

BALANCING AFRICA'S DEVELOPMENT GOALS AND CLEAN ENERGY TARGETS

AFRICA⁵⁰

An article by Africa50

Over 600 million people live without reliable access to electricity on the African continent, with sub-Saharan Africa's electrification coverage still less than 50%. This is not just a challenge but an opportunity to get Africa's energy mix right, and to give a boost to industrialization, economic growth, and standards of living on the continent.

While Africa is committed to tackling climate change challenge with many African countries increasing their investments in renewable energy resources, there is also the need to significantly increase investment in natural gas to support the continent's development needs and make good use of a natural resource that Africa has in abundance.

Africa's commitment to renewable energy

Africa is committed to the Paris Climate Agreement with 49 countries having ratified their commitments and many already boasting an impressive array of renewable energy projects. There is the 1.5 GW Benban solar project in Egypt (the largest in Africa), which Africa50 invested in. Kenya has the 310 MW Lake Turkana wind project and a 280 MW Geothermal Plant in Olkaria. Morocco has the 580 MW Noor solar power plant. And in South Africa over 4,000 MW of

renewable energy is in operation. Even smaller African countries are committing substantial resources to green energy. Senegal, for instance, generates over 22% of its electricity from renewables, thanks to several privately-funded wind and solar projects.

Gas as a transition fuel

Natural gas can serve as a critical transition fuel while African countries increase their renewable energy footprint, the latter whose power production is intermittent and not ideal as a source of base load power. Natural gas is also an input for industry, buildings, and transportation, and can reduce the use of wood and charcoal as cooking fuels, improving health, and lowering carbon emissions and deforestation. Natural gas can also be used to retrofit existing plants which burn more polluting fuels like coal and diesel oil.

The continent is home to seven percent of the world's natural gas reserves. Sixteen

countries have proven gas reserves that can meet their own power demand several times over, but only eleven have installed gas-fired generation capacity. To remedy this, more investments should be channeled into natural gas processing, and midstream transmission and distribution infrastructure, to encourage the use of gas for electricity generation.

Africa50 believes in this balanced energy mix, which is demonstrable through its investments in both renewables and gas-fired power projects. Besides the Benban solar project in Egypt, Africa50 is a

partner in the **Desert to Power initiative** with the African Development Bank – to provide solar power to millions of people in the Sahel region of Africa. Africa50 has also invested in two hydropower projects, the 420 MW **Nachtigal plant** under construction in Cameroon and the 120 MW **Volobe plant under development** in Madagascar. Africa50's investments in gas-fired electricity generation include the **Azura-Edo platform**, which is an independent power producer that operates several gas-fired power plants in Nigeria, Senegal, and Mozambique. In Senegal, Africa50 is constructing the 120 MW **Malicounda**

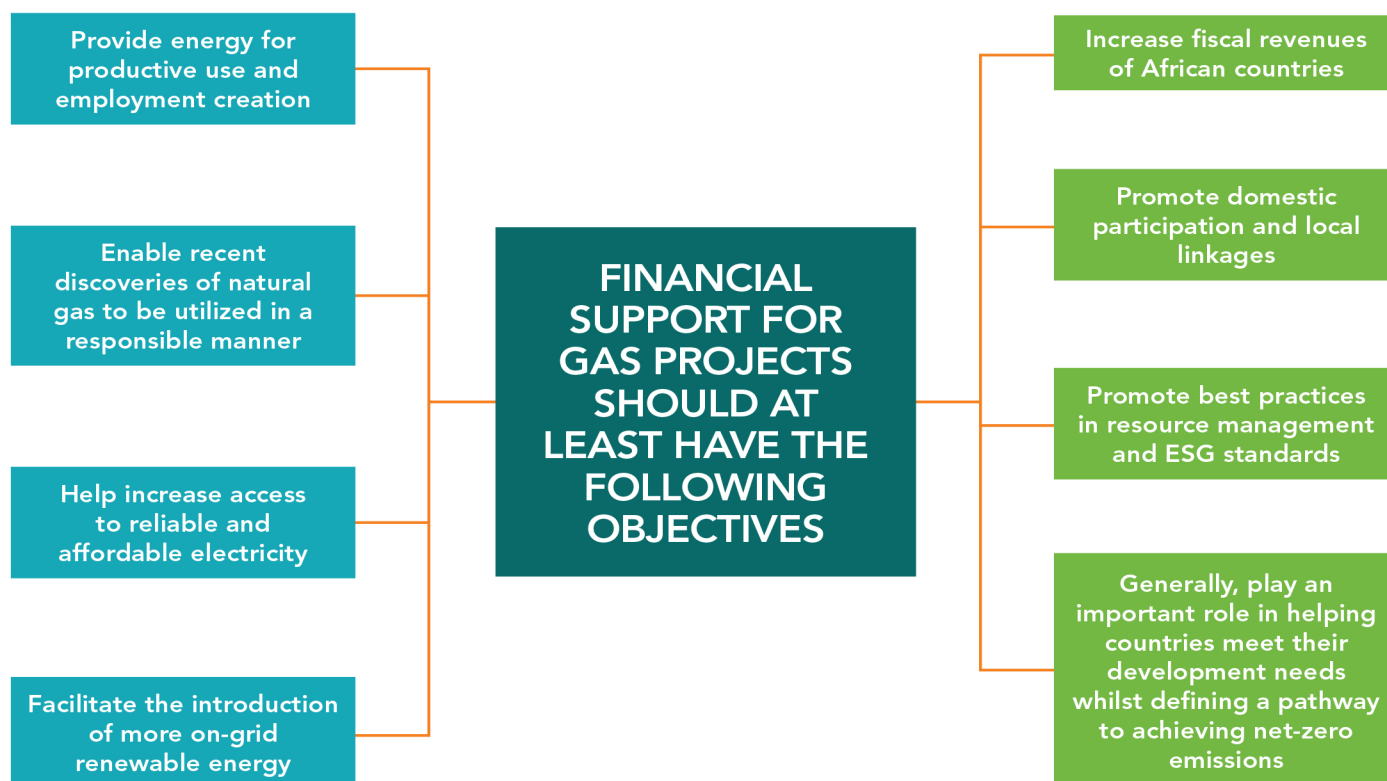
power plant, which will be converted to natural gas once gas becomes available from domestic fields.

