



CORPORATE
SOCIAL
RESPONSIBILITY

ENVIRONMENTAL INITIATIVE

CARBON EMISSION OFFSETTING





EDEN SPRINGS' ENVIRONMENTAL INITIATIVE CARBON EMISSION OFFSETTING

At Eden we are concerned about the environment and how we affect it. After carrying out a life cycle assessment we now know where we should start working in order to reduce our impact. Establishing new internal processes and implementing new tools will take some time, but progress is being made step by step. While we wait for these initiatives to bear fruit, we are supporting a carbon offsetting project to immediately reduce 100% of our carbon footprint.



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.





LONGWANGTAN HYDRO POWER PROJECT

This project consists of a run-of-river hydro power station in Guizhou Province, in South West China. This project reduces CO₂ emissions by producing clean energy which displaces electricity generated by fossil-fuel power plants, and has reduced over 48,000 tCO₂ equivalent, verified and certified to the Voluntary Carbon Standard.

- TECHNOLOGY PARTNER **CLIMATEBRIDGE**
- COUNTRY **CHINA**



ABOUT THE PROJECT

The project is located in the relatively poor and undeveloped province of Guizhou, China. The run-of-river facility has a total capacity of 15MW and supplies electricity to the Southern power grid.

The development of renewable energy supply in China brings local as well as global benefits. Most electricity in China is generated using coal, and with this comes local atmospheric pollution and issues around the disposal of fly ash.

The project also brings benefits to the region; for example, temporary job opportunities were created during the construction period and 20 permanent jobs have been created during the operation time. Because it is a local and reliable supply, the project also stabilises the supply of electricity which enables people to plan more effectively – which is better for quality of life and business.

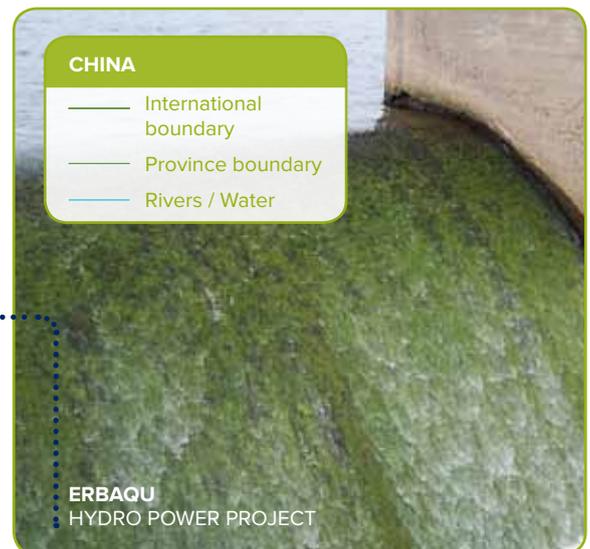


ERBAQU HYDRO POWER PROJECT

Located along the Erba Channel of the Dongda River in the Northwestern province of Gansu, this project consists of six run-of-river hydro power stations. The project generates 9.6 MW of clean energy which is delivered to the local grid, displacing electricity which would otherwise have been derived primarily from fossil fuel fired power plants.

 **STANDARD**
Voluntary Carbon Standard (VCS)
Green-e

 **COUNTRY CHINA**



ABOUT THE PROJECT

The development of renewable energy projects in China brings local as well as global benefits. The project avoids the atmospheric pollution and fly ash disposal issues associated with coal which is the predominant source of energy in China. Alongside these environmental benefits, 300 jobs have been created as a result of the project. This includes 48 permanent, operational roles and the remaining positions were temporary during the planning, commissioning and construction phases. Employees have access to a labour union and are paid above the minimum wage for Yongchang County. The local community has also benefited from road upgrades as a consequence of the project's development.

Before construction began, a detailed environmental impact assessment and stakeholder consultation were conducted. The local community responded positively to the project's development and a number of initiatives were introduced to increase safety and minimise landscape disturbances, including waste-water management during construction, post-construction tree planting and roadside improvements.

HOW CARBON OFFSETTING HELPS THE PROJECT

The most common form of power in China is produced from burning fossil fuels like coal. It can be expensive to operate technologies that are not common practice – like hydro power - and that is where money from carbon offsetting helps. Energy generated from older, more polluting technologies can be displaced by using cleaner, renewable technologies – in this case hydro power. The reductions in CO₂ emissions achieved by a project are measured by an independent verifier to internationally recognised standards, and bought as a ‘carbon credit’ by clients of The CarbonNeutral Company to ‘neutralise’ their own emissions.

To be eligible to sell carbon credits, projects have to pass ‘additionality tests’ – which show that the project would not have happened without the support of carbon financing.



HOW MUCH DOES THE OFFSET PROJECT REDUCE OUR CARBON FOOTPRINT?

Our greenhouse gas (GHG) emissions lifecycle assessment showed us that we emit 5800 tonnes of CO₂ per year. We decided to offset 100% of our footprint through supporting this project and we are now certified as a CarbonNeutral® company with CarbonNeutral® products. These certifications are awarded by The CarbonNeutral Company, a world leading provider of carbon reduction solutions, delivering offset-inclusive programmes for companies in 32 countries since 1997.

More projects and ideas  on: www.edensprings.com



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