

# Africa looks to renewables to curb warming, boost economies

April 4 2022, by Wanjohi Kabukuru

---



Credit: CC0 Public Domain

From wind farms across the African coastline to geothermal projects in the east African rift valley, a new United Nations climate report on Monday brought the continent's vast clean energy potential into the spotlight. If realized, these renewable energy projects could blunt the

harshest global warming effects, power the continent's projected economic development and lift millions out of poverty, the report said.

The U.N.'s Intergovernmental Panel for Climate Change report comes at a time when Africa's renewable [energy](#) business is already booming. Many African nations are intensifying efforts to embrace alternative renewable energy pathways and shift away from fossil fuel dependency, with countries such as Kenya, Tanzania, Morocco, Egypt, Ethiopia and South Africa taking the lead on large-scale clean energy adoption.

Yet Africa has attracted just 2%—\$60 billion—of the \$2.8 trillion invested in renewables worldwide in the last two decades and accounts for only 3% of the world's current renewable energy capacity. Limiting warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit) or 2C (3.6F), in line with the 2016 Paris climate agreement, will involve even greater energy system transformation, the U.N. report said.

That means more renewable energy initiatives, such as Kenya's Lake Turkana Wind Power, launched in 2019 some 600km (372 miles) northwest of the capital Nairobi and making up 18% of the country's energy production, are needed. Its CEO, Phylip Leferink, said large projects like these can be replicated, but it remains logistically challenging.

"The [wind conditions](#) in the north of Kenya are rather unique for the continent. You will be hard-pressed to find another location in Africa with a similar wind regime," Leferink said. "(This) however does not mean that there is no potential for other wind projects in Africa; there most certainly is. Especially the African coastline, from Djibouti all the way south around South Africa and up north again up to Cameroon, has good wind potential and certainly warrants initiatives in this regard."

The project is already in good company, with off-grid solar power also

contributing to the country's [energy production](#). In Nakuru county, some 167km (104 miles) northwest of Nairobi, James Kariuki signed up for M-Kopa solar power, a pay-as-you-go low-cost financing for off-grid solar power to his home.

"When I installed solar power into my home, I ended up making considerable savings from the use of kerosene lamp for lighting and charcoal in my house," Kariuki said. "Hospital bills for my family have since gone down and we now have internet and watch international sports in my home."

Since 2012, M-Kopa has powered over 225,000 homes in Kenya, Uganda and Tanzania with off-grid solar power. Kenya has also been expanding its geothermal and bioenergy capacity for several years.

These initiatives are a firm step in the right direction, according to report author and energy expert Yamina Saheb.

"Renewable energy sources are definitely an important mitigation strategy for Africa, offering its citizens decent living standards by developing infrastructure and buildings that do not require carbon intensive solutions," Saheb told the Associated Press. "The whole continent could go solar including PV (photovoltaic) and thermal solar and some countries could also go for wind."

Solar energy initiatives such as the Noor Ouarzazate complex in Morocco, Benban solar park in Egypt and South Africa's Redstone solar park have sprung up across the continent. The four nations attracted 75% of all the renewable energy investments flows in the region.

Africa has a world-leading capacity for even more [solar power](#) initiatives, the report said, with a solar photovoltaic potential of up to 7900 gigawatts. Plans are also underway to explore the potential for

[geothermal energy](#) in the east African rift valley system and nations dotted around the continent, such as Angola, Sudan and Zambia, are investing in wind and hydropower.

A transition to clean energy is also "economically attractive" in some circumstances, the IPCC report said. The U.N. estimates that Africa's continued uptake of renewable energies will see the creation of more than 12 million new jobs. China remains the largest lender of Africa's renewable energy investments followed by the African Development Bank, World Bank and the Green Climate Fund.

"This latest IPCC working group report on mitigation is a clear indicator that Africa should harness the immense renewable energies opportunities available within the continent to power economic growth and build resilient infrastructure," said Max Bankole Jarrett, an energy expert and former Africa regional manager at the International Energy Agency. "Africa's vast [renewable energy sources](#) should be a priority not just for the continent but also for the world racing to fulfill the net zero ambition."

53 African nations have already submitted their voluntary national determined contributions under the Paris climate agreement which details energy plans and outlines targets to curb emissions. 40 of those countries have included renewable energy targets.

[Africa suffers some of the most severe effects from climate change](#), despite being the lowest greenhouse gas emitting continent with the least adaptive capacity. Swathes of the continent still lack access to electricity and cooking fuels: The International Energy Agency estimates some 580 million people were without power in 2019, and the World Health Organization says about 906 million are in need of cleaner cooking fuels and technologies. But providing universal access using non-renewable energy sources would lead to increased global emissions, the report

warned.

"Climate action is a key component in meeting the sustainable development goals," it said.

© 2022 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed without permission.

Citation: Africa looks to renewables to curb warming, boost economies (2022, April 4) retrieved 24 April 2024 from

<https://techxplore.com/news/2022-04-africa-renewables-curb-boost-economies.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.