related businesses.<sup>[6]</sup> In 2012 Shell was also ranked as the 7th largest oil company worldwide by production, with average daily production of 3.9 billion barrels of oil equivalent (boe) per day.<sup>[7]</sup>

The company name "Shell" and the corporate logo were decided upon due to founder Marcus Samuel's background in importing and exporting oriental shells. He and his brother renamed their oil transport company the Shell Transport and Trading Company in 1897. Royal Dutch was a company formed to develop oil fields in the Dutch East Indies and the two companies joined forces in order to protect themselves against competitor Standard Oil. The full merger of the two companies came in 1907.<sup>[8]</sup>

According to CNN, as access to oil gets tighter Shell is looking to develop its alternative energy assets and in 2010 signed an agreement with a Brazilian biofuel company called Cosan that makes ethanol from sugarcane. In 2011 Shell was also developing technology to build the first floating, liquefied natural gas (LNG) plant, which would give the company an edge over competition when it comes to accessing fuel in deep water. This will be particularly critical as Shell has signed off on new drilling projects in the Gulf of Mexico and off the coast of Brazil.<sup>[9]</sup>

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## Company Report Highlights

According to Shell's 2010 Annual Review<sup>[10]</sup>, 2010 was a 'good year for Shell', in which new business opportunities were generated for further growth over the 2014-20 period.

Earning for the year were at \$20.5 billion, a 61% rise on 2009 figures, and earnings per share rose by 90%. Oil and gas production volumes increased by 5% and sales volumes of liquefied natural gas (LNG) were up by 25%. Sales volumes of oil products and chemical products also grew by 5% and 13% respectively.

The company brought six key projects on-stream over 2010. In Nigeria, the Gbaran-Ubie project started producing oil and gas and production started at the Perdido offshore platform in the Gulf of Mexico. The company also saw the first output increases from the expansion of the Athabasca Oil Sands project in Canada.

Downstream, the business was restructured and many refining and marketing assets were sold in Finland, Sweden, New Zealand and other locations. These divestments are aimed to allow the company to focus on its commercial strengths in large markets and markets with growth potential.

## Official Accreditations and Global Perceptions

### EITI Supporter Status

As of December 2011, Shell was a supporting company of the EITI

### UN Global Compact

As of December 2011, Shell was a member of the UN Global Compact, having joined in July 2000.

### CSR Review

- According to company documents, Royal Dutch Shell's CSR activities include the Shell Foundation, which was established by the Shell Group in 2000 as an independent, UK registered charity operating with a global mandate. They received an initial \$250 million endowment from the Shell Group and an additional 10 year commitment of \$160 million.<sup>[11]</sup> and was set up after Shell was associated in public opinion with two damaging rows in the mid-1990s - the disposal of the Brent Spar oil rig and the execution of the poet and anti-oil activist Ken Saro-Wiwa in Nigeria.<sup>[12]</sup>
- Another initiative from Shell is LiveWIRE, a social investment programme that aims to help young people around the world explore the option of starting their own business as a real and viable career option, launched in 1982 and now working in 21 countries worldwide.<sup>[13]</sup>

### External Coverage

- In 2004 Shell was fined £17 million by the UK's Financial Services Authority (FSA) and chairman Philip Watts was ousted after the company was found to have overstated its oil reserves. In 2009 an Amsterdam court of appeal cleared the way for approximately US \$352.6 million in compensation to be paid out to non-US shareholders over the affair.<sup>[14]</sup>
- In 2008 the British Advertising Standards Authority (ASA) decided that Shell should not have used the word "sustainable" for its controversial tar sands project and a refinery scheme, ruling that one of the company's adverts breached rules on substantiation, truthfulness and environmental claims.<sup>[15]</sup>
- Industry watchdog Platform accused Shell in 2011 of funding armed gangs and fuelling human rights abuses in Nigeria, allegations which the company denied. The organisation stated that while primary responsibility for such violations falls on the Nigerian government and others, Shell has played an "active role in fuelling conflict and violence", regularly arming militias and transferring over \$159,000 to a group credibly linked to militia

violence.<sup>[16]</sup>

- A 2011 report by the United Nations Environmental Programme (UNEP) criticized Shell for contributing to 50 years of pollution in the oil-rich Ogoni region in the Niger Delta, stating that it calls for the world's largest ever oil clean-up and that it would cost an initial \$1 billion and take up to 20 years.<sup>[17]</sup>
- In 2012 Shell's subsidiary in Nigeria was ordered by a Nigerian court to pay over \$25 million to five communities in Imo state for a 1997 oil spill.<sup>[18]</sup>

## Global Operations by Country

### Iraq

*Main article: Shell Operations in Iraq*

### Iran

*Main article: Shell Operations in Iran*

### Libya

*Main article: Shell Operations in Libya*

### Syria

*Main article: Shell Operations in Syria*

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# Shell Operations in Syria

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## History

Shell has a long history in Syria and has had a presence in the country since the 1940s. They have been operating since 1985 through the Al Furat Petroleum Company (AFPC).<sup>[1]</sup>

As of 2011, Shell held a 37.5% stake in the AFPC, in partnership with the Syrian General Petroleum Corporation (GPC), Himalaya Energy Syria and a consortium of CNPC and India's ONGC. In September 2008, Shell extended its three Production Sharing Agreements (PSAs) with the Syrian government for a further ten years.<sup>[2]</sup>

## Activities

As of 2011 Shell was only active in the upstream segment of the Syrian oil sector. The company's two subsidiaries in upstream Syria are 'Syria Shell Petroleum Development' (SSPD) and 'Shell South Syria Exploration' (SSE)

The SSPD is the major vehicle for operations and has interests ranging from 62.5% to 66.67% in three production licenses in Syria, at Deir Ez Zor, Fourth Annex and Ash Sham. All three contracts were signed with the Syrian government and the Syrian General Petroleum Corporation (GPC).

In 2010 the SSPD produced 7.3 million barrels of oil equivalent (boe), compared to 14.2 million boe in 2005. In 2009 Shell's operations accounted for 5.9% of Syria's total oil production, down from 8% in 2005.

The SSE is a 100% owned Shell subsidiary registered in Bermuda and has exploration interests in two production-sharing contracts for blocks in the south of Syria.<sup>[1]</sup>

The 'Pecten-Syria Petroleum Company', a wholly owned subsidiary of Shell, is also a major investor in Syria. Pecten has invested heavily in oil exploration and has developed the Thayyem fields in eastern Syria.<sup>[3]</sup> Pecten holds a 15.625% in the AFPC, alongside the Syrian Petroleum Company (SPC), Royal Dutch Shell and Deminex. Shell is the operator of the venture.<sup>[4]</sup>

## Impact of Uprising 2011

On 2 December 2011 Royal Dutch Shell announced that they would cease activities in Syria after the EU blacklisted three state-owned oil companies, including the GPC.<sup>[5]</sup>

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# Sinopec

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|                     |                                      |
|---------------------|--------------------------------------|
| <b>Type</b>         | Public Limited Company               |
| <b>Traded as</b>    | HKEX: 386 <sup>[1]</sup>             |
| <b>Founded</b>      | 2000 <sup>[2]</sup>                  |
| <b>Headquarters</b> | China <sup>[2]</sup>                 |
| <b>Key People</b>   | Shulin Su (CEO, 2011) <sup>[2]</sup> |
| <b>Products</b>     | Oil and gas exploration.             |
| <b>Employees</b>    | 373,375 (2011) <sup>[2]</sup>        |
| <b>Website</b>      | www.sinopec.com <sup>[3]</sup>       |

## Company Profile

China Petroleum & Chemical Corporation (Sinopec) is a China-based energy and chemicals company. Its oil and gas operations consist of exploring for, developing and producing crude oil and natural gas, transportation, refining of crude oil into finished petroleum products, and marketing of these products. Chemical operations include the manufacturing and marketing of a range of chemicals for industrial uses. (Forbes)

### South Africa refinery plans

Sinopec and PetroSA, South Africa's national oil company, signed a memorandum of understanding in September 2011 to build a refinery through a plan called Project Mthombo. PetroSA first announced plans to build the refinery in 2008, but struggled to find sufficient funding until it teamed up with Sinopec. PetroSA said in 2008 that it expects the refinery in the Coega Industrial Development Zone to process 400,000 barrels of oil a day and cost between \$9 billion and \$10 billion to build. The final cost and capacity will be determined by a study to be undertaken by Sinopec Engineering, which will take as many as 18 months to complete, according to the *Wall Street Journal*. The refinery is scheduled to be commissioned between 2018 and 2020.<sup>[4]</sup>

## Official Accreditations and Global Perceptions

### EITI

As of March 2012, Sinopec was not a supporting company of the EITI.<sup>[5]</sup>

### UN Global Compact

Sinopec began its participation in the UN Global Compact in 2004.<sup>[6]</sup>

In addition, at a November 2011 meeting in Beijing, Sinopec Chairman Fun Chengyu agreed to serve as the inaugural chairman of the Global Compact China Network Board, which aims to promote the ten Global Compact principles among Chinese companies, mobilize more to join the initiative and to make important contributions to sustainable development.<sup>[7]</sup>

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## Global Operations by Country

### Syria

*Main article: Sinopec Operations in Syria*

### References

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- [2] Sinopec-China Petroleum (<http://www.forbes.com/companies/sinopec-china-petrol/>)" *Forbes*, retrieved 12 March 2011
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- [4] " Sinopec Joins Effort to Build South Africa Refinery (<http://online.wsj.com/article/SB10001424052702304019404577418031143011346.html>)" *The Wall Street Journal*, 21 May 2012.
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## Sinopec Operations in Syria

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*This article about Sinopec Operations in Syria is a stub. You can help to improve the wiki guide by expanding it.*

As of December 2008 Tanganyika Oil Company Limited operates as a subsidiary of Sinopec International in Syria. The company owns interests in the Oudeh block, with 59 wells, and Tishrine and Sheikh Mansour fields with 72 wells.<sup>[1]</sup>

The Sinopec Group agreed to buy Tanganyika Oil, a small producer of heavy oil in Syria, for \$2 billion in 2008.<sup>[2]</sup>

### References

- [1] " Tanganyika Oil Company (<http://investing.businessweek.com/research/stocks/private/snapshot.asp?privcapId=876467>)" *Bloomberg*, retrieved 13 March 2012.
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# Tatneft

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|                     |                                                     |
|---------------------|-----------------------------------------------------|
| <b>Type</b>         | Public Limited Company                              |
| <b>Traded as</b>    | MICEX: TATN <sup>[1]</sup>                          |
| <b>Founded</b>      | 1950 <sup>[2]</sup>                                 |
| <b>Headquarters</b> | Almetyevsk (Russia) <sup>[2]</sup>                  |
| <b>Products</b>     | Oil and gas exploration, refining and oil services. |
| <b>Website</b>      | www.tatneft.ru <sup>[3]</sup>                       |

## Current Global Profile

Tatneft is Russia's sixth-biggest crude oil producer.<sup>[4]</sup> Through its subsidiaries, engages in the exploration and production of crude oil. The bulk of its operations are in the Republic of Tatarstan in the Russian Federation, however the company also has projects in the Middle East, in Libya and Syria.

Upstream, the company had 840 million tons of proved crude oil and condensate reserves as of January 2011. Midstream, Tatneft refines and markets crude oil and refined products and manufactures and sells tyres. Downstream, it sells final energy products through its filling stations in Russia and the Ukraine. In addition the company also offers oilfield services such as pipeline and transport services, field studies, well workover and enhance oil recovery services.

Tatneft is listed on the Moscow Interbank Currency Exchange (MICEX).<sup>[2]</sup>

## Global Snapshot

### Transparency

#### EITI

As of March 2012, Tatneft was not a supporting company of the EITI.

#### UN Global Compact

As of March 2012, Tatneft was not a participant in the UN Global Compact.

## Global Operations by Country

### Iran

*Main article: Tatneft Operations in Iran*

### Syria

*Main article: Tatneft Operations in Syria*

## References

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[2] Tatneft-Clis (<http://investing.businessweek.com/research/stocks/snapshot/snapshot.asp?ticker=TATN3:RM>)" *Bloomberg*, retrieved 14 March 2011

[3] <http://www.tatneft.ru/>

[4] Tatneft halts oil production in Syria after Damascus blasts (<http://en.rian.ru/world/20111223/170448818.html>)" *RIA Novosti*, 23 December 2011

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# Tatneft Operations in Syria

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## History

Tatneft became the first Russian oil company to begin geological exploration and production in Syria after winning a tender and concluding a production sharing agreements (PSA) with the Syrian government in 2003.<sup>[1]</sup>

## Activities

Tatneft and Syria's General Petroleum Company (GPC) established a joint venture (JV) named Al Bu Kamal Petroleum Company, which began oil production at the South Kishma field in spring 2010.<sup>[1]</sup>

In January 2011 the company vowed to spend US \$12.8 million drilling wells in Syria near the Iraqi border.<sup>[2]</sup>

## Impact of 2011-12 Unrest

In December 2011 Tatneft suspended its work in Syria due to two powerful bomb blasts in Damascus.<sup>[1]</sup>

## References

[1] "Tatneft halts oil production in Syria after Damascus blasts (<http://en.rian.ru/world/20111223/170448818.html>)" *RIA Novosti*, 23 December 2011.

