

# THE ROLE OF GAS IN NIGERIA'S ENERGY TRANSITION

## THE "DECADE OF GAS"



"SHUTTING OFF CAPITAL IN ENERGY INFRASTRUCTURE WILL NOT RESULT IN A JUST ENERGY TRANSITION, AND THE ATTITUDE TOWARDS NATURAL GAS NEEDS TO BE LOOKED AT FROM AN ENERGY ACCESS AND ENERGY POVERTY POINT OF VIEW."

**NIGERIAN VICE PRESIDENT  
YEMI OSINBAJO**



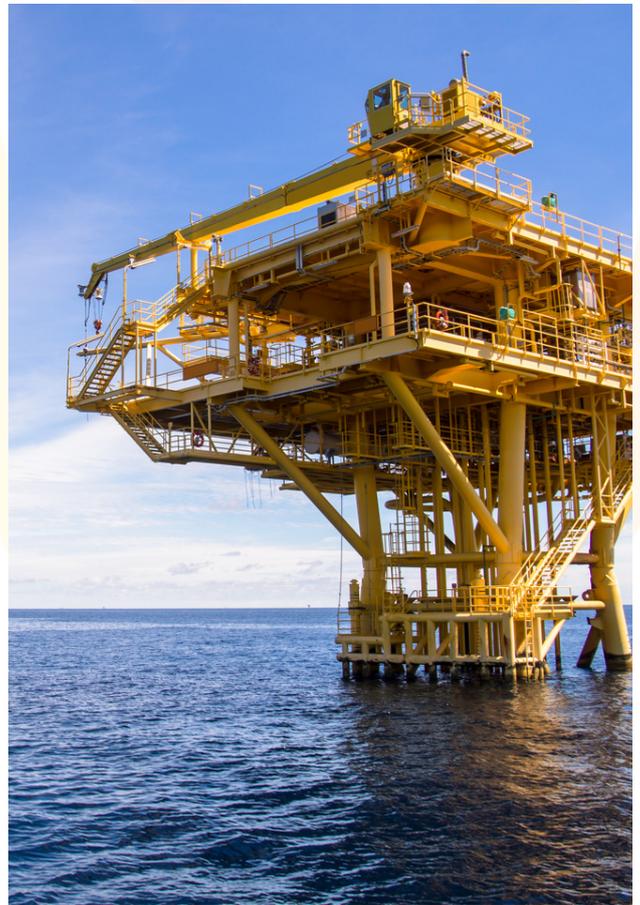
### THE ENERGY TRANSITION FUEL FOR NIGERIA

According to the Nigerian Federal Government (FGN), Nigeria has approximately 206.53 trillion cubic feet (tcf) of proven gas valued at over \$803.4 trillion, of which the estimated recoverable gas is 139.4 tcf, and has the most extensive reserves in Africa. However, although the country has the 10th largest proven reserves globally, the sector is largely underdeveloped as the production-to-reserves is approximately 1%.

As the future of Nigeria's energy, the focus on gas in industrial and economic development has become more pressing, given the country's growing population and rising urbanisation. This was highlighted at the UN Climate Change Conference in November 2021, where Nigeria's President Muhammadu Buhari pledged that Nigeria, Africa's largest oil producer, has committed to achieving net-zero carbon emissions by 2060 while underlining the importance of gas as a transition fuel.

## **FACTS: NIGERIA HAS THE 10TH LARGEST PROVEN GAS RESERVES GLOBALLY**

Many developing countries, especially those with hydrocarbon-dependent economies such as Nigeria, require a more gradual and flexible approach to the energy transition. At COP26, Buhari outlined the country's heavy reliance on gas for a "stable" energy transition due to energy access and energy poverty issues and highlighted that gas could be used to balance a renewable energy-based system enabling the nation to launch the long-term renewable energy infrastructure procurements and investments needed to have a sustainable energy supply.



PwC estimates that economic activities stimulated by the domestic utilisation of Nigeria's recoverable proven gas reserves can generate a Gross Value Add (GVA) of \$18.3 billion yearly to the domestic economy. In addition, harnessing the country's proven reserves for domestic utilisation can also support 6.5 million full-time equivalent jobs annually.

## **FACTS: NIGERIA HAS 202 TRILLION CUBIC FEET (TCF) OF UNTAPPED PROVEN GAS RESERVES**

**THE ESTIMATED RECOVERABLE GAS IS 139.4 TCF.**

## POLICY FRAMEWORK AND LEGISLATION FOR NIGERIA'S FOCUS ON GAS

With the global shift towards cleaner, lower-carbon energy accelerated by the pandemic, Nigeria has promised new efforts to revolutionise its gas sector to help underpin economic development. Nigeria is the seventeenth largest emitter of greenhouse gases globally due to CO<sub>2</sub> and methane emissions – gas venting and gas flaring – from oil and gas operations. Nigeria aims to reduce greenhouse gas emissions by 20% by 2030 through anti-gas flaring regulations and to work closely with oil and gas companies.

