

## **NEFCO Carbon Fund Project Profile: Nam Trai 4 (9.6 MW) Hydropower Project, Vietnam**

**Project title:** Nam Trai 4 (9.6 MW) Hydropower Project

**Country:** Vietnam

**Project type:** Renewable Energy

**Emission reductions:** estimated 137,116 tCO<sub>2</sub> equivalent by 2018

**Project description:** The project activity is to build a new 3x3.2 MW (total of 9.6 MW) hydro electricity power plant. The project is expected to generate 37 GWh/annum of electricity. The project reduces greenhouse gas emissions by displacing fossil fuel-based electricity from the grid with zero-emission energy from renewable energy. The electricity generated will be sold to the Vietnamese National Power Grid. The project has been developed as a Clean Development Mechanism (CDM) project under the Kyoto Protocol. It will generate Certified Emission Reductions (CERs) that will be purchased by the NEFCO Carbon Fund (NeCF) on behalf of its investors.



### **Project Activity**

The Nam Trai 4 hydropower project is located in Hua Trai Commune, Muong La District, Son La Province in Northwest Vietnam.

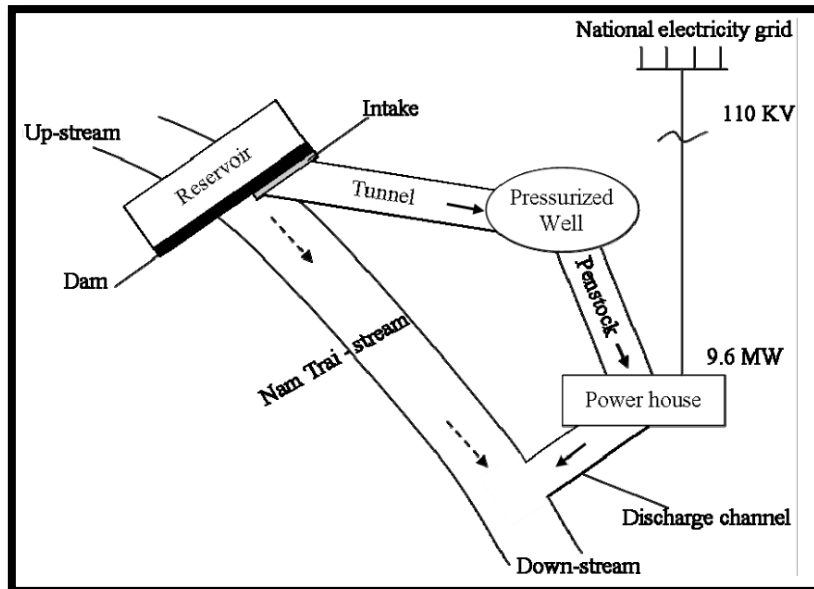
Prior to the implementation of the project activity no power generation existed at the project location. Electricity supplied in Vietnam is generated mainly from fossil fuel sources and is solely distributed to consumers via the unique national electricity grid.

The project's purpose is to generate electricity from a clean and renewable source (hydropower of the Nam Trai River). The energy will be supplied to the national grid via a Power Purchase Agreement (PPA) to be signed with the Electricity Corporation of Vietnam (EVN). The project's installed capacity and estimated annual gross power generation are 9.6 MW and 36,950 MWh, respectively. The net electricity generated (with an estimated annual volume of 36,581 MWh) will

be supplied to the national grid via a newly constructed 110kV transmission line which connects between Nam Trai hydropower plant and the 110 kV Muong La transformer station.

## Technology

The project activity involves the construction of a small reservoir, 2 km tunnel, pressurized well, penstock, power house with 3 units (each unit has a turbine and a power generator) and discharge channels. The main equipment utilized in the plant will be imported from India.



A schematic layout of the project.

## Emission Reductions

By displacing fossil fuel-based electricity generation, the project reduces greenhouse gas emissions by around 19,600 tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) per year, or by 137,000 tonnes over its seven-year crediting period (2012-2018). The NeCF has agreed to buy the CERs which the NeCF investors may use for compliance under the Kyoto Protocol or the EU Emissions Trading Scheme.

## Project Benefits

In recent years, Vietnam has suffered electricity shortages as a consequence of a rapidly increasing demand and insufficient supply, with negative impacts on economic growth as well as daily lives of people. This clean energy project will contribute towards meeting the demand gap.

In addition, the project will contribute positively on the economic well-being of the Son La Province – a poor mountainous area in Northwest Vietnam – by facilitating its industrialisation process and supporting economic development. The infrastructure of the Hua Trai Commune, where minority ethnic groups are also living, will be improved by new roads, improved electricity service and new communication and clean water treatment systems.

## 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