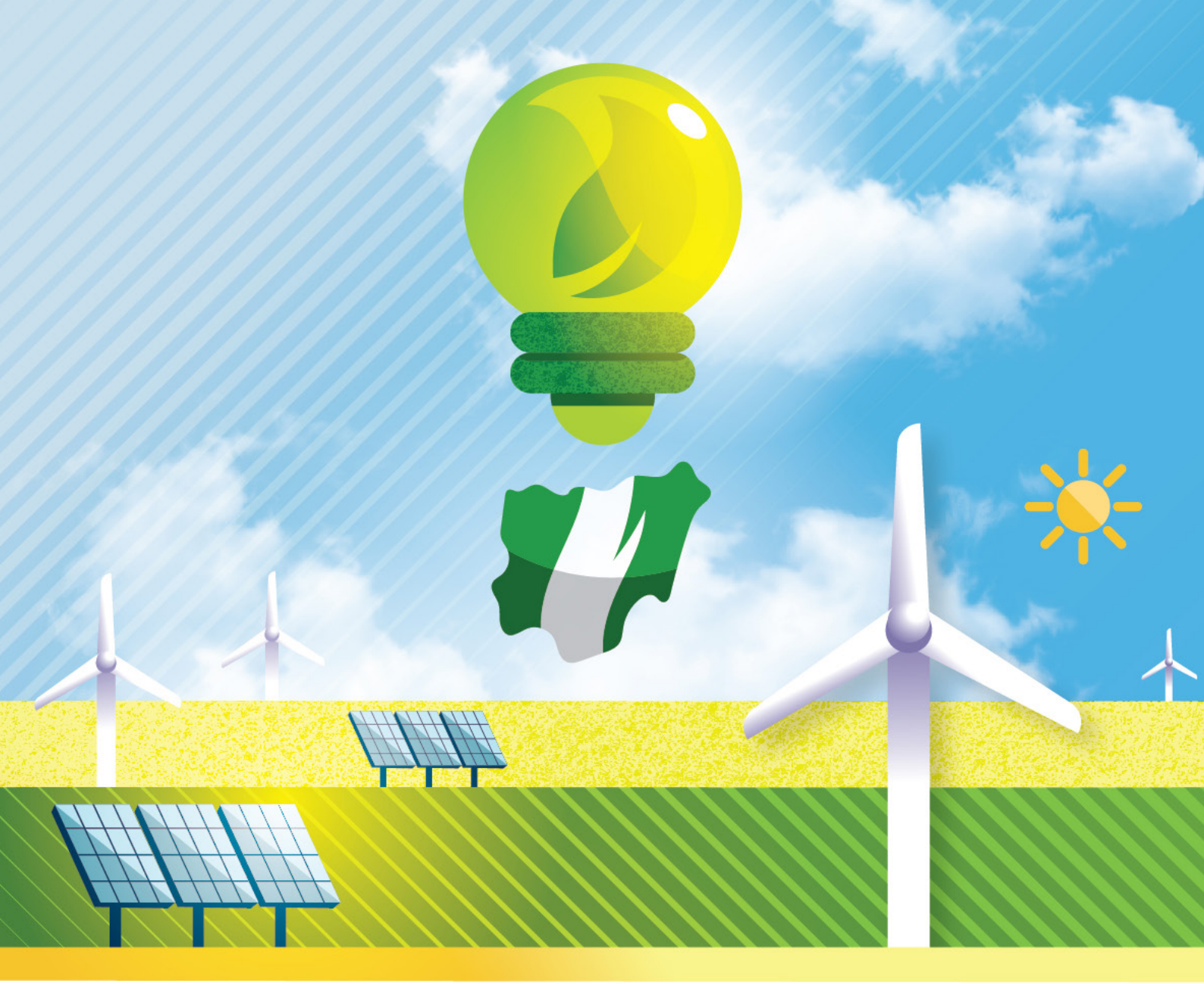

Fostering a Rapid and Effective Energy Transition in Nigeria in the Post-COVID-19 Era

ECREEE
Towards Sustainable Energy

WAGEDI
Gregory University, Uturu - Nigeria.

Policy Brief

FOSTERING A RAPID AND EFFECTIVE ENERGY TRANSITION IN NIGERIA IN THE POST-COVID-19 ERA

Prepared By ECREEE and WAGEDI GUU

July 2020

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ABOUT ECREEE

The ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) is a specialized ECOWAS agency with a public mandate to promote renewable energy and energy efficiency markets in the West African region. It was established in 2010 in Cabo Verde with support of the ECOWAS Commission, UNIDO and the Austrian and Spanish Governments. The regional center of excellence works in fifteen West African countries. ECREEE aims to contribute to the sustainable economic, social and environmental development of West Africa by improving access to modern, reliable and affordable energy services. The center addresses the various existing market barriers for renewable energy and energy efficiency technologies and services and implements activities in the areas of policy development, capacity development, knowledge management, awareness raising and business and investment promotion.

