

Nigeria's gas potential

Nigeria has one of the world's largest reserves of natural gas that can underpin substantial power generation, which in turn is a key driver of economic growth and a higher standard of living.

Energy for a brighter future

An expert's view by

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Melissa Cook, CFA, is the Founder and Managing Director of African Sunrise Partners LLC, a business intelligence and advisory firm. Ms. Cook spent 25 years conducting equity research for Wall Street firms including Prudential Securities, Lazard Asset Management, and CLSA Asia-Pacific Markets. Ms. Cook holds an A.B. in History from Dartmouth College and an M.B.A. in Finance from the Stern School of Business at New York University. She is a CFA charterholder.

In 2011, Ms. Cook founded African Sunrise Partners LLC to provide business intelligence and advisory services to investors and companies interested in doing business in sub-Saharan Africa. During over 40 trips to Africa, Ms. Cook has hosted meetings with business executives, policymakers, and investors in 16 countries. In 2014, Ms. Cook was appointed to a two-year term on the U.S. President's Advisory Council on Doing Business in Africa.



Nigeria is like a giant high-horsepower engine with grit in the gears. Africa's highest-potential, most dynamic economy is stuck in the slow lane. The country's electricity sector produces a fraction of the power needed to run the economy – the lack of consistently available, appropriately priced electricity is a major source of friction preventing Nigeria from accelerating to a new cruising speed.

It's easy to place blame for the current situation: legacy government-owned power assets were mismanaged and sub-scale. Several years after privatisation of the generation assets, grid-based capacity is only 12,500MW, and output is barely touching the 5,000MW mark on a good day. Historically, pricing distortions acted as a disincentive for gas producers to supply domestic Nigerian customers, so production and distribution infrastructure was built to serve export markets. Powerful entrenched interests in the diesel supply/generation arena stymied power-sector reform for many years, forcing manufacturers, businesses, and families to devise their own energy solutions. More recently, the power grid has been brought to near-total collapse by the sabotage of gas infrastructure, severe currency depreciation, and inadequate cash collections.

Despite the gloomy backdrop, we are very optimistic about Nigeria's long-term economic potential. With over 170 million people, a commercially oriented mentality,

abundant unused resources, and increasingly vocal and increasingly frustrated citizens, Nigeria has the building blocks it needs to grow and prosper. This can only happen, however, if there is sufficient gas to run power stations and factories.

Nigerian households can't depend on grid power, so they must spend a material proportion of their income on (usually imported) diesel to run home generators. These machines are noisy and dirty; they require regular upkeep and repair. Grid-based electricity – fuelled by gas – is dramatically cheaper than self-generation. Reliable, affordable, and ubiquitous access to grid-based electricity would free up consumer-spending power – for education, household goods and services, housing, healthcare, communications, travel, and more, as well as using scarce foreign exchange reserves to import diesel rather than using abundant gas resources in country that are paid for in Naira.

Most Nigerian manufacturers produce their own power, out of necessity. Scarce and costly capital must be invested in captive power plants – rather than in a company's growth and expansion. When gas is unavailable, firms switch to more expensive fuel oil, pinching the bottom line. Lack of appropriately priced power negatively affects capital allocation, margins, and returns on investment; high electricity costs are passed along to consumers in the form

of higher prices, rendering Nigerian-made goods uncompetitive. Unlocking gas as a predictable, reliable fuel for power – even if companies continue operating captive power plants for the foreseeable future – would boost profitability and competitiveness. This could generate considerable business investment and job creation.

What are some potential solutions? Transportation remains the biggest bottleneck. The Government is working on resolving long-standing security problems around transportation infrastructure. Public-private partnerships are a potential means of attracting investment in gas pipelines. Companies are seeking new ways to move the molecules – in compact CNG containers, offshore pipelines, or LNG transport from domestic sources to domestic destinations. In some cases, power plants or manufacturing capacity will have to be located closer to gas reserves.

Once Nigeria has adequate domestic gas supply and transportation capacity, the industry must move toward a “willing buyer, willing seller” pricing regime, arriving at a proper market price to satisfy demand from the electricity and manufacturing sectors. Today, even after the significant increase since 2011 in the Domestic Service Obligation price, industrial users are willing to pay far higher prices than the lower price allowed in the regulated electricity sector.



