



# The African Climate Paradox

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There is a fundamental paradox at the heart of the West's approach towards Africa and climate change. On the one hand, the West is concerned that African nations will be disproportionately impacted by climate change, and therefore use "justice for Africa" as a cause to support their drive for net zero emissions around the world. Yet on the other, the West is hindering Africans' ability to access their own energy resources in the name of environmental justice. However, this approach not only disregards African sovereignty, but also fails to recognise the crucial link between energy resources and poverty reduction—a vital component in the pathway to prosperity. Furthermore, reliable, affordable, and abundant energy resources are vital for African nations to increase their resilience to any changes in weather patterns which may occur. This paper therefore outlines the need to recognise the trade-offs between preventing further emissions in Africa and the tangible impact restricting access to energy resources is having on poverty levels as well as the freedom of citizens to adapt to their own environments. Climate activists in the West need to consider the potential human cost of restricting access to energy resources in Africa, rather than demanding net zero carbon emissions around the world with little sensitivity to local context.

Any successful solution to the energy question in Africa will necessarily depend on African agency, with African leaders working with their people to prioritise poverty reduction. This process will include building a pathway towards affordable and abundant energy for their societies, whilst continuing to care for the environment. The West will therefore need to retreat from its position dictating policy maxims through its governmental institutions, multilateral organisations, non-governmental organisations ("NGOs"), and activists. For example, mainstream climate initiatives such as the Paris Agreement—binding countries to the commitment to keep global temperature increases below 1.5 degrees Celsius—claim to allow African nations to set their own timetables for emissions reductions. However, given the current low level of total emissions and energy infrastructure in many of these nations, emission reductions will have to come predominantly from decreasing food and livestock production—demonstrating how the climate agenda pushes directly against efforts to reduce poverty.<sup>1</sup> Furthermore, the concurrent restrictions on investment in energy infrastructure imposed in conformance to the United Nations' ("UN") climate and sustainable development goals have also made it difficult for Africans to harness their own abundant resources to bring prosperity to their nations.<sup>2</sup>

This paradox demonstrates that the most pressing issue with the current, one-sided climate policy debate is that it ignores the trade-offs between the need for African prosperity, and the drive to cut emissions. By framing the issue as a "climate emergency", the need for greater energy infrastructure in Africa to tackle high levels of extreme poverty has been pushed aside. This shift is not due to a reduction in the scale or significance of African poverty, but rather due to growing climate alarmism.

For example, while currently there is much concern in Western media about the future possibility of waves of "climate refugees", in reality, levels of poverty and displacement will be greater in Africa in the immediate future if African countries are hindered in their efforts to pursue growth and utilise their rich resources. It is time for a renewed, rational evaluation of the relative costs of deprioritising African poverty, on the one hand, and retaining a focus on an alleged "climate emergency," on the other. In 2020, sub-Saharan Africa witnessed roughly 4 million deaths of children under the age of five.<sup>3</sup> This number is 90% higher than the developed world's average, meaning that this discrepancy cost 3.6 million children their lives. Meanwhile, the World Health Organisation ("WHO") estimates that between 2030 and 2050, climate change will cause an additional 250,000 excess deaths due to disease each



year.<sup>4</sup> Whilst a cause for concern, this number is only a fraction of the current number of deaths occurring each year due to extreme poverty. Yet, the WHO claims that “Climate change is the biggest health threat facing humanity.”<sup>5</sup>

The reality is that while alarmist estimates of climate-related deaths are on the rise, these calculations fail to acknowledge the huge number of poverty-related deaths taking place across the developing world today. In Africa alone, it has been estimated that up to 7 million people die each year due to preventable, poverty-related causes such as malnutrition, infectious diseases, poor healthcare, and the use of unsafe fuels in the home.<sup>6,7</sup> To focus solely on the future dangers of the climate is to place less importance on the African citizens of today than on the future inhabitants of the developed world. Such nations can afford to ignore these trade-offs, as they have benefitted from the prosperity and economic growth which has raised living standards, lengthened life expectancies, and eradicated mass poverty. Cheap, abundant, and reliable energy sources have been key to every such transition across the world, yet we are at risk of depriving the African continent of the opportunity to develop the energy infrastructure to do the same.

Rather than defend the rights of African nations to use their own resources to this end, Western and multilateral institutions have begun to actively discourage and curtail these opportunities. For example, the World Bank recently stated that “The challenge for developing countries is *they no longer have an opportunity* to develop first in a high carbon-intensive way and then clean up and decarbonize later” (emphasis added).<sup>8</sup> It should be for African nations themselves to decide which opportunities they do or do not have. Yet, aside from this, to delay the provision of power to many African citizens until renewable energy sources are sufficiently energy dense and economically viable runs the risk of perpetuating breakable cycles of poverty. The loss of life and suffering incurred by such a delay is unacceptable.

