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## II. Economics: Power and Potential in Africa

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# COP 28 Will Not Stop Africa: The World's Next Economic Miracle

by Dean Andromidas

Dec. 6—Africa will not accept the Malthusian demands of the billionaires who jet to United Nations “climate” conferences, that it forsake the industrial and technological development which will realize the immense creative potential the African people have to offer humanity. The growing consensus among the continent’s leading political currents is that Africa must become the world’s next economic miracle through an aggressive infrastructure-driven economic development policy.

Central to an infrastructure drive policy is energy. The late political economist and statesman Lyndon LaRouche described technologies by their “energy density,” or power in progressively higher forms, from human and animal muscle power through wind, water—at that lowest end—progressing through coal, hydrocarbons, nuclear fission, and fusion power, for the generation of heat, electricity, and agro-industrial powers. These higher forms of power should be deployed alongside connective infrastructure including roads, railways, electricity in development corridors across the continent, binding the 54 sovereign nations of Africa into a fully integrated agro-industrial economy.

African leaders realize that to achieve the destiny they strive for, they must rapidly overcome the tremendous power deficit the continent suffers. Africa’s endowment with rich sources of coal, petroleum, gas, and uranium must play the central role.

### Alleviate Poverty with Fossil Fuels

In a Nov. 30 [opinion piece](#) as COP28 opened, N.J. Ayuk, Executive Chairman of the African Energy Chamber, published a broadside in Africa.com against the Malthusian dictates of the “climate” oligarchs. While giving respect to the climate lobby, Ayuk nonetheless rejected their anti-hydrocarbon agenda:

The hydrocarbon-bearing nations on our continent deserve to enjoy the same benefits the developed nations reaped when they extracted and monetized the fossil fuels beneath their soil and off their shores. African states also need their fossil fuels, natural gas in particular, to help alleviate the debilitating energy poverty impacting more than 600 million people.

The people of Africa have waited long enough for the advantages and opportunities of modernization.

Ayuk’s was a mere diplomatic protest compared to the proceedings of the annual African Energy Week, sponsored by Ayuk’s Africa Energy Chamber and held in Cape Town South Africa Oct. 16–20, which threw Africa’s climate-change lobby into a rage. The event was a celebration of the expansion of the oil, gas, coal, and nuclear energy sectors for the industrialization of Africa. This even provoked South Africa’s *Daily Maverick* to publish a long denunciation of the conference under the title, “Africa Energy Week: Where Climate Science Makes Way for the Gods of Gas and Coal.”

The theme of the conference was “The African Energy Renaissance: Prioritizing Energy Poverty, People, the Planet, Industrialization, and Free Markets.” Almost every African government and energy-related business and state energy company attended. The *Daily Maverick* screamed that “its speakers ferociously pushed back against global calls for an immediate transition from fossil fuels....”

Namibian President Hage Geingob told the conference:

For the African energy renaissance to be meaningful, Africa should be permitted to explore and exploit its natural endowments for the good of

the continent. It should not be for export to other countries, but for the benefit of African people.

One panel was entitled “King Coal Is Back: Africa’s Future Clean Coal Industry.” In his keynote speech to that panel, Dr. Zwanani Titus Mathe, CEO of the South African National Energy Development Institute, declared:

The energy mix of the future will always have coal. We must therefore continue to invest in coal, continue researching around coal.... It is very clear that baseload power will come from coal-fired power plants and nuclear power plants.

Enobot Agboraw, Executive Secretary of the African Commission on Nuclear Energy told the conference that, given current energy poverty,

Nuclear power, with its long lifespan and reliability, stands out as a key pillar in Africa’s energy transition efforts.

Sayed Salah Eldin Motyaser Aly of the Egyptian Nuclear Power Plant Authority briefed the participants on the progress of El Dabaa, Egypt’s first nuclear power plant, which he called “the start of our future industrialization”:

It has created the opportunity for highly skilled jobs and the development of local industries and Egypt has invested in many initiatives such as the dedicated El Dabaa vocational school, as well as a training program implemented with our strategic partner to ensure we have the skills needed to take this project forward.