ABOUT WAGEDI GUU

The West Africa Green Economic Development Institute(WAGEDI)Gregory University Uturu(GUU)Abia State Nigeria is a research and advocacy institute with mandate to promote low carbon, resources efficient development pathway in Africa and beyond. It was established in 2018 with research members drawn from some African countries with the overarching objective of bringing to the fore research on green innovations and creating a linkage and synergy between academic research outcomes with the industry, government and the civil society etc. So far are we into research collaborative relationship with Africa Technology Policy Study (ATPS) Network Kenya, ECREEE, Africa Union, Scientific, Research and Innovative Council, some relevant Ministries, Department Agencies (MDAs)in Nigeria, Green Economic Institute,UK, amongst others. We also render consultancy services and training programmes for public and private sectors, civil society and the like.

Acronyms

DPR	Department of Petroleum Resources
DRE	Decentralised Renewable Energy
ECOWAS	Economic Community of West African States
ECREEE	ECOWAS Centre for Renewable Energy and Energy Efficiency
EE	Energy Efficiency
ESP	Energy System Performance
ETI	Energy Transition Index
GDP	Gross Domestic Product
Gg CO2-eq	Greenhouse Gas Carbon Dioxide Equivalent
Ghg	Greenhouse Gas
GW	Gigawatts
IEA	International Energy Agency
IHME	Institute for Health Metrics and Evaluation
ILO	International Labour Organisation
IOC	International Oil Company
IRENA	International Renewable Energy Agency
kWh	Kilowatt-Hour
MJ	Mega Joules
MW	Megawatts
NBS	National Bureau of Statistics (Nigeria)
NDC	Nationally Determined Contribution
NREEEP	National Renewable Energy and Energy Efficiency Policy
OECD	Organisation for Economic Co-operation and Development
OPEC	Organisation of the Petroleum Exporting Countries
RE	Renewable Energy
SDG	Sustainable Development Goal
SEforALL	Sustainable Energy for All
TCF	Trillion Cubic Feet
UN	United Nations
WAGEDI GUU	West African Green Economic Development Institute, Gregory University, Uturu
WEC	World Energy Council
WEF	World Economic Forum

Key Words: Energy transition, Nigeria, energy security, energy access climate change, Energy Transition Index (ETI), Energy System Performance

1 Executive Summary

This policy brief, 'Fostering a Rapid and Effective Energy Transition for Nigeria in the Post-COVID-19 Era', is from ongoing research. It is the first milestone in the research collaboration and partnership between the West African Green Economic Development Institute, Gregory University, Uturu (WAGEDI GUU), Nigeria and the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE).

The COVID-19 health pandemic took the world by surprise and brought attendant techno-economic and social disruptions; however, it has also provided opportunities for countries to adapt to the new normal. It has exposed the vulnerability of the current energy system, its inability to absorb shocks, and the need for more resilient energy systems. The Tracking SDG 7 Progress Report notes that the COVID-19 crisis will affect the energy transition and the progress towards universal access to affordable, reliable, sustainable, and modern energy for all by 2030 (IRENA, 2020).

In light of the above, this policy brief observes the compelling need for Nigeria to:

- Embrace energy transition—the fundamental structural changes of energy systems (WEC, 2014).
- Seize the moment and act timeously to craft a result-oriented mechanism for a rapid and effective energy transition that will address barriers constraining the acceleration towards sustainable energy.
- Arrest vulnerability impacts of COVID-19 vis-à-vis the existing structural and economic challenges in Nigeria.
- Draw inferences, since the pandemic provides a glimpse of what the global energy transition could look like in the event of the achievement of some energy transition imperatives.
- Identify drivers of the energy transition, such as technological innovation, economic or social changes, as well as demand and availability of energy resources.
- Realign the current transition to a zero-carbon system, which will have severe implications for its fossil fuel dependent economy.

Special thanks to the team leader of this research project, Prof Magnus Onuoha, the Executive Director of WAGEDI GUU, and his associate, Ms Adeola Adebiyi of ECREEE, for their tireless effort at seeing the fruition of this policy brief. In the same vein, we thank Prof Emmanuel Oladipo, Dr Sadique Okoh, and Dr Noel Ihebuzor for providing insights in the course of the work. Finally, we thank the Acting Executive

Director of ECREEE, Mr Bah Saho, for approving this brief and others to come. To the Chancellor of Gregory University, Prof Gregory Ibe, and the Vice-Chancellor, Prof Augustine Uwakwe, thank you for providing an enabling environment for research and knowledge.

2 Introduction

In recent times, the need for a rapid and effective energy transition has become more apparent, with a myriad of issues compelling the acceleration of the transition. These issues include energy poverty, energy security, energy sovereignty and the geopolitical interests of different states, and, most importantly, the global urgency to address climate change. Although the world is moving towards achieving carbon neutrality, certain socioeconomic forces are pulling countries towards maintaining the status quo. The current COVID-19 pandemic is one of such forces; it is considered a defining challenge of the present-day. The pandemic and climate change are formidable agents of adverse change that the international community must address for a just and socially inclusive transition to take root.

Another front-burner issue is the uncertainty about the speed of the global energy transition. In the event of a slow transition, the goals of the Paris Agreement to reduce carbon dioxide (CO2) emissions and stabilise global temperatures to 1.5 degrees may not be achieved on time, leaving the world in danger of the catastrophic impacts of climate change. On the other hand, a fast transition will lead to disruptions that require quick societal adjustments and adaptations.