Furthermore, total carbon emissions from all African nations remain very low, at 4% of global emissions—despite the continent being home to 17% of the world’s population.<sup>9</sup> Given the small size of this output, the African Energy Chamber has calculated that sub-Saharan Africa’s current emissions would only rise by 0.6% if it were to double its electricity production capacity, solely using natural gas.<sup>10</sup> Hence, restricting African energy expansion in the name of containing climate change prioritises a very small reduction in potential emissions over tangible, widespread poverty. In light of this imbalance, it is clear we need to reorient our priorities in the African context.

## Africa is Energy Poor

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Whilst the economic poverty of many African nations is well documented, the lack of energy available to many citizens is equally critical. As Robert Bryce has so clearly documented, the “energy gap” between the world’s richest and poorest nations is a key missing piece of contextual information in the current climate debate.

Bryce found that roughly 3.7 billion people—47% of the world’s population—live with access to fewer than 1,200 kilowatt hours of electricity per year.<sup>11</sup> To put this in everyday language, one kilowatt hour equates to the amount of energy needed to boil a kettle five times. In a nation such as Chad—which in 2021 had access to just 18 kilowatt hours of electricity per capita—each citizen had enough electricity to boil a kettle up to twice each week, and nothing more.<sup>12</sup> Cheap, reliable, and readily available energy has a drastic impact on living standards in such circumstances. To put this data in perspective, it is estimated that the amount of annual energy per capita needed for a nation to sustain “high” living standards is 4,000 kilowatt hours<sup>13</sup>—a huge leap from the reality experienced in many African nations.

As N.J. Ayuk states in his latest book *A Just Transition*, over 600 million Africans—twice the total American population—have no access to electricity, and an estimated additional 300 million have access to unreliable or limited electricity. This lack of reliable power is a significant impediment to economic growth, as it affects many services taken for granted in the developed world, such as the distribution of clean drinking water, modern-day medical care, and access to information. Ayuk calls this phenomenon “energy poverty”, and notes that cost is a further barrier for many African citizens to obtain energy. Consumers in many sub-Saharan African countries pay up to 50 cents per kilowatt hour of electricity, compared with the global average of just 10 cents—a significant burden for a region with an average per capita income of \$1,626 in 2021.<sup>14</sup>

The lack of access to reliable energy in the African continent has left many people reliant on biomass fuels (wood or animal and agricultural waste) for cooking food, lighting their homes, and keeping warm. Heavy pollution from these fuels leads to between 1.5 million and 4 million deaths each year, mostly among women and children.<sup>15</sup> These dangers are further exacerbated by the fact that only one quarter of sub-Saharan Africa’s healthcare facilities have reliable power—needlessly adding to the loss of life.<sup>16</sup>

The fact that so many African citizens lack access to reliable, affordable energy should pose serious questions about how we shape energy policy to reflect and respond to this pressing problem. It is clear that the living standards of citizens can be raised through the creation of low-cost, stable, and abundant energy resources, given the inextricable link between energy abundance and economic prosperity. This goal should become the new priority for the international community.

## Energy is Needed to Eradicate Poverty

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The discrepancy in energy access outlined above translates to a deeper correlation between energy and prosperity—at both national and individual levels. Hence, the ability of a society to build pathways out of poverty is closely tied to its ability to generate and distribute affordable energy. This fact should not be lost in the rising alarmism about the climate, which comes at the expense of those still living in poverty.

The reality cannot be overstated that economic growth provides the prosperity needed to shift a nation from high levels of poverty to widespread wealth. Such growth has not yet been achieved by any society without access to affordable energy and the means to use it effectively.

The relationship between energy consumption and economic growth is well documented, with some of the clearest evidence of a close correlation between the levels of electricity demand and GDP growth having been published by the International Energy Agency (“IEA”) in 2020.<sup>17</sup> Whether energy consumption drives growth, or stems from growth but is critical to sustaining it, remains a topic of debate.<sup>18</sup> Yet, it is clear that nations with higher energy use experience higher growth.

However, perhaps more crucially for bodies such as the UN which are seized with the climate and net zero agenda, energy has a tangible impact on their own measures of human flourishing and the ability of individuals to meet their basic needs. As Robert Bryce points out in his recent paper titled “Powering the Unplugged: Overcoming the Barriers to Electrification in the Developing World”, Alan D. Pasternak undertook a study in 2000, which focused on the relationship between electricity generation per capita and the UN’s Human Development Index (“HDI”). By using 60 countries’ HDI scores (measured between 0 and 1), he was able to then plot their average HDI outcomes against their electricity generation.<sup>19,20</sup> The results were staggering. Only 15% of the countries studied scored over 0.9 for HDI outcomes, and these correlated exactly with the only nations who generated over 4,000 kilowatt hours of electricity

per year, per capita. This confirmed the previous hypothesis that 4,000 kilowatt hours is the threshold of the amount of energy needed to sustain a “high” quality of life for a healthy lifespan.<sup>21,22</sup>

Therefore, our current approach to energy policy needs to take note of this paradox—that the current drive to cut emissions runs in the opposite direction to the needs of those living in the world’s most severe poverty, who are in need of drastically greater energy generation capacity in order to reach living standards taken for granted in the West. If the UN wishes to meet its own goals of “Human Development” and “Sustainable Development”, it must take into account that these aims are often at odds with one another, rather than complementary.

