

# EUPHRATES BARRAGE BIRECIK BOT PROJECT

## Facts

City/Country

Birecik / Turkey

Client

Birecik A.S., Ankara

Contract Value

€ 1.156,00 Mio.

Construction Period

4/1996 - 10/2001 (66 months)

## Project Description

Turnkey construction of the Birecik Dam and HEPP, a BOT scheme. The project contains a 2.5 km earth embankment dam/rock dam with core seal with a max. height of 62.5 m. Six Francis turbines with a total installed capacity of 672 MW (each 112 MW) will produce approx. 2.5 billion KWh/year.

- Diversion of the Euphrates River for the construction period
- Erection of earth fill dam with interior clay core
- Intake structures and powerhouse construction
- Spillway construction
- Grout curtain under the dam structure to improve the water tightness of the adjacent limestone
- Transformer station and outdoor switchyard
- River dredging operations in the river bed between the dam and the city of Birecik in order to ensure the desired discharge and as a flood-water protection for the city (suction cutter dredger): 12 Mio m<sup>3</sup>
- Temporary heavy-duty traffic bridge across the Euphrates during construction
- Operator's village with 106 residential units incl. the necessary infrastructure (11,600m<sup>2</sup>)
- Road works for connecting the dam area to the public road network

Excavation of alluvial deposits:	13 Mio m <sup>3</sup>
Rock excavation:	1 Mio m <sup>3</sup>
Earthfill dam with clay core:	8.5 Mio m <sup>3</sup>
Reinforcing steel:	20,000 to
Concrete structure (intake, gravity dam, spillway, powerhouse):	1.75 Mio m <sup>3</sup>
Drilling operations (injections, anchors, drainage):	125,000 m
Thin wall/ Cut-off wall:	25,000 m <sup>2</sup>

Total length of bridges 5 km, total length of tunnels 5.9 km.

Birecik was carried out as a BOT-project and has a concession period until 2016.

