Nigeria and COP 26

Nigeria and COP 26 – the question facing us must surely be whether the emphasis in Nigeria should be on adapting to climate change, mitigating its multiple impacts within the country, excoriating others for advocating a remedial plan or instead focussing more strongly on seizing it as an opportunity to change the country's development paradigm.

Recent government discussions, particularly the position put forward by the Vice President in discussion with Tony Blair, or by President Buhari in his "Opinion" piece for Newsweek magazine, have been on how best to continue using gas as the fuel for the country's electricity generation – and not as feedstock for manufacturing and industrial activities to spur real growth and job creation. A case has been put forward for insisting that Nigeria be allowed, if such is the right word, to use its own natural gas resources to the end or for as long as is necessary to rectify the shortfall in electricity supply to the national grid. This approach is simply a variant of "business as usual", as it ignores the potential for innovation in order to drive economic growth. It resorts instead to the past in an effort to continue that past. Will simply providing more electricity in the national grid bring back factories and revitalise industries in those clusters where they once were? Should we not be asking whether supplying to residential customers at incredible cost to the government is worth continuing?

Radical problems call for radical solutions

What if the government rather than propping up a moribund system that it has consistently thrown a comparatively large proportion of its revenues at for that purpose, instead incentivises the conversion of gas into products that could drive industries, whereby government's role must solely be to incentivise and not to own? At the same time, given that the national grid only reaches 40-50 percent of the population at best, why are we not grasping COP 26 as a real opportunity to completely rethink our electricity system and how electricity is provided on location?

Nigeria has under-developed itself into a corner. Its transport system relies on diesel be it for road haulage or for its two old-made-new passenger railway lines. The rampant use of cars rather than buses in its conurbations drives greater reliance on fossil fuels. The electricity the country produces does not reach half the country geographically speaking, let alone very many people, and worse, does not drive at least half the economy. It is time to rethink the entire approach to energy consumption.

With regard to the electricity system, for far too long the focus has been simply on increasing the number of megawatts. This approach is evidenced once again in the Vice President's published preference to extend the use of gas. This mindset simply ignores the fact that it is not the number in absolute terms that counts but the number of megawatt hours reach what users. Therefore, instead of now saying we need to be allowed to use our gas to create more megawatts we should be asking ourselves: Who needs electricity, where, and for what purpose. And we should avoid not appearing serious to the international community. How long have we talked about stopping gas flaring and done nothing? We should end gas flaring immediately, rather than once again stating some date in the future. Indeed, if the government is cash strapped it could simply impose severe penalties for those companies that do not end flaring. It bears noting that a system of penalties has existed for some time, but sanctions have not been applied.

To return to the question: Where do we need electricity? We need it where the economy can grow quickly and where we can create added value in-country. That is in agriculture. And that is in manufacturing. Residential housing requires a far lower amount of electricity, is non-productive in its consumption of electricity, and could henceforth, for example, be offered a choice between being penalised for using diesel or instead receiving subsidises to start to rely on renewables.

The national grid as is, need not be expanded further at great expense. For economic activities, electricity need not be something wheeled over vast distances through a national grid but could equally be something generated locally. Nigeria has ample hydroelectric potentials just as it has extensive solar radiation. It has the ability to produce green hydrogen going forward to drive industrial plants. Just as it has the infrastructure for exporting the green hydrogen, in the form of its LNG terminal.

Nigeria has to date, like most of Africa, relied on old technologies from the global North and used them for old purposes. COP 26 should be viewed as an occasion to revisit the macroeconomic impact of this fact. Going forward, Nigeria must start to explore and identify new technologies to be used for new purposes. If we take the example of agriculture, then we see where centralised power generation in processing, packaging, and forwarding could play a massive role in changing the country's economic fortunes and employment opportunities. The key argument must not be to negotiate with the Global North over the continued use of gas but to negotiate with the Global North over international subsidises to defray the upfront costs of introducing such decentralised systems and avoiding the use of diesel. Indeed, if Nigeria boasts that it can plant millions of trees, then it must also show how those millions of

trees will be moved as saplings to the areas where they are to be planted and how they will be irrigated without massive reliance again on diesel. Otherwise, things will simply move in a vicious rather than a virtuous circle.

Electricity Tariff Increases: Celebration or Cause for Concern?

