SPECIAL EDITION

THE BRIDGE

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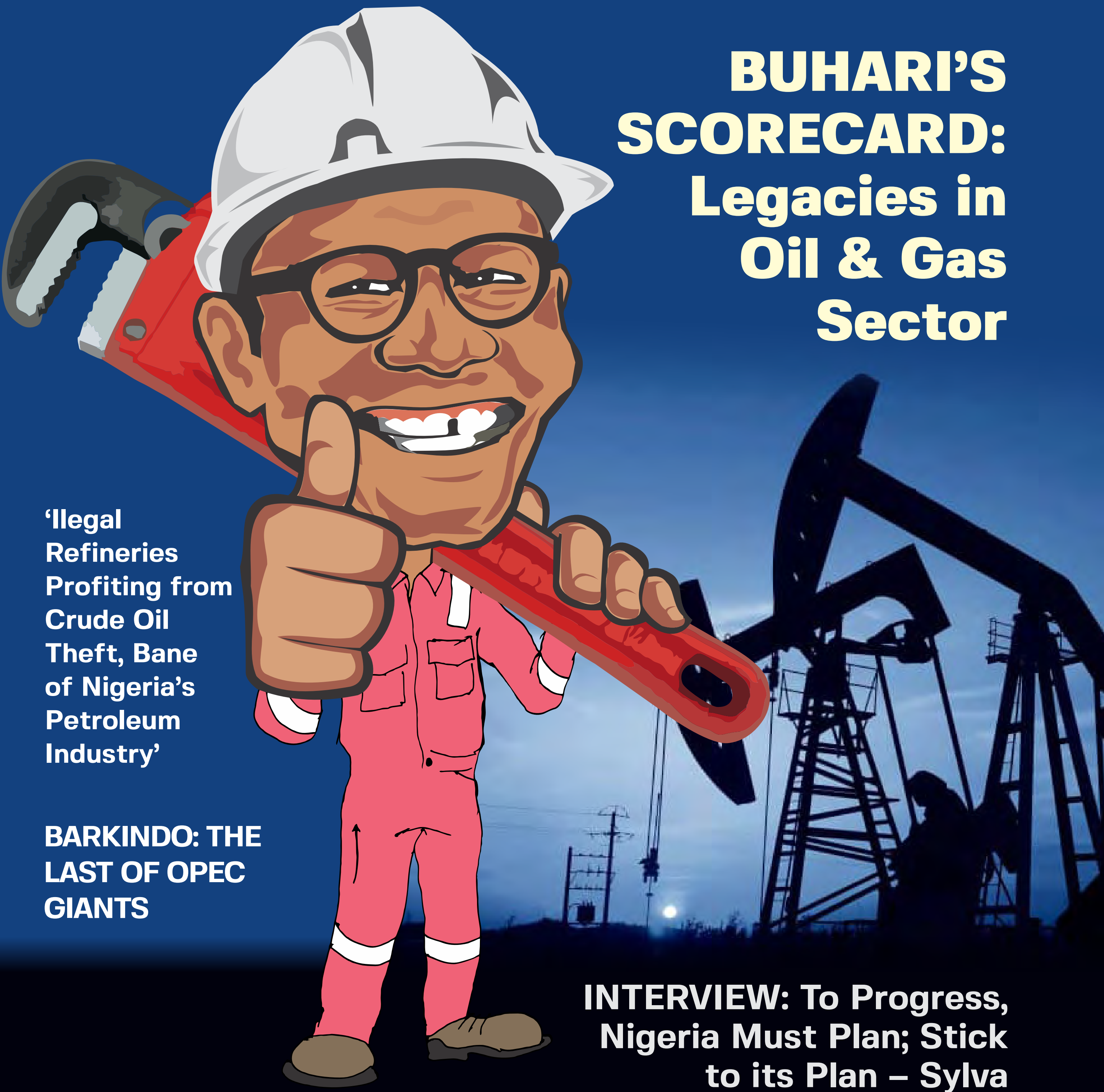
...The Path to Truth



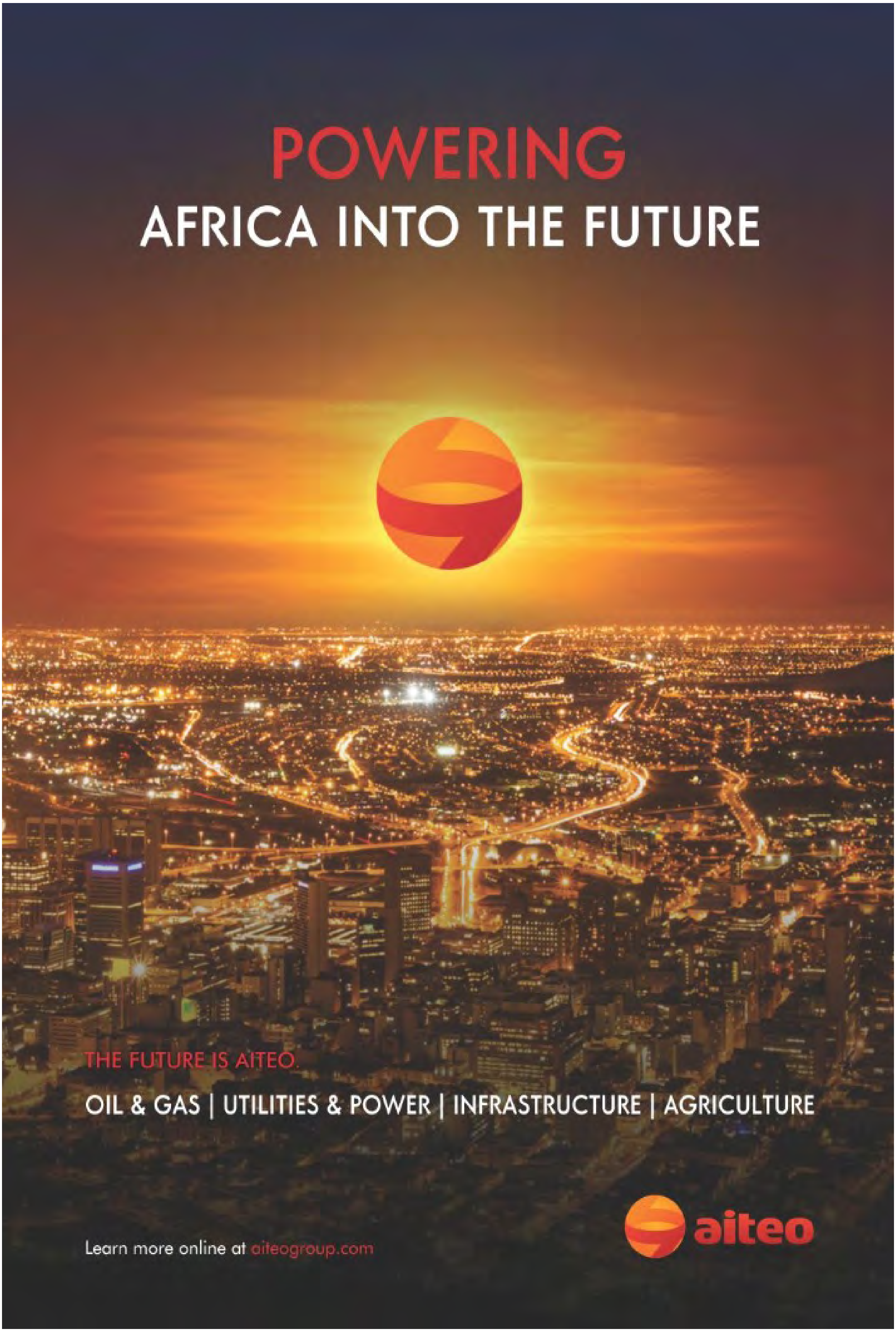
BUHARI'S SCORECARD: Legacies in Oil & Gas Sector

'Ilegal Refineries Profiting from Crude Oil Theft, Bane of Nigeria's Petroleum Industry'

BARKINDO: THE LAST OF OPEC GIANTS

INTERVIEW: To Progress, Nigeria Must Plan; Stick to its Plan – Sylva

LEE ENGINEERING: 30 YEARS OF EXCELLENT SERVICE IN NIGERIA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Editor's Note: THEBRIDGE ...The Path to Truth

Welcome to *The Bridge* Magazine

The last 24 months have seen the most unusual developments in the world, with the coming of Covid-19 pandemic. It is no longer business as usual, as businesses across the world witnessed the most challenging times. The oil and gas sector was affected in a very special way, as oil demand neared zero. There was a huge glut that saw nations like Nigeria facing huge decline in revenue accrual, as a result of the collapse of global oil demands. That was the difficult challenge with which President Muhammadu Buhari, who doubles as the Minister of Petroleum Resources, with his Minister of State Chief Timipre Sylva, has operated in the last two years.

Undaunted by the challenges, they have both been able to make critical progress that have redefined the oil and gas sector of the Nigerian economy. After over two decades of attempting to fashion out a law for the oil and gas sector, Mr Sylva, with the support of President Buhari, was able to push through the passage of the Petroleum Industry Bill (PIB), which the President assented to into law as Petroleum Industry Act (PIA) on August 16, 2021. The National Assembly, under the leadership of Senate President Dr Ahmed Lawan and Hon Femi Gbajiabiamila, must be specially commended for supporting the passage of the bill.

It is also note worthy to state here that the Buhari government, in its quest to create petroleum products sufficiency in the country, awarded contracts for the rehabilitation of the four refineries in Port Harcourt, Warri and Kaduna. This excercise, which is unlike previous Turn Around Maintenance (TAM) undertaken by previous governments, demonstrates the commitment of President Buhari and the minister of state petroleum resources to the overall growth and development of the economy.

> ***The Buhari government has shown enormous determination to put an end to the money guzzling regime that benefits only an insignificant number of the populace***

For the first time in the history of the subsidy regime in Nigeria, the Buhari government has shown enormous determination to put an end to the money guzzling regime that benefits only an insignificant number of the populace. In all, the present administration has shown enough faith in turning around the fortunes in the oil and gas sector for the overall benefits of Nigeria and the Nigerian people. An applause for a job well done by Nigerians for Mr President and the minister of state for petroleum resources would not amount to asking for too much. Kudos Mr President! Kudos Mr Minister!

In this maiden edition of *The Bridge* magazine, we serve you with detailed report, enlightening commentary, and exclusive interviews that highlight the positive developments in the oil and gas sector.

Happy reading!

Editorial Team

Mission Statement:

To be one of the best and most informative magazines in Nigeria.

Minister of State for Petroleum Resources, Chief Timipre Sylva

A Minister in Quest of Sustainable Energy Path for Africa

On August 16, 2021, President Muhammadu Buhari signed into law the Petroleum Industry Bill (PIB), now Petroleum Industry Act (PIA 2021), after over two decades in limbo at the National Assembly. Since the presidential assent, the Minister of State Petroleum Resources, Chief Timipre Sylva, has been at the vanguard for a sustainable energy path for the African continent.

At different world fora, Sylva called for understanding among nations to liberalise the paths to energy transition, rather than the single and narrow path of renewable energy or nothing approach, spearheaded by the developed society. He believes that the path of renewable energy is the way to go, but the hurried approach of a zero net emission by 2050 is unrealistic for Africa, considering the fact that the continent contributes less than 2% of the total global emission of green house gas.

> “ *We reject the concept of a single pathway to the energy transition*

He has remained vocal in the call for multiple routes for global energy transition away from the rush-rush approach adopted by the developed world. Sylva fears that if “we fold our hands and allow the developed world to determine our fate in the oil and gas sector, we will be the ultimate losers, and the loss will be grave for Nigeria and the entire Africa continent”. “This is why in Nigeria; we reject the concept of a single pathway to the energy transition. “Indeed, we prefer the concept of ‘just’ energy transition which takes into cognisance the specific circumstances of each nation in developing the energy transition pathway that best achieves the environmental, social, political and economic objectives of the transition in that specific nation. Multiple pathways to the energy transition should and must exist in order to ensure that no country is left behind in the process of achieving net-zero by 2050.

The minister is worried that the push by the developed world would in no distant time completely cripple investments in the hydrocarbon sector as already multinational oil companies are withdrawing huge investments in the oil and gas sector. This development is pushing the minister to call for the establishment of an African Energy Bank modelled in line with the African Development Bank to provide funding for the hydrocarbon sector of the economy.

> ***We must set a financial institution, an African Energy Bank, to develop the oil and gas sector***

Sylva at the 23rd World Petroleum Congress (WPC), in Houston Texas, United States of America, in December 2021 reiterated the urgent need for the establishment of the Energy Bank to forestall the shortage of continuous funding for the hydrocarbon sector of the economy. The bank, the minister said, would help to aggregate funds for the oil and gas sector following the gradual withdrawal of funding for the hydrocarbons sector in place of renewable energies across the world.

The minister said "the PIA is a watershed moment for us in Nigeria. This is the time for us to get out of Nigeria to market this investment environment. We must not go out of Africa to attract investments. We must set up structures to fund our system. If we insist on the exploration of our oil and gas reserves when the world is cutting down on investments in the sector, we must set a financial institution, an African Energy Bank, to develop the oil and gas sector".

He said Africa, with its huge deposits of hydrocarbons, must not allow the pressure of the western world to force it to foreclose future investments in the sector, noting that although renewable energy is the way of the future, we must not set the same energy transition targets for Africa and the rest of the world.

"If we go into more exploration in Africa, we will find more oil and gas, and must we leave it under the ground because the other countries are racing for renewable energy? We must not allow external influences to force us to abandon our vast hydrocarbon resources. We must find a way to explore it, and that's why we need an energy bank along the line of the African Development Bank (AfDB)".

The minister urged African leaders to close ranks and work through a solid platform like the African Petroleum Producers' Organisation (APPO), to resists the clamour for sudden transition from hydrocarbon to renewable energies. "We must research into African problems. We can and we must do that to be able to explore the huge potentials in Africa".

At the October COP26, in Glasgow, United Kingdom, there was a global consensus, especially among the developed world, for a net zero carbon emission by 2050. The implications of this for Africa and other countries of the world that have huge deposits of hydrocarbon is a shift of focus in terms of investments in the sector.

As a warning sign for huge cutdown on investments in the sector in Nigeria, two multinational oil companies Shell and Exxon Mobil have resolved to divest from some key national oil assets and the implications of this is less revenue for the country. This trend is sweeping across the globe and in place investments are increasing in the renewable energy sector such as solar, wind, and hydro. This divestments, and shift of investments focus, according to Sylva, are a threat to the huge hydrocarbon deposits across Africa continent. He warned that if nothing urgent is done by Africa in providing funding options for the hydrocarbon sector, the fate that befell coal as a source of energy will in no distant time befall our 'Black Gold'.

Horatius Egua, Senior Adviser (Media & Communications), Minister of State Petroleum Resources

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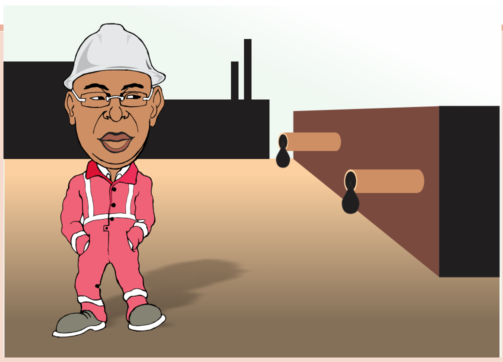

This edition highlights **President Buhari's scorecard: Legacies in the Oil and Gas Sector**.

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> *The document was to replace the outdated and archaic sets of laws and ministerial directives that guided the operations of the industry"*

By Horatius Egua & Bassey Udo

When President Muhammadu Buhari assumed office on May 29, 2015, perhaps, he knew he had a date with history. Something must have told him that posterity would not be kind to him in its judgment if, by the time he walks through his exit door, his administration failed to find solutions to the myriad of challenges the petroleum industry was grappling with.

Maybe that predisposition informed his decision to keep the Petroleum Ministry portfolio in his cabinet to himself. As the supervisory Ministry in charge of the oil and gas industry, Nigeria's proverbial goose that lays the golden eggs, the President wanted to pay direct personal attention, to enable him to take full responsibility for his achievements and failures in the end.

Indeed, there were lots of issues on his plate to worry about in the industry. At the time he took over, an attempt to give the industry a new regulatory framework was already 15 years old. The document was to replace the outdated and archaic sets of laws and ministerial directives that guided the operations of the industry since its inception in 1969. The passage of a draft Petroleum Industry Bill (PIB) submitted to the National Assembly for deliberation was pending since April 2008.

The President identified the passage into law of the PIB as one of his priority assignments. When he appointed Chief Timipre Sylva as Minister of State, Petroleum Resources on August 22, 2019, the passage of the PIB into law was one of the nine points policy agenda he handed to him as his administration's mandate through the Ministry of Petroleum Resources.

Buhari's Scorecard: Legacies in the Oil and Gas Sector

Conscious of the need to see the industry operate in line within a well-rounded regulatory environment in line with what obtains in other climes guided by internationally accepted standards and rules, the President knew that a new PIB for the industry had many advantages.

Apart from creating a conducive environment for exploration and exploitation of petroleum resources for the benefit of Nigerians, the new PIB held bright prospects for the establishment of a progressive fiscal framework to boost fresh investments in the industry and optimize revenue accruals to the government.

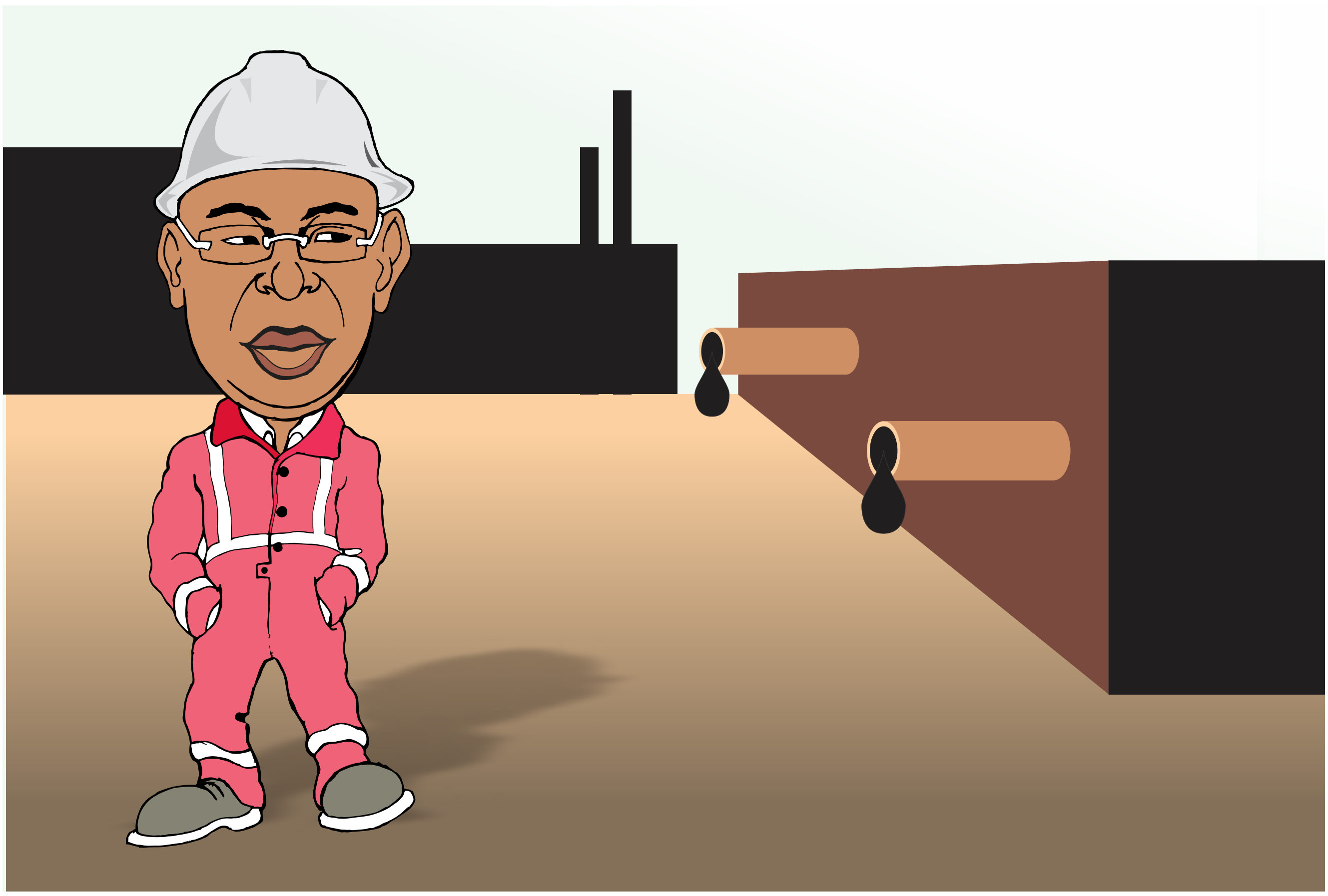
Besides, a new PIB would help establish commercially-oriented and profit-driven entities in the industry; create efficient and effective regulatory agencies; allow the deregulation and liberalization of the operations of the downstream sector, and promote transparency and accountability.