The opportunities for investment: Combining commercial returns with impact

Africa's approach to climate finance should support its push for value addition to its natural resources, along with industrial growth and reliable electricity supply. The continent's population is expected to hit 2.4 billion by 2050, with half aged under 25 years. This growth, the recent launch of the

FINANCING NATURAL GAS IN A SUSTAINABLE WAY

While supporting the development of natural gas we must focus on projects that ensure the transition to low-carbon and climate-resilient economies, which help African countries meet their development needs.



African Continental Free Trade Area (AfCFTA), and other factors, present tremendous opportunities for new investment and development impact on the continent.

The urgent need to scale up and speed up energy projects and build resilient infrastructure is non-negotiable. In the medium term, infrastructure investments should be directed towards building the

right energy mix between renewable and non-renewable sources, with a preference for natural gas while African countries expand their renewable energy footprint.



THE MALICOUNDA POWER PLANT UNDER CONSTRUCTION IN SENEGAL

Malicounda is a 120 MW combined cycle thermal power plant under construction in Malicounda, 85 kilometres from Dakar, and designed to produce at least 956 GWh of power a year. When converted to gas, the plant will form part of the shift of natural gas from diesel. The plant is expected to increase generating capacity in Senegal by about 17%, while reducing generation costs by about 14%. If the savings are passed on to consumers, this could result in a 3-7% reduction in tariffs and a 1-3% rise in the country's GDP. The additional energy generated by the Malcounda plant is expected to increase production in the country, potentially adding up to 76,000 jobs in the long-term.



SCATEC EGYPT, BENBAN SOLAR PLANTS

Scatec Egypt is a 400 MWDC portfolio of six utility scale solar power plants developed under Round 2 of the Egyptian feed-in tariff (FiT) program. The plants (the largest in Africa) have increased Egypt's generation capacity, helping to address growing energy demand in the country. They are also expected to contribute to reducing dependence on imported oil and gas, thereby improving the country's energy security. 1,000 jobs were created during the construction phase, and 62 permanent jobs have been created following the commencement of operations. The production of 870 GWh per year of clean energy is expected to avoid 350,000 tons of CO₂ emissions, helping Egypt meet its climate commitments.



Africa50 CEO Alain Ebobissé (Right) and Hon. Louis Paul Motaze, Cameroon's Minister of Finance (Left) during the signing ceremony of Africa50's acquisition of 15% stake in the Nachtigal Hydro Power Company.

NACHTIGAL HYDROPOWER PLANT IN CAMEROON

The Natchtigal hydropower plant is a 420 MW hydropower plant under construction on the Sanaga River, 65 kilometers from Yaoundé, with a 50-kilometer transmission line to Nyom. The plant is expected to increase Cameroon's generation capacity by more than 25%, improving access to electricity for consumers. The lower prices from hydropower are expected to improve the long term financial sustainability of the sector, making electricity more affordable. It is expected to create up to 1,500 direct jobs during construction (55% locally sourced) and many permanent jobs upon completion. The plant is expected to help raise the share of renewables to 75% by 2022 and avoid one million tons of CO₂ per year. ■