POOR AND DEVELOPING COUNTRIES LIKE NIGERIA ARE VULNERABLE TO THE IMPACTS OF COVID-19

Another front-burner issue is the uncertainty about the speed of the global energy transition. In the event of a slow transition, the goals of the Paris Agreement to reduce carbon dioxide (CO2) emissions and stabilise global temperatures to 1.5 degrees may not be achieved on time, leaving the world in danger of the catastrophic impacts of climate change. On the other hand, a fast transition will lead to disruptions that require quick societal adjustments and adaptations.

The widespread impact of the COVID-19 pandemic on societies and economies has created even more uncertainty. It has also exposed the vulnerability of the current energy system, its inability to absorb shocks, and the need for more resilient energy systems. The Tracking SDG 7 Progress Report notes that the COVID-19 crisis will affect the energy transition and the progress towards universal access to affordable, reliable, sustainable, and modern energy for all by 2030 (IRENA, 2020).

Poor and developing countries like Nigeria are vulnerable to the impacts of COVID-19 while already grappling with diverse structural and economic challenges. Long before the pandemic, energy sector challenges such as a high dependence on fossil fuels and low electricity generation were prevalent in Nigeria. As priorities shift to deal with the health and economic security of the country due to the pandemic, its transition to a low-carbon climate-resilient energy system may continue to remain a mirage.

Nevertheless, the pandemic provides a glimpse of what the global energy transition could look like in the event of the achievement of some energy transition imperatives. These imperatives include the decline in energy use, increased use of renewable energy (RE), decline in global greenhouse gas (GHG) emissions, and improved air quality. In this regard, the pandemic highlights the need for countries to advance efforts towards effective energy transitions.

3 Background and Key Issues

Energy transition is the fundamental structural changes of energy systems (WEC, 2014). It is also referred to as a radical shift in the energy system from an existing model to a new paradigm (Fattouh et al., 2019). Historically, the world has experienced several energy system changes. That is, over the course of human civilisation, the types and forms of energy used have changed several times.[1] For example, at various points in history, human societies progressed from depending on straw as a source of energy to relying on wood, then coal and, eventually, fossil fuels such as oil and gas.

Technological innovation, economic or social changes, as well as demands and availability of energy resources, are all drivers of energy transitions (Smil, 2015). However, the world is currently undergoing an energy transition driven by the need to replace fossil fuels with clean, less volatile, and readily available renewable

[1] Energy transitions are fundamental components of the evolution of human societies (Smil, 2015).

energy sources. This is driven by certain effects of the reliance on fossil fuels, like the fact that the energy sector is responsible for nearly 90% of global carbon dioxide (CO2) emissions and is a major contributor to climate change (IEA, 2019).

Nearly all the nations of the world have committed to the goals of the Paris Agreement to reduce CO2 emissions and lower global atmospheric temperatures to 1.5 degrees. The key issue is that these countries must now transform their energy systems from a fossil fuel-based system to a zero-carbon system while still meeting their energy needs for economic growth and development. The transition from one energy system to another entails significant changes in the entire energy system, which includes the market, stakeholders, policies and institutions as well as the mindset or behaviour of energy users. Because of these changes, countries that have significant structural challenges[2] may find it difficult to deal with the complexities of energy transitions.

In addition, the current transition to a zero-carbon system has severe implications for fossil fuel-rich countries like Nigeria because it entails an eventual decline and phasing out of fossil fuels.[3] Not only is Nigeria Africa's biggest oil exporter with the largest natural gas reserves on the continent, but it also derives 95% of export earnings and 70% of public revenue from the fossil fuel sector (BusinessDay, 2019). Also, fossil fuels make up 87.5% of its electricity mix (Get.Invest, n.d.) and about 11.8 million car users depend on petrol to power their commute (National Bureau of Statistics, 2018). Overall, Nigeria is heavily dependent on the fossil fuel industry for economic development and has built over 60 years of oil and gas infrastructure.

Needless to say, Nigeria's energy transition sits on the crossroad of three major challenges—energy security, economic diversification, and climate change. COVID-19 adds complexity to the confluence of existing factors, posing additional hurdles towards achieving a successful energy transition in Nigeria. For instance, the pandemic has caused a decline in global demand for fossil fuels, with devastating effects on the Nigerian economy.

The country also faces a strategic dilemma. On the one hand, a global exit from the use of fossil fuels in the energy sector is looming in the background of a post-COVID era, and this poses a threat to the financial stability of the country because it will result in an inability to monetise its fossil fuel resources in the future. On the other hand, the country has made commitments that require it to reduce its carbon emissions by 20% by 2030 while sustaining its economic growth.

[2] According to the United Nations Inter Agency Task Force on Financing for Development, an overarching challenge for vulnerable countries—including least developed, developing countries, small island developing states, and African countries—has been limited structural transformation. https://developmentfinance.un.org/addressing-the-diverse-needs-and-challenges-faced-by-countries-in-special-situations.
Also, Nigeria currently requires significant structural policy reforms to boost economic growth. https://www.worldbank.org/en/country/nigeria/overview

[3] Some institutions have modelled energy transformation scenarios, noting that a rapid transformation of the energy sector will lead to fossil fuel peaking and declining by the year 2050. Such institutions include the International Renewable Energy Agency (IRENA) REMap, the Intergovernmental Panel on Climate Change (IPCC) "less than two-degree" models, as well as the IEA (2019) World Energy Model. https://www.iea.org/reports/world-energy-model

The key question is:

How can Nigeria ensure a **rapid and effective energy transition to achieve energy security, economic diversification**, and address climate change simultaneously?