> *A new PIB would help establish commercially-oriented and profit-driven entities in the industry*

Although the President withheld assent to the approved PIB passed by the 8th National Assembly and raised some objections to some issues he considered critical, in September 2020, a new draft PIB was sent to the 9th National Assembly for consideration.

On July 1, 2021, the National Assembly passed the Bill and transmitted the clean copy to the President for his final assent. On August 16, 2021, the President kept a date with history and signed into law the Petroleum Industry Act (PIA) 2021, drawing the curtain on the almost 20 years quest for a new regulatory framework for the industry.

With the PIA, the regulatory and governance structure of the oil and gas industry was overhauled. Apart from establishing the



Nigerian National Petroleum Company (NNPC) Limited that would function as an independent limited liability commercially and profit-oriented entity regulated under the Companies and Allied Matters Act (CAMA), the new law created two regulatory agencies- the Nigerian Upstream Petroleum Regulatory Commission (NUPRC) and the Nigerian Midstream and Downstream Petroleum Regulatory Authority, (NMDPRA).

While the former took over the technical, regulatory and inspectorate functions hitherto exercised by the defunct Department of Petroleum Resources (DPR), the later would be responsible for the regulation of the newly created mid and downstream industries responsible for the development of the oil and gas products and services for domestic consumption.

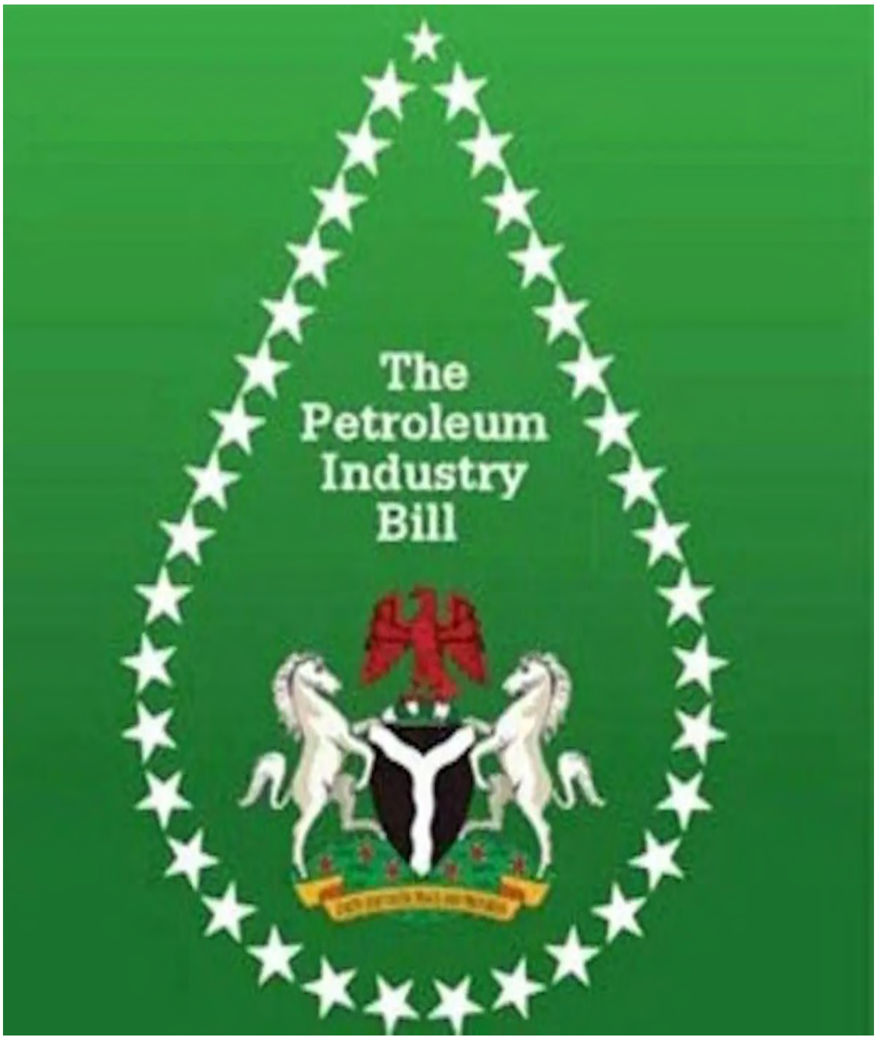
The NMDPRA will be in charge of the commercial operations of the industry hitherto carried out by both Petroleum Products Pricing Regulatory Agency (PPPRA) and the Petroleum Equalization Fund Management Board (PEFMB).

The PIA also established a new tax regime that substituted the petroleum profits tax regime with a hydrocarbon tax, in addition to a tax on the income of oil companies.

Under this new fiscal regime, hydrocarbons, including crude oil, condensates, and natural gas liquids produced from associated gas would attract tax, while imposing penalties for gas flaring, all aimed at generating more revenues to fund industry growth.

Posterity may not forget President Buhari as the man whose administration finally broke the hedge of opacity in the oil and gas industry.

Over the years, the industry has always been associated with



all that was negative. Different names were given by different people depending on where they stood, ranging from a "cesspool of corruption" to "a Blackhole."

When the President came, he appointed Mele Kyari as the Group Managing Director of the

> ***Posterity may not forget President Buhari as the man whose administration finally broke the hedge of opacity in the oil and gas industry***

NNPC. He undertook to reform and transform NNPC, through a rebirth agenda captured in five strategic steps towards the attainment of efficiency and global excellence.

Emphasizing transparency, accountability and performance excellence (TAPE), Kyari vowed to open up NNPC for public scrutiny; ensure transparency and accountability in NNPC's operational processes; benchmark NNPC's operations against established global best practices; set the right operational cost structure that guaranteed value-addition and sustained profitability, and developing suitable governance structures for its strategic business units (SBUs).

To the credit of the President, the NNPC, for the first time in 43 years of its operation since 1977, updated and published its annual audited financial statement and accounts of all its SBUs and Corporate Services Unit (CSU) for 2018.

It followed up with the publication of the 2019 and 2020 editions of the statements, while sustaining the publications of the Monthly Financial and Operational Report which started in 2016, to highlight NNPC's activities in the different aspects of the industry.

Despite the devastation of the global economy and direct impact of the COVID-19 pandemic on Nigeria, the President continued to pursue ongoing strategic projects in the oil and gas industry he believed would stand Nigeria in good stead to recover some of the lost opportunities that may have eluded the country in recent past.

> ***President continued to pursue ongoing strategic projects in the oil and gas industry***

Apart from focusing on efforts to grow the country's capacity oil production from the current average of 2.3 and 2.5 million barrels per day and national oil reserve of about 35 billion barrels, the President wants the industry to also pay close attention to deliberate efforts to harness the abundant natural gas reserves in the country reputed to be ten times more than oil.

To realize these aspirations, the President spearheaded the completion of ongoing projects, development of new, or expansion of existing ones to grow the country's gas development capacity as a major player in the international oil and gas market.

In December 2019, in the thick of the global lockdown as a result of the pandemic, the President approved the final investment decision (FID) on the construction of Train 7 of the multi-billion-dollar Nigeria Liquefied Natural Gas (NLNG) project.

The NLNG project initiated in 1989 as a strategic investment to help harness and export the country's huge gas resources in LNG and natural gas liquid (NGL) forms for export value. From the start-up of operations from its base project (Trains 1 and 2), and the export of its maiden LNG

President Muhammadu Buhari

Presentation of the NNPC Certificate of Registration as a limited liability company to President Muhammadu Buhari

cargo to Europe in October 1999, the project grew rapidly to Train 3 and Trains 4 and 5 (NLNGPlus), including the NGLs handling units (condensate stabilisation and LNG production) to Train 6 (NLNGSix) completed in 2008.

Since then, it appeared further expansion on the six-train facility was stalled, with production capacity at 22 million metric tons per annum (MTPA) of LNG; 5 million MTPA of NGLs, from its initial 3.5 billion standard cubic meters (BCM) per day of natural gas intake.

However, with the FID, the President directed the NNPC and its joint venture partners to award the engineering, procurement and construction contract to effectively set the stage for the commencement of actual construction of the plant estimated to cost about $10billion.

On completion, Train 7 project would increase the Nigeria LNG production capacity by about 35 percent, to 30 million MTPA, and consolidate Nigeria's position as the 5th largest LNG exporter in the world, with a target of raising the production capacity of the plant to 12 trains in future.

Despite the frenzy from the global quest for energy transition, as the world is shifting its attention from the use of fossil fuels as sources of energy supply to alternative sources like wind, solar, and biomass, the President believes Nigeria can make the most of the opportunities left to create value for its hydrocarbon resources.

> **"**
>
> ***The President approved the ongoing construction of the 614 kilometers-long Ajaokuta–Kaduna–Kano (AKK) gas pipeline***

In line with his commitment to grow the country's hydrocarbon production capacities, the President wants the NNPC and its joint venture partners to aggressively create markets around the world for the country's oil and gas resources, to earn the revenue that could be deployed into the development of the infrastructures that would guarantee the country's energy security under the imminent era.

To create the channel to export

the country's huge gas resources abroad, the President approved the ongoing construction of the 614 kilometers-long Ajaokuta–Kaduna–Kano (AKK) gas pipeline designed as an economic bridge between the southern and northern parts of the country.

On completion, the AKK pipeline will transport about 3.5 billion cubic feet (MCF) of feed gas per day from various gas gathering projects in the Niger Delta region, through the Escravos-Lagos Pipeline System II (ELPS II) and Oben-Obiafu-Obrikom (OB3) gas pipelines for supply to industrial centres in the northern part of the country

Also, the pipeline includes a spur linking the Ogidigben Gas Revolution Industrial Park (GRIP) in the Delta region, approved by the President for construction to help harness about 18 trillion cubic feet of gas reserves in the Odidi, Okan and Forcados oil fields, all located within a 50 kilometers radius in the Niger Delta region, and channeled for supply through the ELPS network.

> “
> ***The completion of these projects is expected to generate millions of jobs for Nigerians***

The two projects are an integral part of the 1,300 kilometres-long Trans-Nigeria Gas Pipeline (TNGP) approved by the President to transport about 2.2 billion cubic feet of gas per day from the Niger Delta for power generation and consumption by domestic customers.

The TNGP project also forms part of the proposed 4,401 kilometres-long Trans-Saharan Gas Pipeline (TSGP) to export Nigeria's natural gas resources to customers in Europe.

The completion of these projects is expected to generate millions of jobs for Nigerians and help deepen domestic gas penetration in the country. It would also help to produce gas to boost power generation as well as shore up Nigeria's competitiveness in the global LNG market.

The President has also kept the vision of his administration to help diversify the country's economy away from oil, with his launch in 2020 of the National Gas Expansion Programme (NGEP) designed to put Nigeria at the front seat of global gas investments and utilization.

The NGEP, with N250 billion investment fund set aside by the Federal Government, focuses on the development of Liquefied Petroleum Gas (LPG) and Compressed Natural Gas (CNG) sub-sectors; develop gas-to-people structure, among others.

Minister of State for Petroleum Resources, Chief Timipre Sylva

Under the programme, the President approved the implementation of the Compressed Natural Gas (CNG) development programme, to offer a cheaper and cleaner alternative fuel to the use of petrol for transportation.

Minister of State for Petroleum Resources, Timipre Sylva, has said the administration's plan was on course to convert about one million vehicles from fuel to CNG under this programme.

Since the last oil licensing round in 2005 organized in the country to allow more indigenous participation in the exploration, exploitation and development of the country's oil and gas resources, successive administrations were unable to hold a fresh exercise to afford Nigerians the opportunity to bid for oil licenses.

But the President approved and successfully supervised the 2020 Marginal Field Bid Round organized by the defunct DPR to award 57 fresh oil licenses to various categories of Nigerian investors. The proceeds realized from that bid round helped to augment the Federation Account when the nation's earnings from crude oil sales dipped dramatically as a result of the impact of COVID-19 pandemic.

> “
> ***Before the exit of the President from office, the country would cease to be a net importer of petroleum products and become a net exporter of petroleum products***

A common feature of the past administrations was the recurring incidence of disruptions in the supply of petroleum products which resulted in intermittent long queues at petrol stations.

However, since the coming of the present administration, the President has been able to limit such ugly incidences to negligible few times that hardly lasted for a few days in each case.

The issue of national protests spearheaded by the Nigeria Labour Congress over fuel crisis has also been few and far between, as the President is always ready to dialogue with Labour on the need for harmonious working environment to allow for sustained economic growth.

Although the uninterrupted fuel supply for the six years has been sustained through a programme of importation of petroleum products, considering the huge cost involved as a result of fuel subsidy component of the arrangement, the President approved the rehabilitation of

Group Managing Director of NNPC, Malam Mele Kyari

the nation's four refineries as a permanent solution to the problem.

The President approved the award of the contracts for the rehabilitation of the refineries, with the repair works already ongoing in the Port Harcourt refinery, while those of Warri and Kaduna rehabilitation are on course to follow on schedule.

Both the Minister of State for Petroleum Resources and the GMD of NNPC have assured Nigerians that latest by 2023, before the exit of the President from office, the country would cease to be a net importer of petroleum products and become a net exporter of petroleum products, especially Premium Motor Spirit (PMS).

If the President succeeds to find a permanent solution to the four refineries, apart from the current policy of his administration to encourage investments in local refining capacities, he would have succeeded in burying forever the haunting ghost of fuel subsidy, which has gulped several trillions of Naira that could have been deployed in the provision of critical social infrastructure for the people.

Despite the unprecedented crash in oil prices over the years to when it reached the bottom at the height of the COVID-19 pandemic in 2020 till date, the President has managed to ensure constant remittances into the excess crude oil revenue account (ECA) from the differentials between approved oil benchmark in the annual budget and the prevailing crude oil price at the international market.

> ***"The list of President Buhari's achievements in the oil and gas industry may not be exhaustive, but posterity would surely smile at him***

With the balance in the ECA at about $35.368 million as at December 2021, regardless of the poor monthly accruals over the years, the President still approved additional contributions to the Nigerian Sovereign Investment Authority (NSIA) to facilitate the execution of key projects, like the Lagos-Ibadan railway and the 2nd Niger Bridge.

The list of President Buhari's achievements in the oil and gas industry may not be exhaustive, but posterity would surely smile at him that he laid a foundation that would endure into the future.

Minister of State for Petroleum Resources, Chief Timipre Sylva

> *The entire global economy went on lockdown. If we did not have a strong local content policy that ensured a strong in-country capacity, the oil and gas industry would have totally ground to a halt*

Nigeria is fully on board the global quest for energy transition. But, Minister of State for Petroleum Resources, Chief Timipre Sylva says the country has an obligation to harness its abundant gas reserves to give her people full value for the natural endowment. The Minister spoke with The Bridge editorial Team, HORATIUS EGUA, BASSEY UDO, JUSTICE DEREFAKA AND NONSO NWORGU in his office, in Abuja. Excerpt.

COVID-19 pandemic has devastated the global economy. How much impact would you say it had on President Muhammadu Buhari's agenda in the country's oil and gas industry?

SYLVA: Definitely it impacted on the realization of Mr. President's agenda in the industry. As you know, COVID-19 eroded a lot of the earnings the country should have realized from oil and gas. In fact, from the economic point of view, the pandemic plunged the country into one of the worst recessions ever, because prices were completely eroded, so also, was demand for the country's crude oil. There was a time the country could not even sell any crude. So, it was natural that all these would have affected the realization of the President's plan for the industry.

COVID-19 happened without any warning as you would recall. By 2019, the country was already looking forward to a very great 2020. Having come out from the previous recession and beginning to coast along the recovery phase in 2019. We thought the momentum would take us to 2020 and the next level of the President's agenda. Unfortunately, the country was hit

INTERVIEW:

'To progress, Nigeria must plan; stick to its plan'

badly by COVID-19, and everything unraveled. The global economy was plunged into recession. We are only just now coming out of it.

In spite of all that, but for the impact of COVID-19, we could have probably done better ticking all the boxes. I can comfortably say, without any fear of contradiction that in spite of the COVID-19, we rose to the challenge. It could have been worse if we were not effective in the management of the situation.

Remember that most of the expatriates left the country in the wake of the pandemic. The entire global economy went on lockdown. If we did not have a strong local content policy that ensured a strong in-country capacity, the oil and gas industry would have totally ground to a halt. Our strong local capacity enabled the country to take over from where the expatriates left. It's on record that this was the period the country recorded one of the highest production capacities of over 2.56 million barrels per day. The industry was still producing and robust, but the market was not there, because of the lockdown.

Since then, the country has actually done quite well. In spite of everything, we still went ahead with the rehabilitation of the refineries; carried on with the final investment decision (FID) on Train 7 of the Nigeria LNG project; construction of the Abuja-Kaduna-Kano (AKK) gas pipeline; proceed with the process that resulted in the passage of the industry's major legislation, the Petroleum Industry Act (PIA).

So, in spite of COVID-19, I will say we have done exceptionally well. But we cannot discountenance the

Sylva

fact that COVID-19 had a huge toll on the global economy, not just the Nigerian economy.

The world is talking about the global energy transition. But beyond this, Nigeria is also concerned about energy equity and justice. What does this mean?

SYLVA: Nigeria has never at any time resisted the quest for the global energy transition. We are fully on board. But Nigeria is saying while we are very much onboard the global energy transition, the world should realize that not every country has the capacity to move at the same pace.

> *"Nigeria has never at any time resisted the quest for the global energy transition. We are fully on board.*

The advanced economies are already at a point where they can achieve their energy baseload. Nigeria and other developing economies are not there yet. We still have a lot of Nigerians without access to electricity and other sources of energy supply as you may know.

In fact, Africa has the highest population of people without access to electricity. Just at this point, we are beginning to get our acts together through initiatives to harness our potential to provide access to electricity to the people through natural gas, suddenly the world is asking us to join in moving on to the next best thing. What that means is that we have to abandon all we have already done and start afresh.

But Nigeria is telling the world, yes we are going to join the global energy transition. However, allow us to exploit the abundant gas resources that we have and give energy to our people as our primary responsibility, to enable them function optimally.

Our argument is that the world itself did not start with renewable energy. The advanced economies gave energy to their people through coal and all other kinds of energy sources before this transition. So, if the advanced economies have achieved their energy base loads on coal and fossil fuels, what is good for the goose is also good for the gander; allow Nigeria and other third world economies to also give energy to their people with our natural gas, while looking at the transition.

So, Nigeria is fully in support of the transition. Already, the NNPC has started some solar projects. We are aware of what the Federal Government is doing with solar energy projects all over the country.

> *Nigeria, indeed Africa, must take up the challenge to develop the capacity to follow the money.*

However, at this point, the world cannot expect us to abandon our abundant gas reserves (over 603 trillion standard cubic feet) just because the global community has moved to the next thing.

That is why we are asking them to allow us some time to harness the full value of our gas potential. And I believe they are beginning to give a lot of listening ears to our plea. Quite recently, I learned the European Union is beginning to classify gas as clean fuels for the future. Nigeria is happy about this development that the global community is beginning to listen to us positively.

The energy transition comes with the challenge of funding, as the advanced economies move away from investments in fossil fuels projects. How would Nigeria bridge that funding gap to continue with projects to harness the gas resources as you have said?

SYLVA: For me, as the Chinese would say, every challenge is an opportunity. If the advanced economies are saying they are pulling out of investments in fossil fuels, the question is: Where are they taking these investments to?

Nigeria, indeed Africa, must take up the challenge to develop the capacity to follow the money. They are taking the money out of oil and gas to renewables. That is why I said we cannot abandon renewables. We must follow that money from oil and gas and focus on investing in renewable sources as well.

We have taken up the challenge by looking for other ways of funding our projects, by talking to multilateral funding organizations to see how we can aggregate funding within Africa to fund our projects. That is where the call for Africa Energy Bank comes in. We are working actively towards achieving that, so that we can have our own funding sources for fossil fuels, and at the same time follow

Sylva during the interview

the global community to access the funding for the energy transition projects.

NNPC has presented a N3 trillion proposal to the National Assembly for approval as budget for fuel subsidy in 2022. Most Nigerians are asking about how that proposed budget figure was arrived at when nobody seems to know the country's exact daily fuel consumption?

