Çayaltı Hydro Power Plant

Developed by

European Bank for Reconstruction and Development

Supported by

European Investment Bank

PROJECT DESCRIPTION

The plant is constituted by two run off river HEPPs with total installed capacity of 11 MW. Each plant has 3 horizontal axis Kaplan S-type turbines with a rated power of 2.254 MW x 2 + 0.998 MW. The plants are expected to produce in total about 34.42 GWh/year corresponding to the demand of over 16 thousand households. The energy produced will save emissions of 19,495 tCO_2/year.

CARBON FINANCE

The Project Sponsor is in contact with MidSEFF Carbon Counsultant Team for the development of the project.

ENVIRONMENTAL AND SOCIAL KEY ISSUES

- Potential pollution/contaminant emissions during construction activities;
- Water biota impacts;
- Use of forest area;
- Seismic Zone.

MITIGATIONS/SUCCESSFUL IMPLEMENTATION

- Supervision of the construction activities by environmental, social and health & safety experts to avoid, prevent, minimize and monitor potential adverse impacts on the affected compounds;
- Biota status monitoring during operation phase;
- Installation of fish protection device to avoid fishes entering the communication channel to the power house;
- Implementation of a replantation plan;
- During the design of civil structures foundations the effective ground acceleration coefficient will be taken as 0.40 as required by Turkish Earthquake Regulations.

GENERAL INFORMATION	
Project Location	Zonguldak Province, Devrek District
Technology	Hydroelectric Power Plant
Plant Capacity	11.012 MWe
Annual Energy Production	34.42 GWh/year
Annual CO_2 Reduction	19,495 tCO_2/year
TIME SCHEDULE	
Start of Construction	September 2013
Expected Commercial Operation	March 2015
FINANCIAL PARAMETERS	
Total Project Cost	USD 21,991,997
MidSEFF Loan	USD 13,026,000
Payback Time	6.49 years
Internal Rate of Return	14.75 %