

Hydropower project in Turkey Gold Standard Registration: 103000000002294

Overview

Name	16.7 MW Hamzali Hydroelectric Power Plant
Location	Turkey
Project developer	General Directorate of State Hydraulic Works (DSI)
Certified by	SGS United Kingdom Ltd.
Annual average of emission reductions	71,321 tonnes CO ₂ eq / year
Total emission reductions	499,249 tonnes CO ₂ eq
Duration	2008 until 2015 (7 years)
Certificate type	Verified Emission Reduction (VER)

For more information, please refer to the Gold Standard Registration page: https://mer.markit.com/br-reg/public/project.jsp?project_id=103000000002294

Project description

The Hamzalı Project is a run-off-river type hydroelectric power plant (HEPP) which has been designed originally by General Directorate of State Hydraulic Works (DSI) in 2002 and consists of an irrigation system and a hydroelectric power plant. The project is implemented on the Kızılırmak River and lies in between Ankara and Kirikkale Provinces. The location has been determined such that elevation difference will enable both electricity generation and irrigation of a wide area without need of energy use. The energy component of the Project will have an installed capacity of 16.7 MW whereas estimated electricity generation will be about 127 GWh per annum. In order to avoid impact on aquatic life in the river bed, 3 m³ /s of minimum flow will be released from the weir.

Additionally, the project promotes sustainable development according to the guidelines of the Clean Development Mechanism (CDM):

Social benefits

- Only 1% of the population works on industry which has caused a 12% decline in population mainly due to lack of employment opportunities in the region. In that respect, direct and indirect contribution of project activities to local economy through employment and supply of needs from the region will have a significant effect on development in the region.
- The decreased use of fossil fuels leads to better air quality and therefore reduces social and medical costs.
- Due to the irrigation of 9.600 ha of land, employment opportunities as well as the supply of agricultural products will be enhanced.

Economic benefits

- The project reduces import dependency of fossil fuel dominated electricity sector and diversifies generation mix through use of local resources.
- The project enables and promotes agricultural activity in the region through newly built irrigation channels and thus contributes to economic development both locally and nationwide.
- The project contributes to local development by enabling irrigation of about 9,600 ha of land which is not cultivated currently due to lack of water and high energy costs of irrigation water pumping.

Environmental benefits

- The project contributes to emission reductions of almost 500.000 tonnes CO₂eq through use of renewable resources instead of fossil fuels.
- The project is considered to have positive impact on air quality due to avoided NO_x, PM and SO_x emissions.
- No negative impact on water quality and biodiversity has been identified.