

Colombia Oil Almanac

An OpenOil Reference Guide

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Preface

The Colombia Oil Almanac has been created to significantly increase the stock of information available in local languages and contexts among independent journalists, civil society activists and others. The guide will provide a living database of publicly available information around the Colombian extractive industries, not only for journalists but for anybody wanting to know more about the Colombian extractive industries, and as such, be the basis for a locally based knowledge community around the industry.

The Almanac will provide the basis for a series of capacity building workshops for Colombian journalists. The principal behind the workshops is twofold; to focus on creating a group of journalists with a high level of understanding of the topic who will then go on to be the sole administrators of the Spanish version of the wiki, as well as to create a lasting resource of information around the Colombian extractive industries.

The English language version of the Wiki can be seen online at www.colombia.wiki.openoil.net. The information there currently will only increase in quantity and quality as the number of contributors to it increases.

All of the information included here is publicly available, and is clearly referenced (please see the footnotes at the end of each page) which enables the reader to easily find the source of the information for further research. Crucially, it was created using MediaWiki software, which means that there is now an online database of all of the articles included here which can be updated as more information becomes available. This also means that this printed guide is just a snapshot of what the database is at the moment; we hope that it will grow in the future as the online articles are updated.

At the end of the workshop programme, we hope there will be an ever increasing group of energy specialist Colombian journalists who would feel comfortable and be capable of covering the extractive industries, which is essential in Colombia, both for increasing public knowledge and for holding the extractive industries accountable for their actions.

OpenOil has created similar guides for a range of other countries. If you are interested in finding out more, please see our website: <http://openoil.net>, get in touch at wikiguide@openoil.net or telephone +49 30 246 303 622.

Energy Industry Background

Definition of Hydrocarbon Reserves

Overview

Different systems have been used to classify reserves of oil and gas since the industry first developed in the nineteenth century. But the most widely used definitions today are provided by the Petroleum Resources Management System of the American Society of Petroleum Engineers.¹

Reserve estimates are a major driver of value for exploration and production companies. All reserves are estimates of underground reservoirs which cannot be physically inspected and always involve some degree of uncertainty. However, such systems are important in creating a 'universal language' of clear terms and definitions that result in reliable and easily comparable reserve estimations for investors, regulators, governments and consumers.² However it should be noted that around the world, government agencies and organizations use slightly different definitions.

According to the Vice President of petroleum consultancy Ryder Scott, there has been a trend towards commissioning external audits of estimated reserves. With increased attention given to corporate responsibility in financial reporting, he asserts that oil and gas companies are now engaging third-party engineers to evaluate or audit petroleum reserves.³

Reserves

According to the SPE Guidelines, 'reserves' are a subset of 'resources', representing the part of resources which are commercially recoverable and have been justified for development. Reserves can be subsequently divided into the following three categories depending on certainty of recovery.

Proved Reserves

The highest valued category of reserves is "proved" reserves. Proved reserves have a "reasonable certainty" of being recovered, which means a high degree of confidence that the volumes will be recovered. To be clear, reserves must have all commercial aspects addressed. It is technical issues which separate proved from unproved categories.

1" [Petroleum Reserves & Resources Definitions](#)" *Society of Petroleum Engineers*, retrieved 18 January 2012.

2" [SPE Petroleum Resources Management System Guide for Non-Technical Users](#)" *Society of Petroleum Engineers*, retrieved 18 January 2012.

3" [The Reserves Audit](#)" Ryder Scott, retrieved 18 January 2012.

The term 1P is frequently used to denote proved reserves. [BP](#) publishes an annual Statistical Review which details proved reserves for over 50 producing countries.⁴

Probable and Possible Reserves

“Probable” or “possible” reserves are lower categories of reserves, commonly combined and referred to as “unproved reserves,” with decreasing levels of technical certainty. Probable reserves are volumes that are defined as “less likely to be recovered than proved, but more certain to be recovered than Possible Reserves”. Possible reserves are reserves which analysis of geological and engineering data suggests are less likely to be recoverable than probable reserves.

The term 2P is used to denote the sum of proved and probable reserves and 3P the sum of proved, probable and possible reserves. The best estimate of recovery from committed projects is generally considered to be the 2P sum of proved and probable reserves.

Resources

'Resources' denotes less certainty than 'reserves' because some significant commercial or technical hurdle must be overcome prior to there being confidence in the eventual production of the volumes.

Contingent Resources

These are resources that are potentially recoverable but not yet considered mature enough for commercial development due to technological or business hurdles. For contingent resources to move into the reserves category, the key conditions, or contingencies, that prevented commercial development must be clarified and removed. As an example, all required internal and external approvals should be in place or determined to be forthcoming, including environmental and governmental approvals. There also must be evidence of firm intention by a company's management to proceed with development within a reasonable time frame (typically 5 years, though it could be longer).

Prospective Resources

Prospective resources are estimated volumes associated with undiscovered accumulations. These represent quantities of petroleum which are estimated, as of a given date, to be potentially recoverable from oil and gas deposits identified on the basis of indirect evidence but which have not yet been drilled. This class represents a higher risk than contingent resources since the risk of discovery is also added. For prospective resources to become classified as contingent resources, hydrocarbons must be discovered, the accumulations must be further evaluated and an estimate of quantities that would be recoverable under appropriate development projects prepared.

⁴ [BP Statistical Review 2009](#)

External Links

SPE Non-Technical Guide:

www.spe.org/industry/docs/PRMS_guide_non_tech.pdf

Colombian Hydrocarbon Reserves

Overview

Colombia's energy sector is relatively young and has experienced a period of rapid growth in recent years. The size of areas being explored has increased eight-fold since 2003, from 12.5 million hectares to over 100 million hectares in 2011.⁵

Oil

Reserves

According to the *BP Statistical Review* for 2011, Colombian [proven reserves](#) at the end of 2010 stood at 1.9 billion barrels (bbl), representing a rise of 39.1% on the previous year's figures and almost reaching its 1990 level of 2 bbl of reserves. Colombian reserves represented 0.1% of global oil supply.⁶

Colombia's [National Hydrocarbons Agency \(ANH\)](#) believes that reserves could rise to 4 billion barrels by 2020.⁷

Production Levels

Between 2007-9 Colombia's oil production levels rose 42.8% to reach 801,000 barrels per day (bpd) in 2010.

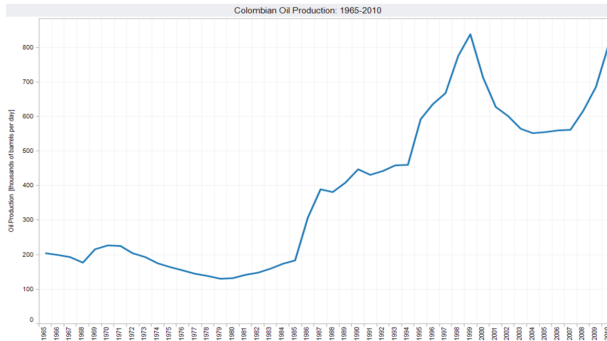
According to Joydeep Mukherji of *Standard and Poor's*, Colombia is likely to reach its goal of 1.5 million barrels per day (bpd) in oil output by 2015. The government set a target of 920,000 bpd for 2011, however production reached almost 930,000 bpd in July 2011. According to his analysis, increases in oil and gas reserves since 2007 can be put down to further investment in existing fields rather than from major new discoveries.⁸

⁵"[Ecopetrol, Colombia's Quiet Energy Giant](#)" *Investor Place*, 21 January 2012.

⁶"[BP Statistical Review of World Energy June 2011](#)" *BP*, June 2011.

⁷"[Colombia Predicts a Bright Upstream Future, as Oil Production Rises](#)" *Petroleum Economist*, 4 January 2010.

⁸"[What is the Outlook for Colombia's Oil Sector?](#)" *Inter-American Dialogue*, 1 August 2011.



Colombian oil production: 1965 - 2010

Gas

Reserves

According to the *BP Statistical Review* for 2011, Colombia's [proven reserves](#) of natural gas at the end of 2010 stood at 0.1 trillion cubic meters, an estimate which has remained broadly stable since 1980.

Most of Colombia's natural gas reserves are located in the Llanos Basin, however the Guajira basin accounted for the majority of production as of 2011. Natural gas production figures have risen with oil production figures in recent years due to greater investment in existing fields, rising domestic consumption and new export opportunities.⁹

Production Levels

In 2010 Colombia produced just 1 billion cubic feet per day of natural gas, with 70% consumed locally and the remainder [exported to Venezuela](#).

However, reflecting on predictions of rising reserves, former ANH Director Zamora claimed that "it's just a matter of time before we are confident enough to move into a totally new stage of our gas industry, which is to open for exports", saying that there could be one or more liquefied natural gas (LNG) plants built in Colombia.

According to the *IEA* a large proportion of the country's natural gas production is re-injected to aid in enhanced oil recovery.

⁹ ["Colombia"](#) *IEA*, retrieved 1 February 2011.

Unconventional Hydrocarbons

As of early 2012 some [shale gas](#) and heavy oil exploration was taking place in Colombia. However the [licensing rounds to take place in 2012](#) were expected to launch investment in unconventional hydrocarbons in the country, where unconventional hydrocarbons were to account for 30% of the areas on offer.¹⁰

The US *IEA* estimates that Colombia has technically recoverable shale gas resources of 19 trillion cubic feet, with proven reserves estimated at 4 trillion cubic feet.¹¹ Colombia's ANH claims that the country could become a significant part of the unconventional gas revolution.

Assessments have put estimated Colombian reserves of [Coal Bed Methane \(CBM\)](#) in the range of 84-480 billion cubic metres. Potential has been indicated in the basins of Bogota, Cauca, Catatumbo, Llanos, Middle Magdalena and Cauca River, and in October 2004 coal miner Drummond announced it would begin drilling for CBM at its Colombian properties.

Other Extractive Industries in Colombia

Aside from oil and gas, Colombia's extractive sector also produces the following minerals.

Coal

Colombia is the USA's largest source of coal imports. The country's coal deposits are concentrated in the Guajira peninsula in the north and in the Andean foothills. The coal is relatively clean-burning, with a sulfur content of less than one percent.

Colombian coal production, which is exclusively carried out by private companies, nearly doubled between 2000-2009, and the Colombian government aspires to double production again by 2019.¹²

According to Mining and Energy Minister Mauricio Cardenas in December 2011, Colombia was producing coal at an annual rate of 75 millions tons per year, a figure which should reach 100 million tons by 2015. Nearly all of the output is exported and Colombia is in the top five or six global coal exporters. According to Cardenas, "it's been a matter of improving security and having a business-friendly government. That's what has done the trick".¹³

10" [Open Round Colombia 2012](#)" *Deloitte*, retrieved 22 January 2012.

11" [Colombia Readies Unconventional Push](#)" *Petroleum Economist*, 1 February 2012.

12" [Colombia Country Profile](#)" *EIA*, retrieved 22 January 2012.

13" [As Colombia ramps up oil exports, it has 'growing pains'](#)" *LA Times*, 25 November 2011.

Coal Bed Methane (CBM)

Coal Bed Methane (CMB) is a gaseous hydrocarbon that occurs along with coal reserves. According to mining company Drummond, Colombian mines could contain up to 2.2 trillion cubic feet (Tcf) of CBM, and CBM has the potential to dramatically increase Colombia's proven natural gas reserves.

Gold

Gold production in Colombia climbed more than 30% over 2011 as a result of high prices for the mineral, attracting both multinational corporations and guerrilla and paramilitary groups who use the resource to finance the ongoing conflict, according to the *New York Times*.¹⁴

In 2010 there were more than 40 international companies exploring for gold in Colombia and the government hopes to produce around three million ounces of gold in 2012, worth approximately half a billion dollars in the market by prices in early 2012 (compared to 1.57 million ounces in 2009 and only 501,500 ounces in 2006).¹⁵

Gems

Historically Colombia has been recognized as an important producer and the world's leading exporter of emeralds.¹⁶

According to the US Geological Survey, between 1995-2005 the country produced 47% of the world's emeralds. As of 2010 remained the top producer of the largest stone, although it may have been surpassed by Zambia in terms of overall output. Reports in 2010 suggested that the country was seeing a boost in exports due to demand from the Indian market for its emeralds.¹⁷

Nickel

According to government estimates, as of 2011 Colombia had six nickel deposits with measured reserves totalling 37.8 million tonnes and 46.48 million tonnes in indicated reserves. The government aspires to increase nickel production to 105,000 tonnes by 2019.¹⁸

Other resources

Colombia also produces: platinum, iron ore, lead, steel, silver and zinc.

14“[In Colombia, New Gold Rush Fuels Old Conflict](#)” *New York Times*, 3 March 2011.

15“[Colombia Jan-May gold output up 33 pct-official](#)” *Reuters*, 3 March 2011.

16“[The Mineral Industry of Colombia](#)” *US Geological Survey*, 2003.

17“[Colombian emerald exports to rebound on India demand](#)” *Colombia Reports*, 26 August 2010.

18“[Colombia Cerro Matoso sees 2011 nickel output down](#)” *Reuters*, 5 August 2010.

Dependency on Extractives Revenues

There are two different measures of oil revenue dependence, as can be seen in the figure below. The first is the ratio of oil revenues to fiscal revenues, or the total income of the government. The second is the ratio of oil revenues to total exports. The IMF estimated 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.¹⁹

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.²⁰

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, displays a higher degree of dependence on oil revenues than Saudi Arabia, which exported around 10.2 million bpd over the same period, or over twenty times more.²¹

Energy Governance Weak Points

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.²² In Libya meanwhile, it was lucrative exploration contracts

¹⁹“[GCC Countries: From Oil Dependence to Diversification](#)”. *International Monetary Fund*, 2003.

²⁰“[Fiscal Policy in Oil Producing Countries During the Recent Oil Price Cycle](#)”. *International Monetary Fund*, February 2010.

²¹“[BP Statistical Review of World Energy June 2011](#)”. *BP*, June 2011.

²²“[Africa: Nigerian generals deny corruption](#)”. *BBC News*, 10 May 1999.

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,²³ who was released on 'compassionate grounds' by the Scottish government. BP denies any lobbying that linked Libyan prisoners to commercial contracts.²⁴

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.²⁵ 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.²⁶ 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.²⁷ 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,²⁸ 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,²⁹ transit fees in ports and along pipelines, such as happened in the Iraqi industry when it fell into disagreement with neighbouring

23“[Libyan controversy adds to BP's woes](#)”. *Washington Post*, 16 July 2010.

24“[A black cloud on the horizon for Anglo-American relations?](#)”. *The Economist*, 21 July 2010.

25“[Corruption and the renegotiation of mining contracts](#)”. *U4*, 30 November 2007.

26“[Managing the 'curse' of natural resources: charter offers guide for politicians](#)”. *The Guardian*, 5 February 2009.

27“[Dynamic Inconsistency](#)”. *Wikipedia*, retrieved 25 October 2011.

28“[Iraq: Post-World War II Through the 1970s](#)”. *US Library of Congress*, retrieved 25 October 2011.

29“[Angola Trade Report](#)”. *US Trade Department*, retrieved 25 October 2011.

Syria, and more recently between Ukraine and Russia,³⁰ and changes in various forms of corporate and other taxes.

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.³¹

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.³² 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.³³

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.³⁴

The 'Energy Mix'

Overview

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 en-

30“ [Q&A: Russia-Ukraine gas row](#)”. *BBC News*, retrieved 25 October 2011.

31“ [The oil service industry: Rigging the market](#)”. *The Economist*, 23 June 2011.

32“ [Glossary of Terms Used in Petroleum Reserves/Resources Definitions](#) ”. *Society of Petroleum Engineers*, retrieved 25 October 2011.

33“ [Cost Recovery And High Oil Price: How Can Host Governments Capture Adequate Revenue? A Case Study Of Nigeria](#)”. *CEPLMP*, 04 June 2009.

34“ [Indonesia to drop cost recovery cap](#)”. *Upstream Online*, 05 January 2010.

ergy mix.³⁵

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%.³⁶

According to the *Economist*, 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 [natural gas](#) is predicted to gain in importance, however energy efficiency will mean that economic growth will be far less energy intensive across the globe.³⁷

[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.

Historical trends

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.

However between 2000-2011 coal's share of the energy mix has 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.

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. The qualification criteria for unconventional resources inevitably shifts over time depending on the availability of exploration and production technologies, the economic environment and other factors. As of 2011 resources such as coal bed methane (CBM), shale gas, frac-

35“ [The Energy Mix](#)” *Planete Energies*, retrieved 1 February 2012.

36“ [The world gets back to burning](#)” *Economist*, 8 June 2011.

37“ [Watts next](#)” *Economist*, 25 January 2012.

tured reservoirs and tight gas sands are considered unconventional resources.³⁸

The *Petroleum Economist* predicts that unconventional resources 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.³⁹

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.⁴⁰

Shale Gas

The *Economist* asserts that the discovery of vast stores of [shale gas](#) will also lead to a significant shift in the world's energy mix, predicting that the location of the planet's biggest shale reserves in China, America, Argentina, Mexico and South Africa, will disrupt traditional geopolitics of energy supply.⁴¹

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, potentially slowing the development of renewable resources. However the industry must first face considerable reputational and regulatory obstacles.⁴²

Coal Bed Methane

[Coal Bed Methane \(CBM\)](#) is one unconventional source which is being developed in Australia, China, India and Indonesia, among other countries.

Oilfield services provider *Halliburton* claims that although the contribution of CBM to the total energy mix was still modest as of 2009, it has impressive potential for the future. According to petroleum engineer Joe Awny, in some region CBM could eventually grow from a supplement to conventional [natural gas](#) supply to a main source of gas. In the long term, he said CBM is expected to be of great significance for the US, India, China, Poland, South Africa, Zimbabwe and elsewhere as a main source of gas supply.⁴³

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

38“ [Unconventional resources](#)” *Schlumberger*, retrieved 9 February 2012.

39“ [Unconventional gas's global potential](#)” *Petroleum Economist*, 18 July 2011.

40“ [Are we entering the golden age of gas?](#)” *IEA*, 2011.

41“ [The World in Figures:Energy](#)” *Economist*, 17 November 2011.

42“ [Shale Gas - A Global Perspective](#)” *KPMG Institutes*, December 2011.

43“ [Coalbed Methane Development—A Vital Part of the Total Energy Mix](#) ” *Halliburton*, 2009.

infancy, however while the global contribution is still minor, it shows a high growth rate. Wind power, for example, showed growth rates above 30% between 1997-2007.⁴⁴

According to a 2011 Progress Report on renewables, renewable energy worldwide has seen 30-40% growth rates in recent years, due to market-creating policies and cost reductions. However, demand for fossil-based energy, such as coal and oil, has outpaced demand for clean energy.⁴⁵

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.

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.

In terms of contributions to growth, over the period 1990-2010 fossil fuels contributed 83% of energy growth, whereas over the period 2010-2030 fossil fuels are predicted to contribute only 64% of growth.

Crude Oil Qualities

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.⁴⁶ The specific gravity of oil is its relative density to water at 60° Fahrenheit.⁴⁷

44“ [World Energy and Population Trends to 2100](#)” *Approaching the Limits to Growth*, October 2001.

45“ [Clean Energy Progress Report](#)” *IEA*, June 2011.

46“ [API Gravity](#)” *Schlumberger Oil Glossary*, retrieved 22 January 2012.

47“ [Tech Talk - Venezuela, heavy crudes, API gravity and refinery gains](#)” *The Oil Drum*, 9 January 2011.

Light Oil

Otherwise known as "conventional oil", light oil has an API gravity of 22° or over.⁴⁸

For example, Saudi Arabia's new blend of super light crude has an API gravity of 44°. ⁴⁹ 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°. ⁵⁰

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.

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.

In Venezuela for example, the Bachaquero Heavy Crude Oil has an API gravity of 17°. ⁵¹

Extra Heavy Oil

Extra heavy oil has an API gravity of less than 10°.

Extra Heavy Oil Natural Bitumen

Otherwise known as "oil sands", bitumen shares many attributes of heavy oil but is even more dense and viscous.

Sulphur Content

Crude oil can also be measured in terms of sulphur content (from "sweet" to "sour"). "Sweet" crude is usually defined as oil with a sulphur content below 0.5%, while "sour" crude has a sulphur content of 0.5% or over. ⁵²

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

48“ [What is Heavy Oil and How is it Formed?](#)” *Rigzone*, retrieved 22 January 2012.

49“ [What is Heavy Oil and How is it Formed?](#)” *Wall Street Journal*, retrieved 22 January 2012.

50“ [Saudi's New Super Light Crude Blend To Hit Market In April -Source](#)” *IEA*, 31 March 2011.

51“ [Crude Oil Types](#)” *A Barrel Full*, 31 March 2011.

52“ [Types of Crude Oil](#)” *Neste Oil*, retrieved 23 January 2012.

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.

Oil Field Depletion

Oil field depletion refers to the decline in an oil field's production over time,⁵³ when a field's recoverable resources become exhausted and production is reduced due to the physical limitations of the reservoir.⁵⁴ Depletion is a natural process by which an oil field produces an increasing volume of oil, that volume stops increasing and production hits a peak, after which the volume that can be pumped out of that field gradually declines.⁵⁵

The analysis of depletion rates is a key element in forecasting the future production of oil reservoirs. This is a sample edit.

Offshore Drilling

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.⁵⁶

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.⁵⁷ 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.

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

53" [The life of an oil reservoir](#)" *The Oil Drum*, 14 August 2006.

54" [Depletion and Decline Curve Analysis in Crude Oil Production](#)" *Global Energy System*, May 2009.

55" [Oil Fields and what they do \(or might\) produce, and when](#)" *Natural Hub*, Retrieved 1 February 2012.

56" [Offshore Drilling Basics](#)" *Diamond Offshore*, Retrieved 10 February 2012.