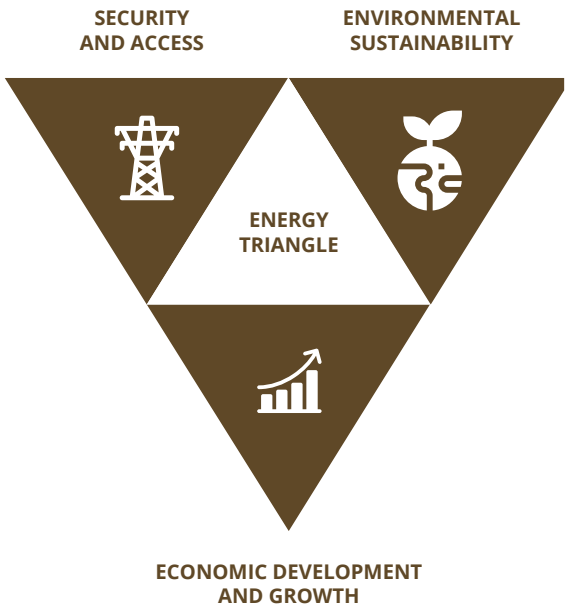
First, it has to improve its current Energy System Performance and then develop adequate green growth policies that promote economic diversification and drive low-carbon development. It must also do so within a prescribed period to avoid pathway dependency and lock-in effects due to the uncertainty of the speed of the transition.

Therefore, this policy brief examines the factors that foster rapid and effective energy transition, energy transition approaches across the world, and the broader issues pertinent for a rapid and effective energy transition in Nigeria.

4 Factors that Foster Rapid and Effective Energy Transitions

The World Economic Forum (WEF) defines an effective energy transition as one that is timely, inclusive, sustainable, affordable, and secure (WEF, 2019). The WEF also established the Energy Transition Index (ETI),[4] an analytical framework that outlines the imperatives of an effective energy transition, linking the performance of countries' current energy systems with their readiness for the future. According to the framework, one of the factors that foster rapid and effective energy transition is the Energy System Performance,[5] which measures the current performance of a country's energy system and its ability to maintain a balance between inclusive

FIGURE 1: ENERGY SYSTEM PERFORMANCE IMPERATIVES



SOURCE: WEF FRAMEWORK TO SUPPORT DECISION-MAKING (WEF, 2018)

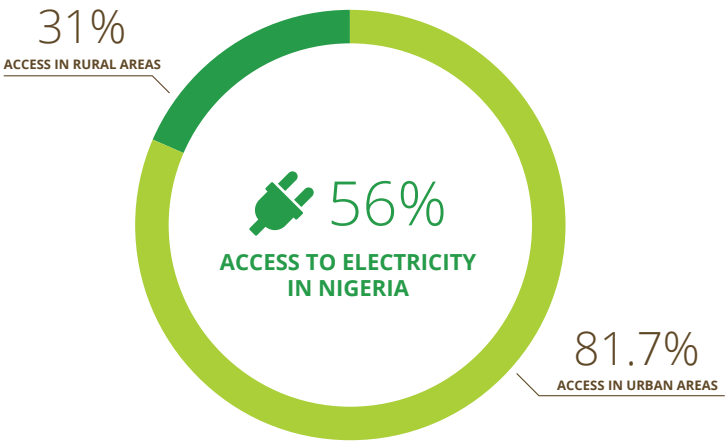
economic development, secure and reliable access to energy, and environmental sustainability.

In WEF's 2019 ETI analysis[6] of 115 countries, Nigeria scored 41% in the overall Energy Transition Index and 46% in Energy System Performance. In 2020, it scored 40.5% in the overall Energy Transition Index—.5 % less than in 2019—and 46% in Energy System Performance. The absence of improvements in the two years analysed shows that there is a need for measures that will strengthen the country's Energy System Performance.

[4] The Energy Transition Index (ETI) serves as a tool to benchmark countries on the performance of their energy system and their readiness for energy transition (WEF, 2018).
[5] The Energy System Performance encompasses the entire energy ecosystem, including the policies, stakeholders, supply and demand modes, and energy-consuming sectors.
[6] The ETI methodology is a composite index that focuses on tracking specific indicators to measure the Energy System Performance and transition readiness of countries. At its core are two equally weighted sub-indexes: the system performance score and the transition readiness score. The system performance score is calculated with 17 indicators, which are defined using the three imperatives of the energy system (energy triangle)—economic development and growth, environmental sustainability, and security and access.

4.1 Energy Access and Security

Currently, access to electricity in Nigeria is at 56.5%, with 81.7% access in urban areas and 31% in rural areas (World Bank, 2018). Citizens' per capita electricity consumption is, however, still amongst the lowest in the world at 145 kWh, compared with an average of 8,010 kWh in Organisation for Economic Co-operation and Development (OECD) countries (World Bank, 2014). This low quality of electricity hampers the social and economic development of the country and limits opportunities for citizens.



Access to solid and non-solid fuels such as kerosene, LPG, wood, and charcoal—used mostly for cooking—is also very low. While these types of fuels cause household air pollution that leads to an estimated 49,100 deaths annually (IHME, 2017), the non-availability of alternatives and modern fuels leaves women who depend on them at the disadvantage of drudgery, safety risks, and unproductivity in their personal lives.

