ENERGY AND NATURAL RESOURCES REPORT

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PARTNER'S NOTE

Energy is pivotal to the socio-economic growth and development of any nation and as Nigeria continues to grapple with issues surrounding the extraction, exploitation, and beneficiation of resources in its energy and natural resources sectors in the era of sustainable development and energy transition, certain considerations come into play.

This maiden edition of Tope Adebayo LP's Energy and Natural Resources Report 2023 seeks to examine the current state of play in the Oil and Gas, Power, and Mining sectors of the Nigerian economy as it relates majorly to energy access, efficiency, sustainability and security. The transition to clean energy for the purpose of achieving Nigeria's energy security goals in the power sector does, as of necessity involve the simultaneous, strategic and deliberate development of its oil and gas, power and mining sectors.

This Report considers amongst others, Nigeria's Decade of Gas agenda and the issues surrounding it. Where are we almost three years down the line? Are we likely to achieve significant progress by the end of the earmarked decade or are we set to continue on the same trajectory of failed projections and deliverables as is our custom?

What role does the decade of gas play in our energy transition plan and how does the power sector plug into this plan? With the repeal of the Electric Power Sector Reform Act 2005 and the recent enactment of the Electricity Act 2023 which seeks to amongst others, provide for a holistic integrated resource plan and policy that recognizes all sources for the generation, transmission, and distribution of electricity, including the integration of renewable energy to Nigeria's energy mix, what improved role hopefully will renewable energy sources play in our energy security agenda and how are State governments poised to take advantage of the provisions of the Act which now vests in them the power to regulate their individual electricity markets in order to achieve energy security within their jurisdictions? Where is our mining industry headed and what are we doing to develop that industry? Will we be proactive in aligning our mining policies and development agenda with the development of future minerals which are minerals key to advanced energy future (which interestingly dovetails into the energy transition agenda)? How do we tackle insecurity issues plaguing our mining industry in a manner that allows us to attain sustainable exploitation and beneficiation of that sector? Are we likely to attract sufficient funding for the attainment of these goals?

These are questions we expect to stimulate your mind as you read this Report which comprises of three chapters on Power, Oil and Gas and Mining respectively. Your guess is as good as ours on what 2024 portends but we hope to see significant improvements in the overall energy transition agenda as Nigeria consolidates on current gains and pursues the implementation of more recent policies.

From the Energy Desk

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CHAPTER 2

THE NIGERIAN GAS INDUSTRY AND INVESTMENTS: OUTLOOK FOR ENERGY TRANSITION

A REPORT ON THE NIGERIAN GAS INDUSTRY AND INVESTMENT PROJECTIONS FOR 2024 AND BEYOND

As we stride into the new year, it is important to look back on the opportunities, challenges, and transformations witnessed so far within the oil & gas industry. This retrospective analysis serves as a compass to guide us in shaping insightful industry projections for the new year. Amidst global shifts in energy paradigms and local aspirations for sustainable development, the Nigerian oil and gas sector holds significant potential, with opportunities arising from policy reforms and technological advancements. Each transformative shift not only influences the nation's economic trajectory but also impacts its global standing. This Report focuses on Nigeria's energy transition efforts as it relates to the oil and gas industry with particular emphasis on the nation's gas development and utilisation journey. We examine historical gas policies, and the promised delivery of significant gas projects by the announcement of the Decade of Gas; projects which are meant to transform the economic landscape and energy security efforts of not only Nigeria but other African countries. We also examine international events such as the influence of the Baku-Tbilisi-Ceyhan (BTC) Pipeline on energy security in Europe, and the potential effects of the Nigeria-Morocco pipeline on both energy security and economic integration and collaboration within the African region.

Activities in the oil and gas industry have been reported to be one of the main culprits of the adverse effects of climate change experienced

globally. In its report[1], the International Energy Agency (IEA) stated that the energy sector is presently the source of around three-quarters of greenhouse gas (GHG) emissions and holds the key to averting the worst effects of climate change. For this reason, leaders around the globe converged in Paris in 2015 to sign an International Energy Treaty, the Paris Agreement grounded in the 1992 United Nations Framework Convention on Climate Change (UNFCCC). Here, the United Nations adopted 17 Sustainable Development Goals (SDGs) to address important issues affecting the world, ranging from ending poverty, and hunger, and safeguarding the environment to ensuring prosperity for everyone.

Global leaders pledged to limit the global rise in temperature to below 2 degrees Celsius above pre-industrial levels to avoid the more serious effects of climate change like floods, drought, sea-level rises etc, with a specific goal of reducing greenhouse gas (GHG) emissions to 1.5°C by 2030. The 7th goal of the SDGs agreed upon by the UN as part of its Agenda for 2030, was 'affordable and clean energy for all'. This marked a significant step forward in the progressive realisation of a cleaner environment for all. The global pathway to net-zero emissions by 2030 or by 2050 as envisaged by the UNFCCC and the IEA respectively, requires all governments to significantly strengthen and then successfully implement their energy and climate policies. One of the proposals made by the Paris Agreement as one of the action plans for net-zero emissions is that countries stop investing in fossil fuels as they transition to the use of Renewable Energy (RE), which is regarded as a cleaner and preferable source of energy.

Although there has been a global push for transitioning from fossil fuels to RE sources, the International Energy Agency (IEA) outlined a roadmap for this shift. The IEA's global pathway[2] for energy transition indicates that specific fossil fuels, such as natural gas, could serve as a transitional bridge for economies facing challenges in readily adopting renewable sources. At COP26, Nigeria made a commitment to carbon neutrality by 2060. Nigeria's Energy Transition Plan (ETP)[3] was unveiled shortly after– highlighting the scale of efforts required to achieve the 2060 net zero target whilst also meeting the nation's energy needs. The Nigeria ETP sets out a timeline and framework for the attainment of emissions reduction across 5 key sectors: Power, Cooking, Oil and Gas, Transport and Industry. Playing a leadership role in Africa by promoting a fair, inclusive and equitable energy transition in Africa, Nigeria chose gas as its transitionary fuel, and this is at the core of Nigeria's ETP. Gas is set to play a critical role as a transition fuel in Nigeria's net-zero pathway particularly in the power and cooking sectors.

[1]International Energy Agency. (2021, May). Net Zero by 2050: A Roadmap for the Global Energy Sector. IEA, Paris. https://www.iea.org/reports/net-zero-by-2050 accessed 14th December 2023.
[2]International Energy Agency. (2021, May 18). Pathway to Critical and Formidable goal of net-zero Emissions by 2050 is Narrow but Brings Huge Benefits According to IEA Special Report. https://www.iea.org/news/pathway-to-critical-and-formidable-goal-of-net-zero-emissions-by-2050-is-narrow-but-brings-huge-benefits accessed 14th December 2023.
[3]https://energytransition.gov.ng/ accessed 14th December 2023.

THE EVOLUTION OF NIGERIA'S GAS UTILIZATION POLICIES

To pave the way for Nigeria's gas future, it is crucial to understand our trajectory so far.

