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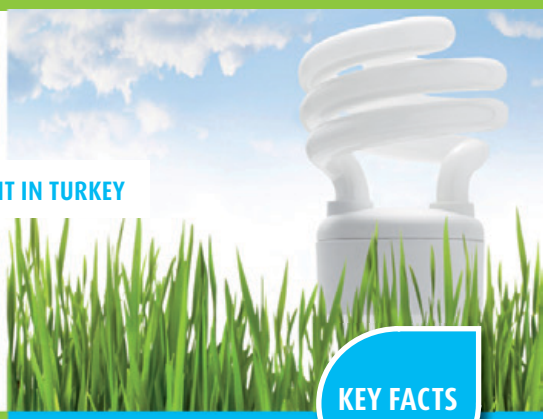
Climate Neutral & Water Services

DEDICATED, NATURALLY.

TURKEY: GENERATING CLEAN ENERGY THROUGH THE POWER OF WATER

127,000 MWH OF CLEAN ENERGY PER YEAR AND 9,600 HECTARES NEWLY IRRIGATED LAND

HYDROPOWER SUPPORTS DEVELOPMENT IN TURKEY



OVER the last decade, the Turkish economy has been developing rapidly with annual growth rates of 7% or more. This success story has been accompanied by an equivalent rise in energy consumption. Today, Turkey is already to a large extent dependent on energy imports, mainly of oil and natural gas. If energy demand continues to increase at this pace and no further investments in power plants are made, the country could face a significant energy shortage by 2016.

This project is located between the provinces of Ankara and Kirikkale. A small hydropower plant with a capacity of 16.7 MW was installed next to the Kizilirmak River. The run-of-the-river plant produces approximately 127,000 MWh of clean energy per year. The electricity is fed into the regional grid and thereby displaces electricity from fossil fuel-fired plants. The location of the project has been defined in a way that the elevation difference between the two regulators of the plant, along with special infrastructure built by the project proponent, enables the irrigation of about 9.600 hectares of land which is currently not cultivated due to lack of water and high energy costs of irrigation water pumping.

SUSTAINABILITY BENEFITS

This project contributes to the United Nations' Millennium Development Goals

The project creates employment positions during construction, operation and maintenance of the plant. Moreover, it increases the income of local population through agricultural production due to the irrigation of the land. This makes it particularly significant for the development of the region if the fact that 85% of the local population works on agriculture is taken into account.

The project proponent proceeds to numerous donations to local educational institutions.

The project helps to improve the regional and national energy supply and to reduce dependency on fossil fuels.

KEY FACTS

Location:
Near to Kirikkale, Turkey

Project type:
Renewable energy: Hydro

Project standard:
Gold Standard

Total emission reductions:
>> 71.321 t CO_2 e p.a. <<

Project start date:
June 2006

Project partner:
TURKON-MNG Elektrik Üretimi Ve Ticaret A.Ş. : TURKON-MNG Elektrik Üretimi Ve Ticaret A.Ş.

Validator:
SGS United Kingdom Limited

Verifier:
TÜV Rheinland (China) Ltd.

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TECHNOLOGY BRIEF - HOW IT WORKS

Hydro power is one of the oldest means of producing energy. The principle is simple: it only needs water and a difference in height. The kinetic energy of the water drives a turbine coupled to a generator and is thus transformed into electricity. This project is of the run-of-river type.

The plant uses the natural flow of the river and diverts only part of the stream to drive the turbines. Since it does not use an artificial water reservoir or dam, there are no significant negative impacts on the river discharge or the river banks.

The project does not require flooding of previously dry land or the resettlement of people. Run-of-river hydro power plants use a naturally available energy potential and have low environmental and social impacts.

THE UN MILLENNIUM DEVELOPMENT GOALS

The eight Millennium Development Goals (MDGs) – which range from halving extreme poverty rates to halting the spread of HIV/AIDS and providing universal primary education, all by the target date of 2015 – form a blueprint agreed to by all the world's countries and all the world's leading development institutions. They have galvanized unprecedented efforts to meet the needs of the world's poorest. Explore the efforts of the UN and its partners for building a better world here:
www.un.org/millenniumgoals/

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SGS CRITERIA

Exclusivity

SGS would be the only (or at least a main) buyer from the project.

Scalability

Started in 2006, the project's economic lifetime is more than 50 years. This is an indication that after the first 7-year crediting period ending in 2015, depending on demand, the project has the ability to keep delivering emission reductions in the carbon market.

Microfinance

The Hamzali Hydropower plant project does not use the mechanisms of microfinance. It is a private investment made by the project proponent, Türkon-MNG. After calculating interest rates and electric tariffs, carbon revenues are considered to be essential to make this investment viable.

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For more information on other projects in our portfolio please visit our website:

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