SYLVA: I would have preferred that this question be directed to the NNPC. I have made my views known about this issue in the past. NNPC has agreed with me that they are not certain about the exact consumption figure.

The truth is that if our petroleum products are smuggled outside the country, nobody can say what volume is involved today, tomorrow or next week. NNPC cannot say they know these figures. It's more or less fueling a criminal economy. The NNPC imports the products, and nobody knows the exact destination of the products at the end of the day. The imported products come to Nigeria, and from there filters out of our borders to neighbouring countries.

So, as a country, we cannot tell the exact volume of petroleum products that we consume on a daily basis. All we have been doing is to assume the level of consumption over a period and work with that. But I believe NNPC probably has a better answer to this. Personally, I don't. I have said this publicly before that I don't know the figure.

When I assumed office, initially I was told that our daily consumption was 66 million litres. Then, when fuel prices increased from N145 to N162, the consumption figure temporarily fell to about 40 something million litres per day, because the arbitrage opportunity reduced. Then the value of the Naira dropped again, and the number went up again to over 60 million litres. I am told the figure sometimes rise to as high as 90 or over 100 million litres. I don't know how that happens.

Sylva

At this rate, I have said if anyone is looking at a criminal enterprise, look no further than the fuel subsidy.

> ***"The President has done everything to resolved the issue, including the closure of the country's borders with neighbouring countries***

That is why I have told all Nigerians, if we all agree that this product is being smuggled out of the country and we cannot account for it, let's take the difficult decision – remove fuel subsidy from fuel pricing template and deregulate.

The President has done everything to resolved the issue, including the closure of the country's borders with neighbouring countries, yet the criminality, was not stopped. The truth is that what the President could do was to close the "formal" borders. What about the illegal routes?

What do you suggest as the solution?

SYLVA: Make it a business. If the subsidy component is taken out through deregulation, we can send to our neghbours. Of course, we need the market from there. But now we are punishing ourselves, because every litre we import at our expense will always find its way outside the country.

Now, the government is trying to subsidize our citizens, so that our people will at least get the benefit of the subsidy is petroleum products. But, now because of how our borders are, it is very difficult. Now, we are inadvertently, subsidizing the whole of Africa. This is the thing we cannot handle.

You sound as if the government is helpless and has resigned to fate.

Sylva making a point during the interview

SYLVA: Far from it. No no no! Customs have gone round and demolished a lot of illegal filling stations and arrested a lot of operators. What I am saying is that the ultimate solution to the problem is deregulation, which is the removal of fuel subsidy.

This has already been provided for in the PIA. But the President, in his humane disposition, said if fuel subsidy is removed now, what would be the immediate impact on the people? He ordered the suspension of the decision to allow the government to put the necessary structures in place, so that by the time deregulation is introduced, people would not feel it anymore.

As you know, we have a very short window to pursue this. This will close in February. So, he said why don't we extend it a little bit, so that we will have time to do the right thing. So, all the arrangements are now ongoing to ensure we are able to achieve deregulation. Everybody sees it as the best policy direction for the country.

With that arrangement, our refineries will work. Jobs and opportunities will be created. Nigerians will invest in the refining sector. Today, nobody is ready to invest in a sector that is so heavily subsidized.

> *What we want to achieve now is a very clear road map, with timelines on how we are going to utilize our gas*

One year after the declaration of the 'Decade of Gas', what is in place, and what should Nigerians be looking forward to?

SYLVA: The idea of the declaration of 2020 as the 'Year of Gas' was that we felt that as a country we must begin to focus more on the development of our gas resources. After the declaration, we started developing a road map for the development of gas in Nigeria. We have made a lot of progress there. On the back of that, we also focused on a lot of gas projects. Train 7 of the NLNG was one of those projects. AKK was a project that was in the doldrums for so long. But we were able to also achieve. Since then, we have not looked back.

What we want to achieve now is a very clear road map, with timelines on how we are going to utilize our gas. This time, we want to see if these timelines could be legislated upon, so that by the time we are leaving, any administration that comes in will be confronted with a law on gas utilization, so that no one would be allowed to pick and choose, but because it is bound by law.

We are working with a very competent team. The NLNG has been very supportive to the whole process. And I am hoping that the rest of OPTS would also support us to achieve this very clear roadmap. We are determined to move away from the past, which was all about slogans and sloganeering. We want to be able to leave something very concrete, with timelines and clear steps that would be taken to achieve them. This will now power the gas masterplan, which is hanging, because the legislative enablement was not there. Now, we have been able to give the legislative enablement for the development of the gas master plan. The Decade of Gas will now provide the roadmap for the development of our gas master plan, bringing all our gas plans together, to give value to the people.

> ***What we really need to do as a nation is to plan. Without a plan, then we are definitely planning to fail***

Where are we on gas flares commercialization?

SYLVA: Gas flaring is not our biggest problem at the moment, as far as pollution is concerned. We have been able to reduce a lot of the flares. Today, we are flaring about 6 percent, from 11 percent. What we want to do now is to commercialize the gas flares. Once we are able to achieve that gas flare commercialization, we will bring everything down to zero.

But the gas flares commercialization programme is already on. The process is already concluded, despite a few issues that we had. After we resolved the issues, we will be putting the gas flares commercialization totally behind us.

If you aggregate all that you have said, what do you think we should do to be where we should be?

SYLVA: What we really need to do as a nation is to plan. Without a plan, then we are definitely planning to fail. At every point in time, there should be a plan. The problem with us as a country is that we really do not plan, and we don't stick to plan. If we plan and stick to it, we will achieve whatever we want.

Unfortunately, most of the things in Nigeria happened outside a very clear plan. Sometimes we stumbled on some major things that happened, and we are happy about it, only to find out that there was no plan or process that was followed that led to it. So, as a country, one of the things we must do is to have a clear plan. Even if it is a 100 years plan, or 50 years to guide someone in a position of authority have an idea where this country will be in 100 years from now. If we have that kind of plan, we can even hold government to account; to say where the country is supposed to be at a certain time on the plan. We must have some form of National Consensus on where we want to go as a country. That's where you establish the irreducible minimum, so that anyone that comes to office. So, what this country needs to progress is planning, planning, planning, and sticking to the plan. If for any reason there is a need to change the plan, let's discuss it and come to a consensus on

Minister of State for Petroleum Resources, Chief Timipre Sylva with the editorial team after the interview in his office

Chief (Dr) Lemon Ikpea, Chairman/CEO of Lee Engineering/Construction Company

> *In 2007, the company expanded its scope to include operations and maintenance*

In the last 30 years, Lee Engineering has weathered the storms from one-cabin office in Warri, Delta State to one of the most successful indigenous oil and gas servicing companies in Nigeria. Thanks to the grace of God and the doggedness of the founding Chairman and Chief Executive Officer (CEO) Chief (Dr) Lemon Ikpea, a seasoned administrator, an astute businessman and philanthropist par excellence.

Since the company's establishment in 1991, Lee Engineering has, through dint of hard work and professionalism, executed well over 300 major projects which have been delivered in accordance with client's specifications and complying with global industry best practices in terms of quality, safety and within project delivery schedule.

When the company was established in 1991, Dr. Ikpea had the vision of taking Lee Engineering from obscurity to the zenith of prominence and through his doggedness and determination, the company today has become one of the most equipped oil and gas services providers with highly skilled and experienced manpower in Nigeria.

"The vision is to remain as the Engineering, Procurement, Construction, Operations and Maintenance Company of choice in Nigeria, through the foreseeable future," he said. And true to that declaration, Lee Engineering has handled landmark projects for local and multinational companies such as the Nigeria National Petroleum Company Limited (NNPC) and its subsidiaries; Shell Petroleum Development Company (SPDC) with particular reference to the WAGP (West Africa Gas Pipeline) Gas Supply Project for SPDC in which the company achieved over 1,000,000(LTI) Lost Time Injury Free Man hours; Chevron Nigeria Limited, Mobil Oil Producing

Lee Engineering: 30 Years of Excellent Service in Nigeria

Company, Seplat Petroleum Development Company, Lafarge Cement, to mention but a few. The testimonies from these world class companies had been that of praises and commendations.

Dr Ikpea, an ardent campaigner and champion of local content, said the vision and passion that have been the guiding principles of the company in the last 30 years have remained unchanged. He added "our motivation has been focused on achieving a better and more efficient service to our numerous clients prioritized with safety, quality and timely delivery".

Lee Engineering, an ISO 9001:2015 certified company, has its head office in Lagos, with branch offices in Port Harcourt and Warri, with international offices in the UK, Italy and the USA. The company also boasts of a multi-million dollars ultra-modern manufacturing and fabrication workshop in Warri, Delta State, with state-of-the-art equipment, modern oil and gas field engineering and construction tools, with the capability to fabricate pressure vessels, heat exchangers, process modules, skids, tanks and flare systems. This facility has the advantage to create employment for Nigerians, earn foreign exchange for the nation as well as secure foreign technology transfer to Nigeria,

In 2007, the company expanded its scope to include operations and maintenance. Today, Lee Engineering is a leading operations and maintenance company, and achieved optimal performance in the operations and maintenance of OML 34, with increasing production capacity of gas from 270 mmscf/day to 360 mmscf/day from 1st of January 2013 to 31st December 2016 as well as other areas of its operations. The company today is a leading EPCOM company.

> *Lee Engineering is instrumental to the government drive in achieving gas to electricity*

In the last three decades of its existence, Lee Engineering has established excellent working and very cordial relationships with major Original Equipment Manufacturers (OEMs) in Europe such as VDL KTI Belgium; ABB SACE, Italy; Emerson Process Management SRL, Italy; Peerless Europe Ltd, UK; Frames Process Systems International BV, Netherlands; and in the United States of America with ABB Incorporation, Houston Texas. We are the Nigerian Representative and sole distributor to Solar Turbines Inc. USA (A Caterpillar Company) for oil and gas business.

Today, Lee Engineering is instrumental to the government drive in achieving gas to electricity to the nation with her involvement in the very important critical gas projects in line with the federal government gas Master plan. These projects include the Gbaran Nodal Gas Compression project and the Assa North Ohaji Gas Project.

The company has achieved its present status and recognition by maintaining its very core values of integrity, quality, respect, innovation, customers satisfaction, safety and team work.

Lee Engineering and Construction Company Limited is an indigenous company with global expertise.

Ikpea with President Muhammadu Buhari

Dr. Louis Brown Ogbeifun

> *The industry witnessed regulatory uncertainties, policy somersaults, rent-seeking focused sector governance, investors' apathy, and lost opportunities*

The transformation of the oil and gas industry became necessary because of the obsolete Petroleum Act of 1969, which did not support efficient industry governance, strong sector regulation, and unfortunately, aided inefficiencies in the oil and sector. That is besides a growing spate of unhappy relationships between three critical stakeholders (the government, the oil-producing communities, and the oil and gas companies). In addition, the industry witnessed regulatory uncertainties, policy somersaults, rent-seeking focused sector governance, investors' apathy, and lost opportunities because of delays in reforming the sector. For example, the Nigerian Extractive Industries Transparency Initiative (NEITI) stated that between 2011 and 2016, Nigeria lost $250 billion due to regulatory uncertainties and investors' anticipatory inputs.

In a bid to reverse the adverse effects of the obsolete law, President Obasanjo's administration emplaced the Oil and Gas Implementation Committee (OGIC) on April 25, 2000. The OGIC was to transform and reposition the industry for optimum productivity. The recommendations gave rise to the 2004 national oil policy, which later metamorphosed into the Petroleum Industry Bill (PIB) introduced in 2008 by the Umaru Yar'adua administration. After almost twenty years of unsuccessful PIB journey, it was enacted as the PIA in 2021 by President Muhammadu Buhari. There is no gainsaying that President Muhammadu Buhari deserves the accolades for having the courage to pass the PIA in 2021 in the face of several oppositions, challenges, sabotage, and lack of political will to transform the sector between 2000 and 2020.

The PIA led to the creation of regulatory frameworks with clear and non-overlapping mandates, creating legal frameworks for a conducive

The Petroleum Industry Act (PIA) 2021: A Practioner's Perspective

environment for the growth and development of the oil and gas sector.

Section 240 (2) specified the payment of 3% of actual annual operating expenses of an oil company to be paid into the Host Communities Development Trust Fund (HCDTF). The prescription is the first-time communities will have direct access to such funds. However, it is still a vexed issue to the people of the Niger Delta region.

Unlocking the investment opportunities, which would help the NNPC, now registered under CAMA regulations, is expected to run like every other commercial entity. It will no longer depend on the government's funding for its operations.

The Act repealed the Petroleum Profit Tax (PPT) and replaced it with the Hydrocarbon Tax (HT) - Section 260 of the Act, levying on profits of the operating oil and gas companies upstream. The tax shall be only on crude oil, condensates, and associated gas in the natural gas liquids. It also has provisions for minimum tax payments, deductible, and non-deductible items that are chargeable alongside the Company Income Tax (CIT), and the companies will be involved in self-accounting assessments before submission to the Federal Inland Revenue Service

The game-changer for me has gas as the bedrock of Nigeria's energy transition. First, is the drive towards using Compressed Natural Gas (CNG) as an alternative fuel for automobiles. Gas is seemingly cleaner and, therefore, will reduce ecological damage to our environment.

> ***"Nigeria lost $250 billion due to regulatory uncertainties and investors' anticipatory inputs.***

Secondly, removing the monopolization of gas pipeline networks would open up the pathways for investment in gas transportation and third-party linkages. To that effect, Sections 161-163 put the vested powers on 'The Authority to grant third party access to pipeline transportation network.

Thirdly, unlike previous legislations, the PIA in sections 52 and 104 was categorical with the source of funding of the Midstream and Downstream Gas Infrastructure Fund, which should not exceed 0.5% of the wholesale price of petroleum products sold and the natural gas produced in the country. Sections 142-145, 146-147, 148-152, 161-163, and 167 modalities for doing wholesale, retailing, distribution especially for strategic sector respectively.

Fourthly, worthy of emphasis is Section 110, which empowers the Upstream Regulatory Commission to deliver gas to the local market. Failure to do this shall attract sanctions.

Despite the identified plausible areas highlighted above, except we overcome the Host Community Trust Fund challenges, deal with vandalism of petroleum products pipelines, crude oil theft, illegal bunkering, the artisanal refining that is causing more damages to the environment and health of Niger Deltans, it might take a little longer to get investors to invest in the mid/downstream sectors in the Niger Delta.

Dr. Louis Brown Ogbeifun was 10th President of PENGASSAN, Convener of Save Nigeria's Oil and Gas Industry, Foundation Member, NSWG-NEITI, Founder, African Initiative For Transparency, Accountability and Responsible Leadership (AfriTAL), former President, the Institute of Chartered Mediators and Conciliation of Nigeria (ICMC), CEDR Accredited Mediator, UK, Certified Professional in Managing Workplace Conflict, Mediation Training Institute (MTI), USA, Member, the Panel of Neutrals, Edo State Multi Door Court House, Benin City.

Ogbeifun

Engr. Justice Derefaka

> Most of the gas produced in Nigeria are associated and derived whilst in the conscious pursuit of oil exploration and production

Energy has rarely been higher up the agenda than it is at the moment. The price of oil seems to hit the headlines every day and analysts, policymakers, politicians, journalists, and the man at the petrol station are all expressing opinions and making predictions about what the price will be next week, next month and beyond. However, I will not be following them down that path. I will instead take a swipe at a topic I coined.

The Federal Government of Nigeria ("FGN") believes that gas would become an ever-increasing element of the global energy mix over the next two to three decades due to its abundance, environmental acceptability, and affordability. This is good for the environment, the Nigerian economy, and the gas industry. In this piece, Engr Derefaka describes what the industry, policymakers and other critical stakeholders must do to ensure that gas becomes Nigeria's, Africa's, and the world's primary energy source.

Let me start by saying that Nigeria is a country of gas with some quantities of oil. This assertion stems boldly from the fact that till date, most of the gas produced in Nigeria are associated and derived whilst in the conscious pursuit of oil exploration and production. Nonetheless, the produced volumes are very competitive. Nigeria has approximately 206.53TCF of gas

'Changing in a Time of Change with Natural Gas at the Heart of a Sustainable Energy Future for Nigeria'

proven and potential upside of 600TCF of gas, the most extensive in Africa, and in the top 10 globally. The benefits of natural gas are well documented. It is flexible. Its supply is abundant and diverse. Its range of uses is still expanding. And it makes economic sense.

The current situation of the oil and gas business can be summarized as follows: "Prospects good, obstacles considerable." There is no doubt, and it is no longer debatable, that Nigeria and the rest of the world will significantly require more energy, the majority of which will be supplied by fossil fuels for the foreseeable future. From projections made, demand is likely to increase considerably more over the first three decades of this century than it did over the previous 30 years. To ensure these supplies, the Nigerian Petroleum Industry is head on by taking advantage of maturing reserves, develop new resources in more difficult conditions and greatly expand gas delivery chains. Meeting changing patterns of demand will also need huge investment in delivery chains and downstream infrastructure. This will be both a challenge and opportunity – enough. But society needs us to help find solutions to intractable environmental challenges. Simultaneously, oil and gas companies are expected by consumers/customers and society to help find solutions to intractable environmental challenges. Effective carbon solutions will be needed, if the world is to continue enjoying the benefits of efficient fossil fuels like gas. Doing all these will depend on maintaining the pace of investments in new capacities where the industry has a vital role on delivering the benefits of innovation, and on integrating local and global strengths particularly those of national and international companies to drive advances

> ***"Nigeria and the rest of the world will significantly require more energy***

LNG corporate head office

everywhere.

As a result, the industry's commercial prospects appear to be promising. This is not a 'sunset' industry by any means. Energy will continue to be a vital and active industrial sector. However, delivering the energy that people require is a major difficulty. Many issues confront the industry, but none is more pressing than climate change. My Principal - The Honorable Minister of State for Petroleum Resources – H.E Chief Timipre Sylva has stated FG's position in regard to climate change vis-à-vis "… Nigeria requires fossil fuel as its baseload energy source…only renewable energy as the sole pathway to energy transition is a source of concern for African countries that are still working to achieve baseload industrialization, address energy poverty and ensure reliable power supply." "…we reject the concept of a single pathway to the energy transition. Indeed, we prefer the concept of 'just' energy transition which takes into cognizance the specific circumstances of each nation in developing the energy transition pathway that best achieves the environmental, social, political and economic objectives of the transition in that specific nation." "Multiple pathways to the energy transition should and must exist in order to ensure that no country is left behind in the process of achieving net-zero by 2050."

> “
> ***Many issues confront the industry, but none is more pressing than climate change***

As time flies, some things change, and some things stay the same. On the plus side, Nigeria's petroleum industry is adapting to changing circumstances by putting in place strategies to help it flourish, whatever the future holds. Although there is no longer complete agreement on the Paris Agreement, no other problem has the ability to disrupt our sector on such a deep and basic level. In response, I believe we must evolve, and that is exactly what our sector is doing with the Petroleum Industry Act (PIA), which was signed into law by President Muhammadu Buhari in 2021. The PIA will transform Nigeria's petroleum industry into a commercial hub of business opportunities. One thing is certain: the PIA has now achieved a balance between urgent revenue demands and the necessity for long-term investment in the industry. This was especially important given that Nigeria received only 4% of the $70 billion invested in Africa's oil and gas industry between 2015 and 2019, despite the fact that it is the continent's largest producer and has the highest reserves. According to the National Bureau of Statistics, the industry received only $53.5 million, or 0.55 percent, of Nigeria's total investment of $9.680 billion in 2020.

Let's get back to our subject i.e., "… a Time Of Change With Natural Gas At The Heart Of A Sustainable Energy Future For Nigeria". We know that however well-documented the benefits of natural gas may be, a golden age of gas is not a given. The natural gas industry, argues this article, will have to work hard to achieve it.

