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# COUNTRY ANALYSIS BRIEFS

# Congo (Brazzaville)

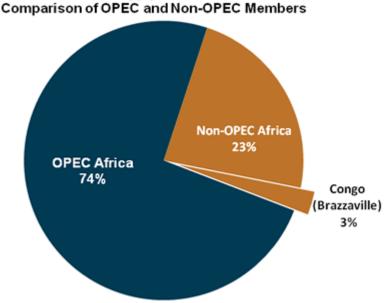
Last Updated: Dec. 14, 2011

## Background

Congo is a mature oil province with declining production; however, new offshore oil fields have recently reversed this trend and boosted production over the past three years. Congo has benefited from oil resources off the coast of the Atlantic Ocean, which also feeds much of the production of neighboring countries.



Congo is the fourth-largest oil producer in Africa that is not a member of the Organization of Petroleum Exporting Countries (OPEC), after Egypt, Sudan, and Equatorial Guinea. Although Congo is among the largest oil producers in Africa, Congo's production has little impact on world oil supply relative to larger African producers, since oil production in the region is heavily concentrated in the African OPEC countries (Nigeria, Algeria, Angola and Libya).



Total Oil Supply in Africa, 2010 Comparison of OPEC and Non-OPEC Members

Source: U.S. Energy Information Administration, International Energy Statistics

Nevertheless, the oil sector greatly underpins Congo's domestic economy, as petroleum accounts for 80 percent of government revenue, 63 percent of GDP, and 88.5 percent of export earnings, according to the U.S. Department of State. In 2010, Congo was one of the fastest growing economies in sub-Saharan Africa, with estimated real GDP growth of 9.1 percent driven by increased oil output coupled with high oil prices. However, sustained future growth will depend on new offshore oil developments and economic diversification.

Electricity and natural gas are not widely utilized, especially in rural areas. The Congolese civil war (1997-1999) left much of the country's infrastructure damaged, especially in southern Brazzaville and in the Pool, Bouenza, and Niari regions, which has not yet been restored. The government has been looking to restore and expand the distribution network in Brazzaville and Point-Noire, but until then, wood fuel will remain the dominant fuel for the country.

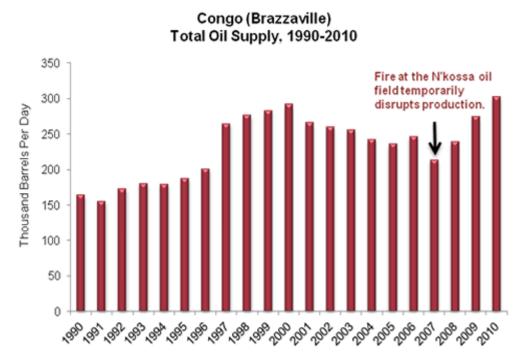
## Oil

### Overview

Congo's first deepwater field came online in 2008 and helped to reverse declining oil production.

As of January 1, 2011, Congo has proven oil reserves of 1.6 billion barrels, according to *Oil & Gas Journal (OGJ)*, the fifth-largest proven reserves in sub-Saharan Africa. Congo produced 302,000 barrels per day (bbl/d) of total oil supply in 2010, surpassing the country's previous peak of 292,000 bbl/d in 2000. The majority of Congolese oil is produced in offshore oil fields and new finds are expected from deepwater projects.

In the late 1970s, Congo emerged as a significant oil producer. Production continued to expand considerably during the 1990s, but at the turn of the century, as oil fields reached maturity, production began to decline in 2001. However, since 2008 oil production has increased every year as a result of several new projects coming online, mainly Congo's first deepwater field Moho-Bilondo.



Source: U.S. Energy Information Administration, International Energy Statistics

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#### Sector Organization

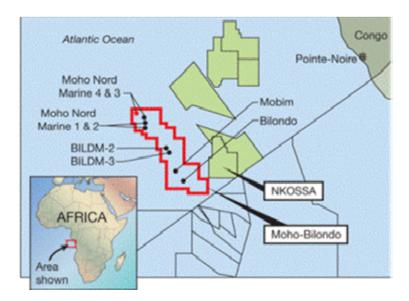
Current exploration and production operations are governed by Production Sharing Agreements. Congo's national oil company, Societe Nationale des Petroles du Congo (SNPC), manages Congolese government-owned shares in oil production. SNPC shares a percentage of operating interest alongside private international oil companies operating in Congo. The country has several active companies, such as Perenco, Murphy Oil, Africa O&G, Prestoil, Chevron, and SOCO Internationals; however, the oil sector is mainly dominated by Total and Eni.

The French multinational, Total, and the Italian conglomerate, Eni, have both been operating in Congo since 1968. Total is the country's leading oil producer through its subsidiary, Total E&P Congo. Total operates nine of the 21 fields developed and its liquids production in Congo was 115,000 bbl/d in 2010. Eni produces over a quarter of Congolese crude oil, with output levels reaching 98,000 bbl/d of liquids in 2010. The largest slice of Eni's production came from the M'Boundi field, which derived 37,000 bbl/day.