[2] "Why Russia is backing Syria (<http://www.guardian.co.uk/commentisfree/2011/dec/02/russia-syria-civil-war-dagestan>)" *Guardian*, 2 December 2011.

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# Total

|                                  |                                                                         |
|----------------------------------|-------------------------------------------------------------------------|
| <b>Type</b>                      | Public Limited Company                                                  |
| <b>Traded as</b>                 | Euronext:FP <sup>[1]</sup> NYSE:TOT <sup>[2]</sup>                      |
| <b>Founded</b>                   | 1924                                                                    |
| <b>Headquarters</b>              | Courbevoie, France                                                      |
| <b>Key people</b>                | Christophe De Margerie (CEO), Thierry Desmarest (Chairman)              |
| <b>Revenue</b>                   | €166.55 billion (approx. US \$220.51 billion), 2011. <sup>[3]</sup>     |
| <b>Net Income</b>                | €12.28 billion (approx. US \$16.26 billion), 2011. <sup>[3]</sup>       |
| <b>% change on previous year</b> | +16.1% <sup>[3]</sup>                                                   |
| <b>Total assets</b>              | €164.05 billion (approx. US \$217.24 billion), end 2011. <sup>[3]</sup> |
| <b>Employees</b>                 | 96,104 (end 2011) <sup>[4]</sup>                                        |
| <b>Website</b>                   | www.total.com <sup>[5]</sup>                                            |

## Global Snapshot

In 2012 Total was the world's 13th largest oil company by production, with an average of 2.7 million barrels of oil equivalent (boe) produced per day. <sup>[6]</sup> It had operations in more than 130 countries. <sup>[4]</sup>

The company has been through several name changes through its history. It was founded as the Compagnie Francaise des Pétroles in 1924 and in 1927 it made its first discovery at the Baba Gurgur oil field in northern Iraq. The company renamed itself Total CFP in 1985 and later in 1991 the name was changed to Total. At this time the French government owned over 30 percent of the company's stock, but reduced this to less than 1 percent by 1996. When Total took over Belgian Petrofina in 1999 it became known as Total Fina and after merging Elf Aquitaine in 2000 it was temporarily named TotalFinaElf. <sup>[7]</sup>

At the end of 2011 the company had proven reserves of 11.4 billion barrels of oil equivalent (boe). <sup>[4]</sup>

## Company Report Highlights

Total's Registration Document 2010 <sup>[8]</sup> reveals that adjusted net income for 2010 was €10.3 billion, up 32% compared to 2009. This was claimed to reflect the 2010 oil market environment, which was marked by a 29% increase in average Brent price to \$79.5/barrel. Production in the upstream segment grew more than 4% compared to 2009 and Total has continued to add to its acreage with new exploration focused on pre-salt projects and unconventional gas.

## Official Accreditations and Global Perceptions

### EITI Supporter Status

Total joined the EITI on its creation in 2002, was elected to the EITI Board as an alternate member in September 2007 and later elected a permanent member in February 2009 in recognition of their commitment to the initiative. Their representative on the 20-member Board in 2011 was Jean-François Lassalle. As part of their commitment, Total publish detailed reports on a number of host countries, accounting for 59% of production in 2010. <sup>[9]</sup>

## UN Global Compact

As of December 2011, Total was a member of the UN Global Compact, having joined in 2002.

## CSR Review

Total's 2010 Society and Environment Report,<sup>[10]</sup> *In Other Words*, which aimed to continue the dialogue with stakeholders initiated in the previous issue, outlined the three action plans the company had set itself to meet the challenge of partnering civil society and achieving environmental sustainability:

1. Meeting energy needs while responding to Climate Change and Natural Resource Challenges (minimizing energy use; 15% target by 2015 for reduction of greenhouse gas emissions; Total Ecosolutions program; providing affordable, sustainable energy for low-income communities.
2. Reducing Impact of Operations on People and the Environment (in accordance with their Health, Safety, Environment and Quality Charter; assessing environmental and health risks in advance; protecting biodiversity)
3. Helping to Spur Local Social and Economic Development: Transparency of financial contributions in compliance with local legislation; education and training; socioeconomic programs.

## External Coverage

- In 2010, Total was placed under formal investigation after an eight year investigation into bribery charges related to oil deliveries from Iraq under Saddam Hussein's rule. The case was based on claims that politicians received vouchers for oil in exchange for lobbying for sanctions to be loosened on Hussein's regime, and that employees of Total purchased the oil. Three years after CEO Christophe de Margerie was placed under investigation, the prosecutor's office recommended dismissing the case against employees. This included De Margerie, who occupied the post of Head of Middle East Operations in the 1990s, the period during which the Oil For Food program was set up. This program allowed Iraq to sell a certain amount of crude oil under the understanding that they use the proceeds for humanitarian goods.<sup>[11]</sup>
  - As of 2010 Total was the biggest Western firm with operations in Burma, running the Yadana offshore gas field alongside Chevron. The company has faced lawsuits accusing it of condoning human rights abuses in the country.<sup>[12]</sup>
-

## Global Operations by Country

### Iraq

*Main article: Total Operations in Iraq*

### Libya

*Main article: Total Operations in Libya*

### Syria

*Main article: Total Operations in Syria*

### Uganda

*Main article: Total Operations in Uganda*

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- [3] "Form 20F 2011 ([http://www.total.com/MEDIAS/MEDIAS\\_INFOS/5256/FR/Form-20-F-2011-V1.pdf](http://www.total.com/MEDIAS/MEDIAS_INFOS/5256/FR/Form-20-F-2011-V1.pdf))". *Total*.
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- [7] "An illustrated history of Total ([http://histoire.total.com/index\\_en.html](http://histoire.total.com/index_en.html))". *Total*, retrieved 19 December 2012.
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- [9] "The Extractive Industries Transparency Initiative (<http://www.total.com/en/our-challenges/ethical-business-conduct/financial-transparency/eiti-201668.html>)". *Total*, retrieved 06 October 2011.
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- [11] "Total under investigation over Iraq oil-for-food (<http://uk.reuters.com/article/2010/04/06/uk-total-idUKTRE63545T20100406>)". *Bloomberg Business Week*, 06 April 2010.
- [12] "Turning a profit in Burma (<http://www.bbc.co.uk/news/world-asia-pacific-11587345>)". *Bloomberg Business Week*, 1 November 2010.

# Total Operations in Syria

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## History

Total's relationship with Syria dates back to 1988, when the company signed its initial Production Sharing Agreement (PSA) with the Syrian Petroleum Company (SPC), forming the Deir Ez Zor Petroleum Corporation (DEZPC).<sup>[1]</sup>

According to a leaked US diplomatic cable from August 2006, Total's attitude towards operations in Syria appeared "non-committal at best", in sharp contrast with the aggressive pursuit of new opportunities shown by Shell and PetroCanada. According to the cable, Total executives hoped to retain a presence in the country but had been directed to avoid new commitments.<sup>[2]</sup>

However according to a further cable dating from September 2008, Total CEO Christophe de Margerie signed three agreements with the Syrian Ministry of Petroleum in conjunction with the visit of French President Sarkozy to Damascus. The first agreement related to the extension of the company's license at Deir Ez Zor until 2012. The second represented a commitment of US \$100 million by Total to increase gas production and delivery to market from the Tabiyeh gas field to an estimated 51 million cubic metres. Thirdly, the Syrian government agreed to partner exclusively with Total in conducting feasibility studies for several potential projects, including cooperation on "gas projects with neighbouring countries".

According to Total country director Hatem Nuseibeh, this third agreement essentially granted Total the inside track for developing the gas infrastructure to connect Syria with the Akkas field in western Iraq, when the political environment would allow this. Another French official commented that this deal would put Total at the head of a line to receive the Kirkuk-Banias pipeline renovation contracts, when the governments of Iraq and Syria reached an agreement.<sup>[3]</sup>

## Activities

Prior to the 2011-12 revolution, Total was present in Syria on the Deir Ez Zor permit. The permit is operated by the Deir Ez Zor Petroleum Corporation (DEZPC), and Total holds a 50% stake in the venture. In November 2008 the Deir Ez Zor permit was extended by 10 years up to 2021.<sup>[4]</sup>

Total is also present at the Tabiyeh field. The contract for the Tabiyeh gas project was signed in July 2009 between the Syrian General Petroleum Corporation (GPC) and 'Total E&P Syrie'. Under the contract, Total were to invest around US \$150 million.<sup>[5]</sup>

Combined, in 2010 all of Total's assets in Syria produced 39,000 barrels per day (bpd), compared to 20,000 bpd in 2009 and 15,000 bpd in 2008.<sup>[4]</sup>

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## Impact of Uprising 2011

In December 2011 Total announced it was suspending operations in Syria in line with recently tightened sanctions by the EU which indirectly target its local partner, the Deir Ez Zor Petroleum Corporation. While Deir Ez Zor was not directly on the EU's list of targeted firms, Syria's state-owned General Petroleum Company (GPC), which owns a 50% stake in the joint venture, is named.

The suspension of Total's operations came a week after Shell made a decision to pull out of Syria, and further reduced Syria's oil output by 39,000 bpd.<sup>[6]</sup>

## References

- [1] " Total negotiates new agreement with Syria (<http://www.syria-today.com/index.php/may-2008/316-business-news/1851-total-negotiates-new-agreement-with-syria>)" *Syria Today*, May 2008.
  - [2] " Royal Dutch Shell Largest Winner In Current Bid Round (<http://www.cablegatesearch.net/cable.php?id=06DAMASCUS4161&q=gulfsands>)" *Wikileaks*, 23 August 2006.
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  - [6] " Total exits Syria following tightened EU sanctions (<http://www.ogj.com/articles/2011/12/total-exits-syria-following-tightened-eu-sanctions.html>)" *Oil and Gas Journal*, 12 July 2011.
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# Joint Ventures in Syria

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## Al Furat Petroleum Company (AFPC)

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### History

The Al Furat Petroleum Company (AFPC) was founded in 1985 and is based in Damascus, Syria.<sup>[1]</sup>

The company is a joint venture (JV) between state-owned General Petroleum Corporation (GPC) and its international partners Syria Shell Petroleum Development (SSPD), a subsidiary of Shell, and Himalaya Energy Syria BV, itself a joint venture between Indian ONGC and Chinese CNPC.

| Company               | Interest |
|-----------------------|----------|
| GPC                   | 50%      |
| SSPD                  | 31.25%   |
| Himalaya Energy Syria | 18.75%%  |

[2]

### Activities

The AFPC is the main foreign producer consortium operating in the country.<sup>[3]</sup> As of May 2011, the AFPC was producing around 100,000 barrels per day (bpd) of oil.<sup>[2]</sup>

### Impact of Unrest 2011-12

In December 2011 the European Union announced that it had widened its sanctions on Syrian oil companies, to include Al Furat. This forced several international partner companies, including Shell to cease operations in the country.<sup>[4]</sup>

### External Links

Official Website: [www.afpc-sy.com](http://www.afpc-sy.com)<sup>[5]</sup>

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## References

- [1] "Company Overview of Al Furat Petroleum Company (<http://investing.businessweek.com/research/stocks/private/snapshot.asp?privcapId=7828447>)" *Bloomberg*, retrieved 15 March 2012.
- [2] "Investments of European companies in Syria ([http://www.ikvpaxchristi.nl/files/Documenten/MO Syrie/Investments of European companies in Syria.pdf](http://www.ikvpaxchristi.nl/files/Documenten/MO%20Syrie/Investments%20of%20European%20companies%20in%20Syria.pdf))" *IKV Pax Christi*, 13 May 2011.
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- [4] "Shell to quit Syria after EU extends sanctions (<http://www.ft.com/intl/cms/s/0/bc9dae8a-1cd1-11e1-a134-00144feabdc0.html#axzz1oz4sxNDK>)" *Financial Times*, 2 December 2011.
- [5] <http://www.afpc-sy.com>

## Other Joint Ventures in Syria

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Aside from the Al Furat Petroleum Company (AFPC), the following joint ventures operate in Syria:

### Al Bu Kamal Petroleum Company

Al Bu Kamal Petroleum Company is a joint venture between the Syrian General Petroleum Company (GPC) and Russian Tatneft. It began oil production in spring 2010 at the South Kisma field.<sup>[1]</sup>

### Deir Ez Zor Petroleum Company

Deir Ez Zor Petroleum Company (DEXPC) is a joint venture (JV) between the Syrian Petroleum Company (SPC) and Total. In 2008 the venture's production was at 30,000 barrels per day (bpd).<sup>[2]</sup>

### Hayan Company

Hayan Company is a JV between the SPC and Croatian INA. The company was established in 2004, primarily for gas production.<sup>[2]</sup>

### AlKawKab Company

AlKawKab is a JV between the SPC and CNPC. It was established in 2004 to develop the Kbaibah field through enhanced oil recovery methods. Production levels in 2008 were at around 12,000 bpd.<sup>[2]</sup>

### Audeh Company

Audeh is a JV between the SPC and Dublin Energy (local subsidiary of Tanganyika Oil Company)<sup>[3]</sup> and was established in 2008 for the development of the Audeh, Tishreen and Shakh Mansour fields. Production in 2008 was at around 15,000 bpd.<sup>[2]</sup>

## Dijlah Company

Dijlah is a JV between the SPC and Gulfsands Petroleum, established in 2008. Production in 2008 was at 10,000 bpd.<sup>[2]</sup>

## References

- [1] "Tatneft halts oil production in Syria after Damascus blasts (<http://en.rian.ru/world/20111223/170448818.html>)" *RIA Novosti*, 23 December 2011.
- [2] "Public Private Partnership (<http://www.syrianpppconference.org/sp/HEEngSufianAlAlao.pdf>)" *Ministry Of Petroleum & Mineral Resources*, October 2009.
- [3] "Syria - SPC Fields. (<http://www.allbusiness.com/mining-extraction/oil-gas-exploration-extraction-oil-oil/14259759-1.html>)" *AllBusiness*, 29 March 2010.