In terms of energy security, Nigeria has self-sustaining renewable energy resources, particularly hydro, wind, and solar (NREEEP, 2015). However, it remains a net energy importer of refined petroleum products and is the only member of the Organisation of the Petroleum Exporting Countries (OPEC) that imports gasoline (Oil Price, 2018). Consequently, a lack of domestic refining capacity means that the country relies on external forces for its actual energy supply, hence energy insecurity that affects economic and political stability.

In addition, over-dependence on subsidised oil and gas slows down the diversification of the country's energy mix. Currently, the primary energy demand is being met

by 81.25% biomass and waste, 8.2% natural gas, 5.3% petroleum products, 4.8% crude oil, and 0.4% hydropower (Nigeria's SEFORALL Action Agenda, 2016). Apart from hydro, new renewable energy accounts for less than 1% of the final energy mix. This is a major energy security impediment.

4.2 Environmental Sustainability

According to the International Energy Agency (IEA), the most comprehensive clean energy transition indicator is a country's energy-related carbon emissions. Other critical environmental factors, such as a reduction in energy intensity and reduction in air pollution, also guide the pathway of effective energy transition.

Even though Nigeria is a fossil fuel-exporting country, it emits less carbon than its OPEC counterparts. However, total aggregated emissions from the country's energy sector increased from 116,057.44 Gg CO2-eq in the year 2000 to 206,452.45 Gg CO2-eq in 2016 (Third National Communication, 2020). If this pattern continues, carbon emission is expected to grow significantly.

EVEN THOUGH NIGERIA IS A FOSSIL FUEL-EXPORTING COUNTRY, IT EMITS LESS CARBON THAN ITS OPEC COUNTERPARTS.

Energy intensity,[7] on the other hand, is the ratio of energy use per dollar of GDP. Interestingly Nigeria's energy intensity fell from 9.6 MJ per US dollar in 1990 to 6 MJ per US dollar (World Bank, 2015). Perhaps, a contributor came in the form of the fall in economic output as a result of the prevailing energy crisis that has persisted for almost two decades.

4.3 Economic Development and Growth

Energy plays a vital role in economic growth and development. It powers the consumption and production activities that enable an economy to function. An effective energy transition should foster economic development and growth in terms of affordability, cost-competitiveness, and contribution to Gross Domestic Product (GDP) growth. The level of energy consumption is also an indication of how fast the economy is growing (Olanrewaju, 2013).

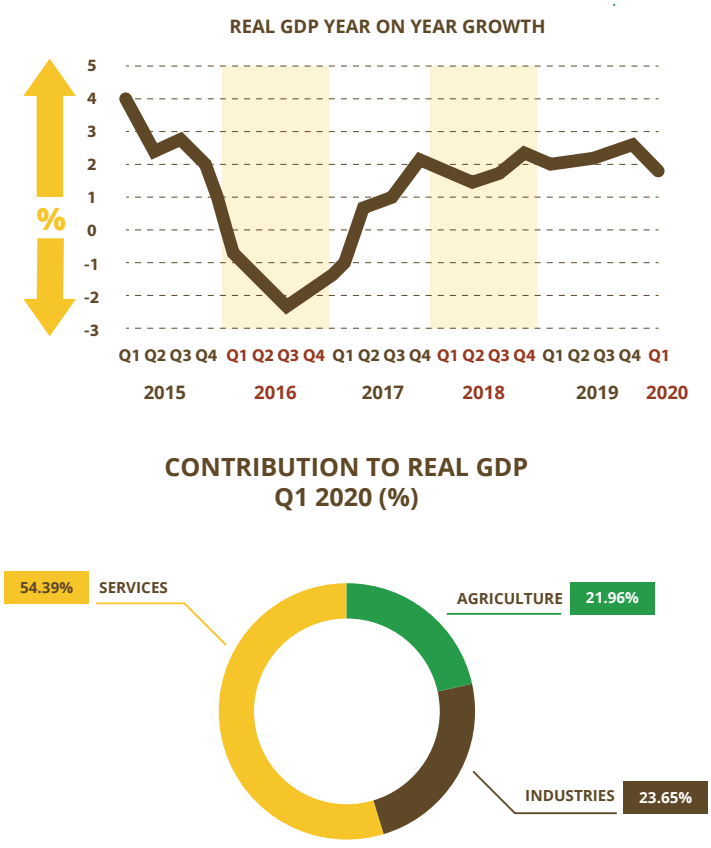
In Nigeria, energy consumption is consistent with GDP growth. There is evidence

[7] Energy intensity is defined as energy used per unit of output. It is typically expressed in mega joules per US dollar (MJ/US$) of GDP (IIASA, 2013).

that a 1% increase in the aggregate consumption of energy, gas, and electricity would lead to a rise of real GDP by 28%, 18%, and 42% respectively (Onakoya, 2013). This evidence constitutes an indirect challenge and a wakeup call for a country like Nigeria, whose GDP growth rate has been less than 3% since 2015.

Despite the poor energy delivery and consumption, the industrial sector has, so far, contributed more than 23% to the GDP in 2020. This means that energy access can unlock new demand to spur economic growth.