Nigeria is largely a natural gas province with a considerable amount of crude oil. Nigeria's natural gas resources are about three times its crude oil resources. This is why Nigeria has been described as a country with tiny drops of oil and a lot of gas. Nigeria boasts an extensive reserve of over 209 trillion cubic feet (tcf) standing in 9th position globally in terms of proven reserves; and holds the 6th spot among the top global natural gas exporting nations as of 2023.[4]

Since the discovery of oil in commercial volumes at Oloibiri, Delta State in 1956, the associated gas produced alongside crude oil has been consistently flared, posing significant environmental hazards. Notably, Nigeria, once ranked as the world's second-highest gas-flaring nation, has since shifted to fifth place and currently holds the seventh position. Despite Nigeria's notable standing in the global crude oil industry, the exploration and production of natural gas in the country have experienced limited development. Throughout its historical trajectory, all gas discoveries in Nigeria have originated from activities related to oil exploration and production (E&P). The sluggish growth of the Nigerian gas sector can be attributed to several factors, including the absence of comprehensive laws and policies governing the sector. Additionally, the lack of a viable domestic market has not encouraged substantial capital investments required for the exploration, production, and development

[4] https://businessday.ng/energy/oilandgas/article/what-nigeria-can-learn-from-russias-gas-strategy/ accessed 12th January 2024.

of gas. We examine below, the progression of Nigeria's gas laws and policies, investigating their implications for both the Nigerian petroleum industry and the overarching goal of energy security.

The Evolution Of Nigeria's Domestic Gas Industry: The Demand-constrained Era (1969-1999)

The inception of the Petroleum Act in 1969 marked the establishment of a comprehensive legal framework governing Nigeria's petroleum industry. However, this legislation primarily focused on regulating crude oil exploitation, lacking explicit recognition of gas as an independent commodity during that period. To provide flexibility, the Minister of Petroleum was granted authority under this Act to make adjustments concerning licenses, leases, and pollution prevention.

As a responsive measure, the Petroleum Act (Drilling and Production) Regulations of 1969 was introduced, mandating licensees and lessees to submit feasibility studies for gas utilization within five years of operation. However, these regulations lacked precise sanctions for non-compliance, creating loopholes that oil and gas companies exploited. Moreover, there were no legal obligations for gas flare reduction before or after the submission of feasibility studies for gas utilization.

Subsequently, the Petroleum Amendment of 1973 allowed the Federal Government of Nigeria (FGN) to take and use associated gas without royalty payments. Despite this amendment, the lack of essential infrastructure for utilizing associated gas hindered effective control of gas flaring.[5]

Recognizing the immense potential held within its gas reserves, the Nigerian Government initially enacted the Associated Gas Re-injection Act in 1979. Subsequently, in 1984, the legislation saw the introduction of the Associated Gas Re-injection (Continued Flaring of Gas) Regulations and the Associated Gas Re-injection (Amendment) Act. The primary aim behind these statutes was to compel oil companies to conserve the country's substantial gas reserves and develop strategies for gas processing suitable for industrial use.

This legislative action stemmed from the fact that oil companies found it more cost-effective to flare gas rather than invest in costly gas re-injection schemes. The amended Associated Gas Re-injection Act of 1979 mandated all oil companies to present plans and projects for utilizing and reinjecting associated gas by October 1, 1980. Furthermore, the law prohibited gas flaring after 1984 and imposed penalties, including the forfeiture of concessions granted for specific fields.

[5]Orji, Uchenna, Jerome (2014). Moving From Gas Flaring to Gas Conservation and Utilization in Nigeria: A Review of the Legal and Policy Regime. OPEC Energy Review, 38 (2), 149-183.

THE EVOLUTION OF NIGERIA'S GAS UTILIZATION POLICIES

However, the Associated Gas Re-injection Act (1979) faltered due to the absence of infrastructure for gas utilization and the government's inability to contribute its agreed share to fund gas re-injection facilities based on existing joint venture agreements with oil-producing companies.

In 1991, the Associated Gas Framework Agreement (AGFA) was introduced with the specific goal of incentivizing the advancement of gas utilization projects among oil and gas operators. AGFA aimed to provide fiscal benefits to encourage such initiatives, allowing International Oil Companies (IOCs) to offset their gas project capital costs using revenues from oil operations.

Despite multiple reviews and increases in fines for gas flaring between 1990 and 1998, the penalties remained notably low in comparison to alternative costs. This period, preceding 1999, was aptly labelled the 'demand-constrained era' in the evolution of Nigeria's domestic gas industry. This classification arose due to rampant gas flaring, stemming partly from an unfavourable investment climate and the absence of a customized, well-articulated legal framework tailored to facilitate comprehensive gas development.

Curbing Gas Flaring and Advancing Industrial Gas Utilization: The National Energy Policy and the Nigerian Gas Master Plan.

The National Energy Policy (NEP) was introduced in 2003 due to the evident failure of previous legislations on gas flaring. The main objectives of this Policy included; eliminating gas flaring by 2008, expanding

the utilization of natural gas as an industrial feedstock for petrochemical, pharmaceutical and fertilizer plants, etc, using gas to diversify the foreign exchange earnings base of the nation, and accelerating the process of technology acquisition and diffusion in the gas industry, as well as encouraging indigenous entrepreneurial capacity in the gas industry including the development of end-user devices. Like the previous policies, the NEP recognized that the continued flaring of natural gas had resulted in a substantial waste of energy resources, in addition to atmospheric pollution, therefore, it became imperative to take effective measures to curtail gas flaring, so that the ending of gas flaring does not exceed the deadline of 2008.

The strategies adopted under the NEP included imposing appropriate and effective penalties to discourage gas flaring, encouraging the establishment of the necessary infrastructure for the effective gathering, transmission and distribution of gas nationwide, expanding and promoting gas-related research and development establishments in the country, and ensuring that the price of natural gas was cost-reflective while giving due attention to the effect on local consumption, amongst others. While some strategies enunciated in the Policy were partially achieved within the period leading to 2008, the deadline set for the prevention of gas flaring was not achieved.

The Nigerian Government introduced the Nigeria Gas-to-Power policy which was essentially contained in the Nigerian Gas Master Plan (NGMP) 2008, and it signalled the government's intention to deploy adequate gas resources to achieve a multiple-fold increase in power generation in the shortest possible time.

The NGMP was a guide for the commercial exploitation and management of Nigeria's gas resources to grow the Nigerian economy by pursuing three key strategies namely:

To stimulate the multiplier effect of gas in the domestic economy following the unprecedented growth in demand for energy in the domestic market;

to position Nigeria competitively in high-value export markets;

and to guarantee long-term energy security in Nigeria.

The Infrastructure Blueprint was the heart of the NGMP. It mapped out the planned infrastructure needed, including connecting the gas networks in the Western and Eastern parts of the country, and building new transport pipelines from the South to Ajaokuta Steel, on to Abuja and then to the Northern-most reaches of the country.