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# Oilfield service companies

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## Oilfield services companies operating in Syria

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### CGG Veritas

CGG Veritas in 2011 was the world's largest seismic surveyor of oilfields.<sup>[1]</sup>

In Syria CGG offered geophysical and geological datasets in support of the International Offshore Bid Round 2011 by the Syrian Ministry of Petroleum and Mineral Resources and the General Petroleum Corporation.<sup>[2]</sup>

### Crosco Drilling

Croatian Crosco Integrated Drilling & Well Services Company was founded in 1997 and operates as an onshore and offshore drilling and well services contractor.<sup>[3]</sup>

Crosco commenced provision of services in Syria in 2000 and by 2004 was the largest drilling and oilfield services contractor in the country. They provide services for INA and Al Furat Petroleum Company (AFPC).<sup>[4]</sup>

*Official Website: [www.crosco.com](http://www.crosco.com)*<sup>[5]</sup>

### Halliburton

Halliburton, founded in 1919 and based in Houston, Texas, serves the upstream oil and gas industries worldwide.<sup>[6]</sup> In 1995 the company was taken over by Dick Cheney, having just left his previous job as US Secretary of Defence.<sup>[7]</sup>

Press reports have accused Halliburton of operating in Syria despite US sanctions, avoiding the measures by operating through offshore subsidiaries.<sup>[8]</sup>

*Official Website: [Halliburton](http://Halliburton)*<sup>[9]</sup>

### Petrofac

Petrofac, founded in 1981, is based in the Channel Islands and provides its services primarily in Algeria, the UAE, the UK, Kuwait, Syria, and Saudi Arabia.<sup>[10]</sup>

The company floated shares on the London Stock Exchange in 2005 and as of October 2010 was the 57th-largest FTSE 100 company.

Petrofac's CEO as of 2012, Ayman Asfari, is Syrian by birth and the company were responsible for the development of the \$350m Elba gas plant in the east of Syria.<sup>[11]</sup>

*Official Website: [www.petrofac.com](http://www.petrofac.com)*<sup>[12]</sup>

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## Schlumberger

Along with Halliburton, Schlumberger is one of the world's largest oilfields services companies. It is based in Houston, Texas.<sup>[13]</sup>

In August 2010 Schlumberger acquired operations in Syria through its acquisition of Smith International.<sup>[14]</sup>

*Official Website:* <http://www.slb.com/r><sup>[15]</sup>

## Stroytransgaz

Moscow-based Stroytransgaz was founded in 1990.<sup>[16]</sup>

In December 2005 the company signed a contract with the Syrian Gas Company (SGC) to produce gas at the Abu Rabah field as part of the government's South Middle Area Gas Project (SMAGP). Gas production began in 2008. Stroytransgaz also built the Arab Gas Pipeline (AGP).<sup>[17]</sup>

*Official Website:* [www.stroytransgaz.com](http://www.stroytransgaz.com)<sup>[18]</sup>

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# Oil and Gas Fields

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## Jbessa Field

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|                        |                        |
|------------------------|------------------------|
| Estimated Gas in Place | 0.8 tcf <sup>[1]</sup> |
| Principal Partners     | AFPC <sup>[1]</sup>    |

### Profile

Along with the Omar Field, Jbessa is one of Syria's largest and most mature fields.<sup>[1]</sup> Natural gas was discovered at Jbessa in 1940.<sup>[1]</sup>

### References

[1] " Syria Country Profile (<http://www.eia.gov/cabs/Syria/Full.html>)", *EIA*, August 2011.

## Karatchuk Field

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### Profile

SPC-operated Karatchuk was the site of Syria's first oil discovery and is located near the border with Iraq and Turkey.<sup>[1]</sup> The field was discovered by an American company in 1956 and produced heavy grade oil.<sup>[2]</sup>

The Karatchuk field is now approaching maturity and contributing to Syria's dwindling production output.<sup>[3]</sup>

### References

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[2] " Syria: Industry (<http://countrystudies.us/syria/44.htm>)" *US Library of Congress*, retrieved 15 March 2012.

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# Omar Field

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|                           |                                  |
|---------------------------|----------------------------------|
| <b>Oil Production</b>     | 20,000 bpd (2008) <sup>[1]</sup> |
| <b>Discovered</b>         | 1987 <sup>[1]</sup>              |
| <b>Principal Partners</b> | AFPC <sup>[1]</sup>              |

## Profile

The Omar field is the largest field in the portfolio of Al Furat Petroleum Company (AFPC) and is located in the north-east of the country, 45 kilometres south-east of Deir Ez Zour.

The field was discovered in 1987. Originally the field produced at a peak of some 80,000 barrels per day (bpd) but production declined rapidly due to the lack of any pressure support. From 1991 onwards water injection was used at the site and between 1994-7 a plateau production level of 60-70,000 bpd was reached. As of 2008 the production rate had declined to 20,000 bpd.<sup>[1]</sup>

Along with the Souedieh field, Omar is one of the primary sources of associated gas in Syria.<sup>[2]</sup>

## References

[1] " The Omar Field (NE Syria) is Overcoming Its Mid-Life Crisis (<http://www.onepetro.org/mslib/servlet/onepetropreview?id=SPE-112940-MS>)", *Society of Petroleum Engineers*, 12 March 2008.

[2] " Syria Petroleum And Natural Gas (<http://www.cafe-syria.com/Petroleum.htm>)", *Cafe Syria*, retrieved 15 March 2012.

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# Rumailan Field

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Rumailan is a small oilfield in Syria near the Souedieh Field which produces a heavy grade of oil.<sup>[1]</sup> The field is connected by pipeline to Syria's Homs Refinery.<sup>[2]</sup>

## References

- [1] " Extraction of Crude Petroleum in Syria - Overview (<http://www.mbendi.com/indy/oilg/ogus/as/sy/p0005.htm>)", *Mbendi*, retrieved 19 March 2012.
  - [2] " Explosion rips through main Syrian oil pipeline in Homs (<http://www.reuters.com/article/2012/02/06/us-syria-homs-pipeline-idUSTRE8150JS20120206>)", *Reuters*, 6 February 2012.
-

# Souedieh Field

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|                           |                            |
|---------------------------|----------------------------|
| <b>Oil Production</b>     | 100,000 bpd <sup>[1]</sup> |
| <b>Discovered</b>         | 1959 <sup>[2]</sup>        |
| <b>Principal Partners</b> | Halliburton <sup>[3]</sup> |
| <b>API Specificity</b>    | 25.5 <sup>[2]</sup>        |

## Profile

The Souedieh field is one of Syria's oldest fields. Sometimes transliterated as "Suwaydiyah" or other versions) was discovered by a West German firm in 1959. It lay around 15 kilometres south of the first oil field discovered in Syria, the Karatchuk field.<sup>[2]</sup> The field produces Souedieh crude (or Syrian heavy grade).<sup>[4]</sup>

On discovery the field initially produced 20,000 barrels per day (bpd).<sup>[2]</sup> However as of 2010 the field was producing 100,000 bpd.<sup>[1]</sup>

## References

- [1] " Gulfsands Petroleum: Outlook (<http://countrystudies.us/syria/44.htm>)", *Edison Investment Research*, 17 Setember 2010.
- [2] " Syria:Industry (<http://countrystudies.us/syria/44.htm>)", *US Library of Congress*, retrieved 19 March 2012.
- [3] " Assessment of Syrian Energy Sanctions (<http://www.syriancouncil.org/en/special-reports/item/9-assessment-of-syrian-energy-sanctions.html>)", *Syrian National Council*, 23 November 2011.
- [4] " Syria: Country Profile (<http://205.254.135.7/countries/cab.cfm?fips=SY>)", *EIA*, August 2011.

# Thayyem Field

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|                        |                                            |
|------------------------|--------------------------------------------|
| <b>Oil Reserves</b>    | estimated 1 billion barrels <sup>[1]</sup> |
| <b>Discovered</b>      | 1984 <sup>[1]</sup>                        |
| <b>First Produced</b>  | 1986 <sup>[2]</sup>                        |
| <b>API Specificity</b> | 36.5 <sup>[1]</sup>                        |

## Profile

The Thayyem field, in the Euphrates region, was discovered in 1984. The discovery was the stimulus for the establishment of the Al Furat Petroleum Company (AFPC).<sup>[3]</sup>

Thayyem is the AFPC's main field, however it is a mature field and production levels have been declining since 1991.<sup>[4]</sup> Like other AFPC fields Thayyem produces a light grade of oil, with low sulphur content.<sup>[5]</sup>

## References

- [1] " Oil and Gas Extraction (<http://www.allbusiness.com/mining/oil-gas-extraction-crude-petroleum-natural/464585-1.html>)", *AllBusiness*, retrieved 1 March 2012.
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- [4] " Extraction of Crude Petroleum in Syria - Overview (<http://www.mbendi.com/indy/oilg/ogus/as/sy/p0005.htm>) *Mbendi*, retrieved 19 March 2012.
- [5] " Syria - The Offshore Prospects ([http://goliath.ecnext.com/coms2/gi\\_0199-150126/SYRIA-The-Offshore-Prospects.html](http://goliath.ecnext.com/coms2/gi_0199-150126/SYRIA-The-Offshore-Prospects.html)) *Goliath*, 8 March 2004..

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## Other Oil and Gas Fields in Syria

| Field                      | Location   | Discovered           | Gas Reserves | Oil Reserves | Operator            | Other Partners | Production (bpd) |
|----------------------------|------------|----------------------|--------------|--------------|---------------------|----------------|------------------|
| Audeh                      | north-east | 1970s <sup>[1]</sup> |              |              |                     |                |                  |
| Azraq                      |            |                      |              |              |                     |                |                  |
| Alian, Tishreen and Gbebeh |            |                      |              |              |                     |                |                  |
| El-Ward                    |            |                      |              |              |                     |                |                  |
| Isba                       |            |                      |              |              |                     |                |                  |
| Jafra                      |            |                      |              |              |                     |                |                  |
| Khurbet East               | north-east |                      |              |              | Gulfsands Petroleum |                |                  |
| Maleh                      |            |                      |              |              |                     |                |                  |
| Qahar                      |            |                      |              |              |                     |                |                  |
| Sijan                      |            |                      |              |              |                     |                |                  |
| Tabiyeh                    |            |                      |              |              | Total               |                |                  |
| Tanak                      |            |                      |              |              |                     |                |                  |
| Yousefieh                  | north-east |                      |              |              | Gulfsands Petroleum |                |                  |

See <http://www.allbusiness.com/mining-extraction/oil-gas-exploration-extraction-oil-oil/14259759-1.html>

## References

- [1] " Syria - SPC Fields. (<http://www.allbusiness.com/mining-extraction/oil-gas-exploration-extraction-oil-oil/14259759-1.html>)", *AllBusiness*, 15 March 2010.

