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This page was added by the journal. The article begins on the next page.

Climate Actions: Nigeria and the Path of Decarbonised Economy

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Abstract

Sub-Saharan Africa becomes a victim of mineral resources, environmental issues arising from natural fossil fuel. Unfortunately, while other countries in Europe, America and Asia, positively, use these carbonated resources to build fledgeling economies, Nigeria underutilises her products from the same resources with an adverse effect on climate conditions. The researcher used discourse analysis to examine the Nigerian scenario with regards to the management of environmental wastes. The article argues that when the shift tilts to a decarbonised economy, there will be a reduction in climate change. Nigeria would then have more opportunity and responsibility to harness decarbonised resources into building an efficient and fledging economy hitherto impossible with fossil driven fuel.

Keywords: Decarbonized Economy, Minigrids, Carbon Pricing, Climate Action, Sustainable Development

Introduction

An aerial view of Nigeria at night reveals great darkness enveloping her with exception to flashes of light around the significant cities powered mostly by generator sets. Of all the reasons that made her the poverty capital of the world, the starkest seems to be the fact that about 55% of the population has no access to reliable electricity. (Solar Plaza, 2018)

In the recent ranking of Mo Ibrahim, "Nigeria scored 47.9% in overall governance, ranking 33 out of 54 countries in Africa. Although Nigeria improved in ranking from 35 in 2017 to 33 in 2018, the country's overall score reduced from 48.1% to 47.9%. According to the report, this score is more moderate than the African average of 49.9% and also lower than the West African average of 54.3%." (Mo Ibrahim Foundation, 2018). A recent report on fragile states index (FSI) categorised Nigeria as the 13th most fragile state in the world with 91m people living in extreme poverty (World Poverty Clock, 2019) and unemployment rate pegged at more than 35 per cent by the National Bureau of Statistics (NBS, 2019).

Nigeria's economy is majorly carbon driven. Olaoye, Ajilore, Akinluwade, Omole & Adetunji (2016) observed that Nigerians spent as at 2012 1.6 trillion Naira yearly and 4.9 trillion Naira. In 2018, Nigerians spent N4.9 trillion on generators annually. It was used to self-generate 14 gigawatts of electricity (RMI report", 2018) on generators and consumes 9 billion USD a year in inefficient fuel. Moreover, the Federal Government spends one trillion Naira annually subsidising fuel (Ben Bruce, 2019).

Since the use of fossil fuels has helped boxed us into a very tightly poor corner, this paper argues that to delete our name from the inglorious club of underdeveloped countries, we must quickly and responsibly transit into decarbonized economy. Such an economy bases on renewable energy resources to protect the planet and deliver tons of economic benefits.

An overview of current situation of carbon driven economy in Nigeria

Issues of blackouts in Nigeria remain ubiquitous. Latest figures peg Nigeria's total power generating capabilities at around 13 GW, 16% accounting for more than 2 GW energy production by hydro and 84% accounting for 10GW stemming from carbon powered plants (Solar Plaza, 2018).

The distribution companies (DISCOs) various grids are most of the time at their worst. The outdated nature of the transmission lines which is mostly radial (a single path for transmission from the energy source) makes it that even a small fault disrupts transmission on a considerable scale. Such an event occurred on the 31st of March, 2016, without electricity transmission for three whole hours throughout the country. These have led to a loss of lives and money. Each year, an estimated 36,000 women die during pregnancy or childbirth, mostly because they gave birth to their babies in clinics without electricity. As Jasper Westerink puts it, "If you do not have electricity, you do not have a fridge, and if you do not have a fridge, you cannot store vaccines."[i](The Economist Magazine, 2017)

There are dismal conditions in the management of the country's electricity supply. In some public schools at the primary and secondary levels, as well as tertiary institutions inclusive do not have steady electricity supply. Students study under hot weather conditions, with reduced efficiency in the processing of information and understanding. The researcher used to charge his phone for N50 and his laptop for N100 every day to enable to access information and assessments materials during school days. Businesses across Nigeria have to also contend with frequent blackouts leading to low productivity and inefficiency. The dearth of potentials caused by the lack of reliable energy in Nigeria is hard to measure. Its negative impact on both SME's

and multinational companies is unquantifiable.

