

# Renewable Energy Project



## Guizhou Hydro Power Project

This project enables the construction of four hydro power stations in Guizhou Province, Southwest China.

### Standard

Voluntary Carbon Standard (VCS)

### Country

China

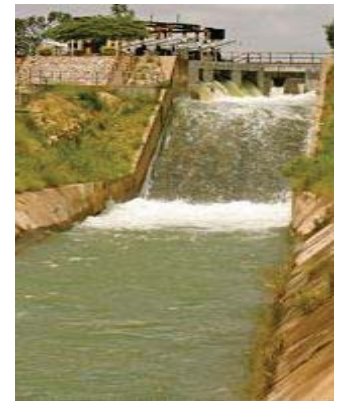
## About your project

The Guizhou project consists of four hydro power plants, situated on remote tributaries of the region's main rivers: Duliu, Loujiahe and Quingshui. The four plants generate 59.4 MW of clean electricity which is delivered to the local grid. The project replaces coal fired power with renewable energy which not only reduces greenhouse gas emissions but improves the overall air quality as it avoids the atmospheric pollutants associated with fossil fuel combustion. The additional energy generated by the project helps stabilize local power supply and reduces the use of fuel-wood by the local population.

In a country where coal is the primary fuel for electricity generation, projects like this make an important contribution to the sustainable development of the Guizhou Province and China as a whole.

The project developer conducted two rounds of stakeholder consultations to capture the opinions of the local people to ensure they were in support of the project's development.

Alongside the environmental benefits, the project has created employment opportunities for the local community including 54 permanent, operational roles and temporary jobs during construction. The local road networks have been improved as a result of the project, aiding the overall development of the local economy.



These images have been provided by individuals working with the project operators

## About hydro power

Hydroelectric power, or hydro power, is electricity generated from the energy of moving water. There are several types of hydroelectric facility including impoundments, run-of-river and pumped storage. Impoundments and run-of-river projects are both powered by the kinetic energy of flowing water, however impoundments use large reservoirs to restrict the flow of water while run-of-river projects use the natural flow of waterways. A pumped storage hydro facility produces electricity by moving water between reservoirs at different elevations during peak times. In all three cases, water is usually fed either from a reservoir or the natural flow of a river into a turbine which is installed at the bottom of the dam. When water is released from a height onto the turbines, pressure causes the turbine blades to rotate. This in turn moves a shaft which is connected to an electrical generator which converts the kinetic energy of water into electrical energy. The amount of energy produced primarily depends on the volume of water and the height difference between the water source and the turbines.



## How carbon offsetting helps the project

It is expensive to develop and operate renewable technologies and that is where carbon finance can play an important role. Hydro power projects like this one are not required by law and often have to overcome financial and technological barriers to realize implementation. Carbon finance provides an additional revenue stream, helping to make these projects an attractive and viable option. In this case, the incentives from carbon finance are enabling the development of a hydro power project to generate clean energy.

The reductions in CO<sub>2</sub> emissions achieved by this project are incremental to business-as-usual and measured by an independent verifier to internationally recognized standards. These are bought as carbon credits by clients of The CarbonNeutral Company to neutralize their own emissions.

### Verification:

This project is being verified to the Voluntary Carbon Standard (VCS).



### Project area coordinates:

The geographical coordinates of this project are longitude 107°55' East and latitude 28°29' North.