

## COUNTRY ANALYSIS BRIEFS

# Equatorial Guinea

Last Updated: January 2011

### Background

**Equatorial Guinea's economy has grown rapidly since the country began exporting oil and developing its natural gas reserves.**

Equatorial Guinea has become a significant oil and natural gas exporter since the discovery and development of large offshore oil reserves in the 1990s. While both oil and gas production have increased significantly over the past decade, both volumes appear to be leveling off in the short-term.



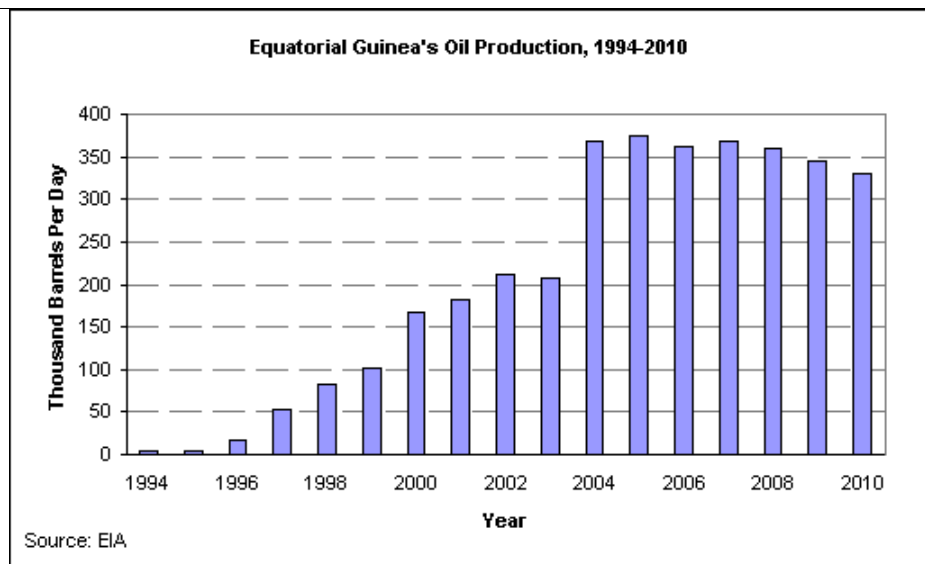
According to the [International Monetary Fund's \(IMF\)](#) latest data, the hydrocarbon sector – mostly crude oil with liquefied natural gas (LNG) playing an increasingly greater role – represented over 90 percent of government revenue and about 98 percent of export earnings.

### Oil

**Equatorial Guinea exports around 300,000 bbl/d of oil, about one-third of which is destined for North American Markets.**

According to the *Oil and Gas Journal*, Equatorial Guinea had proved oil reserves of 1.1 billion barrels as of January 2011. The majority of these reserves are located offshore in the oil-rich Gulf of Guinea. Since the 1995 discovery of the Zafiro field, Equatorial Guinea's oil production increased dramatically. In 1995, oil production was 5,000 barrels per day (bbl/d) and according to EIA's Short-Term Energy Outlook, the country is currently producing slightly over 300,000 bbl/d but forecast to remain relatively flat through 2012. New field developments are underway but no additional production is expected before 2013.

Almost all oil production is in the form of crude oil and lease condensates from natural gas production. All production is exported and the small amount of domestic consumption is met through imports of refined products.



### Section Organization

The Ministry of Mines, Industry and Energy is the overall regulatory body for the petroleum industry in Equatorial Guinea. The Equatoguinean government created a national oil company, GEPetrol, that became operational in 2002. GEPetrol's primary focus is to manage the interest stakes of the Equatoguinean government in various production sharing agreements (PSAs) and joint ventures (JVs) with foreign oil companies. The company is also responsible for marketing, licensing rounds and policy implementation within the hydrocarbon sector. Oil licenses are awarded through licensing rounds or direct negotiations with companies.

While European and Chinese companies are starting to play a role in Equatorial Guinea, the main foreign company involvement is from U.S. companies including ExxonMobil, Hess and Marathon. In recent years, the government has passed legislation to increase local participation (ownership) to a minimum of 35 percent in all foreign investments with companies expected to give preference to local staff and resources. In the hydrocarbon sector, this requirement can be met with a 35 percent share allotted to the national oil company, GEPetrol. As a result, the national oil and gas companies (Sonagas) are expected to continue to play a substantive role in oil and gas development.