This point is most stark when considered against the evidence that the positive correlation between increased living standards and electricity generation plateaus when one reaches the 4,000-kilowatt-hour demarcation line. For the wealthiest 37% of the world’s population, who live comfortably above this threshold, the correlation between higher energy generation and improved living standards is far less tangible than it is for the remainder of the world. Thus, it is unsurprising that many policymakers based in multilateral and Western institutions are forming policy ignorant of the central importance of energy generation to human flourishing. Such policymakers are legislating from a position of abundance and enforcing policies appropriate for their circumstances, as opposed to tailoring policies to address the very real challenges of energy scarcity and poverty experienced by so many of those whom their decisions impact.

Therefore, there is a clear need to re-evaluate our approach to the climate question and to renew our commitment to contributing to the creation of a truly prosperous African continent. These choices need to be made in light of the continent’s real energy needs and the crucial role of energy in the imperative of reducing poverty.

Africa’s current generation of leaders, while heavily lobbied by the West to end reliance on the continent’s fossil fuels and mineral resources in favour of a “green economy”, are attempting to balance the defence of their nations’ rights to use their resources, whilst maintaining their standing in the world order. For African nations to make the best use of their resources, further investment is necessary. However, potential sources of investment are beginning to be cut off as the climate agenda takes hold.

## The Climate Agenda is Perpetuating Poverty

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### Poverty Reduction Sacrificed for Environmental Aspirations

The net zero push to reduce fossil fuel emissions at all costs runs the serious risk of preventing many people from rising out of extreme poverty, and even risks pushing many deeper into poverty across the African continent. If we continue to prioritise the reduction of emissions in Africa over the imperative to reduce poverty levels, the result will be widespread human suffering.

Overly aggressive climate policies could cause serious harm to the developing world, as Bjørn Lomborg identifies:

“Unfortunately, climate policies harm the developing world. The current Paris Agreement will force more people into poverty by 2030 than otherwise would’ve happened. If we aim for 2°C or 1.5°C, a recent peer-reviewed study shows it’ll mean 80 million more poor and 180 million more starving by [the] mid-century.”<sup>23</sup>

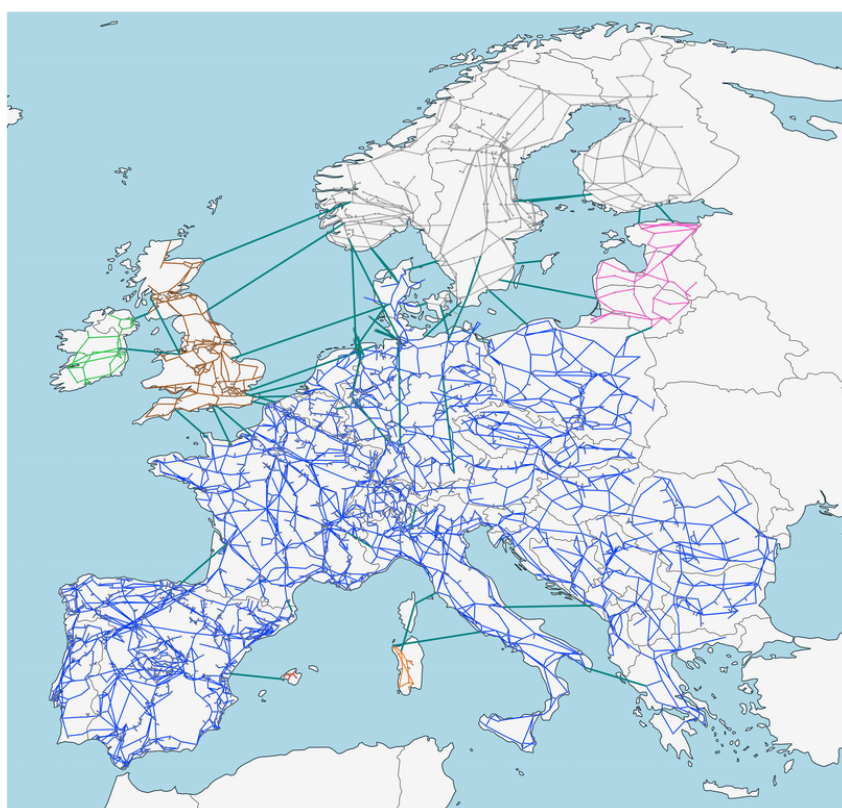
Impoverishing Africans is unacceptable. Yet many proponents of the net zero agenda seem to have discarded the importance of electricity for economic growth, and hence its importance in reducing poverty. The vast majority of people in developed nations have never lived in an environment in which power cuts occur sporadically, often several times per day. Without reliable power, it is impossible to manufacture products competitively to maintain a consistently productive economy.