The new path to development: Decarbonized economy

The combination of innovation and falling costs for renewable energy is a welcome development, Nigeria and Africa in general will as a matter of environmental and economic necessity take the alternative path to produce green energy. Solar is increasingly becoming cheaper, Nigeria can sidestep her energy problem with mini rooftop solar installations that can power a home, or slightly larger "micro-grids" that can light up a village, schools, markets, businesses, among others. The Global Offgrid Lighting Association records that prices of small solar-powered lights fell by 80% between 2010 and 2015 (Global Offgrid Solar Market Report, 2016).

Deepali Khanna of the Rockefeller Foundation thinks that "If you want to drive the productive use of electricity and move people up the economic ladder, then you need a mini-grid." A study by the Rockefeller Foundation in India found that with mini-grids installed in villages, small businesses increased their sales by 13% and incomes rose across the area. It is replicable in Nigeria, thanks to providence we have enough sunshine. In fact, research has shown that our irradiation levels average 5.5-6.7kWh/ m2/day with, on average, six hours of sunshine per day (Solar Plaza, 2018).

However, in another study, "The smart villages initiative", conducted by scientists from Cambridge and Oxford Universities to get mini-grids adopted more widely in developing countries found that once smallholder farmers have electricity, they quickly adopt a range of other technologies such as irrigation pumps and smartphones to get long-term weather forecasts. According to John Holmer a co-leader of the initiative, when this happen, "you then soon find support industries springing up to feed this higher level of economic activity in the villages, together with a general increase in well-being" (The Economist Magazine, 2017).

The advantages of using Minigrids are numerous. It can help to spread not just energy, but communication and internet connectivity, education, healthcare information, among others. The biggest telecommunication expenses of companies like MTN, Globacom, and Airtel is diesel for generators which power their masts. On estimation, this cost about 60% of the company's network operating costs in Africa. However, with mini-grids to power their masts, the cost of internet delivery will becomes cheaper; data will be more available; and students will be able to access research materials online easily.

Fundamental economics reveals that the price by performance ratio of solar panels will continue to improve. The National Agency for Science and Engineering Infrastructure (NASENI) has also established a solar panel manufacturing plant that produces solar panels at an annual capacity of 7.5 MW. The production plant has been in operation since September 2011 and sells to the Nigerian market as well as the rest of the West-African solar market (NASENI, 2018).

Nigerian and the path to decarbonized economy

According to research from the new climate economy, "bold action on climate could deliver $26trillion in economic benefits globally between now and 2030" (Global Commission on the Economy and Climate, 2018). The question now becomes: how will Nigeria benefit from this new climate economy? In more direct terms, how much can Nigeria reap from the $26trillion before 2030?

At the 'carbon pricing leadership coalition's high-level assembly', Ngozi Okonjo-Iweala gave some honest recommendations that align appropriately and corroborates the view of this discourse. She supports that delivering electricity by installing standalone renewables (such as solar home systems) can provide electricity more quickly than connecting to the traditional grid. With new battery technology and mini-grid systems, decentralised renewables can deliver reliable energy to whole communities at a time, helping to grow inclusive, rural economies (Okonjo-Iweala, 2019).

Okonjo- Iweala (2019) equally advocates formulation of carbon pricing policies, removing fossil fuel subsidies and using the revenue to construct reliable infrastructure. She agrees, carbon pricing programmes offer an essential avenue for generating revenues that governments can invest in resilient infrastructure. The World Bank, according to her states existing carbon price programmes around the world generates about $33billion in 2017. The government will use the revenues to boost essential environmental and rural development projects. (Okonjo-Iweala, 2019)