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# Key Infrastructure

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## Overview of Infrastructure in Syria

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### Pipelines

Up until the sharp increase in oil prices in the early 1970s, Syria earned more from the international pipelines crossing its territory than from domestic oil production. In the early 1950s the Tapline Oil Pipeline was completed. The larger and more important Kirkuk-Banias Pipeline (IPC) also began operating in the early 1950s, providing transit fees and some political leverage over Iraq.<sup>[1]</sup>

State-owned SCOT is in charge of Syria's pipelines. Aside from the transnational pipelines mentioned above, the main internal pipelines are:

- a 25,000 barrels per day (bpd) export pipeline from the SPC's north-eastern fields to the Tartous Terminal with a connection to the Homs Refinery.
- a 500,000 tons/year refined products pipeline system linking the Homs Refinery to Damascus, Aleppo and Latakia.
- a 100,000 bpd spur line from Thayyem and other fields to the T-2 pumping station on the old Iraq Petroleum Company (IPC) pipeline.
- a spur line from the Ashara and El-Ward fields to the T-2 pumping station.<sup>[2]</sup>

### Refining

Syria's two refineries are located at Banias and Homs. Total refining capacity in 2004 was estimated at around 240,000 barrels per day (bpd) (around 133,000 bpd at Banias and 107,000 bpd at Homs).<sup>[3]</sup>

Syria faces shortages of gas oil and diesel, which it needs to import. Several refinery projects have been proposed in the country:

In summer 2010 the China National Petroleum Corporation (CNPC) announced that it would begin construction of a long-delayed US \$2 billion refinery in Abu Khashab during the second quarter of 2011. The facility would be located near the oil hub Deir Ez Zour and was due to be operational by 2014 and handle 70-100,000 barrels of crude oil per day. The initial delays were due to the global economic crisis. The CNPC were to assume 85% of the total project cost, with the Syrian government covering the remaining 15%.<sup>[4]</sup>

The Homs City Refinery Project is a 140,000 barrels per day (bpd) project planned by a consortium of Venezuelan, Iranian, Syrian and Malaysian companies.

A third project planned by Kuwait's Noor company was cancelled.<sup>[5]</sup>

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## Terminals

Syria's major oil export terminals are at Baniyas and Tartous on the Mediterranean, with a small tanker terminal at Latakia.<sup>[6]</sup>

## References

- [1] " Syria: Industry (<http://countrystudies.us/syria/44.htm>)" *US Library of Congress*, 28 August 2011.
- [2] " IPC: Iraq Petroleum Company (<http://almashriq.hiof.no/lebanon/300/380/388/ipc/>)" *Al Mashriq*, 28 August 2011.
- [3] " Oil Refining in Syria-Overview (<http://www.mbendi.com/indy/oilg/ogrf/as/sy/p0005.htm>)" *Mbendi*, retrieved 15 March 2012.
- [4] " Oil Refining in Syria-Overview (<http://www.breakbulk.com/project-cargo-heavy-lift/cnpc-begin-refinery-construction-syria-2011>)" *Mbendi*, retrieved 15 March 2012.
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- [6] " Oil Refining in Syria (<http://www.mbendi.com/indy/oilg/ogrf/as/sy/p0005.htm>)" *Mbendi*, retrieved 15 March 2012.

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## Baniyas Refinery

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### Overview

The Baniyas refinery in Syria was built by Industrialexport of Romania and commissioned in 1980.<sup>[1]</sup>

A catalytic cracking unit (used to break large hydrocarbons in heavy oil into smaller ones) came on stream at Baniyas in 1994 as part of an upgrade of the facilities.<sup>[2]</sup> Up until this point, large volumes of gas oil and diesel oil had to be imported in order to meet domestic demands, as the refinery was unable to process the heavier grades of crude.<sup>[1]</sup>

To meet domestic demand, the Baniyas refinery also imports light oil to mix with the heavier Syrian oils.<sup>[3]</sup>

### Capacity

The Baniyas refinery has the capacity to refine 133,000 barrels per day (bpd).<sup>[3]</sup>

### Ownership

The Baniyas refinery, like the Homs Refinery, is a subsidiary of the state-owned General Corporation for Refining and Distribution of Petroleum Products (GCRDPP).<sup>[3]</sup>

## References

- [1] The Syrian Refining Sector (<http://www.thefreelibrary.com/The+Syrian+Refining+Sector:-a058585921>) *Free Library*, retrieved 12 March 2012.
- [2] How Oil Refining Works (<http://science.howstuffworks.com/environmental/energy/oil-refining5.htm>) *How Stuff Works*, retrieved 12 March 2012.
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# Homs Refinery

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## Overview

The Homs Refinery is located 7 kilometres west of Homs City on the international highway to Lebanon.

The Homs refinery was the first refinery built in Syria and came on stream in 1959. It initially processed Iraqi crude oil to satisfy local markets and exported the excess to other markets.<sup>[1]</sup>

According to a leaked US diplomatic cable from February 2010, Homs Governor Iyad Ghazal was planning to relocate and expand the refinery at Homs as part of his "Dream of Homs" regeneration vision. The biggest challenge would be to relocate the oil refinery from the west of the city to the east. The cable notes that a plan presented in 2007 to refurbish the refinery for approximately \$800,000,000 was scrapped after lobbying of the central government, on the grounds that the costs outweighed the benefits.<sup>[2]</sup>

## Capacity

The facility at Homs is capable of processing 107,000 barrels per day (bpd), accounting for 45 % of Syria's total refining capacity.<sup>[3]</sup>

## Ownership

The Homs refinery, like the Baniyas Refinery, is a subsidiary of the state-owned General Corporation for Refining and Distribution of Petroleum Products (GCRDPP).<sup>[4]</sup>

## Impact of Unrest 2011-12

A pipeline serving the Homs refinery was blown up by rebels looking to disrupt the country's supply of oil in December 2011. It was not clear at the time whether the attack had cut off the supply of crude to the refinery.<sup>[3]</sup> The pipeline, running from the Rumailan fields, was hit several times during the uprising against President Bashar Assad.<sup>[5]</sup>

## External Links

Official Website: [www.homsrefinery.com](http://www.homsrefinery.com) <sup>[6]</sup>

## References

- [1] Homs Refinery (<http://abarrellfull.wikidot.com/homs-refinery>) *A Barrel Full*, retrieved 12 March 2012.
- [2] Governor Iyad Ghazal Outlines His "dream Of Homs" (<http://www.cablegatesearch.net/search.php?q=epet+licensing+round&qo=14336&qc=0&qto=2010-02-28>) *Wikileaks*, 1 February 2010.
- [3] Rebels attack Syria's oil supply (<http://www.canada.com/news/Rebels+attack+Syria+supply/5832405/story.html>) *Daily Telegraph*, 8 December 2011.
- [4] Investments of European companies in Syria ([http://www.ikvpaxchristi.nl/files/Documenten/MO Syrie/Investments of European companies in Syria.pdf](http://www.ikvpaxchristi.nl/files/Documenten/MO%20Syrie/Investments%20of%20European%20companies%20in%20Syria.pdf)) *IKV Pax Christi*, 13 May 2011.
- [5] Syria's Homs refinery pipeline attacked (<http://www.upstreamonline.com/live/article303421.ece>) *Upstream Online*, 15 February 2012.
- [6] <http://www.homsrefinery.com>

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# Baniyas Terminal

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## Overview

Along with the Tartous Terminal, Baniyas is one of the two major oil export terminals in Syria. Baniyas can accommodate tankers up to 120,000 dead weight tons (dwt) and has a storage capacity of 437,000 tons of oil in 19 tanks.<sup>[1]</sup>

## Owership

All of Syria's three terminals, including Baniyas, are operated by the Syrian Company for Oil Transport (SCOT).<sup>[1]</sup>

## References

[1] "Global Oil Refining in Syria (<http://www.mbendi.com/indy/oilg/ogrf/as/sy/p0005.htm>)" *Mbendi*, retrieved 15 February 2012.  
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# Latakia Terminal

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Latakia is a small tanker terminal on Syria's Mediterranean coast and is the smallest of Syria's three terminals.<sup>[1]</sup>

## References

[1] "Global Oil Refining in Syria (<http://www.mbendi.com/indy/oilg/ogrf/as/sy/p0005.htm>)" *Mbendi*, retrieved 15 February 2012.

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# Tartous Terminal

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## Overview

Along with the Baniyas Terminal, Tartous is one of the two major oil export terminals in Syria. It can handle tankers up to 210,000 deadweight tonnage (dwt) and is connected via a pipeline to the Baniyas terminal.<sup>[1]</sup>

## Owership

All of Syria's three terminals, including Tartous, are operated by the Syrian Company for Oil Transport (SCOT).<sup>[1]</sup>

## References

[1] "Global Oil Refining in Syria (<http://www.mbendi.com/indy/oilg/ogrf/as/sy/p0005.htm>)" *Mbendi*, retrieved 15 February 2012.

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# Arab Gas Pipeline (AGP)

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## Overview

The Arab Gas Pipeline extends from Arish in Egypt, passing through Aqaba, Damascus and Baniyas. It is 1,200 kilometres long in total and was built at a cost of US \$1.2 billion.<sup>[1]</sup>

The AGP pipeline was initially formed following bilateral discussions with Jordan in 2011, however the original Memorandum of Understanding (MoU) grew to include Syria and Lebanon. A further side deal ensured gas supply to Israel, while Turkey and Iraq both subsequently signed deals to cooperate on the regional project.

The pipeline is divided into four segments:

- Arish-Aqaba, completed 2003.
- Aqaba-El Rehab, completed 2006.
- El Rehab-Homs, completed 2008.
- Homs-Tripoli, completed 2009.<sup>[2]</sup>

The Arish-Ashkelon Pipeline is a submarine branch of the AGP that supplies natural gas from Egypt to Israel, ending in Ashkelon, Israel. It began operating in February 2008 and cost an estimated US \$469 million.<sup>[1]</sup>

Mary Stonaker has highlighted the geopolitical relevance of the AGP pipeline, referring to it as a "vital diplomatic tool for the Middle East".<sup>[2]</sup>

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## Potential and Planned Extensions

### Syria-Turkey

In 2008, Stroytransgaz and the Syrian Gas Company (SGC) finalized an agreement to build the Arab Gas Pipeline Project Phase 2 in Syria. The pipeline will run 62 kilometres from the Turkey-Syria border to a pressure reduction and metering station at Aleppo. The project was estimated to reach completion in 18 months.<sup>[3]</sup>

There have also been suggestions that the AGP could be used to supply the 3,300-kilometre Nabucco pipeline project, set to transit Turkey, allowing the Middle East region to target European natural gas markets as a united exporter.<sup>[2]</sup>

### Iraq

According to the *Financial Times*, Iraq has been in negotiations with Egypt in a bid to use the AGP as an outlet for its gas exports. This export option is said to have little support in Erbil, in Iraqi Kurdistan. The 2011-12 violence in Syria meant that the future of the project looked uncertain.<sup>[4]</sup>

## Capacity

The capacity of the AGP pipeline varies depending on the different sections. However on completion of work on the pipeline in Syrian territory in 2008, the Syrian Minister of Petroleum and Mineral Resources predicted that Egypt would pump 900 million cubic metres of gas to Syria within the first year, with the amount gradually increasing in order to meet Syria's increasing demand.<sup>[5]</sup>

## 2011 Explosions

As of early 2012, the AGP pipeline had been shut down for repairs following an attack in July 2011, which halted the flow of natural gas to both Israel and Jordan. In total the pipeline was bombed nine times over the course of 2011, after Hosni Mubarak fell from power in Egypt in February 2011. These attacks were blamed on the Bedouin Islamists and a rise in Jihadist activities in the Sinai peninsula.

As a result of the attacks and the shutting down of the pipeline, the price of electricity in Israel rose by 10%.<sup>[1]</sup>

## References

- [1] " EGYPT, ISRAEL, AND THE ARISH-ASHKELON PIPELINE CONTROVERSY (<http://prospectjournal.ucsd.edu/index.php/2012/01/egypt-israel-and-the-arish-ashkelon-pipeline-controversy/>)" *Prospect Journal*, January 2012.
- [2] " Energy Infrastructure As A Diplomatic Tool: The Arab Gas Pipeline ([http://www.ensec.org/index.php?option=com\\_content&view=article&id=270:energy-infrastructure-as-a-diplomatic-tool-the-arab-gas-pipeline-in-perspective&catid=112:energysecuritycontent&Itemid=367](http://www.ensec.org/index.php?option=com_content&view=article&id=270:energy-infrastructure-as-a-diplomatic-tool-the-arab-gas-pipeline-in-perspective&catid=112:energysecuritycontent&Itemid=367))" *Journal of Energy Security*, 14 December 2010.
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- [4] " Natural gas: North looks to tap into long-term export potential of vast reserves (<http://www.ft.com/intl/cms/s/0/434000da-1d1f-11e1-a134-00144feabdc0.html#axzz1oz4sxNDK>)" *Financial Times*, 7 December 2011.
- [5] " Syria Completes First Stage of Arab Gas Pipeline ([http://www.downstreamtoday.com/news/article.aspx?a\\_id=8761&AspxAutoDetectCookieSupport=1](http://www.downstreamtoday.com/news/article.aspx?a_id=8761&AspxAutoDetectCookieSupport=1))" *Downstream Today*, 18 February 2008.

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# Islamic Gas Pipeline

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## Overview

In summer 2011 Iran, Iraq and Syria signed a memorandum on laying a 5,000-kilometre pipeline,<sup>[1]</sup> to be named the Islamic Gas Pipeline. The proposed pipeline would transport gas resources from Iran's South Pars field and would extend through Iraq, Syria, Lebanon and to Europe under the Mediterranean sea.

Teheran has suggested that the Islamic Pipeline could serve as an alternative to the EU-backed Nabucco pipeline set to supply Europe with gas resources via Turkey and Austria. The estimated cost of the project is US \$10 billion and is expected to be in operation by 2016.