The current solution to this problem is the use of “back-up” diesel generators, on which sub-Saharan Africa spends almost as much as it does on the official electricity grid itself, given the fractured and unreliable nature of the latter.<sup>24</sup> Diesel generators produce high levels of pollution, which are harmful to human health and the environment. However, if net zero policies shut down access to diesel power generation before Africa has access to adequate replacements, the result will be catastrophic.

Even if all future, additional electricity in Sub-Saharan Africa were to be supplied by solar power, this could only provide, at most, 20% of total electrical generation capacity by 2050—less than the contributions of hydropower, coal, and natural gas.<sup>25</sup> Hence, even such an optimistic scenario predicts that extensive use of fossil fuels would still be required in Africa by 2050—unless there are dramatic, unexpected new innovations in power generation.

Moreover, many of the most optimistic performance estimates regarding the potential of wind and solar power are based on European data, a region which has high population density in a compressed space, often supplied by a single grid.<sup>26</sup> The clearest example is the Synchronised Grid of Europe, which serves 400 million customers in 24 countries.<sup>27</sup>

Figure 1: The Synchronised Grid of Europe.<sup>28</sup>

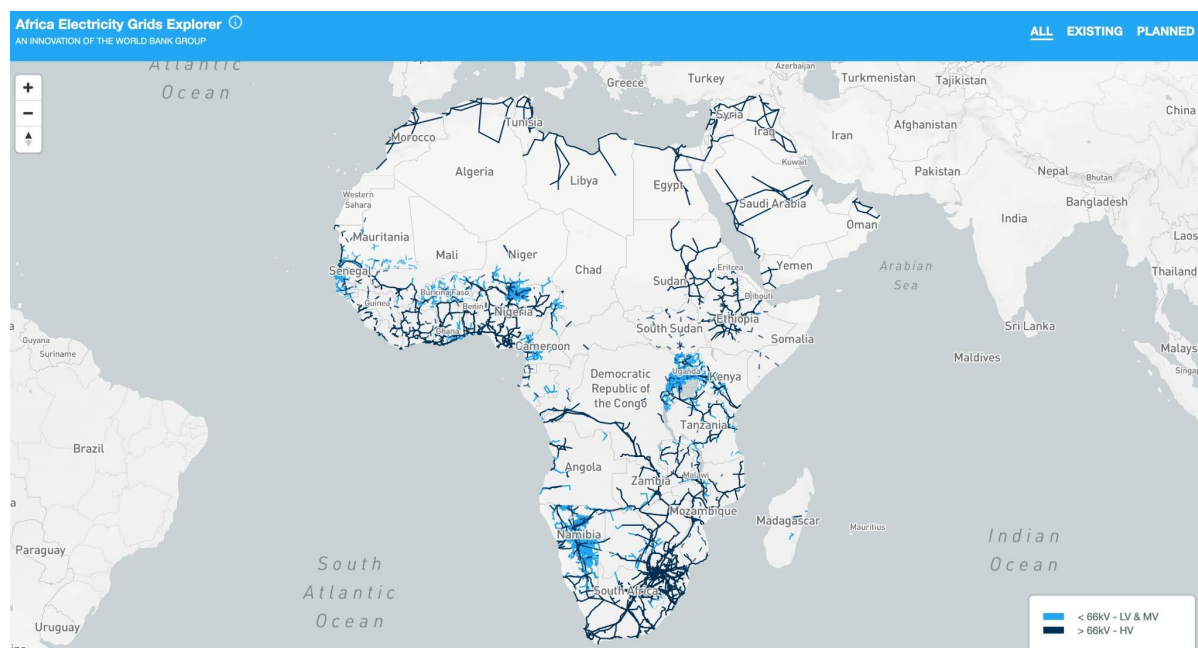


As a consequence, a nation such as Denmark can supply a significant proportion of its electrical needs via renewables (56% in 2020) because the need for reliability is met by the scale of the Synchronised Grid.<sup>29</sup> For instance, if the wind does not blow in Denmark, then coal power from Germany, nuclear

power from France, hydropower from Norway, and other point sources provide abundant reliability. And ultimately, the vast majority of renewable grids in the West rely on natural gas as a back-up, which is burned in large quantities to prevent blackouts.

Meanwhile, Africa is about three times the size of Europe, with a population widely distributed across the continent and powered by numerous disconnected grids (see below). Long distance transmission is costly and subject to power losses and the need for repairs. Therefore, it will be many decades, if ever, before Africa is served by a sufficiently integrated grid that would allow for renewables to function with the reliability needed to power the economy.