57" [Offshore Drilling](#)" *NaturalGas.org*, retrieved 10 February 2012.

the surface of the moon.⁵⁸

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.⁵⁹

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.⁶⁰

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. 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 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. USA Today puts the date of the first U.S. offshore oil production as 1896, also in California.

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 Corporation⁶¹, 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.

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.

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

58" [About NOIA- History of Offshore](#)" *National Ocean Industries Association*, retrieved 10 February 2012.

59" [Worth the risk? Debate on offshore drilling heats up](#)" *USA Today*, 14 July 2008.

60" [Gulf Coast business still suffering from offshore drilling slowdown](#)" *Fuel Fix*, 6 February 2012.

61" [History of the Offshore Oil and Gas Development in Louisiana](#)" *Bureau of Ocean Energy Management*, retrieved 10 February 2012.

nearly 48 billion barrels of oil in water of depths of 2,000 feet or greater.⁶²

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.

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.

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.⁶³

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.⁶⁴

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.

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."

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.⁶⁵

62" [The Next Prospects: Four Offshore Drilling Frontiers](#)" *National Geographic*, 19 April 2011.

63" [IHS Petrodata Weekly Rig Count](#)" IHS, 3 February 2012.

64" [Offshore Drilling: Is Energy Worth the Ecological Disaster of Oil Spills?](#)" *Tree Hugger*, June 2010.

65" [The Case Against Offshore Drilling](#)" *Greening Forward*, Retrieved 10 February 2012.

Oilfield Services Industry

Overview

[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).⁶⁶ National Oil Companies (NOCs) and international oil companies (IOCs) often lack such technical and geological skills and so turn to service companies.⁶⁷

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.⁶⁸

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 unconventional 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* 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](#).

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

66" [Industry Handbook: The Oil Services Industry](#)" *Investopedia*, retrieved 12 March 2012.

67" [The oil-services industry: Rigging the market](#)" *Economist*, 23 June 2011.

68" [The Future of the Oil Fields Services Industry to 2015 - Rebound in Exploration and Drilling Activity Drives Growth](#)" *GBI Research*, May 2010.

"hand it back" to the NOC to run in the long term.⁶⁹

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](#)
8. BJ Services Company
9. Petrofac
10. China Oilfield Services Ltd.

A report by the *Economist* 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.

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.⁷⁰

Natural Gas

Overview

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.⁷¹ 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.⁷²

Natural gas can be found as either associated gas, non-associated gas, wet gas (a type of non-associated gas) or coal bed methane.

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

69" [Ayman Asfari on Petrofac's road to Damascus](#)" *Telegraph*, 30 October 2010.

70" [Musings: The Innovators in The Oilfield Service Industry Identified](#)" *RigZone*, 30 October 2010.

71" [Oil and Gas Resources and Their Uses](#)" *TEEIC*, retrieved 13 February 2012.

72" [Natural Gas](#)" *US Department of Energy*, retrieved 13 February 2012.

foot deep). This volume is usually expressed in BCF (billion cubic feet), TCF (trillion cubic feet) and MCF (thousand cubic feet).⁷³

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.

Non-associated gas

Non-associated gas is gas which is found in reservoirs which do not contain significant quantities of crude oil.⁷⁴ 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.

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.

Coal Bed Methane

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

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 First World War in the 1940s.⁷⁵

Role of natural gas in the energy mix

The *International Energy Association* estimates that natural gas could overtake coal and rival oil by 2035 to account for over 25% of global energy demand.⁷⁶

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 mar-

73" [Natural Gas Measurement](#)" *KGM*, retrieved 13 February 2012.

74" [NON-ASSOCIATED GAS DEFINITION](#)" *Oil and Gas Glossary*, retrieved 13 February 2012.

75" [The History of Natural Gas](#)" *US Department of Energy*, retrieved 13 February 2012.

76" [Gas could make up 25% of global energy mix by 2035: IEA](#)" *Platts*, 2011.

kets." 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.⁷⁷

The *International Energy Agency* (IEA) also points out that gas can help to diversify energy supply and so improve energy security.⁷⁸

Natural Gas Flaring

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.⁷⁹

Liquefied Natural Gas (LNG)

Overview

LNG is liquefied natural gas, a clear, colourless, non-toxic liquid,⁸⁰ produced by cooling [natural gas](#) to -260° Fahrenheit, -160°C, at which point it becomes a liquid. This process occurs to allow more efficient transport of natural gas, either by truck or by sea.⁸¹ LNG takes up 600 times less space than natural gas in its gaseous form.⁸²

Converting natural gas into LNG can make stranded natural gas deposits more economically viable, as constructing pipelines can be expensive. In addition, LNG will not explode in an unconfined environment, so in the unlikely event of an LNG spill, the natural gas has little chance of igniting an explosion. Other benefits of LNG include that the liquification process removes oxygen, carbon dioxide, sulphur and water from the natural gas, resulting in LNG which is almost pure methane. Once it reaches its destination, LNG is stored as a liquid until it is warmed back to natural gas via the process of regasification.

77" [Unconventional Gas's Global Potential](#)" *Petroleum Economist*, 18 July 2011.

78" [Are We Entering a Golden Age of Gas?](#)" *IEA*, 2011.

79" [Global Gas Flaring Estimates](#)" *NOAA*, retrieved 15 February 2012.

80" [What is LNG?](#)" *Shell*, retrieved 13 February 2012.

81" [Overview-About LNG](#)" *Center for Liquefied Natural Gas*, retrieved 13 February 2012.

82" [Liquefied Natural Gas \(LNG\)](#)" *NaturalGas.org*, retrieved 13 February 2012.

Production

As of early 2012, there were 20 LNG production and export terminals worldwide, 63 import terminals and nearly 300 LNG ships altogether handling approximately 170 million metric tons of LNG every year. These numbers are predicted to increase dramatically over the next decade due to the [growing popularity of this clean fuel source](#).⁸³

While LNG is reasonably costly to produce, advances in technology are reducing the costs associated with the liquification and regasification of LNG. The *BP World Energy Outlook* predicts that LNG trade will grow twice as fast as global gas production, that is, at a rate of 4.4% per annum.⁸⁴

Shale gas

Shale gas is [natural gas](#) produced from shale formations.⁸⁵

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.⁸⁶

Coal Bed Methane (CBM)

Overview

Coal bed methane (CBM) or coal seam gas (CSG) is the natural gas extracted from coal beds during underground coal mining. As coal is formed over millions of years, methane forms within the coal and is trapped by water in cracks in the coal molecules.⁸⁷ The high methane content of the gas (over 90%) makes it an excellent fuel and a suitable alternative to natural gas.⁸⁸

CBM also results in environmental benefits, as methane is a potent greenhouse gas and its release into atmosphere during mining operations can have negative environmental consequences (coal mining accounts for around 10% of methane emissions in the US). Therefore recovery of of CBM mitigates these emissions, allowing for economic use of the resource.⁸⁹

83" [What is LNG?](#)" *ConocoPhillips*, retrieved 13 February 2012.

84" [World Energy Outlook 2030](#)" *BP*, retrieved 13 February 2012.

85" [Shale Gas](#)" *Schlumberger Oilfield Glossary*, retrieved 21 March 2012.

86" [Shale Gas - A Global Perspective](#)" *KPMG*, 2011.

87" [Jargon Buster](#)" *BG Group*, retrieved 1 February 2012.

88" [Coal Bed Methane – A Subterranean Energy Treasure](#)" *Clarke Energy*, retrieved 1 February 2012.

89" [Future Supply and Emerging Resources](#)" *NETL*, retrieved 1 February 2012.

CBM production has commenced over recent years in Canada, Australia, China and India. Indonesia has also shown untested potential, but as yet there has been no commercial CBM production.⁹⁰ Russia has also shown an interest in developing CBM reserves and international companies have entered [Colombia](#) to drill for the gas.⁹¹

Global Reserves

Estimates of worldwide CBM resources are difficult to make and vary considerably, however they should rise with new understanding and technology. However Halliburton petroleum engineer Joe Awny estimated global recoverable reserves to be around 1,200 trillion cubic feet in 2009.⁹²

Future Supply and Demand

According to oilfield services provider "Halliburton" the development of CBM is likely to accelerate as more is learned about coalbed behaviour, and as innovative drilling and completion techniques are applied.

Demand is also likely to increase as global appetite for gas grows, in preference over oil and coal.

For further detail see: [The 'Energy Mix'](#)

90“ [Coal bed methane production: success depends on location](#)” *Engineering Live*, retrieved 1 February 2012.

91“ [Colombia: Summary of Coal Industry](#)” *Global Methane*, retrieved 1 February 2012.

92“ [Halliburton](#)” *Coalbed Methane Development—A Vital Part of the Total Energy Mix*, 2009.

Regulatory Framework

Overview of Regulation in Colombia

Revenue Sharing Procedures

Current ANH contracts

When the National Hydrocarbons Agency (ANH) was formed in 2003, it took over the regulatory role formerly the responsibility of state-owned [Ecopetrol](#). Simultaneously new contracts were designed with new procedures for the collection of royalties and taxes from oil companies.⁹³

Following changes to the regulatory model made by President Uribe, royalty payments were cut from a flat 20% to a sliding scale of 8-25% depending on production levels. The state's share of revenues through royalties and taxes also fell from 70% to 50-55%.⁹⁴ Since 2003 it has also been possible for private companies operating in Colombia to own 100% stakes in oil ventures.⁹⁵

The new contracts also envisage a heavy oil discount (for those grade of oil with an [API gravity](#) of less than 15) and a gas discount.⁹⁶

After successfully bidding for and being awarded a block, the ANH contracts consist of three distinct phases:

1. Initial exploration phase (six years to make a discovery, plus a possibility of extending for two years)
2. Evaluation phase (two years to evaluate whether to develop the field further)
3. Commercial phase (24 years are given to develop the deposit before the project is relinquished)

Previous types of contract

1970-1999

Over the course of Colombia's oil producing history, there have been several amendments made to fiscal terms for oil companies. Under the terms of contracts negotiated between 1970-89, foreign investors were responsible for the entire exploration phase of development. If a discovery was considered commercially viable, state-owned [Ecopetrol](#) was "backed in" for a 50% working interest and the

93“ [Historia](#)” *Agencia Nacional de Hidrocarburos*, retrieved 22 January 2012.

94“ [Colombia's Energy Renaissance](#)” *Council of the Americas*, December 2010.

95“ [Violent Protests Threaten Colombia's Oil Boom](#)” *Time*, 24 September 2011.

96“ [Initiating on South American E&Ps](#)” *Tudor, Pickering, Holt and Co.*, January 2011.

private company was paid a flat royalty rate of 20% on production. Under such contractual terms, the private company was allowed to recover 50% of their exploration costs before Ecopetrol received a portion of the "profit oil".

In 1990 a revision to the contractual terms stated that once cumulative production passed 60 million bpd, Ecopetrol's working interest started to increase above 50%. Another amendment was made in 1994, changing the conditions of Ecopetrol's working interest.

1999 contracts

This regime constituted a combination of previous contractual arrangements, whereby [Ecopetrol](#)'s working interest was 30% until a cumulative production limit has been passed, after which Ecopetrol's participation could rise as high as 65%. Although these contracts have now been replaced by the modern ANH contracts, they still apply to certain development blocks in Colombia.

Licensing Rounds

Historically, access to oil and gas acreage in Colombia was achieved by acquiring blocks on a "first come, first served" basis, according to *Tudor, Pickering and Holt* bank. However as competition grew for Colombia's acreage, the newly created [ANH](#) organized a series of bid rounds from 2007 onwards.

The main rounds which have taken place up to 2011 are the [Caribbean Round 2007](#), Mini-Round 2007, [Colombia Round 2008](#), Mini-Round 2008 and [Open Round Colombia 2010](#).

The criteria used for the awarding of blocks are the value of the operator's offer and their ability to meet commitments.

As of early 2012 a [further bidding round](#) was expected to be held in November or December 2012.⁹⁷

Bidding Rounds 2007-8 in Colombia

In December 2006 the [National Hydrocarbons Agency \(ANH\)](#) announced plans for a series of bidding rounds to begin in 2007, as part of the country's strategy to attract investment and boost oil output.⁹⁸

Caribbean Round 2007

In 2007 Colombia launched its first offshore bidding round, offering 13 blocks off the Caribbean coast. Each block on offer was around 740,000 acres and are located along a stretch running from offshore Guajira to the northern end of the Uraba

⁹⁷“[Colombian Bid Round 2012](#)” *First Energy*, January 2011.

⁹⁸“[ANH unveils plans for future bidding rounds - Colombia](#)” *Business News Americas*, 5 December 2006.

Gulf, taking in almost the whole of Colombia's Caribbean coastline. The blocks included not only deepwater offerings but shallow blocks both onshore and offshore.⁹⁹

On the 18 September 2007 the bidding took place, resulting in the successful auction of nine exploration blocks. According to a leaked US diplomatic cable, the Colombian government had anticipated receiving bids on no more than seven of the nine blocks.¹⁰⁰ However the blocks were awarded as follows:¹⁰¹

Block	Operator	Other Partners	Initial investment	ANH profit margin
RC10	ONGC Videsh (50%)	Ecopetrol (50%)	\$5.3 million	2%
RC11	Ecopetrol (100%)		\$5.3 million	3%
RC4	BP (35%)	Ecopetrol (35%); Petrobras (30%)	\$5.5 million	16%
RC8	ONGC Videsh (40%)	Ecopetrol (40%); Petrobras (20%)	\$5.3 million	4%
RC5	BP (100%)		\$5.8 million	12%
RC12	Ecopetrol (100%)		\$5.3 million	15%
RC7	Petrobras (40%)	Ecopetrol (30%); Hess (30%)	\$5.3 million	11%
RC6	Petrobras (40%)	Ecopetrol] (30%); Hess (30%)	\$5.3 million	2%
RC9	Ecopetrol] (50%)	ONGC Videsh (50%)	\$5.3 million	5%

[Chevron](#), one of the first offshore producers in Colombia, did not submit any bids during the round. Companies which were awarded blocks agreed to invest a minimum of \$5 million in exploration in each respective block. On completion of the round, Colombia had 6 million hectares of offshore territory under exploration.

Colombia Round 2008

'Colombia Round 2008' comprised of two separate bid rounds.

In the first round held in November 2008, 43 blocks were on offer in four basins: the Cesar-Rancheria Basin in the north-east, the Sinú-San Jacinto Basin in the

⁹⁹“[Colombia opens offshore tracts](#)” *E&P*, 2 July 2007.

¹⁰⁰“[Colombia Auctions Nine Offshore Blocks On Caribbean Coast](#)” *Wikileaks*, 19 September 2007.

¹⁰¹“[The ANH successfully closes the Caribbean Round](#)” *ANH*, 19 September 2007.

northwest, the Cordillera Basin in the eastern central region, and the Crudos-Pesados area of the eastern portion of the Llanos Basin in central Colombia.¹⁰²

The second bid round was competed in December 2008. According to a US diplomatic cable from December 2008, Colombian officials characterized the second bloc auction as a success, asserting that many of the blocs received several bids higher than expected. The auction attracted bids on 48 heavy oil mini-blocs in the eastern Cordillera region (provinces of Santander and Norte de Santander), Magdalena province, Putumayo province and the eastern Llanos region (Meta province). Half of the blocs on offer attracted bids, meeting the government's target. The total exploration investment committed to the 48 blocs exceeded US \$300 million and brought the total number of contracts adjudicated in 2008 to a record 100 contracts.¹⁰³

Open Round Colombia 2010

On the 22 June in Cartagena, the [National Hydrocarbons Agency \(ANH\)](#) made 168 blocks available for bidding as part of the 'Open Round Colombia' bidding process. The process of awarding production and exploration rights was competed on the 12 May 2011.

The number of blocks available eventually increased to 229, covering a total acreage of 476,650 square kilometres.¹⁰⁴

Following the pre-qualification phase, the ANH finalized a list of 73 companies who were authorised to submit an offer. These companies were divided into the following categories depending on their capacities:

- Operators: 49 companies with proven capacity juridical, financial, operational, environmental and social responsibility qualified to be operators at fields.
- Non-operators: 4 companies limited to participating in a consortium with qualified operators.
- Restricted operators: 20 companies restricted to operate Block 1 type only (see below).
- Non-qualified: 8 companies did not qualify to submit offers.

Types of Contract

The blocks on offer were divided into three types:

- Type 1: E&P Mini-round.

102“[Colombia is open for business](#)” *E&P*, 24 June 2008.

103“[Colombia Energy Update: More Blocs, Gas Prospects, And Biofuels](#)” *Wikileaks*, 17 December 2008.

104“[Open Round Colombia 2010 results](#)” *Deloitte*, retrieved 22 January 2012.

138 onshore blocks in mature basins, available for Exploration and Production (E&P) contracts.

- Type 2: E&P New Prospective Basin.

31 onshore and offshore blocks in new, prospective basins, also available for E&P contracts.¹⁰⁵

- Type 3: Technical Evaluation Agreement (TEA).

63 short-term contracts allowing frontier areas to be evaluated for prospectivity without committing explorers to expensive drilling programmes.¹⁰⁶

Results

On completion of Open Round Colombia, 68 contracts had been signed with 27 companies designated as operator or licensee.

[Ecopetrol](#) won eight blocks (seven as operator), six of which were located in the Llanos basin. Canadian companies were also prominent in the bidding round, with [Meta Petroleum](#) becoming operator of 6 blocks and two TEA contracts. [Gran Tierra](#) won two TEA blocks and one E&P contract, and six blocks were awarded to [Alange Energy Corporation](#). Of the large international companies who qualified, [Shell](#) won one TEA contract and one E&P onshore license in the Middle Magdalena Valley, and Brazilian independent OGX was another key company, winning five licenses.

The complete results can be seen in the table below:

Block	Operator	Partners	Type	Basin
CAG-5	Meta Petroleum Colombia (50%)	Talisman Colombia (50%)	3	Oriente
CAG-6	Meta Petroleum Colombia (50%)	Talisman Colombia (50%)	1	Oriente
CAUCA-6; CAUCA-7	Gran Tierra Colombia (100%)		3	Cauca Patia
COR-11	Canacol Colombia (100%)		1	Eastern Cordillera
COR-15	Pacific Stratus Energy Colombia (50%)	Maurel and Prom (50%)	3	Eastern Cordillera

105“ [Colombia’s 2010 Open Round Offers 225 Oil and Gas Exploratory Blocks](#)” *Mayer Brown*, 8 April 2010.

106“ [Colombia predicts a bright upstream future, as oil production rises](#)” *Petroleum Economist*, 4 January 2010.

COR-23	Kinetex Colombia (100%)		1	Eastern Cordillera
COR-24	Meta Petroleum Colombia (50%)	Pacific Stratus Energy Colombia (50%)	3	Eastern Cordillera
COR-33	Alange Energy Colombia (100%)		1	Eastern Cordillera
COR-39	Canacol Energy Colombia (100%)		1	Upper Magdalena Valley
COR-4	Australian Drilling Associates Colombia (100%)		1	Eastern Cordillera
COR-6	Interoil Colombia (100%)		1	Upper Magdalena Valley
CPO-16	Hocol (100%)		2	Llanos
CR-2; CR-3; CR-4	OGX Petroleo Gas (100%)		3	Cesar Rancheria
GUA-OFF-3	Shell Colombia (100%)		3	Aruba
LLA-11	Stetson Oil and Gas (10%)	Sagres Energy (90%)	1	Llanos
LLA-13; LLA-39	Hocol (100%)		1	Llanos
LLA-15; LLA-59	Petrominerales Colombia (100%)		1	Llanos
LLA-37; LLA-38; LLA-52; LLA-6; LLA-8	Ecopetrol (100%)		1	Llanos
LLA-40	Ramshorn International (50%)	Apco Properties (50%)	1	Llanos
LLA-41	Alange Energy Colombia (100%)		1	Llanos
LLA-42	Telpico (100%)		1	Llanos
LLA-45	Perenco Colombia (100%)		1	Llanos
LLA-47	Interoil Colombia (100%)		1	Llanos

LLA-48	Serviojeda Compania (100%)		1	Llanos
LLA-5	Vetra Colombia (100%)		1	Llanos
LLA-55; LLA-7	Meta Petroleum Colombia (100%)		1	Llanos
LLA-56	Tabasco Oil Company (100%)		1	Llanos
LLA-57	Parex (100%)		1	Llanos
LLA-58; LLA-62	Hupecol (100%)		1	Llanos
LLA-61	Suelopetrol (100%)		1	Llanos
LLA-71	Geotechnology LA (100%)		1	Llanos
PUT-10	Gran Tierra Colombia (100%)		1	Oriente
PUT-3	Vast Exploration Inc. (10%)	Sagres Energy (90%)	1	Oriente
PUT-6; PUT-7	Petro Caribbean Resources (100%)		1	Oriente
PUT-8	Vetra Colombia (50%)	Grupo C&C Energy Colombia (50%)	1	Oriente
PUT-9	Meta Petroleum Colombia (60%)	Talisman Colombia (40%)	1	Oriente
SSJS-1	Ecopetrol (70%)	SK Energy (30%)	2	Sinu
TUM-OFF-3	Ecopetrol (100%)		2	Borbon
VIM-2	SK Energy (100%)		2	Lower Magdalena
VIM-5	OGX Petroleo Gas (100%)		2	Lower Magdalena
VIM-6	Hocal (100%)		2	Lower Magdalena
VMM-11; VMM-35	Alange Energy Colombia (100%)		1	Middle Magdalena Valley

VMM-18	Montajes JM (100%)		1	Middle Magdalena Valley
VMM-26	OGX Peroleo Gas (100%)		1	Middle Magdalena Valley
VMM-27	Shell Colombia (100%)		1	Middle Magdalena Valley
VMM-28	Petroleos del Norte (100%)		1	Middle Magdalena Valley
VMM-32	Cementaciones Petroleras (49%)	Ecopetrol (51%)	1	Middle Magdalena Valley
VMM-37	Patriot E Serve (100%)		1	Middle Magdalena Valley
VSM-12; VSM-13	Alange Energy Colombia (100%)		1	Upper Magdalena Valley
VSM-14	Tecnica Vial (100%)		1	Upper Magdalena Valley
VSM-15	Flamingo Oil (100%)		1	Upper Magdalena Valley
VSM-22; VSM-3	Telpico (100%)		1	Middle Magdalena Valley
VSM-9	Hocol (100%)		1	Upper Magdalena Valley

Open Round Colombia 2012

On the 22 November 2011 the [National Hydrocarbons Agency \(ANH\)](#) pre-launched the Open Round Colombia 2012 bidding round, with a list of qualified companies to be available by July 2012. Offers are to be submitted by the 16 October, awards expected in November 2012 and contracts to be signed between November and December 2012.¹⁰⁷

The ANH announced that in total 113 onshore and offshore blocks will be available, covering a total area of over 15 million hectares, and would be divided into Types 1, 2 and 3 as in [Open Round Colombia 2010](#).¹⁰⁸

An important aspect of the 2012 round is that unconventional hydrocarbons were to account for 30% of the areas on offer. The ANH also planned amendments to the royalty system in order to encourage bids for unconventional blocks.