### Production

Equatoguinean oil production originates almost entirely from the Zafiro, Ceiba, and Okume fields, while condensate production originates from the Alba field. A detailed map of oil and gas licenses and activities is available through the [Ministry of Mines and Energy Website](#).

#### Zafiro Field

In 1995, ExxonMobil and Ocean Energy discovered the Zafiro field, which is located northwest of Bioko Island. Zafiro was the first deepwater field to be brought on-stream in West Africa and is currently the main producing field in Equatorial Guinea. Zafiro is currently operated by an ExxonMobil-led consortium and producing around 160,000 bbl/d. While Zafiro continues to be the single largest source of Equatoguinean oil, field production has been in decline since it peaked in 2006 at over 240,000 bbl/d. Zafiro, as of 2005, has been blended with Topacio and marketed as "New Zafiro", a low-sulfur distillate-rich crude oil.

#### Ceiba Field and Okume Complex

Ceiba, Equatorial Guinea's second major producing oil field, is located just offshore of Rio Muni in exploration Block G, neighboring the Okume Complex. The field contains an estimated 113 million barrels of reserves and in 2009 was producing close to 80,000 bbl/d. The field is operated by the Hess Corporation, with partners Tullow Oil and GEPetrol. According to Wood Mackenzie, other fields in the Okume complex contributed around 30,000 bbl/d of Ceiba Blend in 2009.

#### Alba

Alba, Equatorial Guinea's third largest field, is located 12 miles north of Bioko Island. Alba was developed as a major condensate field containing an estimated 400 million barrels of liquids. The field currently produces close to 70,000 bbl/d of condensates as well as some liquefied petroleum gas (LPG). The associated natural gas that was historically flared from the Alba field is now the main source of feedstock for the Punta Europa liquefied natural gas (LNG) plant on Bioko Island (see Natural Gas section). Marathon Oil Corporation serves as operator of Alba field along with GEPetrol.

#### Upcoming developments

Noble Energy operated Aseng and Alen condensate fields are expected on-stream in the short-term. Aseng production is expected to start in late 2012, peaking at 50,000 bbl/d while Alen is not expected to begin production until 2013 with an estimated production of around 40,000 bbl/d. Natural gas from the Alen field will initially be used to enhance oil recovery but plans are underway to bring this gas to market.

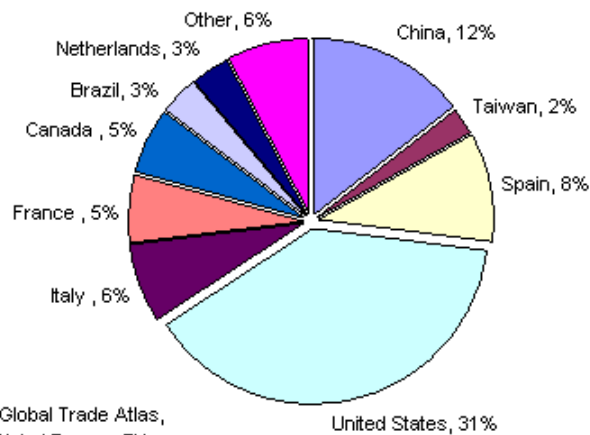
### Downstream and Refining

Domestic oil consumption for 2009 was estimated at 2,000 bbl/d, primarily in the form of motor fuel. Getotal, jointly owned by Total and the government of Equatorial Guinea, has a monopoly on the distribution of petroleum products, all of which are imported due to a lack of refining capacity. Plans for a 20,000 bbl/d refinery located in Rio Muni were announced in 2010 but the project is still in the design phases.

### Exports

The majority of Equatorial Guinea's oil production is exported to North American, European, and Asian markets. In 2009, the United States imported approximately 90,000 bbl/d of crude and products from Equatorial Guinea. Other major destinations for exports include Spain, China, France, and Italy.

