

## NEFCO Carbon Fund Project Profile: Sichuan Cangfang 16MW hydropower project, China

**Project title:** Sichuan Cangfang 16MW hydropower project

**Country:** China

**Project type:** Renewable Energy

**Emission reductions:** The project generates around 52,400 tCO<sub>2</sub> reductions annually with estimated generation of 95,900 tCO<sub>2</sub> by the end of 2012

**Project description:** The proposed project is a run-of river hydropower station, located in the downstream of Jinyang River in the Jinyang County of Sichuan Province. Within the project activities, three sets of 5.3 MW generators will be installed at the site with a total capacity of 16MW. The proposed project is expected to supply an annual average of 61,5 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 Central China Power Grid ("CCPG") dominated by fossil fuel fired thermal power.

### Project Activity

The proposed project is a run-of river hydropower station, located in the downstream of Jinyang River in the Jinyang County of Sichuan Province.

Within the project activities, three sets of 5.3 MW generators will be installed at the site with a total capacity of ca. 16MW. The proposed project is expected to supply an annual average of 61,5 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 Central China Power Grid ("CCPG") dominated by fossil fuel fired thermal power.



Figure 1 Location of the project in the Sichuan province

## Technology

The technology to be employed by the project is the state-of-the-art tubular turbine manufactured by a domestic Chinese company. The proposed project is a run-of-river hydropower plant, which is made up of the dam, diversion tunnels, power plants, pressure pipelines and substation. At the top of the plant is catchments 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 three identical sets of turbines and generators (3x5.3MW).



**Figure 2 The damn/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 52,400 tCO<sub>2</sub> reductions annually with estimated generation of 95,900 tCO<sub>2</sub> 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 local employment opportunities during the project construction and operation period,
- Promoting the living standards of local community;
- improving the local economy by providing revenues to the locals
- Reducing the emission of SO<sub>2</sub>, dust and NO<sub>x</sub> resulting from the power generation industry in China, protecting the local environment;

## Further Information

For additional information, please visit <http://www.nefco.org/cff> or email us at [carbonfinance@nefco.fi](mailto: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