107" [Open Round Colombia 2012](#)" *Deloitte*, retrieved 22 January 2012.

108" [Open Round Colombia 2012](#)" *ANH*, retrieved 22 January 2012.

External Links

ANH Presentation: [Pre-Launch 2012 Round \(English\)](#)

2011 Legislative Reform in Colombia

Restructuring of Oil and Mining Royalties

Santos passed a bill to Congress in August 2010, proposing that royalties received from mining and exploration by Colombia's local authorities are pooled into a general fund to be distributed nationwide. According to government officials, this was designed to cut inefficiency and corruption and would lead to the investment of 10% of the funds from natural resource exploitation in science and technology.¹⁰⁹ Under the new arrangements the oil and mineral-producing regions would eventually receive around 25% of royalty transfers, rather than the previous share of 75%.¹¹⁰

In a speech, President Juan Manuel Santos asserted that the new measures would "make a great effort to close the gaps of inequality in this country". However bill sparked protests in nine provinces of the country, who claimed that the interests of resource-rich regions were not sufficiently protected under the new bill.

The royalties reform project was approved in June 2011 by Colombian lawmakers. According to Finance Minister Juan Carlos Echeverry the rate received by the provinces where most oil and mining resources are located will fall from 75% to around 25%.

In the newspaper *El Espectador* Hernan Jaramillo warned that, while the redistribution of revenues is designed to reinvigorate areas such as science, technology and innovation on a national level, the danger is that political interests will interfere in the choice of which projects are financed, rather than allowing such decisions to be made in the regions themselves.¹¹¹

The redistribution of royalties income was due to begin in 2012.¹¹²

Creation of Sovereign Wealth Fund

A further policy promoted by President Santos is the proposed creation of a sovereign wealth fund, where oil and gas revenues could be stored for investments in technology and infrastructure. This policy is also designed to reduce some of the

¹⁰⁹“[Royalty redistribution will close inequality gap: Santos](#)” *Colombia Reports*, 27 May 2011.

¹¹⁰“[Colombian House approves reform in royalties distribution](#)” *Colombia Reports*, 9 June 2011.

¹¹¹“[Las regalías de ciencia, tecnología e innovación](#)” *El Espectador*, 22 December 2011.

¹¹²“[Royalties reform will pump \\$20M into Colombia's poorest regions: Minister](#)” *Colombia Reports*, 10 June 2011.

[inflationary pressure on the Colombian peso.](#)¹¹³

According to the *Sovereign Wealth Fund Institute*, Santos is "fully aware of the issue of Dutch Disease and how it can affect a fragile country that is trying to diversify into a number of industries" and is therefore seeking legislation to create such a fund.¹¹⁴

113“ [Colombia economy: Seeking fiscal sustainability - Latin America](#)” *Economist*, 14 October 2010.

114“ [Colombia May Join Colleagues in Creating a Sovereign Wealth Fund](#)” *SWF Institute*, 11 July 2011.

Historical Overview

Origins and Evolution of Colombia's Oil Industry

Origins

The year 1905 marked the first activities in the Colombian oil industry, with the signature of the 'Barco' and 'De Mares' concessions. This beginning was consolidated by the discovery and development of the giant [Cira Infantas](#) field in 1918.

According to Juan Carlos Echeverry, the history of Colombia's oil and gas industry can be roughly divided into three periods as follows:¹¹⁵

1918-1969

During this period the property of all subsoil wealth in Colombia belonged to the state. Hopes of discoveries and favourable contractual conditions attracted international companies including [Exxon](#), [Shell](#), [Chevron](#) and others. Over this period several new fields were discovered, with an accumulated total of 4.18 billion barrels of oil.

[Ecopetrol](#), now part-privatized and one of the largest oil companies in South America, was founded in 1951 when the 'De Mares' concession was reverted to the Colombian state.¹¹⁶

1970-1994

According to Echeverry, this was a period marked by nationalism and unfavourable contract terms, where the state-take was increased in contractual agreements. Many significant discoveries were made, including giant fields at [Chuchupa](#) (1973), [Caño Limón](#) (1983), [Cusiana](#) (1988) and [Cupiagua](#) (1993). Over this period 5,169 million barrels of oil reserves were discovered.

According to the *Los Angeles Times*, big oil finds by British [BP](#) and US [Occidental](#) in the 1980s and 1990s began to rapidly dissipate, causing concerns that the country would lose even its own self-sufficiency.¹¹⁷

115“[Oil in Colombia: history, regulation and macroeconomic impact](#)” Juan Carlos Echeverry, May 2008.

116“[Colombia's Ecopetrol: A Legacy of Principles](#)” *AAPG Explorer*, retrieved 19 January 2012.

117“[Colombia is a rising oil exporter to U.S.](#)” *LA Times*, 7 April 2011.

1995 onwards

Colombia was a significant oil exporter during the 1990s, attracting investment from international oil companies such as [BP](#), [ExxonMobil](#) and [Occidental Petroleum](#)¹¹⁸ and in 1999 the country set an oil export record of 398,275 barrels per day (bpd) of oil and refined products. This exports record was not reached again until 2010.¹¹⁹

From 1993 onwards however, the number and size of discoveries of new fields became smaller. The most important discovery in this period was [Petrobras' Guando field](#) in 2000, with reserves of around 100 million barrels of oil. As a result output fell from peak production of over 800,000 barrels per day (bpd) in 1999 to nearly 550,000 bpd in 2004.

Furthermore, the worsening security climate over this period make Colombia a very risky location in which to operate, particularly in the case of the exploration and production sector, often concentrated in areas where the state enjoyed limited control. Pipeline bombings, extortion and kidnappings were common.

Colombia's Energy Renaissance post-2000

According to a 2010 report by US-based business organisation *Council of the Americas*, Colombia has developed its once struggling energy sector over the last decade into one of Latin America's foremost destinations for investment in the oil and gas sector, a transformation made possible by the country's political, economic and legal stability and an effective balance struck by the government between private firms and public institutions.¹²⁰

Security Environment

According to a report by the BBC, one significant factor in the resurgence of the Colombian oil industry since 2003 is the vast improvement in the national security environment following the rise of Alvaro Uribe Velez rise to power in 2002.¹²¹

Partly as the result of the implementation of the the US-funded "Plan Colombia" anti-drug and anti-rebel program, the Colombian military were able to regain control of most of the national territory. According to comments made by former Mining and Energy Minister Carlos Rodado, the frequency of attacks by leftist guerrillas on power pylons fell to around 30 in 2011, compared to around 500 in the early 1990s. Attacks on pipelines were also said to have fallen to "a couple of dozen per year", down from 270 in 2001, according to Rodado.¹²²

118“ [Colombia's Energy Renaissance](#)” *Council of the Americas*, 12 May 2010.

119“ [Colombia the Rising Star of the Oil Industry in South America](#)” *Mercopress*, 12 May 2010.

120“ [Colombia's Energy Renaissance](#)”. *Council of the Americas*, December 2010.

121“ [Profile: Alvaro Uribe Velez](#)” *BBC*, retrieved 19 January 2012.

122“ [Colombia is a rising oil exporter to U.S.](#)” *LA Times*, 7 April 2011.

Regulatory Reform

The [National Hydrocarbons Agency \(ANH\)](#) was created in 2003, releasing formerly state-controlled [Ecopetrol](#) from its regulatory role.

With the introduction of this new institutional framework, Ecopetrol was forced to compete on a level playing field with private countries for exploration and production licenses and in November 2007 floated shares on the Colombian stock exchange. From 2003 onwards, private oil companies were allowed a full 100% ownership stakes in fields with less than 60 million barrels of reserves.

This insitutional model followed the example of Brazilian Petrobras, the formerly state-owned company which was partly privatized in order to improve transparency and competition in the bidding process. Brazil subjected state-owned [Petrobras](#) to commercial discipline by floating 40% of its shares in 2010. In 2007 Ecopetrol put up for sale up to 20% of its shares.¹²³

According to the *Council of the Americas* report, the new competitive model and more efficient nature of Ecopetrol was a "resounding success". The number of exploration contracts awarded doubled between 2004-2009.

Oil Industry under President Santos

As a result of continued high energy and commodity prices since Santos came to power in August 2010, foreign investors have sought to invest in Colombia. Foreign direct investment increased by 56% in 2011 to \$14.8 billion, 82% of which was in the oil and mining sectors.¹²⁴

The new administration under Santos began putting into place a [series of fiscal reforms](#) around the extractives sector. These included the restructuring of allocation of royalties, with plans to transfer 20% of royalty revenues from local authorities to central government,¹²⁵ and the creation of a sovereign wealth fund along the lines of those successfully created by Norway and Chile. The goal was said to be to keep public expenditure and to create "fiscal equilibrium" by 2014.¹²⁶

In October 2011 newly appointed Energy and Mining Minister Mauricio Cardenas opposed the raising of royalty rates for oil and mining companies, arguing that it would be inopportune timing for the sector and that the debate should be left until a later date.¹²⁷

Oil companies as of 2011 paid royalties in accordance with their levels of production. In the coal sector companies paid between 5-10% depending on production and in the minerals sector businesses paid 12% for ferronickel or 4% of gold and

123“[Share gusher](#)”. *Economist*, 30 August 2007.

124“[Colombia’s turnaround: from bullets into drill bits](#)”. *Globe and Mail*, 19 January 2012.

125“[Colombia economy: Seeking fiscal sustainability - Latin America](#)”. *Economist*, 14 October 2010.

126“[Colombia: going Dutch?](#)”. *Control Risks*, November 2010.

127“[Colombian mining minister opposes bill to raise royalties](#)”. *NTN24*, 12 October 2011.

silver. The new bill proposed raising oil royalties to a maximum of 25% and 8-20% for coal and other minerals.¹²⁸

128“[Colombia refuses to increase oil royalties](#)”. *Reuters*, 12 October 2011.

State-Owned Entities

Colombian Ministry of Mines and Energy

The Ministry of Mines and Energy is the key governmental body involved in the energy sector. The role of the Ministry is overall policy making and supervision of the electricity sector in Colombia.¹²⁹

In September 2011 Mauricio Cárdenas was named the Minister of Mines and Energy for Colombia. Prior to serving as Minister, Cardenas was director of the Latin America Initiative at the Washington-based think tank, the Brookings Institute.¹³⁰

External Links

Official Website: www.minminas.gov.co

Colombian National Hydrocarbons Agency (ANH)

History

The National Hydrocarbons Agency, or *Agencia Nacional de Hidrocarburos* (ANH) was created in 2003 as part of President Alvaro Uribe's reform of the regulator model in the Colombian energy sector.¹³¹

Role

The ANH took over the role previously held by state energy firm [Ecopetrol](#).

Its functions now include the auctioning of exploration licenses to oil companies and the gathering of seismic data, which it then to companies participating in bidding rounds.

External Links

Official Website: www.anh.gov.co

129" [An Energy Overview of Colombia](#)" *Fossil Energy International*, retrieved 22 January 2012.

130" [Mauricio Cárdenas](#)" *Brooking Institute*, retrieved 22 January 2012.

131" [Colombia's Energy Renaissance](#)" *Council of the Americas*, December 2010.

Ecopetrol

Type	Public Limited Company
Founded	1921 (as Tropical Oil Company), 1951 (as Ecopetrol S.A)
Headquarters	Bogotá (Colombia)
Key People	Javier Gutiérrez Pemberty (CEO) ¹³²
Products	Oil and gas exploration, production, refining, transportation.
Revenue	US \$21,742.9 million (2010)
Net Income	US \$4.22 billion (2010)
Total Assets	US \$35.91 billion (2010)
Total Equity	US \$21.58 billion
Employees	6,744 (2011)
Website	www.ecopetrol.com.co

Profile

The majority state-owned EcoPetrol is Colombia's largest oil company, and was formerly also its regulator.

Formerly known as the Empresa Colombiana de Petróleos, it previously served as the state oil regulator, until it was part-privatized and began floating shares on the Colombian stock exchange in November 2007.¹³³

In 2011 Ecopetrol controlled 40% of the exploration land in Colombia and 54% of the proven energy reserves. The company produced two thirds of the country's crude oil output and owns three-fourths of the pipeline capacity, as well as Colombia's two largest refineries. However Ecopetrol has also expanded its reach and in 2011 60% of its total revenues came from outside the country.¹³⁴ Outside of Colombia, the company is involved in upstream activities in Brazil, Peru and the US Gulf Coast.¹³⁵

It is the largest company in Colombia and one of the largest integrated oil firms in Latin America.¹³⁶ In the 2011 Fortune Global 500 rankings of companies by market capitalization, Ecopetrol was ranked at number 445.

¹³²[Ecopetrol](#)" *Fortune Global 500*, retrieved 19 January 2012

¹³³[Colombia's Oil and Gas sector: Boosting output through reform](#)" *Deloitte*, 10 February 2011.

¹³⁴[Ecopetrol, Colombia's Quiet Energy Giant](#)" *Investor Place*, 21 January 2012.

¹³⁵[Colombia's Ecopetrol: A Legacy of Principles](#)" *AAPG*, retrieved 19 January 2012

¹³⁶[Ecopetrol Profile](#)" *Hoovers*, retrieved 18 January 2012.

History

Origins

Ecopetrol started life as the Tropical Oil Company, which began activities in 1921 with operations at the [Cira-Infantas field](#). In 1951 the reversion of the 'Mares Concession' from the Tropical Oil Company¹³⁷ to the Colombian state gave way to the Empresa Colombiana de Petroleos. The company was subsequently in charge of administrating the nation's hydrocarbon resources.

In 1961 the company assumed direct management of the [Barrancabermeja Refinery](#) and in 1974 purchased Colombia's [Cartagena Refinery](#).

In 1970 the company came under the control of the Ministry of Mines and Energy, fiscally supervised by the General Comptroller of the Republic of Colombia.

In 1983, the Caño Limón field was discovered in partnership with international oil company [Occidental](#), a reservoir with estimated reserves of 1.1 billion barrels. During the 1990s Ecopetrol continued its advance with the discovery of the Cusi-ana and Cupiagua fields, in partnership with British [BP](#).¹³⁸

Part-privatization 2007

Ecopetrol's transformation from state to private company began with a 2003 decree establishing the [National Hydrocarbons Agency \(ANH\)](#). This released the company from its function as the administrator of oil sources. In 2007 Ecopetrol floated its shares for the first time in an Initial Public Offering worth US \$2.8 billion, in which 10.1% of the company was sold to shareholders.¹³⁹

According to industry advisor Luis E. Giusti, the partial privatization of Ecopetrol was the "fourth pillar of a strong platform for Colombia in facing its oil and gas future".¹⁴⁰ However in response to the privatization plans, 5,000 members of Colombia's United Syndicalist Workers (USO) picketed at Ecopetrol facilities in Cartagena and Bogota in August 2006.

Since debuting on the stock market, Ecopetrol has posted impressive growth, as well as completing on a string of takeovers, including the purchase of 51% of [BP's Colombian operations](#) for \$0.9 billion.¹⁴¹

A leaked 2008 US diplomatic cable suggests that Ecopetrol has increasingly looked to Brazilian [Petrobras](#) as a model for the development of a "technically sophisticated parastatal hydrocarbons company with private investment and cor-

137 [1951: Colombia](#) " *As They Saw It*, retrieved 19 January 2012

138 [Our History](#) " *Ecopetrol*, retrieved 19 January 2012

139 [Our History](#) " *Shearman & Sterling*, 19 September 2008.

140 [What is the Outlook for Colombia's Oil Sector?](#) " *Inter-American Dialogue*, 1 August 2011.

141 [Ecopetrol Continues Acquisition Binge, as Colombian Oil Rebirth Rolls On](#) " *Petroleum Economist*, 30 September 2010.

porate governance standards." Direceu Abrahao, president of Petrobras in Colombia acknowledges this fact and commented that Ecopetrol asked Petrobras officials to assuage Colombian Members of Congress on Petrobras' private capitalization process before Colombia's Congress approved the successful 10% privatization.¹⁴²

In August 2011 further shares in Ecopetrol were sold domestically, raising \$1.3 billion for the Colombian government.

In January 2012 Mining and Energy Minister Mauricio Cardenas announced that the government would sell another batch of share representing up to 3% of its 88.5% stake in the company, mainly targeted at overseas investors and sovereign investment funds. The sale was hoped to raise \$3 billion for the state, which they proposed to use to finance reconstruction works following severe winter weather conditions. However as of early 2012 the sale was still to be approved by Congress.¹⁴³

Activities

Ecopetrol is involved in crude oil and natural gas exploration, production, refining and transportation projects.

Upstream, Ecopetrol dominates the oil and gas industry in Colombia. In early 2010, Ecopetrol and its partners produced more than 700,000 barrels per day (bpd) of a total production output of less than 900,000 bpd. However since that data many independent firms have pledged investments.

As of late 2011 Ecopetrol produced almost all of its oil onshore and any drilling offshore had been exploratory, rather than for production. In 2008 the company unveiled an ambitious \$80 billion capital programme for the rest of the decade with a target output of over 1 million bpd, more than double its production in 2008.

In July 2011 the company reported that it had found evidence of crude oil deposits in four test wells in its Cano Sur block in the Llanos Orientales basin, Meta province and at the end of 2011 Ecopetrol's proven net reserves stood at 1.86 billion barrels of oil equivalent (boe), an 8.3% increase on the previous year.¹⁴⁴

Downstream, Ecopetrol owns two refineries at [Barrancabermeja](#) and [Cartagena](#), from where it supplies the domestic market and exports oil and oil products to the US. According to London-based publication the *Petroleum Economist*, the company's centrepiece infrastructure project is the \$4.2 billion [Bicentennial Oil Pipeline](#), a venture for which it was seeking private-sector partners in 2010.

¹⁴²[Colombia's Oil & Gas Outlook: Investors Bullish, Predict Prolonged Exporter Status](#)" Wikileaks, 12 February 2008.

¹⁴³[Colombia targets Ecopetrol shares at foreign investors](#)" *EnergyPedia*, 15 January 2012.

¹⁴⁴[Colombia Oil Co Ecopetrol's Reserves Rose 8.3% In 2011](#)" *Fox Business*, 31 January 2012.

Pipeline Explosion 2011

In December 2011 the [Salgar-Cartago pipeline](#), controlled by Ecopetrol, suffered an explosion which resulted in the death of 11 people, the injury of 99 people and the destruction of dozens of homes. The company said that the explosion was a result of severe winter weather and landslides.¹⁴⁵

Corporate Social Responsibility

Environmental Measures

In November 2011 Ecopetrol was named on the Dow Jones Sustainability Index as the 12th oil or gas company to be admitted, as an indication of its commitment to mitigate the environmental impacts of its activities.

Ecopetrol claims it looks to comply with all environmental laws, reduce spills, emissions and solid waste, to reduce greenhouse gas emissions and promote biodiversity. According to *Reuters* reports, this strategy is driven partly by the company's overseas expansion plans and the subsequent need to comply with stringent environmental laws in other countries.

The company spent \$517 million on environmental programs in 2010, a figure which was expected to more than double in 2011. This figure represented a 617% increase on 2005 figures.

Ecopetrol's measures include:

- projects to capture and market methane gas released at drilling sites.
- the capturing of natural gas escaping at well sites and conversion to electricity for further production.
- Operations to dismantle retired oil wells.
- Drilling of relief wells to mitigate blowouts and other disaster.

Interaction with Indigenous Communities

Ecopetrol have faced long-standing opposition to their exploration operations among the U'wa indigenous group in the Boyaca department, who object to the company's presence on their ancestral lands.¹⁴⁶

For further detail, see article on [Environmental Impact of Colombian Oil Industry](#).

¹⁴⁵[Fuel pipeline blast kills 11 in Colombia](#) *Reuters*, 23 December 2011.

¹⁴⁶[Colombia's U'wa Reiterate Opposition to Ecopetrol Gas Drilling in their Ancestral Territory](#) *CENSAT*, 15 October 2009.

International Oil Companies

Overview of private entities in Colombia

Around 150 oil and gas firms were operating in Colombia in 2011.¹⁴⁷

According to President of the *Council of the Americas* Eric Farnsworth, because many of the oil fields in Colombia are small, the major players tend to be independent oil companies, with the exception of partly state-owned [Ecopetrol](#). In a 2011 interview he said the three largest producers in the country were Ecopetrol, [Pacific Rubiales](#) (Canada) and [Occidental](#) (US). Other Canadian companies, local Colombian companies, British [Perenco](#) and Brazilian [Petrobras](#) are also among the top 10 producers.¹⁴⁸

In a 2008 interview, Dr. Armando Zamora, Director General of the [National Hydrocarbons Agency \(ANH\)](#) listed six things he believes companies look for when they are looking for when making international investment decisions:

- Prospectivity
- Fiscal regime
- Economic stability
- Legal stability
- Political stability
- Personal safety

In Zamora's opinion, Colombia is competitive in all of these issues, but there was some work to be done before investors could be calmed over the issues of 'political stability' and 'personal safety'.¹⁴⁹

Amerisur Resources

Type	Public Limited Company
Traded as	LSE:AMER
Founded	2000 ¹⁵⁰
Headquarters	Cardiff, UK
Key People	Dr John Wardle (CEO)
Website	www.amerisurresources.com

147 [What is the Outlook for Colombia's Oil Sector?](#) *Inter-American Dialogue*, 1 August 2011.

