

A team of employees at Shell Nigeria Gas facility at Agbara, Ogun State Nigeria.

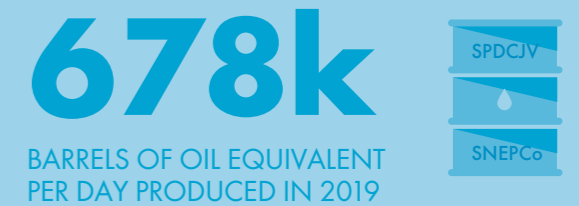


# POWERING NIGERIA'S ECONOMY

Nigeria's oil and gas resources can power a diverse economy, expand domestic industries and increase the prosperity of its people. In 2019, Shell Companies in Nigeria paid about \$1.5 billion<sup>3</sup> in taxes and royalties to the Nigerian government.

With business interests from the oil and gas producing heartlands of the Niger Delta to the growing industries of Ogun State and Lagos, Shell Companies in Nigeria provide technical expertise, a global perspective and strong governance that can unlock opportunities for Nigeria and Nigerians.

- Prosperity through power.
- A pipeline of projects.
- Future opportunities in deep-water.
- Developing Nigerian talent and supply chains.



SPENT ON CONTRACTS TO NIGERIAN COMPANIES IN 2019 (SCIN)

The Nigeria Briefing Notes update on activities and programmes undertaken by several Nigerian companies either wholly-owned by Shell or in which Shell has an interest. Together these are referred to as the Shell Companies in Nigeria (SCIN). Four of these are:

- Shell Petroleum Development Company of Nigeria Limited (SPDC); a wholly-owned Shell subsidiary, which operates an unincorporated joint venture (SPDC JV) in which SPDC holds a 30% interest.
- Two other wholly-owned Shell subsidiaries; Shell Nigeria Exploration and Production Company Limited (SNEPCo) and Shell Nigeria Gas Limited (SNG).
- And Nigeria Liquefied Natural Gas (NLNG) Limited; an incorporated joint venture in which Shell has a 25.6% interest.

<sup>3</sup>Shell share of royalties and corporate taxes paid to Nigerian government (SPDC \$0.7 billion; SNEPCo \$0.8 billion)

Nigeria has some of Africa's largest reserves of oil and natural gas, giving it a resource foundation to build a prosperous economy for its growing population of around 200 million people. The country makes over 90% of its export earnings and about 70% of government revenue from the oil and gas industry<sup>4</sup>.

However, development is held back by a lack of infrastructure. Intermittent power from the electricity grid causes power shortages in urban as well as rural areas and the need for back-up generators adds to the cost of energy. Natural gas and off-grid renewable energy projects are proving a new way forward for Nigeria to power its homes and businesses.

### PROSPERITY THROUGH POWER

Economic growth relies on access to reliable, affordable energy. The Federal Government of Nigeria has made it an economic priority to harness the potential of its natural resources and expand access to energy as it strives to raise the living standards of its people. Shell wants to be part of this opportunity for the next generation of Nigerians.

Today, the SPDC JV supplies about 10% of Nigeria's domestic gas, most of which is used for power generation. The SPDC JV operates the joint venture's power plan, AFAM VI, which has a nameplate capacity of 650MW although often only operates between 350MW and 450MW depending on grid allocations. AFAM VI uses combined cycle gas turbine technology that burns 40% less gas than plants using older open cycle technologies. This can help contribute to reduction in greenhouse gas emissions. Shell Nigeria Gas (SNG) provides gas to industrial and commercial customers in Nigeria. Challenges like building a more extensive gas distribution pipeline network remain but the Shell Companies in Nigeria have an existing foundation that is creating more opportunities.



Gas-powered electricity is beginning to replace diesel generators at one of Africa's largest open markets.

SNG distributes gas to more than 115 commercial and industrial customers across Ogun and Lagos States, such as Nigeria's first float glass manufacturer and first producer of antiretroviral drugs. Other customers include international consumer goods companies and Nigeria's largest desktop water supplier. This industrial hub underpins a vibrant local economy, providing employment and making Ogun one of just two states to generate more revenue than it receives from the federal government.

In Lagos, the other state that generates more revenue than it receives, SNG is exploring opportunities to distribute gas to the Lagos State Government as part of the 'Light Up Lagos' initiative that could distribute gas to wholesale and retail customers in Victoria Island, Ikoyi, Lekki and Epe in the metropolitan Lagos area.

In Abia State, gas from SNG is already used to produce electricity to light the thousands of stalls at the Ariaria Market, one of West Africa's largest open markets with over 37,000 stalls. Over time the gas-generated power will replace the diesel generators that the over two million traders use for power.



Gas from SNG is already supplied to commercial and industrial customers in Ogun and Lagos States.

<sup>4</sup>Nigerian National Bureau of Statistics, 2017 (latest available).

