Country Analysis Executive Summary: Congo Brazzaville

Overview

- The Republic of the Congo, or Congo Brazzaville, is the third-largest crude oil producer in Sub-Saharan Africa after Nigeria and Angola. Most of Congo Brazzaville’s revenue depends on crude oil production, which makes the economy vulnerable to crude oil price swings.
- The Oxford Economics March 2021 forecast indicates that real GDP will grow by 4.8% in 2021 following the 10% contraction in 2020. This decline followed a decrease in global trade and investment as a result of the 2019 coronavirus disease (COVID-19) outbreak and the OPEC+ agreement, which was an agreement made by the Organization of Petroleum Exporting Countries (OPEC), of which Congo Brazzaville is a member, and other countries party to the agreement to cut crude oil production.1,2
- The economic slowdown caused by the COVID-19 pandemic and its effects on energy markets led Congo Brazzaville to seek debt relief measures. On June 9, 2020, the Paris Club, a group of major creditor countries, approved Congo Brazzaville to participate in the Group of 20 (G-20) Debt Service Suspension Initiative (DSSI). The DSSI allowed Congo Brazzaville to temporarily suspend its debt service repayments to its creditors until June 2021. The G-20 DSSI provides debt relief to low income countries and allows participants to focus resources on the pandemic and economic recovery.3

Sector organization

Recent updates

- President Denis Sassou-Nguesso assumed a fourth term in office in March 2021. President Sassou-Nguesso is one of the longest-tenured presidents in Africa, serving for about 36 years. In 2015, Congo Brazzaville approved a constitutional referendum to remove the presidential age limit of 70 years and the two-term limit for holding office. The newly approved constitution allowed Sassou-Nguesso to run for a second five-year term although rival candidates disputed the results of the ballot or boycotted the election altogether.4
- The Congolese government introduced a revised Hydrocarbons Code in 2016 to replace the 1994 version of the law. This legislation mainly governed hydrocarbon activities in Congo Brazzaville. The revised law reduces natural gas royalties from 15% to 5% and crude oil royalties...
from 15% to 12% (but only for offshore fields located at greater than 500 meters deep). However, the revised law maintains the interests of the Congolese government and its national oil company (NOC), La Société des Pétroles du Congo (SNPC Congo). Therefore, SNPC Congo remains the exclusive concessionaire of petroleum exploration and production permits, and it continues to have a minimum participating interest of 15%. Petroleum contracts must be either a production sharing contract or services agreement and require government approval after negotiation and signing to be legally binding. The 2016 Hydrocarbons Code also requires a minimum participating interest of 15%–25% in the contracting group of companies to be reserved for participating private Congolese petroleum companies. This requirement can only be waived by the Minister of Hydrocarbons.5

- The Congolese government wants to attract new investment in the hydrocarbon sector to continue last decade’s production growth. In October 2015, the government launched a licensing round for hydrocarbon production with 13 blocks for bidding, which led to five licenses awarded to Total, Perenco, and Kosmos Energy. The government opened a second licensing phase in 2018–2019 that offered an additional 15 blocks for bidding, which led to three offshore blocks awarded to Kosmos Energy, Eni, and Lukoil. In spite of the recent licensing awards, however, exploration has not resulted in major new discoveries that would significantly increase production in Congo Brazzaville.6

- In 2019, The Congolese government received a new $450 million, 3-year extended credit facility (ECF) from the International Monetary Fund (IMF). This ECF followed a debt restructuring agreement with China related to $1.6 billion in loan repayments.7 However, the IMF delayed disbursements from the ECF outside of an initial $45 million payment to Congo Brazzaville. ECF disbursement payments have ceased until SNPC Congo’s debts of $1.7 billion in oil-backed loans from trading firms Trafigura and Glencore can be restructured.8

**Petroleum and other liquids**

**Exploration and production**

- Congo Brazzaville’s proved crude oil reserves were approximately 2.9 billion barrels at the beginning of 2021, according to the estimates by the Oil & Gas Journal (OGJ), which is down from 3.0 billion barrels in the previous year.9

