renewables hydro

firstclimate

Brazil: Small Hydro Power Project in Southern Brazil

Short description

The primary objective of the project is to help meet Brazil's rising demand for energy due to economic growth and to improve the supply of electricity, while contributing to the environmental, social and economic sustainability by increasing renewable energy's share of the total Brazilian electricity consumption.

- **Project type**: Renewable energy, hydropower
- **Type of certificate**: VER
- **Quality standard:** The project has been validated and verified by SGS in accordance with the VCS. It applies an approved CDM methodology.

Project background

The project comprises the development of three small hydro power plants with a total capacity of 16MW in an isolated region in the State of Rio Grande do Sul in South Brazil. Small scale hydro electric power projects with reservoirs provide locally generated and distributed electricity, in contrast with the business as usual large hydro power and natural gas fired plants. This kind of project provides site-specific reliability and transmission and distribution benefits including:

- increased reliability, shorter and less extensive outages;
- lower reserve margin requirements;
- improved power quality;
- reduced lines losses;
- reactive power control.

In general, a large untapped potential for the development of small hydro power especially in remote regions exists still in Brazil, e.g. due to the restricted availability of long-term finance for this investment-intensive technology. Project developers have therefore relied on carbon credits to improve the financial situation of the project on a long-term basis.

Sustainable development

The project improves the supply of electricity with clean, renewable hydroelectric power while contributing to the regional/local economic development. Small-scale hydro power is an indigenous and clean source of energy which is highly beneficial for the regional development of remote regions by creating a more reliable energy supply.

The construction of the project has provided jobs to more than 100 people in each hydro power plant. Furthermore, the three cooperatives implicated in the project have set up a range of social programs in order to share the carbon benefits with the local population. These programs included environmental education activities involving more than 600 children in schools around the hydro power plants, native seeds distribution and the reforestation of degraded areas, as well as the support of a Familiar Agricultural Cooperatives Regional Centre, and an open visitation program for students and teachers.