#### Exploration and Production

The large offshore Moho-Bilondo oil field, operated by Total, is the chief contributor to the increase in production since 2008. It came online in April 2008 and reached 90,000 bbl/d of production in 2010. Total has the majority operating interest of 53.5 percent, in addition to Chevron with 31.5 percent and SNPC's 15 percent. Located some 80 kilometers offshore of Congo, it is the country's first deepwater project and marks the largest successful expedition to tap into

Congo's deepwater reserves.



As part of the overall Moho-Bilondo development, Total recently estimated that it will require \$10 billion to develop the deepwater Moho-Bilondo Nord offshore project. Total expects that production at Moho-Bilondo Nord will begin between 2015 and 2017. In addition, Eni plans to expand production facilities at its largest oil field, M'Boundi, from 37,000 bbl/d to around 90,000 bbl/d in 2012.

Eni recently announced that it will launch a pilot oil sands project in Congo in 2012. In 2008, Eni and the Congolese government signed a deal to explore and develop the oil sands deposit located in Tchikatanga and Tchikatanga-Makola, two areas covering a total of 1,790 square km in the south of Congo. According to preliminary studies, the area is estimated to contain between 500 million and 2.5 billion barrels of oil sands. The oil sands project is estimated to cost \$3 billion.

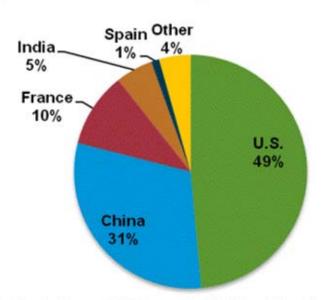
In October 2011, Congo's hydrocarbons minister Andre Raphael Loemba requested that oil companies operating in the country develop new offshore oil fields. The government is keen to develop new offshore fields to supplement declining production from mature fields. The government is expected to hold a deepwater licensing round in 2012.

#### Downstream

Congo has one refinery, the 21,000 bbl/d Congolaise de Raffinage (CORAF) plant in Point-Noire. EIA estimates that total refinery output of petroleum products in 2008 was 10,500 bbl/d. The refinery operates at half capacity due to poor performance and causes a considerable loss. Some of the refinery's output is used to satisfy domestic demand, and the remainder is exported. For a number of years, the Congolese government has proposed to privatize CORAF, but has not yet found a committed investor.

#### Exports

In an average year, oil makes up 90 percent of Congo's total exports and in recent years, the increase in oil exports have bolstered Congo's trade surplus. According to the Economist Intelligence Unit, Congo's oil-dominated exports rose by an estimated 34 percent in 2011.



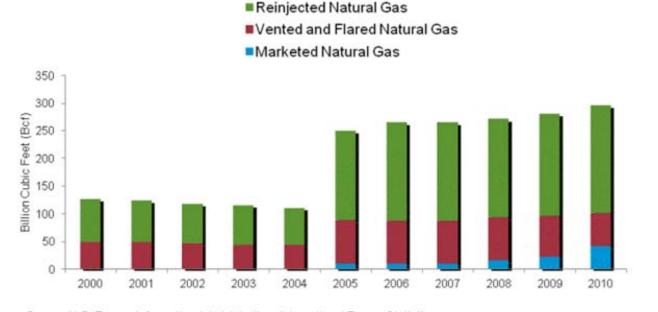
### Congo (Brazzaville) Exports of Crude Oil including Lease Condensate, 2009

Source: Global Trade Atlas and U.S. Energy Administration, International Energy Statistics

The U.S. and China are the top destinations for Congolese oil, together receiving over three-quarters of Congo's crude oil exports in 2009 (270,000 bbl/d). The U.S. was the leading market for Congolese oil for most of the previous decade as well.

## Natural Gas

Congo holds the fifth-largest proved reserves of natural gas in sub-Saharan Africa at 3.2 trillion cubic feet (Tcf), according to *OGJ*. The country produced 298 billion cubic feet (Bcf) of natural gas in 2010, although only 14 percent (43 Bcf) was marketed. A majority of the natural gas, 65 percent (194 Bcf), was reinjected. The remaining 21 percent (60 Bcf) was flared or vented. Due to the lack of gas infrastructure, 33 Bcf of dry natural gas is domestically consumed.