### Electrification of Africa in the Next Decade

All North African countries, including Egypt, Libya, Tunisia, Algeria and Morocco, are significant producers and exporters of oil and gas and enjoy 100% electrification, while carrying out ambitious economic development policies. By contrast, Sub-Saharan Africa,

with the vast majority of the continent’s land area and people, is the largest region on this planet where access to electricity is not available to 100% of the population.

Only 3% of Niger’s population has access to electricity; in Chad it is 9%; Liberia, 11%; Burkina Faso, 20%; Mauritania, 30%; Mali, 40%; and in most other sub-Saharan countries, 30–60%. Only South Africa has 95% of its population with access to electricity but suffers shortages.

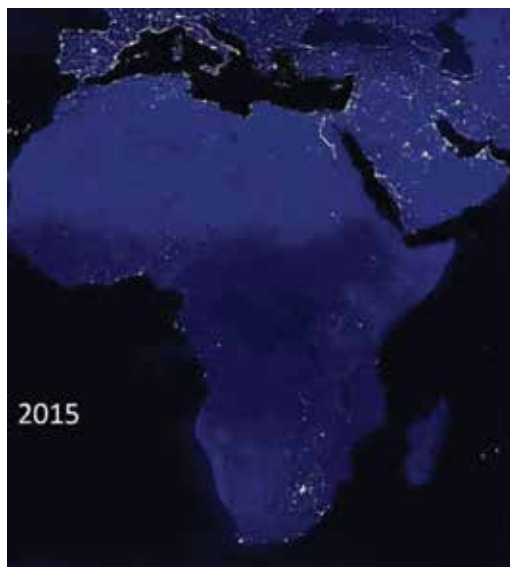
A total of 580 million Africans lack electricity according to the International Energy Organization. The worst effected countries are in Central Africa. Yet Africa is well endowed with reserves of coal, oil, gas, and uranium, most of which are exported. Yet Nigeria, the largest petroleum producer in Africa,

imports \$2 billion worth of downstream petroleum products, despite having refineries. Many of the leading African exporters of gas have yet to fully electrify their countries. The major reason for this is the fact that the oil revenues of these states are used to finance their governments and pay off international debts, rather than developing Africa to create wealth-generating, advanced agriculture and industry.

This is rapidly changing as African leaders begin to take their destinies into their own hands, and reach out to new economic partners, including China’s Belt and Road Initiative, Russia, and now the BRICS, the rapidly growing association of the governments of Brazil, Russia, India, China, and South

Africa. This past year’s BRICS Summit in South Africa, and the parallel Russia-Africa Summit in St. Petersburg, were very well attended by African leaders. The BRICS decided to invite as new members Egypt and Ethiopia, two of Africa’s most populous countries, which have highly ambitious development policies.

There is a growing consensus that the so-called “Energy Transition” away from fossil fuels to so-called “renewables,” such as wind and solar, threatens to perpetuate sub-Saharan African poverty by denying those countries the benefits of exploiting their abundant hydrocarbon resources for the industrialization of the continent.