A lot seems to have happened in the power space over the last few days. First came the CBN announcement laying down specific rules for DMOs on what they can and cannot do with monies received on behalf of electricity distribution companies. We were also regaled with the efforts by FGN to avoid defaulting on payments to Azura IPP. Then came the bombshell, at least in the opinion of some industry watchers: The President approved significant electricity tariff increases – 73 percent in the first instance and by the time the second increase kicks in, total rise from the current position would be in excess of 130 percent. These news, alongside a series of other sobering headlines from last week (one in two Nigerians in the labour force is either unemployed or underemployed; inflation is on the increase; Nigerians now spend about 60 percent of their income on food, Nigeria borrows grain from ECOWAS to feed her citizens, etc.) are bound to agitate, or be of great concern to discerning minds.

Before dissecting the various issues, let us look at why these headlines elicit agitation and concern. Agitation because the consequences could have been avoided: The desperation and urgency of the authorities are apparent in the Azura case. If the same level of diligence had been accorded the negotiations in the first place, it is doubtful government would be where it is today. Likewise, if the way the tariff is calculated had been properly scrutinised, it is doubtful the clamour by the owners and financiers of the PHCN successor companies would have received such attention. Perhaps doing the right thing from the start is quite un-Nigerian. The default setting is to attempt to solve self-created problems that could have been avoided in the first place.

Why concern? The probability that the above developments will have a devastating impact on the wellbeing of the citizens of the “poverty capital of the world”. The expected consequences are higher prices of goods and services, leading to higher inflation, further unemployment, etc. A situation that will presumably be compounded if the looming recession materialises as the economy has reportedly contracted by 6.1 percent, having barely recovered from the last recession.

Of the series of recent news, the following three are noteworthy: the CBN announcement, the Azura payments, and the tariff increases.

CBN appears to be taking centre stage in running the economy. As the banker to the Federal Government, it became, by default, the de facto banker to the electricity industry. First, it played a key role in persuading the banks to provide finance to the would-be investors on the eve of the privatisation. Later, the liquidity problem caused by technical and non-technical losses led the Federal Government to mandate CBN to provide “market support” to the electricity industry. It is the inability of government to continue providing the credit support, considering its own revenue challenges, that must have driven the CBN to safeguard its exposure. No one seems to be asking the question of the causes of the shortfall.

What may come across as CBN using its regulatory powers to breathe some sanity into the financial position of the electricity industry is, to all intents and purposes, an overreach, as CBN has simply relegated the sector regulator to a casual bystander. CBN has stepped beyond its mandate and assumed a key function of NERC, namely, supervision of the electricity market. And that does not bode well for the future of the electricity industry and the real reform required to provide the energy to drive the economy.

As for Azura, the authorities were remiss in their responsibilities. The risks and contingent liabilities the PPA, PCOA and PRG were meant to mitigate or manage were not contingent. They were real risks merely waiting to happen, and happen they did. Alarm bells were sounded as far back as 2015, but evidently fell on deaf ears. Government was more focused on the willingness to provide what was considered the necessary mitigation required to facilitate the development of the power plant and less on its capability to fund or manage the expected liabilities.

Perhaps if more attention had been placed on capability, the necessary inquiries would have caused the spotlight to be focused on assumptions and parameters on which the financial viability of the plant was based. This would have led to financial modelling and sensitivity analysis not only to underpin the viability of the arrangement but would have thrown up issues and challenges that would allow the authorities to manage the situation better. Unfortunately, the level of diligence the developers and financers undertook to safeguard their interest was not replicated on the government side.

The second issue is the tariff increases, which ostensibly are to facilitate access to a US$1.5 billion facility from the World Bank to augment the financial position of the industry given the

revenue challenges of government. One must ask whether an adequate assessment was undertaken to determine the implications and effects of tariff increases of 73 and 60 percent respectively, that is, the possible deleterious consequences on the economy and welfare of Nigerians.

Consider this: The bottom line is that a consumer who is currently paying ₦20,000 per month for electricity will end up paying ₦34,600 per month when the initial price increase takes effects in September 2020. The amount the same customer will pay in 2021 when the second increase is implemented is ₦46,600 per month for the same amount and quality of energy. This is a staggering increase. With the current realities of GDP contraction, lower oil prices, etc. we should brace ourselves for some serious economic challenges as real income declines, with a higher proportion expected to be spent on electricity and food already accounting for 60 percent of household income, food prices will tend upwards especially those that depend on electricity.

The distribution companies have been clamouring for tariff increases from inception on the grounds of non-cost reflective tariffs. However, what is 'cost-reflective' if there is no consensus on the areas that must be tackled to improve operational and financial performance by the authorities who are meant to balance the interests of consumers and service providers.