148 [Global Insider: Colombia's Oil Sector](#) *Americas Society*, 30 September 2011.

149 [Colombia is open for business](#) *E&P*, 24 June 2008.

150 ["AMERISUR RESOURCES PLC"](#) *Bloomberg*, retrieved 2 February 2012.

Company Profile

Amerisur resources is listed on the London stock exchange and explores and develops oil and gas fields in South America, with operations in Colombia and Paraguay.¹⁵¹

Amerisur Resources Operations in Colombia

In Colombia Amerisur has a 100% working interest in the [Platanillo field](#), as well as a 100% working interest in the [Fenix field](#), an interest which will reduce to 70-80% under the terms of a 'farm out' agreement.

BP

Type	Public Limited Company
Traded as	LSE:BP
Founded	1909 (as Anglo-Persian Oil), 1954 (as British Petroleum)
Headquarters	London, UK
Key people	Carl-Henric Svanberg (Chairman), Bob Dudley (CEO)
Products	Petroleum products and derived products, service stations.
Revenue	US \$308.9 billion (2010) ¹⁵²
Operating income	US -\$3.7 billion (2010)
Net income	US -\$3.3 billion (2010)
Total assets	US \$272.2 billion (end 2010)
Total equity	US \$94.98 billion (end 2010))
Employees	79,700 (end 2010) ¹⁵³
Website	www.bp.com

151“[Company Profile](#)” *Amerisur Resources*, retrieved 2 February 2012.

152“[Annual Report and Form 20-F 2010](#)” *BP*

153“[Annual Report 2010](#)” *Eni*

Global Snapshot

Current Global Profile

BP is a British global energy company, ranked in 2010 by Platts as the second largest energy company in the world based on financial performance, trailing [ExxonMobil](#). It improved its position from fourth in the rankings in 2008.¹⁵⁴

BP began business as Anglo-Persian Oil in 1909,¹⁵⁵ which exported its first cargo of oil in March 1912 from Abadan in Iran. From 1914 until the 1980s, the British government were the company's principal stockholder and since then BP have acquired the Standard Oil Company in 1987, merged with US company Amoco in 1998 and acquired Atlantic Richfield and Burmah Castroland in 2000.¹⁵⁶

However, BP has since 2010 been dealing with the aftermath of the Macondo oil spill in the Gulf of Mexico in April 2010, the US's largest ever oil disaster. The Deepwater Horizon oil well explosion killed 11 workers and is estimated to have affected around 1,000 miles of shoreline, 200 miles of which were thought to be 'heavily oiled'. However, the exact extent of the spill has been disputed by different parties.¹⁵⁷ The company made the decision to sell non-core assets in order to pay for the clean-up operation and to compensate victims. In October 2011, BP finally received authorization to resume drilling at the site.¹⁵⁸

Company Report Highlights

BP's Annual Report released for 2010 acknowledges the difficult nature of the year passed, given the explosion at the Deepwater Horizon rig, admitting that this grew into a corporate crisis which "threatened the very existence of the company". The document reports a loss in 2010 of \$3,324 million, compared to 2009 annual profits of \$16.76 billion.¹⁵⁹

However, in October 2011 BP announced a near tripling in third-quarter profits on the previous year, reaching £3.2 billion (\$5.4 billion). The CEO claimed that the company had reached a 'turning point' for its oil and gas operations and production.¹⁶⁰

154" [Platts Top 250 Global Energy Company Rankings](#)" *Platts Energy*, retrieved 25 October 2011.

155" [Business: The Company File From Anglo-Persian Oil to BP Amoco](#)" *BBC News*, 11 August 1998.

156" [BP PLC](#)" *History.com*, retrieved 25 October 2011.

157" [Deepwater Horizon and the Gulf oil spill - the key questions answered](#)" *The Guardian*, 20 April 2011.

158" [Oil giant BP reaches 'turning point'](#)" *BBC News*, 25 October 2011.

159" [Annual Reporting](#)" *BP*, retrieved 25 October 2011.

160" [Oil giant BP reaches 'turning point'](#)" *BBC News*, 25 October 2011.

Official Accreditations and Global Perceptions

EITI Supporter Status

As of December 2011, BP was a supporter company of EITI.

UN Global Compact

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

CSR Review

According to BP's official website¹⁶¹, the following comments were made about the previous year's corporate social responsibility activities:

- BP took responsibility immediately for the clean up after the Macondo spill. The clean up effort at its peak involved 48,000 people, 6,500 vessels and 125 aircraft. The company set up the \$20 billion Deepwater Horizon Oil Spill Trust for claims and certain other costs, and provided hundreds of millions of dollars for economic, health and environmental programmes. They suspended dividend payments for three quarters and initiated \$30 billion of asset sales to pay for the effort.
- A new safety and operational risk function was set up with specialist personnel and the company is co-operating with a series of investigations.
- BP are building their business in natural gas, providing a lower-carbon alternative to coal. They are also including a carbon price in new project development plans to encourage efficiency and continue to invest in low-carbon renewable energies.
- Since 2005, BP has invested more than \$5 billion in its alternative energy businesses and expected to invest a further \$1 billion in 2011.

External Coverage

- In March 2005 an explosion at BP's Texas City Refinery killed 15 oil workers and injured at least 170 more, making it the worst workplace accident in the US since 1989. Investigations by *CBS News* found that BP failed to provide for the health and safety of its workers and ignored warnings of danger in the run-up to the blast.¹⁶²
- In October 2007, four former BP energy traders from Houston were indicted on federal charges, alleging they had manipulated propane prices. Aside from the individual indictments, BP reached a \$303 million settlement with the government related to the allegations.¹⁶³

161 "[Group chief executive's letter](#)" *BP*, retrieved 29 October 2011.

162 "[The Explosion At Texas City](#)" *CBS News*, 11 February 2009.

163 "[Four BP traders charged with price manipulation](#)" *Houston Chronicle*, 25 October

- In April 2010 an explosion and fire at BP's Deepwater Horizon rig in the Gulf of Mexico resulted in an estimated 206 million gallons of oil spilled over several months, polluting beaches and coastal marshes and shutting vast areas of the Gulf to fishing. The spill was dubbed the worst in US offshore history and eleven rig workers died as a result of the fire. BP created a \$20 billion compensation fund shortly after the spill.¹⁶⁴ and in March 2011 reached an \$8.7 billion package business and individuals suing the company over the spill.¹⁶⁵
- According to reports by the *Guardian*, BP spent nearly \$16 million on lobbying the federal government, breaking a previous spending record of \$10.4 million in 2008 and ranking it among the 20 highest spenders that year. In 2008 it also spent more than \$530,000 on federal elections.¹⁶⁶
- In 1997 BP became the first major energy company to publicly acknowledge the need to stake steps against climate change.¹⁶⁷ However environmental activists have dubbed BP's drive towards being a more eco-friendly company as "greenwashing" and dismiss it as little more than a public relations stunt, despite its 2008 multimillion dollar marketing campaign.¹⁶⁸

BP Operations in Colombia

History

According to former CEO Tony Hayward, as of 2010 BP had been involved in Colombia for over 20 years and 'played a major role in finding and developing the country's major oilfields'. The assets of BP's wholly owned subsidiary, BP Exploration Company (Colombia) Limited (BPXC), included five producing fields in four association contracts, interests in four pipelines and two offshore exploration blocks. Their net reserves in 2010 totalled 60 million barrels of oil equivalent (boe) and net production was approximately 25,000 barrels per day (bpd).¹⁶⁹

Upstream, BPXC was operator at [Cusiana](#) and [Cupiagua](#) fields near Taumarena in the central-eastern Casanare province.¹⁷⁰ Midstream, BPXC had interests in the Cuasiana gas processing facility and interests in four pipelines totalling some 1,600 km of oil and 400 km of gas pipelines, including a 24.8% share in the [Ocensa crude oil pipeline](#).

According to a leaked US diplomatic cable from December 2008, BP announced

2007.

164" [BP's Influence Peddling In Congress Bears Fruit Two Years After Gulf Spill](#)" *Huffington Post*, 12 March 2012.

165" [BP's \\$7.8 billion deal may speed payments for spill](#)" *Reuters*, 4 March 2012.

166" [BP spends millions lobbying as it drills ever deeper and the environment pays!](#)" *Guardian*, 2 May 2010.

167" [BP tackles climate change threat with £200m boost for energy efficiency](#)" *Telegraph*, 25 October 2005.

168" [Recapping on BP's long history of greenwashing](#)" *Greenpeace*, 21 May 2010.

169BP [Agrees to Sell Colombian Business to Ecopetrol and Talisman](#)" *BP* 3 August 2010.

170[Colombia Courts Oil Interests](#)" *Chicago Tribune*, 27 March 1995.

that its recently completed seismic data from two blocs one mile offshore of Cartagena strongly indicated the presence of [commercially viable](#) gas deposits. BP Colombia President Guillermo Quintero announced that the company intended to begin drilling exploratory wells in 2009 and that BP had invested \$35 million in mapping and studying offshore blocs.¹⁷¹

Community Relations

In November 2009 the *Guardian* reported that 95 Colombian farmers were suing BP in the high court in the United Kingdom, BP's headquarters, alleging that the construction of the [Ocensa oil pipeline](#) caused serious damage to their land, crops and animals. The farmers claimed damages for breach of contract and negligence. According to the claimants, an environmental impact assessment (EIA) conducted by BP prior to the construction of the pipeline acknowledged significant and widespread risks of damage to the land, but the mostly illiterate farmers were not informed. BP officials deny any long-term damage had been caused.

The region where the pipeline was laid had been plagued by paramilitary activity and Marta Hinestroza, one of the farmer's lawyers, was forced to flee Colombia for Britain when she discovered that her name was on a paramilitary hit list. As of early 2012 no reports were found of results of the case.¹⁷²

In 2006, BP had agreed an out-of-court settlement with a group of farmers over the Ocensa pipeline, rather than to allow the case to be heard in London's High Court.¹⁷³

Termination of Activities

However in August 2010 [BP](#) announced that it had agreed to sell its exploration, production and transportation business in Colombia to a consortium of [Ecopetrol](#) (51%) and Canadian [Talisman Energy](#) (49%). The two companies were to pay BP a total of \$1.9 billion for 100% of the shares in BPXC . This formed part of BP's plan to divest up to \$30 billions of assets globally in order to help pay the bill for the Deepwater Horizon spill. It was expected that the majority of BP's 470 staff would transfer with BPXC to the new owners.

C&C Energia

Type	Public Limited Company
Traded as	TMX:CZE

¹⁷¹[Colombia Energy Update: More Blocs, Gas Prospects, And Biofuels](#)" *Wikileaks*, 17 December 2008.

¹⁷²[BP faces damages claim over pipeline through Colombian farmland](#)" *Guardian*, 11 November 2009.

¹⁷³[Colombian farmers win BP payout](#)" *BBC*, 11 November 2009.

Founded	2005
Headquarters	Calgary, Canada
Key People	Dr Richard Walls (CEO)
Website	www.ccenergialtd.com

Company Profile

Canada-based C&C Energia Ltd. engages in exploration and production of crude oil in Colombia. In 2011 it had a total acreage of 587,000 net acres and had interests in 9 blocks. The company was formerly known as C&C Energy Canada Ltd and changed its name in May 2010.

Canacol Energy

Type	Public Limited Company
Traded as	TMX:CNE
Headquarters	Calgary, Canada ¹⁷⁴
Key People	Mr Charle Gamba (CEO)
Website	www.canacolenergy.com

Company Profile

Canada-based Canacol Energy and its subsidiaries engage in the exploration and production of oil and natural gas in Colombia, Brazil and Guyana. It has interests in 12 exploration blocks and 3 production blocks.

Canacol Operations in Colombia

Canacol produces oil at Rancho Hermoso, located in the Llanos Basin in eastern Colombia, and at the [Capella Field](#) in the southern Putumayo province. The company also has interests in 10 exploration and production contracts and was planning to drill three new wells in the Caguan-Puyumayo basin by the end of 2011.¹⁷⁵

CEPSA

CEPSA operates in Colombia under its subsidiary Cepsalsa.¹⁷⁶ CEPSA began ex-

¹⁷⁴“[Canacol Energy Ltd](#)” *Bloomberg*, retrieved 2 February 2012.

¹⁷⁵“[Canacol Energy Announces Promising Results at Colombia Field](#)” *Latin American Herald Tribune*, retrieved 2 February 2012.

¹⁷⁶“[CEPCOLSA - Cepsa Colombia S A](#)” *EMIS* retrieved 21 March 2012.

ploring in Colombia in 2000 and in 2011 had holdings in 19 Exploration and Production (E&P) projects in the Llanos Basin and the Upper Magdalena River Valley, at 12 of which it is the operator.

In the Upper Magdalena Valley the company has a stake at the Espinal block and at the [North Canada field](#).

In the Llanos Basin Cepcolsa operates the Caracara block. In 2010 Cepcolsa and [Petrobras](#) announced that oil had been discovered here at the Balay-1 well.¹⁷⁷

Chevron

Type	Public Limited Company
Traded as	NYSE:CVX
Founded	1984 ¹⁷⁸
Headquarters	San Ramon, California. ¹⁷⁹
Key People	John S. Watson (Chairman and CEO) ¹⁸⁰
Products	Petroleum, natural gas, petrochemicals.
Employees	58,000 (2011) ¹⁸¹
Website	www.chevron.com

Global Snapshot

As of 2011 Chevron was the second largest integrated oil firm headquartered in the USA, following [ExxonMobil](#). As of 2011 it had proven reserves of 10.5 billion barrels of oil equivalent (boe) and a daily production of 2.8 million boe per day. In 2011 Chevron acquired Atlas Energy in a deal worth \$4.3 billion.¹⁸²

The company can trace its history back to an oil discovery at Pico Canyon, north of Los Angeles, in 1879, which led to creation of the Pacific Coast Oil Company. The company was subsequently renamed the Standard Oil Company of California, which emerged from the breakup of Rockefeller's Standard Oil. and later became Chevron when it acquired the Gulf Oil Corporation in 1984, at the time the largest merger in US history.

¹⁷⁷“[Colombia](#)” *CEPSA*, retrieved 2 February 2012.

¹⁷⁸[Company Profile](#)” *Chevron*, retrieved 22 January 2012.

¹⁷⁹[A Brief History Of Major Oil Companies In The Gulf Region](#)” *University of Virginia*, retrieved 22 January 2012.

¹⁸⁰[Corporate Officers](#)” *Chevron*, retrieved 22 January 2012.

¹⁸¹[Company Profile](#)” *Chevron*, retrieved 22 January 2012.

¹⁸²[Chevron Corporation](#)” *Hoovers*, retrieved 22 January 2012.

In late 2011 Chevron was banned by Brazilian regulators for drilling on their territory after they suffered an oil spill off the Atlantic coast.¹⁸³ As of December 2011 drilling had not resumed and Chevron was facing an \$11bn lawsuit over the spill.¹⁸⁴

Chevron Operations in Colombia

History

[Chevron](#) has a long history in Colombia's oil and gas sector. The company began exploring in the late 1920s and made oil and gas discoveries in the 1960s and 1970s. These oil fields were sold during the 1990s and two additional oil fields were turned over to [Ecopetrol](#) in 2000.

In 1972 Chevron discovered gas in the La Guajira province and drilled the first well in 1975. The [Ballena onshore field](#) began producing gas in 1977 and the [Chuchupa field](#) began producing in 1979.

In 2011 Chevron was Colombia's largest producer of natural gas.¹⁸⁵

Activities

As of 2011 Chevron produced enough natural gas to supply approximately 65% of Colombia's national demand. Their production activities are focused on three natural gas fields, one offshore and two onshore.¹⁸⁶

Downstream, Chevron announced in 2011 that they were launching a major initiative to integrate Chevron-produced natural gas into the Texaco brand and market it under the name TEXGAS in Colombia, with stations to be installed in "strategic cities".¹⁸⁷

ExxonMobil

Type	Public Limited Company
Traded as	NYSE:XOM
Founded	1999
Headquarters	Texas, USA
Key people	Rex Tillerson (Chairman and CEO)

¹⁸³[Chevron Banned From Drilling In Brazil After Oil Spill](#)" *Forbes*, 23 November 2011.

¹⁸⁴[Brazil fines Chevron \\$5.4m for oil spill](#)" *BBC*, 24 December 2011.

¹⁸⁵"[Colombia: Record of Achievement](#)" *Chevron*, retrieved 3 February 2012.

¹⁸⁶"[Colombia](#)" *Chevron*, retrieved 3 February 2012.

¹⁸⁷"[Chevron steps on CNG station market in Colombia](#)" *NGV Journal*, retrieved 3 February 2012.

Products	Fuels, lubricants, petrochemicals
Revenue	US \$383.221 billion (2010)
Operating income	US \$52.96 billion (2010)
Net income	US\$ 30.46 billion (2010)
Total assets	US\$ 349 billion (2010)
Total equity	US\$ 146.839 billion (2010)
Employees	83,600 (end 2010)
Website	www.ExxonMobil.com

Global Snapshot

Current Global Profile

US-based firm ExxonMobil is currently ranked second on the Fortune 500 list of the largest American corporations, ranked by revenue.¹⁸⁸ It began life as the Standard Oil Company in 1882 and became ExxonMobil in 1999 as an alliance of two of the direct descendants of John D. Rockefeller's Standard Oil Company, Exxon and Mobil.¹⁸⁹ The company has several divisions and hundreds of affiliates with names including ExxonMobil, Exxon, Esso or Mobil.¹⁹⁰

In 2008, on the back of soaring global oil prices, ExxonMobil became the world's most valuable firm when shares soared by over 40% in a year.¹⁹¹ In 2010 they acquired XTO Energy, a leading developer of unconventional resources including shale oil and gas which requires advanced drilling techniques.¹⁹² In August of 2011, Exxon secured a \$3.2 billion joint venture with Rosneft on high risk deep-sea exploration in the Arctic and Russian Black Sea.¹⁹³

Over 2010, Exxon's total net production of liquids and natural gas was 4.4 million barrels of oil equivalent (boe) per day. Over 25% of their upstream production came from the US and roughly the same proportions from Africa and Asia.¹⁹⁴

Exxon is said to be considering the potential, currently being developed by Shell, of using revolutionary Floating Liquefied Natural Gas (FLNG) in order to build a fleet of ships that could be utilized for offshore gas discoveries.¹⁹⁵

188" [Fortune 500: ExxonMobil](#)" *CNNMoney*, retrieved 07 October 2011.

189" [Our History](#)" *ExxonMobil*, retrieved 07 October 2011.

190" [ExxonMobil Corp Profile](#)" *Reuters*, retrieved 07 October 2011.

191" [The age of oil](#)" *The Economist*, 24 February 2005.

192" [Exxon Mobil to buy XTO Energy in big U.S. gas bet](#)" *Reuters*, 14 December 2009.

193" [Exxon Mobil clinches Arctic oil deal with Rosneft](#)" *BBC News*, 30 August 2011.

194" [Annual Report 2010](#)" *ExxonMobil*, Retrieved 07 October 2011.

195" [Oil Majors Seek FLNG Support to Build \\$5 Billion Ships](#)" *Oil and Gas Eurasia*, October 2008.

Company Report Highlights

ExxonMobil's Annual Report for 2010¹⁹⁶ shows that capital and exploration expenditures for the year were a record \$32.2 billion, and that the company planned to invest more than \$165 billion over the following five years.

The company's market valuation had increased 12.9% to \$364 billion in 2010 on the back of rising oil prices, after a significant dip in 2009. Net income also rose by 58% from 2009 levels to \$30.46 billion, but remains some way off 2008 levels of \$45.2 billion. These figures include record Chemical earnings.

In 2010, Exxon also started up three major Upstream projects and finalized an agreement with the Iraq Ministry of Oil to redevelop and expand the West Qurna oil field, in which they hold a 60% interest. The company's takeover of XTO Energy allowed them to become the largest natural gas producer in the US and their percentage of proven reserves replacement increased from 100% in 2009 to 211%.

Official Accreditations and Global Perceptions

EITI Supporter Status

As of December 2011, ExxonMobil was a supporter company of the EITI, having joined on its creation in 2002. CEO Rex Tillerson co-authored the foreword to the EITI Business Guide.¹⁹⁷

In addition to the company's membership of the EITI, ExxonMobil announced in 2010 that they would serve on the Iraq EITI Board after the country joined the initiative. The company has also been active in the multi-stakeholder committee working to implement the EITI process in Equatorial Guinea.¹⁹⁸

UN Global Compact

On their official website, ExxonMobil state that while they were not a signatory of the UN Global Compact as of December 2011, its values regarding human rights, labour standards, the environment and anti-corruption are embedded in their own Corporate Standards.¹⁹⁹

CSR Review

Exxon's 2010 'Corporate Citizen Report' marks the following highlights in corporate social responsibility:

- A 10% reduction in lost-time incident rate since 2009.
- 40 technical scholarships awarded and 1263 global internships and co-op assign-

196" [Annual Report 2010](#)" *ExxonMobil*, Retrieved 07 October 2011.

197" [REITI Business Guide: Extractive industries can be part of the solution](#)" *EITI*, 12 May 2008.

198" [Corporate Citizen Report 2010](#)" *ExxonMobil*, Retrieved 9 January 2012.