## A PIPELINE OF PROJECTS

The SPDC JV has long produced oil in the Niger Delta. Today, it aims to produce more natural gas, much of which was once flared. In 2019, the Southern Swamp Associated Gas (SSAGS) and Forcados Yokri gas gathering facilities achieved first production. This gas is destined for domestic and global markets.

The SPDC JV is also working with the Federal Government of Nigeria and Nigerian National Petroleum Corporation (NNPC) on developing four of the government's seven gas supply projects.

One of these projects is the Assa North/Ohaji South Gas Development Project<sup>5</sup> in Imo State where construction began in 2019. The project, with a capacity for 300 million standard cubic feet of gas per day, has the potential to be one of the largest domestic gas projects in the country when completed. The development will help the federal government deliver on its ambition to provide enough gas for domestic consumption, power generation and gas-based ammonia and urea fertilizers for farmers.

The other three projects are in early stages and investment decisions have not been taken. However, if all four projects were completed, together they might be expected to deliver more than three billion standard cubic feet of gas per day for domestic use and export.

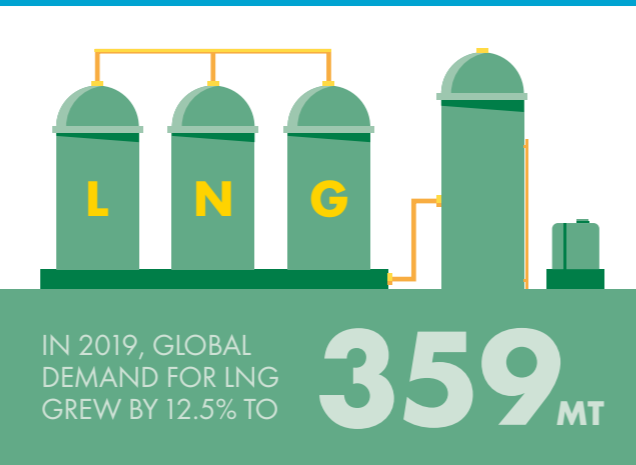
SPDC also operates the Gbaran-Ubie gas plant in the heart of the Niger Delta. In 2019, Gbaran-Ubie achieved peak production with about 175,000 barrels of oil equivalent per day – approximately 864 million standard cubic feet per day (MMscf/d) and 26,000 barrels of condensate per day.

Much of this gas is for export but in 2019 SNG signed agreements to supply gas to industrial clusters and parks in Bayelsa State, the SPDC JV Gbaran-Ubie gas facility, and for offtake of the Assa North/Ohaji South Gas Development Project in Imo State. SNG sees further expansion opportunities in Rivers, Abia, Bayelsa, Ogun and Lagos states.

Nigeria's growing population means the country needs more gas infrastructure to meet rising demand for energy. Additional investment is required to build a pipeline network that can reach more customers.

<sup>5</sup>The project is a joint development between SPDC, NNPC, Total, Agip and SEPLAT.

### 2019 WAS A YEAR OF RECORD LNG SUPPLY GROWTH



Global demand for LNG continues to grow. The Nigeria LNG (NLNG) joint venture (Shell interest 25.6%) was created 30 years ago.

SNG is already working to increase its gas distribution capacity and in 2019 increased capacity by over 150% after the completion of its second gas train, the Agbara-Ota Capacity Increase Project. This facility enables regular gas supply to industries in Ogun State. SNG and its partners continue to try to expand to reach more states. SNG now has a network capacity to deliver over 150 mmscfd.

Outside Nigeria, global demand for LNG continues to grow. In 2019, NLNG reached a final investment decision to build a seventh LNG production line (known as a train) subject to certain conditions being met. The expansion would ensure Nigeria's continued place as a global player in an energy source that helps replace coal-use in power plants, reducing the CO<sub>2</sub> emissions by 45-55% as compared to coal when producing electricity.

In addition to direct investment, Shell also hopes that its substantial funding to create a not-for-profit impact investing company called All On will bring reliable power to largely off-grid urban and rural customers across Nigeria. All On works with commercial partners to expand access to energy to about five million people, specifically in the Niger Delta.



NLNG plans to build a 7th LNG production line<sup>6</sup> that will ensure Nigeria's key role in supplying an energy source that helps reduce CO<sub>2</sub> emissions in power stations when compared to coal.

## UNLOCKING NATURAL GAS FOR ECONOMIC GROWTH

Nigeria has around 202 trillion cubic feet of proven gas reserves and about 600 trillion cubic feet of unproven reserves, according to the government-owned Nigerian National Petroleum Corporation (NNPC). However, only 25% of these reserves are being produced or are under development.

The Federal Government of Nigeria (FGN) has made it a priority to unlock and harness the potential of this resource to increase domestic and industrial power supply, raise living standards and support sustainable economic growth and diversification.