- Crude oil accounts for most of the total liquid fuels production in Congo Brazzaville; the country produces very small volumes of lease condensate and natural gas liquids. Congo Brazzaville produces and exports three main blends of crude oil: Djeno, N’Kossa, and Yombo (Table 1). The Djeno blend is a medium, sweet crude oil blend and is the primary blend produced and exported from Congo Brazzaville. N’Kossa is a very light, sweet crude oil blend produced in small volumes and is a blend of N’Kossa and Kitina crude oils. The Yombo blend is a heavy, sweet crude oil blend with a high viscosity level. Yombo’s crude oil properties are well suited for blending, and it is exported in small volumes primarily to destinations in the Asia-Pacific region, such as the Singapore-Malaysia fuel oil blending and storage hubs.10

- A number of international oil companies (IOCs) participate in Congo Brazzaville’s hydrocarbon industry. Total, Chevron, Perenco, and Eni are the major IOCs operating in the country; other IOCs such as Qatar Petroleum and Lukoil also operate in Congo Brazzaville on a smaller scale. SNPC Congo manages the government-owned shares of the country’s crude oil fields.11

- Rising production form the N’Kossa Marine area fields drove significant increases in total liquid fuels production in Congo Brazzaville starting in 2016. In 2019, total liquid fuels production was
about 336,000 barrels per day (b/d), up from about 300,000 b/d in 2011 (Figure 1).\textsuperscript{12} In spite of the recent growth in liquid fuels production, EIA expects Congo Brazzaville’s total liquid fuels production to decline as a result of field maturation and a slowdown in upstream development. The Congolese government wants to attract new investment and to develop its hydrocarbon resources by making changes to its legal and regulatory framework that would create more favorable terms for operators and investors. We assess these efforts to be insufficient in attracting investor interest in exploiting the Congo’s resources in the short term.\textsuperscript{13}

- The Moho Bilondo Phase 1B project, located in the northern part of the Moho Bilondo permit area, began producing in 2015, and the Moho Nord extension, located in the northern part of the same area, started producing in 2017. Both developments are operated by Total and have a collective reported production plateau of 140,000 b/d.\textsuperscript{14} The Nene Marine offshore development, which is located in the Marine XII block and operated by Eni, began producing in 2014 and has an estimated peak production of 50,000 b/d. The Chevron-operated Lianzi offshore area is located in a unitized offshore zone on the Congolese and Angolan boundaries and has an estimated peak production of 40,000 b/d. The Lianzi project is the country’s first cross-border development and the first in Central Africa (Table 2).\textsuperscript{15}

- As a member of OPEC, Congo Brazzaville agreed to limit its monthly crude oil production as part of the OPEC+ agreement of April 15, 2020, which was in response to the acute drop in economic activity and in global crude oil demand caused by the outbreak of COVID-19. Congo Brazzaville reduced crude oil production to an average of about 275,000 b/d from May 2020 to December 2020, compared with the 2019 annual average of 328,000 b/d. EIA expects that Congo Brazzaville’s crude oil production will rise in the second half of 2021 because the production cuts stipulated in the agreement begin to gradually taper off for the duration of the agreement.\textsuperscript{16}

<table>
<thead>
<tr>
<th>Crude blend</th>
<th>API</th>
<th>Sulfur content</th>
<th>Total acid number (TAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Djeno</td>
<td>27.6</td>
<td>0.34</td>
<td>0.69</td>
</tr>
<tr>
<td>N’Kossa</td>
<td>41.3</td>
<td>0.06</td>
<td>0.04</td>
</tr>
<tr>
<td>Yombo</td>
<td>16.7</td>
<td>0.34</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Source: Perenco company website, Chevron company website, and Lavicorp.com
Table 2. Recent oil projects in Congo Brazzaville