199" [Safety in our operations](#)" *ExxonMobil*, retrieved 07 October 2011.

ments sponsored.

- Over 33,000 employees received anti-corruption training.
- The company received a 10/10 rating from GovernanceMetrics International and was ranked among the top 1% of companies rated.
- 2,600 hectares of protected wildlife habitats were added.
- The company managed a 20% reduction in upstream flaring.
- \$1.6 billion had been invested to improve energy efficiency and reduce greenhouse gas emissions since 2006.²⁰⁰

External Coverage

- Prior to BP's Deepwater Horizon spill in the Gulf of Mexico, America's worst offshore oil leak was the Exxon Valdez spill in Alaska in March 1989, when a tanker hit a reef and spilled 11 million gallons of crude oil into the waters. The spill caused long-term environmental damage, polluting coastlines, contaminating fishing ground and killing large numbers of animals. A court ordered Exxon to pay \$5 billion in damages, a figure which was later reduced to only \$500 million.²⁰¹
- ExxonMobil has been criticized for its funding of climate change denial science. An analysis carried out by Carbon Brief in 2011 found that 9 out of 10 of the most prolific authors who cast doubt on climate change had some sort of connection with the company.²⁰²
- In 2001 an international human rights group filed a lawsuit against Exxon, accusing it of complicity in the murder, torture and sexual abuse of the local population in the Aceh province in Indonesia, by virtue of the local army units it hired to protect its gas fields. Exxon denied the allegations.²⁰³
- In 2003 James Giffen, merchant banker and consultant to the Kazakh government, was arrested after being accused of channeling bribes in Kazakhstan during the 1990s in order to buy influence in the country for ExxonMobil, as well as other majors such as BP and Phillips Petroleum. The payments were said to violate the Foreign Corrupt Practices Act. However none of the oil companies were accused of any wrongdoing.²⁰⁴
- In 2006 gay rights groups began boycotting ExxonMobil for refusing to specifically prohibit discrimination against gays in its employment policy.²⁰⁵

200" [Corporate Citizen Report 2010](#)" *ExxonMobil*, Retrieved 9 January 2012.

201" [Alaska town slowly heals after 1989 Exxon Valdez spill](#)" *BBC*, 16 July 2010.

202" [9 out of 10 top climate change deniers linked with Exxon Mobil](#)" *AME Science*, 10 May 2011.

203" [Exxon 'helped torture in Indonesia](#)" *BBC*, 22 June 2001.

204" [Oil, Cash and Corruption](#)" *New York Times*, 5 November 2006.

205" [ExxonMobil's gay problem](#)" *CNN*, 11 May 2006.

Gran Tierra Energy

Type	Public Limited Company
Traded as	TMX:GTE
Founded	2005 ²⁰⁶
Headquarters	Calgary, Canada
Employees	307 (2011)
Website	www.grantierra.com

Company Profile

Gran Tierra Energy Inc. is an independent energy company which engages in the acquisition, exploration, development, and production of oil and gas properties in Colombia, Argentina, Peru, and Brazil. As of December 2010 the company held 16 exploration and production contracts in Colombia; seven in Argentina; six in Peru, and four exploration blocks in Brazil. It had estimated proven reserves of 1.2 billion cubic feet of gas and 22.1 million barrels of oil.

In July 2008 Gran Tierra Energy announced its acquisition of fellow Canadian company Solana Resources, with the aim of consolidating its position in South America.

Gran Tierra Energy Operations in Colombia

Gran Tierra Energy is the largest producer in the Putumayo basin of Colombia.²⁰⁷

The company's net production in Colombia grew from approximately 700 barrels of oil per day (bpd) in 2006 to 15,000 bpd in 2010. According to Gran Tierra's official website, this growth was driven by exploration and subsequent development success, including the discovery of the [Costayaco field](#). At [Open Round Colombia 2010](#) the company was awarded 3 blocks.²⁰⁸

Hocol

Type	Private
Founded	1956 ²⁰⁹
Headquarters	Bogota, Colombia

206“[Gran Tierra Energy Inc](#)” *Business Week*, retrieved 30 January 2012.

207“[Initiating on South American E&Ps](#)” *Tudor, Pickering, Holt and Co.*, January 2011.

208“[Colombia](#)” *Gran Tierra Energy Inc.*, retrieved January 2012.

209“[Hocol Petroleum Ltd](#)” *Bloomberg*, retrieved 6 February 2012.

Key People	Mr. Alvaro Vargas Vera (CEO and President)
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Company Profile

Bogota-based Hocol Petroleum Ltd. engages in hydrocarbon exploration and production in Colombia and Venezuela. As of May 2009 Hocol has operated as a subsidiary of [Ecopetrol](#), after being bought from French Maurel and Prom for \$748 million.²¹⁰

Hocol has exploration and production operations in the Upper and Middle Magdalena Valleys and in the Llanos region.

Nexen Inc

Nexen has exploration and production activities mainly in the UK North Sea (accounting for more than half of total annual oil and gas revenues), the US Gulf of Mexico, western Canada (including unconventional natural gas resources plays), Yemen, offshore West Africa and Colombia. In 2010 Nexen reported proved reserves of 987 million barrels of oil equivalent (boe).²¹¹

Occidental

Type	Public Limited Company
Traded as	NYSE:OXY
Founded	1920
Headquarters	Los Angeles, USA
Key people	Ray R. Irani (Executive Chairman), Stephen I. Chazen (President and CEO)
Products	Oil, natural gas, petrochemicals.
Revenue	\$19.16 billion (2010)
Net income	\$4.53 billion (2010)
Total assets	\$52.43 billion (end 2010)
Total equity	\$32.48 billion (2010)
Employees	11,000 (2010)

210“ [Ecopetrol to buy Hocol Petroleum](#)” *Colombia Reports*, 10 March 2009.

211“ [Nexen Inc](#)” *Hoovers*, retrieved 22 January 2012.

Website	www.oxy.com
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Overview

Current Global Profile

Occidental Petroleum, often referred to as Oxy due to its abbreviation on the NYSE stock exchange, covers three main sectors; Oil and Gas, Chemical, and Midstream Marketing.²¹² Occidental's oil and gas operations are consolidated in three core areas: the US, the Middle East and Latin America. In 2010, US operations provided 51% of Oxy's production and the US represented 66% of total proven reserves.²¹³

Company Report Highlights

Occidental's Annual Report 2010 reports that net income in 2010 improved by 55% on 2009 figures, reaching \$4.5 billion, and that the company ended 2010 with stock at its highest year-end closing price in company history of \$98.10. This surpassed the year-end 2009 closing price by more than 20%. The encouraging financial results were attributed to high commodity prices and increased production volumes. 2010 operating cash flow from continuing operations (excluding Argentina, where operations have been discontinued) saw a 60% increase on the previous year's figures.

Sales of oil and natural gas climbed 3.9% between 2009-10 to 748 thousand barrels of oil equivalent (boe) per day. Proven reserve additions from all sources totalled 409 barrels of oil, 63% of which resulted from improved recovery techniques, 35% from acquisitions and the remainder from extensions and discoveries.

Global Snapshot

EITI Supporter Status

As of December 2011, Occidental was not a supporter company of the [EITI](#).

UN Global Compact

As of December 2011, Occidental was not a participant in the UN Global Compact.

CSR Review

Oxy's 2010 Social Responsibility Report *Growth With Responsibility* reports the following activities and achievements in corporate governance, labour, human rights and health, environment and safety.²¹⁴

212“[Occidental Petroleum Corp Profile](#)”. *Reuters*,retrieved 06 October 2011.

213“[Annual Report 2010](#)”. *ROxy*,retrieved 06 October 2011.

214“[OAnnual Report 2010: Social Responsibility](#)”. *Oxy*, retrieve 06 October 2011.

- Employee Injury and Illness Incidence Rate (IIR) of 0.40 was approximately nine times better than the US industry average and the second lowest in Oxy's history.
- The company received an overall perfect 10 corporate governance ranking from Governance Metrics International (GMI).
- The company had seven programs recertified by the Wildlife Habitat Council (WHC) and one new program established in 2010.
- Oxy was included on Forbes' 2010 list of 'America's 20 Most Responsible Companies' and on Corporate Responsibility Magazine's 12th Annual (2011) 'Best Corporate Citizens List'.

External Coverage

- In 1995 the US Justice Department and Environmental Protection Agency announced that Occidental was to pay the US government \$129 million to cover the costs of the "Love Canal" toxic waste incident, which began in the late 1970s and forced the evacuation of more than 1000 homes, an elementary school and an entire neighbourhood in Niagara Falls, New York.²¹⁵
- In 1997 US Vice President Al Gore's "reinventing government" program was reported to have helped Occidental become the beneficiary of the largest ever American privatization of an oilfield, when it purchased 78% of the Elks Hills oilfield in California, which had been the Navy's strategic reserve. The fact that the Gore family had holdings in the company worth over \$500,000 led to accusations of graft. However it should be noted that Occidental's offer for the property was twice as high as that of the nearest of its 22 competitors.
- In 2000 the 5,000-strong Colombia U'wa indigenous tribe threatened to commit mass suicide if Occidental were to go ahead with their plans to drill on land they consider sacred.²¹⁶
- In 2005, Occidental numbered among the 53 organisations that donated the maximum \$250,000 towards George Bush's presidential inauguration.²¹⁷

Occidental Operations in Colombia

History

According to [Occidental's](#) official website, the company has been an active investor in Colombia for over four decades.²¹⁸

215“ [Financing the Inauguration](#)”. *US Justice Department*, 21 December 1995.

216“ [Gore's Big Oil Connection: An 'Occident' of Birth?](#)”. *Time*, 25 September 2000.

217“ [Financing the Inauguration](#)”. *USA Today*, 16 January 2005.

218“ [Estrella shuts down rigs in Colombia because of unrest](#)” *Oxy*, retrieved 30 January 2012.

Activities

In the north-eastern department of Arauca, Occidental discovered and operates the giant [Caño Limón oilfield](#).

In the Middle Magdalena Basin, the company has working interests in the [Ciras Infantas field](#), which it operates in partnership with [Ecopetrol](#). Operations at these fields use improved oil recovery (IOR).

Interaction with indigenous communities

During the 1990s leaders of the U'Wa indigenous group settled in the north-eastern cloud forests of Colombia waged a campaign of resistance against Oxy operations in the area. In 2002 Oxy announced that it was pulling out of the oil project.²¹⁹

For full details see: [Social and Environmental Impacts of Colombia's Oil Industry](#)

Pacific Rubiales

Type	Public Limited Company
Traded as	TRX:PRE BVC:PREC
Founded	1985 ²²⁰
Headquarters	Toronto, Canada.
Key People	Ronald Pantin (CEO) ²²¹
Products	Petroleum, natural gas.
Website	www.pacificrubiales.com

Company Profile

Canada-based Pacific Rubiales Energy Corporation engages in the exploration, development and production of heavy crude oil and natural gas. As of February 2011 the company owned total proved and probable reserves of 316.44 million barrels of oil equivalent (boe).

The company has working interests in 35 blocks in Colombia, two blocks in Guatemala and three blocks in Peru. In 2010 the company drilled a total of 29 exploratory wells.²²²

In early 2012 Pacific Rubiales announced that they would start trading shares on

219“ [Defend U'wa Life and Territory](#)” *Amazon Watch*, retrieved 30 January 2012.

220[Pacific Rubiales](#)” *Bloomberg*, retrieved 22 January 2012.

221[PACIFIC RUBIALES ENERGY CORP](#)” *Bloomberg*, retrieved 22 January 2012.

222[Pacific Rubiales Energy Corp](#)” *Reuters*, retrieved 22 January 2012.

Brazil's stock exchange from the 2 February.²²³

Pacific Rubiales Operations in Colombia

Activities

As of 2011 [Pacific Rubiales](#) was producing nearly one quarter of Colombia's total oil output 953,000 barrels per day (bpd), and *Time* magazine sees the company as the main driver behind Colombia's energy boom. The publication also comments that Pacific Rubiales' Colombian operations are run by [exiled Venezuelan oil workers](#).²²⁴

Pacific Rubiales owns 100% of Pacific Stratus and Meta Petroleum Limited, two Colombian operators with interests in the [Rubiales](#) and [Piriri](#) oil fields in Colombia's Llanos Basin and the [La Creciente](#) natural gas field in northern Colombia.²²⁵

When members of Colombian oil union USO went on strike in late 2011 over pay and conditions at Pacific Rubiales, press reported that union members received death threats from right-wing paramilitary groups.²²⁶

Perenco

Type	Private
Founded	1975 ²²⁷
Headquarters	London, UK
Key People	Mr. J. M. Jacoulot (CEO)
Website	www.perenco.com

Overview

Anglo-French Perenco UK Ltd engages in oil and gas exploration in Africa, South America, the Middle East and Europe. The company offers geoscientific, drilling, project development and crude production services.

²²³[Pacific Rubiales to Start Trading on Brazilian Exchange](#)" *Bloomberg*, 1 February 2012.

²²⁴"[Violent Protests Threaten Colombia's Oil Boom](#)" *Time*, 24 September 2011.

²²⁵"[Pacific Rubiales Energy Corp](#)" *EPC Engineer*, retrieved 24 January 2012.

²²⁶"[Unionists representing Pacific Rubiales workers report paramilitary death threats](#)" *Colombia Reports*, 1 December 2011.

²²⁷"[Perenco UK Ltd](#)" *Bloomberg*, retrieved 6 February 2012.

Perenco Operations in Colombia

Overview

In Colombia, [Perenco](#) operates under its subsidiary Perenco Colombia Ltd, founded in 1993 and based in Bogota.²²⁸

Activities

Perenco's assets in Colombia as of 2011 lay in the Llanos Basin (at the fields of [Casanare](#); [Esterero](#); [Coracora](#); [Garcerio](#); [Orocue and Yalea](#)), remote sites where the company claims to have made the operations economical by rationalising operational costs. As of early 2012 the company's drilling campaign had resulted in the drilling of 41 development wells and 11 exploratory wells.²²⁹

Criticisms

Press reports have alleged that Perenco has provided funding for paramilitary groups in Colombia, as well as accusations of disregard of environmental protection procedures and harrassment of union members. As of January 2012 none of Perenco's directors had been subject to a criminal investigation.²³⁰

Petrobras

Type	Partially state-owned
Founded	1953 ²³¹
Headquarters	Rio de Janeiro, Brazil
Key People	José Gabrielli (CEO) ²³²
Employees	80,492 (March 2011) ²³³
Website	www.petrobras.com

Company Profile

Petroleo Brasileiro (Petrobras) is a Brazilian integrated oil and gas company, operating in five segments: exploration and production; refining, commercialization

228“[Perenco Colombia Ltd](#)” *Bloomberg*, retrieved 6 February 2012.

229“[Colombia](#)” *Perenco*, retrieved 6 February 2012.

230“[Perenco accused of paramilitary ties, environmental neglect, harassing unionists](#)” *Colombia Reports*, 15 January 2012.

231“[Petrobras](#)” *Bloomberg*, retrieved 6 February 2012.

232“[Interview with Gabrielli, Petrobras CEO and Oil Executive of the Year](#)” *Forbes*, 10 November 2011.

233“[Petrobras-Petróleo Brasil](#)” *Forbes*, March 2011.

and transport of oil and gas; petrochemicals; distribution of derivatives and electrical energy; biofuels and other renewable energy sources. As of December 2010 it had 132 production platforms, 16 refineries, 291 vessels, 29,398 kilometers of pipelines, six biofuel plants, 16 thermoelectric plants, one pilot wind farm, 8,477 service stations and two fertilizer plants, as well as presence in 30 countries.

Outside of Brazil, the company focusses its upstream activities in the Gulf of Mexico and West Africa. Over the course of 2009 the company conducted exploration and production activities in 21 countries outside of Brazil (Angola, Argentina, Bolivia, Colombia, Ecuador, the United States, India, Iran, Libya, Mexico, Mozambique, Namibia, Nigeria, Pakistan, Peru, Portugal, Senegal, Tanzania, Turkey, Uruguay and Venezuela). As of the end of 2009, international activities accounted for 7.4% of total assets.

Petrobras Operations in Colombia

History

In Colombia Petrobras operates under its subsidiary Petrobras Colombia Limited, founded in 1972. This company explores and produces oil and gas, and also distributed hydrocarbon products through its service stations in Colombia.²³⁴

Activities

As of 2011 Petrobras was operating at seven onshore fields in Colombia and 15 exploration blocks. Its total oil production was 33,000 barrels of oil equivalent (boe) per day.²³⁵

PetroMagdalena Energy

Type	Public Limited Company
Founded	2008 ²³⁶
Headquarters	Toronto, Canada
Key People	Jaime Perez Branger (Executive Chairman), Luciano Biondi Golinucci (CEO) ²³⁷
Employees	130 (2011)
Website	www.petromagdalena.com/

234“[Petrobras Colombia Limited](#)” *Bloomberg*, retrieved 2 February 2012.

235“[Petrobras Colombia Limited](#)” *Business News Americas*, retrieved 2 February 2012.

236“[PetroMagdalena Energy Corp](#)” *Business Week*, retrieved 30 January 2012.

237“[Officers & Management](#)” *PetroMagdalena*, retrieved 30 January 2012.

Company Profile

PetroMagdalena Energy Corp. engages in the acquisition, exploration, and production of oil and gas properties in Colombia. In July 2011 Alange Energy Corp. announced that it would change its name to PetroMagdalena Energy Corp.²³⁸

Luis Giusti, who founded Alange Energy and took the company public in 2009, was the last President of PDVSA of Venezuela before the era of Hugo Chavez. He stepped down from his position as CEO of Alange Energy in January 2011.²³⁹

Operations in Colombia

PetroMagdalena has operations in the Llanos Basin, Catatumbo Basin, Putumayo Basin and Middle Magdalena Basin.²⁴⁰ In total the company has proved reserves of 7,614 million barrels of oil equivalent (boe) in the country.²⁴¹

Petrominerales

Type	Public Limited Company
Founded	1996 ²⁴²
Headquarters	Bogota, Colombia
Key People	Mr. Corey C. Ruttan (CEO and President)
Website	www.petrominerales.com

Overview

Petrominerales Ltd. is a Toronto-listed company which engages in the oil exploration, development, and production in Colombia and Peru. It holds 15 exploration blocks covering 2 million acres in Colombia and 5 blocks in Peru.

Petrominerales Operations in Colombia

In Colombia [Petrominerales](#) operates under its subsidiary Petrominerales Colombia Ltd.²⁴³

As of early 2012 the company was focussed mainly on fields in Colombia's Llanos basin, but also held several licenses in the Middle Magdalena Basin, where there

238“ [Alange Energy Corp. Announces Name Change](#)” *Reuters*, 15 July 2011.

239“ [Luis Giusti, Alange Energy \(ALE.v\) saga still not over](#)” *Setty's Notebook*, 20 January 2011.

240“ [Map of Properties](#)” *PetroMagdalena*, retrieved 20 January 2012.

241“ [Summary](#)” *PetroMagdalena*, retrieved 20 January 2012.

242“ [Petrominerales Ltd](#)” *Bloomberg*, retrieved 2 February 2012.

243“ [Petrominerales Colombia Ltd](#)” *Bloomberg*, retrieved 2 February 2012.

has been much potential recognized for its [unconventional hydrocarbons](#). In January 2012 CEO Corey Ruttan commented that the firm would closely monitor upcoming exploration work targeting unconventional hydrocarbons formations in the country, but that it did not have its own campaign planned.²⁴⁴

Repsol

Type	Public Limited Company
Traded as	BNAD:REP
Founded	1986
Headquarters	Madrid, Spain
Key people	Antonio Brufau Niubó (Chairman and CEO)
Products	Oil and gas exploration and production, natural gas and LNG trading and transportation, oil refining, petrochemistry.
Revenue	€60.43 billion: 2010 (approx. US \$83.37 billion)
Operating income	€7.621 billion: 2010 (approx. US \$10.51 billion)
Net income	€4.693 billion: 2010 (approx. US \$6.47 billion)
Total assets	€67.63 billion: end 2010 (approx. US \$93.31 billion)
Total equity	€25.99 billion: end 2010 (approx. US \$35.86 billion)
Employees	43,300 (end 2010)
Website	www.repsol.com

Global Snapshot

Current Global Profile

Repsol is a Spanish integrated oil and gas company, operating in over 35 countries in the field of exploration, production, refining and marketing. It was formed in 1986 following the merger of various state-owned oil companies.²⁴⁵ The majority of its assets are located in Spain and Argentina, as a result of its takeover of Argentinian firm YPF in 1999. However, the Spanish company has sold off 15% of YPF to the Petersen Group.

244“ [Petrominerales keeping eye on early stage unconventional exploration - CEO](#)” *Business News Americas*, retrieved 2 February 2012.

245“ [Repsol Broadens Its Horizons](#)” *Petroleum Economist*, 09 July 2009

As of the 31 December 2010, Repsol's proven reserves (excluding YPF) totalled 1,100 million barrels of oil equivalent (boe). These reserves are mainly located in Trinidad and Tobago (36%), 46% lie in other South American countries (Venezuela, Peru, Brazil, Ecuador etc.), 12% are in North Africa (Algeria and Libya), 5% in the Gulf of Mexico and around 1% in Spain. The company portfolio is essentially exposed to Spain and Peru downstream, and South America and Africa upstream.

In 2010 Repsol moved forward with its strategy of divestment of non-strategic assets, including the sale of a 30% holding in a refinery in Brazil to Petrobras. In June 2011 Repsol and Alliance Oil Company executed a Memorandum of Understanding (MoU) for creating a joint venture which aimed to serve as a growth platform for both companies in the Russian Federation.²⁴⁶

Company Report Highlights

Repsol's 2010 Annual Report revealed a 201% increase in Net Income compared to 2009, up to €4.69 billion. CEO Brufau attributes much of this success, achieved despite a challenging environment in 2010, to corporate transactions secured. The management saw the most significant of these as the alliance formed with Sinopec in Brazil. Recurring Net Income (relating to ongoing projects) saw a 55% rise on 2009 figures to €2.36 billion.