However Konstantin Simonov of the National Energy Safety Foundation commented that "everyone is aware of political risks associated with Iran" and that "moreover, the construction will never begin because Iran and Syria have no money and foreign financial resources are unavailable to them."<sup>[2]</sup>

## Capacity

According to the Deputy Oil Minister Javad Owji, the proposed pipeline would be able to pump 3.9 billion cubic feet of natural gas per day.

Baghdad has stated it wants up to 530 million cubic feet per day for its own needs, Syria will need up to 706 million cubic feet and Lebanon up to 247 million cubic feet. This would leave 2.4 billion cubic feet for possible export.<sup>[3]</sup>

## References

[1] "Seven Investors Ready to Fund Islamic Gas Pipeline (<http://www.gulfoilandgas.com/webpro1/main/mainnews.asp?id=16039>)" *Gulf Oil and Gas*, 8 June 2011.

[2] "Islamic Pipeline to challenge Nabucco (<http://english.ruvr.ru/2011/07/26/53747063.html>)" *Voice of Russia*, 26 July 2011.

[3] "'Islamic pipeline' seeks Euro gas markets ([http://www.upi.com/Business\\_News/Energy-Resources/2011/07/25/Islamic-pipeline-seeks-Euro-gas-markets/UPI-13971311588240/](http://www.upi.com/Business_News/Energy-Resources/2011/07/25/Islamic-pipeline-seeks-Euro-gas-markets/UPI-13971311588240/))" *UPI*, 25 July 2011.

# Kirkuk-Banias Pipeline (IPC)

The 880-kilometre (km) Kirkuk-Banias pipeline was first brought online in 1952 and transported oil from Kirkuk in central-northern Iraq to the port of Banias in Syria. According to *Pipelines International*, the building of the pipeline marked a significant moment in the development of Iraq's petroleum industry.<sup>[1]</sup>

The pipeline stopped operating in 2003 during the US-led invasion of Iraq and as of late 2012 remained closed.<sup>[2]</sup>

## Capacity

The Kirkuk-Banias pipeline had a capacity of 300,000 barrels per day (bpd) prior to 2003. However its original capacity when built in the 1950s was 1.4 million bpd.<sup>[3]</sup>

## History

In 1950 the Iraq Petroleum Company (IPC) contracted Bechtel to construct the 30-32 inch pipeline, which was laid by British, American, Syrian and Iraqi workers. Construction was completed in 1952. The pipeline was damaged by the Syrian army in response to the Anglo-French seizure of the Suez Canal zone in 1956, but was later repaired.

In 1972 Iraq nationalised the IPC, which led to nationalisation of the IPC's assets in Syria, including the Syrian section of the Kirkuk-Banias pipeline.<sup>[4]</sup>

The pipeline was closed for much of the 1970s and 1980s, but in the 1990s it was reopened so that Iraq could bypass the UN oil embargo. At the time, reports put Iraq's exports through the line at about 150,000-200,000 bpd.<sup>[3]</sup> But the pipeline was bombed by US forces during the invasion that removed Saddam Hussein in 2003, stopping the flow of oil.

In 2007 it was reported that Syria and Iraq were discussing plans to revive the pipeline, however ongoing security issues stalled the deal according to Oil Minister at the time Shahrastani.<sup>[5]</sup> Reports suggested that Russian firm Stroytransgaz had secured a contract for repairs, however Christopher Blanchard reported that in 2007 the Syrian government was seeking alternative foreign firms. In April 2009 Syria and Iraq again announced that the two sides had reached an agreement to repair the line, however the deal was not followed through.<sup>[6]</sup>

In April 2011, Stroytransgaz reported that Iraq was finalizing the terms of engagement for a contract to construct two crude export pipelines and a gas pipeline through Syria to the Banias port, to be offered to investors. Capacity for the two pipelines was expected to reach 2.75 million bpd. The first pipeline would transport heavy crude from the northern Baiji area, potentially including oil from Majnoon, Halfaya, Badra, Ahdab and East Baghdad fields, as well as Najmah and Qayara. The second would follow the route of the existing damaged pipeline, with a capacity of 1.25 million bpd. As of late 2011 the project had not been confirmed.<sup>[7]</sup>

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# Tapline Oil Pipeline

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## Overview

The Trans-Arabian Pipeline (Tapline), opened in 1950, is a thirty-inch pipeline running from the Saudi Arabia on the Persian Gulf through Jordan, Syria and Lebanon to the Mediterranean Sea. Tapline was the largest facility of its kind in the world until the Trans-Alaska pipeline was completed 27 years later.<sup>[1]</sup>

The construction of the pipeline saved around 3,200 kilometers of sea travel and the transit fees of the Suez Canal.<sup>[2]</sup> Various legs were shut between 1976 to 1990 and Saudi Arabia subsequently exported most of its crude on tankers passing through the Strait of Hormuz.<sup>[3]</sup>

## History

In the early 1950s, when Syria earned greater revenues as a transit country than from domestic oil production, the Tapline pipeline was completed, running from the oil fields in Saudi Arabia across Jordan and the south-west corner of Syria to a sea terminal on the Lebanese coast.<sup>[4]</sup>

The pipeline was originally intended to terminate at the port of Haifa, then part of Palestine and now a major Israeli port. However the establishment of the state of Israel resulted in a diversion to Sidon, Lebanon.<sup>[5]</sup>

The Arabian American Oil Company (ARAMCO) selected California-based contractor Bechtel International to construct the pipeline. The company employed 20,000 Arab labourers to lay 265,000 tons of steel pipe, and worked non-stop for two years to complete the project.<sup>[6]</sup>

Syria earned small amounts of revenue from transit fees (around US \$2.8 million in the 1970s) for oil running along Tapline. However interruptions in pipeline operations, escalating transit fees and the reopening of the Suez Canal in June 1975 reduced use of the pipeline at this time.<sup>[4]</sup>

## Capacity

Initial capacity along Tapline was 320,000 barrels per day (bpd), but capacity was expanded, eventually handling 480,000 bpd in the mid-1970s.<sup>[2]</sup>

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# Energy Access

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## Power Generation in Syria

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### Overview

Syria, like many of its Middle Eastern neighbours, is facing increasing demands for electricity from its booming population.<sup>[1]</sup>

In recent years Syria has expanded its capacity in electric power generation. Installed capacity in 2010 was 7,800MW, compared to little over 4,000MW in early 1998. Annual demand for electricity has been growing at an average rate of 10% in recent years. The government was planning to expand this capacity by 8,000MW to 15,800MW by 2018, requiring an investment of \$7.6 billion, according to the state-owned Public Establishment for Electricity Generation and Transmission (PEEGT).<sup>[2]</sup>

### Feedstocks for power generation

As of 2010, oil and gas account for more than 90% of total power generation, the remainder coming from hydropower and very limited biomass. Although the majority of power generation in Syria focused on thermal power plants, the Syrian government began to explore the possibility of utilizing renewable energy resources such as wind and solar.

Typically in the past Syria's power plants have used heavy fuel oil but more recently natural gas has become more popular.<sup>[3]</sup> According to the US Energy Information Administration, all of Syria's oil-fired power stations are being converted to natural gas, and Syria's domestic gas demand is expected to more than double by 2020, obliging Syria to import gas to meet domestic demand.<sup>[4]</sup> However as of 2011, 60% of Syria's electricity was still generated from oil.<sup>[5]</sup>

As far as renewable sources of energy go, Syria has excellent wind and solar resources and international companies such as Vestas have invested, as have Turkish and Ukrainian companies as part of joint ventures with Syrian partners.<sup>[3]</sup>

### Electricity Shortages

According to comments made by business journalist Jihad Yazigi, there has never been an abundance of electricity in Syria. While the country has been able to produce enough electricity to cover its needs, for many years there has been a shortage.

According to press reports in 2009, the electricity shortages in Syria were producing summertime blackouts in Syria's largest cities and suburbs. The blackout lasted for around two hours in the morning and two hours at night. The Syrian Electricity Minister commented that Syria was "facing a real crisis".<sup>[6]</sup>

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## Development of Infrastructure

In 2009, after years of struggling to increase the output of the Syrian power sector to meet the growing demands on a swelling population, the government turned to the private sector and invited actors in to develop the country's power generation infrastructure.<sup>[7]</sup>

An important part of Syria's power infrastructure was built with the support of the European Union in the context of the Euro-Mediterranean Partnership, either using loans from the European Investment Bank or by direct corporate foreign investments. Greek company METKA SA and Italy's Ansaldo were awarded a \$650 million contract to build a power plant in Deir Ali, south of Damascus, and the two companies began working on the construction of a gas-fired power plant in Deir Ez-Zor in 2010.<sup>[8]</sup>

In early February 2010, the government and PEEGT launched a search for technical consultants to work on Syria's first independent power producer (IPP), a 220-250MW plant to be built in Nassserieh, north-east of Damascus.<sup>[2]</sup>

In May 2011, following several weeks of pro-democracy protests and government crack-downs in Syria, Qatari company QatarElectricity and Water Co cancelled plans to build two power plants in Syria. The projected value of the two plants had been \$1 billion and would have involved building plants in the north-eastern town of Swedeih and the industrial area of Adra, close to Damascus.<sup>[9]</sup>

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# Liquid Petroleum Gas (LPG)

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|------------------------------------------------|--------------------------------------------|
| Want to teach yourself about the oil industry? | "Teach Yourself Oil" Unit 0 <sup>[1]</sup> |
|------------------------------------------------|--------------------------------------------|

## Overview

Liquid Petroleum Gas (LPG), also referred to as 'liquefied petroleum gas', is a mixture of gaseous hydrocarbons, produced from natural gas and oil extraction (66%) and from oil refining (34%). Hence LPG is an example of an associated gas.<sup>[1]</sup>

Unlike liquefied natural gas (LNG), which must be stored at  $-162^{\circ}\text{C}$  in order to remain liquefied under atmospheric pressure,<sup>[2]</sup> LPG becomes a liquid when compressed at room temperature for storage and transport.<sup>[3]</sup>

When natural gas is extracted from the ground, around 90 percent of it is methane, and the rest is made up of various liquid petroleum gases. The methane is separated from this mixture and transported via pipelines. These gases can also be produced during the crude oil refining process, usually producing around a 3 percent yield.<sup>[4]</sup>

LPG is mostly made up of propane, butane or a mix of the two. Other elements present are primarily used as chemical feedstocks rather than fuel.<sup>[1]</sup>

LPG was first produced in 1910 by Walter Snelling and the first car powered by propane ran in 1913.<sup>[5]</sup>

## Usage

LPG is popular as a fuel for domestic use, as it is safe to store and portable. It is used for portable camping grills, hot water tanks, refrigerators, caravans, or for use on boats or isolated cabins or lodges. The fuel also has many industrial uses, including uses in metal working, glass working and ceramics, and for industrial forklifts and heavy lifting.<sup>[4]</sup>

According to industry commentator Ed Grabianowski, LPG was one of the most common alternative fuels in the world as of 2011 and is a particularly popular fuel for heating and cooking in certain areas of India and in rural parts of the US. He reports that the fuel is becoming an attractive source of energy for people struggling to meet increasing heating bills.<sup>[4]</sup>

The World Liquefied Petroleum Gas Association (WLPGA) estimates that more than 9 million vehicles in 38 countries currently operate on LPG. Cited benefits of using the fuel to power cars rather than conventional fuels include reduced greenhouse gas emissions, government incentives and tax breaks in many countries, and affordability. However cars must first undergo a conversion process to be able to run on LPG.<sup>[4]</sup>

Though rare, LPG (particularly propane and butane) poses a risk of sudden depressurization and explosions during storage and transport, so is often subject to regulations on its production, storage and transport.<sup>[6]</sup>

## LPG Markets

In countries like India, which do not have reliable oil or natural gas supplies, LPG makes up a major share of the energy mix. In such cases, many everyday heating and cooking needs are supplied by propane instead of oil or coal.<sup>[4]</sup>

According to the LP Gas Association, rapid population growth in many of the world's developing countries has outpaced the increase in modern energy provision, a gap which creates an opportunity for LPG gas markets.<sup>[7]</sup>

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## LPG in Syria

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Although into the 1980s most natural gas in Syria was flared, the country began exporting small quantities of liquid petroleum gas (LPG) in late 1981.<sup>[1]</sup>

As of 2011, Syria was heavily dependent on LPG imports for domestic use and home cooking, in the form of bottled butane gas. It had a LPG Fuel Dependency Ratio at the time of 80%.<sup>[2]</sup>

## Exemption from 2011 Sanctions

The international sanctions imposed on the Syrian regime in 2011-12 did not apply to LPG. Naftomar director J. Heard said in a statement that this is believed to be for humanitarian reasons as "it is unfair to deny such a basic commodity as LPG to consumers as part of a political statement."<sup>[3]</sup>

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# Regional Dynamics

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## Eastern Mediterranean Offshore Prospects