Figure 2: Africa's Electricity Grids.<sup>30</sup>



The fact that renewable energy sources are not yet sufficiently technologically capable or economically viable to address the energy needs of the African continent means that imposing anti-fossil fuel policies blocks existing potential to effectively reduce poverty.

## Unintended Consequences

As a result, policies such as net zero are having a range of unintended consequences, which pose new dangers and undermine their own goals. This failure stems from the fact that when Western institutions attempt to prescribe agendas which push African policymakers in their desired direction it does not work. Rather, African governments divert their decisions to other sources of funding and support. Hence, the presumption that a lack of Western funding for fossil fuel exploitation will push Africans to use green energy is false.

Green technology is not yet sufficiently advanced to meet the mass need for energy across the continent, nor is it affordable to the majority of developing nations in its current position on the market. Hence, withdrawing investment in fossil fuels from Western companies and partners pushes African leaders to look elsewhere—for both funding and fuel.

The clearest example of this trend is the rise of Chinese-funded energy plants in Africa. Currently, 30% of new power plants being built across the continent are being constructed by Chinese contractors and

are controlled by the Chinese government.<sup>31,32</sup> These projects include new coal plants, without filtering technologies to limit emissions.<sup>33</sup> Although China represents an alternative source of funding, it has total disregard for issues such as protecting the environment or defending human rights. The more the West retreats, the more the opportunities for Chinese infrastructure in Africa grow.

In light of these challenges, there must be a way to provide African countries with access to abundant, affordable energy, without placing greater value on future societies than the people living in developing nations in the present day. It is clear that the desired outcome by all would be the generation of clean energy, which is capable of sustaining high living standards across the world and does not harm the planet. However, the wealth of evidence outlined above suggests this will require the willingness to move away from the current net zero agenda, to build a solution which serves the needs of the African continent. However well-meaning, the climate lobby must restore its respect for African agency, its sensitivity to African needs, and its discretion in reading the global energy market.

## Millions Needlessly Left in the Dark

The dangers of net zero policies go far beyond these concerns. There is substantial evidence that the net zero agenda is preventing the provision of electricity to nations and communities living without reliable power.

This reality is clearly demonstrated in a study conducted by the Centre for Global Development in 2014, which found that “more than 60 million additional people in poor nations could [have] gain[ed] access to electricity” between 2013 and 2014, if bilateral lenders such as the International Development Finance Corporation were allowed to invest in electrification projects that rely on natural gas, instead of only being allowed to finance projects which rely on renewable energy sources. The study found that a natural-gas-only portfolio could have provided an additional 42,000 megawatts (“MW”) of electricity, versus the 4,200 MW generated through a renewables-only portfolio—a tenfold difference.<sup>34</sup>

The scale of potential impact on poverty levels in the African continent being blocked here is enormous; 60 million people is equivalent to over 1.5 times the entire population of Canada, just greater than the entire population of Kenya, or just smaller than the entire population of Tanzania.<sup>35</sup> And these estimations were only measuring one single calendar year.

Hence, the sheer scale of the number of people who could be given access to reliable power, a key ingredient in their ability to move out of poverty, should give us serious pause. Net zero policies and aspirations, though arguably well-intentioned, are preventing entire nations from moving out of poverty.

Keeping Africans poor as an unintended consequence of an otherwise well-intentioned goal of marginally reducing future temperature increases should not be regarded as “climate justice.” Accelerating African prosperity, through increasing access to affordable and reliable energy, is the most humane and just means of supporting Africans now and in the future.

## Fossil Fuels and Economic Growth

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As outlined above, the greatest need in the African continent—both in reducing poverty and allowing citizens to shield themselves from potential changes in weather patterns—is widespread prosperity. Economic growth, entrepreneurship, and good governance are the key ingredients many African nations need to achieve this. Oil and gas development is, most agree, a vital component of African



economic growth and revenue expansion, necessary for building infrastructure and expanding state capacity. Africa is very fortunate in that its wealth of oil and gas resources are spread over roughly half of the continent's 55 countries.

Five of the world's 30 largest oil-producing countries are in Africa, led by Nigeria, which produced roughly 2 million barrels of oil per day ("BOPD") between 2015 and 2019.<sup>36</sup> Nigeria is followed by Angola, which has access to abundant offshore and deepwater oil reserves in the South Atlantic and produced about 1.8 million BOPD in 2015. However, production fell to 1.4 million BOPD in 2019, as Angola and fellow members of the Organisation of Petroleum Exporting Countries ("OPEC") agreed to cut production for environmental purposes.<sup>37</sup> This has created space for several major international oil companies to begin operations in Angolan waters—including the China National Offshore Oil Corporation ("CNOOC"). Algeria has faced similar circumstances, with Egypt being the only African nation in the global top 30 which has seen a rise in oil revenues—as a non-OPEC member and following domestic pro-market reforms.