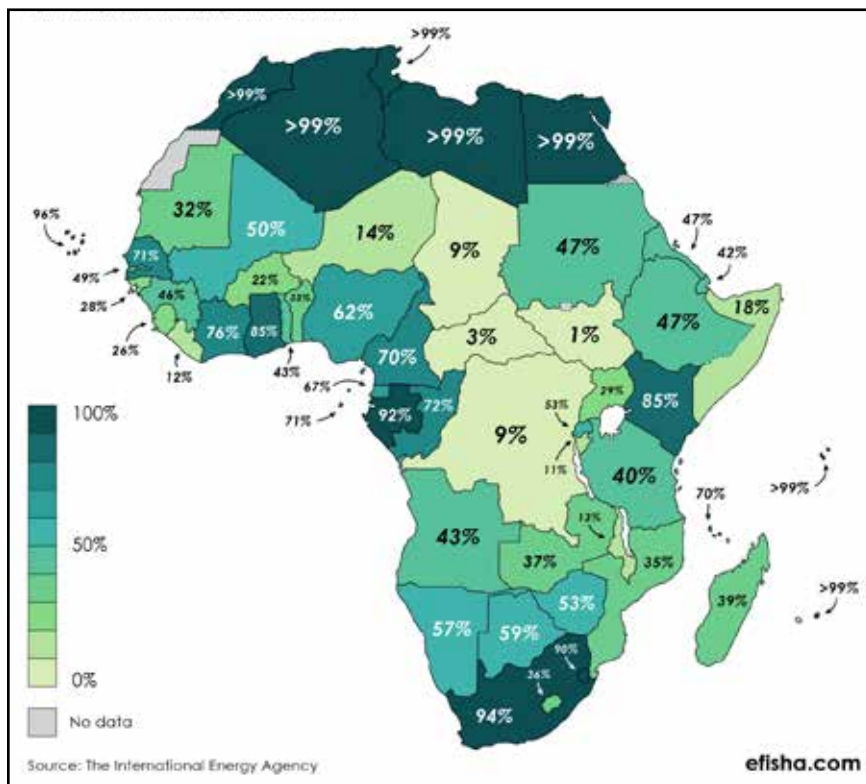
NASA

*Sub-Saharan Africa is the largest region on the planet where electricity is not available to all. This satellite image shows how much of Africa is utterly dark at night. Compare Johannesburg, Cape Town, and the lower Nile with the rest of the continent. Compare the continent with Spain and Italy.*

FIGURE 1

## Access to Electricity in Africa

By the proportion of the population, 2019 data



The map (Figure 1) shows the levels of electrification throughout the African continent where it can be seen that the coastal countries enjoy a relatively higher level of electrification while the landlocked countries suffer a highly a debilitating power deficit. This parallels the geographical distribution of hydrocarbon resources, which are mainly found on the Mediterranean coast countries of North Africa and along the coast of West Africa. In East Africa, long-term hydrocarbon producers Mozambique, and Tanzania are being joined by others. More discoveries are being made along the East coast as well as the interior countries such as Uganda and in the Sahel. Coal is abundant in southern Africa and accounts for the fact that South Africa enjoys 95% electrification. Leading African organizations are moving to remedy this disparity through the creation of gas pipeline networks from the western coastal producing countries, into the interior landlocked countries for electricity and other power needs. Key pan-African organizations, including the African Petroleum Producers Organization representing the 18 hydrocarbon-producing nations of Africa, The African Energy Chamber, and individual states acting in con-

cert, are already moving to carry this out.

## From Hydrocarbons to Nuclear Power

The electrification of Africa will be in two overlapping phases; the first by hydro-carbons and hydro-electric; the second, nuclear power. Coal and gas offer the most rapid means of electrification. Combined-cycle gas turbine power stations can be built in a matter of months. All their major components are factory produced and assembled on site. In 2016, Egypt commissioned the German Siemens company to build the world’s largest combined-cycle gas turbine power station, with a massive 14.4 gigawatt (GW) capacity. It was built in no more than 36 months and on line by 2018, increasing Egypt’s electricity capacity to more than 34 GW.

Much smaller plants are required in the power-deficit regions. While pipelines are being built, the power stations and the grids can be constructed. Laying pipelines is not rocket science, and African companies employing Africans can easily master the technique.

The nuclear power phase will begin simultaneously given the fact that 15–20 years is required to build a reactor for countries that do not have any nuclear engineering experience. This will be discussed further below. Similarly, large hydroelectric power plants require long construction times taking as long as a decade to construct.

There are numerous pipelines and gas facilities in Africa but most are dedicated to exports; none receive liquefied natural gas which has been produced in Africa, for transport to countries such as South Africa. Here we describe projects aimed at distribution of gas within Africa.

A memorandum of understanding was signed at the meeting of the Central Africa Business and Energy Forum (CABEF) in January 2023 to make the Central Africa region an “energy poverty-free zone” by 2030. The signatories included the African Petroleum Producers Organization (APPO), Equatorial Guinea, Cameroon, Gabon, Chad, the Democratic Republic of

Congo, the Republic of Congo, and Africa’s second-biggest oil producer, Angola. Their idea is to create a Central African Pipeline System (CAPS) which, instead of exporting energy to Europe and the West and using the revenues to pay off foreign debt, would distribute natural gas throughout Central Africa. The project would include construction of gas-fired power stations, refineries, and gas liquification plants. The energy generated would bring power to homes, businesses, new industries processing resources such as iron ore, bauxite, copper, etc., which are now exported without any processing. The plan would entail laying 6,500 kilometers of new pipeline across eleven African countries.