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### Overview

In recent years the Eastern Mediterranean region has been sparking growing interest from international energy firms. Substantial gas reserves have been found in Egypt's Nile Delta Basin and in the Mediterranean coastal areas since 1995, and in 1999 a gas field was found off the Gaza coastline that contained enough reserves to supply Palestinians with power for a decade. The US firm Noble Energy has found gas off the Israeli coast at the second largest field in the world in the past two years and several countries have been announcing the auction of offshore blocks.<sup>[1]</sup>

The US Geological Survey estimates that the Levant Basin province, where the largest discoveries of Tamar and Leviathan fields were found, contains 122 trillion cubic feet of recoverable gas and around 1.7 billion barrels of technically recoverable oil.<sup>[2]</sup>

While the reserves available are not huge in relative terms, according to Egyptian political scientist Gawdat Bahgat these reserves could drastically change the region's energy outlook. However it would take several years to exploit the resources and full utilization would depend on agreements on maritime borders and geopolitical considerations.<sup>[3]</sup>

William Engdhal comments that the discoveries are having enormous political, geopolitical and economic consequences and that they could also have potential military consequences given the political tensions throughout the region.<sup>[4]</sup>

### Impact on Turkish-Cypriot Relations

Cyprus has been exploring for hydrocarbon reserves in the Eastern Mediterranean basin and signed agreements with Lebanon and Egypt to delineate exploration boundaries. However the state of Cyprus as a divided island complicates the issue and Turkey has protested that the authorities in Turkish-occupied northern Cyprus had not been consulted. Turkey has argued that not exploration should take place until a settlement is reached between the two countries, however the Cypriots have refused to cease activities.<sup>[5]</sup>

Turkey, for its part, announced in September 2011 that it would send a "research" ship to start oil and gas exploration in the region, with a warship as an escort.<sup>[6]</sup>

### Syria-Lebanon

According to *Syria Today*, Syria has traditionally lagged behind other countries in the region when it comes to developing its offshore sector. Syria's first offshore licensing round in 2007 only attracted one bid. However Syrian officials believe that the offshore discoveries made in the Mediterranean, Egypt, Palestine, Lebanon and Cyprus will make Syrian blocks more attractive.<sup>[1]</sup>

In October 2010 Lebanese prime minister Saad al-Hariri said that the country would soon define its offshore boundaries with Syria and move ahead with licensing of exploration blocks, noting that they had experienced some differences with Syria.<sup>[7]</sup>

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## Israel

Prior to the discovery of a number of gas fields, Israel had limited energy resources and was highly dependent on suppliers in Russia, Central Asia, Latin America and elsewhere. This was in part because of the reluctance of international oil companies to operate in Israeli waters for fear of antagonizing Arab producers or the Iranian regime. Following the discoveries, Gawdat Bahgat believes that Israel has the potential to transform itself into a gas exporter.<sup>[8]</sup>

In 2009 Israel's exploration partner Noble Energy discovered the Tamar field some 50 miles west of the Israeli port of Haifa, with an estimated 8.3 trillion cubic feet (tcf) of natural gas reserves. Tamar was the world's largest gas discovery in 2009.<sup>[6]</sup>

It is unknown whether Israel's Tamar and Leviathan fields stretch into the territorial waters of its northern foe Lebanon, however the fields are likely to be part of much bigger potential oil and gas reserves in the Eastern Mediterranean and so this may be the case. Beirut asked the UN to help mark a temporary sea boundary between Lebanon and Israel, to which the UN agreed and which is being studied by the Israelis. However the task could be difficult due to mutual mistrust and the complicated geography of the coastline.

*Time* magazine suggests that the potential fossil-fuel wealth off the Israeli and Lebanese coastline could turn the Mediterranean into a potential theatre of conflict once again between the Israelis and Hezbollah, as the Lebanese group are trained in underwater sabotage and coastal infiltrations. The Israeli navy reportedly presented to the government a maritime security plan costing between \$40 million and \$70 million to defend the gas fields.<sup>[9]</sup>

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# Syria-Russia

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## Relations between Syria and the Soviet Union

During the 1970s and 1980s the Soviet Union, along with Czechoslovakia and Romania were active in developing Syria's infrastructure. Syrian refinery workers underwent training in Romania and the Soviet Union continued to lend assistance for power plant projects, including the US \$97 million Tishrin plant, a joint venture undertaken by the Soviet Union's Technopromexport and Syria's Milihouse.<sup>[1]</sup>

## Relations between Syria and post-Soviet Russia

Syria, having been the Soviet Union's main strategic ally in the Middle East throughout the 1970s and the 1980s, came much lower down in Moscow's list of foreign policy priorities during the 1990s, according to Andrei Murtazin of RIA Novosti.<sup>[2]</sup>

The projects developed between Syria and the Soviet Union created large sums of debt (as much as US \$12 billion), which affected the relationship between Putin's Russia and Syria. Relations remained sour until Putin and Bashar al-Assad met in 2005, after which they improved dramatically. Military considerations and the Russian naval base at Tartous played a large part in these deepening relations. However on the back of this came the advent of Russian oil exploration throughout Syria, as well as Russian oil companies such as Tatneft and Sroytransgaz building gas processing plants, oil refineries and petrochemical complexes within Syrian territory.<sup>[3]</sup> The *Moscow Times* reported that Russian's investment in Syrian infrastructure, energy and tourism amounted to US \$19.4 billion in 2009.<sup>[4]</sup>

According to comments made by Ali Hamra of the Syrian daily *Al Watan* in 2010, Syrian are interested in attracting Russian companies into large economic project, likely to include the development of Syrian oil and gas fields as well as construction projects in fields such as power generation, sea ports and the renovation of Syria's industrial infrastructure. Russian oil and gas companies were also reported to be interested in partnering with the Syrian government in constructing additional refinery capacity.<sup>[5]</sup>

## Impact of Unrest 2011-12

When the EU imposed sanctions on President Assad's Syrian regime in 2011, Russia stood to benefit from the consequent changes to world oil markets and a boost in the market value of Russia's "Urals crude". As Syria's heavy grade crudes are of a similar grade to the Urals crude, the Russian crude was viewed as an alternative source of supply following constraints on exports of Syrian oil.<sup>[6]</sup>

Russia was also reported to be continuing to supply the Syrian regime with shipments of gas oil in early 2012. According to trading and shipping sources, at least four tankers were making voyages to Syria from the Black Sea.<sup>[7]</sup>

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# Social and Environmental Impacts

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## Environmental Impacts of Syrian Extractives Industries

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### Oil pollution

According to the chairman of Syrian-Chinese al-Kawkab, the contamination of soil with crude oil is one of the most prominent environmental problems encountered in Syria.<sup>[1]</sup>

In addition, an EU document warns that Syrian territorial waters and the Syrian coastline, with its oil refineries and power plants, are exposed to a serious risk of oil pollution, both from maritime traffic related sources and from land-based facilities.<sup>[2]</sup>

As a consequence of the war between Hizbollah and Israel in neighbouring Lebanon in 2006, an oil spill caused by the Israeli bombardment of the Jiyeh power plant in Lebanon reached the Syrian coastline, endangering the environment.<sup>[3]</sup>

In 2011, in the context of the popular uprising against Assad's regime, pipelines were targeted and attacked on several occasions, including an attack in July 2011 which caused 1,500 barrels of crude oil to leak into the waters of a nearby dam. Numeir Makhoul, chairman of the state-owned Syrian Company for Oil Transport (SCOT), commented that the oil had leaked into a main lake that supplies the Western agricultural area with irrigation water.<sup>[4]</sup>

### Water Crisis

A water crisis in the Middle East has escalated over recent years. Dwindling resources, affected by agricultural and industrial initiatives and population growth, have elevated the strategic importance of water in the region.<sup>[5]</sup>

Water is an important resources in the production of oil and gas and the issues and impacts of water on the oil and gas sector have been gaining prominence in recent years.<sup>[6]</sup> Deir Ez Zour, the region which produces most of Syria's oil has been particularly impacted by the water crisis since 2005, which has crippled agricultural production.<sup>[7]</sup>

The Arab world has criticized Turkey for its part in exacerbating the water crisis in Syria and other neighbouring countries. The Turkish mountains are home to the headwaters of the Tigris and Euphrates rivers and the Turks have built dozens of dams limiting the flow of water to the Arab world downstream. According to Hussein Amery, a water specialist, "the Arabs, the Iraqis and the Syrians feel very much that Turkey is asserting itself as a regional hydrological superpower", claiming that the water crisis has fuelled resentment against the Turks.<sup>[8]</sup>

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## Environmental Initiatives

The Syrian Ministry of Environment was established in 2009. Since then the country has been working on a number of environmental protection initiatives pertaining to the oil and gas industry. An environmental program was developed aimed at prevention of pollution and the the utilization of natural resources. The Ministry of Oil was reportedly working with Hagler Bailly Consulting on environmental protection measures for the industry.<sup>[9]</sup>

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# Resource Transparency Opportunities

## EITI

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| Want to teach yourself about the EITI? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
|----------------------------------------|------------------------------------------------|

### EITI Compliance

Countries seeking to achieve EITI Candidate status must meet five sign-up requirements, and for a country to achieve EITI Compliance, it has two and a half years to be validated as a Compliant country. Once a country is Compliant, the country must undergo Validation at least every 5 years, or upon the request from the EITI International Board.<sup>[1]</sup>

As of January 2013 18 countries were "EITI compliant", namely: Azerbaijan, Ghana, Iraq, Kyrgyz Republic, Mauritania, Mozambique, Nigeria, Peru, Timor-Leste, Zambia, Central African Republic, Liberia, Mali, Mongolia, Niger, Norway, Tanzania and Yemen. There were a further 18 "Candidate Countries": Afghanistan, Cameroon, Chad, the Democratic Republic of Congo, Guineau, Sao Tome and Principe, the Solomon Islands, Trinidad and Tobago, Albania, Burkina Faso, Cote d'Ivoire, Gabon, Guatemala, Indonesia, Kazakhstan, Congo, Sierra Leone and Togo. Madagascar was temporarily suspended at the time.<sup>[2]</sup>

### Validation Requirements

#### Sign-Up

The EITI rules state that a country applying for Candidate status must meet the following sign-up requirements:

1. The government is required to issue an unequivocal public statement of its intention to implement the EITI.
2. The government is required to commit to work with civil society and companies on the implementation of the EITI.
3. The government is required to appoint a senior individual to lead on the implementation of the EITI.
4. The government is required to establish a multi-stakeholder group to oversee the implementation of the EITI.
5. The multi-stakeholder group, in consultation with key EITI stakeholders, should agree and publish a fully costed work plan, containing measurable targets, and a timetable for implementation and incorporating an assessment of capacity constraints.<sup>[3]</sup>

#### Preparation

The government is required to: ensure the engagement of civil society in the process; engage companies; and remove legal and regulatory obstacles to the implementation of the EITI. The multi-stakeholder group is required to agree a definition of materiality and the reporting templates, which define what revenue streams are included in company and government disclosures. The organisation appointed to produce the EITI reconciliation report must be perceived as credible, trustworthy and technically competent. The government is then required to ensure that all relevant companies and government entities report and that both company and government reports are based on accounts audited to international standards.<sup>[4]</sup>

## Disclosure

Companies must comprehensively disclose all material payments in accordance with the agreed reporting templates, and government agencies must comprehensively disclose all material revenues. The multi-stakeholder group must also be content that the organisation contracted to reconcile the company and government figures did so satisfactorily, and the reconciler must ensure that the EITI Report is comprehensive, identifies all discrepancies, where possible explains those discrepancies, and where necessary makes recommendations for remedial actions to be taken.<sup>[4]</sup>

## Dissemination

The government and multi-stakeholder group must ensure that the EITI Report is comprehensible and publicly accessible to encourage that its findings contribute to public debate.<sup>[4]</sup>

## Review and Validation

Oil, gas and mining companies must support EITI implementation, and the government and multi-stakeholder group are encouraged to take steps to act on lessons learned, address discrepancies and ensure that EITI implementation is sustainable. Implementing countries are required to submit Validation reports in accordance with the deadlines established by the Board.<sup>[4]</sup>

## Retaining Compliant Status

Compliant countries must maintain adherence to all the requirements listed above in order to retain Compliant status.<sup>[4]</sup>

## EITI Criteria

- 1. Publication:** Regular publication of all material oil, gas and mining payments by companies to governments ("payments") and all material revenues received by governments from oil, gas and mining companies ("revenues") to a wide audience in a publicly accessible, comprehensive and comprehensible manner.
- 2. Audit:** Where such audits do not already exist, payments and revenues are the subject of a credible, independent audit, applying international auditing standards.
- 3. Reconciliation:** Payments and revenues are reconciled by a credible, independent administrator, applying international auditing standards and with publication of the administrator's opinion regarding that reconciliation including discrepancies, should any be identified.
- 4. Scope:** This approach is extended to all companies including state-owned enterprises.
- 5. Civil Society:** Civil society is actively engaged as a participant in the design, monitoring and evaluation of this process and contributes towards public debate.
- 6. Work Plan:** A public, financially sustainable work plan for all the above is developed by the host government, with assistance from the international financial institutions where required, including measurable targets, a timetable for implementation, and an assessment of potential capacity constraints.<sup>[4]</sup>

## EITI Implementation by country

### Iraq

*Main article: EITI in Iraq*

### Niger

*Main article: EITI in Niger*

## External Links

Official Website: [www.eiti.org](http://www.eiti.org) <sup>[5]</sup>

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# Global Witness

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|----------------------------------------------------------|------------------------------------------------|
| Want to teach yourself about how to handle oil revenues? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
|----------------------------------------------------------|------------------------------------------------|

Global Witness is a non-profit organisation headquartered in London which describes itself as exposing "the corrupt exploitation of natural resources and international trade systems, to drive campaigns that end impunity, resource-linked conflict, and human rights and environmental abuses". <sup>[1]</sup>

Founded in 1993, Global Witness has been a key player in many of the major international mechanisms and initiatives that have been established to address these issues; including the Kimberley Process governing production of diamonds and precious stones, and the Extractive Industries Transparency Initiative (EITI).