While each of these five nations have been in the oil business for several decades, new discoveries of both oil and natural gas reserves—onshore and offshore—in nearly two dozen other African nations (with more perhaps to come) have brought multiple new players into the continent's fossil fuels portfolio.<sup>38</sup> For example, the offshore basin in West Africa—off the coasts of Mauritania, Senegal, Gambia, and Guinea-Bissau—includes the Greater Tortue Ahmeyim ("GTA") gas field, which is estimated to contain more than 100 trillion cubic feet ("TCF") of natural gas, and the Yakaar-1 gas field in northern Senegal, with current resources estimated at 15 TCF. The basin includes the AGC joint maritime zone, sitting between Guinea-Bissau and Senegal, and features a regional collaboration between the governments of the five countries.<sup>39</sup>

Africa's fossil fuel potential has been known for some time. Reuters reported in 2014 that "Africa's underused gas reserves... are set to play a big role in stemming the continent's crippling electricity void, a shift that should boost economies and small-cap energy firms." The article noted that sub-Saharan Africa was already known to contain "some of the fastest growing and most dynamic economies in the world."<sup>40</sup>

How important are oil and gas to African economies? It has been estimated that Nigeria raised 21 trillion Nigerian nairas (US\$45.6 billion) from the sale of crude oil alone in 2022, according to the nation's National Bureau of Statistics.<sup>41</sup> Even in the small nation of Cameroon, the Treasury reported in June 2022 that it had collected CFA205 billion (about US\$35 million) in revenues from the National Hydrocarbons Corporation of Cameroon (SNH) in April.<sup>42</sup> These figures are merely the tax and royalty payments directly from oil and gas production. But each nation also receives direct and indirect tax revenues from those who work for the oil and gas industry and from those with whom those oil and gas workers spend their money. Nor do these figures include the economic, educational, and entrepreneurial benefits to those individuals who derive their livelihoods from these enterprises.

Moreover, a report released this year, "Exploring the Impacts of Africa's New Oil and Gas Economies" begins by stating that, "Several African countries are set to enter unprecedented periods of economic growth on the back of first-time oil and gas production."<sup>43</sup> These countries include Senegal, Namibia, Mozambique, South Africa, Uganda, and Kenya—all of which are due to, or have undertaken new oil and gas enterprises at scale in the last two years.<sup>44</sup> The report predicts that new oil and gas production will bring in sizable export revenue streams for national governments. Emerging gas producers like Senegal will be selling to European and Asian markets. African nations are already positioned to replace up to one fifth of former Russian gas exports to Europe by generating an additional 30 billion cubic meters of African gas annually.<sup>45</sup>

The associated influx of foreign revenues could be transformative for African economies, enabling citizens to accelerate infrastructure and sub-sector development, as well as ease fuel supply shortages and raise electricity access rates domestically. Naturally, for these nations to harness the full economic potential of their resources, local entrepreneurs must act to create greater domestic value-addition and diversification. However, it is clear that fossil fuel resources present real potential for economic growth across Africa, and that the curtailing of these industries could inflict real loss.

## “Renewable Energy” and the Future of Africa

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Alongside these vital revenue opportunities, we recognise the long-term goal of moving towards clean, cheap, and abundant energy in Africa which minimises harm to the environment. According to a recent report by the African Energy Chamber, “solar [photovoltaics] PV, onshore wind, and hydrogen [are] expected to be the main sources driving the renewable energy capacity in Africa through the 2030s.”<sup>46</sup> In 2022, however, African nations generated only 2%, 1%, and <0.5%, respectively, of global solar power, onshore wind, and hydrogen energy—with capacity volumes of just 12.6, 10, and <0.5 gigawatts (“GW”), respectively. Hence, drastic improvement is needed in the long term, if renewable energy sources are to play a significant role in providing Africa with energy.

Many projects are underway to develop Africa’s renewable energy generation capacity. Efforts to increase solar power, onshore wind, and hydrogen capacities to 70, 51, and 50 GW, respectively, by 2035, are currently led by Mauritania, Morocco, and Egypt—with the majority of financing coming from nations in the European Union and the United States, while Asian nations are financing most new oil and gas operations.

The chief reason for Mauritania’s projected position as the continental leader in renewable energy is the US\$40 billion Aman Project, being developed by CWP Global, which has committed to building 18 GW of wind capacity and 12 GW of solar capacity to generate an estimated 110 terawatt-hours (“Twh”) of electricity, that will in turn produce an estimated 17 million tons of green hydrogen, or 10 million tons of green ammonia, annually. The project is expected to increase Mauritania’s GDP by up to 50% percent by 2030, and it hopes to vastly increase access to electricity and the provision of over 50 million cubic meters of fresh water for both domestic and agricultural uses.<sup>47</sup>