At the virtual Nigeria International Petroleum Summit (NIPS) 2021 Pre-Summit Conference and official launch of the *#DecadeofGas*, President Muhammadu Buhari said: "When we declared 2020 as "The Year of Gas" in Nigeria, it was a bold statement to demonstrate our Administration's resolve that gas development and utilization should be a national priority. Now we're going a step further to dedicate this decade to industrializing Nigeria using gas." "…The rising global demand for cleaner energy sources has offered Nigeria an opportunity to exploit gas resources for the good of the country. We intend to seize this opportunity…" " To stimulate economic growth, further improve the energy mix, drive investments, and provide much-needed jobs for our citizens, gas development and utilization must be a national priority" "The major objective of this administration is to transform Nigeria into an industrialized nation, with gas playing a major role." "We must deal with the energy poverty in the country. We must find a way to unlock the natural gas potential of Nigeria, and drag over 120 million of our people out of energy poverty"

The *#DecadeOfGas* is a decade of elimination of gas flaring, a decade of more domestic Liquefied Petroleum Gas (LPG), and a decade of fully gas-powered economy and LNG export. Gas is power and energy. It is transport, as in Auto-gas. It is petrochemicals-feed stock. Gas is manufacturing and industries, it is also food, from fertilizers. Lending credence to Mr. Presidents declaration of the decade of gas initiative, H.E. Joseph McMonigle (the International Energy Forum Secretary General) noted at a conference that: "… As a cleaner alternative to other fossil fuels, natural gas offers the developing world a real chance to meet the twin goals of reducing emissions and widening popular access to power. Nowhere is this more relevant than Nigeria, Africa's most populous nation, which has had abundant gas resources but has also faced challenges on the power side of the equation,"

> **"** ***At least $40 billion in Foreign Direct Investments (FDI) is necessary to achieve the decade of gas***

In terms of investment, at least $40 billion in Foreign Direct Investments (FDI) is necessary to achieve the decade of gas. This investment will be used in the upstream, midstream, and downstream industries. Support for gas-based industries is required to incentivize this investment target, i.e., investing in gas-based industries that produce petrochemicals like fertilizer is a good idea. They have a large need for gas and a ready market in Nigeria's agricultural industry, which employs four out of ten Nigerians and contributes significantly to the country's GDP. The availability of fertilizer will increase agricultural productivity as a result of such focused investments. Low fertilizer application has been identified as a major contributor to low yield. Nigeria used roughly 6 kilograms of

fertilizer per acre in 2016, according to the World Bank, compared to a global average of 140 kilograms in the same year.

Gas is what Nigeria, and the world needs as we face up to a period of profound change. Gas is now everything for Nigeria. The FGN is using what we have to get what we want. Saudi Arabia and Dubai used oil to move their economies to becoming one of the best in the world. Qatar has used gas to transform from a fishing economy to global gas giant. Trinidad and Tobago ("T&T") is a good example of a country that has accomplished much with its gas resources. With a small population of circa 1.4 million and only 11 TCF of proven gas reserves then, the country has developed a globally competitive petrochemicals industry. T&T is the world's largest exporter of ammonia and second largest exporter of methanol leading to that sector contributing significantly to the country's GDP.

Nigeria has both oil and gas, and with our significant larger gas reserves, we have the potential to achieve even bigger success compared to T&T. Domestic utilisation is rightly the focus and should in no way hamper exports via LNG. Domestic utilisation is the only way to maximize value and improve the economy. As a nation we are on course as we have sufficient capacity to do both The vision of the gas policy is to ensure that gas development is undertaken in accordance with Nigeria's socio-economic development priorities.

I believe the gas sector has never been in a better shape: it is as strong and dynamic as it has ever been. I also feel that our industry is experiencing unprecedented innovation, which is resulting in new sources of supply... and demand for gas. Let me begin by explaining why I believe the gas business is strong. At present consumption rates, the world has enough gas to last 250 years. Our business has been changed by the gas revolution, which has doubled the amount of economically recoverable gas globally. For instance, at current consumption rates, the United States has enough natural gas to last nearly 100 years. As the amounts of gas parallel: expanding domestic production, pipeline and LNG exports, gas will play an increasingly essential role in connecting supply and demand centers. This diversification of gas suppliers will improve supply security and lead to a bigger gas participation in the energy mix.

> ***Government cannot do it all alone, we need to collaborate across broad spectrum and dimensions***

Government cannot do it all alone, we need to collaborate across broad spectrum and dimensions, i.e., government and industry to make this happen. In recognition of the Decade of Gas Initiative, the recently passed PIA2021 has kick-started tremendous changes in the Industry. It has also created a critical foundation for the much-desired industrialization and economic development of this Country. Generous incentives to enable development, distribution, penetration, and utilisation of gas - Incentivizes entry into the midstream, especially for pipelines with an additional 5-year tax holiday for investment in gas pipelines.

As you may be aware, the PIA2021 was part of the FGN's resolve and commitment to building a competitive and resilient petroleum industry that will attract investment, improve revenue base, create jobs, and support the economic diversification agenda. The PIA2021 became necessary because until late Nigeria runs a petroleum industry that is governed largely by laws enacted over 50 years ago such as the principal legislation; the Petroleum Act of 1969 and other outmoded legislations.

The PIA2021 is a supply-side enabler, capable of provoking and triggering commercial interests and investments in gas utilisation. It treats gas as a stand-alone commodity, Plus, it creates a distinct midstream decoupled from upstream gas. The PIA2021 will also promote gas distribution pipelines in gas-scarce areas, delivering massive volumes of gas daily to industrial demand centres and commercial clusters, and bolstered by a thriving and cost-effective virtual pipeline delivery system that enables flexible, remote, and micro-volume delivery to gas consumers across the country.

It is no exaggeration to say that the ability of this industry to meet the world's energy needs without damaging the environment will determine the trajectory of the twenty-first century. These difficulties present numerous business opportunities. However, we must not underestimate the difficulty of bringing dreams become reality. To do so, it is necessary to (a) maintain and even surpass the current rate of investment, (b) develop creative solutions and provide their advantages, and (c) combine local and global strengths to propel progress everywhere. I believe that our industry, particularly in Nigeria, has the commitment and inventiveness to address such problems.

And this gets me to the last point I made at the beginning. Something

> **"*The energy situation is rapidly shifting. As a result, we must change, because change is what the world requires***

I sincerely hope and believe will never change. It's the pride I have for what we do as an industry, and I hope we all have. Simply said, our goods make people's lives better. However, the energy situation is rapidly shifting. As a result, we must change, because change is what the world requires. We must maintain our financial stability in order to make that adjustment. And we must keep pace with society and make a genuine difference in people's lives, so that the pride we feel in what we do is justified.

The industry must work with governments to highlight the benefits of gas in delivering a sustainable energy future, as well as to encourage the implementation of regulations and policies that will give gas a level playing field on which to compete and claim its rightful place as the world's leading energy source. We continue to develop as an industry, delivering new sources of supply and new sources of demand that provide our consumers with reliable, affordable, and environmentally sustainable choices to meet their energy needs.

So, while this is a time of change and challenge for everyone, especially here in Nigeria, the energy industry in Nigeria has a tremendous strength and depth of experience that will guarantee that it adapts successfully to that transition. While the future remains unpredictable, one thing is certain: energy will stay at the center of policy debates. It is unavoidable and non-negotiable.

Engr. Justice O. Derefaka is the Technical Adviser (TA) on Gas Business & Policy Implementation to the Honorable Minister of State, Petroleum Resources. He is the pioneer Program Manager (PM) of the Nigerian Gas Flare Commercialization Programme (NGFCP); and Chairman – Capacity Building Development (CBD) Subcommittee as well as Program Manager (PM) – AutoGas Subcommittee, of the National Gas Expansion Program (NGEP) in the office of the Honorable Minister of State for Petroleum Resources.

Dr. Ishaku Abner

"All investments required to separate oil from gas from reserves and convert it into suitable products is considered part of oil field development

Gas Potential

Nigeria is heavily endowed with Natural Gas Resource with a proven reserves of 203.16 trillion cubic feet (tcf), but it is underutilized and flared. While the challenges are daunting, the need for increased energy generation, industrial production, and household consumption provides an opportunity to capitalize on the country's natural gas potentials.

In order to mitigate the effects of volatile oil prices and reduce reliance on oil, key investments must be directed toward developing Liquefied Natural Gas (LNG) infrastructure to encourage local industry adoption. Despite having over 203tcf of gas reserves, Nigeria barely produces 8.3bsfcd of gas, of which the country exports 41% of its gas; 31% is used in oil fields and plants for fuel, gas lift, and re-injection; 18% is used in the domestic market for power; and about 10% is flared.

Gas Investment Opportunities

I. Gas Exploitation Upstream

All investments required to separate oil from gas from reserves and convert it into suitable products is considered part of oil field development. Capital investment facilities to deliver Associated Gas in usable form at utilization or transfer points will be treated as part of the capital investment for oil development for fiscal purposes. The provisions of the recently enacted Petroleum Industry Act (PIA) will apply to capital allowances, operating expenses, and the basis for assessment.

Upstream commercial opportunities for gas include:

i. Surveying - tropical and planimetric; and sea bottom survey.

ii. Civil Works- mud pit construction, concrete works at rig sites.

iii. Seismic data acquisition and interpretation.

iv. Drilling operations.

v. Pipelining

Gas Utilization Mid-Stream & Downstream

Exploring the Huge Gas Potential in Nigeria

The Government has outlined incentives to potential investors for encouragement of exploitation and utilization of Associated Gas for commercial purposes, these include:

1. Companies engaged in gas utilization are to be subjected to the provisions of the Companies Income Tax Act (CITA).
2. An initial tax-free period of three years renewable for an additional two years.
3. Accelerated Capital Allowance after the tax-free period in the form of 90% with 10% retention in the books for plant and machinery.
4. 15% investment capital allowance which shall not reduce the value of the asset.
5. All gas developmental projects, including those engaged in power generation, liquid plants, fertiliser plants, gas distribution and transmission pipelines are to be taxed under the provisions of the Companies Income Tax Act (CITA) and not the Petroleum Profit Tax.
6. All fiscal incentives under the gas utilisation downstream operations are to be extended to industrial projects that use gas i.e. power plants, gas to liquids plants, fertiliser plants and gas distribution/ transmission plants.
7. Tax holiday is to be extended from three to five years.

> ***Tax holiday is to be extended from three to five years***

Investment opportunities midstream and downstream include:

- Domestic Production and Marketing of Liquefied Natural Gas (LPG).
- Domestic Manufacturing of LPG cylinders, valves and regulators, installation of filling plants, retail distribution and development of simple, flexible and less expensive gas burners to encourage the use of gas instead of wood.
- Establishment of processing plants and industries for the production of refined mineral oil, petroleum jelly, grease and bituminous based water/damp proof building materials e.g. roofing sheets, floor tiles, tarpaulin.
- Building of asphalt storage, packaging and blending that may export these products.
- Establishment of chemical industries e.g. distillation units for the production of Naphtha and other special boiling point solvents used in food processing.

- Linear Alkyl Benzene, Carbon Black and Polypropylene producing industries.
- LNG Projects.
- Small-scale production of chemicals and solvents e.g. chlorinated ethane, Formaldehyde, Acetylene etc. from natural gas.

Gas Expansion Programme Drive

The Ministry of Petroleum Resources (MPR) has commenced the implementation of carefully conceived initiatives under the National Gas Expansion Program (NGEP) to foster efficiency and attract investments along the gas value chain as embedded in the Government's policy aspirations for the Gas sector as part of the Federal Government's ongoing strategy to reposition the oil and gas industry. The government's policy initiative seeks to define and establish the framework required to transition Nigeria from a crude oil export-based economy to an attractive oil and gas-based industrial economy. The current push to develop Nigeria's gas reserves is consistent with the goals of the 2017 National Gas Policy, which is to develop Nigeria as an attractive gas-based industrial nation, with a primary focus on meeting domestic gas demand and developing a significant presence in international markets.

> “
> ***The framework provides a N250 billion intervention facility to encourage investment in the gas value chain***

A. NGEP Intervention Facility

The Ministry of Petroleum Resources and the Central Bank of Nigeria (CBN) recently issued a Framework for the Implementation of Intervention Facility for the National Gas Expansion Programme to supplement the Ministry's efforts to improve the viability of the Nigerian gas sector and encourage private investment in the sector. The framework provides a N250 billion intervention facility to encourage investment in the gas value chain, which is one of Nigeria's critical sectors. The facility's goals include improving access to finance, stimulating investments in gas infrastructure development, and ultimately increasing employment.

Government Guarantees (Assurance of Gas Feedstock) to Gas Bas Industries & Processing plants and Benefits of the PIA

The Ministry of Petroleum in line with the Executive Order – 001 of the Federal Government of Nigeria supports intending investors in their efforts to secure feedstock guarantee for gas supply with the NNPC.

Dr. Ishaku P. ABNER, Technical Adviser to HMSPR on Mid/ Downstream, Team Lead CNG on NGEP, Office of the Honourable Minister of State, Petroleum Resources, 11th Floor, Block D, NNPC Towers, Abuja

NIGERIAN CONTENT DEVELOPMENT AND MONITORING BOARD

NIGERIAN CONTENT TOWER, OX-BOW LAKE, SWALI, YENAGOA, BAYELSA STATE

NIGERIAN CONTENT INTERVENTION (NCI) FUND REPORT CARD

Initial NCI Fund size in 2017	US$200m
Initial Products · Manufacturing · Loan Refinancing · Asset Acquisition	Obligor Limit: US$10m Interest Rate: 8%
Contract Financing	Obligor Limit: US$5m Interest Rate: 8%
Community Contractors Financing	Obligor Limit: ₦20m Interest Rate: 5%
18 months COVID-19 palliative: April 1, 2020 - Sept 30, 2031	* Interest rate reduced from 8% to 6% * Tenor of running loans extended by 18 months * Moratorium on principal repayment for maximum of 18 months
· Loan Disbursement · Loan Repayment	· 100% · 98 %
Increase of Fund Size in June 2020	US$200m to US$350m
New Products · Women in Oil and Gas · Working Capital (PETAN)	· US$20m · US$30m
Total Fund Size	US$350m

Dr Mohammed Sanusi Barkindo,
OPEC Secretary General

> *The old generation that saw how OPEC built its might in the 1970s and then lost it all in the 1980s is the last generation of giants*

With the departure of Nigeria's Mohammed Barkindo, the age of the giants heading the secretariat of the Organization of the Petroleum Exporting Countries (OPEC) will come to an end.

In six months, Kuwaiti Faisal Al-Ghais will replace Barkindo and manage OPEC's affairs for another six years, till the middle of 2028. By that time, all those giants who were involved with the Vienna-based organization in the 1980s will no longer be in a condition to lead it.

Therefore, the arrival of Al-Ghais will signal a generational change — the end of an era and the beginning of a new one.

The old generation that saw how OPEC built its might in the 1970s and then lost it all in the 1980s is the last generation of giants as they were the last to work with ministers like Saudi Ahmed Zaki Yamani and Kuwait's Sheikh Ali Al-Khalifa.

That generation began their careers when OPEC was shaking the world's politics — when meetings dragged on for days and sometimes weeks.

It was when Iran and Iraq entered a war for eight years during which an Iranian oil minister, Mohammed Javad Tondguyan, was captured by Iraqi forces near Abdan. The Iranian delegation that attended OPEC meetings kept his seat empty, but left Tondguyan's portrait in his place and refused to take decisions until he returned.

Those were the golden, but abnormal days of OPEC, when it controlled more than half of the world's production and its member countries' fields were young enough to push oil with natural lift while US wells were running on submersible pumps. Those were the days when OPEC controlled the world's spare capacity and there was no alternative energy. It was also the period of mismanagement of oil resources and petrodollars, when

Barkindo: The Last of OPEC Giants

countries thought about spending as if there was no tomorrow.

Qatar's former energy minister Abdullah Al-Attiyah, Abu Hamad, used to describe his involvement in that era by saying: "I used to sit not in the front line or the second line behind the ministers, but in the third line. When Yamani and the other ministers entered the meeting room, I used to see them walking in front of me like giants."

To that era Barkindo, Abu Sadique, belonged. He was a young Nigerian assisting the late minister Rilwanu Lukman, who became secretary general between 1995 and 2000. Oil veteran Mike Rothman recalled the age when Lukman, along with Indonesia's Subroto, who also headed OPEC from 1988 to 1994, and Algeria's Sadek Boussena, were called "the three wise men of OPEC."

Top but tough job

The secretary general's job was not easy back then. Many countries were either at war or their representatives avoided speaking to one another. Wise countries or OPEC oil price doves like Saudi Arabia were pushing for reasonable oil prices, while price hawks such as Venezuela and Iran called for higher prices. And when the gap widened, it was the job of the OPEC chief to bring everyone together. Sometimes the secretary general would need to circle the globe just to discuss price matters and get consent on many issues — often trivial — such as the host country for a summit or meeting.

Barkindo saw all this at an early point in his career. He learned everything from his mentor Lukman, including diplomatic skills, when to speak and how to spot friend from foe. Sometimes it could get really tough. An OPEC head should be neutral, but it is very easy for any secretary general to be accused of conflict of interest if he walks the lines of his country. At the same time, he can be blamed by his country for not defending its interests.

Times have changed now. There are no longer those long meetings and political battles. The big change came when Ali Al-Naimi, who headed the Saudi Ministry of Petroleum, brought to OPEC the discipline he had learned at Aramco.

It was Al-Naimi who started the de-politicization of OPEC that was accelerated later by his successor, Khalid Al-Falih. This process is now advanced with current Minister of Energy Prince Abdulaziz bin Salman, another OPEC giant who began his career with

> ***"He was a young Nigerian assisting the late minister Rilwanu Lukman, who became secretary general between 1995 and 2000***

Barkindo

Barkindo and Sylva, during a courtesy visit to the Minister in Abuja

the organization around 1987.

But these changes do not mean that OPEC's top job has lost its glamour. The circumstances have changed and it has become much easier now that OPEC and its allies in OPEC+ run the show. Yet politics will always remain, and representatives of OPEC countries at the secretariat must be managed well as they represent different backgrounds, cultures and interests.

The research role of OPEC now is eclipsing other traditional positions and this market orientation and understanding of the oil trading world is what makes the presence of Al-Ghais essential for the transformation of the secretariat into a real rival of the IEA.

> ***The circumstances have changed and it has become much easier now that OPEC and its allies in OPEC+ run the show***

Who's Barkindo?

A devout Muslim from Yola, the capital and largest city of Adamawa State in north-eastern Nigeria, Barkindo is greatly influenced by the traditions and core values of Islam.

For a man with great accomplishments in his career and a high level of education, his humble character is unmatched by any other OPEC official I have seen. Abu Sadique was very down to earth and that is, again, a reflection of his beliefs that God created us all equal and no human should disdain

another.

Maybe that is why he surrounds himself with the poor when he visits his home in Yola or the cities of Islam's birth. In fact, he always kept reminding himself that it is a religious obligation for the wealthy to take care of the needy.

His appearance and dress is also shaped by his Islamic roots, which also helped to form his view of the world. He sees divine intervention in everything that happens around him, including the fate and affairs of OPEC — and whenever OPEC strikes a good deal, he attributes the success to divine intervention.

> *He sees divine intervention in everything that happens around him, including the fate and affairs of OPEC*

Truly, it seems that God chose Barkindo to lead OPEC during the historical turning point it went through during his tenure. For the first time in its history, OPEC has been working side by side with non-OPEC members to restore balance in the oil markets. His calm nature and aptitude for listening carefully to, and learning from, others was necessary. He respected all member nations and strongly believed that the success of OPEC depends on its charter, which gives each country equal voting rights.