As such, Nigeria's increased utilisation of its gas reserves is not without recognition of its international commitment to combat climate change. In November 2021, Nigeria enacted the Climate Change Act 2021 (the "CCA"). The key focus of the CCA is a framework for achieving low greenhouse gas emissions whilst promoting sustainable economic growth. The CCA reflects Nigeria's revised Climate Change Policy administered by the Department of Climate Change within the Department of Environment.



With President Buhari's "Decade of Gas" declaration, there has been notable legislative reform and the issuance of gas-centric policies to attract local and foreign investment in the gas sector. The Petroleum Industry Act 2021 (the "PIA") is also central to these reforms.

### The principal measures of the PIA include:

- New concessions recognising the exploitation of gas and not just oil
- The Midstream and Downstream Gas Infrastructure Fund: A fund designed to promote private sector investment in midstream/downstream gas projects
- The provision of licenses specific to midstream and downstream gas operations
- The introduction of a hydrocarbon tax which provides specific exemptions for certain associated gas (AG), non-associated gas (NAG), natural gas liquids (NGLs) and gas processing
- Natural gas and NGLs royalties will be based on production only
- Natural gas and NGLs based on production will be at a rate of 5% and 2.5% for natural gas produced and utilised in-country
- Expenses allowed for tax purposes: Deduction for the cost of gas reinjection wells
- Providing a framework for setting the floor price of gas for power, commercial and gas-based industries
- Revision of domestic gas prices allows for more competitive pricing that reflects current market conditions.

## INVESTING IN NIGERIA'S SUSTAINABLE FUTURE

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To achieve its climate goals, the International Energy Agency (IEA) has forecast that Nigeria will require \$445 billion of investment in cumulative energy supply through 2040, 80% of which will be needed for the oil and gas sector. At COP26, President Buhari urged international leaders to help fund renewable energy and gas projects in Africa as the country can continue to use gas until 2040 without diverting from the goals of the Paris Agreement.

Energy transition will continue to impact the ability of Nigeria and oil and gas companies to attract capital as banks and investors prioritise environmental, social and governance ("ESG") factors and move away from funding hydrocarbon projects. This is presenting significant challenges as Nigeria tries to balance the country's needs to continue developing its oil reserves to generate revenue while developing gas as the transition fuel.

To successfully raise the capital required to fully exploit gas as the transitional fuel and achieve Nigeria's long-term energy goals, the FGN, project sponsors and capital providers will need to work closely together to identify, allocate and mitigate the complex issues and risks that impact major gas projects. When reviewing the financing of gas projects, funding providers will require a bankable contractual framework and look at several other factors that will be key to the project securing funding.

## KEY CONSIDERATIONS

**CORPORATE  
STRUCTURING**

**BANKABILITY OF  
PROJECT  
DOCUMENTS**

**SPONSOR  
SUPPORT**

**OFFTAKE  
STRATEGY**

**SOURCES OF  
FUNDING**

## TECHNOLOGY INNOVATION IN GAS-BASED SOLUTIONS



**THE SECTOR IS LARGELY  
UNDERDEVELOPED AS  
PRODUCTION-TO-  
RESERVES IS  
APPROXIMATELY 1%**

The challenges and opportunities presented by the focus on gas are significant and require technical solutions to realise the economic and environmental benefits of Nigeria's gas. The development of gas-based solutions – CCUS, LPG, CNG, FLNG – will contribute to promoting gas-based industries and finding solutions to the country's chronic power sector deficit.

Gas demand increases significantly in all of the global energy scenarios modelled by the IEA in its World Energy Outlook 2021. By 2050, 50% of gas consumed will be used to produce low-carbon hydrogen, and 70% of gas use is in facilities equipped with carbon capture, utilisation and storage ("CCUS").

The IEA projects that CCUS technologies deployment will increase from ~40Mt CO<sub>2</sub> year capture in 2020 to ~1.6Gt CO<sub>2</sub>/year by 2030 and 7.6Gt CO<sub>2</sub> by 2050.

The FGN has recognised CCUS as a pivotal technology to support Nigeria's energy transition and attain its climate targets. This is because CCUS can underpin the long-term development and utilisation of gas and act as a catalyst to decarbonise the industrial sector and develop new gas uses, including low-carbon hydrogen production.

**BE PART OF DRIVING NIGERIA'S  
SUSTAINABLE POWER SUPPLY**

## THE SUCCESS OF THE "DECADE OF GAS" IN NIGERIA

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For Nigeria to progress and succeed in its energy transition strategy, it will be necessary to continue to develop the country's significant gas reserves and resources while progressing the introduction of renewable energy sources – particularly solar – at a local level, for example, through establishing micro-grids. The role of gas as the transition fuel is a reality in moving Nigeria from an oil-based economy to a diversified industrial economy that can meet the needs of its growing population and achieve the net-zero objectives outlined at COP26.

The "Decade of Gas" is already well progressed in terms of changes made in legislation and policies, major ongoing gas infrastructure projects and the level of funding that is being sourced from domestic and international sources of capital. This represents a significant opportunity to transform the country's economy and provides a realistic and achievable path to achieving Nigeria's energy transition.

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