The FGN also aims to increase electricity generation. Nigeria currently has around 12 gigawatts (GW) of installed electricity capacity but often less than 5 GW is available in the grid due to transmission capacity

and other challenges. The FGN wants to increase this to 20 GW and this represents a huge development opportunity for Nigeria's domestic gas industry.

SPDC is working with the FGN on four of its seven gas development projects. The Assa North/Ohaji South gas development project is under construction. The other three are in early stages of planning. The projects are:

- Assa North/Ohaji South field.
- The 4 Unitized Gas fields – Samabri-Biseni, Akri-Oguta, Ubie-Oshi and Afuo-Ogbainbri.
- Gas supply to Brass Fertilizer Company.
- Okpokunou/Tuomo West field cluster.

<sup>6</sup>Financial Investment Decision is subject to certain conditions being met.

## FUTURE OPPORTUNITIES IN DEEP-WATER

Future opportunities also lie in the deep waters of the Gulf of Guinea. Through its subsidiary SNEPCo, Shell is using its technological and operational expertise to help Nigeria access these oil and gas resources. Since 2010, industry-wide production from these deep-water fields has added more than 930,000 barrels per day to Nigeria's total oil output, which in 2019 was around 2.1 million barrels per day.

Three decades ago, Shell brought its expertise to Nigeria, after honing its deep-water skills in the Gulf of Mexico. SNEPCo's vision is simple: to be the best deep-water business in the world. It pioneered the advance into Nigeria's deep-water frontier and today its operation is run by Nigerians and contributes around 22% to Shell's total deep-water oil production.

In the right investment climate, there are opportunities to expand and in 2019, SNEPCo took steps to increase production by inviting contractors to bid to develop the 150,000 bpd-capacity Bonga South West Aparo oil field. The project's first phase will include developing around 20 deep-water wells and subsea infrastructure, as well as building a new floating, production, storage and offloading vessel (FPSO).



Bonga floating production, storage and offloading (FPSO) vessel.

## DEEP-WATER ENGINEERS

The development of the Bonga field by Shell Nigeria Exploration and Production Company Limited (SNEPCo) gave rise to the first generation of Nigerian deep-water oil and gas engineers. SNEPCo was the first Nigerian company to venture into the deep waters of the Gulf of Guinea and this required the application of cutting-edge technology. SNEPCo hired Nigerian engineers who cut their teeth on this project, developing knowledge and skills that would advance the country's oil and gas sector.

SNEPCo continues to cultivate Nigerian engineers through its annual university scholarships. In 2019, Maikanti Baru, the then Group Managing Director of the Nigerian National Petroleum Corporation (NNPC) described SNEPCo as a trail blazer and clear leader in deep-water exploration with an exemplary performance. SNEPCo Managing Director Bayo Ojulari, responded by saying the company was mindful of its pioneering role and wanted to continue to pass on its technical expertise.



## DEVELOPING NIGERIAN TALENT AND SUPPLY CHAINS

Shell's investment in Nigeria goes beyond oil and gas infrastructure. It extends to Nigerians themselves. Shell employs Nigerians in all roles and 96% of its around 3,000 employees in the country are nationals. Nigerian staff also work outside Nigeria and share their expertise with their colleagues in Shell's operations around the world.

At Shell Companies in Nigeria, employees work to global standards, are exposed to ideas and training and are empowered to make decisions and deliver. Shell's talent building, however, starts through support for Nigerian students via its social investment initiatives. The various Shell Companies in Nigeria also provide specialised training for semi-skilled Nigerians to work in the energy industry as welders and scaffolders, for example.

Shell also assists Nigerian companies to achieve the necessary certification for their products and services to ensure they qualify for tenders and contracts to provide goods and services across its operations and the Nigerian oil and gas sector. In 2019, 98% of Shell Companies in Nigeria contracts worth \$1.1 billion were awarded to Nigerian companies.

Sometimes, a lack of access to capital hinders many Nigerian companies from competing for and executing contracts effectively. Shell has provided access to nearly \$1.5 billion in loans to 637 Nigerian vendors under the Shell Contractor Support Fund since 2012. These loans help improve their tendering opportunities.

Shell's activities continue to help create Nigerian businesses that can provide technical and support services to the industry. This includes the manufacture of tools and technical kits, the operation of helicopter flights in the Niger Delta, strategic partnerships between foreign and local companies to stimulate technology transfer and capacity development.

SNEPCo has awarded major engineering and construction contracts to companies that are indigenous, have local staff, or possess domestic capabilities in the country. These companies were involved in the installation of new production manifolds, subsea umbilical systems, oil production and water injection flowlines. In 2019, a local company refurbished one of Bonga's subsea wellhead control systems, known as a tree.