Source: *Arab News*

Profile of HE Mohammed S. Barkindo

Name: **Mohammad Sanusi Barkindo**
Date of birth: **20 April 1959**
Place of birth: **Yola, Adamawa State**
Marital status: **Married, with children**

Education: BSc (Hons) in Political Science, Ahmadu Bello University, Zaria, Kaduna State, Nigeria (1981)
Post Graduate Diploma in Petroleum Economics, Oxford, United Kingdom (1988)
MBA in Finance and Banking, Washington University, United States (1991)
Fellow, George Mason University, Fairfax VA, US (2013–16)
Hon Doctorate Degree in Science (Honoris Causa), Modibbo Adama, Federal University of Technology, Yola

Posts held: 1982–85
- Worked with Nigerian Mining Corporation, Jos, up to the Level of Principal Administrative Officer, Liaison Office, Lagos 1984–86
- Special Assistant to the Minister of Mines, Power and Steel, Lagos HE Mohammad Sanusi Barkindo Secretary General of OPEC 1986–89
- Special Assistant to the Minister of Petroleum Resources and Head, Office of the Chairman of the NNPC Board, Lagos 1990
- Served (on secondment) as Special Assistant to the Minister of Foreign Affairs, Lagos (From 1992)

Served in various capacities in the Nigerian National Petroleum Corporation (NNPC) Group spanning some 24 years, namely:
- Head, International Investments, Investment Division, NNPC Headquarters (1992)
- Head, International Trade, NNPC London
- President Duke Oil Inc.
- Chairman NAPOIL (1993–94)
- General Manager, NNPC London Office (1993–97)
- Managing Director/Chief Executive, HYSON/CALSON — an international trading arm of the NNPC (1998–2003)
- Group General Manager Investments, NNPC Headquarters (2003–04)
- Deputy Managing Director/Chief Executive, NLNG (2005)
- In 2007, elevated to the office of Coordinator Special Projects, NNPC
- Between 2007 and 2009, oversaw all Federal Government projects vested in the NNPC as Coordinator
- Participated as a member of the Oil and Gas Industry Reform Implementation Committee (OGIC) that produced the original draft Petroleum Industrial Bill (2008)
- Led the Transformation Programme of the NNPC as enshrined in the Oil and Gas Industry Reform Implementation Committee Report (2008)
- Between January 2009 and April 2010, served as Group Managing Director/ Chief Executive Officer of the NNPC
- Special Assistant to the Minister of Petroleum and Energy (at various times)
- Served on several Boards of NNPC investee companies, such as banks, oil service companies, international trading companies etc. 2014–16
- Fellowship Programme at George Mason University, Fairfax VA, USA, undertaking research in the field of Energy, Climate Change and Sustainable Development OPEC positions held: 1986–2010
- Nigerian Delegate to OPEC Ministerial Conferences 1993–2008
- Served as Nigeria's National Representative on OPEC's Economic Commission Board (ECB) Jan–Dec 2006
- Served as Acting for the OPEC Secretary General, Chaired ECB 2009–10 Nigeria's Governor for OPEC
- Served as Adhoc OPEC Governor at various times

Other activities:
- Served as Chairman of the OPEC Task Force of the 15th Session of the United Nations Commission on Sustainable Development (UNCSD)
- Spearheaded OPEC/European Union dialogue on Energy Markets, Taxation and Environment An architect of the first Long Term Strategy (LTS) at OPEC
- Founder delegate to the formation of the African Petroleum Producers Association (APPA) in Algiers, Algeria, in 1986.
- Delegate to APPA Ministerial Conferences from 1987 to 2010
- Pioneer member of the International Energy Forum (IEF), Riyadh, Saudi Arabia. Has helped strengthen and consolidate OPEC/non-OPEC cooperation and dialogue

Hobbies:
Reading, charity work, the environment, soccer
Source: ***www.opec.org***

OPEC Scribe

Honourable Minister of State for Petroleum Resources, Chief Timipre Sylva (4th from left) supervising the handing and taking over of the Chief Executive Officers of the Nigeria Upstream Petroleum Regulatory Commission and the Midtream & Downstream Regulatory Authority, in Abuja.

Minister of State for Petroleum Resources, Chief Timipre Sylva during a visit to the traditonal ruler of Bonny Island, Rivers State.

Minister of State for Petroleum Resources, Chief Timipre Sylva during a visit by the Polish Ambassador to Nigeria, Joanna Tarnawska

Minister of State for Petroleum Resources with the Minister of Mines and Hydrocarbons, Obiang Lima during a courtesy visit, in Abuja.

Honourable Minister of State for Petroleum Resources, Chief Timipre Sylva with his Ex-Chief of Staff, Engr. Moses Olamide, at his retirement party, in Abuja.

Minister of State for Petroleum Resources, Chief Timipre Sylva (6th from left) and Chief Justice of Nigeria, Hon. Justice Tanko Muhammed (5th from left) and other Judges at Petroleum Technological Development Fund (PTDF) Conference for Judges, in Abuja.

Minister of State for Petroleum Resources, Chief Timipre Sylva tours the AITEO oil spill site in Basambiri, Bayelsa State.

Minister of State for Petroleum Resources, Chief Timipre Sylva in a handshake with Emir of Azare, Alhaji Muhammadu Kabir Umar

Senegalese Minister of Petroleum and Energy, Mrs. Aissatou Sophie Gladima (2nd left) with Minister of State for Petroleum Resources, Chief Timipre Sylva (3rd left) after a bi-lateral meeting in Abuja.

Honourable Minister of State for Petroleum Resources, Chief Timipre Sylva (3rd from left) with his senior aides in his office.

Honourable Minister of State for Petroleum Resources chats with Executive Members of Independent Petroleum Producers Group, in Abuja.

Chief (Dr.) Lemon Ikpea, Chairman/CEO, Lee Engineering Group of Companies (L) with Engr. Simbi Wabote, Executive Secretary, Nigerian Content Development and Monitoring Board (NCDMB), at NIPS 2021, in Abuja

Honourable Minister of State for Petroleum Resources, Chief Timipre Sylva (4th from left) with a delegation of Nigeria Women for Gas and Green Initiative (NW4GGI), in Abuja.

Honourable Minister of State for Petroleum Resources, Chief Timipre Sylva (5th from left) with other dignitaries at the foundation laying ceremony of NLNG Train 7, in Bonny, Rivers State.

Minister of State for Petroleum Resources, Chief Timipre Sylva (3rd left) with other top industry executives during a visit to Chevron Headquarters, in Houston, Texas, USA

Minister of State for Petroleum Resources, Chief Timipre Sylva laying the foundation-stone of NLNG Train 7, in Bonny, Rivers State

Minister of State for Petroleum Resources, Chief Timipre Sylva poses with his top aides and other participants after a meeting at the World Petroleum Congress (WPC), in Houston, Texas, USA.

Minister of State for Petroleum Resources, Chief Timipre Sylva (3rd left), during a visit to Slumberger office in Houston, Texas, USA.

Chief Timipre Sylva, Minister of State for Petroleum Resources been honoured by Ijaw leaders, in Abuja.

L-R: Managing Director of Shell, Mr. Osagie Okunbor, Minister of State for Petroleum Resources, Chief Timipre Sylva and Group Managing Director, NNPC Ltd, Malam Mele Kyari, at NIPS 2021, in Abuja.

Minister of State for Petroleum Resources, Chief Timipre Sylva at a Town Hall meeting with the Permanent Secretary, Directors, top management and staff of the ministry.

Minister of State for Petroleum Resources, Chief Timipre Sylva and Dr Nasir Sani-Gwarzo, Permanent Secretary of the ministry exchanging views during the Town Hall meeting.

The Minister of State for Petroleum Resources giving his speech at the meeting.

Minister of State for Petroleum Resources, Chief Timipre Sylva and Dr Nasir Sani-Gwarzo, Permanent Secretary of the ministry listening to Engr. Justice O. Derefaka making his contribution during the meeting.

Cross section of some staff at the meeting.

Minister of State for Petroleum Resources, Chief Timipre Sylva and Dr Nasir Sani-Gwarzo with staff after the meeting.

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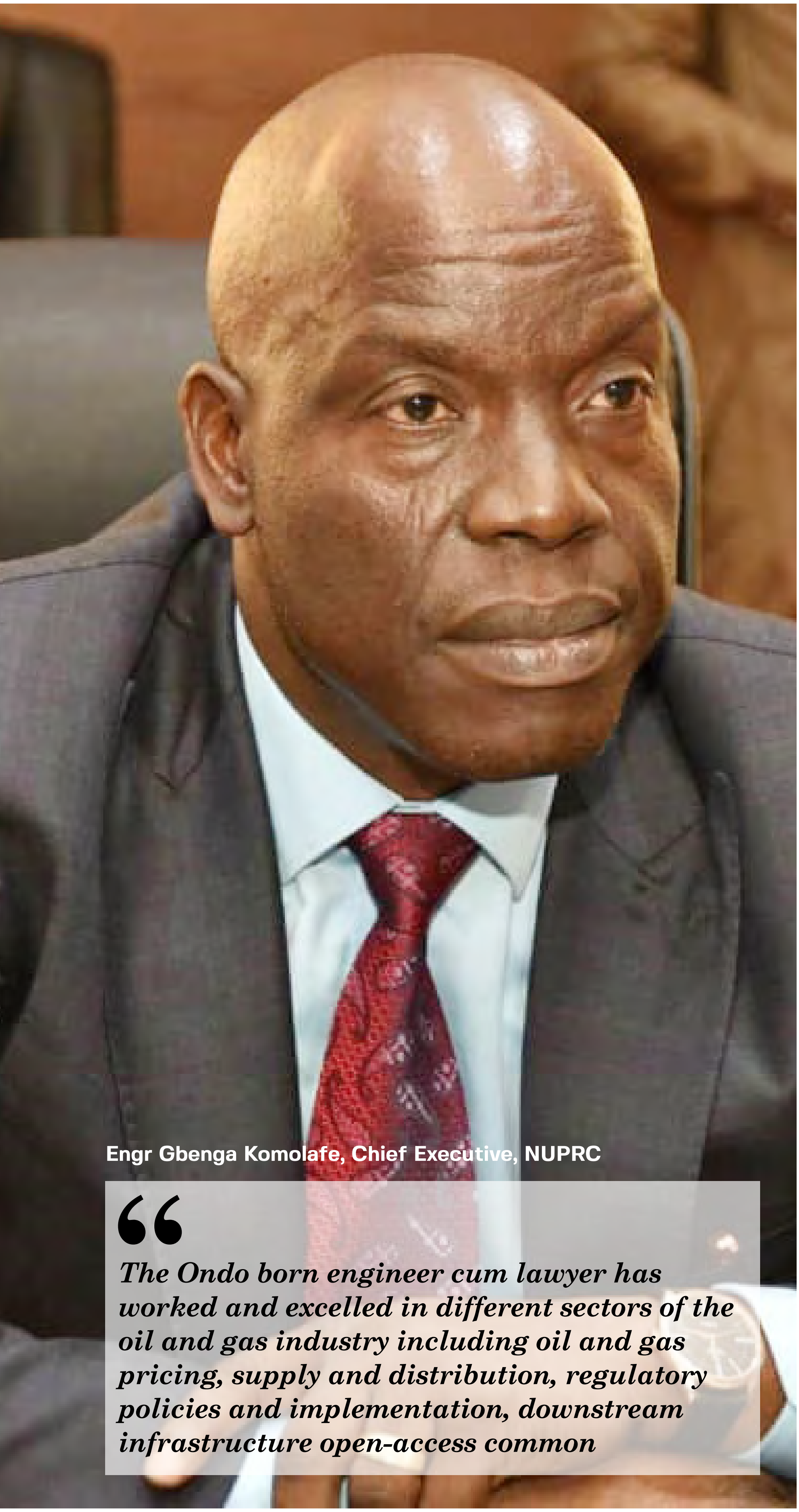

Engr Gbenga Komolafe, Chief Executive, NUPRC

> ***The Ondo born engineer cum lawyer has worked and excelled in different sectors of the oil and gas industry including oil and gas pricing, supply and distribution, regulatory policies and implementation, downstream infrastructure open-access common***

Chief Executive of the Nigerian Upstream Petroleum Regulatory Commission (NUPRC), Gbenga Komolafe can be described as a man with rounded experience. He fits into the plate of a lawyer, an engineer, a technocrat and a manager of both human and material resources.

Since coming on board as the NUPRC boss, he has maintained a high sense of commitment and operated an open-door policy, declaring on assumption of office that he will "be fair and just, as well as address every issue in the commission adequately, to spur oil and gas industry development".

True to that claim, the industry technocrat has been able to navigate the delicate path of the changing oil and gas terrain. His proactive and skilful handling of the Aiteo oil spill, in Basambiri, Bayelsa state with the guidance of the Minister of State Petroleum Resources, Chief Timipre Sylva, attests to his top-class community engagement skills.

Engr Komolafe is a team player with diverse range of robust professional backgrounds and competencies spanning from his original forte as an accomplished Engineer, to a savvy Lawyer who has held top critical management positions and responsibilities in the oil and gas industry.

The Ondo-born engineer cum lawyer has worked and excelled in different sectors of the oil and gas industry, including oil and gas pricing, supply and distribution, regulatory policies and implementation, downstream infrastructure open-access common - career policy regime framework design and implementation, national oil and gas infrastructure operations and policy articulation, federation crude oil entitlement determination, marketing and revenue accounting.

Engr Gbenga Komolafe: Nigerian 'Upstream Boss' with a Wealth of Experience

Komolafe has also been heavily involved in strategic policy formulation and implementation for about two and half decades. As an accomplished oil and gas expert, he initiated and coordinated various policies that generated and saved Nigeria billions of dollars in his various capacities and national assignments.

The NUPRC boss places premium on human capital development and he demonstrated this with the elevation of about 198 staff of the defunct Department of Petroleum Resources (DPR) who were stagnated on their position for decades. His words "human capital is critical and essential element of factors of production. Staff need to be happy before they can work, and we had assured them of the determination of the Federal Government to look after their welfare. It is only when staff are happy that we can talk of improving our crude oil production quota, which is presently below what we should be producing".

As a professional financial manager, Komolafe from the day he assumed office has been concerned about the dwindling financial state of the country and pledged to find ways of helping the Federal Government generate more money for the government for developmental projects.

"In the international community, we are at a very critical moment in the life of the industry (oil and gas). We are coming in at a point when there is the energy transition from the fossil fuels to renewable, which is competing. It is competing with the need for the nation to have increased revenue to fund our social budgeting and our critical infrastructure. So, that itself places on us a challenge that really needs us to double our efforts, roll our sleeves and begin to hit the ground running and meet the aspirations of the nation".

> *The NUPRC boss places premium on human capital development and he demonstrated this with the elevation of about 198 staff of the defunct Department of Petroleum Resources (DPR)*

With Engr Gbenga Komolafe at the helm of affairs at NUPRC is a story of a round peg in a round hole.

Komolafe whispers something of interest to Sylva

President Muhammadu Buhari

> *Nigeria has proven reserves of more than 203.16 trillion standard cubic feet (TSCF), made up of 100.69 TCF of associated gas, and 102.47 TCF of non-associated gas, an equivalent of about 10 trillion standard cubic meters*

By Bassey Udo

Nigeria is reputed to be a gas province with only a little pool of oil. What this means is that the country's natural gas reserves far outstrip those of oil. As at 2019, the Oil & Gas Journal puts Nigeria's proven crude oil reserves at about 37 billion barrels. Current potential estimates are that the reserves could be as high as above 40 billion barrels of onshore and offshore production capacities.

The oil and gas sector as the mainstay of the country's economy accounts for about 10 percent of the country's gross domestic product (GDP), with crude oil exports revenue accounting for more than 80 percent of total exports earnings.

In terms of natural gas, Nigeria has proven reserves of more than 203.16 trillion standard cubic feet (TSCF), made up of 100.69 TCF of associated gas, and 102.47 TCF of non-associated gas, an equivalent of about 10 trillion standard cubic meters, with current gas production capacity estimated at about 12 billion SCF. The bulk of the associated gas (AG) is produced in the course of crude oil production, with the rest, non-associated gas, reinjected to aid oil production. The level of the country's unproven gas reserves is put conservatively at about 600 TCF.

With crude oil production capacity of over 550 million barrels as of 1989 under the Organization of Petroleum Exporting Countries (OPEC) arrangements, and exports of over 450 million barrels of crude oil, in addition to the export of about 27.5 million barrels of condensate classified outside OPEC quotas, a World Bank document on the implementation of the OSO Field Development project in 1991 (1) said Nigeria emerged as one of the world's leading oil-exporting countries.

Energy experts, Worldometer, the global oil statistics group, put world oil proven reserves equivalent at 46.6 times its annual consumption

The Place of Gas & Renewable Energy in Nigeria

levels. With that figure, the group guesstimates that as a depleting asset, the world has only about 47 years of oil left, based on current consumption levels and excluding unproven reserves.

What Worldometer did not say, however, is that as long as crude oil is produced, natural gas would continue to be produced in association. In essence, natural gas will outlast oil in terms of lifespan.

For Nigeria, the place of gas is massive, perhaps far into the future of her energy plans, outside other natural resources the country has, like tin, iron ore, coal, limestone, niobium, lead, zinc and arable land, which contribute to the balance of the components of the country's rich economy.

With crude oil production capacity currently at about 2.5 million barrels per day, Nigeria sits at the top of the crude oil production pyramid among all oil producers in Africa. The United States Energy Information Administration (EIA) ranks Nigeria as the largest oil producer in Africa; the holder of the largest natural gas reserves on the continent. Globally, the country's total oil reserves make Nigeria the sixth largest oil producing country in the world.

Until recently, virtually all the gas produced in the Niger Delta region by the Joint Venture partners with the Nigerian National Petroleum Corporation (NNPC) including Shell Petroleum Development Company (SPDC), Total/Elf Nigeria Limited and Nigeria Agip Oil Company (NAOC), were flared into the environment, except the small volume deployed to reinjection in oil wells to boost producibility.

As at the first half of 2016, the Society of Petroleum Engineers (SPE) in its presentation during the Nigeria Annual International Conference and Exhibition held in Lagos, on July 2017 said Nigeria flared over three billion cubic meters (BCM), about (106 BCF) of gas, with a nominal value of about $300 million.

The resultant impact of gas flaring is not only the massive environmental despoilation, pollution, devastation and monumental wastage, but it is at the heart of the agitation, conflict and crisis in the oil producing regions of Nigeria.

The World Bank-led Global Gas Flaring Reduction Partnership (GGFR), which is in support of Nigeria's efforts towards achieving its goal of ending routine gas flaring, says Nigeria flares almost 8 billion cubic meters of gas annually, making it the seventh-largest flarer of gas in the world.

> ***"For Nigeria, the place of gas is massive, perhaps far into the future of her energy plans***

But the National Petroleum Investment Management Services (NAPIMS), the NNPC subsidiary in charge of the Federal Government investment interests in the petroleum industry JVs, puts current gas flare statistics at about 63 percent of the two billion SCF daily production of associated gas.

Harnessing gas resource for value

To diversify the country's revenue base and cut down on the monumental wastage of valuable resources as well as curb the degradation of the environment through gas flaring, the Federal Government, through the NNPC, unveiled the gas monetization programme in December 2016 aimed at meeting the global gas flares-out deadline of 2030 set countries that have ratified the Paris Climate Change Agreement, as well as sign the Global Gas Flaring Partnership (GGFR) principles.

The government's gas monetization programme wielded a carrot and a stick. Carrot in the form of incentives and tax credits to companies that were ready to embark on gas-based projects, and stick in the form of

penalties for operators who were bent on flaring gas in violation of the government directive for companies to embark on gas utilization projects in their areas of operation.

To benefit from the regime of incentives offered by the government under the monetization programme, most companies did not only initiate, but they also intensified the setting up of gas reinjection projects in their areas of operations, apart from undertaking other gas-based projects tied to the utilization of the gas produced in their operation areas.

In line with the monetization programme, the NNPC and its JV partners, namely Shell, Total/Elf and Agip, which got together earlier in 1997 to initiate one of the biggest gas utilization programme projects in the world, immediately decided to expand the output capacity of the plant.

At inception in 1999, the plant commenced operations with a two-train base project production lines, followed by the Expanded Projects and the Natural Gas Liquids (NGLs) – condensate stabilization and Liquefied Petroleum Gas (LPG) production units.

The plant has since expanded to NLNGPlus Project, which comprise of Trains 4 and 5, as well as NLNGSix Project, consisting of Train 6 and additional condensate processing and additional LPG storage and jetty facilities.

The six trains plant has the capacity to produce about 22 million metric tons per annum (MTPA) of LNG and 35% MTPA of NGLs from 3.5 billion SCF per day of natural gas intake.

With the final investment decision (FID) and engineering, procurement and construction (EPC) contract for Train 7 already awarded by the Board of the NLNG, the total production capacity of the plant is to raise to 30 MPTA of LNG on completion.

Before the Nigeria LNG, there were other projects initiated by other JV partners to harness the country's huge gas potentials. The OSO Condensate

Ms Sharon Ikeazor, Minister of State for Environment

projects was designed to capture the natural gas liquids and condensate produced with the operational area covered by the NNPC/Mobil Producing Nigeria Unlimited (MPNU) joint venture in Akwa Ibom and environs.

The Ekpe Gas Compression Projects by the NNPC/MPNU JV was to gather the gas produced in the oil field for enhancement of oil production by gas lifting and gas re injection, while OSO 2Y2 Project was to provide additional gas make-up for the OSO NGL as well as consolidate condensate production.

The Escravos Gas Project executed by the NNPC/Chevron Nigeria Limited (CNL) JV was to tap the natural gas liquids and liquefied petroleum gas (LPG) from the Southwestern part of the country in

> **“*The government's gas monetization programme wielded a carrot and a stick*”**

Delta State for export to Europe.

Also, there were other projects, like the Belema Gas Injection Project by the NNPC/Shell Petroleum Development Company (SPDC) joint venture, to help cut down on gas flares in five flow stations in the Niger Delta region, by either re-injecting some of the natural gas, or used as fuel for local industries, supply to independent power projects to boost electricity generation, while the excess deployed to meet various existing contractual gas supply obligations to various companies operating in the country, including petrochemical firms and fertilizer plants, glass manufacturing companies, food and beverages, manufacturing industries.

The Odigbo Node Gas Project by Shell was to gather about 113 million

SCF/D of associated gas produced from about six flow stations in the NNPC/Shell Eastern Nigeria Fields, as feed gas to the Aluminum Smelter Company of Nigeria (ALSCON), Ikot Abasi in Akwa Ibom State.