However, despite these policy thrusts and the significant increase in gas utilization, the gas market growth over the past years under the Gas Master Plan had still been very slow, at 3.1% a year, only just keeping up with national population growth of 2.8% according to the World Bank.[6] In other words, gas supply per head had barely changed since the introduction of the NGMP and had failed to meet economic growth needs.

Despite its substantial gas resources, Nigeria was grappling with a severe energy crisis, prompting the necessity for a revamped gas policy. This new policy aimed to be more effective, tailored to navigate the increasingly challenging global business landscape, and focused on instigating institutional reforms and regulatory adjustments crucial for attracting investments into the gas sector.

Significantly, recognizing the limitations of the 2008 National Gas Master Plan (NGMP) in attracting the requisite private sector investments for essential infrastructure and for fostering a mature domestic gas market by the targeted 2015, the Federal Executive Council (FEC) approved the National Gas Policy (NGP) in June 2017. The urgency surrounding the introduction of the NGP was amplified due to the clear absence of a coherent and updated gas policy, identified as a major factor contributing to the repeated failure of the Petroleum Industry Bill (PIB) since its initial introduction to the National Assembly in 2008.

An Assessment of the National Gas Policy

The NGP[7] set out quite clearly that the government was making Nigeria a 'gas-play' and not an 'oil-play'. The NGP contained the following key aspirations:

[6] https://documents1.worldbank.org/curated/es/466291468780949357/pdf/ESM27910paper.pdf accessed 15th December 2023.
[7] https://www.aelex.com/a-quick-overview-of-the-new-national-gas-policy/ accessed 15th December 2023.

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1. Moving the economy from oil to gas;
2. Diversifying the gas resource base within Nigeria, to ensure the security of supply;
3. Extending gas penetration in the domestic market to facilitate the growth of all sectors;
4. Ending gas flaring and addressing environmental issues;
5. Providing an enabling environment for increased private sector participation in the gas sector;
6. Providing an attractive climate for investment;
7. Identifying gas as a stand –alone commodity;
8. Establishing & triggering a midstream for the gas sector; and
9. Enabling low-cost gas for domestic markets.

THE EVOLUTION OF NIGERIA'S GAS UTILIZATION POLICIES

In line with the policy aspiration of the NGP, the Federal Government through the Federal Executive Council approved the Nigerian Gas Flare Commercialization Programme (NGFCP) in 2016 and the Nigerian Gas Expansion Program (NGEP) in 2018. The objective of the NGFCP is to eliminate gas flaring through technically and commercially sustainable gas utilization projects developed by competent third-party investors who will be invited to participate in a competitive and transparent bid process. The commercialization approach is a unique and historic opportunity to attract major investment in economically viable gas flare capture projects whilst permanently addressing a 60-year environmental problem in Nigeria.

Under the NGFCP, the associated gas captured will be harnessed and used for power generation, in fertilizer, methanol and petrochemical plants, to produce liquefied petroleum gas (LPG) and liquefied natural gas (LNG)). This move was expedient because Nigeria is home to more than 16,000 flare sites globally. The 145 - 150 BCM of gas flared per year globally, is enough to produce 750 billion kWh of power, which is more than the entire power consumption on the African continent annually. The NFGCP was designed as an important 'climate change action plan', consistent with Nigeria's commitments to the UNFCCC.[8]

To fortify the National Gas Flare Commercialization Program (NGFCP), the Federal Government of Nigeria sanctioned the Flare Gas (Prevention of Waste and Pollution) Regulations in 2018. These regulations were formulated by Sections 9 and 11 of the Petroleum Act of 1969. Concurrently, in 2018, the Federal Government also launched the National Gas Expansion Programme (NGEP). This initiative was specifically crafted to establish the framework and policy guidance necessary for broadening gas supply and usage across various domains, including power generation, gas-oriented industries, and emerging specialized gas sectors. Additionally, the former Head of State, President Muhammadu Buhari outlined further strategies, including the Ajaokuta-Abuja-Kano (AKK) gas pipeline project, aimed at supporting substantial domestic gas utilization, targeting a capacity of five billion cubic feet per day in the near term. This endeavour aligns with plans to achieve a significant 5-gigawatt power generation capacity.[9]

Aligned with Nigeria's dedication to the 17 Sustainable Development Goals (SDGs) outlined in the 2015 Paris Agreement, aimed at curbing global CO2 emissions, the Federal Government of Nigeria designated 2021-2030 as the 'Decade of Gas Development in Nigeria.' This declaration preceded the enactment of the Petroleum Industry Act in 2021. The enactment of the PIA in August 2021 was a breakthrough for the Petroleum industry, as gas is now treated for the first time as a 'stand-alone' commodity. According to the 2023 World Energy Outlook, Nigeria's gas consumption rose from 14% in 2010 to 32% in 2021 but declined by 1% in 2022..

[8]Department of Petroleum Resources. (2018). Nigerian Gas Flare Commercialization Programme: Harnessing Nigeria's Flare Gas for Sustainable Wealth &Value Creation. https://ngfcp.dpr.gov.ng/ accessed December 15th 2023.

[9]International Energy Agency. (2022, April 5). Framework for the Implementation of Intervention Facility for the National Gas Expansion Programme. https://www.iea.org/policies/13420-framework-for-the-implementation-of-intervention-facility-for-the-national-gas-expansion-programme accessed 15th December 2023.

As previously mentioned, Nigeria formally ratified the Paris Agreement in May 2017, subsequently outlining its Nationally Determined Contributions (NDCs), which were updated in 2021. Within these commitments, Nigeria vowed to achieve a 20% reduction in emissions below Business as Usual (BUA) levels by 2030. Additionally, a conditional commitment of 47% reduction was made, contingent on receiving financial aid, technological transfers, and capacity building from more developed and willing international partners. This updated NDC stands as a robust and equitable contribution aligning with the Paris Agreement's objectives.

Notably, Nigeria's energy sector emerged as the primary source of greenhouse gas (GHG) emissions, recording 209 million metric tons of CO2 equivalent in 2018, constituting 60% of the nation's total emissions. Among these, fugitive emissions stemming from the oil and gas sector were identified as the most significant contributor, accounting for 36% of the total energy sector emissions in 2018. Specific targets within the NDC for the oil and gas sector include achieving zero gas flaring by 2030 and a 60% reduction in fugitive methane emissions by 2031.[10]

[10] https://climatechange.gov.ng/wp-content/uploads/2021/08/NDC_File-Amended-_11222.pdf accessed on 15th December 2023.

The FGN has come up with various initiatives in recent years to drive gas utilization and ultimately achieve its net-zero goals. These is discussed below.

Three Years On: Nigeria's Decade of Gas

On March 29, 2021, the FGN launched its 'Decade of Gas' policy. This initiative is aimed at harnessing the country's vast gas reserves to drive economic growth and development. Under the plan, Nigeria aims to collaborate with other stakeholders to ramp up gas use in the decade from 2020-2030. The 'Decade of Gas' initiative is built on the premise that gas is a key driver of economic growth and development. Nigeria has nearly 209 trillion cubic feet of natural gas reserve, which ranks as the ninth largest in the world, but harnesses only about 8 billion standard cubic feet per day (bscf) of gas, and most of it is sent to the export market.[11]

The $20 billion dollar initiative is centred on four key pillars: increasing domestic gas utilisation, expanding gas infrastructure, growing gas exports, and attracting foreign direct investment into the gas sector. To achieve these goals, the government outlined several policy measures, including the implementation of a new gas pricing regime to encourage investment in the sector, the development of new gas infrastructure, and the promotion of gas-based industries such as fertiliser production, power generation, and petrochemicals.