## CONTRACTING LOCAL BUSINESSES

Shell Companies in Nigeria contribute to the development of the Nigerian business sector by contracting local companies. For example, the Southern Swamp Associated Gas (SSAGS) project, which began production in 2019, contracted 286 Nigerian companies. These included:

- SAIDEL Nigeria Limited, which deployed the first Nigerian Flagged Pipelay Vessel (\$900).
- AOS Orwell Limited, which built new workshops and facilities for assembling control and security panels. They also developed capacity for carrying out testing of the panels in Nigeria, which previously had been done outside of the country.
- Kasal Engineering Limited and Pamac Engineering Limited, which fabricated steel structures and expanded their fabrication yard and standardised their processes.



WE HOPE TO INCREASE EXPORTS BUT THE OPPORTUNITY FOR THIS GENERATION IS TO BRING MORE ENERGY TO THE NIGERIAN ECONOMY.

Simon Roddy,  
Deputy Managing Director of SPDC



Simon Roddy,  
Deputy Managing Director of SPDC.

## OPPORTUNITY OF A GENERATION

**Interview with Simon Roddy,  
Deputy MD, SPDC**

Education: BSc Honours in Physics from the University of Bristol; MBA from INSEAD  
Joined Shell: 1993

### Impact:

Last year oil and gas production increased and we paid a healthy dividend to government and shareholders. We still have a lot of work to do but believe we are turning a corner on creating a more normal operating environment.

### Approach:

Operating in the Niger Delta represents a significant challenge but this must not be an excuse. We are embracing the challenge, working hard towards our Goal Zero commitments and safely re-opening wells, flowlines and pipelines. As we say in Nigeria, "one team, one family, one T-shirt."

### Hopes:

Production is at a five-year high and we are looking to grow further. But oil and gas production is not only about revenues. In Nigeria it is an enabler that helps to deliver the aspirations of a generation. We hope to increase exports but the opportunity for this generation is to bring more energy to the Nigerian economy.

### Challenge:

Our biggest challenge remains sabotage, which causes spills, and regrettably we can't eliminate that. But what we are doing is working continuously to respond faster to spills and to clean them up in a shorter timeframe. We never take our eye off the security and safety of our employees, contractors and ultimately the communities where we operate. Everyone has to go home safely.

*Energy is the opportunity  
of a generation.*

*Simon*

# CAUTIONARY NOTE

The companies in which Royal Dutch Shell plc directly and indirectly owns investments are separate legal entities. In this Briefing Notes "Shell", "Shell group" and "Royal Dutch Shell" are sometimes used for convenience where references are made to Royal Dutch Shell plc and its subsidiaries in general. Likewise, the words "we", "us" and "our" are also used to refer to subsidiaries in general or to those who work for them. These terms are also used where no useful purpose is served by identifying the particular entity or entities. "Subsidiaries", "Shell subsidiaries" and "Shell companies" as used in this Briefing Notes refer to entities over which Royal Dutch Shell plc either directly or indirectly has control. Entities and unincorporated arrangements over which Shell has joint control are generally referred to as "joint ventures" and "joint operations", respectively. Entities over which Shell has significant influence but neither control nor joint control are referred to as "associates". The term "Shell interest" is used for convenience to indicate the direct and/or indirect ownership interest held by Shell in an entity or unincorporated joint arrangement, after exclusion of all third-party interest.

This Briefing Notes contains forward-looking statements (within the meaning of the U.S. Private Securities Litigation Reform Act of 1995) concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "aim", "ambition", "anticipate", "believe", "could", "estimate", "expect", "goals", "intend", "may", "objectives", "outlook", "plan", "probably", "project", "risks", "schedule", "seek", "should", "target", "will" and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this Briefing Notes, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for Shell's products; (c) currency

fluctuations; (d) drilling and production results; (e) reserves estimates; (f) loss of market share and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions; (j) legislative, fiscal and regulatory developments including regulatory measures addressing climate change; (k) economic and financial market conditions in various countries and regions; (l) political risks, including the risks of expropriation and renegotiation of the terms of contracts with governmental entities, delays or advancements in the approval of projects and delays in the reimbursement for shared costs; and (m) changes in trading conditions. No assurance is provided that future dividend payments will match or exceed previous dividend payments. All forward-looking statements contained in this Briefing Notes are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Additional risk factors that may affect future results are contained in Royal Dutch Shell's 20-F for the year ended December 31, 2019 (available at [www.shell.com/investor](http://www.shell.com/investor) and [www.sec.gov](http://www.sec.gov)). These risk factors also expressly qualify all forward looking statements contained in this Briefing Notes and should be considered by the reader. Each forward-looking statement speaks only as of the date of this Briefing Notes, April 9, 2020. Neither Royal Dutch Shell plc nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this Briefing Notes.

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SPDC Remediation and Oil Spill Response Team sets out to deal with a spill.