In Central Africa alone there are reserves of oil estimated at more than 31 billion barrels, with 5 of the 10 African oil producers located in the region: Gabon, Republic of Congo, Equatorial Guinea, Chad, and Angola. There is significant involvement of China National Petroleum Corporation (CNPC) in countries in the region.

Late last year, Equatorial Guinea’s then-Minister of Mines and Hydrocarbons, H.E. Gabriel Mbagha Obiang Lima, laid out a timeline for [the project](#) during a meeting organized by the African Energy Chambers. His country and Cameroon are working on the first phase, which will connect through Chad. This would involve the creation of energy hubs to receive and export hydro-carbons, including LNG, as well as chemicals. These hubs will have power stations to produce cheap electricity that can be transferred to energy deficit countries in land-locked Central Africa.

Obiang Lima spoke with the government leaders of all 11 countries and has secured funding from the Cairo based Africa EXIM Bank to finance a study for the project. The Minister made a [detailed presentation](#) on the project at the MSGBC Oil, Gas & Power 2022 conference.

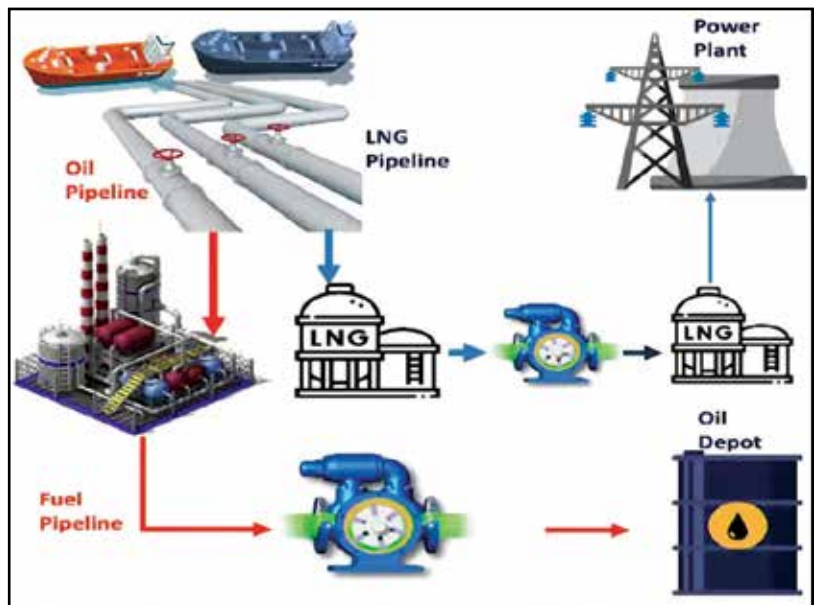


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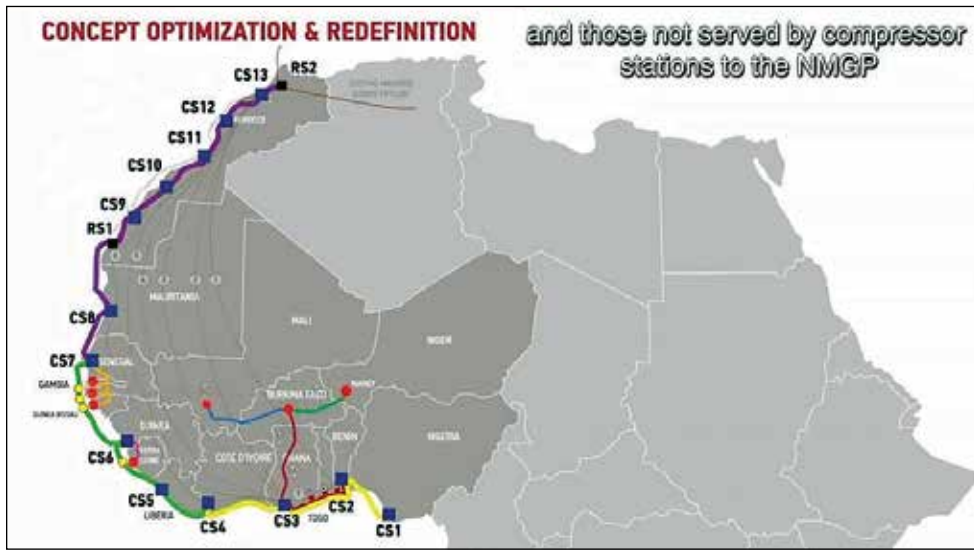
Signers of an MOU for the Morocco-Nigeria gas pipeline. Left to right: Sédido Douka, ECOWAS Commissioner for Infrastructure, Energy, and Digitization; Amina Benkhadra, Director General of ONHYM; and Mele Kyari, Group CEO of NNPC, Ltd.