According to the plan, between 2020 and 2030, gas demand is expected to grow at a compound annual growth rate of 16.6 percent annually, driven by major projects such as NLNG Train 7 in the base case, Nigeria/Morocco pipeline, NLNG Train 8, and AKK pipeline-related projects in the high case. Other projects from which the Decade of Gas was meant to be achieved include Brass Fertiliser and all under-construction power plants. Gas supply for the Decade of Gas would derive from specific onshore non-associated gas (NAG) and shallow water associated gas/NAG development projects.

These were meant to spur the development of other critical projects like the Obiafu-Obrikom-Oben Gas Pipeline designed to transport gas from the Obiafu-Obrikom gas plant in Rivers State to the Oben gas plant in Edo State, and the Escravos Lagos Pipeline System Phase II, an expansion project for the existing Escravos Lagos Pipeline System that transports gas from the western Niger Delta to Lagos and other cities in the South-West. Projects already slated for development like the Assa North-Ohaji South Gas Development Project, which will see the development of gas fields in the Assa North and Ohaji South areas of

[11] https://businessday.ng/energy/oilandgas/article/analysis-three-years-on-nigerias-decade-of-gas-remains-just-a-slogan/ accessed 15th December 2023.

Imo State and Central Processing Facilities (CPF) in Oil Mining Leases (OMLs) 58, 61, 62, 63, which will develop CPFs in four OMLs in the Niger Delta to help process associated gas produced along with crude oil.

It will revive the Nigerian Gas Flare Commercialisation Programme, an initiative aimed at eliminating gas flaring in Nigeria by monetising flared gas through various projects, such as gas-to-power, gas-to-industry, and gas-to-people. It would drive compressed natural gas (CNG) and mini-liquefied natural gas projects across the country. According to the plan, by the end of 2030, natural gas production is projected to increase from 8.0bcfd in 2020 to 12.2bcfd. The bulk of this production, about 58%, is expected to come from NAG reserves, driven by onshore developments such as ANOH, Ubeta, and offshore developments to meet demand from Train 7. For this to happen, infrastructure projects including pipelines must be delivered on time, the country would transit to market-based gas pricing, settle historical debt to power plants, and incentivise fiscal and commercial terms for offshore NAG developments.

Some critical midstream and downstream infrastructure developments include the expansion of the existing transmission lines as they are insufficient to meet projected 2030 demand. $9 billion investments in priority pipeline infrastructure are required with about $1.5 billion to be funded by the government.[12] Private sector investment would be unlocked by a transition to market-led prices (gas sales, transmission costs to guarantee private investors on investment). The network code would be expanded to govern private pipelines. The plan also involves

[12] https://businessday.ng/energy/oilandgas/article/analysis-three-years-on-nigerias-decade-of-gas-remains-just-a-slogan/ accessed 15th December 2023.

creating gas processing facilities which will require about $6 billion investment in new priority gas processing infrastructure.[13] A tolling framework for third-party access to the processing facility is required to enable commercial agreements. Then onshore processing facilities including regasification terminals would be built for onshore gas destined for the domestic market. It also called for investments in distribution, pipeline, and liquefied petroleum gas (LPG) facilities.

To meet the potential short of 0.95bcfd distribution capacity compared with high case supply by 2030, the plan requires a $1.5 billion investment estimated for distribution – $0.9 billion estimated for LPG, $2.6 billion estimated for CNG, through long-term loans at the single digit interest rate for up to 20 years. Direct government intervention funds would be targeted at historically underserved locations while incentivising private sector investments in major demand centres. The guiding economic principles for the Decade of Gas begin with cost-reflective tariffs across all segments of the gas value chain to enable participants to earn a normal rate of return while stimulating sector growth. Next is a transparent and market-led gas pricing framework and balancing the needs of vulnerable end users.

The comprehensive plan identified three key interventions to help secure Nigeria's Decade of Gas. These include improving investor confidence by eliminating historical debt to gas producers from the power sector estimated at $900 million and straightening mechanisms to improve power sector liquidity. Another measure is to guarantee investors attractive returns through cost-reflective pricing across the gas value chains and enable investments by supporting key infrastructure by government contributing equity or debt to key gas infrastructure projects as well as guarantees to private investors.

Benefits of the Decade of Gas

The delivery of the key Decade of Gas projects could supply an additional 300mmscf/d to the domestic power sector by 2026. This will increase available on-grid electricity distribution by 30%. Eliminating gas constraints to available capacity could lead to a cumulative impact on GDP over the power sector by $4.7 billion, the commercial sector by $5 billion, gas-based industries by $4.4 billion, and growth in exports by $5.3 billion. Unlocking the 3.1bcf/d, which is the plan's goal, would attract about $14 billion in foreign direct investments, create over 2 million new jobs across the gas value chains and add $12 billion to the federal government's revenue from gas royalties and taxes.[14]

[13] Ibid.

[14] Ibid.

CRITICAL INFRASTRUCTURE TO BE DELIVERED UNDER THE DECADE OF GAS

We will consider the critical infrastructure and initiatives slated to drive the decade of gas and their progress rates so far.

NLNG Train 7

Sometime in June 2021, the FGN flagged off the construction of Nigeria LNG Limited's (NLNG) Train 7 project during the groundbreaking ceremony at the Company's plant site on Bonny Island, Rivers State with its partners & stakeholders present: NNPC (with 49 % stake) on behalf of the Federal Government, Shell Petroleum Development Company (25.6% stake), Total (15% stake) and ENI (10.4 % stake). The project has reached 52 % completion and currently engages 8,300 Nigerians of diverse skill sets. According to the NNPC,[15] the NLNG Train 7 project is aimed at increasing the NLNG's production capacity by the expansion of the existing Trains 1- 6 and associated infrastructure at an estimated cost of $4.3bn. The Train 7 project is regarded as the biggest project that will unlock Nigeria's gas potential.[16] The Train 7 project is expected to ramp up NLNG's production capacity from 22 million tons per annum to 30 million tons per annum. NLNG's core of operations are liquefaction, transmission, transportation, marketing and sales, and it has delivered over 5,770 LNG cargoes and over 500,000 tons of liquefied petroleum gas (LPG) produced and sold both locally and internationally.

[15] https://jee.africa/wp-content/uploads/2019/04/THE-NLNG-TRAIN-7-PROJECT.pdf accessed 15th December 2023.
[16] https://jee.africa/wp-content/uploads/2019/04/THE-NLNG-TRAIN-7-PROJECT.pdf accessed 15th December 2023.