Further highlights of 2010 include the opening of the Pampa Melchorita Liquefied Natural Gas (LNG) plant in Peru and the investment in Repsol's Cartagena refinery, which aimed to double its capacity from 110,000-220,000 barrels per day (bpd) and become the largest industrial investment ever made in Spain. Repsol was involved in six new discoveries during 2010, which resulted from exploration activities in Venezuela (La Perla 2), Brazil, Sierra Leone and Colombia.

The financial results released for the Second Quarter of 2011 revealed a drop of 21.8% in reported earnings compared with the same period of 2010, and a 12.9% drop in upstream production. This was reportedly due to diminished production in Argentina following social unrest plus the suspension of production in Libya since 5 March.²⁴⁷

Global Snapshot

Transparency

EITI Supporter Status

Repsol YPF has been committed to the EITI initiative as a supporter company since 2003.²⁴⁸ According the Repsol's Annual Report 2010, the company also participates in the group working to support Peru becoming a compliant country.²⁴⁹

246" [Repsol 2010](#)" *Repsol*.

247" [Q11 Income Statement](#)" *Repsol*, 28 July 2011.

248" [Repsol YPF profile](#)" *EITI*, retrieved 06 October 2011

249" [Corporate Responsibility Report 2010](#)" *Repsol*, retrieved 06 October 2011

UN Global Compact

Repsol has been a participant in the UN Global Compact since 2002.²⁵⁰

CSR Review

According to official Repsol documents, the following are highlights of CSR achievement made over the course of 2010:²⁵¹

- The Strategy, Investment and Corporate Responsibility Committee met three times to discuss issues of safety and the environment, among others.
- The initiatives chose as priorities by the above Committee make up Repsol's Sustainability Plan, whose current version has a 2012 horizon. The Plan will be updated on an annual basis.
- Worked to develop Corporate Responsibility Committees in Spain, Argentina, Bolivia, Ecuador and Peru, which are due to hold their first meeting during 2011.
- Worked to identify high-priority investors who incorporate sustainability considerations in their investment policies and criteria.
- Gave a total of 186,982 training hours on Health and Safety in the Workplace, extending to 35% of the workforce.
- Reduced CO2 emissions by 385,556 tons (Repsol's total reduction between 2006-2010 amounted to 1,612,819 tons, 65% of the 2005-2013 strategic objective).
- Completed studies on carbon capture for five refineries in Spain, plus a feasibility study of the transport of CO2 in methane tankers.

External Coverage

- 2011 press reports suggested the appearance of an internal dispute between Repsol's largest shareholders (a Mexican oil company and Spanish construction group) and the management under CEO-Chairman Brufau. This dispute appeared to be provoked by dividend payouts and resulted in comments that the company may be at risk of a takeover.²⁵²

Repsol Operations in Colombia

History

In Colombia [Repsol](#) operates as Repsol Exploración Colombia, formerly known as 'Hispanoil'.²⁵³

250" [Repsol YPF Profile](#)" *UN Global Compact*, retrieved 06 October 2011

251" [Corporate Responsibility](#)" *Repsol Reports 2010*, retrieved 06 October 2011

252" [Repsol at War with Itself](#)" *Petroleum Economist*, 13 September 2011

253" [Repsol Exploracion Colombia](#)". *Bloomberg*, retrieved 6 February 2012.

Activities

According to the official company website, Repsol has rights in Colombia to over 8 onshore blocks, three exploration blocks (1,436 square kilometres) and five development blocks (net area of 274 square kilometres).²⁵⁴

In June 2011 Repsol Exploracion Colombia agreed with [Ecopetrol](#) and [Petrobras](#) to participate in a venture to explore the Tayrona block off the Caribbean coast.²⁵⁵

SK Energy

Overview

South Korean SK Energy is a publicly owned and traded company with activities in exploration and production (E&P), refining, marketing, petrochemicals, coal and trading. The company currently has operations in 30 oil and gas blocks worldwide and posted revenues in 2009 of US \$37.6 billion.²⁵⁶

Talisman Energy

Type	Public Limited Company
Traded as	TSX:TLM NYSE:TLM
Founded	1925
Headquarters	Calgary (Canada)
Key People	John A. Manzoni (CEO, President)
Products	Oil and gas.
Revenue	US \$4 billion (2010) ²⁵⁷
Net Income	CAD \$648 million (approx. US \$631 million), 2010. ²⁵⁸
Total Assets	CAD \$24.2 billion (approx. US \$23.6 billion), 2010.
Total Equity	CAD \$10.5 billion (approx. US \$10.2 billion), 2010.

254“[Colombia](#)”. *Repsol*, retrieved 6 February 2012.

255“[Repsol joins hunt offshore Colombia](#)”. *Offshore*, 6 January 2011.

256“[SK Energy Profile](#)” *Business News Americas*, retrieved 22 January 2012.

257“[90 Hunt Consolidated/Hunt Oil](#)” *Forbes*, retrieved 19 December 2011.

258“[Financial and Operating Highlights](#)” *Annual Report*, retrieved 19 December 2011.

Employees	3,078 (2011)
Website	www.talisman-energy.com

Overview

Current Global Profile

Talisman Energy Inc. is an upstream oil and gas company that engages in the exploration, development, production, transportation, and marketing of crude oil, natural gas, and natural gas liquids. It primarily operates in North America, the UK, Scandinavia, and south-east Asia. The company was founded in 1925 and is headquartered in Calgary, Canada.²⁵⁹ In 2010 the company produced 417,000 barrels of oil equivalent (boe)/day globally, approximately 50% oil and 50% natural gas.²⁶⁰

In 2011 Talisman Energy was ranked at number 559 in Forbes' 'Global 2000' list of the world's biggest public companies. (Forbes) It is listed on the Toronto and New York stock exchanges and at year-end 2010 the company's enterprise value was more than \$25 billion.

Talisman was created in 1992 when [BP](#) spun off its Canadian unit. CEO Manzoni formerly worked for BP as head of the company's refining and marketing unit.²⁶¹

Company Report Highlights

According to Talisman's 2010 Annual Report, net income for the year was up by 48% on 2009 figures to \$648 million, which was attributed to higher commodity prices and improved operating performance. Production averaged 417,000 boe/day, significantly above initial targets and, excluding asset sales, year-on-year production increased by 7%.

In 2010 Talisman replaced 164% of production with [proved reserves](#). The company also sold over \$2 billion of non-core assets, predominantly in North American natural gas properties. However the company acquired assets in two liquid areas, establishing a position in the Eagle Ford shale play in Texas, as well as producing assets in Colombia.

In 2011 Talisman was planning to spend US \$700 million in international exploration, with a number of key wells in Colombia and Peru, as well as activity in the North Sea, Papua New Guinea, Indonesia, the Kurdistan region of northern Iraq and the first shale wells in Poland.²⁶²

²⁵⁹[Talisman Energy Inc](#)" *Yahoo Finance*, retrieved 19 December 2011.

²⁶⁰[About Our Company](#)" *Talisman Energy*, retrieved 19 December 2011.

²⁶¹" [BP sells \\$1.9B Colombian assets to Ecopetrol, Talisman](#)" *Colombia Reports*, 3 August 2010.

²⁶²[2010 Annual Report](#)" *Talisman Energy*, retrieved 19 December 2011.

Global Snapshot

Transparency

EITI Supporter Status

Talisman Energy became an EITI supporting company in 2005.²⁶³

UN Global Compact

Talisman Energy has been a participant in the UN Global Compact since 2004.²⁶⁴

CSR Review

According to the official Talisman CR Report for 2010, the following are the company's highlights in corporate social responsibility:

- The company carried out a comprehensive review of their global drilling operations in the aftermath of the BP plc Deepwater Horizon incident and used the findings to apply additional rigour to the design, procedures and safety processes in preparation for the first deepwater well.
- Combined employee and contractor lost-time injury frequency improved by 18% from 2009.
- The number of spills greater than a half-barrel was reduced by 31% to 109 from 157 in 2009.
- Roll-out of 10 Golden Rules for Safe Operations – compliance with these rules is a condition of working at any Talisman site.
- Development of a new global community relations policy (GCRP) to create a consistent, best-practice approach to interacting with, and gaining the support of, local stakeholders.
- The company invested \$8.5 million worldwide in community initiatives.²⁶⁵

External Coverage

- Human rights groups campaigned extensively against Talisman's operations in Sudan, claiming that the oil revenues they paid to the Sudanese government were used to buy arms for the ongoing civil war. Talisman entered the country in 1998 and sold its stake in the Greater Nile Oil Project in 2003, however the Presbyterian Church of Sudan filed a lawsuit in 2001 claiming that Talisman aided the Sudanese military in a "brutal ethnic cleansing campaign".²⁶⁶

²⁶³[Transparency](#)" *Talisman Energy*, retrieved 19 December 2011.

²⁶⁴[Talisman Energy Inc.](#)" *UN Global Compact*, retrieved 19 December 2011.

²⁶⁵[2010 CR Report](#)" *Talisman Energy*, retrieved 19 December 2011.

²⁶⁶[Talisman Sudan suit to proceed](#)" *BBC*, 20 March 2003.

Talisman Energy Operations in Colombia

History

When [BP](#) sold off its Colombia assets in 2010, [Talisman Energy](#) purchased 49% ([Ecopetrol bought the remaining 51%). Talisman's President John Manzoni commented on the sale, saying that "these are tremendous assets that our team knows well. They are attractively priced, with excellent running room and we are partnering with the preeminent oil and gas company in Colombia."²⁶⁷

The acquisition added an additional 330,000 net acres to the company's assets in Colombia, along with 12,000 barrels of oil equivalent (boe)/day of production.²⁶⁸

At this stage Talisman was already partnered with Ecopetrol in several license areas in Colombia and Peru.

Activities

As of 2010 Talisman (Colombia) Oil and Gas Ltd (TCOG) held interests both as an operator and a non-operator in 11 blocks in the Llanos region of Colombia.²⁶⁹

In March 2011 23 men working for a company which had been subcontracted by Talisman Energy were kidnapped in Puerto Principe de Guerima, in Colombia's eastern Vichada province. Despite rumours of a ransom deal being made between the company and guerrilla groups, Talisman denied paying any ransom and asserted that it had always followed Colombia law. A Colombian military official said that the mass kidnapping had been carried out because the company had refused to pay protection money to the rebels.²⁷⁰

Vetra

Type	Private
Founded	2003 ²⁷¹
Headquarters	Bogota, Colombia
Key People	Mr. Manuel Jove Capellán (Vice President and Director)
Website	www.vetragroup.com

267" [BP sells \\$1.9B Colombian assets to Ecopetrol, Talisman](#)" *Colombia Reports*, 3 August 2010.

268" [Colombia](#)" *Talisman Energy*, retrieved 6 February 2012.

269" [Dilemmas and Case Studies](#)" *UN Global Compact*, retrieved 6 February 2012.

270" [Colombia warns firms face expulsion for paying ransoms](#)" *BBC*, retrieved 6 February 2012.

271" [Vetra Energia](#)" *Bloomberg*, retrieved 6 February 2012.

Current Global Profile

Vetra Energia explores and produces oil and gas in Colombia and internationally, as well as providing technical and management services to the sector. As of 2012 the company has operations in Colombia, Ecuador, Peru, Mexico, the US, Trinidad and Tobago and Venezuela. Vetra Energia operates as a subsidiary of Avante-genera.

Vetra Operations in Colombia

Vetra Exploracion y Produccion Colombia S.A. operates in Colombia, as a subsidiary of the [Vetra](#) Group. The company has exploration and production blocks including [Surorient](#), [La Punta](#), [Tolima B](#), [San Luis](#), [Rio de Oro](#), [La Rompida](#) and [Pauta](#).²⁷²

Winchester Oil and Gas

Type	Partially state-owned
Founded	2002 ²⁷³
Headquarters	Colombia
Key People	Mr. Orlando Sardi de Lima (President)
Website	www.wogsa.com

Company Profile

Winchester Oil & Gas S.A. is an exploration and production company with working interests in oil and gas blocks in Colombia. It offers drilling services in the Yamu field in Colombia.

²⁷²“[Vetra Exploracion y Produccion Colombia,S.A](#)” *Bloomberg*, retrieved 6 February 2012.

²⁷³“[Winchester Oil & Gas S.A.](#)” *Bloomberg*, retrieved 6 February 2012.

Oil and Gas Fields

Oil and Gas Fields in Colombia

The following is a list of blocks in production in Colombia as of 2011, along with the company which was currently operating the block:

- La Creciente ([Pacific Stratus](#))
- Esperanza ([Geoproduction](#))
- Campos Tello y La Jague ([Petrominerales](#))
- Joropo ([Petrominerales](#))
- Yamu ([Winchester Oil and Gas](#))
- Rio Verde ([Colombia Energy](#))
- Cubiro ([Alange Energy](#))
- Los Hatos ([Colombia Energy](#))
- Oropendola ([Columbus](#))
- Buenavista ([Tecnicontrol](#))
- Cabiona ([New Granada](#))
- Guasimo ([Pacific Stratus](#))
- Moriche ([Pacific Stratus](#))
- Cravoviejo ([C&C Energia](#))
- Corcel ([Petrominerales](#))
- Chaza ([Gran Tierra Energy](#))
- Casimena ([Petrominerales](#))
- Las Garzas ([New Granada](#))
- Carbonera ([Well Logging](#))
- Platanillo ([Amerisur Resources](#))
- Leona ([New Granada](#))
- Guarrojo ([Hocol](#))
- La Paloma ([Apex](#))
- Midas ([Petrolatina](#))
- Cachicamo ([Ramshorn](#))
- Nashira ([Sogomi Energy](#))
- Mapache ([Petrominerales](#))
- Fenix ([Fenix](#))
- Guatiquia ([Petrominerales](#))
- Siriri ([Ecopetrol](#))
- Doima ([Hocol](#))
- Buganviles ([Pacific Stratus](#))
- Campo Rico ([Emerald Energy](#))
- Caracas ([Cepcolsa](#))
- Guachiria ([Lewis Energy](#))
- Las Quinchas ([Pacific Stratus](#))
- Rio Magdalena ([Gran Tierra Energy](#))
- Cosecha ([Occidental](#))
- Chipalo ([Pacific Stratus](#))
- Fortuna ([Emerald Energy](#))
- Apiay ([Ecopetrol](#))
- Cubarral ([Ecopetrol](#))
- Tibu ([Ecopetrol](#))
- La Cira Infantas ([Ecopetrol](#))
- Pavas ([Ecopetrol](#))
- Ranchohermoso ([Ecopetrol](#))
- Pijao - Potrerillo ([Ecopetrol](#))
- Santa Clara ([Ecopetrol](#))

- Area Occidental ([Ecopetrol](#))
- La Rompida ([Ecopetrol](#))
- Barranca-Lebrija ([Ecopetrol](#))
- Nancy-Burdine-Maxine ([Ecopetrol](#))
- Camoa ([Ecopetrol](#))
- Chenche ([Ecopetrol](#))
- Valdivia-Almagro ([Ecopetrol](#))
- Provincia P Sur ([Ecopetrol](#))
- Magdalena Medio ([Ecopetrol](#))
- Lisama-Nutria ([Ecopetrol](#))
- Rio de Oro ([Ecopetrol](#))
- Area Sur ([Ecopetrol](#))
- El Dificil ([Ecopetrol](#))
- Caimito ([Ecopetrol](#))
- Hato Nuevo ([Ecopetrol](#))
- Cicuco Momposina ([Ecopetrol](#))
- Cicuco Boquete ([Pacific Stratus](#))
- Rio Zulia ([Ecopetrol](#))
- Palagua ([Ecopetrol](#))
- Ortega ([Ecopetrol](#))
- Toy ([Ecopetrol](#))
- Toldado ([Ecopetrol](#))
- Quimbaya ([Ecopetrol](#))
- Orito ([Ecopetrol](#))
- Nororiente ([Ecopetrol](#))
- Suroriente ([Ecopetrol](#))
- Chimichagua ([Ecopetrol](#))
- Entrerrios ([Ecopetrol](#))
- La Punta ([Ecopetrol](#))
- Cocorna Norte ([Ecopetrol](#))
- Provincia P Norte ([Ecopetrol](#))
- Ayombe ([Ecopetrol](#))
- Tisquirama ([Ecopetrol](#))
- Rio Meta ([Ecopetrol](#))
- Arauca ([Ecopetrol](#))
- Huila ([Ecopetrol](#))
- Yalea ([Perenco](#))
- P.P. Velasquez ([Mansorovar](#))
- Mana ([Interoil](#))
- Tambaqui ([Hupecol](#))
- Rio Opira ([Interoil](#))
- Cerrito ([Pacific Stratus](#))
- Ambrosia ([Interoil](#))
- San Jacinto ([Hocol](#))
- Guayuyaco ([Gran Tierra Energy](#))
- Opon ([Petrocolombia](#))
- Abanico ([Pacific Stratus](#))
- Chipiron ([Occidental](#))
- Espinal ([Petrobras](#))
- Boqueron ([Petrobras](#))
- Bolivar ([Colombia Energy](#))
- Puli ([Interoil](#))
- Tapir ([Coltanques](#))
- Matambo ([Emerald Energy](#))
- Tapir ([Coltanques](#))
- Matambo ([Emerald Energy](#))
- Maracas ([Texican](#))
- Rio Seco ([Seep](#))
- Santana ([Gran Tierra Energy](#))
- El Pinal Sur ([PetroSantander](#))

- Bocachico ([Colombia Energy](#))
- Rio Paez ([Hocol](#))
- Palermo ([Hocol](#))
- Recetor A ([Equion Energia](#))
- Alcaravan ([Colombia Energy](#))
- Piedemonte ([Equion Energia](#))
- Guajira ([Chevron](#))
- Las Monas ([PetroSantander](#))
- Cocorna Sur ([Mansarovar](#))
- San Luis ([Vetra](#))
- Tisquirama A-B ([Petroleos del Norte](#))
- Tolima ([Vetra](#))
- Santiago de las Atalayas ([Equion Energia](#))
- Tauramena ([Equion Energia](#))
- Rio Chitamena ([Equion Energia](#))
- Nare ([Mansarovar](#))
- Mangangue ([Solana](#))
- Lebrija ([Petroleos del Norte](#))
- Hobo ([Petrobras](#))
- Dindal ([Pacific Stratus](#))
- Chaparral ([Vetra](#))
- Caguan ([Petrobras](#))
- Armero ([Interoil](#))
- Garcero ([Perenco](#))
- Coracora ([Perenco](#))
- Rubiales ([Meta Petroleum](#))
- Upia ([Petrobras](#))
- Rondon ([Occidental](#))
- Piriri ([Meta Petroleum](#))
- Orocue ([Perenco](#))
- Casanare ([Perenco](#))
- Estero ([Perenco](#))
- Cravo Norte ([Occidental](#))
- Toca ([Ecopetrol](#))
- Playon ([Ecopetrol](#))
- Sogamoso ([Ecopetrol](#))
- Quebrada Roja ([Ecopetrol](#))
- Capachos ([Repsol](#))²⁷⁴

²⁷⁴[Mapa de Tierras](#)" ANH, 19 January 2012.

Enhanced Recovery Techniques

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.²⁷⁵

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.²⁷⁶ EOR also has some considerable drawbacks, including the relatively high cost of its implementation and, in some cases, the unpredictability of its effectiveness.²⁷⁷

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.²⁷⁸

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). 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.

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. This stage extends a field's productive life and results in the recovery of 20 to 40 percent of the original oil in place.

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.

275" [Enhanced Oil Recovery \(EOR\)](#)" *Teledyne ISCO*, Retrieved 1 February 2012.

276" [Oil Field Glossary](#)" *Schlumberger*, Retrieved 1 February 2012.

277" [Enhanced Oil Recovery/CO2 Injection](#)" *Fossil Energy*, Retrieved 1 February 2012.

278" [Enhanced Oil Recovery](#)" *Petroleum Technology Transfer Council*, Retrieved 1 February 2012.

Categories of EOR techniques

The primary categories of EOR are thermal recovery, gas injection and chemical injection.

Thermal EOR has historically been the most widely applied. 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.

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. 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.

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. This effects a more efficient displacement, and therefore better recovery, of moderately viscous oils.

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.

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.

Key Infrastructure

Overview of Infrastructure in Colombia

Pipelines, Refineries and Terminals

As of 2011 Colombia had six major oil pipelines crossing the country: ([Ocensa](#); [Cano-Limon](#); [Llanos Orientales](#); [Alto Magdalena](#); [Colombia Oil](#) and [Transandino](#)) four of which connect oil and gas fields to the Caribbean export terminal at [Covenas](#). The [Bicentennial Pipeline](#) is in development and due to be completed in 2012.

Downstream, Colombia had a 290,850 barrels per day (bpd) crude oil refining capacity in 2010 and has five major refineries, all owned by Ecopetrol. The [Barrancabermeja Refinery](#) and the [Cartagena Refinery](#) represent the majority of the country's capacity.²⁷⁹

Colombia's Infrastructure Bottleneck

Infrastructure and connectivity have always been a challenge for Colombia, due to its geography of high peaks and dense jungle dividing the different regions. The government's [45-year conflict against rebel groups](#) has been a further barrier to efficient infrastructure.

Following a dramatic improvement in the security environment in the 21st century, investors are beginning to return.²⁸⁰

However insufficient infrastructure still remains a major obstacle to meeting the country's production targets for oil and gas output. The President of the Colombian Infrastructure Chamber commented in 2011 that the "monumental backwardness" of Colombia's transport network was perhaps its biggest obstacle to economic growth.²⁸¹

According to industry analyst Jamie Somerville in 2011 "virtually every company has been impacted by infrastructure problems in the Llanos basin.... Everyone highlighted oil transportation and infrastructure as a key challenge for the industry this year." Many of these concerns stemmed from reduced output along the [Ocensa pipeline](#) in late 2011. A report by the *Council of the Americas* suggested that output is limited by up to 30,000 bpd due to a lack of adequate transport infrastructure.