Similar projects are being undertaken in Morocco, Botswana, Namibia, and Angola, through combinations of investment and aid. For example, the launch of the US-Africa Clean-Tech Energy Network in December 2022 has, the White House has said, brought 24 clean-tech companies into the continent. The goal is to close \$350 million in new clean energy deals over the next five years, supporting the broader target of bringing “reliable, renewable power” and internet access to at least 10,000 healthcare facilities across sub-Saharan Africa.<sup>48</sup>

In his book *A Just Transition*, N.Y. Ayuk identifies that, unlike with wind and solar power—where Africa is far behind Asia, Europe, and North America—Africa finds itself at the same starting line as everyone else with regards to green hydrogen. He suggests that South Africa could soon be home to Africa’s first “hydrogen valley”, serving as an incubator for pilot projects across the entire hydrogen value chain—production, transportation, distribution, and end use. Ayuk notes that Africa could develop a comparative advantage in green hydrogen production due to its wealth of renewable energy sources, including sunlight, considerable landmass, and untapped hydropower potential—of which only 1% is currently being utilised. He also notes the interest of Western nations such as Germany in looking to African markets for the supply of green hydrogen. The West African region alone has the potential to

produce up to 165,000 TWh of electricity per year, 1,500 times that of Germany's projected 2030 demand level.<sup>49</sup>

Many African nations are working to secure funding to unleash their potential as leading producers of green energy, to serve the needs of their populations, and take opportunities to export to the global market. However, as with many Western nations, these projects are in their infancy, and will need to mature alongside existing outlets of energy to ensure the needs of African populations and the reduction of poverty are prioritised.

## Realistic Nuclear Energy Trajectories

Nuclear power could also provide part of the answer in supplying Africa with clean, cheap, and abundant energy. While there are currently only two operating nuclear power plants in Africa—both in South Africa—the International Atomic Energy Agency (“IAEA”) reports that 11 further African nations are considering using nuclear power to bolster their electric grids.<sup>50</sup> Of the 175 IAEA member states, 45 are in Africa.<sup>51</sup> Hence, in terms of suitability, there is significant potential for the development of nuclear energy in the African continent, capable of producing reliable electricity supplies for long periods of time, with minimal physical imprints or emissions.

However, the IAEA also identified that the construction of new nuclear energy infrastructure within Africa would likely take 10 to 15 years, and significant amounts of investment.<sup>52</sup> Hence, the nuclear option further demonstrates the need to allow Africa the time to transition to cleaner energy sources, rather than rushing this process at the expense of providing its people with power. Even the option of investing in small modular reactors (“SMRs”), rather than large-scale projects, will require major inflows of investment. The difficulties in securing such funds have led to an increase in the number of nuclear plants being constructed by Russia and China within the continent. While some Western actors such as the United States and Japan are also operating in this arena, it is clear that this investment opportunity needs to be further recognised in the West.

## Solution

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In light of the many challenges outlined above, we believe it is possible to formulate solutions which will both address the immediate concerns of reducing poverty across Africa, but also incorporate the long-term goal of a realistic transition to cleaner energy.

Lasting solutions will require contributions from individuals at all levels of society and across all sectors—individuals, communities, businesses, governments, and the international community. However, in each sphere, African agency must be respected.

## African Agency

The prioritisation of African agency in the use of their resources over any external limitations—especially with regard to resources which can be used to aid poverty reduction—will be a key aspect of any lasting solution to the energy question in Africa. Despite many proponents of the climate initiative wishing to be seen as advocates, protecting African societies from the “injustice” of climate change and its impact, many fail to see how the imposition of net zero targets infringes on the rights of African nations to determine the use of their own resources.

Whilst there is potential for a more dynamic and faster transition to cleaner energy in developing nations than the process undertaken in the West—as new technologies emerge on the market—oversight of these processes should ultimately lie with developing nations themselves. In other words, African nations can benefit from the lessons learned in the West and new energy technologies, as they cultivate their own “industrial revolutions”.

This freedom should include African leaders being able to make their own choices regarding the use of their own hydrocarbons. The principal goal here should be increasing electrification and eliminating energy poverty, with promoting renewables or reducing emissions being secondary to this imperative. It is one thing for Western interests to support Africans with additional technological expertise for solar, wind, or nuclear energy options. It is a very different thing for Western interests to try to prevent Africans from developing their own resources or providing affordable, reliable energy to their own people. The former is benign and usually beneficial; the latter is presumptuous, hostile, and damaging to the lives of Africans now and into the future.

However, there are many examples of the West overstepping the line when it comes to African nations’ rights to use their own resources. For example, South Africa’s grid is in disarray, in part, because Eskom has been pushed by foreign governments to stop burning coal, even though South Africa has staggering amounts of the fuel. As a result, South Africa has been battling an ongoing power crisis with frequent blackouts and many communities lacking access to reliable electricity, whilst having a mass of fuel which could be used to meet these needs.<sup>53</sup> This paradox is one of the most egregious examples of carbon colonialism. Even as European nations such as Germany have turned to burning coal in recent moments of energy crisis, they have effectively curtailed the use of coal within developing nations such as South Africa.<sup>54</sup> It is beyond the authority of Western nations to dictate to South Africa whether or not it may use its own resources. African sovereignty must be respected.