The Odidi associated gas gathering Project also by the NNPC/Shell JV in the South Western part of Nigeria was to gather gas and inject into the Escravos-Lagos pipeline (ELP) that formed part of the West African Gas Pipeline project designed to supply gas to some West African countries, including Togo, Benin Republic and Ghana for electricity generation under the West African Power Pool project.

The Cawthorne Channel Gas Injection Project also by Shell was to gather the gas in the Cawthorne oil field in the Niger Delta for re-injection in the operation of the JV and for supply to a third party for LPG extraction.

There were other integrated oil and gas utilization projects initiated by the NNPC/TotalElf and NNPC/Shell JVs, like the Amenam/Kpono, Ofon, Akri/Oguta, Southern Forcados, East Area, Bonga, Ubie, Bomu, etc, to service local industrial establishments in the country.

Gas as alternative source of clean domestic energy

Apart from efforts to harness associated gas produced in the country for exports and industrial uses, the government has unveiled a number of programmes to encourage the utilization of gas as alternative source of clean energy for domestic uses in the country.

Despite being the highest producer of gas in Africa, Nigeria's gas utilization capacity remains one of the poorest. Investments in infrastructures to enhance the production and utilization of Compressed Natural Gas (CNG) and Liquefied Petroleum Gas (LPG) as clean alternative sources of domestic energy are low. LPG penetration rate has been the lowest in the continent. The economic, environmental, fiscal and social consequences of this, particularly in terms of the potential to engender rapid growth in the country's non-oil economy are high.

The introduction of the National Gas Expansion Programme (NGEP) by the Federal Ministry of Petroleum Resources (MPR) was to stimulate growth and make CNG the fuel of choice for transportation compared to petrol; develop gas-to-people structure; ensure policy guidelines implementation, regulations and DPR guidelines. Similarly, LPG was to serve as the fuel of choice for domestic cooking, captive power and small gas-based industrial establishments. The government wants LPG to be used not only in the cities, but in all homes across the country.

Also, the Nigerian Gas Transportation Network Code (NGTNC) was launched by the Ministry to open up opportunities for investors in gas transportation infrastructure and market participation as shippers, agents, and suppliers.

Under the Code, contractual framework between gas network operator and users as well as enhance system security, safety and reliability. The Code provides open and competitive access to gas transportation infrastructure to promote the development of the country's gas sector.

In January 2020, the Ministry declared 2020 as 'Year of Gas', with opportunities identified for the CNG development, mini-liquefied natural gas (LNG), LPG, and gas-based industries in the country.

To boost the government gas commercialization agenda, the ministry has continued to pursue its CNG and LPG penetration programe to encourage Nigerians to use CNG and LPG (otherwise called cooking gas) as alternative sources of fuel in the country.

Under the CNG and LPG penetration programme, the ministry's agenda is to encourage Nigerians to use the commodity as alternative sources of

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The ministry has continued to pursue its CNG and LPG penetration programe to encourage Nigerians to use CNG and LPG (otherwise called cooking gas) as alternative sources of fuel in the country

fuel in the country.

The gas revolution is one of the strategies by the government to help create jobs and improve their quality of life.

On December 1, 2020, the National Gas Expansion Programme was unveiled in Abuja to help deepen domestic usage of natural gas as auto-fuel in the country to give the masses an alternative petrol.

Transiting to renewable energy

The enormous potentials of gas in the Nigerian economy are hardly in doubt. But the potentials of the renewable energy can only be imagined. Renewable energy covers a range of non-fossil and non-nuclear sources, including solar, wind, hydro, oceanic, geothermal, biomass, and other sources of energy derivable from "sun energy", which are capable of being renewed indefinitely as long as nature exists. Forms of useable energy include electricity, hydro-gen, fuels, thermal energy and mechanical force. Unlike natural gas that is a wasting asset, renewable energy can be replenished and sustainable, with no harmful side effects.

All the multinational oil companies operating in the country have announced various programmes focusing on the development of renewable energy to tackle climate change caused by carbon dioxide emissions and other environmental challenges.

On its part, the government has unfolded the Nigeria Renewable Energy Master Plan, which is part of the Electricity Power Sector Reform (EPSR) Act, the principal law for the regulation of the power sector. The Act encouraged the promotion of electricity generation from all sources of energy, including renewable energy.

The plan is the roadmap for the implementation of projects to increase the contribution of renewable energy to about 30 percent of Nigeria's total energy consumption by 2025.

Although the government speaks of plans to increase the country's electricity generation capacity to 10,000 MW by 2022, the fastest way to reach the highly-dense rural population is through renewable energy sources, as virtually all parts of the country are sufficiently covered by the sun.

> *"The ministry has continued to pursue its CNG and LPG penetration programe to encourage Nigerians to use CNG and LPG*

However, the situation in the rural areas today shows that over 70 percent of Nigerians depend on firewood for their household chores. Nigeria is reputed to consume over 50 million tonnes of fuel wood annually, which far exceeds the replenishment rate through various afforestation programmes.

Sourcing for fuel wood for domestic and commercial uses has been identified as a major cause of desertification in the arid-zone states and erosion in the southern part of the country.

The rural areas, which are generally inaccessible due to the absence of good road networks, have little access to conventional energy such as electricity and petroleum products. Petroleum products such as kerosene and petrol are purchased in the rural areas at prices often about 150 percent in excess of their official pump prices.

With the price of petroleum products, particularly petrol, on the spiral in recent times, the government is shifting its focus to renewable energy as the most viable and reliable alternative.

To demonstrate its commitment to accelerate the transition to clean, affordable, reliable and renewable energy, the Nigerian government plans to construct about five million new solar home installations and renewable energy mini-grids under a 'solar power strategy' as part of sustainable development goals to secure access to affordable, reliable, sustainable and modern energy for all by 2030.

The regulations apply to renewable energy sourced from wind, hydro, biomass and solar PV with a capacity of between 1MW and 30MW connected to the national grid or the distribution networks.

To encourage private sector participation in the development of the renewable energy sector, the government has provided certain incentives in the form of tax reliefs for electricity generation through the execution of renewable projects.

> *The government has provided certain incentives in the form of tax reliefs for electricity generation through the execution of renewable projects*

These incentives include the Industrial Development (Income Tax Relief) Act, to attract foreign investments into the country, where qualified companies involved in independent power generation projects using gas, coal and renewable energy sources would be granted pioneer status, which guarantees the beneficiaries exemptions from f income tax payments for between three- and five-years period.

Tax incentives to manufacturers of renewable energy and energy efficient equipment and their accessories, and incentives for importers to offer energy-efficient appliances and lighting through exemption from excise duty and sales tax; custom duty rebate for two years on the importation of equipment and materials used in renewable energy and energy efficiency projects.

There is also the provision of soft loans and special low-interest loans from the power sector development fund for renewable energy supply and energy-efficiency projects.

The Renewable Electricity Action Programme 2006 highlights the potential and gaps, technical assessments, financial implications of utilizing renewable energy; potential for renewable energy technologies, and markets, elaborating on the development targets per technology, application and strategies for achievement.

The programme spells out a roadmap for the implementation of the Renewable Electricity Policy Guidelines 2006, while the National Biofuel Policy and Incentive 2007 integrates the agricultural sector of the Nigerian economy, as a means of improving the quality of automotive fossil-based fuels in Nigeria.

The Nigerian Rural Electrification Policy broadened access to electricity in a cost-effective manner through the use of both grid and off-grid approaches from renewable and thermal sources in rural areas.

Besides, the national Building Energy Efficiency Code 2017 stipulates the minimum standards for energy-efficient building in Nigeria, to reduce energy costs and wastage, and conserve available energy for utilization where and when necessary, in various homes, companies and public buildings.

Nigeria in OPEC

Nigeria is ranked the most populous country within the Organization of Petroleum Exporting Countries (OPEC, with a population of over 208 million people. Among the 13-member group, consisting Algeria, Angola, Congo, Equatorial Guinea, Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, United Arab Emirates and Venezuela, the country has grown in stature since it joined the group in 1971, currently ranked in the eighth position in the organization, in terms both its current daily oil production capacity of 2.1 million barrels, and crude oil reserves.

In terms of administrative role, apart from the period between January 1975 and December 1976, when Chief M. O. Feyide served as the Secretary General of the group, Nigeria was again elected to occupy the position between July 1986 and June 1988; January 1995 and December 2000 through the election of Dr Rilwanu Lukman into the office on both occasions.

Between January 2006 and December 2006, another Nigerian, Dr Edmund Daukoru, then Nigeria's Special Adviser of Petroleum and Energy to the President, was also elected to serve as the Secretary General of OPEC, apart from the incumbent, Mohammad Barkindo, appointed by the OPEC Conference since August 2016 to perform the responsibility as the head of the Secretariat of the group in accordance with the directives of the Board of Governors.

Mr Udo is the Team Lead for MEDIATRACNET NIGERIA, an online business platform, based in Abuja

Engr. Simbi Wabote, Executive Secretary, Content Development and Monitoring Board (NCDMB)

> *The spike in global oil prices and growing demands (estimated to reach 50% from current levels by 2035) together with increase in worldwide car sales of over 71million units in 2021, provide additional impetus for the uptick in oil and gas activities*

Despite the sad ravages of the Coronavirus (Covid-19) and attendant global economic setbacks, we have continued to see uptick in oil and gas activities in Nigeria. This trend is underpinned by gradual economic recovery, particularly on the heels of increased vaccinations and removal of travel restrictions.

Resurgence in economic activities in Nigeria is amply illustrated by the Composite Purchaser Manager Index (PMI) for the month of October 2021, which rose to 54.1, up from all time low rate of 37.10 in April 2020. The PMI for October therefore gives positive indication of increase in output, new orders, inventories, and staff levels at work, despite corresponding rises in the prices of consumers goods, services, materials, and transportation.

On the energy front, the spike in global oil prices and growing demands (estimated to reach 50% from current levels by 2035) together with increase in worldwide car sales of over 71million units in 2021, provide additional impetus for the uptick in oil and gas activities. These developments reinforce hope in achieving the Nigerian Content growth forecast of 70% by 2027.

Signs of recovery and growth of Nigerian Content

It was therefore exciting for the Board to commission two world-class oil and gas facilities and state-of-the art equipment a couple of weeks ago in the ever-busy Trans-Amadi Industrial Area of Port Harcourt, the major hub of oil and gas services in Nigeria. The first facility belongs to PE Energy Limited and the second to PIMO Services Ltd.

The ground-breaking for PE Centre of Excellence was performed in November 2019. It is heart-warming that despite the setbacks of COVID19 pandemic, PE Energy Limited remained focused and worked assiduously to build

Recovery and Continuous Growth Of Nigerian Content – By Simbi Wabote

and complete this Centre of Excellence, a state-of-the-art facility, stretching across 10,820 sqm of land, where it will provide bespoke tech solutions and services in Automation, Process & Systems Integration, Valve Assembly, Valve Actuation, Metering Systems, Pump and Compressor Solutions, and Integrated services, including Instrument Fitting Manufacturing and Service Lines, and a Training and Competence Assessment Centre. Early Production Facilities (EPFs) and Mobile Production Units (MOPUs) will also be assembled in this Centre. These range of services are very crucial to Nigeria's aspiration to increase oil and gas production and grow national revenues.

> *Huge investments in new facilities and assets constitute significant contribution to the growth of the Nigerian oil and gas sector*

The second asset and facility that the Board also commissioned this last quarter of 2021 were deployed by PIMO Services Ltd. The assets include newly acquired Hydro Hammer (with 200 kilo joules capacity), Internal Lifting Tools (with 250 tons capacity), Casing Running Tools and developing capacity produce casing accessories in-country. Some of the equipment and tools acquired and deployed by this engineering company are about the only ones currently in Nigeria.

The sophistication of the equipment acquired by PIMO Services Ltd have proven capacity to reduce cost in terms of time and capital expenditure, which supports the cost reduction agenda of our Honourable Minister of State for Petroleum Resources, Chief Timpriye Sylva in his avowed determination to reposition Nigeria's oil and gas industry to become more competitive.

These huge investments in new facilities and assets constitute significant contribution to the growth of the Nigerian oil and gas sector and do propel growth of Nigerian Content in terms of numbers and local capability. They also speak to faith in Nigeria and patriotism.

Other factors to engender Nigerian Content growth

From the gains and accomplishments recorded on the back of Egina, Ikike and now NLNG Train 7, Nigerian content performance has maintained an upward trajectory.

Enactment of the Petroleum Industry Act (PIA) assented by President Muhammadu Buhari (GCFR) in August this year is a watershed in the annals of Nigeria's oil and gas industry. The PIA s set to unleash a domino effect on the

Wabote

petroleum industry and wider economy.

With the cloud of uncertainty out of the way, the PIA is expected to stimulate more investments, spur growth in daily production and boost more business activities, especially in gas value chain in line with the federal government's decade of gas initiative. All of these rejuvenate hope for more job creation, more foreign capital inflow, more local capacity utilization and more in-country value adding activities.

> *We have continued to ramp up action in our commercial ventures and partnerships*

Interestingly also on the global sphere, COP26 which held in Glasgow, Scotland ended the way it did. Contrary to speculations before the climate summit that world leaders might resolve to phase out the use and development of coal and fossil fuel, the insistence of China and India resulted in an anti-climax. The final draft pact had to be tweaked at the last minute to read "phasing down" (instead of "phasing out") of coal and fossil fuels. The implication being that Nigeria can stay within its nationally agreed plan of de-carbonization using gas as its transition fuel and to exit fossil fuel only after the year 2060 as declared by our president. This paves way for more investments in gas development and utilization, without Nigeria necessarily offending any international convention or instrument on carbon reduction.

On our part, we have continued to ramp up action in our commercial ventures and partnerships targeted at catalysing key government initiatives and programs, put in place to create jobs, generate additional revenue, increase hydrocarbon resource utilization and in-country value addition. Thus, our partnerships and investment footprints are visible in modular refineries, LPG value chain, equipment manufacturing, technical and vocational skills development etc.

In specific terms, some of the projects we currently catalysing include composite LPG cylinder manufacturing (in partnership with RUNGAS Group) in Bayelsa and Lagos State respectively, Base oil production with BUNORR in Port Harcourt, Rivers State, Gas processing facility with NEDO Gas Group in Delta State, and Energy Park at Egbokor, Edo State with DUPORT Midstream Ltd.

Others include Nigerian Oil and Gas Park in Cross River, Bayelsa, and Akwa Ibom, LPG Storage and Loading Terminal Facility in partnership with Triansel Gas Limited in Koko, Delta State, Fertiliser and Methanol gas processing plant in Brass, and LPG Bottling Plants/Depots with Butane Energy Ltd in ten (10) Northern States of Kano, Kaduna, Katsina, Bauchi, Nassarawa, Zamfara, Niger, Plateau, Gombe, Jigawa states and Abuja.

Our intervention in these areas demonstrates putting our money where our mouth is. It underscores the point we make all the time that we need a steady stream of projects to sustain Nigerian content growth projection.

In the coming months therefore as these projects materialize, there will be a gale of project commissioning by NCDMB. Economic activities would be re-energized across the states and regions of the country, where these projects are located, more jobs would be generated for our teeming youth, available capacity in-country would be utilized; there will be more capital retention in Nigeria with more value adding activities across the oil and gas value chain.

> “
> ***Our intervention in these areas demonstrates putting our money where our mouth is***

As one thinker rightly observed, “Direction is so much more important than speed”. We might not be sprinting towards our goal, but then the stars are lining up and the projects are crystalizing. This reassures us that we can reach and beat our target of 70% Nigerian Content level by the year 2027 in line with our Ten-year Strategic Roadmap.

Engr. Simbi Kesiye Wabote, FNSE, FIPS, Executive Secretary, NCDMB

Dr. Chike Nwosu, Chief Executive Officer, Waltersmith Refinery & Petrochemical Limited

> *The impact on domestic refining is also huge as our high-quality petroleum products have to compete in the same market with the dangerous products from illegal refining*

Dr Chike Nwosu is the Chief Executive Officer of Waltersmith Refining and Petrochemical Limited. In this exclusive interview with The Bridge Magazine, the first-class engineer X-rayed the critical issues in the oil and gas sector of the economy.

How would you generally appraise the oil and gas industry in Nigeria, particularly the refining sector? Has Nigeria made progress as is expected of an oil producing nation?

NWOSU: The existential threat in the Nigerian oil and gas industry is the massive crude theft, especially on the Trans Niger Pipeline (TNP), which reached a record high of 91% in December 2021. In addition to the impact of this crude theft on the revenues of the oil & gas operators and the FGN, the massive environmental pollution associated with the illegal refineries profiting from this crude theft is also a major problem. The impact on domestic refining is also huge, as our high-quality petroleum products have to compete in the same market with the dangerous products from illegal refining. These problems need to be very urgently and aggressively addressed.

WalterSmith is one indigenous company that stands out as a model to other local companies in the refining sector, how have you been able to achieve this feat. Are there plans by the company for future expansions in gas?

NWOSU: Waltersmith's model is about looking inwards and

'Illegal Refineries Profiting from Crude Oil Theft, Bane Of Nigeria's Petroleum Industry'

developing energy for domestic consumption. This is our differentiator as we understand the impact on GDP growth and job creation both direct and indirect in all the streams of oil and gas (upstream, but especially midstream and downstream). Our mission is to deliver clean and affordable energy for the benefit of humanity with a specific focus on Nigeria and the sub-Saharan Africa region, and our sustainability report captures our journey towards transiting through gas to renewable power.

Is the investments in modular refinery by WalterSmith yielding the desired dividends to the investors, especially now that the world is clamouring for a shift in the direction of renewable energy?

NWOSU: We are stabilizing the modular refinery and have learnt a lot in our first full year of operations that will ensure we meet our targets. The shift to renewable energy is also part of our overall group strategy, but in the near to medium term, Africa will need to continue developing and utilizing fossil fuels. Although the LCOE for renewables like solar is now lower than for fossil fuels, there is a significant initial capital outlay for the absent infrastructure that the developing countries cannot carry at this time.

How is Waltersmith able to effectively manage the joint-venture partnership it has with the Nigerian Content Development and Monitoring Board in the Ohaji Modular refinery. Is it beneficial?

NWOSU: The NCDMB has been an exceptional business partner and provides us technical and financial advisory support but, most especially, directs and supports our local content initiatives. Under our HCD programme, we have trained over 45 graduates from the community in refinery and upstream operations, hired 15 of this first batch as full staff of Waltersmith and will continue running this until 200 graduates in our host communities have been trained. Our upstream operations are 100% indigenous (no expatriates) and our refinery, after just a year of operations, is at 90% staffed by Nigerians.

> “*Africa will need to continue developing and utilizing fossil fuels*

Waltersmith was granted a license by now defunct Department of Petroleum Resources (DPR) to establish the refinery in June 2015, what has been the challenges and the prospects?

NWOSU: Simple. We delivered the first phase of 5,000 bopd 24 months after groundbreaking and we are expanding to achieve a refining capacity of 50,000 bpd. This is not about getting a license but using it as intended by the regulators and the Federal Government.

What are your views on the call for divestments in the hydrocarbon sector by western nations? Is it fair to say Africa,

> *We have continued to ramp up action in our commercial ventures and partnerships*

especially Nigeria should abandon their hydrocarbon deposits in quest for the uncertainties of renewable energy?

NWOSU: As noted, Africa will need to continue developing and utilizing fossil fuels. Although the LCOE for renewables like solar is now lower than for fossil fuels, there is a significant initial capital outlay for the absent infrastructure that the developing countries cannot carry at this time.

How would you advice Nigerian government to go about the energy transition programme? Abandon fossil fuel and hop on the train of renewables or the other way around?

NWOSU: Absolutely not - a balanced energy policy that demonstrates how we will first grow and consume fossil fuels (especially the abundant gas resources as a transition fuel to renewables) needs to be articulated and executed. The HMOSPR has declared this decade the Decade of Gas and this is a critical step in demonstrating that we are cleaning up our energy portfolio (more gas in the fossil fuel mix). What we then need is to demonstrate how this transition to a mixed energy portfolio (with renewables in the mix) will happen.

The minister of State Petroleum Resources Chief Timipre Sylva is at the vanguard for the call for the establishment of an African Energy Bank (AfEB) modelled after the African Development Bank (AfDB). Do you share this same view? If not what other ways do you think that investments in the hydrocarbon sector in Africa would be sustained?

NWOSU: Again, a great initiative from the HMOSPR and it will become more imperative as foreign direct investments in oil and gas start drying up and Africa's position of sustaining the development of oil and gas comes into conflict with this. So, there is an urgency to take the needed and practical steps to do set up and African energy Bank.