Nevertheless, recently investment in infrastructure has begun to flood into Colom-

279" [Colombia](#)" *EIA*, retrieved 22 January 2012.

280" [El Condor IPO and Colombia's peace dividend](#)" *Financial Times*, 26 January 2012.

281" [Bridging the gaps](#)" *Economist*, 17 September 2011.

bia. This was given a boost by the announcement in January 2012 that construction company 'El Condor' would make an \$111m initial public offering (IPO) in order to invest the capital in infrastructure across the country.

[Ecopetrol](#) and its partners have also been making investments totalling more than US \$2 billion to increase capacity along the country's pipelines, at storage facilities and at truck/tank unloading platforms, according to their official website. This investment is carried out within the framework of the 'Crude Export Plan' for 2011 and beyond. Of the total of \$960 million invested between 2010-2011, \$522 million came from Ecopetrol and \$275 million from Ecopetrol partnerships.²⁸²

Alto Magdalena Pipeline

Route

Completed in 1990, the Alto Magdalena oil pipeline transports crude 400 kilometres from the Magdalena Valley in south-west Colombia to Vasconia in central Colombia. An extension also delivers crude oil to the [Covenas Terminal](#).²⁸³

Capacity

Along with the [Colombia Oil pipeline](#), the Alto Magdalena pipeline is one of the lower capacity pipeline in Colombia.²⁸⁴

Ownership

The pipeline was constructed by oil companies [Hocol](#) and [Shell](#).²⁸⁵

Cano Limon Pipeline

Route

The Caño Limón – Coveñas Pipeline, constructed in 1985 connects the [Caño Limón Field](#) with the Caribbean [Covenas Terminal](#).²⁸⁶

At 771 kilometres long, the pipeline is the second longest in the country.²⁸⁷

282" [Race Against the Clock](#)" *Ecopetrol*, retrieved 27 January 2012.

283" [South America Snapshot](#)" *Pipelines International*, September 2009.

284" [Colombia](#)" *IEA*, June 2011.

285" [Race Against the Clock](#)" *Ecopetrol*, retrieved 23 January 2012.

286" [South American Snapshot](#)" *Pipelines International*, September 2009.

287" [Ecopetrol S.A.: Colombia's Cano Limon Oil Pipeline Bombed; Pumping Halted](#)" *4 Traders*, 20 January 2012.

Capacity

The pipeline is capable of pumping 220,000 barrels a day (bpd) of crude oil. However over 2011 had an average output closer to 80,000 bpd.

Ownership

The pipeline is jointly owned by [Ecopetrol](#) and US oil company [Occidental](#).

However in March 2011 the two companies reached an agreement giving Ecopetrol 100% control of the pipeline, while Occidental would remain operator at the Cano Limon Field. This agreement would grant Ecopetrol access to the pipeline's surplus capacity.²⁸⁸

Attacks on Pipeline

According to a report by US Congress, the Cano-Limon pipeline has been a major target for armed groups such as the FARC and ELN in Colombia. In 2001 it was bombed 170 times, causing shut-downs for seven months and costing approximately \$500 million in revenues and royalties to Colombia. Since 2001 there has been a marked decrease in attacks. In 2002 there were only 41 attacks on the pipeline, 34 in 2003 and 17 in 2004.²⁸⁹

However over the course of January 2012 two different sections of the pipeline were blown up on two separate occasions a week apart. The press reported that leftist rebels were responsible for the attack.

Colombia Oil pipeline

The Colombia Oil pipeline, along with the [Alto Magdalena Pipeline](#) is one of the country's smaller pipelines.²⁹⁰

Llanos Orientales Pipeline (ODL)

Route

The 235 kilometre Llanos Orientales pipeline transports crude oil from the [Rubiales Field](#) and other fields in the north-east of the country to the Monterey Station, where it connects with the national petroleum infrastructure that transports the oil to Caribbean ports.²⁹¹

288[Ecopetrol and Occidental Reach Agreement on Autonomy of Cano Limon-Covenas Pipeline](#)" *Reuters*, 4 March 2011.

289[Plan Colombia: A Progress Report](#)" *US Congress*, 22 June 2005.

290"[Colombia: Country Analysis Brief](#)". *EIA*, June 2011.

291[The ODL Pipeline](#)" *Pacific Rubiales*, retrieved 26 January 2012.

Capacity

In 2010 the pipeline was transporting 240,000 barrels per day (bpd) of crude, with a projected figure for 2011 of 340,000 bpd. It is 24 inches in diameter.

Ownership

The pipeline is jointly owned by [Ecopetrol](#) (65%) and [Pacific Rubiales](#) (35%), who together invested a total of \$560 million dollars in the project.

The two companies signed a Memorandum of Understanding in 2007 to establish the joint venture company ODL, which developed the project. According to CEO of Pacific Rubiales Ronald Pantin, the goal was to be able to take the [Rubiales field](#) to its full potential and to provide a cheaper way to transport crude to the [Covena Terminal](#) for export. Oil was previously trucked, and the pipeline was predicted to reduce transportation costs by around 50%.²⁹²

Ocensa Oil Pipeline

Route

The Ocensa pipeline starts onshore at the [Cusiana](#) and [Cupiagua](#) fields and stretches for 829km to the [Covenas Terminal] on the Caribbean coast.²⁹³

According to the *Oil and Gas Journal* Ocensa is the most strategic pipeline for Llanos basin production, as it is the lowest cost transportation alternative to international markets.²⁹⁴

Capacity

As of mid-2011, the Ocensa pipeline was carrying 560,000 barrels per day (bpd) of oil from the Llanos basin, representing 60% of the country's total oil production.

Ownership

In 2003 the ownership structure of the pipeline was the following: [Ecopetrol](#) (35.29%), [BP](#) 24.8%*, [TOTAL Pipeline Colombia](#) (15.2%), Enbridge (24.71%).²⁹⁵ However since this time there have been several changes in the ownership structure.

In March 2009 [Ecopetrol](#) announced that it had agreed to buy up the shares of En-

²⁹²[Pipeline reduces costs in Colombia](#)" *Pipelines International*, September 2009.

²⁹³[Ecopetrol Increases Shares in Colombia's Ocensa Pipeline](#)" *RigZone*, 16 March 2009.

²⁹⁴[Total sells stake in Ocensa pipeline to Petrominerales](#)" *Oil and Gas Journal*, 21 July 2011.

²⁹⁵[BP And Amerada Hess Agree Swap](#)" *BP*, 30 January 2003.

bridge Inc. in the Ocesa pipeline for \$417.8 million. This increased Ecopetrol's share in the venture from 35.3% to 60%. In July 2011 oil company Petrominerales announced their acquisition of a 5% interest in the Ocesa pipeline, bought from Total E&P Holdings \$281 million.²⁹⁶

In early 2010 Canadian oil firm [Pacific Rubiales](#) signed a deal to pay \$190 million for use of the Ocesa pipeline. This awarded the company preferential rights to transport 160 million barrels of oil for a 10-year period.²⁹⁷

Trans-Caribbean Gas Pipeline

Route

The Trans-Caribbean Gas Pipeline (also known as the Antonio Ricaurte pipeline) carries natural gas from [Chevron's Ballena field](#) to Western Venezuela.²⁹⁸

The project was announced in 2003 as the first step in a major regional integration project and was inaugurated in October 2007.²⁹⁹

Capacity

The pipeline carries an estimated 200 million cubic feet of gas per day,³⁰⁰ runs approximately 225km and started transporting gas in 2008.³⁰¹

Ownership

State-owned Venezuelan PDVSA spent \$467 million to build the pipeline to ship Colombian gas to Maracaibo as Venezuela lacks infrastructure and investment in its gas infrastructure and therefore relies on Colombian gas imports.

The gas for the pipeline is supplied from Colombia field by [Ecopetrol](#) and American [Chevron](#).³⁰²

296 [Petrominerales Announces Closing of Strategic Acquisition of Interest in Colombia's Ocesa Pipeline](#)" *Reuters*, 20 July 2011.

297 [Pacific Rubiales signs deal to use Ocesa's pipeline](#)" *Reuters*, 7 January 2010.

298 ["Colombia-Venezuela gas pipeline blows up, stupid speculation flows freely"](#). *Setty's Notebook*, 28 March 2011.

299 ["FARC attacks Trans-Caribbean gas pipeline"](#). *CorpWatch*, 5 June 2008.

300 ["Crossing the Wayúu: Pipeline Divides Indigenous Lands in South America"](#). *Intelligence Quarterly*, 5 June 2008.

301 ["South America snapshot"](#). *Pipelines International*, September 2009.

302 ["Ecopetrol, Chevron Ship 300MM Cf/D of Gas to Venezuela"](#). *Downstream Today*, 18 June 2009.

Transandino Oil pipeline

The Transandino Pipeline, operated by [Ecopetrol](#), runs 305km between [Ecuador and Colombia](#), connecting Ecuador's fields with [Port Tumaco](#) in Colombia.

The pipeline was completed in 1969, has a capacity of 50,000 barrels per day (bpd) of oil and varies in diameter between 10-18 inches.³⁰³

Bicentennial Oil Pipeline (proposed)

The Bicentennial Pipeline (Bicentenario or OBC) is a project due for completion in December 2012.³⁰⁴

Route

On completion the pipeline will be the largest of its kind in Colombia. It will run from the Casanare department in the centre-east of the country, to the [Covenas Terminal](#) on the Caribbean coast, in order to facilitate oil exports from fields in the oil-rich Llanos region.³⁰⁵

Capacity

The pipeline will have a diameter of 36-42 inches and will have a capacity of 450,000 barrels per day (bpd) of crude.

Ownership

The pipeline will be owned by a newly-formed joint venture known as 'Oleoducto Bicentenario de Colombia', in which Colombian [Ecopetrol](#) holds a 55% share. The remaining shares are held by [Pacific Rubiales](#) (32.88%), [Petrominerales](#) (9.65%), [Hocol](#) (0.96%), [C&C Energia](#), Rancho Hermoso, [Canacol Energy Ltd](#) and [Vetra Energy](#) (0.5% each).

In total the project is predicted to cost US \$4.2 billion and is to be built in three stages:

- Stage 1: Pipeline laid from Aragueny to Banadia and infrastructure upgrades at the [Covenas Terminal](#).
- Stage 2: Pipeline laid from Banadia to Ayacucho.
- Stage 3: Pipeline laid from Ayacucho to Covenas.³⁰⁶

303“[South America snapshot](#)”. *Pipelines International*, September 2009.

304“[Pipelines](#)” *Pacific Rubiales*, retrieved 22 January 2012.

305“[Colombia moves toward construction of its longest oil pipeline](#)” *Pipelines International*, December 2010.

306“[ECOPETROL SEEKS PARTNERS FOR 1,545-KM BICENTENNIAL PIPELINE](#)”

Barrancabermeja Refinery

Ownership

The Ecopetrol-owned Barrancabermeja-Santander facility, along with the [Cartagena Refinery](#), represents the majority of Colombia's refining capacity of 290,850 barrels per day (bpd).³⁰⁷

Capacity

As of 2010 the processing capacity at the Barrancabermeja facility was 205,000 bpd. and supplies nearly 80% of the fuels consumed in Colombia.³⁰⁸

Modernisation Project

According to Ecopetrol's Annual Report for 2010, the basic engineering and construction stages of the Barrancabermeja Refinery Modernization Project (PMRB) were completed over the year.³⁰⁹

Operations are scheduled to commence at the modernized refinery in 2016, with the aim of improving profitability and supplying the entire Colombian market without any need for imports. The modernized refinery is also expected to produce fuels of higher quality, which will help reduce pollution and lead to better air quality in Colombia.

In August 2011, engineering and construction contractor Foster Wheeler announced that it had been contracted by Ecopetrol to implement the second phase of the Project for the PMRB. The PRMB is to add heavy crude processing capability to take advantage of the domestic heavy, sour crude oil, and to provide the processing capabilities to meet the Colombian clean fuels product specifications.³¹⁰

Cartagena Refinery

Ownership

[Ecopetrol](#) became the outright owner of the Cartagena refinery, on Colombia's Caribbean coast, when it acquired 51% of the shares of mining and commodities

Pipeline and Gas Journal, November 2010.

307^{Colombia}" *US Energy Information Administration*, retrieved 19 January 2012.

308^{Green Light for Construction of Modernization Project at Barrancabermeja Refinery}" *Reuters*, 15 May 2011.

309^{Refining}" *Ecopetrol*, retrieved 19 January 2012.

310^{Foster Wheeler Gears up for Second Phase of the Barrancabermeja Refinery Modernization Project}" *Business Wire*, 9 August 2011.

group Glencore International in 2009.³¹¹

Capacity

As of January 2010, the Cartagena refinery was processing 80,000 barrels per day (bpd) of crude oil.³¹²

Expansion and Modernisation Plans

According to industry publication the *Petroleum Economist* in 2010, Ecopetrol was planning to spend \$2.9 billion to expand and modernize the two refineries at Cartagena and [Barrancabermeja](#).³¹³

The development plan is intended to increase refinery capacity to 165,000 barrels per day (bpd). The total estimated cost and was expected to be completed by the end of 2012. In 2010, 17.5% of the project was completed.

In January 2012 Ecopetrol announced that it had finalized a \$3.5 billion financing package for the modernisation of the refinery at Cartagena. The financing package was provided by a group of export credit agencies and commercial banks, including US EXIM, the Bank of Tokyo-Mitsubishi and Banco Bibao Vizcaya Argentina.³¹⁴

Other Refineries in Colombia

Colombia has five major refineries, all owned by [Ecopetrol](#), which together had a crude oil refining capacity of 290,850 barrels per day (bpd). Aside from the refineries at [Cartagena](#) and [Barrancabermeja](#), there are:

- Apiay Refinery (2,250 bpd capacity 2010)
- Orito Refinery (1,800 bpd capacity 2010)
- Tibu Refinery (1,800 bpd capacity 2010)

Covenas Terminal

The Coveñas Terminal is supplied with crude by the [Caño Limón Pipeline](#), the [Colombia Oil Pipeline \(ODC\)](#) and the [Ocesa Oil Pipeline](#).³¹⁵ Colombian crude oil

311 [Refining](#)" *Ecopetrol Annual Report 2010*, retrieved 19 January 2012.

312 [Underground Survey Services for Cartagena Refinery Expansion Project Completed Successfully](#)" *PR Log*, 31 January 2011.

313 [Ecopetrol continues acquisition binge, as Colombian oil rebirth rolls on](#)" *Petroleum Economist*, 30 September 2010.

314 [Columbia \(sic\): Ecopetrol Agrees Financing Deal for Cartagena Refinery](#)" *Petrol World*, 9 January 2012.

315 ["Terminal coveñas"](#). *Ecopetrol*, retrieved 2 February 2012.

is exported from Coveñas to the Gulf and East coasts of the United States.³¹⁶

Capacity

In 2010 the terminal was exporting 460,000 barrels per day (bpd). However press reported in late 2010 that [Ecopetrol](#) planned to raise the loading capacity to around 1.5 million bpd by 2014.³¹⁷

Other Terminals in Colombia

The following are the remaining terminals in Colombia:

- Santa Marta Terminal
- Buenaventura Terminal
- Tumaco Terminal

³¹⁶“[An Energy Overview of Colombia](#)”. *Fossil Energy International*, retrieved 2 February 2012.

³¹⁷“[Ecopetrol to expand Covenas terminal](#)”. *Latin American Energy*, 17 November 2010.

Regional Dynamics

Colombia-Ecuador

Overview of Relations

Relations between Colombia and Ecuador under the Uribe administration in Colombia were often strained, particularly following a Colombian military incursion into Ecuadorian territory in 2008 during an attack on rebel force the FARC, after which Ecuador broke off diplomatic ties. The relations between the Uribe and his Ecuadorian counterpart Rafael Correa were described by the *Economist* as being marked by "deep mistrust and personal antipathy".

In July 2009 Ecuadorian Foreign Minister Fander Falconi commented that relations between the two countries had never been as bad, following accusations of donations made by the FARC to the election campaign for President Correa.³¹⁸

However by December 2011 Correa commented that relations between the two countries were improved under the Santos government in Colombia. At a meeting between the two heads of state Santos and Correa formally announced the restoration of trade relations and more open border crossings, as well as agreements to cut airline prices between Quito and Bogota and restore bridges along the common border.³¹⁹

Transnational Pipelines

Transandino pipeline

[Ecopetrol's Transandino Pipeline](#), completed in 1969, runs 305 kilometres between Ecuador and Colombia, connecting Ecuador's oil fields with Port Tumaco on Colombia's Pacific coast. The pipeline has a capacity of 50,000 barrels of oil per day (bpd) and varies in diameter between 10 and 18 inches.³²⁰

The pipeline has suffered attacks on several occasions. A March 2008 attack took the pipeline off-stream for several weeks and in April 2009 an attack was allegedly carried out by FARC rebels, however this attack did not cause a halt in production.³²¹ Press reports have suggested that these incidents may have been reprisals by the rebel group for the March 2008 military raid on Ecuadorian soil that killed

318“[From the guerrilla's mouth](#)” *Economist*, 3 July 2009.

319“[Colombia, Ecuador relations improve, bilateral trade restored](#)” *Colombia Reports*, 20 December 2011.

320“[Colombia, Ecuador relations improve, bilateral trade restored](#)” *Pipelines International*, 20 December 2011.

321“[Ecopetrol restarts ops at Transandino pipeline](#)” *Business News Americas*, 5 May 2009.

the FARC's second-in-command.³²² In early February 2011 the pipeline was again bombed by suspected rebels.³²³

Proposed extension to Antonio Ricaurte pipeline

In November 2011 the presidents of Venezuela and Colombia signed an agreement to extend the [Antonio Ricaurte pipeline](#) across Colombian territory to Panama and Ecuador.³²⁴

Colombia-Venezuela

Overview of Relations

Colombia and Venezuela have experienced a period of tension in bilateral relations over the past decade, however they remain important trading partners. The *Economist* reported that for both countries, the other is the second-largest trading partner (after the US in both cases) and that bilateral trade in 2008 totalled \$7.2 billion. Colombian exports made up \$6 billion of this, mainly food, live animals, clothing and cars.

According to the report, trade considerations have tended to ease the personal rift between former Colombian President Uribe and left-wing Venezuelan President Chavez.³²⁵

Between 2008-2010 relations between the two countries significantly deteriorated.³²⁶ In July 2009 Chavez declared a "freeze" on diplomatic ties with Colombia, promising to find alternatives to Colombian goods, in response to Colombia's agreement to allow the US to use seven of their military bases for their anti-drug operations.

In July of 2010 Venezuela definitively broken ties with neighbouring Colombia when Colombian President Uribe accused Venezuela of harbouring rebel forces. However a month later following the election of Juan Manuel Santos in Colombia the two leaders agreed to restore bilateral relations at a meeting in Santa Marta. President Santos has stressed that he seeks compromise, not confrontation, with Venezuela, seen as a departure from the confrontational policies of his predecessor Uribe.

According the BBC, the troubled relations between the two countries between

322“[Colombia Pipeline Bombed by FARC After Ecuador Attack](#)” *Bloomberg*, 6 March 2008.

323“[Ecopetrol says bombed pipeline back in operation](#)” *Colombia Reports*, 14 February 2011.

324“[Proposed pipeline extension is boon for Venezuela’s regional ambitions](#)”. *Interfax*, 29 November 2011.

325“[Politics versus trade](#)”. *Economist*, 10 September 2009.

326“[Politics versus trade](#)”. *BBC*, 11 August 2010.

2008-201 cut bilateral trade by around 70%, with particularly negative effects on border cities. Commenting on the closing of relations between Chavez and Santos, Alvaro Uribe was reported to have asked "President Santos, we are confused, how do you give more weight to 800 million pesos (\$410,400) or 400 (\$205,200) than to democratic values? Democratic values have no price."

Transnational pipelines

Antonio Ricaurte gas pipeline

The [Antonio Ricaurte pipeline](#) (also known as the Trans-Caribbean Gas Pipeline) carries natural gas from [Chevron's Ballena field](#) to Western Venezuela. Venezuela's state oil company needs the imported gas in order to maintain oil output in the Maracaibo region and for use in the production of petrochemicals.³²⁷

The project was announced in 2003 as the first step in a major regional integration project and was inaugurated in October 2007.³²⁸ The pipeline carries an estimated 200 million cubic feet of gas per day,³²⁹ runs approximately 225km and started transporting gas in 2008.³³⁰

Originally Chavez had intended to extend the Antonio Ricaurte pipeline as far as Nicaragua by 2012, but the project was delayed by delays in bringing Venezuela's offshore discoveries on stream. However in November 2011 the Venezuelan President signed an agreement with President Santos to extend the pipeline across Colombian territory to Panama and Ecuador. As of 2011 it was not clear whether the extension to Panama would run onshore or underwater along the coast. *Interfax* reported in 2011 that the disparity between heavily subsidized Venezuelan prices and global gas prices had in the past deterred such advances on infrastructure deals.³³¹

In April 2011 there was an explosion along the pipeline, affecting a 25-metre stretch and producing a 7-metre deep crater in the Maicao area of La Guajira. Gas supply was disrupted for several days.

Many press reports accused rebel group the Fuerzas Armadas Revolucionarias de Colombia (FARC) for the explosion, however energy reporter Steven Southam suggested that anti-Venezuela right-wing paramilitaries may have involved or that the explosion could have been a result of poor maintenance of the pipeline itself.

327“[Colombia-Venezuela gas pipeline blows up, stupid speculation flows freely](#)”. *Setty's Notebook*, 28 March 2011.