<table>
<thead>
<tr>
<th>Project</th>
<th>Operator</th>
<th>Start date</th>
<th>Location</th>
<th>Water depth (meters)</th>
<th>Peak production plateau (thousand barrels per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lianzi</td>
<td>Chevron</td>
<td>2015</td>
<td>offshore Haute Mer (Congo), block 14</td>
<td>900</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Angola)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nene Marine</td>
<td>Eni</td>
<td>2014</td>
<td>offshore Marine XIl block</td>
<td>28</td>
<td>50</td>
</tr>
<tr>
<td>Moho Nord extension</td>
<td>Total</td>
<td>2017</td>
<td>offshore Moho Bilondo area</td>
<td>3,000</td>
<td>100</td>
</tr>
<tr>
<td>Moho Bilondo Phase 1b</td>
<td>Total</td>
<td>2015</td>
<td>offshore Moho Bilondo area</td>
<td>750–1,200</td>
<td>40</td>
</tr>
</tbody>
</table>

Source: Chevron, Eni, and Total company websites; Oil & Gas Journal; offshore-mag.com; and Economist Intelligence Unit

Figure 1. Total annual liquid fuels production and consumption in Congo Brazzaville, 2011–2020

Refining and refined oil products

- Congo Brazzaville has one refinery, the La Congolaise de Raffinage (CORAF) plant, located in Pointe-Noire. The CORAF refinery has a nameplate capacity of 21,000 b/d, according to Oil & Gas Journal, and mainly produces diesel, fuel oil, gasoline, and kerosene.\textsuperscript{17} Recently announced plans indicate that the CORAF refinery will undergo maintenance in 2021 and facilities upgrade in 2022.\textsuperscript{18}
- The Congolese government has reportedly signed a deal with Beijing Fortune Dingsheng Investment Company Limited to build an 110,000 b/d refinery in two phases at Pointe-Noire to
meet increasing petroleum product demand in Congo Brazzaville and in the African region. The plant is scheduled to be completed and open in 2023.¹⁹

**Petroleum and other liquids exports**

- Congo Brazzaville exports nearly all of the crude oil it produces, with a small amount slated for its refinery for domestic consumption.
- Congo Brazzaville exported about 240,000 b/d of crude oil in 2020 (Figure 2). Most of the Congo’s crude oil exports went to the Asia-Pacific region, and China imported approximately 156,000 b/d, or 65%, of total exports in 2020. India and Spain were the next largest importers by volume, importing about 17,000 b/d and 15,000 b/d, respectively, in 2020.²⁰

**Figure 2. Annual crude oil exports from Congo Brazzaville, 2015–2020**

<table>
<thead>
<tr>
<th>Year</th>
<th>North and South Americas</th>
<th>Middle East</th>
<th>Europe and Eurasia</th>
<th>East Asia and the Pacific</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>200</td>
<td>50</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>2016</td>
<td>200</td>
<td>50</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>2017</td>
<td>400</td>
<td>50</td>
<td>100</td>
<td>50</td>
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<td>2018</td>
<td>400</td>
<td>50</td>
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<tr>
<td>2019</td>
<td>400</td>
<td>50</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>2020</td>
<td>400</td>
<td>50</td>
<td>100</td>
<td>50</td>
</tr>
</tbody>
</table>

Source: U.S. Energy Information Administration, based on Global Trade Tracker data and Clipperdata

**Natural gas**

**Exploration and production**

- As of January 2021, *Oil & Gas Journal* estimated that Congo Brazzaville held approximately 10 trillion cubic feet (Tcf) of proved natural gas reserves.²¹
- In 2018, Congo Brazzaville produced and consumed about 49 billion cubic feet (Bcf) of dry natural gas.²²
- A significant amount of Congo Brazzaville’s natural gas is flared (or burned off) as a by-product of oil production or is re-injected into oil fields to aid crude oil recovery. According to the World Bank Group data published in April 2021, Congo Brazzaville flared about 63 Bcf in 2020, far below the volumes flared by the top five flaring countries (Russia, Iraq, Iran, the United States, and Algeria), but an increased amount relative to previous years (Figure 4).²³
- Eni is the leading natural gas producer in Congo Brazzaville, although most of the natural gas it produces is either flared or re-injected to aid crude oil recovery. However, Eni has reduced
natural gas flaring by commercializing more of the associated natural gas produced at its oil fields. Eni constructed two natural gas-fired power plants, the Centrale Électrique du Djéno (CED) and Centrale Électrique du Congo (CEC), and upgraded the connecting power transmission and distribution network to provide power generation to Pointe-Noire. Both plants are fueled by associated natural gas from the M’Boundi and Marine XII fields. In March 2020, a third gas turbine was added at the CEC plant, resulting in increased plant generation capacity from 300 MW to 484 MW. In March 2020, Eni added a third turbine to increase generation capacity at the 50 MW CED plant by 170 MW.24