**Equatorial Guinea's Oil Exports by Destination, 2009**



Source: Global Trade Atlas,  
FACTS Global Energy, EIA

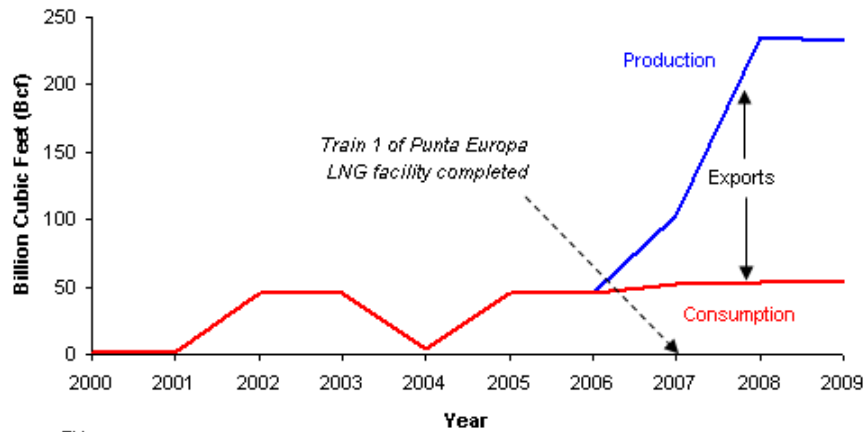
### Ports

The Luba oil port, located on the west side of Bioko Island, became operational in 2002. Luba has become a transportation hub for the oil and gas industry. In addition, a renovation at the port in Malabo is almost complete and a renovation of Bata port is expected.

## Natural Gas

**Equatorial Guinea's natural gas production has grown rapidly over the past decade but is currently starting to level off.**

According to the *Oil and Gas Journal*, Equatorial Guinea had 1.3 trillion cubic feet (Tcf) of proven natural gas reserves as of January 1, 2011. The majority of the reserves are located offshore Bioko Island, primarily in the Alba and Zafiro associated natural gas fields. From 2001-2009, Equatoguinean natural gas production increased rapidly from 1 billion cubic feet (Bcf) to 232 Bcf as new projects came online. Domestic consumption over the same period went from 1 to 55 Bcf, increasing along side of production until 2007 when the completion of the Punta Europa liquefied natural gas (LNG) facility on Bioko Island allowed for greater exports.

**Equatorial Guinea Natural Gas Production and Consumption, 2000-2009**

Source: EIA

### Sector Organization

Following a decree signed by President Obiang in January 2005, the government announced the creation of a state natural gas company, Sociedad Nacional de Gas de Guinea Ecuatorial (Sonagas, G.E.). The responsibilities of Sonagas include managing gas assets and developing an industrial and residential natural gas market, as well as the treatment, distribution, marketing, and exportation of natural gas reserves. As is the case with oil companies, the government requires a minimum local participation of 35 percent in all foreign investments which can be substituted by allotting shares to the state companies.

### Exploration and Production

Natural gas production in Equatorial Guinea has expanded rapidly in the last five years in response to new investments by major stakeholders in the Alba field. Alba, the country's largest natural gas field, contains most of the 1.3 trillion cubic feet (Tcf) of proven reserves, with probable reserves estimated at 4.4 Tcf or more. Currently, the Alba field produces almost all of the 232 Bcf of marketed natural gas. Marathon Oil (operator) has a 63 percent interest in the field, while Noble Energy holds 34 percent interest and GEPetrol has the remaining three percent.

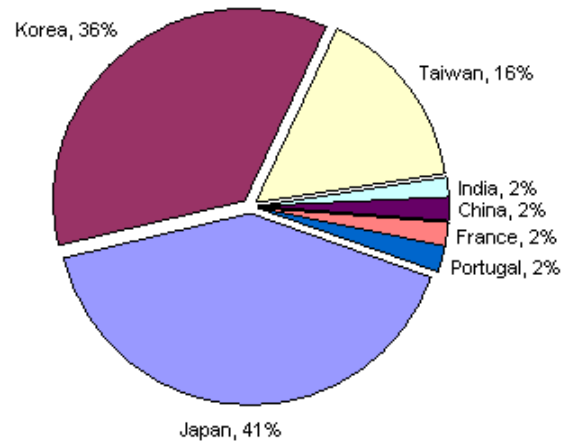
Additional natural gas production could come on-stream if the government is able to implement plans to reduce gas flaring by 2013. The government has specifically targeted ExxonMobil's Zafiro field that it claims is responsible for close to 80 percent of all natural gas flaring in the country and has threatened fines for continued flaring.

### Liquefied Natural Gas (LNG)

Most of Equatorial Guinea's natural gas production is exported in the form of LNG. Marathon Oil Corporation and its partners completed Train 1 of the \$1.4 billion Punta Europa LNG facility on Bioko Island in May 2007. The plant is initially designed to process approximately 3 Tcf of dry gas from the Marathon-operated Alba Field.

