

# Ilisu (Turkey): Dam and Hydropower Project (1200 MW) on Tigris River

## Client

Republic of Turkey, DSI, Turkish Office of State Hydraulic Works, Ankara  
Contractor: IC Ilisu Consortium composed of Nurol & Cengiz (Turkish Civil Contractors), Andritz Hydro (HM & EM Works), Stucky & Temelsu (Engineering – Switzerland, Turkey)

## Consultant

ECS Consortium composed of AF Consult and IM Maggia Engineering (Switzerland)  
Dolsar Engineering & Rast Engineering (Turkey)

## Period

Final design: 2007–2009  
Construction: 2009–2020

## Construction costs

€ 1.6 billion

## Scope of services

Final design, preparation of technical specifications, review and approval of application design and site supervision as Owner's Engineer

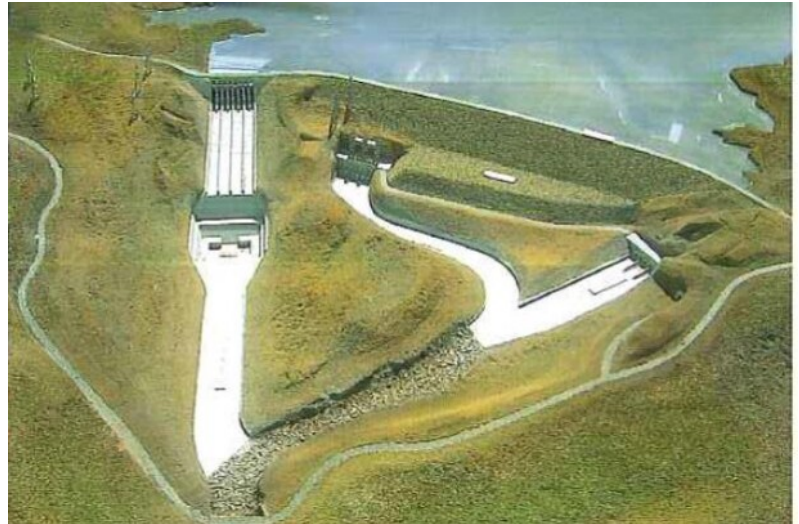
## Description

The Ilisu Dam & Hydroelectric Power Plant (1,200 MW) is located on the Tigris River in southeast Turkey in Mardin District. The power plant is composed of a 135 m high and 2,289 m long concrete faced rockfill dam (CFRD), gravity dam, spillway, power intakes & power tunnels (3 x Ø12/10 m), powerhouse (6 units, 1200 MW), tailrace channel and 3 river diversion tunnels (Ø12 m) with low level outlet. The design and site supervision works include:

- Concrete faced rockfill dam (H= 135 m, crest length L= 2,289 m, dam fill volume 23.5 million m<sup>3</sup>, reservoir volume 10,430 hm<sup>3</sup>, reservoir surface 313 km<sup>2</sup>)
- Gated spillway with 3 chute channels, gravity dam and transition zone to CFRD, (spillway capacity 17,988 m<sup>3</sup>/s)
- Power intake & power tunnels (Ø12/10 m)
- Open powerhouse with 6 Francis units of 222 MW each (L / H / W = 178 / 56 / 38 m)
- River diversion with 3 tunnels (Ø12/L= 1000 m, capacity 3,600 m<sup>3</sup>/s)
- Switchyard (380/154 kV double busbar SY)

## Main Data

- Capacity: 6 x 200 MW
- Design discharge: 1,200 m<sup>3</sup>/s
- Annual energy production: 4,120 GWh



## N DAM SECTION