## Investigations and results

Global Witness claims their investigations have had direct and major impacts, such as the International Monetary Fund (IMF) withdrawal from Cambodia in 1996 over corruption in the logging industry,<sup>[2]</sup> the imposition of timber sanctions on Charles Taylor's Liberia in 2003,<sup>[3]</sup> and the precedent-setting arrest of timber baron Gus Kouwenhoven in the Netherlands in 2005.<sup>[4]</sup>

## Oil and Gas

Global Witness started producing reports on the oil and gas industry in 2004 when its report **Time for Transparency** detailed abuse of natural resources in Kazakhstan, Congo Brazzaville, Angola, Equatorial Guinea and Nauru.<sup>[5]</sup> Reports on Russia's gas trade with the countries of Eastern Europe and the EU followed.<sup>[6]</sup>

In September 2009 Global Witness produced a report which provided details of the lack of transparency in the way Sudan distributes oil revenues between the government in Khartoum and the autonomous government of South Sudan.<sup>[7]</sup>

## Conflict minerals

Global Witness' work on conflict minerals focuses on the Democratic Republic of Congo (DRC) where fighting is fuelled by the trade in valuable minerals such as cassiterite, coltan, wolframite and gold.<sup>[8]</sup>

It was also one of the first organisations to bring the world's attention to the problems of conflict diamonds in countries such as Liberia, Sierra Leone, Angola, the DRC, and Cote d'Ivoire. The organisation is an official observer of the Kimberley Process and continues to campaign for the strengthening and effective implementation of its rules.<sup>[9]</sup> However in December 2011 Global Witness made the decision to leave the process, due to concerns that the mechanism was no longer proving effective in achieving its objective.<sup>[10]</sup>

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## External Links

Official website: [www.globalwitness.org](http://www.globalwitness.org) <sup>[11]</sup>

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# Natural Resource Charter (NRC)

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|----------------------------------------------------------|------------------------------------------------|
| Want to teach yourself about how to handle oil revenues? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
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The Natural Resource Charter, as part of the resource transparency movement, is a set of principles to guide governments' and societies' use of natural resources so these economic opportunities result in maximum and sustained returns for a country's citizens. It outlines tools and policy options designed to avoid the mismanagement of diminishing natural riches, and ensure their ongoing benefits.<sup>[1]</sup>

## Foundation

The charter was conceived by economist Paul Collier, as he worked on his book the *Plundered Planet*. Recognising the precedent set by the EITI, the charter is an attempt to extend the principles of good governance across every area of natural resource management. A draft of the charter was announced in February 2009.<sup>[2]</sup> As well as Collier, the charter was sponsored by a number of academics and the Revenue Watch Institute.<sup>[1]</sup>

Collier's idea is that natural resources are key to the development of many countries, particularly in Africa. But the reason so many countries have suffered from the Resource Curse is a series of breaks in a crucial chain of decisions required to ensure effective exploitation of resources: the lack of sufficient investment in the discovery process, failure to impose adequate taxation, shortage of domestic investment of revenue, and the need to 'invest in investments' by building civil service capacity to manage investment portfolios.<sup>[3]</sup>

## Precepts

The charter is made up of a number of precepts, or basic principles. These are thought to be universally applicable to all natural resource producing countries, in the same way as the Universal Declaration of Human Rights. Each of the principles has a detailed explanation and an accompanying document on ways to achieve it on the charter's website.<sup>[4]</sup>

## Overarching Issues

- Precept 1: The development of natural resources should be designed to secure maximum benefit for the citizens of the host country.
- Precept 2: Extractive resources are public assets and decisions around their exploitation should be transparent and subject to informed public oversight.

## Upstream Issues

- Precept 3: Competition is a critical mechanism to secure value and integrity.
  - Precept 4: Fiscal terms must be robust to changing circumstances and ensure the country gets the full value from its resources.
  - Precept 5: National resource companies should be competitive and commercial operations. They should avoid conducting regulatory functions or other activities.
  - Precept 6: Resource projects may have serious environmental and social effects which must be accounted for and mitigated at all stages of the project cycle.
  - Precept 7: Resource revenues should be used primarily to promote sustained economic growth through enabling and maintaining high levels of domestic investment.
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## Downstream Issues

- Precept 8: Effective utilization of resource revenues requires that domestic expenditure be built up and gradually smoothed to take account of revenue volatility.
- Precept 9: Government should use resource wealth as an opportunity to secure effective public expenditure and to increase the efficiency of public spending.
- Precept 10: Government policy should facilitate private sector investments in response to new opportunities and structural changes associated with resource wealth.

## Global Responsibility

- Precept 11: The home governments of extractive companies and international capital centers should require and enforce best practice.
- Precept 12: All extraction companies should follow best practice in contracting, operations and payments.

## Institution

The charter is at present a draft put together by a group of leading international scholars. In March 2010, the charter announced that it had an advisory board which includes former president of Mexico Ernest Zedillo, and African businessman Mo Ibrahim.<sup>[5]</sup>

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# Resource Curse

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|--------------------------------------------------|------------------------------------------------|
| Want to teach yourself about the resource curse? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
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The "Resource Curse" (sometimes termed the "paradox of plenty") refers to the theory that natural resource wealth and a high degree of dependency on natural resources can sometimes paradoxically create negative development outcomes in producing countries, due to weakened governmental institutions, neglect of other key sectors of the economy, corruption, high income inequality and other factors.<sup>[1]</sup>

## Evidence and Research

The idea that natural resources can result in poor development outcomes has been in play since the 1950s, when it was hotly contested by the ideological camps of the Left and Right. Empirical data began to accumulate to support the idea over time. In the 1970s Gobind Nankani, a vice-president at the World Bank, showed that a group of mineral exporting countries grew on average by 1.5 percent per year over the period 1960 to 1976, about half the growth in a control group of non resource-rich countries.<sup>[2]</sup> In 1988 a study commissioned by the World Bank examined the windfalls accruing to six oil-rich countries during the boom of the 1970s and concluded that those states had performed less well than other, resource-poor countries.<sup>[3]</sup>

At the end of the 1990s Jeffrey Sachs and Andrew Warner's publication "Natural Resource Abundance and Economic Growth" examined 97 countries over a period of 18 years (1971 - 1989) and found that states with a high abundance of natural resource exports had abnormally slow economic growth in general, relative to other countries. The study became the basis of a growing recognition of the need to address the problems that natural resource abundance can create in developing societies.<sup>[4]</sup>

## Opponents of the Term

Some economists have resisted the term "resource curse" because they claim it sounds fatalistic.<sup>[5]</sup> Oxford professor Paul Collier suggests that the term poses the problem the wrong way round, since he estimates there are more natural resources in developed countries than in developing ones. The dominance of natural resource industries in some developing countrys' economies is simply, he states, due to the fact that they have had few other options for economic development, which in turn is due to a whole host of political and social factors. Collier argues that for the world's "Bottom Billion" - the poorest billion people on the planet - a greater problem is rather that their natural resources have not been discovered or developed enough.<sup>[6]</sup>

Others have resisted that the phenomenon is inevitable, arguing that any resource curse must be contingent. Paul Collier cites the case of Botswana, for example, which has experienced rapid growth since the discovery of diamonds.<sup>[7]</sup>

## Attitudes of Major Institutions

### International Institutions

The International Monetary Fund has published papers discussing how to address the resource curse in Nigeria<sup>[8]</sup> and Botswana.<sup>[9]</sup> For its part, the World Bank uses the term "resource curse"<sup>[10][11]</sup> while arguing that it is not inevitable and can be avoided by good governance.

### Oil Companies

The attitude of private oil companies towards acceptance of the term varies, however in a 2004 speech Nick Butler, BP's Vice-President for Strategy and Policy Development, made the following comment in acknowledgment of the phenomenon: "The reality of the problems which have afflicted a number of different countries as a result of natural resource development is undeniable. I am convinced that there are things we can do to mitigate many of the problems but it would be quite wrong to start from a position of denial."<sup>[12]</sup>

On the other hand, in an advertisement from 2006, US major ExxonMobil rejected use of the term Resource Curse, but said it supported the Extractive Industries Transparency Initiative (EITI) process because it acknowledges that good governance is necessary to deliver benefits from oil production, and that transparency is a part of that. The advertisement made the point that "disparaging the resource itself is not the answer."<sup>[13]</sup>

## Economic Symptoms

### Dutch Disease

So-called "Dutch disease" is the effect on a country's economy when it earns a lot of revenues from exporting a natural resource. It was named after the period in the Netherlands when a decline in the manufacturing sector was witnessed during the 1960s following the discovery of a major natural gas field. The theory goes that oil exports result in large inflows of foreign currency, which in turn tends to lead to the appreciation of the local currency and makes exports from other sectors uncompetitive. Simultaneously the earning power of the oil sector draws in labour and capital, adversely affecting other sectors of the economy, whether they are export-oriented or not.<sup>[14]</sup>

### Oil and Debt

Economists have long noted the link between oil revenues and higher fiscal spending. Overspending during a commodity boom, thanks to access to cheap credit in international capital markets, can lead to accumulation of high levels of debt, leading to high interest rate spreads during periods of lower natural resource prices. Some have attributed the "resource curse" in oil-rich countries to the "debt overhang" which occurred in the 1970s when these countries used commodities as collateral to take on excessive debt when oil prices were high. However a collapse in oil prices in the 1980s left these countries with no ability to service their debts.<sup>[15]</sup>

A 2005 study by the Institute for Public Policy Reform analysed data from 101 countries for the period 1991 to 2002 and concluded there was a statistical correlation between increased oil production and exports, and public debt in the producing country.<sup>[16]</sup> The case of Venezuela during the 1970s oil boom displays the symptoms detailed above, where President Carlos Andres Perez increased public spending dramatically, leading to high levels of debt and ensuing management problems through commodity price cycles.<sup>[17]</sup>

## Political Symptoms

### Weakening of Institutions

Many political scientists have outlined a "resource curse" which both makes rulers in a state less accountable, and state institutions weaker. They are less accountable because the presence of resource revenues means a state is not under the same pressure to raise taxes in order to provide welfare and public services (to a greater or lesser extent depending on the degree of their resource wealth). State institutions become weaker because they do not develop the same degree of discipline, through meritocracy and against measured goals and results. The most notable exponent of this theory has been Professor Terry Lynn Karl, who studied the cases of Venezuela, Nigeria, Algeria and Iran for her analysis.<sup>[18]</sup>

### Conflict

Analysts of the resource curse point to many cases where natural resource wealth creates or exacerbates conflicts, either between states or within them. Notable cases include:

- South Sudan, where the presence of oil renewed tensions between the Khartoum government in Sudan and the newly formed country.
- The oil-rich Cabinda region of Angola, where a secessionist movement has flourished since the discovery of oil.
- Nigeria, where the concentration of oil in the Niger Delta was a contributing factor to the Nigerian Civil War of 1966-70, and ever since has been a cause of significant unrest.<sup>[19]</sup>

## Avoiding the Resource Curse

Mechanisms and policies which have been proposed to avoid the "resource curse" include: simply leaving the oil in the ground (one of the more extreme proposed solutions that allows an economy and society time to adjust before inflows arrive, but opposed by the private sector); economic diversification (to develop other sources of value and reduce dependency on mineral exports); "revenue sterilisation" (to neutralise the impact of windfall revenues by resisting spending pressures); and stabilisation funds (set up to invest revenues outside the domestic economy and guard against fluctuating commodity prices).<sup>[20]</sup>

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# Resource Transparency Movement

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|----------------------------------------------------------|------------------------------------------------|
| Want to teach yourself about how to handle oil revenues? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
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Many organisations work in the resource transparency area, such as Transparency International, Global Witness and the Revenue Watch Institute.

## History

What might be called a coherent movement for resource transparency really evolved in the 1990s on two different tracks.

First, NGOs like Transparency International (TI) and Global Witness were founded.<sup>[1]</sup> TI was dedicated to changing the legal and regulatory environment which governs the way business in general is done, and Global Witness was set up to investigate and expose individual cases of corruption, especially those related to mining industries and oil and gas.