CRITICAL INFRASTRUCTURE TO BE DELIVERED UNDER THE DECADE OF GAS

LOCAL CONTENT BENEFITS OF THE LNLNG TRAIN 7 PROJECT

Some of the many benefits of the Train 7 NLNG project from a local content perspective include:

- giving first consideration to indigenous goods, services and human resources;
- local procurement of low and high-voltage cables;
- civil engineering works on roads, piling and jetties;
- fabrication of the condensate stabilisation unit, pipe-racks, flare system, etc;
- provision of logistics services, equipment leasing, insurance, hotels, office supplies and consumables;
- aviation services, haulage services.

CHALLENGES FACING THE ONGOING NLNG TRAIN 7 PROJECT

- Inadequate gas supply, resulting in underproduction by trains 1-6, producing below 50% of its total installed capacity.
- Recurrent vandalization of the gas supply pipeline.
- Facility failure and low production from aging wells resulting in serious supply disruption.
- Unwillingness of IOCs to activate deepwater gas projects that would provide feedgas for the project.

THE WAY FORWARD FOR NLNG TRAIN 7 PROJECT

- NLNG to partner with critical security agencies to curtail vandalism on the pipelines
- NLNG to work with its JV partners (NAOC, SPDC, Total Energies) to increase production
- NLNG to procure gas from international & indigenous gas producers.
- Exploring NCDMB's E-market place to increase transparency and remove human interferences from business processes and move things electronically to achieve better results.
- NLNG to secure the approval of third-party gas injectors and the sanctioning of new deep-water gas projects to support its Train 7 project.[17]

[17] https://www.premiumtimesng.com/promoted/640648-train-7-project-hits-52-employs-8300-persons.html accessed on 15th December 2023.

CRITICAL INFRASTRUCTURE TO BE DELIVERED UNDER THE DECADE OF GAS

The Nigeria-Morocco Pipeline

The Nigeria-Morocco Gas Pipeline was proposed in a December 2016 agreement between the Nigerian National Petroleum Corporation (NNPC) and the Moroccan Office National des Hydrocarbures et des Mines (National Board of Hydrocarbons and Mines) (ONHYM). The pipeline would connect Nigerian gas to every coastal country in West Africa (Benin, Togo, Ghana, Cote d'Ivoire, Liberia, Sierra Leone, Guinea, Guinea-Bissau, Gambia, Senegal, and Mauritania), ending at Tangiers, Morocco, and Cádiz, Spain. It would be an extension of the existing West African Gas Pipeline, which already connects Nigeria with Benin, Togo, and Ghana.

In August 2017, NNPC and ONHYM began a feasibility study for the pipeline. The pipeline is estimated to cost US$25 billion and would be completed in stages over 25 years. Morocco is reportedly pushing Nigeria to pursue this pipeline rather than the Trans-Saharan Gas Pipeline, arguing that the latter would have to pass through a region with significant militant activity. NNPC and ONHYM completed the feasibility study for the construction of the pipeline in January of 2019. In the same month, the two countries contracted with Penspen to conduct the first phase of front-end engineering & design. In August 2019, NNPC and ONHYM presented the pipeline proposal at a special meeting of the Economic Community of West African States (ECOWAS); the Director of Energy and Mining of ECOWAS spoke positively of the project. However, according to analysts, the NMGP

faces a myriad of challenges and is unlikely to materialize in the short or medium term.[18]

In June 2021, there were reports that the pipeline construction had begun, and in May 2022 it was reported that the project was in the initial technical design stage. Upon completion, the gas pipeline will be the world's longest offshore pipeline, and second longest pipeline overall. Based on the 25-year estimate given in 2017, construction will be completed by 2046. In June 2023 it was reported that Côte d'Ivoire, Liberia, Guinea, and Benin had signed agreements with Morocco and Nigeria to participate in the Nigeria-Morocco gas pipeline project. The signing ceremony took place at the Economic Community of West African States (ECOWAS) headquarters in Lagos, Nigeria, alongside the steering committee meeting for the Nigeria-Morocco gas pipeline project, which was attended by representatives from ECOWAS and all the relevant countries. Following this development, a total of ten states are now involved in the project, building upon the agreements previously signed with ECOWAS, Mauritania, Senegal, Gambia, Guinea-Bissau, Sierra Leone, and Ghana.[19] The NMGP is significant as it will help strengthen the region's electricity production/generation capacity, accelerate access to energy for all, improve the living conditions of the populations, integrate the economies of the sub-region, mitigate desertification, stimulate industrial and agricultural development, and contribute to Africa's energy transition plan by diversifying Africa's export routes and eliminate gas flaring. The project has also raised the possibility of a new energy supply route for West Africa and Europe following the Russia-Ukraine war.

The Minister for Petroleum Resources (gas) has scheduled the Nigeria-Morocco pipeline construction for 2024.[20] The Minister cited the pipeline which will span across 5,600 kilometres as a critical infrastructure to ensure the continued supply of gas in Africa. The said pipeline begins at Brass Island in Nigeria and extends to the Northern region of Morocco where it will connect with the existing Maghreb European pipeline originating from Algeria and extending to Spain. This pipeline will cut across 13 African countries: Nigeria, Benin, Togo, Ghana, Cote 'd'Ivoire, Liberia, Sierra Leone, Guinea, Guinea-Bissau, the Gambia, Senegal, Mauritania, and Morocco. The NNPCL highlighted the multiple advantages of the pipeline including its potential to boost regional economic integration, combat desertification and notably reduce carbon emissions.

However, there are concerns regarding the feasibility of the pipeline. Experts believe the project has been overly delayed due to prolonged talks since 2016 when the initial Memorandum of Understanding (MOU) was signed between Nigeria and Morocco. Moreover, they highlight the necessity of a comprehensive multilateral treaty to effectively execute this substantial cross-border undertaking. Concerns raised include the potential hurdles posed by ongoing conflicts in the Sahel region, particularly in nations like

[18] https://www.gem.wiki/Nigeria-Morocco_Gas_Pipeline#:~:text=The%20pipeline%20would%20connect%20Nigerian,Morocco%2C%20and%20C%C3%A1diz%2C%20Spain. Accessed on 15th December 2023.
[19] Ibid.
[20] Ekpo schedules Nigeria-Morocco gas pipeline construction for 2024 - Nairametrics accessed 14th December 2023.

Burkina Faso, Togo, and Niger, where the pipeline is slated to traverse, potentially impeding the successful realization of the project. An alternative strategy has been proposed for Nigeria and Morocco to prioritize investments in LNG plants, regasification facilities within Moroccan ports, and LNG vessel carriers instead of pursuing the pipeline. The proposed alternative is seen as a better strategy which promises increased flexibility, wider market access, and a greater potential for expansive trade in liquid fuels compared to a pipeline confined to specific routes.