On the argument that prices are not cost reflective, the focus should be on appropriate pricing principles and efficient cost of production – after all, no one would support persistent disequilibrium of costs and price. The debate must, therefore, be on addressing the underlying systemic and structural deficiencies that consistently cause costs to diverge from set tariffs. Assuming a tariff increase will cure the myriad of sectoral challenges is naive. The overwhelming evidence is that any cure attributable to tariff increase is temporary at best. People adjust their consumption patterns in line with their disposable income. The implication is price increases that please service providers cause consumers to reduce consumption. This is basic economics.

Without addressing the underlying factors that drive cost to diverge from price, consumers will face further tariff increases in the future; this will negatively impact aggregate demand and cause shrinkage in supply and production. The factors which directly or indirectly influence costs and, consequently, prices), include: (i) technical losses, (ii) non-payment/theft of electricity, (iii) low capacity utilisation, and (iv) high operating and capital costs. Then there are unfavourable macroeconomic parameters, such as: high interest rates; a dearth of

long-term development capital; the regular depreciation and devaluation of the Naira and heightened foreign currency exposure increase prices for imported equipment (virtually everything) utilised in electricity production and supply; denominating gas supply purchases in US dollars despite the fact that it is produced domestically; the lack of adequate risk mitigation instruments; and finally, inappropriate trading arrangements for electricity that add to cost of services, etc.

Moreover, the knock-on effect of tariff increases does not receive the attention it deserves. The fact that factories and businesses are regularly closing is not unconnected with epileptic and expensive power supply. There is a presumption on the part of the authorities and operators in the industry that prices can be increased inordinately. This may be applicable to most residential consumers: they have low price elasticity of demand, that is, they have little or no choice on source of power and their consumption is not that sensitive to price changes. The reality for job- and wealth-creating commercial and industrial consumers is the opposite: with higher elasticity, when faced with increased power prices that can make their products more expensive and less competitive they respond by investing and switching to self-generation or closing up shop.

It is worth noting that the various tariff increases the industry has witnessed in the past did not solve any of the electricity supply challenges in Nigeria. Neither have tariff increases improved operational or financial performance of the sector or supplied more energy to the economy. The authorities still need to decide how to make electricity available at a fair price to enhance competitiveness, create jobs and spur economic growth. Nigeria is at a crossroads: Urgent attention must be paid to addressing growing poverty, unemployment, the flagging economy and HDIs that are negatively correlated to economic growth, an electricity is a critical infrastructure that must be available. The issue is not just about the electricity industry. No, it goes beyond that: The basic economic welfare of the citizens and society will be pulverised if business as usual approach is maintained. Our welfare is imperiled with dire consequences for society simply because we have failed to diligently attend to the economy and balance the interest of all stakeholders. We should be deeply concerned and agitated by these recent developments.

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It is worth noting that the various tariff increases the industry has witnessed in the past did not solve any of the electricity supply challenges in Nigeria. Neither have tariff increases improved operational or financial performance of the sector or supplied more energy to the economy. The authorities still need to decide how to make electricity available at a fair price to enhance competitiveness, create jobs and spur economic growth. Nigeria is at a crossroads: Urgent attention must be paid to addressing growing poverty, unemployment, the flagging economy and HDIs that are negatively correlated to economic growth, an electricity is a critical infrastructure that must be available. The issue is not just about the electricity industry. No, it goes beyond that: The basic economic welfare of the citizens and society will be pulverised if business as usual approach is maintained. Our welfare is imperilled with dire consequences for society simply because we have failed to diligently attend to the economy and balance the interest of all stakeholders. We should be deeply concerned and agitated by these recent developments.

*Photo by **Miguel Á. Padriñán** from **Pexels***

Why the Electricity Industry Fails to Serve the Nigerian Economy

Clear Disconnect between Electricity Industry and Nigerian Economy

As any economist or industrialist will tell you, electricity is a key enabler of the transformation of goods. Most transformation of goods and productive activities cannot take place without energy, and electricity is ranked as the main form of energy. The positive relationship between energy and economic growth is a given. There is ample evidence to this effect – a recent study of 10 Latin American countries over a 36-year period showed that for every 1% in energy consumption, there is 0.59% increase in GDP. What, however, is not unambiguous is what is cause and what is effect? While the preponderance of empirical evidence establishes a unidirectional run from energy consumption to economic growth, some countries exhibit the converse. Nigeria is one of those. The obvious conclusion must be: Electricity has crippled the Nigerian economy. Not because of the erratic and inadequate

nature of electricity supply but the fact that the main sectors that dominate the Nigeria economy – agriculture, manufacturing and services – are rarely the focus of electricity industry supplies. Put differently: The national grid to which we dedicate large proportions of national resources to rehabilitating first and foremost serves residential customers and then only those who are close to the distribution lines.