### Transformative Project for Electricity

Further up the West Coast is the proposed Morocco-Nigeria Gas Pipeline project that could bring electricity to 400 million people in Africa. The project was presented as “transformative” by King Mohammed VI of Morocco at the African Investment Forum (AIF) held in Marrakech, Morocco Nov. 8–10. It will, he said,



Key infrastructure elements for ending the energy poverty in Africa: LNG pipelines, oil pipelines, pumping stations, LNG terminals, power plants, oil refineries, and fuel storage depots.



The planned 5,600 km Morocco-Nigeria gas pipeline will bring electricity to 400 million Africans. It will also connect into Cádiz, Spain. CS = Compressor station; RS = Receiving station.

enhance regional economic integration [and] will enable all countries along the pipeline route to have access to reliable energy supplies.

This project was initiated by King Mohammed VI and former Nigerian President Muhammadu Buhari in 2016 by an agreement of the Nigerian National Petroleum Corporation (NNPC) and the Moroccan Office National des Hydrocarbures et des Mines (ONHYM). The 5,660 kilometer pipeline would connect Nigeria, Benin, Togo, Ghana, Cote d’Ivoire, Liberia, Sierra Leone, Guinea, Guinea-Bissau, The Gambia, Senegal, and Mauritania, ending at Tangiers, Morocco, and Cádiz, Spain. It would actually begin in Ghana where the existing West Africa Pipeline connecting Nigeria, Benin, Togo, and Ghana ends.

All the African countries involved have already signed agreements to participate. Feasibility and engineering studies financed by the Islamic Development Bank and OPEC Fund for International Development (OFID) are completed or in process. While no date has been set to commence construction, the project is high on Morocco’s agenda. The pipeline would facilitate transporting gas from this coastal pipeline into the landlocked Sahel countries which have the lowest rate of electrification in Africa.

The project also forms part of the recent [initiative](#) announced by the King of Morocco for integrating all the Atlantic coast African countries through port

and transportation infrastructure to the landlocked countries in the Sahel and Central Africa.

In East Africa, Mozambique, a major producer, already exports its gas to neighboring Zimbabwe and South Africa through existing pipelines, with new ones in the planning stage. Tanzania, another significant gas producer, plans to become fully electrified by 2030. It has signed agreements for proposed pipeline projects to neighbors Kenya and Uganda.

On Nov. 10, 2023, Tanzania and Uganda [agreed](#)

on a gas pipeline feasibility study that will evaluate the project’s structure, gas requirements, and pipeline dimensions. Both countries see the project as part of East Africa’s broader energy integration efforts, aiming to enhance regional energy security and economic development. In addition, they have agreed to collaborate on the East African Crude Oil Pipeline (EACOP) project, which will bring recently discovered petroleum in Uganda to Tanzania for export to world markets.

[Tanzania and Kenya](#) are about to begin construction of a 600 kilometer [Mombasa–Dar es Salaam pipeline](#) to bring Tanzanian gas to Kenya.

### Financing Bank Being Formed

These pipeline projects threaten to overturn the European Union’s policy of energy independence from Russia and its fantasies of turning Africa into its green-energy paradise, not for Africans but for Europe, as per their murderous climate change policy.

Already, environmentalists have attacked the plan, led by the South Africa-based Africa Climate Foundation which has received \$6.5 million in a year from the Rockefeller Foundation, the Hewlett Foundation and the Bill and Melinda Gates Foundation.