Analysis of the Nigeria-Morocco Pipeline (NMGP): Case Study of the Baku-Tbilisi-Ceyman (BTC) Pipeline

Apprehensions regarding the viability of the NMGP pipeline hold merit, given its stalled construction since 2016 and the conflicts looming along its proposed routes. Nevertheless, the substantial economic and enduring advantages of the project in our view, surpass the anticipated drawbacks. By employing meticulous planning and strategic approaches, expediting the delivery of the NMGP within an exceptional timeframe is plausible despite these concerns. This scenario draws parallels to the BTC pipeline, which stands as the second-longest pipeline in the history of the former Soviet Union.

The BTC pipeline is a 1,768 kilometres long crude oil pipeline connecting Baku, the capital of Azerbaijan and Ceyman, a port of the South-Eastern Mediterranean Coast of Turkey, via Tbilisi, the Capital of Georgia. The BTC was launched in 2002 and completed in 2005. In its first year of operation, it supplied 10 million barrels of oil flowing from Baku to Ceyman. It has transported 1.2 million barrels of oil per day to Azerbaijan, Georgia and Turkey since 2009 to date. It has created 10,000 short-term jobs and 1000 long-term jobs across the period of its existence. On 11 August 2014, BTC celebrated the loading of 2 billion barrels of oil at the Ceyhan terminal in Turkey. On 12 December 2021, BTC reached a significant milestone by achieving 500 million tonnes of oil export in total from the Sangachal terminal near Baku across Azerbaijan, Georgia and Turkey to Ceyhan. In the first half of 2023, 114 million barrels (more than 15 million tonnes) of BTC-exported crude oil was lifted at Ceyhan and loaded on 158 tankers.[21]

The BTC pipeline diversifies the global oil supply and insures against a failure of supply in other parts of the world. The pipeline contributes heavily to the GDP of its host countries. In the first half of 2007, a year after the pipeline was launched, the GDP of Azerbaijan, the main export route of the oil hit a record increase of 35%. The BTC not only constitutes an important leg of the East-West energy corridor, gaining Turkey greater geopolitical importance and supporting Georgia's independence from Russian influence, but it is also an important constituent element of Europe's energy security.

[21] https://www.bp.com/en_az/azerbaijan/home/who-we-are/operationsprojects/pipelines/btc.html accessed 15th December 2023.

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However, apprehensions arose regarding the pipeline's security due to its diversion away from Armenia, entangled in an unresolved conflict with Azerbaijan over Nagorno-Karabakh's status. The pipeline traverses through Georgia, where two separatist conflicts linger, and skirts the periphery of Turkey's Kurdish region, historically marked by prolonged conflicts with Kurdish separatists. To safeguard the BTC pipeline against potential attacks, Georgia established a specialized battalion for protection, accompanied by US surveillance via Unmanned Aerial Vehicles (UAVs). Furthermore, a significant portion of the pipeline is buried underground, heightening the difficulty of mounting an assault.

The extensive and lasting economic as well as geopolitical advantages associated with the BTC pipeline far surpassed the security concerns raised, prompting project advocates to proceed with construction and implement protective measures. Similarly, the NMGP holds immense promise for the African continent. Beyond supplying gas to Europe and Morocco, its potential to satisfy the energy demands of approximately 400 million individuals across 11 nations is staggering. This initiative stands poised not only to bolster Africa's socioeconomic progress but also to serve as a robust source of employment opportunities and attract investments to the region. Hence, we firmly believe that a well-established multilateral treaty mechanism can successfully facilitate the delivery of the NMGP, akin to the success of the West African Gas Pipeline (WAGP) spanning the Republic of Benin, Ghana, Nigeria, and Togo.

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The Ajaokuta-Kaduna-Kano Pipeline (AKK) Project

The AKK project flagged off in 2020[22] and was slated for completion in the first quarter of 2023. It has however experienced some delay because of the difficulty in passing it across the river crossing areas. The pipeline's route spans from Ajaokuta to Kano, crossing through Kaduna. It has the primary objective of supplying gas to Northern Nigeria while catalysing gas development in the South. This initiative aims to rejuvenate struggling industries, establish a reliable power supply, ensure energy stability, and stimulate Foreign Direct Investment (FDI). Notably, the Nigerian National Petroleum Company Limited (NNPCL) has revised the completion deadline for the AKK pipeline to August 2024. Upon its conclusion, the pipeline is expected to generate 3.6 gigawatts of power and provide crucial support to gas-based industries located along its path.

The Obiafu-Obrikom-Oben (OB3) Gas Pipeline[23]

The 127 km-long, upcoming OB3 gas pipeline project is an onshore, gas pipeline, with a maximum diameter of 48 inches, that will start in Edo State and end in Rivers State. The OB3 project is owned by the NNPCL and is to be operated by the Nigerian Gas Company. Construction of the pipeline commenced in 2017 and was expected to commence operations in 2022. However, despite the projected timeline, the OB3 remains under construction, encountering various challenges acknowledged by involved contractors such as Oilserv Group, Nestoil, China Petroleum Pipeline Engineering Corporation, among others. These hurdles include adverse weather conditions like rain and flooding, compounded by the impact of the COVID-19 pandemic. Upon its eventual completion, the OB3 pipeline is expected to possess the capacity to deliver 2000 million cubic feet of gas per day. This infrastructure assumes pivotal significance as it will considerably augment gas availability to petrochemical manufacturers, catalyzing both domestic consumption and the export of gas.

The Expansion of the Escravos-Lagos Pipeline System (Phase II)

The 36-inch ELPS is a natural gas pipeline built in 1989[24] to supply gas from Escravos in the Niger Delta to various consumption utilization areas. It is operated by the Nigerian Gas Company (NGC) and supplies gas to power plants in the Southwest. The ELPS is the only transmission pipeline system that is dedicated to supplying gas to the West. This pipeline system is the only source of supply to the industrial and utility sectors of the domestic market. It also serves as a source of Gas supply to the West African Gas Pipeline System. Domestic demand in Nigeria is about 4 billion SCF of gas per day while the demand for natural gas in the Southwest of the country is over 1.2 billion SCF and a potential domestic demand of 7.5 billion SCFD by 2020 (Ministry of Petroleum Resource, 2018). However, the ELPS Phase 1 with an installed

[22] https://www.reuters.com/world/africa/nigerias-akk-gas-pipeline-open-early-2023-nnpc-says-2022-04-15/ accessed 15th December 2023.

[23] https://www.offshore-technology.com/marketdata/obiafu-obrikom-oben-gas-pipeline-nigeria/?cf-view accessed 15th December 2023.

[24] https://punchng.com/escravos-lagos-pipeline-set-to-move-2-2-billion-scf-of-gas-nnpc/ accessed 15th December 2023.

capacity of 1.2 billion SCF per day is only able to deliver about 800 million SCF per day to the domestic market despite the abundance of gas in the country. In 2019, NNPC announced plans to build an expansion EPLS II to double the existing capacity. This expansion was completed in 2021 and the pipeline now can add 2.2 billion standard cubic feet of gas into the market. This is set to greatly increase domestic consumption.

