Africa has vast gas reserves. Here's how to stop them from adding to climate change

November 17 2022, by Chukwumerije Okereke and Youba Sokona

Credit: AI-generated image (disclaimer)

The question of whether Africa should be allowed to exploit its gas reserves, estimated at more than 17.56 trillion cubic meters (620 trillion cubic feet) in 2021, has been much discussed at the latest UN climate change summit, COP27, in Sharm El-Sheikh, Egypt.

Former U.S. vice president Al Gore used his speech at the opening session to urge an end to all fossil fuel investment globally, including in Africa. But Macky Sall, the president of Senegal and chairperson of the African Union, argued at the same event that Africa needs space in Earth's dwindling carbon budget to use its resources for development.

The gas debate centers on two arguments, either for gas or against it. This is too narrow and fails to consider what development might look like for Africa and other regions that are struggling to grow their economies and address widespread poverty while also taking ambitious climate action. It also neglects the question of what kind of international cooperation might be necessary to make climate-compatible development possible.

Those who argue against expanding fossil gas extraction say that exploiting Africa's reserves is incompatible with keeping average global temperature rise below 1.5°C, the "safe" limit agreed in Paris in 2015. Renewable energy is now the cheapest way to connect millions of people to power networks in countries where energy poverty is rife, they say.

It has also been suggested that widespread poverty in oil-rich countries such as Nigeria demonstrates how decades of oil and gas exploration have only benefited multinational corporations such as Shell and left few gains for most Africans. Investing in oil and gas now, it's argued, will leave African countries holding stranded assets as Europe and North America pivot to wind, solar and other renewables.

Those in favor of exploiting Africa's gas argue that industrialization—for example, the building of modern transportation systems, hospitals and schools which developed countries enjoy—has relied on burning fossil fuels. Industrialized countries still consume a lot of gas. Germany, for instance, uses the fossil fuel to generate up to 30% of its power.

Natural gas, it is held, could provide enough energy for industrial processes such as steel, cement, paper and pulp manufacturing which renewables such as solar and wind have yet to provide.

A study published in 2021 found that a lack of finance, or the high cost of accessing it, imposes a huge gap between the theoretical and actual cost of generating renewable energy in Africa. And, if African countries are able to diversify their energy portfolio with gas it will, it is argued, increase energy resilience and strengthen the right of African countries to make their own decisions on energy generation, distribution and consumption in a way that they deem appropriate.

Proponents of gas point out that, historically, Africa has contributed the least to climate change, accounting for less than 4% of the total stock of CO_2 in the atmosphere. If the whole of Sub-Saharan Africa tripled its electricity consumption from gas it would only add 1% to global CO_2 emissions. In comparison, the US has released more than 509 gigatons of CO_2 since 1850 and is responsible for 25% of the global total.

On this basis, it is argued that developed countries are enacting a renewed form of colonialism—what some might call climate colonialism. This is because countries that developed using fossil fuels and continue to appropriate a disproportionate amount of the remaining carbon space in the atmosphere are seeking to stop Africans from using their abundant reserves of gas to address energy poverty challenges and fast track their development.

Striking a balance

The narrow view of either "no to gas" or "yes to gas" in Africa is largely unhelpful in framing the continent's climate, energy and development challenges. What Africa urgently needs is a credible plan for oil-dependent economies to avoid the need to transition to gas in the long

run. That must include technical and financial support to scale up renewables in all countries, so they can build self-reliant, prosperous economies.

Neither gas nor renewable energy on their own can do much to help Africa when so many countries depend on foreign technology and investment to grow their economies. The crucial question for Africa at COP27 should be: what is the right package of assistance needed to expand modern and affordable energy, develop a competitive advantage in manufacturing renewable technologies and better manage resources in a climate-constrained world?

Many African countries such as Ghana and the Gambia already have ambitious climate targets, but these are conditional on the receipt of international support which is not forthcoming. Despite being an oil-dependent economy, Nigeria has a pledge to be carbon neutral by 2060. The cost of implementing this strategy is valued at US$1.9 trillion (£1.59 trillion). In spite of high-level diplomacy by the vice president, Yemi Osinbajo, Nigeria has only managed to receive a promise of a one-off payment of US$3 billion from the World Bank—but when this is supposed to be delivered has not been confirmed.

The U.S. thinktank Climate Policy Initiative has suggested that Africa needs an inflow of about US$277 billion annually to implement the plans contained in each country's emissions reduction pledge. But the continent currently only receives something in the region of about US$30 billion a year.

Africa could be world-leading in renewable energy generation if provided with the right technology and financial assistance. The continent has big advantages when it comes to renewable energy generation—ranging from solar, hydroelectricity, wind and geothermal energy. The International Energy Agency says Africa has 1% of the

world's total installed solar power capacity, despite the fact that, it has 60% of the world's most promising areas to generate solar energy.

Calls to cease all gas exploration in Africa that fail to account for where historical responsibility for climate change lies and the need to close the current finance gap are the most audacious kind of climate imperialism. COP27 must unlock trillions of dollars in large-scale renewable energy investments and generate new economic opportunities for Africa—or it will have failed.

Provided by The Conversation