The direct threat to the African hydrocarbons sector comes from the City of London, the principal source of capital for the oil and gas industry in Africa. The Africans are fighting back with their own [bank](#), the African Energy Bank, which will open by June 2024.

Conceived in 2022, it is a joint project of the African Export-Import Bank (Afreximbank) and the African Petroleum Producers Organization (APPO). The latter has initiated the above CAPS pipeline system and the former is financing the feasibility study.

Speaking at the Inter-African Trade Fair in Cairo on Nov. 16, Afreximbank Director of Client Relations Rene Awambeng said:

The management of Afreximbank, working on the sidelines with African Petroleum Producers Organization, has decided to create another agency that will engage in financing the energy Africa requirement. We are in the final stage of getting all the approvals and it is going to be an organization set off by treaties. We will have three classes of shareholders, the first will be the African oil-producing countries; national oil companies; and African investors as well as international investors from all walks of life.

A May report by *Business Insider Africa* quoted APPO Secretary-General Dr. Omar Farouk Ibrahim as saying, the bank “is going to focus essentially on funding oil and gas projects on the African continent because the funds have dried,” specifically mentioning the World Bank and other international financial institutions (IFIs) that have funded oil and gas projects in Africa, but implicitly including private funds, those following COP26 Climate Finance advisor Mark Carney’s “green finance” mandate. Ibrahim described the IFIs shutting down financing channels and having “stringent conditions ... compared to 20 or 30 years ago.”

### **The Journey to Nuclear Power**

The nuclear phase for powering Africa has already begun. South Africa is the only country with an operating nuclear power plant (NPP), a 970 megawatt NPP built by France’s Framatome (now Areva) at Koeberg, near Cape Town. A second one is planned. Having constructed nuclear weapons during apartheid governments, South Africa has a very mature nuclear research and engineering capability. Already in the 1990s it was developing the groundbreaking Pebble-Bed Modular Reactor. While a very promising project, it was terminated for lack of financing.

Nonetheless, both the government and private interest are further developing the technology. The most promising project is being carried out by the STL

Nuclear firm. It is developing a High Temperature Modular Reactor, the HTMR-100 (100 MW thermal, 35 MW electrical), a pebble-bed high-temperature gas-cooled reactor with a [thorium-based fuel cycle](#). It is being developed with an eye to the needs of Africa, where lower and dispersed population densities are better served with small power stations operating independent grids.

Egypt will become the second African country operating an NPP when their El Dabaa 4.8 gigawatt plant, being built by Russia’s Rosatom nuclear engineering company, is commissioned in 2026 or 2027. Egypt, like all African countries except South Africa, had no nuclear engineering capabilities when it decided to build an NPP. Its current journey will total close to 20 years—an example for other countries. The steps involved include creating a regulatory authority and legal framework; determining a site location; conducting feasibility studies, etc. Most important is educating the scientific and technical cadre to operate the NPP, and institutional and physical infrastructure. Besides sending several hundred students to Russia for education and training, Egypt established a high school to teach Egyptian youths nuclear engineering and science. Only after this unavoidable process of more than a decade, was the first spade turned in July 2022 to lay the foundation for El Dabaa. Egypt is considering building more.

This process has not deterred other African countries from embarking on the journey. Russia and Rosatom have taken a lead in this effort; at the Second Russia-Africa Summit in St. Petersburg in July 2023, nuclear technologies were at the center of the program. Rosatom has nuclear cooperation agreements with Burkina Faso, Burundi, Congo, Ethiopia, Ghana, Mali, Nigeria, Rwanda, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe, and Egypt. Many of these will no doubt mature into construction of NPPs.

Russia’s not the only player. The United States, with such companies as Westinghouse and GE Hitachi, also seeks entry into the African market. In November the U.S. Energy Department’s Office of Nuclear Energy, in cooperation with Ghana’s Ministry of Energy and the Nuclear Power Institute of the Ghana Atomic Energy Commission, held the U.S.-Africa Energy Summit in Ghana.

The [Summit](#) drew participants from across Africa: various international institutions, industry, academia, and civil society organizations from the U.S., the UK, South Korea, and Japan.