Myriad of Problems

This is a problem that policymakers have consistently eschewed. Even if we manage to increase power generation and distribution to 6,000, 7,000 or even 10,000MW, the effect on the economy can be expected to be negligible. The main reason for this is not complicated: Usually, industrial and commercial consumption form the hub of any electricity grid. In Nigeria, however, the grid has metamorphosed into a network serving primarily domestic consumption. This transformation was largely brought about by poor electricity services as factories and industries have suffered under the weight of irregular power supplies, very high prices relative to cost of service and as a result either closed down or sought alternative, reliable supply sources, usually investing significantly in own-generation. , However, it would be misleading to focus on poor power supply as the sole culprit. There are other issues and challenges ranging from the lack of other critical infrastructure and transportation, the absence of a supporting national industrial development plan, inconducive macroeconomic conditions, lack of economic goals etc., all of which are factors relevant to explaining the parlous state of the Nigeria economy.

That said, there are most definitely operational and systemic issues that come within the ambit of the electricity supply sector and have hobbled its ability to help drive economic growth. These include a lack of knowledge of the country's demand and power requirements (believe it or not, the operations and development of the sector are based on guesstimates and not on any rigorous demand study), high technical and commercial losses, the misalignment of constituent sectors, the narrow choice of generation technologies, etc. Moreover, we should not forget the regulatory issues such as the flawed tariff methodology that consistently causes prices to diverge from an efficient cost-of-service delivery, and wrong-headed policy or practice of gas industry placing the power industry further down the pecking order. Or the simple fact that generating companies pay for their gas and purchases of equipment in dollars but are paid in Naira for electricity supplied and consumed.

From the above, it follows that the poor electricity supply has blighted the socio-economic landscape. Yet, if fundamental changes are not made to redirect the role electricity should

play in promoting economic growth, job creation and poverty alleviation it looks set to continue to wreak havoc. At present, the Nigerian electricity supply industry (NESI) functions like a disguised version of the old subsidy on petrol at the pump. The government is busy subsidizing residential electricity users rather than focusing on the economy. For manufacturing and agriculture, NESI has long since become our Nessie (the elusive monster of Loch Ness) – given that it has been a long time since they last experienced adequate and reliable electricity. Yet the government ploughs over half a billion dollars just into covering NBET's bills each year and is about to use a similar amount for the Presidential Power Initiative.

We Need to Create Prosperity and Jobs Urgently to Address Socioeconomic Problems

This being where we are today, we should endeavour to make sure this is not where we remain. Central to this is the need for inclusive economic growth. Why inclusive? The growth the economy posted between 2000 and 2015 did not create jobs, and that is why despite an increase in national GDP, the incidence of poverty increased substantially. Indeed, with the recessions since then, Nigeria has emerged as the "Capital of Poverty" in the world, and unemployment has risen at an alarming rate especially among the youth.

What is overly obvious is that a change of approach in addressing the problem is required. As things stand without focusing on how to generate prosperity and employment to improve the welfare of Nigerians, more people will fall into poverty with all the attendant dire social consequences. The latest releases on unemployment and inflation – and they shockingly stand at 27.1 percent and 12.82 percent, respectively – are sad testimonies to this reality. According to the latest NBS unemployment report, one in every two Nigerians in the country's labour force is either unemployed or underemployed. At the same time, updated data from the World Economic Forum shows that Nigerians spend more on food than any other country in the world. Food takes up an astonishing 58.9 percent of Nigerians' income. Talk about a disconnect. These statistics are grim as inflation and weak economy continue to erode household income.

Creating productivity and jobs will require improving productivity and expanding the economy's productive base. Electricity has a crucial role to play here in the growth of the key sectors that will drive the growth, namely agriculture, manufacturing, and services. For electricity to perform this function a vastly different approach to generation and supply would be required. The improvement in productivity and expansion of agriculture require irrigation, mechanization and storage facilities – and these activities require energy and not all of it

electricity and where electricity is most efficient form of energy, it need not be grid-supplied. Modern technologies that can be harnessed abound – at costs that are comparable to grid electricity. Manufacturing requires not only energy but energy that is provided efficiently and at reasonable costs. Only then will our industries be able to compete with imports from China etc. and will we be able to stop the drain of foreign currency out of the Treasury. It is important to state that while adequate and reliable power is critical and needs to be planned carefully, it must be complemented by an efficient transportation infrastructure, access to capital, an upskilled productive labour force etc.