In 2009, Equatorial Guinea exported approximately 153 Bcf of LNG, almost all of which went to Asia, mainly Japan (41 percent), South Korea (36 percent) and Taiwan (16 percent), smaller volumes that year went to India, China, France and Portugal. Initial LNG exports were destined for the United States and in 2007, the country did import close to 18 Bcf of LNG. However, since then, growing Asian demand has shifted the dynamics of Equatorial Guinea's LNG markets.

### Equatorial Guinea's LNG Exports, 2009



Source: FACTS Global Energy

Plans for a second LNG train are underway but have reportedly been delayed until 2016. Feasibility studies on processing stranded gas from Cameroon and Nigeria have been carried out but it is more likely additional supplies will come from domestic sources such as currently flared gas from the Zafiro field.

## Profile

### Energy Overview

|   |                              |
|---|------------------------------|
| <b>Proven Oil Reserves (2011 Oil &amp; Gas Journal)</b>         | 1.1 billion barrels          |
| <b>Oil Production (2010)</b>                                    | 330 thousand barrels per day |
| <b>Oil Consumption (2010)</b>                                   | 2,000 barrels per day        |
| <b>Proven Natural Gas Reserves (2011 Oil &amp; Gas Journal)</b> | 1.3 trillion cubic feet      |
| <b>Natural Gas Production (2009)</b>                            | 232 billion cubic feet       |
| <b>Natural Gas Consumption (2009)</b>                           | 55 billion cubic feet        |
| <b>Electricity Installed Capacity (2008)</b>                    | 0.03 million kilowatts       |
| <b>Electricity Generation (2008)</b>                            | 90 million kilowatthours     |
| <b>Electricity Consumption (2008)</b>                           | 90 million kilowatthours     |
| <b>Total Per Capita Energy Consumption (2007)</b>               | 97 million Btus              |

### Environmental Overview

|   |                         |
|---|-------------------------|
| <b>Energy-Related Carbon Dioxide Emissions (2008)</b>             | 4.6 million metric tons |
| <b>Per-Capita, Energy-Related Carbon Dioxide Emissions (2008)</b> | 7.4 metric tons         |

### Oil and Gas Industry

|                                |   |
|--------------------------------|---|
| <b>Organization</b>            | GEPetrol; Sonagas (national oil and gas companies)                              |
| <b>Major Oil/Gas Ports</b>     | Luba Port and Malabo Port (almost complete)                                     |
| <b>Major Oil Fields</b>        | Zafiro, Okume Complex, Ceiba (40,000 bbl/d), Alba (70,000 bbl/d of condensates) |
| <b>Major Natural Gas Field</b> | Alba  |

\* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power.

\*\*GDP figures from Global Insight estimates based on purchasing power parity (PPP) exchange rates.

## Links

### EIA Links

[EIA - Country Information on Equatorial Guinea](#)

### U.S. Government

[CIA World Factbook - Equatorial Guinea](#)

[U.S. State Department's Country Page - Equatorial Guinea](#)

[U.S. State Department's Consular Information Sheet - Equatorial Guinea](#)

[U.S. Trade with Equatorial Guinea](#)

### General Information

[Africa News Service: Equatorial Guinea](#)

[MBendi Information Service: Equatorial Guinea's oil and gas sector](#)

[African Development Bank: Equatorial Guinea](#)

[African Studies: University of Pennsylvania](#)

[Extractive Industries Transparency Initiative](#)

[International Monetary Fund - Equatorial Guinea](#)

[Transparency International](#)

[World Bank - Equatorial Guinea](#)

### Oil and Natural Gas

[ExxonMobil](#)

[Hess Corporation](#)

[Marathon Oil](#)

[Ministry of Mines, Industry and Energy - Equatorial Guinea](#)

[Noble Energy](#)

[Tullow Oil](#)

## Sources

African Energy Intelligence

Bloomberg

Business Monitor International

CIA World Factbook

Economist Intelligence Unit

Energy Intelligence Group

FACTS Global Energy

Global Trade Atlas

IHS Global Insight

International Monetary Fund

Newsbase African Oil and Gas Monitor

Oil and Gas Journal

Platts Oilgram News

RigZone

Upstream

Wood Mackenzie

World Bank

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