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THE ENERGY SECTOR OF EQUATORIAL GUINEA

H.E. Mr. Gabriel Mbaga Obiang Lima, Minister of Mines, Industry and Energy, Republic of Equatorial Guinea
Equatorial Guinea country data

- **Population**: 1.2 million
- **GDP**: $28.9 billion
- **Imports**: $5.48 billion
- **Exports**: $14.76 billion

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Oil and Gas in the Economy

The engine for economic growth and social welfare

- 77% of annual GDP
- More than 95% of overall exports
- Nearly 90% of government revenue

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Production Overview

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Oil and Gas Production Profile

Annual production averages (boe/d)

- Crude oil: 56%
- Condensate: 28%
- Dry gas: 12%
- Natural gas liquids: 4%

342,441 boe/d total production

Production volumes

- LNG: 86,800
- Methanol: 19,700
- Butane: 7,000
- Propane: 11,600
- Condensate: 55,300
- Oil: 156,500
Production Overview

Oil and Gas Production Profile

Liquids production by field

- Alba 7%
- Zafiro 36%
- Ceiba 9%
- Okume 14%
- Aseng 14%
- Alen 10%

Dry Gas 1.3 BCF/D

LNG 3.5 MTPA

Methanol 3,133 MTD
Hydrocarbons Sector Structure
**Hydrocarbons Sector Structure**

**Strong legal framework**

- **3 Nov. 2006**
  - Hydrocarbons Law (Law 8/2006)

- **3 Nov. 2006**
  - Mining Law (Law 9/2006)

- **20 June, 2013**
  - Regulations on Petroleum Operations (Ministerial Order 4/2013)

- **26 Sep. 2014**
  - National Content Regulation (Ministerial Order 1/2014)

- **2015**
  - Amended Mining Law under consideration

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**The Energy Sector of Equatorial Guinea**

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Hydrocarbons Sector Structure

State Support

- **Sector regulation:** Ministry of Mines, Industry and Energy
- **National oil company:** GEPetrol
- **National gas company:** SONAGAS
Hydrocarbons Sector Structure

National Oil and Gas Companies

- Established in 2001, operational since 2002
- Manages state's participation in PSC
- Participating in all producing operations
- Subsidiaries: GEPetrol Insurance and GEPetrol Services

- Set up in 2005 to manage gas projects
- Participates in LPG, methanol and LNG production
- Local distribution of LPG through subsidiary GEOCAM

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Exploration in 2016
A History of Exploration Success

- **Alba field** discovered in 1984, six producing areas now across the country
- Exploration success rate **almost double the global average**
- **EG Ronda 2016** bidding round launches today
All remaining acreage not under direct negotiations offered for bidding

Bidding round to conclude November 2016
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Major Energy Projects
Fortuna FLNG: The next generation of mega projects

November 6, 2014:
EG and Ophir Energy reach agreement for Floating Liquefaction Storage and Offloading Vessel

Fortuna FLNG will be first of its kind in Africa

First gas expected in 2020

FID in 2016
Upstream and midstream FEED finalized

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Bioko Oil Terminal
Crude oil and petroleum products storage in the Gulf of Guinea is an area in need of investment.

- West Africa’s largest storage facility
- 1.2 million cubic meters capacity
- FID end of 2016
- 250 ha site selected at Punta Europa
Bioko Oil Terminal

Creates African center for distribution of petroleum products and crude oil

Stimulates regional petroleum industry, creates employment and reduces imports

Attracts investment and builds local financial capacity

Large increase in product shipment to Asia
Opportunities

- Create a regional center for storage of refined products and crude and a strategic hub in the Gulf of Guinea.
- Provide logistics infrastructure to support current operations and eliminate inefficiencies in the value chain.
- Take advantage of international trade flows and serve local and regional supply needs.
- Create value, leveraging blending capabilities to obtain products that meet the specifications of end markets.
Major Energy Projects

Development of Bioko Oil Terminal in Phases

- **Phase 1**
  - Refined products: Gasoline, Gasoil, Jet A1 and Naphtha
  - 23 tanks with a capacity of 520,000 m³
  - Construction of a 120-meter quay
  - $600 million
  - Final investment decision end of 2016
  - Construction period: 3 years

