Overview

*Brazil is the ninth-largest liquid producer in the world and the third-largest producer in the Americas.*

- In 2017, Brazil produced 3.36 million barrels per day (b/d) of petroleum and other liquids, making it the ninth-largest producer in the world and the third-largest in the Americas behind the United States and Canada.

- In 2017, Brazil was the eighth-largest energy consumer in the world and the third-largest energy consumer in the Americas, behind the United States and Canada.¹

- Total primary energy consumption in Brazil has grown by 28% in the past decade because of economic growth. Petroleum and other liquids represented about 46% of Brazil’s domestic energy consumption in 2017 (Figure 1).

*Figure 1. Total primary energy consumption in Brazil by fuel type, 2017*

Source: *BP Statistical Review of Energy, 2018*
Petroleum and other liquids

Brazil was the largest producer of petroleum and other liquids in South America in 2017.

Reserves

- The Oil & Gas Journal estimates that as of January 2018, Brazil had 12.6 billion barrels of proved oil reserves. This amounts to the second-largest level in South America after Venezuela.\

Production and Consumption

- In 2017, Brazil’s production of petroleum and other liquid fuels was 3.36 million b/d, up from 3.24 million b/d in 2016, continuing a trend of increasing production. Crude oil (including condensate) accounted for 2.6 million b/d, and the remainder was produced as biofuels, natural gas, and other natural gas liquids (NGLs) (Figure 2).

Figure 2. Brazil's liquid fuels production and consumption

Source: U.S. Energy Information Administration, Short-Term Energy Outlook

- Production of oil in the pre-salt layer grew 26% from 2016 to 2017, accounting for almost 50% of total production in 2017, according to the Agência Nacional do Petróleo, Gás Natural e Biocombustíveis (ANP).\

- The transportation sector accounts for a large share of demand. In 2017, Brazil’s energy consumption in the transportation sector was 33% of total energy demand: diesel oil accounted for 44%, gasoline accounted for 29%, and ethanol accounted for 16%. The remaining shares were natural gas, biodiesel, and aviation kerosene.\

Refining

- According to Oil & Gas Journal, at the end of 2017 Brazil had 2.1 million b/d of crude oil refining capacity at 12 refineries, most of which are owned by Petrobras.\

- In 2017, Brazil ranked ninth in the world in refinery capacity and had a utilization rate of 76%.
Exports and Imports

- Brazil exported approximately 997,000 b/d of crude oil in 2017, a 25% increase from the previous year and the highest amount to date. China, the largest importer of Brazilian crude oil, imported about 423,000 b/d in 2017, an increase of more than 43% from 2016. (Figure 3).

- Biofuels
  - Total biofuels production in 2017 was 567,000 b/d. Brazil is the second-largest producer of ethanol in the world after the United States. Total ethanol production fell to 493,000 b/d in 2017, slightly lower than 2016, according to the ANP (Figure 4).
In 2017, Brazil exported approximately 25,000 b/d of ethanol, down more than 70% from its highest level of exports in 2008. The United States imported 17,000 b/d of ethanol from Brazil in 2017.  

Although Brazil is a major ethanol producer, the country imported more than 31,000 b/d of ethanol in 2017 (up 119% from 2016). Nearly all imported ethanol came from the United States. Brazil is a significant market for American ethanol exporters because of several factors. Brazil began importing small amounts of ethanol from South Africa in 2017.  

Brazil also produces biodiesel. In 2017, the country produced approximately 74,000 b/d of biodiesel, a 13% increase from 2016. More than three-quarters of biodiesel is produced from soybean oil.

**Natural Gas**

Despite Brazil’s significant reserves, natural gas accounted for only 11% of Brazil’s total primary energy consumption in 2017. Brazil’s natural gas reserves are located primarily offshore in the Campos Basin.

**Reserves**

According to the *Oil & Gas Journal*, Brazil held 13 trillion cubic feet (Tcf) of proved natural gas reserves at the beginning of 2018, the third largest in South America after Venezuela and Peru.

**Production and Consumption**

In 2017, Brazil produced 846 billion cubic feet (Bcf) of natural gas, an increase from 2016 as Brazil continues to develop its vast offshore reserves.

Brazil’s consumption of natural gas was 1.2 Tcf in 2017, an increase from 2016 (Figure 5). Demand from the industrial sector was a little more than 50% of the country’s total natural gas consumption in 2017.
Production of natural gas in the pre-salt layer grew 26% year over year from 2016 to 2017, according to ANP.20

Imports

- Brazil imported 376 Bcf of natural gas in 2017, a decrease from 2016. Of this amount, 83% came from Bolivia (via pipeline), and the remainder was liquefied natural gas (LNG) imports primarily from Nigeria, the United States, and Angola.21

Electricity

_Brazil has the third-largest electricity sector in the Americas behind the United States and Canada._

- Brazil had an installed generating capacity of 157 gigawatts (GW) in 2017, a 4.5% increase from 2016, according to the Ministério de Minas e Energia (MME) (Figure 6).22
As of June 2017, Brazil had 100 megawatts (MW) of photovoltaic (PV) solar in its generation mix, up from about 1 MW five years ago. By 2024, the government expects Brazil's overall solar capacity to exceed 8 GW.23

Notes

- In response to stakeholder feedback, the U.S. Energy Information Administration has revised the format of the Country Analysis Briefs. As of January 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 April 2019.
- Data are EIA estimates unless otherwise noted.

3. Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 1.3 (August 2018).
7. Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 1.17 (August 2018).
8. Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 1.17 (August 2018).
9. Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 1.16 (August 2018).
10. Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 1.18 (August 2018).
11. Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 2.1 and 2.7 (August 2018).
13 Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 2.1 (August 2018).
14 Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 2.4 (August 2018).
15 Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 2.3 (August 2018).
16 Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 2.7 (August 2018).
17 US Department of Agriculture, “Brazil Biofuels Annual Report 2016” (August 2016.)
20 Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 1.5 (August 2018).
21 Agência Nacional do Petróleo, Gás Natural e Biocombustíveis, “Oil, Natural Gas, and Biofuels Statistical Yearbook 2018” Table 1.23 (August 2018).
22 Ministério de Minas e Energia, “Resenha Energética Brasileira: Exercício de 2017.”
23 BN Americas, “Out of the dark: Brazil’s solar boom” (June 8, 2017).