328“[FARC attacks Trans-Caribbean gas pipeline](#)”. *CorpWatch*, 5 June 2008.

329“[Crossing the Wayúu: Pipeline Divides Indigenous Lands in South America](#)”. *Intelligence Quarterly*, 5 June 2008.

330“[South America snapshot](#)”. *Pipelines International*, September 2009.

331“[Proposed pipeline extension is boon for Venezuela's regional ambitions](#)”. *Interfax*, 29 November 2011.

Proposed pipelines

In November 2011 Presidents Chavez and Santos announced that they plan to boost trade between Venezuela and Colombia and were looking to build a transnational pipeline to carry Venezuelan oil to Colombia's Pacific coast. The pipeline project was described by President Santos as of "transcendent importance."³³²

Illegal Fuel Exports

According to reports in 2005, around 100,000 barrels of oil were illegally exported out of Venezuela every day. Much of this was destined for Colombia, where smugglers could sell the crude for ten times the price it commanded in Venezuela, due to heavy oil subsidies in the country. The border communities of Colombia were said to dependent to a significant extent on cheap, illegally imported Venezuelan fuel.³³³

A Colombian driver in the border regions interviewed by *Reuters* in 2011 commented that "in this region, we have illegal oil, drugs and some legitimate business. But the profit is made in illegal oil,"

In late 2010 the Venezuelan authorities implemented a system to automate gas sales, using chips in vehicles to track the number of times tanks were filled up, in an attempt to tackle the fuel smuggling. However the system was later suspended following the discovery of fraudulent chips on the market selling for around \$20.³³⁴

Migration of PDVSA Workers 2002

In 2002, Venezuelan President Hugo Chavez fired nearly 20,000 oil workers from state-owned PDVSA after they mounted protests against him. Production in Venezuela subsequently fell dramatically. However many of the specialists who were banished from the Venezuelan industry, from geologists to managers, migrated to work in neighbouring Colombia, where they have helped to ramp up production at Colombian fields.

According to Humberto Calderon, a former Venezuelan mining minister who now runs [Vetra Energy](#) in southern Colombia, "Chávez has been a huge help for the petroleum industry in Colombia".³³⁵ While Venezuela went from being the world's fifth-largest exporter to the 11th largest in 2011, Colombia raised its production output from just over 500,000 barrels per day (bpd) in 2005 to nearly 1 million bpd in 2011. One of the sacked oilmen, Ronald Pantin, went on to become CEO of

332“ [Venezuela, Colombia Leaders Discuss Oil Pipeline](#)”. *Energy Tribune*, 29 November 2011.

333“ [Ministry to regulate fuel exports, prevent smuggling](#)”. *Business News Americas*, 15 March 2005.

334“ [World's lowest gas prices fuel Andean smuggling](#)”. *Reuters*, 10 June 2011.

335“ [Venezuelan oilmen behind Colombia's boom](#)”. *Seattle Times*, 1 October 2011.

336“Venezuelan Know-How Fuels Rise Of Colombian Oil”. *NPR*, 16 September 2011.

Resource Transparency Opportunities

Resource Curse

Overview

The "Resource Curse" is the idea that the presence of large amounts of natural resources, relative to other sources of income for a state or a society, actually leads to negative social, political and economic effects rather than positive ones. The Resource Curse is a direct result of dependency on oil revenues. As the resource transparency movement has gained ground much research has been carried out into the weak points in the chain of oil production at which corruption and abuses can occur.

History and Current Status of the Idea

The idea that natural resources resulted in poor 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% per year during the period 1960 to 1976, about half the growth in a control group of non resource-rich countries.³³⁷ 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.³³⁸

Sachs Work in the 1990s

Jeffrey Sachs and Andrew Warner's Natural Resource Abundance and Economic Growth at the end of the 1990s examined 97 countries over a period of 18 years, 1971 to 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.

337" [Developmental Problems of Mineral Exporting Countries](#)" *World Bank background paper for the 1980 World Development Report* Retrieved 24 October 2011.

338" [Oil Windfalls, Blessing or Curse?](#)" *Alan Gelb and Associates* Oxford University Press, New York, 1988.

Opponents of the Term "Resource Curse"

Some economists have resisted the term "resource curse" because they say it sounds fatalistic.³³⁹ 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 country 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.³⁴⁰ 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.

Attitudes of Major Institutions

International Institutions

The International Monetary Fund has published papers recently discussing how to address the resource curse in Nigeria³⁴¹ and Botswana.³⁴² The World Bank uses the term "Resource Curse"^{343,344} while arguing that it is not inevitable and can be avoided by good governance. But some critics have challenged whether the policies the World Bank has pursued are effective, notably in the case of their support for an oil pipeline from Chad through Cameroon which was tied to poverty alleviation policies.³⁴⁵

Oil Companies

In recent years, energy companies have started to acknowledge the challenges that natural resource revenues can present to developing countries.

"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," said NJ Butler, then vice-president of

339" [Resource Curse, or Resource Trap?](#)" *M. Lorenzo Warby* Retrieved 24 October 2011.

340" [The Plundered Planet Why We Must - and How We Can - Manage Nature for Global Prosperity](#)" *Paul Collier* Oxford University Press, 2009.

341" [Addressing the Natural Resource Curse. An Illustration from Nigeria](#)" *IMF Working Paper* Retrieved 24 October 2011.

342" [Escaping from the Resource Curse: Evidence from Botswana and the Rest of the World](#)" *IMF Staff Papers*, 2007 pp. 54, 663–699.

343" [Property Rights and the Resource Curse](#)" *Leif Wenar* World Bank Research Paper, Retrieved 24 October 2011.

344" ['Contributing to development?'](#)" *Interview with Somit Varma, director of the World Bank's Oil, Gas, Mining and Chemicals Group, Critical Resource website* Retrieved 24 October 2011.

345" [Can policy intervention beat the resource curse? Evidence from the Chad–Cameroon pipeline project](#)" *Scott Pegg*, *African Affairs* 105(418):1-25 (2006)

British Petroleum, in a speech in 2004.³⁴⁶

Exxon Mobil has rejected use of the term Resource Curse but says it supports the EITI process because it acknowledges that good governance is necessary to deliver benefits from oil production, and that transparency is a part of that.³⁴⁷

Economic Causes

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 Netherlands to explain a decline in manufacturing through the 1960s after a major natural gas field was discovered at the end of the 1950s.

The theory is that oil exports earn a lot of foreign currency which tends to lead to a rise in the exchange rate of the local currency. That makes exports from other sectors uncompetitive, and so the natural resource starts to dominate all exports. At the same time, the earning power of the oil sector draws in labour and capital, and therefore also adversely affects all other sectors of the economy, whether they are export-oriented or not.

Correlation Between Oil and Debt

Economists have long noted the link between oil revenues and higher fiscal spending. Venezuela during the 1970s oil boom is a famous case, where President Carlos Andres Perez increased public spending dramatically, leading the country into debt. The fact that all government spending, as well as liquidity in the economy as a whole, rises and falls unpredictably with the fluctuations in the price of oil and other commodities is a severe management problem.

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.³⁴⁸

Political Causes

Weakening of the State

Many political scientists have outlined a Resource Curse which both makes rulers in a state unaccountable, and state institutions weak. They are unaccountable be-

346" [Escaping the Resource Curse: Managing Natural-Resource Revenues in Low-Income Countries](#)" *BP Website* Retrieved 24 October 2011.

347" [Transparency can promote better natural resource management](#)" *Exxon Mobil website* Retrieved 24 October 2011.

348" [Drilling into Debt](#)" *Institute of Public Policy Research, UK, 2005* Retrieved 24 October 2011.

cause resource revenues allow them not to have 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). And they are weak because the institutions of the state never develop under real discipline, through meritocracy and against measured goals and results. The most notable exponent of this theory has been Professor Terry Lynn Karl, who studied Venezuela, Nigeria, Algeria and Iran.³⁴⁹

Conflicts

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:

- Southern Sudan, where the presence of oil is renewing tensions between the Khartoum government and southern separatists.
- The Cabinda region of Angola, which is oil-rich. A secessionist movement has flourished in the region 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 constant unrest.

Resource Transparency Movement

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.³⁵⁰ 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" scandal³⁵¹ 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

349" [The Paradox of Plenty: Oil Booms and Petro States](#)" Terry Lynn Karl University of California Press, 1997.

350" [Global Witness History](#)" and "[TI About Us](#)" *GW and TI websites, respectively* Retrieved 24 October 2011.

351" [Blood Diamond](#)" *Wikipedia* Retrieved 24 October 2011.

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.³⁵²

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.³⁵³

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

EITI

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.

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.³⁵⁴

The charter is governed by an advisory board which includes the former president of Mexico, Ernesto Zedillo, and the African businessman Mo Ibrahim.³⁵⁵ The founder of the charter was economist Paul Collier, the leading world scholar on the link between natural resources and problems in development.³⁵⁶

352" [OECD Anti-Bribery Convention](#)" *OECD official website* Retrieved 24 October 2011.

353" [Introduction to UNCAC](#)" *Anti-Corruption Resource Centre (U4)* Retrieved 24 October 2011.

354" [Natural Resource Charter](#)" *Natural Resource Charter official website* Retrieved 24 October 2011.

355" [Charter: Advisory and Monitoring Board](#)" *Natural Resource Charter official website* Retrieved 24 October 2011.

356" [The Plundered Planet: Why We Must - and How We Can - Manage Nature for Global Prosperity](#)" *Paul Collier* Oxford University Press, 2009.

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.³⁵⁷

As of October 2011 12 countries were EITI compliant, namely: Azerbaijan, Mongolia, Central African Republic, Niger, Ghana, Nigeria, Kyrgyz Republic, Norway, Liberia, Timor-Leste, Mali and Yemen,³⁵⁸ although Yemen was temporarily suspended in June 2011 due to concerns that it did not satisfy the full and active participation of civil society and other actors in implementing the EITI.³⁵⁹ There were 23 EITI Candidate countries, and an additional two - the United States and the Philippines - had signaled their intent to implement the EITI.³⁶⁰

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.³⁶¹

Preparation

The government is required to: ensure the engagement of civil society in the pro-

357" [EITI Implementation](#)" *EITI website* Retrieved 27 October 2011.

358" [EITI Countries](#)" *EITI website* Retrieved 27 October 2011.

359" [EITI Yemen](#)" *EITI website* Retrieved 27 October 2011.

360" [EITI Countries](#)" *EITI website* Retrieved 27 October 2011.

361" [Sign Up](#)" *EITI website* Retrieved 27 October 2011.

cess; 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.³⁶²

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.

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.

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.

Retaining Compliant Status

Compliant countries must maintain adherence to all the requirements listed above in order to retain Compliant status.

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, independ-

362" [EITI Rules](#)" *EITI website* Retrieved 27 October 2011.

ent 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.

External Links

Official Website: www.eiti.org

EITI in Colombia

As of January 2012, Colombia was not a supporting country of the Extractive Industries Transparency Initiative (EITI).

However in 2011 oil company [Pacific Rubiales](#) became the first company on Colombia's main stock exchange, the BVC, to support the EITI and they committed themselves to a leading role in the implementation of the initiative in Colombia.³⁶³

Representatives from Colombia also participated in 2009 Latin America Workshop, where participants gathered to discuss measures to improve transparency in the extractives industry.³⁶⁴

Global Witness

Global Witness is a non-profit organisation headquartered in London, Britain, 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".³⁶⁵

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

363" [Pacific Rubiales supports the EITI](#)" *EITI* 1 July 2011.

364" [EITI Workshop in Latin America](#)" *EITI* 15 December 2009.

365" [Global Witness, About Us](#)" *Global Witness website* Retrieved 24 October 2010.

precious stones, and the Extractive Industries Transparency Initiative.

Investigations which have driven policy changes

Global Witness' hard-hitting investigations have had direct and major impacts, such as the IMF withdrawal from Cambodia in 1996 over corruption in the logging industry,³⁶⁶ the imposition of timber sanctions on Charles Taylor's Liberia in 2003,³⁶⁷ and the precedent-setting arrest of timber baron Gus Kouwenhoven, in the Netherlands in 2005.³⁶⁸

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.³⁶⁹

Reports on Russia's gas trade with the countries of Eastern Europe and the EU followed.³⁷⁰

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.³⁷¹

Global Witness and 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.³⁷²

Global Witness 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.³⁷³

366" [Our History](#)" *Global Witness website* Retrieved 24 October 2010.

367" [Liberia breaches UN Sanctions - whilst its logging industry funds arms imports and RUF rebels](#)" *Global Witness website* 6 September 2001.

368" [Arms dealer and timber trader Guus Kouwenhoven found guilty of breaking a UN arms embargo](#)" *Global Witness website* 7 June 2006.

369" [Time for Transparency](#)" *Global Witness website* Retrieved 26 October 2011.

370" [It's a gas - funny business in the Turkmen-Ukraine oil trade](#)" *Global Witness website* Retrieved 26 October 2011.

371" [Fuelling mistrust - The need for transparency in Sudan's oil industry](#)" *Global Witness website* Retrieved 26 October 2011.

372" [Conflict Minerals](#)" *Global Witness* Retrieved 30 November 2011.

373" [Conflict Diamonds](#)" *Global Witness* Retrieved 30 November 2011.

External Links

Official website: www.globalwitness.org

Natural Resource Charter

Overview

The Natural Resource Charter is described as an international convention in the making, an attempt to spread best practice and governance issues across the energy and extractive industries worldwide. As such it is the latest development in the resource transparency movement.

Foundation of Charter

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 2009.³⁷⁴ As well as Collier, the charter was sponsored by a number of distinguished academics and the Revenue Watch Institute.

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.

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.³⁷⁵

Overarching Issues

- Precept 1: The development of natural resources should be designed to secure maximum benefit for the citizens of the host country.

374" [New Charter to help oil-rich poor countries - launched today](#)" *Charter website* Retrieved 24 October 2011.

375" [Natural Resource Charter - Precepts](#)" *Charter website* Retrieved 24 October 2011.

- 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.

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.

Publish What You Pay

Overview

Publish What You Pay (PWYP) is a global network of civil society organisations calling for oil, gas and mining revenues to form the basis for development and improve the lives of ordinary citizens in resource-rich countries.

From a few, mostly UK-based groups at the time of its launch, PWYP members today span nearly 60 countries, with national affiliated coalitions in 31 of these.³⁷⁶

PWYP has often been seen to be the flagbearer of a strategy which says transparency efforts should be led by legal and regulatory requirement, and made obligatory on companies, in contrast to the approach adopted by the [Extractive Industries Transparency Initiative](#), which is consensual.

History

The call to 'publish what you pay' first appeared in a 1999 report by [Global Witness](#) on the oil and banking industries in Angola.

On the back of this, in June 2002 *Global Witness*, along with fellow founding members CAFOD, *Open Society Institute*, *Oxfam GB*, *Save the Children UK* and *Transparency International UK*, launched the worldwide PWYP campaign. The small founding coalition of NGOs was soon joined by others such as *Catholic Relief Services*, *Human Rights Watch*, *Partnership Africa Canada*, *Pax Christi Netherlands* and *Secours Catholique/CARITAS France*, along with an increasing number of groups from developing countries.³⁷⁷

Activities

PWYP undertakes public campaigns and policy advocacy to achieve disclosure of information about extractive industry revenues and contracts.

The organisation's call for companies to 'publish what you pay' and for governments to 'publish what you earn' formed the basis of their activities. However, the coalition now calls for transparency and accountable management and expenditure of public funds, as well as the public disclosure of extractive industry contracts and for licensing procedures to be carried out transparently and in line with best international practice.

PWYP's activities consist primarily of advocacy efforts and capacity building of civil society groups. The growing desire to monitor the payments, revenues and expenditures within the extractives sector has also generated an increasing need for technical training around issues such; contracting and taxation regimes; auditing and accounting processes; [EITI](#) processes, rules and policies. PWYP collabor-

³⁷⁶[About Us](#)" *Publish What You Pay* retrieved 14 December 2011.

³⁷⁷[About Us](#)" *Publish What You Pay* retrieved 14 December 2011.

ates with local and international actors to organize training workshops, conferences and seminars to help meet these needs.

Governance

In 2006 a Strategic Advisory Group (SAG) was established to oversee strategic planning. The SAG is comprised of 12 representatives from a broad spectrum of PWYP members from around the world.

PWYP has an International Coordinator (IC) based in London as well as one full-time regional coordinator for Africa, and coordinators for all national affiliated coalitions. These coordinators are supported and overseen by management committees.

Representatives from the entire coalition meet every two years for an international strategy meeting.³⁷⁸

External Links

Official Website: www.publishwhatyoupay.org

Revenue Watch Institute

First launched in 2002 as the Revenue Watch Program of the Open Society Institute, and spun off into an independent organization in June 2006, 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 converge³⁷⁹.

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.

EITI

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. Recent RWI support for EITI implementation has included visits and ongoing outreach in Ecuador, Bolivia, Peru, Trinidad and Tobago, Indonesia, Malaysia, Iraq, Yemen, Sierra Leone and South Africa, among other countries.³⁸⁰

³⁷⁸[How We Are Governed](#)" *Publish What You Pay* retrieved 14 December 2011.

³⁷⁹"[About Us](#), *RWI*, retrieved 26 March 2012.

³⁸⁰"[RWI and the EITI](#)", *RWI website*

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.³⁸¹

External Links

Official Website: www.revenuewatch.org

Data Analysis: [EITI Reports: Results and Analysis](#)

Transparency International

Overview

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, terrible 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.³⁸²

Major Programs

The project for which TI is most famous is the 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. Iraq ranked 175th out of 183 countries surveyed in 2011.³⁸³

As well as the index, TI also publishes a range of reports and position papers on various issues related to transparency.

Middle East Presence

TI works through a series of national chapters - some 100 worldwide. In the Middle East region, there are national chapters in Palestine, Lebanon, Bahrain, Kuwait and Morocco.

TI has also carried out a three-year project in four Arab countries (Egypt, Morocco, Lebanon and Palestine) called *Promoting Transparency and Enhancing In-*

381" [EITI Reports: Results and Analysis](#)", *RWI*, retrieved 26 March 2012.

382" [TI's greatest success](#)" *Wikipedia* Retrieved 25 October 2011.

383" [2011 Corruption Perception Index](#), *Transparency International*, Retrieved 5 January 2012.

tegrity in the Arab region,³⁸⁴ with the results of the studies on Lebanon, Morocco and Palestine being launched in late 2009 and the report on Egypt launched in March 2010.³⁸⁵

The Oil and Gas Industries

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 adapted the methodology.³⁸⁶

External Links

Official Website: www.transparency.org

Transparency of Global Oil Companies (TI Report)

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.³⁸⁷

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.

384" [Promoting Transparency and Enhancing Integrity in the Arab Region](#)" *Transparency International website* Retrieved 25 October 2011.

385" [Promoting Transparency and Enhancing Integrity in the Arab Region](#)" *Transparency International website* Retrieved 25 October 2011.

386" [Promoting Revenue Transparency: 2011 Report on Oil and Gas Companies](#)" *Transparency International website* Retrieved 25 October 2011.

387" [Promoting Revenue Transparency: 2011 Report on Oil and Gas Companies](#)" *Transparency International website* Retrieved 25 October 2011.

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.

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 pro-

grammes, organisational disclosure and country-level disclosure.

Transparency of Contracts

Overview

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.³⁸⁸

The 2009 "Contracts Confidential" report from Revenue Watch 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.

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.³⁸⁹

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."

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.

388“ [Contracts Confidential: Ending Secret Deals in the Extractives Industries](#)” *Revenue Watch*, 2009.

389“ [WHY IS OIL CONTRACT TRANSPARENCY NECESSARY?](#)” *Public Finance Monitoring Centre*, retrieved 15 March 2012.

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.

Susan Maples, in her report for Revenue Watch, 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.

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.³⁹⁰ 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.³⁹¹

External Links

Revenue Watch Report: [Contracts Confidential: Ending Secret Deals in the Extractive Industries](#)

WikiLeaks

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 2007³⁹² by Julian Assange, an Australian internet activist.³⁹³ Since its formation, WikiLeaks has released more classified intelligence documents than the rest of the world press combined, according to the organisation's website.

³⁹⁰“ [What needs to change for the EITI remains relevant?](#) ” *Publish What You Pay Africa*, October 2011.

³⁹¹“ [What needs to change for the EITI remains relevant?](#) ” *EITI*, 2 October 2009.

³⁹²“ [What is Wikileaks?](#)” *WikiLeaks.org* Retrieved 6 February 2012.

³⁹³“ [WikiLeaks Boss Says He Enjoys 'Crushing Bastards'](#)” *ABC News* 26 July 2010.

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.

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.

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.³⁹⁴ 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.³⁹⁵

In 2007, WikiLeaks helped promote good governance when a leak exposed \$3 billion of corruption in the government of Kenya in the midst of an epidemic of malaria, which, according to the WikiLeaks website, was estimated to have been the cause of 20 percent of all deaths in children under five. WikiLeaks claims that the leak swung the December 2010 Kenyan national elections by 10 percent, and led to changes in the constitution and the establishment of a more open government.

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.³⁹⁶

Criticism and legal issues

WikiLeaks has drawn intense criticism from governments, organisations and individuals who have had their information leaked.³⁹⁷ Since 2007, Wikileaks has been victorious over legal attacks from 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

394" [Guantanamo operating manual posted on Internet](#)" *Reuters* 14 November 2007.

395" [Wikileaks releases 92,000 secret Afghan-war files](#)" *TechRadar.com* 26 July 2010.

396" [cablegatesearch.net](#)" *WikiLeaks* Retrieved 21 March 2012.

397" [WikiLeaks: Secrets and Legal Liability](#)" *The Law Insider* 2 December 2010.

bank, and Russian companies.

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 E. 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.

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.

External Links

WikiLeaks website: www.wikileaks.org

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