- **Phase 2**
  - Crude oil storage
  - Tanks will have 680,000 m³ capacity
  - Planned expansion to 3 million m³
  - Two berths planned
  - Suitable for VLCC and Suez class carriers

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Major Energy Projects

Future Developments

Final feasibility study report to be presented June 30, 2016

MoU signed October 2015 between Taleveras Group, Gunvor Group, Strategic Fuel Fund and SacOil Holdings

Joint venture agreement to be negotiated

Construction contracts to be negotiated and awarded

Detailed engineering work and site preparation to begin soon
Goals

To build a terminal that is flexible, and in operational terms, unique in the region.

To attract an operator and customers who share our vision.
Petrochemicals Revolution
The Petrochemicals Revolution of Equatorial Guinea (REPEGE) is our plan to maximize value from Equatorial Guinea’s abundant gas reserves.

- Gas agreements in place, feasibility study completed 2014
- Local content driven project, work for local companies identified
- Location and initial investor established
- First production 2019
A New Petrochemicals Hub at Riaba

Riaba Fertilizers will be the operator of the REPEGE project.

Ongoing:

- FEED
- Technology partner selection
- Off-taker selection
- O&M partner selection

Open to equity participation from strategic partners
Daily feed gas
105,000 MMBTU/D from Alen field

Project cost of 1.83 billion USD

REPEGE will create 50,000 jobs (direct and indirect) over 20 years

Nameplate capacity of 1.3-1.5 MTPD

Riaba Fertilizers will increase Equatorial Guinea’s industrial and human capacity and boost the local and regional agriculture sector.
REPEGE Project Plan

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Luba Petroleum and Industrial City
Industrial area focused on development of tertiary and logistics activities for petroleum sector

**Objectives**

- Decongesting urban areas
- Developing tertiary activities and logistics of the oil sector
- Provision of downstream services
- Optimizing sector growth
- Developing oil and gas port activities
- Creating potential for SMEs
- Increase national revenue
Bata power plant gasification project

**Gasification of 24 MW Bata power plant via conversion of two 8 MW turbines**

**Objectives:**
- More effective utilization of domestic gas resources
- Lower reliance on more costly fuel oil

**Status:**
- 70% of construction work is completed
- On track to become a world class gasification project

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Major Energy Projects

Bata power plant gasification project

- Punta Europa LNG plant
- Transport by road and sea
- Arrival in Bata
- Regasification and utilization at Bata power plant and CNG buses

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Compressed natural gas bus transport

- Pilot project launched in Malabo and Bata in 2016
- Commercialization now underway
- City bus transportation to run on clean CNG
- A pioneering project for Central Africa
Transporting LPG from Punta Europa

Installing gas supply to all homes and hotels in Oyala

LPG bottling plant in Bata

LPG distribution in Bata and Djibloho regions

Project objectives

- Encourage the use of LPG in all buildings
- Establish processes for latest technology
- Train technicians in the gas industry and create opportunity

Bringing LPG to Bata and Djibloho

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Power Sector
Equatorial Guinea: Regional power leader in Central Africa

- $2 billion in government investments to deliver better power
- 20 projects underway or already completed, including new gas fired, hydro and solar generation projects
- Power projects central to Horizon 2020 national plan
- New energy law planned to allow IPP investment in power sector
- Electricity for every Equatoguinean by 2017, with surplus for exports

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Power Sector over the Years

- **2001**: SEGESA is established
- **2004**: 17 MW are added to Punta Europa turbo gas power plant
- **2004**: 56 MW capacity
- **2008**: 334 MW capacity
- **2010**: 214 MW capacity
- **2011**: SEGESA is restructured into 3 separate units
- **2011**: Punta Europa plant gets upgrade to 148 MW
- **2012**: 120 MW Djibloho hydroelectric power station comes online
- **2013**: 76 MW capacity
- **2013**: 71 MW capacity
- **2016**: Gasification of Bata power station to be completed
- **2017**: 200 MW Sendje hydropower plant is expected for completion
- **2018**: 200 MW capacity
Sociedad de Electricidad de Guinea Ecuatorial (SEGESA)

SEGESA restructured to facilitate government investment in power sector