Addressing the problem must be from a holistic perspective: Clear outputs and outcome-based indices must comprise the goals and targets in a comprehensive economic plan. Resources must be allocated to address specific problems, with a clear monitoring and evaluation framework to ensure there is enhanced performance. Nigeria must once and for all stop spending scant government revenues in the hundreds of billions of Naira in a way that does not address the fundamental problems of the industry and, moreover, further deprives other sectors such as education and health of much needed funds. Throwing money at the electricity industry without demanding a commensurate improvement in services that is transparently linked to addressing unemployment and income generation is in essence throwing money down the drain. Worse still, it simply delays the underlying socio-economic problems for a later day.

Image by Tom Swinnen from Pexels

Losses and Poor Electricity Supply

The old adage “Money makes the world go around” is apt in describing one of the fundamental problems of the Nigerian electricity industry. The problem revolves around inadequate revenues, which undermines performance and viability. In a nutshell, the industry, as presently operated and regulated, is incapable of generating enough money to pay for: (a) gas used by the generating companies to produce electricity, (b) transmission facilities used in transporting the electricity from the power stations to distribution companies’ networks, and (c) distribution assets used in ultimately getting the electricity generated and transported to the final end users, namely, households and factories. The ensuing inadequacies and inefficiencies wreak havoc on gas supply, transmission, distribution and marketing businesses that are interlinked in the production and supply of electricity.

So what causes revenue shortage in the industry?

The production chain alluded to above implicitly traces costs of electricity services to respective sectors involved in the production and supply process. The cash paid by end users for the electricity they consumed is the only source of cash flow for the companies involved along the electricity industry supply chain. Any shortage in that cash flow will invariably reduce the cash available to some or all of the companies. In such a case, the implication is that they will not, in the short-term, be able to cover their operating expenditures, and in the long-term, capital expenditures for expansion and asset replacement will be negatively impacted. In short, as a result of energy losses along the supply chain, revenue collected is inadequate to meet the expenses incurred in the generation and onward supply of electricity. The expenses can be categorised as either energy or capacity costs. The former refers to direct cost of generating electricity and the latter to the gamut of equipment costs involved in the generation and supply of electricity to end users.

On the output side, what is observed in Nigeria is a significant discrepancy between electricity generation and consumption. This discrepancy, termed system losses, is above 25 percent. What NERC refers to as aggregate technical, commercial and collection (ATC&C) losses, is comprised of line losses across transmission and distribution networks, and commercial and collection losses, with respect to the energy delivered to the transmission network. When the latter set of losses are added to the network losses, the aggregate losses exceeds 55 percent – this compares unfavourably with global best practice of approximately 7 percent. ATC&C losses, according to figures published by NERC, range between 32 and 71 percent.

First, let us put the problems associated with losses in proper context. Total system losses at present stand at around 55 percent of electricity injected into the transmission network. What this implies is that on any given day, if the generating companies inject 3000MW into the transmission network, it is likely that revenues collected will only cover 1350MW of the total generation (compared to 2790MW if the system were operated in line with best practice). It follows that either the service providers bear the losses and accept non-payment of 1650MW or the incidence or burden of the losses is transferred to the end users by way of tariff increases. From a monetary perspective, the value of lost electricity, assuming 3000MW output and average end user tariff of N25/kWh, is approximately N360 billion per annum. For emphasis, that is about N1 billion per day. If tariff increase is opted for as the means to deal with this shortfall, 1350MW must be effectively rebased to amount to 3000MW by over 200 percent to make good the positions of generation, transmission and distribution companies –

and by extension, the gas suppliers. Tariff increase as an option is fraught with issues such as regulatory lag (delay) as rate determination is a protracted process: the authorities have to balance increases with affordability, and the industry must contend with reduction in consumption by end users in response to higher prices. The overall impact is reduction in electricity consumed, which normally sets off a cycle of tariff increases. The implication of either tariff increase or poor financial performance are dire: reduced profitability and financial viability for the service providers and/or higher cost of electricity services to end users. The long-term result: inadequate and unreliable electricity services make it difficult for service providers to raise the capital required for investment to address losses and improve services.

