



Sustainability action · Project Renewable Energy and Energy Efficiency

Bugoye small run-of-river hydro, Uganda

Hydropower is a form of energy that is generated by the conversion of free-falling water into electricity. The primary objective of the project is to supply emission-free, affordable electricity for Uganda.

Project

In Uganda's growing economy, the power source of choice remains fossil fuel. To overcome financial and regulatory hurdles, renewable energy projects need the extra funding that carbon trading provides. With the Bugoye project, another zero-emission powerhouse comes to the Western part of the country.

Electricity is generated using a natural height difference of 160 meters. After passing through the plant's two 6.5 MW Francis

turbines, the water is discharged to the Mubuku River.

By providing this rural region with reliable and sustainable energy, the project activity not only replaces fossil fueled energy from the grid, it also displaces diesel generators and wood-fired heating and lighting, which leads to better indoor/outdoor air quality and reduces respiratory and eye diseases.

Apart from power generation, the project owner is promoting sustainable development in Western Uganda. Among other activities, locals have been granted access to the hydro plant's greywater canal for their demand. The project owner has also funded an HIV awareness campaign, the construction of several hospital buildings to improve public health, and malaria prevention measures.

Checklist	Additionality and permanence	3 rd party verified	Transparency	Annual CO ₂ -reduction	Social and environmental benefits	Marketing material
Project 300 650	According to the rules of the CDM and VCS (pre-CDM VERs)	By Bureau Veritas	Provided by Markit Registry	55,000 tCO ₂ e	As documented in our database	High resolution pictures available



Location

The project is located at the foot of the Rwenzori Mountains in the Kasese District, Western Uganda. Crater lakes on top of Mount Rwenzori provide water supply to the Isya and Mubuku Rivers that are feeding the plant. The district is covered with wetlands, water and savannah vegetation in a diverse landscape with mountainous terrain and flat plains.

Project achievements

Socio-economic impact

- The project has generated about 1000 jobs for local people in building, operation and maintenance of the hydropower plant.
- New clinic buildings have been installed, among them an out-patients ward, a maternity ward, and latrines.
- In a dedicated malaria prevention programme, awareness campaigns have been launched, and bednets distributed.
- To raise HIV / AIDS awareness among the population, events are organised and information is spread, and condoms distributed for free.
- Support to piped water supply is given to the communities, and access to grey water is granted.
- A tertiary education programme for women has been set up to foster sustainable development.
- The plant's 'Island Mode' supply has significantly improved the prospects of West Ugandan businesses, which before the project activity faced daily power cuts. As a concrete example, manufacturing businesses in the Bugoye and Ibanda areas engaged in cassava milling, coffee husking, carpentry and welding are benefitting from the stable power supply.

Environmental impact

- Reforestation activities have been carried out to protect the Mubuka watershed.
- The project has reduced the need for firewood for heating, cooking, and lighting, thus allowing the forest to regenerate and improving soil conditions, hydrology and biodiversity.
- The project has improved regional air quality by reducing the need for diesel generators and wood fires (approximately \$ 13 m p.a. of government subsidies to diesel-powered generation is expected to be avoided as a result of this project!).