FIGURE 2: NIGERIA'S REAL GDP GROWTH AND THE CONTRIBUTION OF INDUSTRIES



SOURCE: NATIONAL BUREAU OF STATISTICS: NIGERIAN GROSS DOMESTIC PRODUCT REPORT (Q1 2020)

Switching to clean energy technologies also has significant economic benefits. They are considered more efficient and are now more affordable; therefore, they have the potential to reduce fuel import cost and protect against the volatility of external markets. This means that Nigeria has the opportunity to redirect savings from imports to the local economy.

5 Global Energy Transition Approaches and Pathways

Countries can adopt multiple approaches and pathways to achieve the energy transition. A country's energy transition approach and pathway should, however, represent the choice or planned actions that will transform the energy system to achieve the energy transition imperatives of improved energy access and energy security simultaneously, while avoiding dangerous climate change.

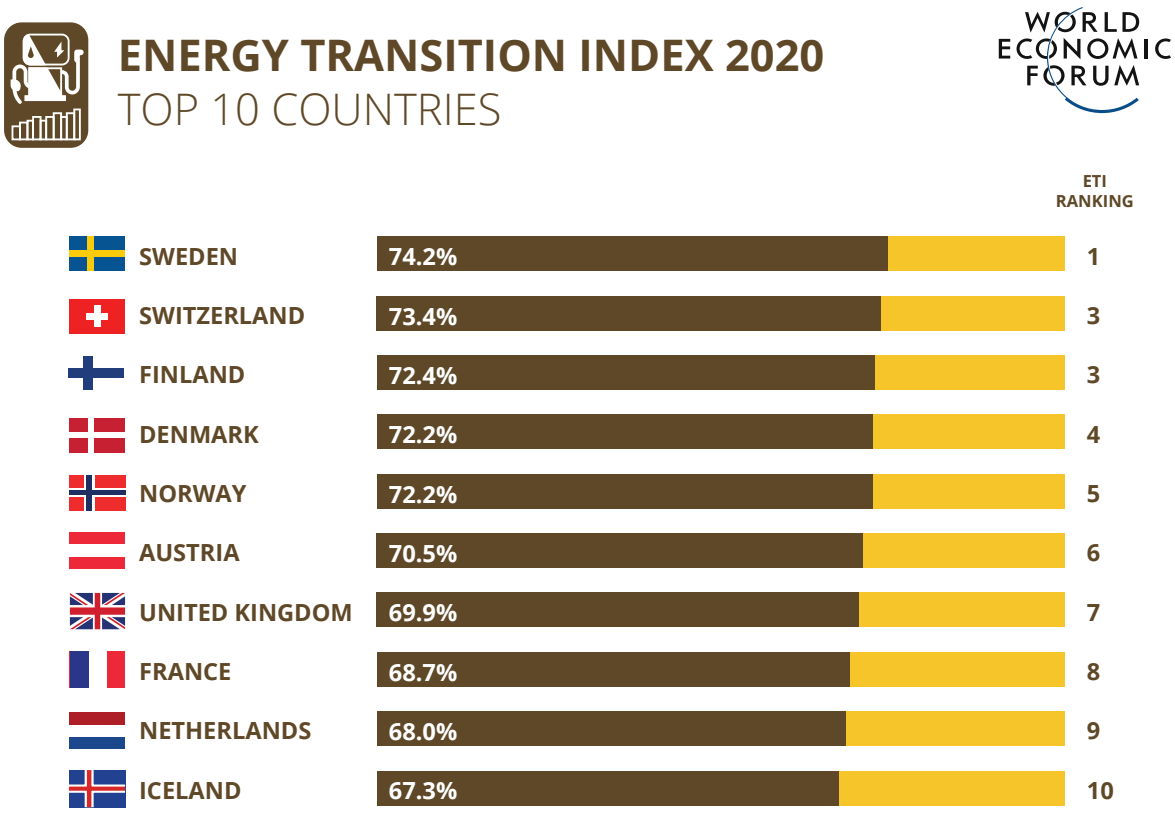
Also, because national resources and economies differ, and energy use and emissions vary from country to country, transition pathways also differ from country to country. Country-level transition approaches are also different for rich and poor countries, developed and developing countries etc.

However, some key patterns have evolved from countries that are advancing along their transition trajectory. They include the following:

1. Putting in place high-level policy that sets the country-level motivation and drivers for energy transition;
2. Setting targets that represent the decision on time and technological changes;
3. Establishing the governance and implementation frameworks and structure;
4. Creating the enablers—finance and institutions—and;
5. Devising strategies to maximise synergies and take advantage of opportunities such as job creation, innovation, market development, and growth.

Countries that have adopted these types of approaches include Sweden, Switzerland, Denmark, Norway, and Germany—the first four of which are countries leading in energy transition.

