NEFCO Carbon Fund Project Profile: Sichuan Chayuan 20MW hydropower project, China

Project title: Sichuan Chayuan 20MW hydropower project

Country: China

Project type: Renewable Energy

Emission reductions: The project generates around 74,700 tCO2 reductions annually with estimated generation of 193,200 tCO2 by the end of 2012.

Project description: The proposed project is a run-of river hydropower station, located in Chayuan River, Yuexi County, Sichuan Province. Within the project activities, two sets of 10 MW generators will be installed at the site with a total capacity of 20MW. The project is expected to supply an annual average of 87,6 GWh electricity to the Central China Power Grid (CCPG). Prior to the implementation of the proposed project, electricity in the absence of the project activity is supplied by Sichuan Provincial Power Grid ("SPPG"), which is one of sub-grids of the CCPG dominated by fossil fuel fired thermal power

Project Activity

The proposed project is a run-of river hydropower station, located in Chayuan River, Yuexi County, Sichuan Province.

Within the project activities, two sets of 10 MW generators will be installed at the site with a total capacity of 20MW. The project is expected to supply an annual average of 87,6 GWh electricity to the Central China Power Grid (CCPG). Prior to the implementation of the proposed project, electricity is supplied by the Sichuan Provincial Power Grid ("SPPG"), which is one of sub-grids of the CCPG dominated by fossil fuel fired thermal power.

Figure 1 The power house construction status as of Feb 2010.

Technology

The technology to be employed by the project is the state-of-the-art tubular turbine manufactured by a domestic company. The proposed project is a run-of-river hydropower plant without regulating capacity on Yuexi River, which is made up of the dam, diversion tunnels, power plants, pressure pipelines and substation. At the top of the plant is a catchment area, where a portion of the river flow is channeled into a pipeline through the intake structures. The change of the water level in the catchment area is very small. In order to take full advantage of the height drop, the project adopts a long tail channel. The pipeline carries the water to the powerhouse and drives the turbines to generate electricity. The powerhouse contains two identical sets of turbines and generators (2x10MW).

Figure 2 The reservoir construction status as of Feb 2010.

Emission Reductions

By displacing fossil fuel-based electricity generation, the project reduces greenhouse gas emissions. The average annual carbon dioxide emission reductions by the project activity are estimated to be 74,700 tCO2 reductions annually with estimated generation of 193,200 tCO2 by the end of 2012.

The NeCF has agreed to procure the CERs from the project up to 2012 which the NeCF investors may use for compliance under the Kyoto Protocol or the EU Emissions Trading Scheme.

Project Benefits

The proposed project will contribute to sustainable development to the local society through the following aspects:

- Creating job opportunities during the project construction and operation periods.
- Supporting the underprivileged and the poverty-stricken region and increase local incomes.
- Reducing emissions of environmental pollutants, such as the CO_2, CO, SO_2 and dust derived from thermal power plants.

Further Information

For additional information, please visit http://www.nefco.org/cff or email carbonfinance@nefco.fi .

NEFCO Carbon Fund
c/o Nordic Environment Finance Corporation (NEFCO)
P.O. Box 249, FI-00171 Helsinki, FINLAND
Phone +358 10 618 003
Fax +358 96 30 976