



ÇAKIT

HYDROELECTRIC POWER PLANT

The Çakıt hydropower plant is a run-of-the-river plant utilizing the Çakıt River close to Karaisalı in Adana province in Turkey. Çakıt Enerji A.Ş. is a wholly owned Statkraft company.

Background

The construction works started April 2008. Çakıt was one of three projects that Statkraft acquired from Yeşil Enerji in 2009. While the construction of Çakıt was initiated in 2008 already, Statkraft completed the works and the power plant was commissioned in May 2010, going into commercial operation in June 2010.

The Project

Çakıt power plant is operated and maintained by Statkraft. It has an installed capacity of 20MW and has an average annual production of 80 GWh. This amounts to the electricity consumption of approximately 40.000 households.

To collect water and to give sufficient head for power production, the waterways start by a small concrete regulator dam with necessary gates for riparian release and overflow weir.

From this regulator dam the water used for power production is diverted from its original route through the Çakıt canyon in Kapıkaya village into a new waterway. The system consists of two concrete channels and two tunnels before entering into a concrete head pond. The total length of channels and tunnels is 5433 m.

When filled up, the head pond is on elevation 298 and the water is then pressurized via a steel penstock down to the power plant. With the turbine floor on elevation 154 this creates the gross head of 144 m to the turbines.

KEY FACTS

- Ownership: Statkraft
- Estimated annual production: 80 GWh
- Installed capacity: 20 MWe
- Gross head: 144 m
- Maximum discharge: 16.5 m³/s
- The installation consists of:
 - Two horizontal Francis turbines of 10 MW each
 - 2 Synchronous Generators 11,870 kVA
 - Step-up transformer and auxiliaries 33 kV switchgear
 - 31,5 kV transm. line 11,2 km
 - 45 powerline poles



Operation Room



Turbine



Penstock

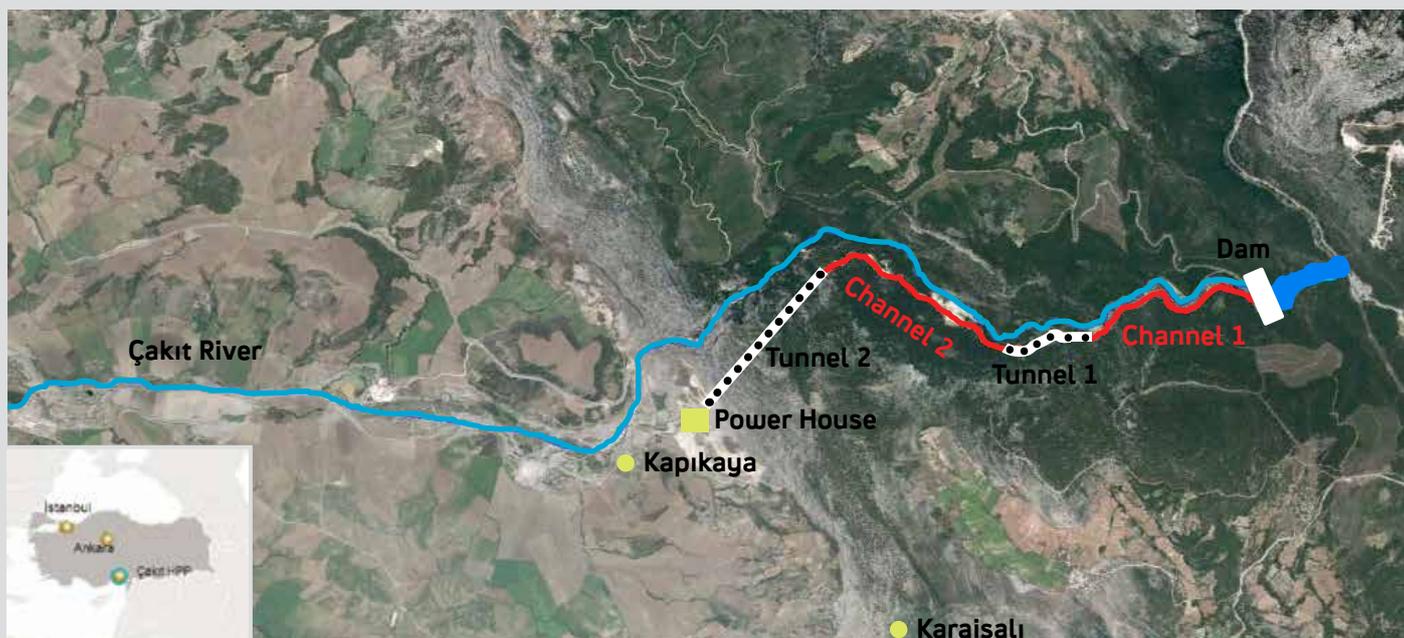
Sustainability

Çakıt HPP is certified under the Voluntary Carbon Standard, documenting voluntary reduction in emissions. It is also a certified SOCIALCARBON Standard holder, with the purpose of ensuring demonstrable social, environmental and economic benefits for project stakeholders. Çakıt HPP is the first hydroelectric plant in the world which accomplished being validated with SOCIALCARBON standards.

Environmental and Social Management

Since the commissioning of Çakıt HPP, the adverse instead of negative effects of its presence has been minimized and settlements neighboring the project have been contacted to contribute to the needs of the region. Various programs for local development and protection of environmental resources have been carried out in Kapıkaya quarter and Karaisalı district which are located in the project influence area.

PROJECT LAYOUT



About Statkraft

Statkraft is a leading company in hydropower internationally and Europe's largest generator of renewable energy. The Group produces hydropower, wind power, gas-fired power and district heating and is a global player in energy market operations. Statkraft has 4200 employees in more than 20 countries.

Çakıt HPP

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