Gross Natural Gas Production, 2000-2010

Congo (Brazzaville)

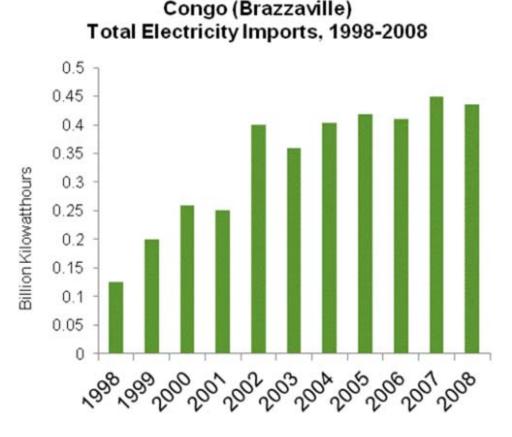
Source: U.S. Energy Information Administration, International Energy Statistics

In 2008, Eni began constructing two gas-fired electric power stations, with the dual purpose of increasing electricity capacity and eliminating gas flaring by 2012 by capturing gas to produce electricity. Eni recently constructed a 300 megawatt (MW) gas-fueled power station, Centrale Electrique du Congo (CEC), and its capacity is expected to increase

Although Congo boasts one of the highest proved reserves of natural gas in sub-Saharan Africa, only a small portion of production is consumed, as a vast majority of it is reinjected or flared. to 450 MW by 2012. The power station is fueled by associated gas from the M'Boundi deposit. The company also recently doubled capacity at the Djeno power station, Centrale Electrique de Djeno (CED), from 25 MW to 50 MW, which also utilizes associated gas that was previously flared. In 2010, gas flaring in Congo decreased by 24 percent to 60 Bcf.

## Electricity

New gas-fired power stations have tripled the electricity capacity in the Point-Noire area, one of Congo's most populous areas. Société Nationale d'Electricité (SNE), the national electricity company, controls the electricity generation, transmission and distribution sectors. Power consumption is low in Congo due to the limited transmission system that mainly serves the country's principal cities, Brazzaville and Point-Noire. As of 2009, the electrification rate was 37.1 percent and 2.3 million people were without electricity, according to International Energy Agency estimates. In urban areas, demand for electricity has increased over the last decade and Congo has had to rely on power imports, especially from the Democratic Republic of Congo, to satisfy domestic consumption.

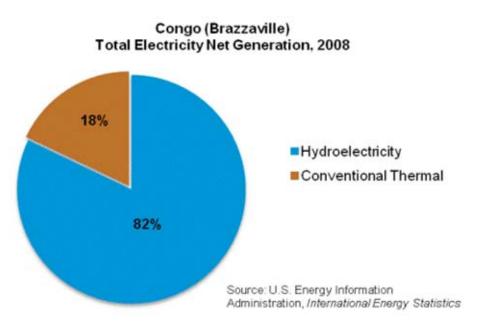


Source: U.S. Energy Information Administration, International Energy Statistics

Eni is reconstructing a 220 kV high-voltage line from Pointe-Noire to Brazzaville and connecting the gas-fueled power station, CEC, to the national electricity network. Construction of the CEC and CED, and the increase in available electricity capacity, has led to higher electricity consumption in the densely populated Pointe-Noire area. According to Eni, average per-capita electricity consumption in the Pointe-Noire area rose to 462 KWh in 2010, three times more than the national per-capita average of 137 KWh per year.

Although Congo's newest electricity projects are gas-fueled power stations, a significant amount of the country's electricity generation derives from hydropower. As of 2008, hydropower accounted for 82 percent of total electricity net generation, while conventional thermal electricity made up the remaining 18 percent. Hydroelectricity is generated from Imboulou (120-MW), Bouenza (74-MW), and Djoue (15-MW) hydroelectric plants. The Imboulou Hydropower Plant, built by the Chinese company CMEC, came online in 2011 and almost doubled Congo's hydroelectricity generation to power Brazzaville and several other towns.

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Congo's hydroelectric potential is estimated to be 3,000-MW. In light of its potential, Congo plans to expand hydropower capacity. Projects being considered include a 150-MW hydroelectric plant in the Bas-Congo Province called Zongo II, a 600-MW plant on the River Tcha in Cameroon to serve both Congo and Cameroon, and a 1,200-MW power station at Sounda Gorge. Congo's ability to capitalize on its hydropower potential depends primarily on the development and restoration of the domestic distribution network.

# Links

EIA- Country Information on Congo (Brazzaville) International Energy Statistics CIA U.S. State Department – Congo (Brazzaville) U.S. Embassy in Congo (Brazzaville) Eni Total BBC Congo Africa Focus & Reuters on Congo-Brazzaville African Economic Outlook: Congo Republic World Development Indicators

## Sources

AfriOil : Newsbase Africa Oil & Gas Monitor Afrique Avenir CIA, The World Factbook : Republic of the Congo **Economist Intelligence Unit** Eni Annual Report 2010 Global Insight Energy: Article Global Insight Energy: Report **Global Trade Atlas** International Energy Agency International Monetary Fund OECD Development Centre Oil & Gas Journal Reuters **Total Annual Report 2010** U.S. Department of State: Republic of the Congo Wood Mackenzie World Development Indicators

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