FIGURE 3: TOP 10 COUNTRIES LEADING IN THE ENERGY TRANSITION INDEX 2020

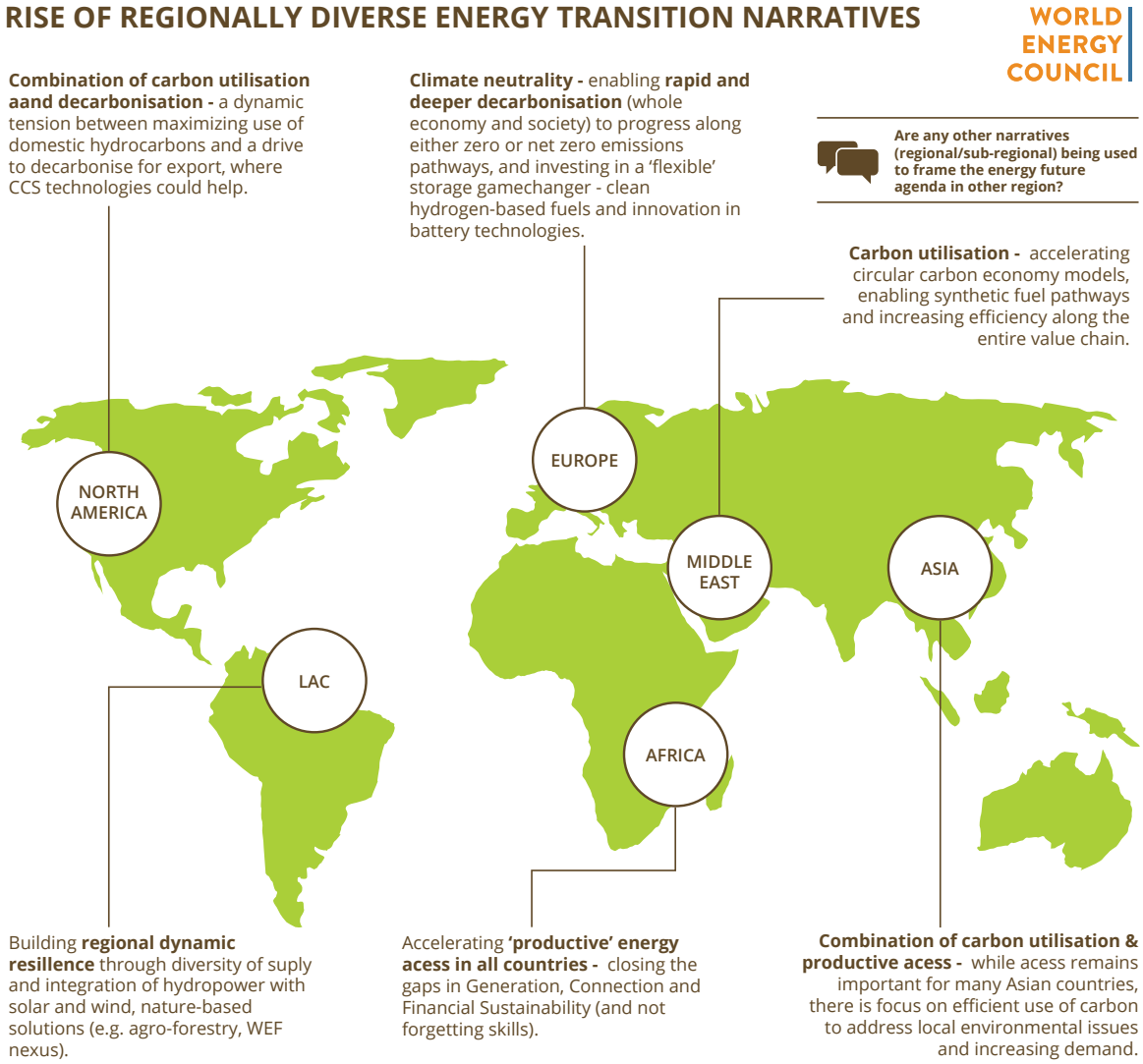


Note: The Energy Transition benchmarks on the performance of their system, as well as their readiness to a secure, sustainable, affordable, and reliable future energy system. ETI 2020 scores on a scale of 0 - 100. **Source:** World Economic Forum, Fostering Effective Energy Transition 2020.

SOURCE: WORLD ECONOMIC FORUM (WEF), 2020

Energy transition approaches and pathways can also be viewed from a regional perspective, as shown in Figure 4. It shows that transition trends in Africa are geared towards improving the current energy performance levels such as closing generation gaps like access and productive use, when compared to Europe, where achieving sustainable development through deep carbonisation is a priority.

FIGURE 4: REGIONALLY DIVERSE ENERGY TRANSITION NARRATIVES



SOURCE: 'HUMANISING ENERGY TRANSITION', A WORLD ENERGY COUNCIL PRESENTATION, MARCH 2020

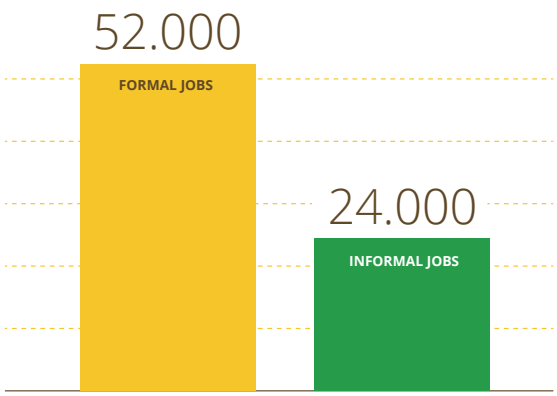
This regional transition narrative also shows that the approach taken by a country is often a reflection of its strategic priority. Switching to a low-carbon energy system without improving quality and access is counter-productive and can contribute to prolonged inequality caused by energy poverty. Achieving energy transition in many African countries, including Nigeria, will therefore depend on the overall efforts to secure reliable access to energy.

