



# **UGANDA: RURAL ELECTRIFICATION BY 3.5 MW HYDRO POWER PLANT**

**CASE STUDY/INSIGHT**

## UGANDA: RURAL ELECTRIFICATION BY 3.5 MW HYDRO POWER PLANT

Uganda consists of rich natural resources including renewable energy sources such as hydro, solar, biomass and geothermal. However, only 25% of the population have received electrification access so far. The Government of Uganda is promoting private sector investments to develop renewable energy based power generation and increase the electrification rate in the country. For this purpose, a Rural Electrification Fund (REF) was established by the Government.

The 3.5 MW run-of-the-river small hydro power plant was installed by the private sector investment with the support of REF fund. The project received a subsidy from the REF fund for installation of power plant, development of grid network and incentive for every new connection. The project was tendered internationally on a “build, own and operate” basis, with two 20-year licences (generation and distribution) granted to the winning bidder by the Electricity Regulatory Authority (ERA). The project aimed at upgrading the existing isolated grid network in the region and provided additional 4,000 connections in the region.



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The generated clean electricity replaced GHG emissive electricity currently generated by two diesel generators in the isolated mini-grid. The diesel power generation was also insufficient due to unreliable fuel supply network. Thus, the power generation from hydro offered a sustained and reliable power supply to the West Nile region, increasing the business and economic activities in the region.

Since the project did not include construction of any reservoir to stop and store the river water, environmental impacts were very low. In summary, this is a climate change project designed to reduce global carbon footprint. The small hydro power project reduced significant amount of carbon emissions every year. It also received funding assistance from the World Bank carbon finance.