This begs two questions: What is the source of the losses? Who bears the burden of the losses? The answer to the first question can be found in the ubiquitous revenue formula of price multiplied by output. If the regulated tariff is low or the discrepancy between electricity generated and consumed is significant, then revenues will be lower than expected.

What can cause tariff to fall below cost of service? Regulatory lag or poor calculation of unit costs, *ex post* production and cost inefficiencies. Since our focus is on losses, and given the importance of pricing, we will return to issues surrounding non-cost reflective tariffs in a different paper.

Another way of looking at losses is in terms of technical and non-technical categorisation. Losses ascribed to the former are as a result of the physics and engineering involved in transporting electricity. Losses ascribed to the latter category are caused by human omission or commission. By omission we mean inadequate energy accounting – especially in the aspects of billing, metering and collection. By commission, we mean wilful acts of circumventing and undermining legitimate services such as theft, tampering with meters, non-payment of electricity consumed etc.

Since privatisation in 2013, the way revenue shortfalls have been dealt with by government is to avail the market participants of direct tariff support. The total sum expended since 2015 is in excess of N1 trillion. Put differently, government continues to plough cash into a predominantly privatised sector to address a problem that hitherto was non-existent. In addition to this, which effectively amounts to income redistribution, current regulatory practices compound the situation by allowing service providers to recover their entire asset base rather than what is actually used in supply of electricity. This practice encourages service providers to engage in “gold-plating” in the knowledge that all their assets will be included in the tariff determination thereby putting upward pressure on electricity tariffs. For

instance, no more than a quarter of the total transformation capacity of distribution networks that is in excess of 20,000MW is used in distributing power to end users, yet the distribution companies, in principle, get paid for all. Apart from the fact that end users have to contend with higher tariffs, this practice impacts negatively on government's fiscal position through tariff/market support and high-cost energy purchase obligations demanded by IPPs and gas suppliers.

The simple point is that the losses are just too high and neither make a good story for investment nor improvement in electricity services. This position is simply not sustainable – not for the government, not the service providers and certainly not for the end users. Something must be done urgently.

Slay the monster before it consumes everything in its path

The distinction along technical and non-technical lines gives insights into how the problem can be approached. Technical losses consistent with best practice (design and network operations) are considered to some extent to be non-discretionary due to the characteristics of electricity. Non-technical losses, on the other hand, are within the discretionary control of service producers. Some allowance is usually made for losses in rate setting but not to the extent we see in Nigeria. The level of ATC&C losses we see in the Nigerian electricity industry is essentially rewarding inefficiencies and poor practices. It effectively provides a disincentive to the distribution companies to undertake necessary loss reduction programs that will boost quantity and quality of power, and ultimately provide cheaper electricity. One of the reasons why residential customers dominate power consumption in Nigeria, contrary to what is observed in other countries, is that apart from the epileptic supply, the losses have amplified the vicious cycle of incessant tariff increases and have indirectly made industrial customers uncompetitive, which have made many of them close down or relocate to neighbouring countries, while those that remain are buffeted by hostile operating conditions. These have combined to exacerbate socioeconomic problems and challenges such as unemployment, poverty, rural-urban development etc.

Another way of looking at losses is from an accounting perspective. The industry burns more gas than required, this is a resource that otherwise would be sold to enhance government revenues and fiscal position, not to mention ensuing environmental degradation. More investment in transmission and distribution facilities is required to address the losses as ultimately, high technical losses translate into losses to the nation, and high non-technical losses are corporate losses to the service providers. This situation is further compounded by

a moral hazard problem on the part of the service providers as the losses are borne by end users and government.

What must be done?

The good news is Nigeria is not the first to contend with high losses as other nations who were in similar positions have successfully curbed and reduced them to tolerable levels. The bad news, however, is the attention of the industry is yet to be properly trained on losses – ATC&C performance targets ranging between 21 and 38 percent set by NERC are not stringent enough and performance of the distribution companies come nowhere close to those targets. This needs to change given the significance of electricity to economic growth and development. Irrespective of the argument that energy consumption drives economic growth or vice versa we subscribe to, the dragon must be slain if the nation is to see electricity play its rightful role as the engine of growth and development. Policymakers must take cognisance of the fact that simply committing public funds to transmission and distribution networks, or providing financial backing for the development of generating plants will not alter the fundamental problem caused by technical and non-technical losses.