On Carbon pricing Okonjo-Iweala continues "signals the direction of the shift, towards cleaner 21st-century technologies and industries. It helps in providing companies and investors with strong financial incentives. Rolling back fossil fuel subsidies, which artificially prop up outdated energy technologies; is also essential to creating the conditions for growing sustainable, resilient economies" Okonjo-Iweala,(2019). As Senator Ben Bruce Murray during the rejection of his proposed bill to phase out carbon-driven vehicles by 2030, notes "we have been spending over N1 trillion annually subsidising fuel in this country. By introducing electric cars, fuel subsidy

will automatically reduce, and those funds used for infrastructure and education. (Ben Bruce, 2019)

On that note, Okonjo- Iweala admonished that we should create the conditions for the right investments. For instance, "the African Development Bank recently invested $25million in a renewable energy equity fund that plans to add 533 megawatts of electricity across sub-Saharan Africa. This initial public investment is expected to attract private investors to commit a further $60millionto $75million, potentially tripling the level of investment (Okonjo-Iweala, 2019).

Recommendation and conclusion

In his prescient analysis, Stephen Doig of Rocky Mountain Institute, in conjunction with the World Bank, released a report in December 2017 on the Nigerian energy sector, showing that the country consumes over $9 billion a year in inefficient fuel, which is used to power homes and businesses. The report also showed how, with the use of renewables, the country would be able to save around $4.4 billion, making it a huge opportunity for market investors (Adeyemi Adepetu, 2017).

One such project, initiated by Schneider Electric SE, was among five projects to be awarded grants for outstanding solar projects that help communities through their social impact. The project revolved around the electrification of 170 schools, with 190,000 students, and 11 public health centres, servicing 4.7 million patients. Furthermore, the project also saved the schools and hospitals a total of $1 million per year in diesel costs and benefited the community with over 3000 jobs(Andrew Burger, 2018). In the same vein, the World Bank gave Nigeria $350 million loans to build 10,000 solar-powered mini-grids by 2023 in rural areas, as a way to bring power to hospitals, schools, and households. Besides that, The SkyPower FAS Energy pledged 3 GW Utility-Scale with a combination of projects of $5 billion worth of investments and will provide 30,000 green jobs (Energy Mix Report, 2018).

Thus, if we create a conducive environment for investments to thrive, investors will arrive. It is an economic law that hardly fails. As Ben Bruce Murray puts it, "If Nigeria builds up her capacity to host the world, the world will come!" (Ben Bruce, 2015). Nigeria fares poorly in the annual Ease of Doing Business ranking list in the Global Competitive Index (GCI) published by the World Economic Forum. Currently, the country are at the 146th position (Trading Economics Report, 2018). When they create the conditions for right investments of renewable energy, close to 60% of the $60million to $75million made from renewable energy equity fund

and at least 5% of the $26trillion of the new decarbonised economy will find its way to Nigeria and climate change is reduced.

People might object that transitioning into the decarbonised economy is not possible soon because we need to use our carbon economy to lift 94 million people out of poverty as China has done before putting great efforts towards moving to cleaner energy. Moreover, oil revenue makes up 9% of GDP and more than 90% of export earnings. This objection misses a crucial point. The truth is that oil, which is the mainstay of our carbon-driven economy, has been our most magnificent albatross to development in the country. The money wasted in fuel subsidy alone as related above is evident. Last year fuel subsidy in Nigeria was worth at least 0.5% of GDP—as much as the government spent on health care.

However, others may contend that Nigeria's per capita emissions are below that of developed countries. In so far as it is still in tune with the Paris Agreement, there is no need for pressure to quickly transition into the decarbonised economy and allow our natural resources (oil) to be untapped. However, the fact is that both statistically and progressively, the oil economy is not sustainable. The oil economy has a triple tragedy baked into it. (a) It is not a renewable resource and so does not lead to a sustainable economy, (b) it kills the planet by contributing immensely to global warming, (c) It progressively loses value until it becomes useless. When there is a proper transition to the decarbonised economy using the recommendations above; then, will there be democratised prosperity among Nigerian citizens. Besides, this saves the debate of the false choice between the economy and the environment by using the economy to protect the environment.

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