

Medium Head Plants

Feke-II Dam and Hydroelectric Power Plant TURKEY



Feke-II Dam and Hydroelectric Power Plant is a hydropower scheme located on Seyhan River in Adana province, south of Turkey. It is a BOT project licensed by the Ministry of Energy and Natural Resources (MENR). Still undergoing construction, the project is planned to be operational at end of the year 2010.

The dam is 70m high above foundation with 252.7m crest length. The dam body is roller compacted concrete fill, impounding a total volume of 63,07 million m³ in the reservoir. Two penstocks of 4m diameter exits from the power intake structure and goes down to powerhouse. The Spillway has two radial gates. Energy dissipation structure of the spillway is deflector bucket.

The powerhouse is a concrete structure upto erection bay level, and the crane hall, which is 46.2m long and 29 m wide is of steel construction. There are two generating units with francis type turbines, and installed capacity of each unit is 2 X 35.7 MW.

Client:

Akkur Enerji Üretim Ticaret ve Sanayi A. Ş.

Main Data:

roller compacted concrete fill:

- maximum height above foundation 70 m
- crest length 252.7m

Spillway:

- no.s/type/size of gates 3/radial/11.3x12.5 m

Powerhouse :

- | | |
|----------------------------------|-----------------------------|
| • no.s/type of turbines | 2/francis, vertical axis |
| • rated capacity/rated discharge | 70MW/127.5m ³ /s |
| • rated head | 62 m |
| • rotation/frequency | 250 rpm/50 Hz |
| • firm energy production | 81.886 GWh/a |
| • second energy production | 139.00 GWh/a |

Execution:

2007-2010

Services :

- Review, appraisal and recommendations for feasibility study
- Preparation of final design reports and drawings
- Preparation of technical specifications and tender documents
- Programming site investigations and evaluation of the works
- Assisting owner in evaluation of E&M bid documents
- Preparation of detailed construction drawings for project structures
- Verification of detailed design drawings of hydro-mechanical and electro-mechanical equipment
- Consultancy services to the owner during site construction works, before and during installation of hydraulic steel structures and of electro-mechanical equipment
- Monitoring acceptance tests and supervision of commissioning of equipment and plant