The formulation of a more effective partnership between African entrepreneurs and clean energy technologies emerging on the global market will also be key in driving forward a positive energy environment in Africa, which serves the needs of its people. This approach will allow long-term, responsible environmental stewardship, while prioritising the needs of those living in poverty to access affordable energy.

## Within Africa

Workable solutions will also require both pull factors from within African nations and push factors which the West and wider world can use to aid the formation of Africa-based solutions. Yet, the impetus to develop effective energy generation within Africa will be the most powerful ingredient in finding solutions to its current difficulties.

Much of this process rests on the ability of African leaders to develop national environments which are more conducive to entrepreneurship and the productive use of natural resources to the benefit of the wider population. Therefore, a continued focus on effective market institutions and governance norms will be key to developing energy infrastructure capable of lifting societies out of poverty across the continent. These factors have continually been crucial to the different trajectories of newly industrialised nations in creating the energy needed to help populations build pathways out of poverty, such as the “Asian Tigers”.

African institutions should foster innovation and talent in how resources can be used creatively, in a way which maximises energy generation, but also looks for opportunities to create cleaner energy. This can be a gradual process, which prioritises the ability to sustain high living standards for all populations.



## The Role of Western Nations

The West needs to re-evaluate and tailor its energy policy to the African context, recognising the imperative of reducing poverty through increased energy generation, alongside a gradual transition to cleaner energy sources.

This renewed strategy must recognise the need to respect African agency and foster innovation and market exchange rather than create greater aid dependencies in the energy sector. The West should seek to transfer its renewable energy technology through market-based exchange and investment, rather than by policy decree, in order for a transition to cleaner energy to occur in an economically viable manner, capable of supporting high living standards.

Respect for African agency, building local productive capacity, and avoiding aid dependency also need to guide the balance between supporting and incentivising local energy production and promoting “climate resilience” measures aimed to protect local livelihoods from the impact of changing weather patterns. Whilst the latter are important, they cannot be emphasised at the expense of the former, given that many “resilience” initiatives such as new seed varieties, irrigation, fertiliser, air conditioning, and the like require reliable energy sources in order to be produced and maintained. Therefore, if they are prioritised over the expansion of domestic power generation, one simply repeats the mistake of creating dependencies on Western intervention, rather than building a resilient local market capable of generating its own solutions.

Nuclear power provides an option that balances the West’s climate concerns against Africa’s desire to create reliable energy sources capable of supporting high living standards. Nuclear power is sufficiently energy-dense that it can supply the needed boost to African grids to help eradicate mass poverty, whilst also being affordable, reliable, and low-emission. The West has a wealth of capital and expertise in nuclear energy. Therefore, financial investment and support through the sharing of technical expertise could be pursued by a number of Western actors.

## A Bright Future for Africa

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There is a significant risk that if the current agenda of “green” policies continues, the result could be the unnecessary extension of mass poverty in many African nations. Well-intentioned but misinformed Western initiatives—such as NGOs subsidising solar-powered streetlights in neighbourhoods where women must continue burning dung to cook in their homes—have the potential to do more harm than good. We do not wish for trillions of dollars to be spent on renewable energy which does not have the capacity to reach and transform the lives of African people. We cannot continue to allow Western policymakers to determine the quality of life of African populations.

However, if African nations have sovereignty and responsibility regarding the use of their own resources, and invest in creating strong business and governance environments, then there is significant potential to create widespread access to affordable and reliable energy. These developments would have transformative effects on the quality of life enjoyed by citizens within the continent and would be a key building block in creating widespread prosperity.

As African nations increase their prosperity, their choices with respect to climate change will be more analogous to the choices of the West—facing a manageable challenge. Widespread prosperity empowers individuals and communities to determine their own responses to changes in their environment, rather than relying on government or international intervention. African citizens will

therefore be able to develop their own means of resilience, replacing the need for “justice for Africa” climate campaigns.

Prioritising both concern for African poverty and a commitment to African prosperity will envision a bright future. An analogous example would be the fact that in the mid-20<sup>th</sup> century, China and India were also used as examples of mass poverty. Yet today, the West is more concerned about China’s prosperity than its poverty. India is set to follow suit.

It would be tragic and short-sighted to keep in place policies which make it more difficult for Africa to build its way out of poverty in the coming century. While the developed world should continue to innovate with respect to clean energy—including wind, solar, nuclear, geothermal, wave energy, and more—Africans should be allowed to use the energy resources they need to become as prosperous as Europe, the United States, and other developed nations to create the high living standards which are so freely enjoyed in the developed world.

Please join with us in supporting a bright future for Africa.

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