The issue of transparency around natural resources gained great public attention in Western countries with the exposure of the "Blood for Diamonds" scandal<sup>[2]</sup> in which it became clear that wars in some African countries were being prolonged by the fact that both governments and rebel factions could finance themselves through selling precious stones onto world markets.

In parallel to the projects of individual organisations, there were several large initiatives from multilateral international organisations.

In 1997, the OECD approved an anti-bribery convention, which urged member states to pass laws making it illegal for companies under their jurisdiction to use bribery anywhere in the world.<sup>[3]</sup>

In 2003, the United Nations General Assembly passed the United Nations Convention Against Corruption. Since that time, over 130 countries have signed up to the convention, which obliges them to introduce a wide range of measures in their own laws to combat corruption.<sup>[4]</sup>

These two tracks, of civil society activism and international treaties and conventions, are mutually reinforcing.

## EITI

The EITI, itself founded in 2002, can be considered as inbetween the two tracks, since it is an international initiative which formally and specifically engages the civil society sector.

*Main article: Extractive Industries Transparency Initiative (EITI)*

## Natural Resource Charter

In 2009, a group of independent experts set up a website and loose organisation called the Natural Resource Charter which seeks to lay out guidelines for best practice right across the energy industry, embracing the EITI but extending beyond it.<sup>[5]</sup>

The charter is governed by an advisory board which includes the former president of Mexico, Ernesto Zedillo, and the African businessman Mo Ibrahim.<sup>[6]</sup> The founder of the charter was economist Paul Collier, the leading world scholar on the link between natural resources and problems in development.<sup>[7]</sup>

*Main article: Natural Resource Charter (NRC)*

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## Country-specific activities

Activity in Libya

Activity in Iraq

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# Revenue Watch Institute (RWI)

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|----------------------------------------------------------|------------------------------------------------|
| Want to teach yourself about how to handle oil revenues? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
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First launched in 2002 as the Revenue Watch Program of the Open Society Institute (OSI) and spun off into an independent organization in June 2006. According to their official site, the Revenue Watch Institute is the only organization dedicated exclusively to addressing the special problems of oil, gas and mining-dependent countries—countries where poverty, conflict and corruption too often converge.<sup>[1]</sup>

## Activities

RWI characterises its work as mainly with civil society, helping them oversee mining industries across the entire value chain, from wellhead to international markets. The organisation also makes many small grants to partner institutions in developing countries.<sup>[1]</sup>

RWI was a key founding member of the EITI in 2002 and has sat on its International Advisory Board. The institute defines its projects as supporting the EITI process in many countries around the world.<sup>[2]</sup>

RWI also carries out analysis of data found in EITI reports for participating countries. As part of this process they review the quality of recent reports and extract key pieces of revenue data, then rank the various reports according to a set of pre-determined indicators.<sup>[3]</sup>

## External Links

Official Website: [www.revenuewatch.org](http://www.revenuewatch.org) <sup>[4]</sup>

Data Analysis: EITI Reports: Results and Analysis <sup>[5]</sup>

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# Transparency International

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|----------------------------------------------------------|------------------------------------------------|
| Want to teach yourself about how to handle oil revenues? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
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Transparency International (TI) is the world's largest civil society organisation working on issues of corruption and transparency. It was founded in 1993 by Peter Eigen, a former regional director in Africa from the World Bank.

Eigen explained that in his 25 years at the World Bank, bad projects often got funded because they had the support of leading officials, backed by corruption. The purpose of TI was to put the issue of corruption on the agenda of the World Bank, large donor countries, and the development process.<sup>[1]</sup>

## Major Programs

The project for which TI is most known is its Corruption Perceptions Index, an annual report issued since 1995. In it, business people are asked for their perceptions of the influence of corruption in their country.<sup>[2]</sup>

As well as the index, TI also publishes a range of reports and position papers on various issues related to transparency.<sup>[3]</sup>

## Oil and Gas

In March 2011, TI issued a report about the status of transparency among global oil companies. It follows a 2008 report that was built on a 2005 study by the charity Save the Children into the same issue, but the methodology was adapted.<sup>[4]</sup>

## External Links

Official Website: [www.transparency.org](http://www.transparency.org) <sup>[5]</sup>

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# Transparency of Contracts

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|-----------------------------------------|------------------------------------------------|
| Want to teach yourself about contracts? | "Teach Yourself Oil" Governance <sup>[1]</sup> |
|-----------------------------------------|------------------------------------------------|

The drawing up of contracts is necessary in the extractive industries in order to give precise detail and legal specificity to the obligations of a state and company or consortium of companies involved in a project. Many contracts establish important tax, environment and investment provisions with major implications for a producing country.<sup>[1]</sup>

The 2009 "Contracts Confidential" report from Revenue Watch Institute notes that in recent years there has been a growing movement calling for greater contract transparency, within and beyond the extractives sector. International jurisprudence on the right to information, which increasingly supports the disclosure of agreements, as well as domestic freedom of information (FOI) laws across the world, are trends which offer important tools of argument and procedure in breaking the barrier to disclosure while balancing other legitimate interests.<sup>[1]</sup>

## Benefits

According to Ingilab Ahmadov of the Public Finance Monitoring Center in Azerbaijan, it is widely known that a transparent "company-state" relationship is a key factor for resource-rich countries seeking efficient management of their natural resources to benefit current and future generations. He argues that contract transparency is necessary because an outside observer who wishes to compare similar contracts across or within countries needs a way to determine the extent to which it takes society's interests into account. To judge the fairness of these contracts, one must first have access to them.<sup>[2]</sup>

Proponents of contract transparency argue that the publishing and scrutiny of contracts allows government to be held accountable for all contracts they enter. In their report on the issue, Revenue Watch argue that "contract transparency is critical to addressing better resource management and bringing contract stability to an industry that sees its contracts renegotiated more than any other."<sup>[1]</sup>

## Opposition and counter-arguments

One of the most commonly aired arguments against transparency of contracts is that this openness impairs a company's commercial interests and weakens its competitive position. Confidentiality clauses are a common and legitimate feature in contracts between private parties and are used to prevent information from coming into the hands of public groups.<sup>[1]</sup>

This assertion is contradicted by proponents of transparency such as Ingilab Ahmadov, who argues that industry specialists in any case are aware of all or almost all contracts. Given the high level of information technology and close cooperation on joint projects in today's oil industry, it is unrealistic to maintain "trade secrets" as they existed in the 1980s and 1990s. According to Ahmadov, practice has shown that the commercial interests of parties involved in oil and gas contracts do not suffer negatively from the exposure, but on the contrary are able to benefit from a badly needed enhancement of their public image.<sup>[2]</sup>

Susan Maples, in her report for Revenue Watch Institute, suggests that one reason why companies are not eager to embrace contract transparency is that the information asymmetry between different parties resulting from secrecy arrangements allows certain companies an advantage, enabling them to negotiate more favourable commercial deals. Maples admits that the arguments in support of contract secrecy are not negligible arguments, but they overlook the special obligations of governments and the democratic right to information.<sup>[1]</sup>

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## The EITI and Contract Transparency

As of 2011, the Extractive Industries Transparency Initiative (EITI) did not make demands on participating countries regarding contract transparency. There have been calls from transparency activists for the initiative to widen its remit to include contract transparency.<sup>[3]</sup> However EITI representatives argue that it is important that the EITI retains precisely this tight focus in order to foster wider change and provoke debate on broader governance issues.<sup>[4]</sup>

## External Links

Revenue Watch Report: Contracts Confidential: Ending Secret Deals in the Extractive Industries <sup>[5]</sup>

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## Transparency of Global Oil Companies (TI Report)

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In March 2011, Transparency International (TI) issued a report on the transparency of information provided by 42 major oil and gas companies around the world.<sup>[1]</sup>

## Findings

The report summarised its analysis into several main findings:

- Oil and gas companies are increasingly adopting and making publicly available anti-corruption programmes, but there are many companies that still do not publish their anti-corruption codes, policies or measures.
  - Public disclosure of partnerships and subsidiaries, including their countries of incorporation, are key elements of organisational disclosure and the average results in this section were relatively high. Many national oil companies have a good level of disclosure. However, disclosure of equity or field partners in upstream operations remains infrequent, despite the fact that equity minority partnerships often present corruption risks.
  - Country-level disclosure on international operations has improved since the 2008 PRT report, and reporting on production levels has become a broadly accepted standard and there are examples of good disclosure for financial data and reserves. But country-level disclosure on international operations remains weak; many companies do not disclose any financial data on a disaggregated country-level. The host country environment itself cannot be exclusively blamed for poor disclosure. In the same host countries, often described as 'difficult environments', some companies disclose extensive information, while the others disclose little or none at all.
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## Key Policy Recommendations

### For Companies

- Detailed anti-corruption programmes should be publicly available
- Companies should undertake voluntary independent assurance of anti-corruption programmes
- Companies should publish details of their subsidiaries and fields of operations
- Oil and gas companies should increase their reporting on a country-by-country basis
- Companies should join the Extractive Industries Transparency Initiative
- Companies should create and maintain up-to-date corporate websites

### For National Oil Companies (NOCs)

- All NOCs should introduce internationally or generally accepted accounting standards, as well as publish independently audited accounts
- The relationships between home governments and NOCs should be clear and publicly disclosed

### For Public Bodies

- The European Union should amend relevant legislation to require EU-registered companies to report on their operations on a country-by-country basis
- All governments that are home to oil and gas producers should require companies to report on their operations on a country-by-country basis
- Stock exchanges should enforce regulations providing for country-level reporting

### For the Investor Community

- International rating agencies and risk analysts should include anti-corruption measures in their risk evaluation models where relevant
- The International Accounting Standards Board should require companies to report key information on a country-by-country basis
- Corporate responsibility indices should include reporting on anti-corruption programmes, organisational disclosure and country-level disclosure

## Company Grades

Grades of Companies Operating in Libya

Grades of Companies Operating in Iraq

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# WikiLeaks

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WikiLeaks is a non-profit media organisation with the stated goal of improving the transparency of governments, corporations and other organisations, and thereby ultimately reducing corruption and creating stronger democracies. The organisation was launched in 2007<sup>[1]</sup> by Julian Assange, an Australian internet activist.<sup>[2]</sup> Since its formation, WikiLeaks has released more classified intelligence documents than the rest of the world press combined, according to the organisation's website.<sup>[1]</sup>

## How WikiLeaks Works

Wikileaks publishes private, secret and classified media provided by anonymous news sources and whistleblowers. When information is submitted to WikiLeaks via a high-security electronic drop box, the organisation's journalists analyse and verify the material and write a news piece describing its significance to society. WikiLeaks then publishes both the news story and the original source material, enabling readers themselves to analyse the story in the context of the original source material.<sup>[1]</sup>

## Notable breakthroughs

Since 2007, WikiLeaks has broken many stories on controversial issues including government and corporate transparency, suppression of free speech, diplomacy and intelligence, censorship, war, and corruption.<sup>[1]</sup>

WikiLeaks broke into mainstream public knowledge in 2007, when it leaked a manual describing the day-to-day operations of the US military's Guantanamo Bay detention facility. The manual indicated that some prisoners were designated as off limits to visitors from the International Committee of the Red Cross, which the US military had repeatedly denied.<sup>[3]</sup> In July 2010, WikiLeaks published over 75,000 confidential files relating to the US war effort in Afghanistan, revealing gruesome details of civilian killings by coalition forces, the increase in Taliban attacks, and coalition concerns that neighboring countries like Pakistan and Iran were aiding insurgents in the region.<sup>[4]</sup>

As of March 2012 the Wikileaks full-text search engine, Cablegate, contained over 7,000 cables with the tag "epet", the US state department tag for topics concerning petroleum and natural gas.<sup>[5]</sup>

## Criticism and legal issues

WikiLeaks has drawn intense criticism from governments, organisations and individuals who have had their information leaked.<sup>[6]</sup> Since 2007, Wikileaks has won legal battles with numerous entities, including the US Pentagon, the Chinese Public Security Bureau, the Former president of Kenya, the Premier of Bermuda, Scientology, the Catholic & Mormon Church, the largest Swiss private bank, and Russian companies.<sup>[6]</sup>

The US administration of President Barack Obama pledged to pursue those responsible for the leak of US diplomatic cables in 2010. US Army Private Bradley Manning was arrested in May of that year for disclosure of confidential and classified information connected to a number of WikiLeaks releases. In 2008, Swiss bank Julius Baer Group successfully obtained an injunction shutting down the website by forcing Dynadot, the domain registrar of Wikileaks.org, to disassociate the site's domain name records with its servers, preventing use of the domain name to reach the site. The injunction was, however, dissolved in the same month by a United States district court and the bank dropped the suit in March 2008.<sup>[6]</sup>

However because it acts as the publisher, rather than the discloser, of leaked documents, WikiLeaks enjoys substantial protection in the United States under the first amendment, which protects the freedom of speech, for its publication of US government documents.<sup>[6]</sup>

## External Links

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