Nwosu

Mr. James Shindi

> *NIES is the only federal government of Nigeria official petroleum industry event with the Federal Ministry of Petroleum Resources and all its parastatals*

'The decade of gas is quite an ambitious initiative'

Mr James Shindi is CEO of Brevity Anderson, the organizers of the Nigeria International Energy Summit (NIES) formerly Nigeria International Petroleum Summit (NIPS). Mr Shindi is a lawyer with over 22 years of experience. In this interview with The Bridge Magazine Mr Shindi with vast experience in promoting trade in emerging markets, including project finance and trade facilitation spoke on a number of issues in the oil and gas sector of the economy.

In retrospect what would you say has been the significance of hosting the Nigeria International Petroleum Summit now Nigeria Energy Summit (NES)?

SHINDI: The major significance is that the summit is now the definitive platform, not just for Nigeria, but

also for Africa to engage the global energy community. It has provided the platform for cross fertilization of ideas and shaping the country's policies in the energy industry.

I also wish to remind you that NIES is the only federal government of Nigeria official petroleum industry event with the Federal Ministry of Petroleum Resources and all its parastatals including the Nigerian National Petroleum Corporation (NNPC), Nigerian Content Development and Monitoring Board (NCDMB), Department of Petroleum Resources (DPR), Petroleum Equalization Fund (PEF), Petroleum Technology Development Fund (PTDF) and Petroleum Training Institute (PTI) being joint hosts.

Every year, industry giants gather in Abuja for the Summit. What would you say has been its greatest take-aways?

SHINDI: There is no bigger platform for energy in the whole of Africa than the NIES. The take aways over the years have been many but I can only give few instances here. The conversation around the exit of government from Joint Venture Cash Call funding emanated from the summit. The push to diversify Nigeria's economy and drive industrialization through focus on domestic utilization of natural gas which culminated to the declaration of 2020 as the year of natural gas for Nigeria, started at NIPS. Nigeria's Decade of Gas, initiative emanated from NIPS. After several years of planning, the National Gas Transportation Network Code (NGTNC) was finally launched at NIPS.

Discussions around the traction on the Petroleum Industry Bill (PIB) took place at NIPS with the Senate President and Speaker of the House of Representatives making definitive statements on the passage of the bill which has happened.

The private sector is not left out of the party. Key international and indigenous companies like Shell Petroleum & Development Company Limited, Total Exploration & Production, Nigeria Liquefied Natural Gas (NLNG) Limited, Dangote Refinery, Waltersmith Petroman and a host of others used the NIPS platform for special presentations to drive their aspirations and launch major projects.

What are we expecting at the 2022 edition of the Summit?

SHINDI: As you already know, we set the agenda for the industry and provided the background for the theme of the summit: "Revitalizing the Industry: Future Fuels and Energy Transition." Our objective is to drive a new narrative and make energy transition the cornerstone of the country's industry policy.

It has become a tradition for us to put together key chief executives of international and indigenous oil companies on the same platform which we call the international panel session. This is where the biggest and brightest of the industry interrogate critical issues, set agenda for the industry and steer the compass for policy makers.

The recently enacted Petroleum Industry Act (PIA) 2021 and its implementation so far, will face thorough scrutiny at NIES 2022. The industry both locally and globally is passing through interesting times and you can expect NIES 2022 to make a clear sense of all those developments.

> "*The decade of gas (2020-2030) is quite an ambitious initiative by President Muhammadu Buhari*

2030 was declared the decade of gas and since the declaration, would you say the industry has started seeing the result of that engagement?

SHINDI: The decade of gas (2020-2030) is quite an ambitious initiative by President Muhammadu Buhari. It provides for an opportunity for Nigeria's largely untapped, natural gas resources to provide the means for the country to fund its way through industrialization and the global energy transition.

In terms of seeing the result of the initiative, one can easily point to the Ajaokuta–Kaduna–Kano (AKK) gas pipeline which has been on the drawing board for years but now we are talking about completion of the project in 2023. The government hopes the AKK pipeline will connect the country's gas supply to other planned trans-regional and inter-continental pipelines such as the Trans-Saharan Gas Pipeline in order to open up access to Europe.

Reflecting on the just concluded COP26 and the communique from it, where does that leave the issue of gas as a transition fuel for Nigeria?

SHINDI: COP26 is the first major test of the 2015 Paris Agreement. There was an agreement by the participants on the persistent gap in emissions and there was a collective agreement to work to reduce that gap and to ensure that the world continues to advance during the present decade, so that the rise in the average temperature is limited to 1.5 degrees.

For me personally, the high point was consensus amongst the countries that there is need to continue increasing support to developing countries with the reaffirmation of providing $100 billion dollars annually from developed to developing countries.

Of course, Nigeria does not need COP26 to advance its goal of making natural gas a transition fuel. Even in Paris, President Muhammadu Buhari stated unequivocally that Gas remains priority and a transition fuel for Nigeria. The President said Nigeria remains mindful of the target of zero-emission by 2060 and had already started putting in place necessary natural structures that will ensure balance and safety for citizens and the global community.

With global players bent on cutting lending to fossil fuel, where does that leave Nigeria's hydrocarbon exploration?

The fact remains that oil and gas would continue to be the globally-preferred fuel in the next couple of decades despite the global energy transition. Oil and gas would continue to be fuels of choice for the foreseeable future and conventional and unconventional hydrocarbons were likely to remain the main component of the energy mix needed to meet the growing global energy demand in the next five decades.

> ***"Nigeria does not need COP26 to advance its goal of making natural gas a transition fuel***

The growing population of Nigeria means higher energy demand and as such the need for more exploration and discoveries to satisfy future energy demand. The country is at risk of long-term disruption to oil and gas supplies, power generation, a collapse of industries and significant loss of revenue if we discontinue hydrocarbon exploration activities as alternative energy sources cannot match the country's energy demand. Thus, reduction in hydrocarbon exploration and exploitation has dire consequences.

At last, the Petroleum Industry Bill (PIB) has become law with the benefit of hindsight, what can stakeholders expect on the short to medium term in the oil and gas sector!

SHINDI: There have been excitements and optimisms in many quarters since the signing of the Petroleum Industry Bill into law, particularly from oil and gas players, political leaders, oil producing communities, public policy analysts, and civil society groups. We share in that excitement optimism given that from inception, the summit was the platform for robust debate about the bill.

Generally, the Act seeks to provide legal, governance, regulatory and fiscal framework for operation and participation in the Nigerian oil and gas industry and development of host communities. The Act is also seen as a solution to the lack of investment in the Nigerian oil sector and the non optimisation of the oil and gas resources.

In the short to medium term, the Act has provided some clarity to the fiscal terms by removing legal and regulatory uncertainties that held back the industry's growth for decade. I see that encouraging high-level investments into the industry from existing and prospective investors and players. I also see some peace within the restive host communities as the Act equally ensures that host communities are well cater for.

However, there is need for caution and moderation of high expectations as only the law cannot solve all the problems manifestly holding Nigeria's oil and gas industry back for decades.

Sylva in a chat with Shindi

President Muhammadu Buhari

> **"*Energy transition has to do with the global energy sector's shift from dependence on fossil fuel-based systems of energy production and consumption, including oil, natural gas, and coal, to renewable energy source***

By Bassey Udo

The global shift away from hydrocarbon and fossil fuels toward renewable and clean energy may pose a huge dilemma for Africa in its quest for development and poverty alleviation.

On one hand, experts say the transition from demand for coal, oil, and natural gas as the source of the world's energy supply could, in the short to medium term, spell a huge disaster for commodities producing countries of Africa, and in the long run, a blessing in disguise.

Experts say energy transition has to do with the global energy sector's shift from dependence on fossil fuel-based systems of energy production and consumption, including oil, natural gas, and coal, to renewable energy sources like wind, solar, and biomass.

This transition is made possible largely by technological advancements and the application of artificial intelligence to achieve sustainable development, reduction in energy-related greenhouse gas emissions through various forms of decarbonization processes.

The International Energy Agency (IEA) says the global net renewable energy-based power generation capacity is primed to grow by 50% between 2019 and 2024.

But the World Bank in its publication "Africa's Resource Export Opportunities and the Global Energy Transition," said the world's shift toward renewable energy and clean energy technologies would provoke a precipitous reduction in global demand for hydrocarbon fossil fuels, such as coal, oil, and natural gas.

Given that nearly 50% of sub-Saharan Africa's export value and earnings are composed of fossil fuels, the global energy transition may have profound effects on its economies, the Bank said.

However, the report noted that

Global Energy Transition: Implications For Africa's Development

while Africa as a whole is poised to prosper from shifting exports to mineral energy materials (MEMs) such as nickel, copper, and cobalt, these changes in global demand might be more disruptive to the region's oil-dependent countries.

The indicators are clear. In the last two to three decades, between 1995 and 2018, research has shown that exports of hydrocarbon fossil fuels constituted more than 48.5 percent, against 23 percent of MEMs that make up over 70 percent of sub-Saharan Africa's aggregate export value.

As Research Analyst at Africa Growth Initiative, Chris Heitzig, noted in a recent report on the research he conducted with his colleague, Leo Holtz, that "exporting natural resources generates a significant source of government revenue for sub-Saharan Africa countries, such that natural gas, crude oil, and metals derive, on average, approximately 25 percent of the region's government revenue."

> *Exporting natural resources generates a significant source of government revenue for sub-Saharan Africa countries*

"The revenue can stem from in-kind payments (a physical share of the commodity extracted) to national oil companies, production sharing agreements, joint venture royalty systems, and natural resource leases," the report noted.

Crude oil is one of the world's most important commodities. When transformed into petroleum products, it becomes a key energy material for the manufacturing of vehicles and airplanes as a well as a crucial source for generating heat for homes, asphalt for roads construction, and electricity for industries.

What is clear has been that the growth of the world's economy, especially those of the advanced economies of Europe and America, which are spearheading the energy transition agenda, could not have been possible without the contribution from the oil and gas

Minister of State for Petroleum Resources, Chief Timipre Sylva

resources exploited from Africa.

The research report titled: "The effects of the global energy transition in Africa: Disruption and opportunity" published in February 2021, said what many fear might likely be one of the dire implications of the global energy transition on Africa and its overall development.

The researchers were of the view that the global energy transition might have profound effects on sub-Saharan Africa's economies and their growth and developmental aspirations.

The role of technology and knowledge creation through the application of artificial intelligence in finding and producing oil is very evident.

As at 2019 (the latest year for which full data is currently available), the U.S. Energy Information Administration (EIA) said fossil oil was the world's largest exported commodity, with over 4.5 billion metric tons production, which accounted for more than 1.3% of the total global gross domestic product (GDP).

Since the energy transition began, and the United States, which used to be one of the biggest importers of sub-Saharan Africa's fossil oil, has, pursuant to its energy independence policy, shifted its attention to focus on the development of its shale oil technology as an alternative source of supply, emerging as the world's top oil exporter.

Shale oil production leverages on technological advancement in oil drilling. It applies horizontal drilling through the hydraulic fracturing of the underground rock formations where crude oil deposits are trapped.

> *The researchers were of the view that the global energy transition might have profound effects on sub-Saharan Africa's economies and their growth*

With the new production technic, what was not possible using convention oil drilling methods in crude oil extraction from permeable rock formations has become possible, with daily oil output from US shale oil production growing from about 0.4 million barrels in 2007 to over 4 million barrels in 2014.

The development reinforces the sentiment by the World Economic Forum (WEF) in its White Paper of September 2021 on the impact of technology and artificial technology in global economic development.

The report titled: "Harnessing Artificial Intelligence to Accelerate Energy Transition" noted that artificial intelligence technology has the potential to rapidly accelerate the energy transition, particularly in the power sector, in the areas of renewable power generation and demand forecasting, grid operation and optimization, energy demand management, and materials discovery and innovation.

The direct consequence of that development has been that the value derived from fossil oil exports in sub-Saharan Africa has significantly declined.

Prior to the energy transition era, Nigeria, Africa's largest producer of oil and as well as the holder of the largest natural gas reserves, was ranked by EIA as the world's fifth-largest exporter of fossil oil and liquefied natural gas (LNG).

Latest EIA data place Nigeria in the ninth position among the world's top ten leading exporters, behind United States, Iran, Kuwait, United Arab Emirates, Canada, Iraq, Russia, and Saudi Arabia, with Kazakhstan the only country behind Nigeria.

Nigeria's total proven oil reserves, which stood at about 36.9 billion barrels by 2019, recorded a massive decline to about 5 billion barrels as at December 2020, out of Africa's total oil reserves of 125.1 billion barrels, with a decline to about 16.6 billion barrels.

In 2020, the EIA reported that the US oil exports spiked by about 500% since 2014, with an average export of about 18.6 billion barrels of crude oil per day, or about 20% of the global export volume, out of a total average production volume of more than 94.185 million barrels per day.

The agency listed Saudi Arabian global fossil oil exports in 2020 as following at 12%, Russia 11%, Canada 10%, China 5%, Iraq 4%, the United Arab Emirates 4%, Brazil 4%, Iran 4% and Kuwait 3%.

The implication is that the top three oil-producing countries, namely United States, Saudi Arabia, and Russia, current champions of the energy transition, collectively are responsible for producing approximately 40 million barrels of oil per day in 2020, 43% of total world production of fossil oil as well as all other petroleum liquids, biofuels, and products.

In terms of consumption, the Statistical Review of World Energy 2021 reports that Africa's total consumption of primary energy (fossil fuels) of about 18.58% of the global average declined by about 6.7%, while carbon dioxide emissions stood at about 1,254 billion tons, about 8.4% decline from about 1,364.5 billion tons in 2019.

> “
> ***The energy transition may have ushered in a new era capable of prospering Africa's drive towards the development of other MEMs***

Regardless, the flip side of the dilemma in the energy transition for Africa's development, experts say, has been that although the shift in the balance of global fossil oil exports has disrupted the progress in Africa's oil-dependent countries, it has also compelled these economies to turn elsewhere in search of alternative sources of wealth creation to survive.

The energy transition may have ushered in a new era capable of prospering Africa's drive towards the development of other MEMs such as nickel, copper, and cobalt, to pull its people out of energy poverty and ensure creative ways of utilizing whatever is left of the fossil oil in the ground that is yet to be produced.

But, does Africa's refocus on the development of MEMs in place of fossil fuels an indication she is on her way to industrialization?

Experts seem not to agree that is the case. One of the main reasons they give for Africa's slow pace towards industrialization as a result of the energy transition appears to

NNPC Towers, Abuja

be that her leaders have neglected to pursue economic policies that would be the enablers, due primarily to the fear of being antagonized by their benevolent donors from the West.

Former deputy governor of the Central Bank of Nigeria (CBN), a political economist and lecturer from the Fletcher School of Law and Diplomacy at Tufts University in Boston, USA, Kingsley Moghalu, shares this view.

"*Africa stands on the cusp of a lost opportunity because its leaders and those who assess its progress in London, Paris, and Washington are wrongly fixated on the rise and fall of GDP and foreign investment flows*

"Africa stands on the cusp of a lost opportunity because its leaders and those who assess its progress in London, Paris, and Washington are wrongly fixated on the rise and fall of GDP and foreign investment flows, mostly into resource extraction industries and modern shopping malls," Moghalu said in an op-ed in *The Financial Times* in 2016.

For Indonesian Governor for OPEC, Maizar Rahman, although crude oil has been the world's major source of commercial energy for many decades, the consensus is that it would maintain that leading role in the foreseeable future well into the 21st century.

The Organization of Petroleum Exporting Countries (OPEC) has forecasted that despite the current decline in global demand for fossil fuel, crude oil production would continue to average about 32.11 million barrels per day in 2021 and 34.15 million BPD in 2022.

After the second World War, he recalled the Organization of Economic Cooperation and Development (OECD) countries were responsible for between 60 and 70 percent of global oil consumption.

Today, he said oil accounts for about 40 percent of the global energy mix, and gas about 23 percent.

The world's proven oil reserves is put at about 1,100 billion barrels, enough to meet demand for over 45 years, at current production rates, with global oil demand projected to rise by 38 million barrels daily (an annual average growth rate of 1.7 percent) to about 115 million barrels per day by 2025.

Regardless, a new report by the IEA acknowledges Africa's place on the global energy transition agenda.

IEA's executive director, Faith Birol, remains profoundly optimistic that Africa, which produces only 2% of global energy-related CO_2 emissions, and home to some of the world's most vulnerable countries when climate change is concerned, still has a future and broader global role to play.

"Africa holds the key for global energy transitions, as it is the continent with the most important ingredients for producing critical technologies, including cobalt and platinum, which are crucial for global energy transitions," he said.

Speaking on the "The Role of Oil and Gas Companies in the Energy Transition", at the Atlantic Council Global Energy Center event recently, the OPEC Secretary General, Mohammad Sanusi Barkindo, said despite the energy transition, the world will continue to depend on fossil oil for energy in decades to come.

Barkindo is looking at a combination of many factors that could bring this about. Apart from the world battling to recover from the devastating impact of the COVID-19

Group Managing Director of NNPC, Malam Mele Kyari pandemic, Barkindo said looking in the longer term towards 2045, the global economy is expected to more than double in size, while over 1.7 billion people may join the current world population.

The OPEC scribe believes the world would still look up to the oil and gas industry to tackle energy poverty, generate electricity, heat, power, and low-emission fuels for cooking to billions of people around the world.

Although he acknowledges the reality of future energy transition, Barkindo said the real challenge borders on how to ensure sufficiency in energy supply to meet expected future demand surge in a sustainable way, with a balance between the people requirement and their social welfare, the economy, and the environment.

OPEC in a recent publication on "World Oil Outlook 2020", said oil and gas still have a vital role to play in the global energy transition, with the sector forecast to still supply over 50% of the world's energy needs by 2045, at the rate of 27% (oil) and 25% gas.

"The oil and gas industries are part of the solution. They possess critical resources and expertise that can help unlock our carbon-free future. We need to look for cleaner and more efficient technological solutions everywhere, across all available energies. We will need a very broad portfolio of emissions removal technologies to tackle climate change. We are believers that solutions can be found in technologies, such as carbon capture, utilization, and storage (CCUS) and others," the report said.

To achieve the objectives of energy transition, the report said it would require massive future investments, estimating the global oil sector alone would require a cumulative investment of $12.6 trillion through to 2045.

"Without the necessary investments, there is the potential for further volatility and a future energy shortfall, which is not in the interests of either producers or consumers," the report warned.

"*Without the necessary investments, there is the potential for further volatility and a future energy shortfall*

The WEF Insight report, "Fostering Effective Energy Transition (2021 Edition) published in April said: "This journey is far from over. As of 2018, the report said about 81% of the world's energy was still supplied by fossil fuels.

"Global greenhouse gas emissions rose through 2019 and more than 770 million people around the world still lack access to electricity. The transformation of our energy systems needs to increase its momentum to help achieve critical objectives such as the UN's Sustainable Development Goals and the Paris Agreement.

"The results are deprivation, pollution, environmental damage, drudgery, and forgone economic opportunity. Compounding these challenges is Africa's vulnerability to climate change, which means that traditional pathways to increasing energy supply, based on the burning of fossil fuels, will become increasingly unviable."

Managing Director/CEO of LNGL, Phillip Mshelbila

Dr Nasir Sani-Gwarzo

> *Dr. Gwarzo's work/experience spans across community, LGA, state, national and international levels. His hallmark in all the places he served is "Strategy & Innovation"*

Dr. Nasir Sani-Gwarzo, mni was appointed a Federal Permanent Secretary and sworn-in by the President of the Federal Republic of Nigeria, on the 18th of December 2019. He was deployed to the Federal Ministry of Industry, Trade & Investments (FMITI). He was recently redeployed to the Ministry of Petroleum Resources on 3rd August, 2021 and resumed duty effectively on 6th August, 2021.

Sani-Gwarzo hails from Kano State, and his academic achievements include: the best graduating medical student of Usman Danfodiyo University, Sokoto (MB:BS, 1989); recipient of the 1988/89 International Bursary Award from the Association of Common Wealth Universities, London. In 1994, he received a British Chevenning Scholarship Award to study in Leeds University, UK, where he graduated with MPH-International with distinction. He is a member of the West African College of Physicians – MWACP-PH, 1997. He is widely traveled, speaks three international languages and has over 50 professional peer-reviewed publications to his credit.

Dr. Nasir Sani-Gwarzo mni, MB: BS; MPH-Int; MWACP; NPOM, is a public health physician with in-depth knowledge and skills in diverse areas of public health, especially in the areas of policy, strategy, leadership, management, partnerships, as well as health & risk communications.