Relaunch of Nigeria's Gas Flare Commercialization Programme (NGFCP) 2022

To resolve the unacceptable oil field practice of gas flaring and to end the wastage of this premium economic resource, the FGN introduced the Nigeria Gas Flare Commercialization Programme (NGFCP) in 2016. Pursuant to its mandate under the PIA, the NUPRC relaunched the NGFCP in 2022 for better efficiency. The main objectives of the NGFCP are to demonstrate Nigeria's commitment to the ratified Paris Climate Change Agreement and the Global Gas Flaring Reduction (GGFR) Partnership principles for global flare-out by 2030; achieve its aspiration to attain net-zero routine flaring within the decade of gas; monetise flare gas resources for optimal government revenue; deepen in-country value addition through indigenous participation in line with the PIA; attract Foreign Direct Investments (FDIs); and to create gas-based industrialization for enhanced socio-economic benefits in and around host communities in the Niger-Delta.

Under the NGFCP 2022, 42 permits to access flare gas were offered through a competitive and transparent bidding process to technically, commercially, and financially competent third-party investors from across the world. 30% of the existing flares in Nigeria, accounting for 250 million scf of natural gas was mopped up in this bid round.[25]

Nigeria-Germany Partnership: Nigeria Signs Gas Export Agreement with Germany[26]

The President presided over the signing ceremony of two significant Memoranda of Understanding (MOU). The first pertained to the agreement on the export of gas from Nigeria to Germany, and the second involved a commitment of $500 million for renewable energy projects within Nigeria. The gas export partnership MOU was established between Riverside LNG of Nigeria and Johannes Schuetze Energy Import AG of Germany, with the primary objective of curbing the flaring of approximately 50 million cubic feet per day of gas in Nigeria. The project intends to supply Germany with energy, commencing at 850,000 tonnes per annum and eventually scaling up to 1.2 million tonnes per annum. The inaugural shipment of gas from Nigeria to Germany is slated for 2026, marking the initiation of a pathway towards increased and diversified gas exports to Germany.

[25] https://www.linkedin.com/pulse/2022-nigerian-gas-flare-commercialization-auction-key-sandra-/ accessed 15th December 2023.

[26] https://statehouse.gov.ng/news/nigeria-germany-partnership-expand-as-president-tinubu-witness-signing-of-500m-renewable-energy-pact-and-gas-export-agreement/ accessed 15th December 2023.

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The Presidential Compressed Natural Gas Initiative (PCNGI)

The Federal Government of Nigeria has through its actions and recent policy initiatives demonstrated the important role gas will play in Nigeria's Energy Transition Plan. President Bola Ahmed Tinubu aligning with the 'Nigeria's Decade of Gas' policy launched in the past administration introduced the CNG initiative. The Presidential Compressed Natural Gas Initiative (PCNGI)[27] was set up to drive the utilization of CNG sometime in August 2023, following which 250 billion naira was set aside in CBN as an intervention fund to facilitate financing options and encourage the adoption of CNG technology. This transformative initiative is poised to revolutionize the transportation landscape in the country, targeting over 11,500 new CNG-enabled vehicles and 55,000 CNG conversion kits for existing PMS-dependent vehicles, while simultaneously bolstering in-country manufacturing, local assembly, and expansive job creation in line with the presidential directive. The PCNGI aims to achieve the following objectives:

- The development of new stakeholder-operated Intrastate Mass Transit systems built on CNG.
- Support for States to onboard new CNG buses as part of their Intrastate Mass Transit network (wholesale conversion, retrofitting and new purchase).
- The deployment of CNG buses through existing Private Mass Transit operators, including new financing programmes for operators through an innovative asset finance programme.
- Incentivize investors to invest in CNG processing, distribution and utilization by providing incentives for enhanced investment and partnership.
- Deliver training and technology transfer to support the After-Sales Services and maintenance sub-industry to create sustainable jobs.

Under the PCNGI, the President recently inaugurated 107 gas and electric-powered buses and taxis in Maiduguri, Borno State.[28] The PCNGI is expected to stimulate economic growth, create employment opportunities, and bolster the nation's automotive manufacturing capabilities.

Shell's Investment in Natural Gas Production in Bonga North Oil Project[29]

Shell recently identified a lucrative $5 billion prospect in Nigeria's Bonga North oil project, reaffirming its dedication to injecting an additional $1 billion into natural gas production. This commitment arises subsequent to strategic deliberations between Shell executive Zoe Yujnovich and the Federal Government of Nigeria, intended to draw in investment capital to the country. Notwithstanding obstacles, Shell is pushing forward with the feasibility phase of its Bonga North endeavor, located in deep water. The

[27] https://statehouse.gov.ng/news/president-tinubu-approves-establishment-of-presidential-cng-initiative-targets-nationwide-adoption-of-workshops-for-smooth-transition-to-cng-fuelled-vehicles/ accessed 11th December 2023.

[28] https://newswirelawandevents.com/tinubu-unveils-107-gas-electric-powered-buses-in-borno/ accessed 14th December 2023.

[29] https://www.reuters.com/business/energy/shell-sees-6-billion-oil-gas-investments-nigeria-presidency-says-2023-12-07/ accessed 14th December 2023.

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project is said to be on track, aiming for commercial production by 2025, pending final investment decision approval in 2024, with an anticipated cost pegged at approximately $5,455 million.

Drilling Campaign, Deepwater Projects to Drive Nigeria's Oil & Gas Production Growth in 2023-2030

Recent analysis[30] has shown that drilling campaigns and deepwater projects will be driving Nigerian oil and gas production growth opportunities in 2023-2030. Projections support a positive outlook for the Nigerian oil and gas sector following a decade of unmet potential.[31] However, it was noted that the growth opportunities projected for the Nigerian oil & gas industry will hinge on timelines of project completion, along with nationwide infrastructure and security improvements. Additionally, while it is reported that oil production is on the rise in the country, Nigeria is unlikely to meet its 2.6 mmbpd crude production target by 2027, instead forcasting 1.9 mmbpd by 2030.[32]

Nevertheless, there is considerable optimism for rejuvenating Nigeria's oil and gas sector. While strides have been taken, sustained progress necessitates implementing measures to cultivate an inviting business landscape. Nigeria must actively cultivate an environment conducive to attracting both domestic stakeholders and international energy corporations. These efforts are pivotal to paving the way for the anticipated success and growth of the sector.

In late 2022, the Nigerian National Petroleum Corporation Limited

[30] https://theenergyrepublic.com/drilling-campaign-deepwater-projects-to-drive-nigerian-oil-and-gas-production-growth-in-2023-2030/#:~:text=Following%20bidding%20in%20January%202023,production%20increase%20beyond%20current%20expectations. Accessed 14th December 2023.

[31] Ibid.

[32] Supra.

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(NNPCL) announced a mini-exploratory bid round for seven ultra-deep offshore blocks. Following bidding in January 2023, the country anticipates an average of 140 development wells to be drilled year-on-year until 2030 from the development of these discoveries, which could see production increase beyond current expectations. While the country may not yet be able to hit its targets, Nigeria is making significant strides to transform its oil and gas industry and reap the benefits of its bountiful reserves. The coming years will create an invaluable opportunity for domestic oil companies to take the front seat in onshore and shallow water exploration and experience an upturn in fortunes.