Figure 3. Annual natural gas production and consumption in Congo Brazzaville, 2009–2018

Source: U.S. Energy Information Administration
Natural gas exports

- Congo Brazzaville does not export any natural gas.
- New Age African Global Energy Limited proposed a floating liquefaction project with a capacity of about 48 Bcf to commercialize natural gas resources located in Marine XII block, but this project has stalled. Initially, a final investment decision (FID) was targeted for 2018 and first export for 2021. New Age African Global Energy Limited sold its 25% non-operating interest in Marine XII to Lukoil in September 2019.\(^{25}\)

Energy consumption

- EIA estimates that natural gas accounted for 59% of Congo Brazzaville’s total primary energy consumption in 2018. Petroleum and other liquids, as well as renewables, comprised the remainder of fuel sources consumed (Figure 5). Solid biomass and waste, which typically consist of wood, charcoal, manure, and crop residue, are generally used to meet off-grid heating and cooking needs, mainly in rural areas. Congo Brazzaville does not have any nuclear generation capacity, nor does it use coal for electricity generation or primary energy consumption.\(^{26}\)
Electricity

- In 2018, electricity capacity totaled 0.6 gigawatts (GW) in Congo Brazzaville, while electricity generation was 3.4 billion kilowatthours (kWh). Hydroelectric and fossil fuel sources primarily accounted for electric generation capacity (Figures 6 and 7).\(^{27}\)

- The World Bank estimated that only 69% of the Congolese population had access to electricity in 2018, which is an increase of 27% from 2010 levels, although access levels vary significantly between urban and rural populations. Access to electricity for urban populations in 2018 was 92%, up from 60% in 2010, while access for rural populations was 20% in 2018, up from 12% in 2010. Providing reliable access to electricity for rural populations is a significant challenge because of underdeveloped infrastructure in the power sector.\(^ {28}\)

- Much of the growth in electricity capacity has come from natural gas projects. Installed capacity increased because of the construction of the CED and CEC natural gas-fueled plants in 2007 and 2010, respectively, and the capacity expansions that followed in subsequent years. The CED and CEC plants provide access to electricity primarily for the densely populated Pointe-Noire area.\(^ {29}\)
Figure 6. Congo Brazzaville’s electricity capacity by fuel type, 2009–2018 gigawatts

Source: U.S. Energy Information Administration

Figure 7. Congo Brazzaville’s net electricity generation by fuel type, 2009–2018 billion kilowatthours

Source: U.S. Energy Information Administration
Renewable Energy Sources

Hydropower

- Hydropower accounted for 34% and 37% of Congo Brazzaville’s total installed capacity and net electricity generation in 2018, respectively. Currently, the country has three existing hydropower plants: Imboulou (120 MW), Moukoukoulou (74 MW), and Djoué (15 MW).30
- Congo Brazzaville has significant hydropower potential, estimated at 2.5 GW, but less than 5% of this has been developed. A number of hydropower projects are reportedly under consideration for development: Chollet (600 MW), Murala (150 MW), Koeumbali (150 MW), and Loufoulakari (50 MW). The Congolese government is seeking investors to finance the construction and development of a 1.2 GW hydropower plant at Sounda Gorge. However, these projects are unlikely to be completed within the next five years because they appear to still be in early stages of development or deliberation.31

Notes

- In response to stakeholder feedback, we have revised the format of the Country Analysis Briefs. As of December 2018, updated briefs are available in two complementary formats: the Country Analysis Executive Summary provides an overview of recent developments in a country’s energy sector and the Background Reference provides historical context. Archived versions will remain available in the original format.
- Data presented in the text are the most recent available as of May 12, 2021.
- Data are EIA estimates unless otherwise noted.


11 Based on total liquid fuels production data provided by Rystad Energy’s Cubebrowser platform, accessed 2/8/2021.


29 The Integrated energy access project in Congo, Eni company website, accessed 3/5/2021.