Sani-Gwarzo "(mni)" is also a member of the National Institute for policy and Strategic Studies, (NIPSS - Kuru, SEC-27. 2005), and also a graduate of the American Leadership and Management Institute (LMI) of the United States - CDC Atlanta, Course-9, Nov. 2007 – Aug. 2008).

Dr. Gwarzo's work/experience spans across community, LGA, state, national and international levels. His hallmark in all the places he served is "strategy & innovation". He designed and pre-tested the

Sani-Gwarzo: An Extraordinary Administrator

three-pronged innovative strategy of 'Gezawa Initiative on Polio' (2008-2009) which led to the successful resolution of non-compliance to Polio immunization in the entire Northern Nigeria, thus paving way for the successful eradication of Polio in Nigeria. For this singular act, he received the Nigerian Presidential Award of the National Productivity Order of Merit (NPOM – August 2012).

Sani-Gwarzo led the team that characterized the Lead poisoning epidemics associated with artisanal gold mining in Zamfara and Niger States as well as institutionalized the appropriate response and control strategies (2009 – 2014). In 2014, he led the team that screened, and mounted surveillance in all airport-related threats that turned out to be Ebola cases as a result of direct contact with the index Ebola case, thus helped in preventing the further spread of the epidemic in Nigeria. At the peak of the COVID-19 pandemic in 2020, Sani Gwarzo was given a Presidential appointment to lead the Ministerial Task Team that responded to the Corona outbreak in Kano and other eight (8) states in the Northern Nigeria which led to the establishment of an effective response system in the nine (9) affected states.

> ***Dr. Gwarzo's other merit awards of excellence for professionalism and leadership include two-time awards of the United States of America 'Superior Honor Award***

Dr. Gwarzo has served Nigeria in various capacities as a one-time Chief Epidemiologist of Nigeria; Director of the Port Health Service; Coordinator of the National Tuberculosis and Leprosy Control Program; and Coordinator of the National AIDS/STDs Control Program. At international levels, he served as the Medical Epidemiologist of the United States Center for Disease Control and Prevention - USCDC, (2006 – 2011) and also with the World Health Organization headquarters in Geneva, as the focal point for Polio transition and vaccinations in humanitarian emergencies (2017).

Dr. Gwarzo's other merit awards of excellence for professionalism and leadership include two-time awards of the United States of America 'Superior Honor Award – SHA' (2008 and 2010, respectively); and most recently, the World Health Organization Honor Award in recognition of exemplary contribution to improving immunization in the African region (Nov. 2019).

Sani-Gwarzo exchanging pleasanteries with Minister of State for Petroleum Resources, Chief Timipre Sylva, in his office on resumption of duty as the new Permanent Secretary.

Dr Mele Kyari, GMD of NNPC Ltd.

> *The reform that resulted in the transformation of the NNPC involved seeking more opportunities to be more efficient, by automating its operating systems and processes*

By Bassey Udo

The story of how the Nigerian National Petroleum Corporation (NNPC) transformed from a liability cost centre in 2018 into a multi-billion Naira profit-making entity in 2020 is phenomenal by any imagination.

The Minister of State for Petroleum Resources, Timipre Sylva, said the monumental milestone achieved by the company (now named National Petroleum Company Limited following the enactment of the Petroleum Industry Act) was as a result of the adoption of new operational processes and systems to ensure transparency, accountability and efficiency towards sustained profitability.

Sylva said the reform that resulted in the transformation of the NNPC involved seeking more opportunities to be more efficient, by automating its operating systems and processes to make the company's business faster, reduce logistic costs, and eliminate additional costs to the business.

Prior to the first public presentation of its financial accounts since the commencement of operations on April 1, 1977, the NNPC was something akin to a blackhole. Nothing goes into the system by way of investment and comes out with a profit, if it ever comes out. Corruption was rife. Opacity was the rule. Transparency and accountability were hard to come by.

A review of the five-year financial statement highlighting the performance of the company and the Group from 2016 tells the story of the trend in the last decade.

In 2016, although the company and Group declared a profit after tax of N16.75billion (company) and N118.34billion (Group) for the year, the accumulated losses from the previous year stood at a total of about N345.97 billion (company) and N901.99 billion (Group), with total current assets at

From Liability to Profitability: The Story of NNPC Turnaround

N2.87 trillion (company) and N4.16 trillion (Group) trailing total current liabilities of N3.64 trillion (company) and N6.59 trillion (Group) by N77 billion (company) and N2.43 trillion (Group). Revenue from the Group's operations was about N1.48 trillion each for the company and Group.

In 2017, the company and Groups performance nose-dived to total loss after tax of N1.85billion (company) and N111.59billion (Group), with cumulated losses before tax improving to about N309.27 million (company) and N635.8 billion (Group). Total current liabilities of N3.91trillion (company) and N6.999 trillion (Group) still outstripped total current assets of N3.15trillion (company) and N4.78 trillion (Group) by N76 billion (company), and N2.22trillion (Group), with total revenue at about N2.14 trillion each for the company and Group.

In 2018, the company and Group's performance took a deeper dive. While loss after tax plunged to about N254billion (company) and N803.88billion (Group), accumulated loss for the year stood at about N490.74billion (company) and N1.63trillion (Group). The total current liabilities grew to about N5.74 trillion (company) and N8.69 trillion (Group), overwhelmed total current asset of N4.77 trillion (company) and N5.36 trillion (Group) by over N97billion and N3.33trillion. The total revenue stood at about and N4.74trillion (Group).

In 2019, while the loss after taxation stood at about N107.78billion (company) and N1.76billion (Group), with accumulated loss at about N473.99billion (company) and N1.53trillion (Group). The total current liabilities of N5.62trillion

> ***In 2017, the Company and Groups performance nose-dived to total loss after tax of N1.85billion (company) and N111.59billion (Group)***

(company) and N9.72trillion (Group) exceeded the total current assets of N4.48trillion (company and N5.27trillion (Group) by N1.14trillion (company) and N4.45trillion. Total revenue stood at about N2.58trillion (company) and N4.63trillion (Group).

While the profit after tax for 2020 was N235.3billion (company) and N287.2billion (Group), its accumulated loss came down to N394.95billion (company) and N1.53trillion, with total current liabilities of N5.995trillion (company) and N10.82trillion (Group) in excess of total current assets of N5.27trillion (company) and N6.26trillion by about N725billion (company) and N4.56trillion (Group). The total revenue stood at N2.13trillion (company) and N3.72trillion (Group).

The financial statement for 2021 is not yet available. But the directors reported in 2020 that although the performance of the company over the years has been poor, they have no material reason to believe the company would not continue to operate as a going concern in the years ahead.

The directors' optimism may have

President Muhammadu Buhari

been informed by a giant leap in the Group's performance from an N1.76billion loss position in 2019 to a profit of N287.2billion in 2020.

In announcing the company's performance in 2020, President Muhammadu Buhari directed the NNPC to not only ensure the timely publication of the Audited Financial Statements in line with the requirements of the law but also follow up with the commitment to ensure transparency and accountability by public institutions.

For the Group Managing Director of the NNPC, Mele Kyari, the company's declaration of profit from a loss position in the previous year was not a mere sudden flight, but the result of a calculated turnaround of operational processes and procedures to ensure aggressive cost-cutting, automation of the system and downwards renegotiation of contracts by about 30 percent, among other tough reform measures.

As a result of the reforms, the Group financial position of the NNPC grew significantly, with total current assets of N5.27trillion in 2019 rising by 18.79percent to N6.26trillion in 2020, while total current liabilities increased by 11.32 percent, from N9.72trillion to N10.82trillion within the corresponding period.

In terms of revenue, about N3.72trillion realized in the 2020 financial year declined from about N4.63trillion in 2019 by about N91billion, or 19.65 percent, attributable to the impact of COVID-19 pandemic on crude oil production and the price of the commodity at the international market.

On July 8, 2019, when he was appointed the 19th GMD of the NNPC, Kyari said he inherited a national oil company many believed nothing works; a cesspool of corruption and opacity; a laggard behind its peers in other climes, and harbinger of inefficiency.

President Muhammadu Buhari and Malam Mele Kyari

> *Kyari rolled out a five-step strategic roadmap for NNPC's attainment of efficiency and global excellence*

He promised to break from the past and give the NNPC a new direction in the way it conducts its businesses and operations. Kyari rolled out a five-step strategic roadmap for NNPC's attainment of efficiency and global excellence called the Transparency, Accountability, and Performance Excellence (TAPE) agenda.

The TAPE agenda, Kyari said, would transform the NNPC and enhance its potentials and capacity to compete with other national oil companies around the world, by opening up its systems to public scrutiny; making its operational processes transparent and accountable to the Nigerian people and the government.

Also, the TAPE would ensure NNPC operated along with well-defined processes benchmarked against established global best practices by world-class oil and gas companies, setting the right cost structures in its operations, to guarantee value-addition towards NNPC's sustained profitability, and establishing achievable goals, priorities, and performance standards and criteria, by developing suitable governance structures for its strategic business units, to achieve set corporate goals.

Key markers of Kyari's first anniversary in office in 2020 included making good his to promise to embrace openness, transparency and accountability in his management approach, by publishing the audited financial statements (AFS) of the company's strategic business units (SBUs) and Corporate Services Units (CSUs) and Group for 2018, followed a few weeks later with the 2019 edition, the first time in 43 years then.

The 2020 edition of the AFS showed a remarkable turnaround in the company's fortunes with a 99.7 percent drop in the loss profile from N803.88billion in 2018 to N1.76billion in 201 before transiting to making a profit of N287.2billion, thanks to the historic cost cutting measures adopted in the way the NNPC does business.

Apart from ensuring operational costs are kept at the barest minimum, to as low as 30 percent, without compromising value and quality, the NNPC also insists on revenue optimization in all its activities.

> ***Operational costs are kept at the barest minimum***

With such a strategy, NNPC is determined to remain profitable, by ensuring projects by all its joint venture partners complied strictly with the efficient operational processes established by the NNPC, to achieve cost conservation and delivery of business objectives at low costs and reduced budgets, to guarantee steady revenue flows to the federation account.

Also, the NNPC has sustained the publication of the Monthly Financial and Operational Report that highlights NNPC activities in the different aspects of the industry value chain, which began in 2016.

As a company committed to doing away with old ways of doing things, the NNPC, which has always defaulted in remitting to the Federation Accounts revenues realized from its operations, has not only been regular in exercising that responsibility, but has also been timely ever since.

To ensure it continues to discharge its operational responsibility in a manner that would continue to guarantee profitability, the NNPC, under the supervision and partnership with the Ministry of Petroleum Resources, has turned its focus on investing heavily in the gas sector, in line with the government aspiration to diversify the country's economic base, by transforming the nation into a gas-driven economy.

With the government declaring 2020 as the "Year of Gas", the NNPC has continued to vigorously pursue some strategic profit-oriented gas development projects, to generate more revenue to the government and ensure sustainability.

Apart from the Final Investment Decision (FID) on the construction of Nigeria LNG Train 7 Project, the NNPC, along with its JV partners - Shell, Total, and ENI, has also signed the contract with the SCD JV Consortium, comprising affiliates of Saipem, Chiyoda and Daewoo, for the execution of the engineering, procurement and construction (EPC) contract, to allow the effective commencement of the detailed design and construction phase of the project.

On June 15, 2021, President Muhammadu Buhari performed the ground-breaking ceremony of the NLNG Train 7 Project, marking the effective commencement of construction work on the project.

On completion, the multi-billion-dollar project expected to generate over $20billion revenue to the government over its production life cycle would raise the NLNG production capacity by 35 percent from the current 22 million tonnes per annum (MTPA) to 30 MTPA, boost Nigeria's competitiveness in the global LNG market, in addition to creating about 10,000 direct and 40,000 indirect jobs.

The project, which has been described by President Muhammadu Buhari as a game-changer, is an integral part of the Trans-Nigeria Gas Pipeline (TNGP) with a capacity to transport about 2.2 billion cubic feet of gas per day from the Niger Delta to industrial establishments along the Abuja, Kaduna, Kano as well as other places along the corridor.

Another strategic project initiated to guarantee sustained profitability for the NNPC has been the 614 kilometers-long Ajaokuta–Kaduna–Kano (AKK) gas pipeline.

The pipeline is designed to transport up to 3.5billion cubic feet (MCF) of feed gas per day from various gas gathering projects in Niger Delta, and transported through the Escravos Lagos Pipeline System II (ELPS II) and Oben-Obiafu-Obrikom (OB3) gas pipelines across Niger and Kaduna States, for supply to industrial centres in the northern part of the country.

Scheduled for completion in 2023, the AKK pipeline system, which represents the first phase of the 1,300 kilometres-long Trans-Nigerian Gas Pipeline (TNGP) project, is being developed as part of Nigeria's Gas Master Plan to utilize the country's surplus gas resources for power generation as well as for consumption

Malam Mele Kyari, GMD of NNPC with Chief Timipre Sylva, Minister of State for Petroleum Resources

by domestic customers.

The TNGP project also forms part of the proposed 4,401 kilometres-long Trans-Saharan Gas Pipeline (TSGP) to export Nigeria's natural gas resources to customers in Europe.

The enactment of the Petroleum Industry Act (PIA) almost 20 years since the process to review the laws guiding the operations of the country's petroleum industry will definitely enhance NNPC's capacity to achieve sustained profitability.

Apart from ensuring that all aspects of the petroleum industry operations are conducted in keeping with the global standard accepted in all jurisdictions, the PIA will make the NNPC to carry out is businesses efficiently in the most cost-effective way, as a public company with a mindset to declare profit for its investors and shareholders.

NNPC's ambition facilitate the realization of Nigeria's aspirations of increasing its daily oil production capacity from the current average of 2.5million barrels to about 3million barrels per day, and national crude oil reserves from about 33billion barrels to 40 billion barrels.

The Nigerian Upstream Petroleum Regulatory Commission (NUPRC), the regulatory authority in the country's petroleum industry, and successor agency of the Department of Petroleum Resources (DPR), says it is committed to removing all bottlenecks that have always militated against the realization of these national aspirations.

This includes building partnerships to address the insecurity challenges in the Niger Delta region; benchmarking costs across all the terrains, to help cut the cost of production deploying technology to tackle the menace of crude oil theft, sabotage and pipeline vandalism.

If the country's four refineries at Port Harcourt, Warri and Kaduna are fully rehabilitated by 2022, to transform Nigeria from a net importer of refined petroleum products into net exporter of the commodity, as Kyari, promised, then NNPC's profitability would be fully guaranteed.

With four fully functional refineries, supported by several private refineries, including Dangote Oil Refinery Company, Waltersmith Refining company and OPAC Refineries, the challenge of refined petroleum products importation and the associated problem of fuel subsidy payment would be eliminated, and huge loss of foreign exchange saved for the country.

> **"*Kyari was last year recognized for exemplary leadership***

For spearheading NNPC's turnaround from loss to profitability, Kyari was last year recognized for exemplary leadership and conferred with the "2020 Zik Prize for Public Service Leadership" by the Public Policy Research & Analysis Centre (PPRAC).

At the conferment ceremony in Lagos, the Centre said the conferment on Kyari was in recognition of "his distinguishing leadership role and sterling achievements since he assumed office as the GMD of NNPC in 2019.

"Even in the recent difficult years, Kyari recorded these achievements, through the various transparency and accountability reform policies he initiated prior to the recent transition of the NNPC to a limited liability company under the new Petroleum Industry Act (PIA).

"Kyari initiated policies that seamlessly transformed NNPC operations, including deepening domestic gas utilization in the country, rehabilitation of the nation's four refineries to end the arbitrage through the importation of petroleum products, and a regime of public disclosure of NNPC accounts, through a deliberate policy of transparency and accountability," the Centre said.

At the event to honour him as "The Sun Man of The Year 2020" by The Sun Publishing Company Limited, Kyari restated NNPC's commitment to continue to embrace transparency and accountability in its operations.

"What we have done in recent years is to take out all the opaqueness in NNPC operations and ensure we represent the over 200 million Nigerians and work for them, as our shareholders," Kyari said.

President Muhammadu Buhari and NNPC Board members after inauguration at the State House, in Abuja

Minister of State for Petroleum Resources, Chief Timipre Sylva welcomes a guest to NIPS 2021 dinner, in Abuja

Egyptian Ambassador with other guest to NIPS 2021 dinner, in Abuja

Egyptian Ambassador to Nigeria (2nd left) with other guests at NIPS 2021

Some guests at the NIPS 2021 dinner, in Abuja

Mr. Osagie Okunbor, Managing Director of Shell speaking at NIPS 2021 dinner, in Abuja

Some guests at the NIPS 2021 dinner in Abuja

Some guests at the NIPS 2021 dinner, in Abuja

One of the speakers at the NIPS 2021 dinner, in Abuja

Honourable Minister of State for Petroleum Resources, Chief Timipre Sylva and other guests at NIPS 2021 dinner, in Abuja

Guests at the NIPS 2021 dinner, in Abuja

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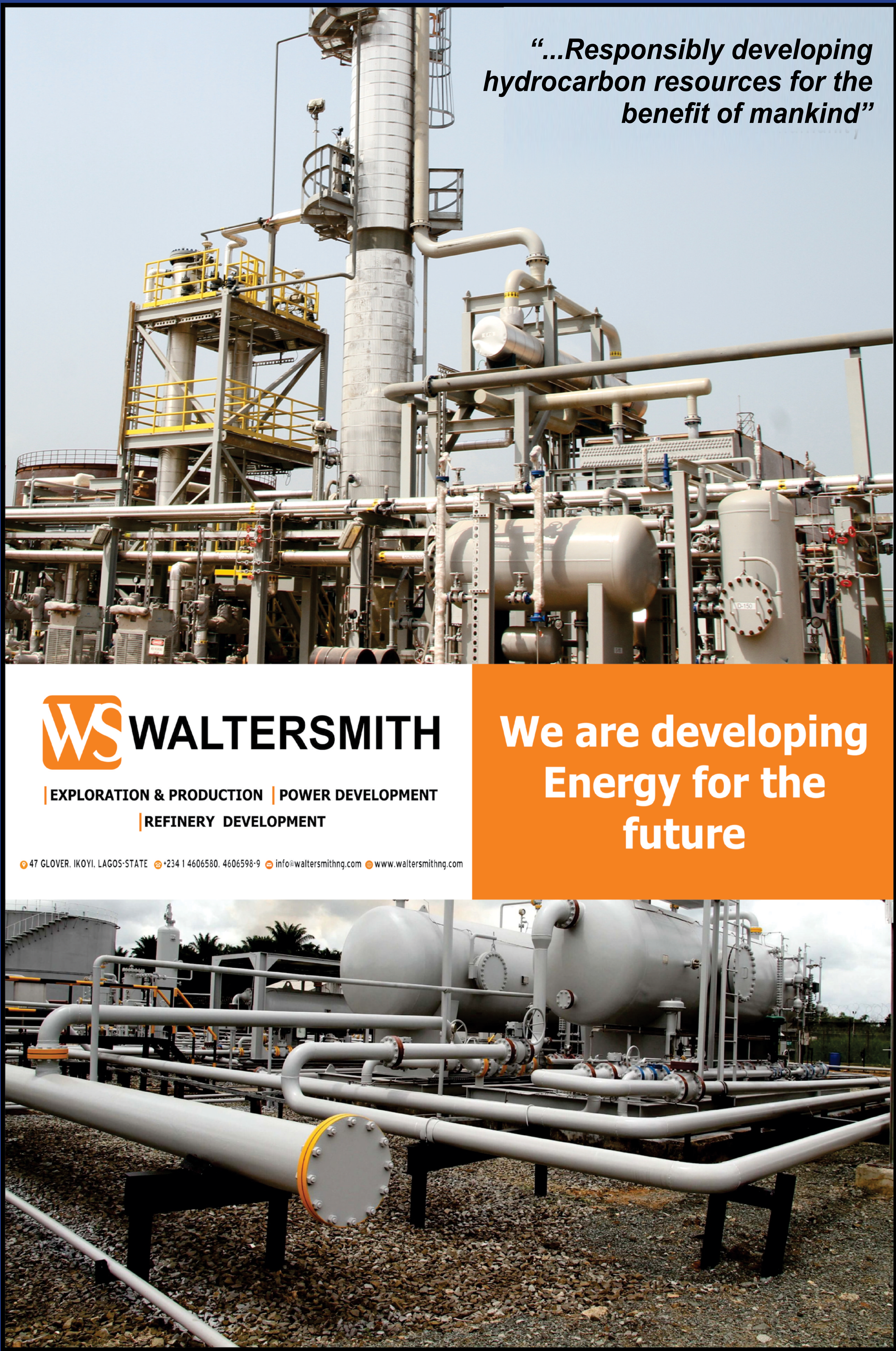
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