Funding for the Nigerian Gas Sector

Following the implementation of Nigeria's Decade of Gas policy, stakeholders within the industry have observed a decline in financing for natural gas projects. This trend can be attributed to the global emphasis on supporting environmentally friendly initiatives. Despite plans to establish gas-to-power projects totalling $880 billion in Nigeria, only $1 billion has been committed thus far, while other projects are still in negotiation phases.[33]

During the UN COP 28 summit, the introduction of the 'Loss and Damage' fund marked a significant milestone. The fund's activation signifies world leaders' dedication to fulfilling the resolutions outlined during COP27. Tariye Gbadegesin of Nigeria was appointed as the Chief Executive Officer of the Climate Investment Fund, located in Washington DC, recognized as one of the world's largest innovative financing platforms.[34] Subsequent to its launch, high-income countries have begun making pledges, amounting to approximately $1 billion. This Fund serves as a mechanism to provide financial support and establish fairness in addressing the challenges posed by the climate crisis.

The Fund's primary objective is to assist vulnerable nations, such as Nigeria, in managing the disruptions associated with climate mitigation measures. Additionally, it aims to facilitate a swift transition towards cleaner energy across the African continent.

The summit notably showcased a diverse range of investment prospects and collaboration opportunities tailored for sectors impacted by climate change. Nigeria's tangible gains from its engagement at COP28 are already evident, as demonstrated below.

Nigeria's Investment Commitments at COP28[35]

- At COP28 in Dubai, NNPC Ltd. Seals LNG Deals for Domestic and International Markets Agreement on 421 Tonnes Per Day Small-Scale LNG Project in Ajaokuta and MOU on floating LNG. In its

[33] https://unctad.org/system/files/official-document/wir2023_en.pdf accessed 16th December 2023.

[34] https://punchng.com/cop28-nigerias-positive-takeaways/ accessed 15th December 2023.

[35] https://dareakogun.com/nigeria-secures-over-300-million-in-commitments-and-partnerships-at-cop28-for-energy-transition/ accessed 15th December 2023.

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efforts to further boost natural gas utilization in the country and enhance Nigeria's gas revenue, NNPC Ltd. has signed two major agreements to deliver LNG to the domestic gas market and the international LNG market. During two separate signing ceremonies held on the sidelines of the ongoing United Nation's Climate Change Conference (COP28), NNPC Ltd. signed an MOU with Wison Heavy Industry Co. Ltd, a Chinese company, for the development of a floating LNG project in Nigeria, targeting the international LNG market. The Floating LNG MOU was signed by the Executive Vice President, Gas, Power & New Energy, Olalekan Ogunleye on behalf of NNPC Ltd and Mr. Kai Xu, Managing Director of Wison Ltd, on behalf of his company. Both parties agreed to work together to chart a roadmap for the project development that will lead to an investment decision.

- Also, NNPC Prime LNG Ltd., an arm of NNPC Trading Ltd., signed a Supply, Installation and Commissioning Agreement with SDP Services, an independent oil and gas company, for a 421 tonnes per day LNG project targeting the domestic LNG market. The Floating LNG MoU was signed by the Executive Vice President, of Gas, Power & New Energy, on behalf of NNPC Ltd and the Managing Director of Wison Ltd, on behalf of his company. Both parties agreed to work together to chart a roadmap for the project development that will lead to an investment decision.

- Similarly, a Small-Scale LNG (SSLNG) Project agreement was signed by the Managing Director, NNPC Trading Ltd., on behalf of NNPC Prime LNG Ltd. while the Managing Director of SDP Services Ltd., signed on behalf of his company. The SSLNG Project, which will be located at Ajaokuta in Kogi State, Central Nigeria, will ensure the efficient supply of LNG to the Autogas/Compressed Natural Gas (CNG) and industrial/commercial customers nationwide. The LNG Project is expected to be operational by December 2024.

The successful completion of these projects will be a major breakthrough in the government's quest for the commercialization of Nigeria's abundant gas resources and pivotal to securing essential foreign revenue from the country's vast gas assets. They are also consistent with NNPCL Management's drive to deliver on the President's gas and power aspirations across the country.

CONCLUSION

Nigeria's Minister for Petroleum Resources (Gas) has been engaging with several countries in a bid to further the country's "Decade of Gas" ambition. As part of the initiative, Nigeria aims to significantly increase its gas production to meet various domestic needs like clean cooking, fuel for vehicles, industrial purposes, and electricity. Moreover, there's a focus on exporting gas to Europe, where there's anticipated high demand.

The Minister envisions that by 2030, Nigeria should achieve a daily gas production of 5.5 billion cubic feet (equivalent to 57 billion cubic meters annually). His vision is centred on a comprehensive plan designed to tap into Nigeria's untapped gas reserves, a significant but currently underutilized resource that has the potential to transform the nation. The FGN's strategy revolves around a crucial aspect: establishing a framework for utilizing gas that goes beyond solely profit-making.

This framework is driven by a commitment to environmental sustainability, aiming not just for increased revenue but also for ensuring broader access to energy for Nigeria's population. Ultimately, it's about harnessing the country's gas potential for both economic growth and better energy access for its people. 2024 promises to be no less eventful, as activities and investments in the gas sector continue to be shaped by local, regional, and global trends. According to statistical data from the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA)[36], there has been a notable decline of 33.58% in petroleum consumption following the discontinuation of the fuel subsidy. This reduction is anticipated to result in an upswing in the demand for gas, both within the domestic sphere and for industrial purposes. Despite this, the domestic supply of gas continues to fall short of meeting international sales commitments. Addressing this trend will necessitate prompt fiscal intervention by the Federal Government to establish a more sustainable regulatory framework.

[36] https://www.vanguardngr.com/2023/10/nigeria-records-33-58-reduction-in-fuel-consumption-says-nmdpra-boss/#:~:text=Ahmed%20who%20stated%20this%20at,cent%20reduction%20from%20the%2066.7 accessed 15th December 2023.

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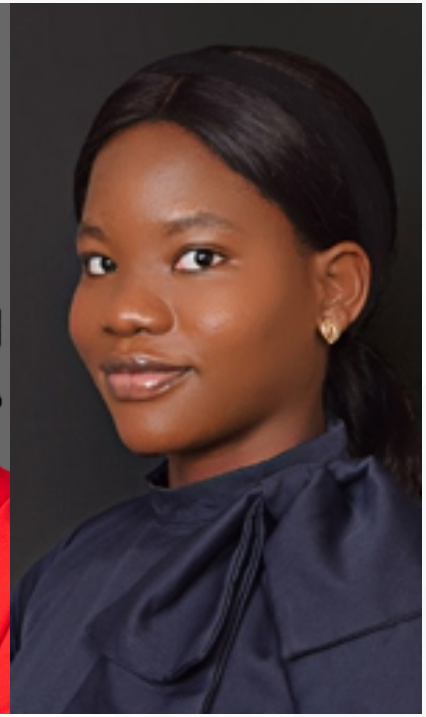

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