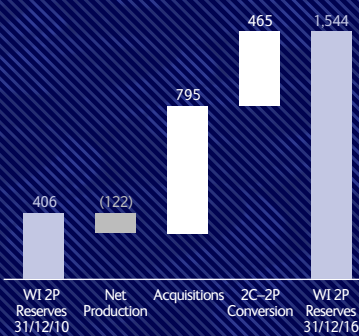
An estimated

80 million
people without access to
electricity in Nigeria

Where does Seplat fit in?



WI 2P gas reserve base 2010-2016 (Bscf)^{1,2}



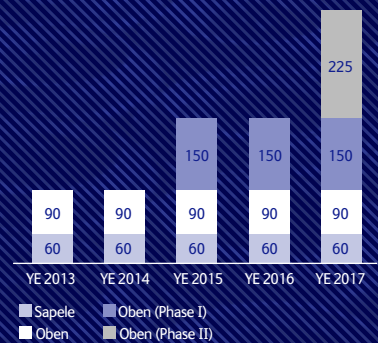
Source: Company information.

1. Volumes stated at 31 December 2010 based on estimates from Gaffney Cline & Associates.
2. Volumes stated at 31 December 2016 and for acquisitions based on independent estimates from DeGolyer & MacNaughton.

Indigenous oil & gas companies are a critical part of the solution. These firms have a unique focus on exploiting Nigeria's resources, building local hard and soft infrastructure, and establishing operations in ways that are beneficial to the Company and to the country. Long term, we expect all local firms to maintain better local community relations, which are critical to security and broad-based economic development. Historically, international oil companies operating in the country have not had a management, strategic, or budgetary orientation toward developing Nigeria's domestic market.

We're excited about Nigeria's potential – and gas is critical to the story. For now, let's leave aside issues of corruption, politics, currency, global commodity price fluctuations, infrastructure shortfalls, and inadequate cash flows. Think for a moment on this bullish scenario: When there is free flow of locally produced gas to the market, grid-based power plants can operate consistently. Distributed and captive power plants can run predictably on natural gas, allowing companies to manage expenses and optimise capital allocation.

Gas plants capacity (MMcfd)

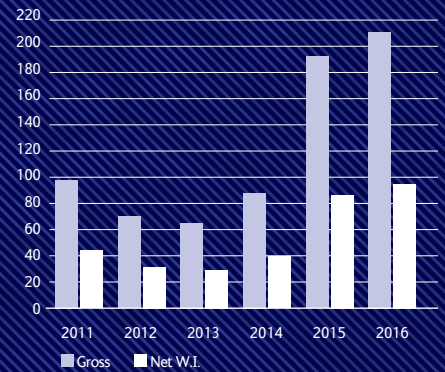


“ Reliable access to affordable grid-based electricity – fuelled by gas – could generate considerable industrial investment and job creation.

Confidence in investment returns will rise as volatility subsides. This should, in turn, reduce risk factors, bring down the cost of capital, and stimulate fresh investment. Local manufacturers will become more competitive. Small businesses and entrepreneurs can survive and even thrive. Households will have more discretionary income. Businesses can expand and create jobs. Lower demand for imported diesel, coupled with soon-to-be-built domestic refining capacity, will remove a big overhang on the Nigerian currency. All of this should help Nigeria move toward realising its economic and human potential.

We realise that some of this may seem too good to be true, from today's vantage point. We are fully cognisant of the challenges involved in doing business in and investing in Nigeria and are not trying to imply that gas is the single solution to the country's problems. Our belief in the validity of this scenario comes from seeing challenges elsewhere in Africa improve after one longstanding problem has been solved – like moving traffic out of downtown Nairobi onto new bypass routes. The success inspires confidence that other problems can be solved, and with confidence comes investment and solutions. We never underestimate the ingenuity, determination, and power of ordinary Africans to solve their country's problems, once the path is clear.

Gas production supplied to the domestic market (MMscfd)



An average of 2,000 homes in SSA can be powered by...

1MW

...our current gas processing capacity is

525MM
scf/day...

...capable of underpinning almost

2,000MW
worth of power..

...enough for approximately

4m homes

African Sunrise Partners has received compensation from Seplat Petroleum Development Company Plc for writing this article.