



RENEWABLE ENERGY IN AFRICA:

An opportunity in a time of crisis

Democratic Republic of Congo

State of electricity

The Democratic Republic of Congo's (DRC's) electricity supply is dominated by hydroelectric power. Power generation largely rests with the state-controlled utility Societe Nationale d'Electricite (SNEL), which owns and operates 94% of installed capacity in the DRC.¹ Independent power producers own 6% of total generating capacity (or 135 MW) which is mostly used for mining activities. The Congo River has significant potential for further dam development (2.5% of hydroelectric potential is exploited¹), although this would involve large-scale hydropower dams, and there is serious contestation of new dams from communities. There are no utility-scale wind and solar projects.

In the DRC, 15.5% of the population have access to electricity. This is unequally distributed with 34.8% of the urban population having access, but only 0.4% of the population in rural areas enjoy the same. There are 68.8 million people without access to electricity. Traditional biomass dominates energy usage.²

In the past few years, the investment environment in the DRC has suffered from the political instability following widespread conflict after President Joseph Kabila's refusal to leave office at the end of his term in 2016. This conflict was ongoing until the December 2018 national elections.

Relevant policy for renewable energy

The government plans to triple the current national electrification rate to 32% by 2030. The DRC's low energy requirement and dependence on hydropower is assessed by analysts to not be conducive to the development policy required to encourage renewables build. Tax incentives for renewable energy projects are the sole area where policy directly benefits the industry.

The electricity price environment is weak. Residential customers are charged one of the lowest tariffs in the world, which fail to cover SNEL's operational costs and the utility is insolvent. Most electricity is purchased by consumers at a fixed lump sum as meters are very scarce, leaving much to the discretion of officials. It is common for public institutions (schools, health centres and public enterprises) to have large amounts overdue on their electricity bills.

The DRC does not yet have meaningful renewable energy incentives in place.

Renewable energy projects

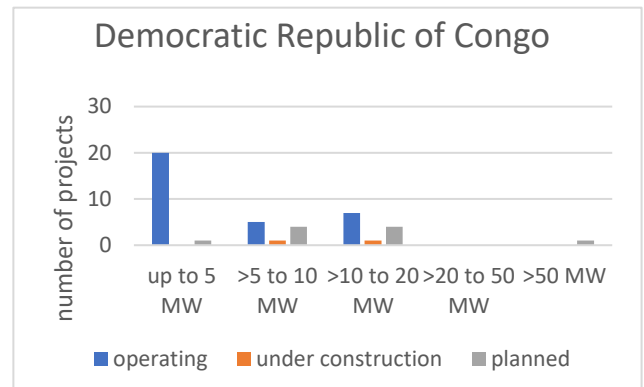
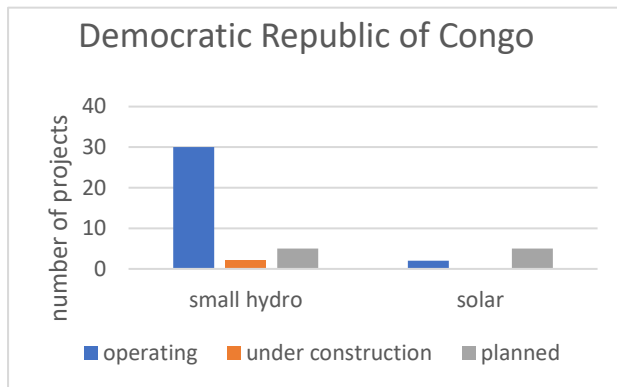
Plans for solar PV plants include those by Copperbelt Energy, a privately-owned public listed company which has announced plans for two PV plants to feed electricity to copper and cobalt mines in the country. Prospects for wind and solar developers to build new projects in the country are poor, as a result of the high offtaker risk - SNEL owns 94% of total installed capacity, currency volatility and political uncertainty.

¹ <https://www.lightingafrica.org/country/democratic-republic-of-congo/>

² <http://global-climatescope.org/results/cd#clean-energy-policy>



The graphs below show the scale of renewable energy by stage of development, which potentially includes the projects described.



Distribution of renewable energy projects in the DRC by technology and scale, by stage of development ('operating', 'under construction', or 'planned'). Source: Authors' estimates from African Energy Live database, September 2019.

Off-grid

The low rates of electricity usage suggest significant potential for modern, off-grid lighting. Trust in solar products, however, has been hampered by the domination of informal street vendors selling poor quality products.

The Government of DRC together with the International Finance Corporation (IFC)-World Bank Lighting Africa program developed a USD 1.5 million program to identify key barriers to off-grid lighting, and then to provide funding for market seeding. The pilot project, which is still ongoing in 2018, has been helping to introduce solar lighting and energy products into communities. Twenty thousand solar lanterns are being provided to social institutions in selected off-grid districts for use by key community influencers. Five thousand basic plug-and-play Solar Home Systems are being distributed to town halls, schools and healthcare facilities. The IFC-World Bank Lighting Africa program has set itself the target of enabling more than 250 million people across sub-Saharan Africa to gain access to clean, affordable, quality-verified off-grid lighting and energy products by 2030.

Local market

The DRC has no manufacturing capacity of any scale for its hydropower or other renewable energy projects, so local content requirements do not exist. Smaller-scale companies also face import duties on off-grid solar products, unless they are granted an exemption.

Political instability and currency volatility drive low investor confidence. The country's domestic banking sector is not well set up to provide commercial finance. The few announced solar projects are small-scale and linked to commercial mining activities or the telecoms industry.

DRC has a fledgling off-grid renewable energy market, concentrated in a few regions. Market intelligence studies can help tackle perceived risk and difficulty of investing in DRC. Consumer education campaigns help buyers identify quality products and understand their benefits. Public sector engagement, for



example training key officials and ensuring tax breaks for quality-verified products, can play an important role in creating a receptive environment.

Visit the report webpage at <https://350africa.org/renewable-energy-report>.