6 Just Transition

The main idea of a Just Transition is to ensure that countries are aware of, plan for, and put in place measures to deal with the anticipated social and economic impacts of moving from a fossil fuel-based energy system to a low-carbon system. These impacts include stranded assets and loss of jobs and livelihood. Both the 2015 Paris Agreement and the International Labour Organisation (ILO) highlight the importance of the creation of decent work and the eradication of poverty in national development priorities for the energy transition.

In the case of Nigeria, a Just Transition entails dealing with the economic and social fallout from the eventual retirement of the fossil fuel industry. In other words, beyond policies to facilitate the energy transition, complementary strategies are needed to ensure benefits from trade-offs. These can include labour market policies to protect workers that may be affected by changes due to the transition. For instance, even though more recent and publicly available data on the number of those employed in the energy sector in Nigeria is scarce, the oil industry provided over 65,000 direct jobs and more than 250,000 indirect jobs in 2005 (ILO, 2005). Recent data on other metrics in the sector reveal that there are about 10 independent energy-related institutions and more than 100 oil and gas companies that operate in the upstream sector (Afrinvest, 2019). These include large International Oil Companies (IOCs) that are known to employ thousands of indirect labour.

To achieve a Just Transition, the government needs to develop adjustment policies and strategies that will enable workers to adapt to the transition and keep them from experiencing job loss. It must also equip them to support the clean energy market. Nigeria already shows prospects for developing a clean energy workforce. For instance, the Decentralised Renewable Energy (DRE) sector has the potential to create 52,000 formal jobs and 24,000 informal jobs by 2030 (Powering Jobs Census, 2019). Another option, is for the government to invest in education and training for re-skilling of workers from the fossil fuel sector and additionally to enable them take over high-skilled jobs arising from a zero carbon economy.



DRE NUMBER OF JOBS POTENTIAL BY 2030

7 Policy Recommendations

The growing realisation that fossil fuels will become more obsolete as energy technologies change to accommodate the goal of a zero-carbon energy transition means that Nigeria may need to foster a rapid and effective energy transition to achieve its energy, economic, and climate objectives. Also, COVID-19 has shown the need for more resilient energy systems that are based on readily available domestic energy to power economies in the face of a crisis.

The following recommendations are, therefore, presented to foster rapid and effective energy transition in Nigeria in the post-COVID era:

7.1 Improve Energy System Performance

The current Energy System Performance should be improved by closing the energy access gap. To achieve this, the country must ensure the supply of adequate good quality energy through flexible and reliable infrastructure. As stated in previous paragraphs, Nigeria scored 40.5% in the overall Energy Transition Index of 115 countries, which means that the country's power system is performing at less than average. For instance, the peak electricity generated is about 5,000 MW, despite a peak demand forecast of over 12,000 MW. Nigeria has already put in place integrated and comprehensive plans to increase energy access. For example, the Sustainable Energy For All (SE4ALL) Action Agenda adopted in 2016 aims to reduce the share of people without access to 10% by 2030 and the recently released economic recovery plan that has energy access embedded within it. These plans should be fully implemented to improve the country's Energy System Performance.

7.2 Prioritise the Diversification of the Energy Mix

In addition to closing access gaps, the diversification of the primary energy mix should be prioritised by shifting from fossil fuels to readily available renewable energy resources such as wind and solar. Accordingly, Nigeria's unique possession of abundant gas reserves (200.7 Trillion Cubic Feet [TCF])[8] can serve as a "transition in the transition". The country can harness its enormous gas resources while gradually moving towards zero-carbon emitting resources and less dependence on volatile fossil fuels. The country should ensure the revision and implementation of the following strategic policies and plans: The Nigerian Gas Master Plan; the National Renewable Energy and Energy Efficiency Policy (NREEEP); accompanying national RE and EE action plans; and the Nationally Determined Contribution (NDC), which aims to develop 13 GW of solar power by 2030.

[8] Nigeria's gas reserves increased by 7.3 percent from 187 Trillion Cubic Feet (TCF) to 200.79 TCF, according to the Director of the Department of Petroleum Resources (DPR), Mordecai Ladan.
https://www.dpr.gov.ng/nigerias-gas-reserves-rise-to-200-79-trillion-cubic-feet-dpr/

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7.3 Expand Green Growth Policies

In the light of the COVID-19 pandemic, green growth policies will create opportunities for economic stimulus that not only responds to the present issues, but also ensures longer-term social, economic, and environmental sustainability. This will help Nigeria to define a development pathway that decouples carbon emissions from economic growth. Innovative policies such as fiscal and non-fiscal green policies and reforms can include subsidy reforms that transfer subsidies from fossil fuels to cleaner sources of energy technologies or carbon dioxide (CO2) tax. The new economic recovery plan also makes plans to eliminate fossil fuel subsidies and is a major step forward.

7.4 Institutionalise Just Transition Strategies

Finally, there is a need for the institutionalisation of Just Transition strategies by endorsing and committing to mainstreaming the International Labour Organisation (ILO) guidelines on Just Transition. This will guarantee alternative sources of employment for oil industry workers in the long term, due to the phasing out of fossil fuels. Amongst other strategies, the government needs to develop policies and regulatory reforms that give clear signals for both decarbonisation and clean energy market development to assimilate and build the clean energy workforce.

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