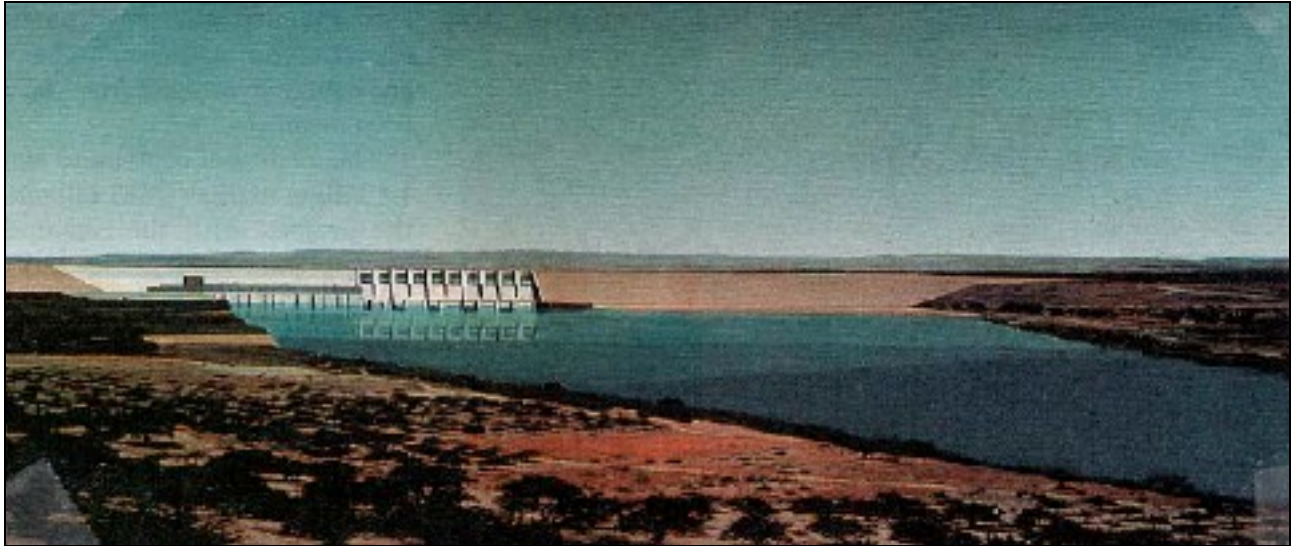


## BOT Projects      **Birecik Turkey**



In March 1994, Lahmeyer International was appointed to the role of Banks' Engineer for implementation of the Birecik Hydroelectric Project on a Build, Operate, Transfer (BOT) basis. Initially, prior to Financial Closing, Lahmeyer has been charged with a review of the construction contract for the project and a review of the final design. Thence, throughout the 5.5-year construction period, Lahmeyer engineers shall review all quarterly reports prepared by the BOT- company's engineer, ensuring that the banks' interests are duly represented. Finally, specialist technical advice will be provided to the banks during testing and commissioning of the project.

The project will be located on the Firat (Euphrates) River, which forms the provincial boundary between Urfa and Gaziantep. It will be constructed some 90 kilometres downstream of the Ataturk Dam, some 30 kilometres north of the Syrian border, utilising a gross head of approximately 45 metres. With six 112 MW vertical shaft Francis turbines, the project will have a total installed capacity of 672 MW. The powerhouse and the spillway are incorporated in the dam. Two 380 kV transmission lines will connect Birecik to existing substations at Ataturk, and thence to the national grid.

Scheduled to go into commercial operation on 1st October 2001, the project has a total investment cost of some 2,000 million DM.

### **Client:**

Chase Investment Bank Limited, London

### **Main Data:**

|  |                                       |
|--|---------------------------------------|
| • Vertical Francis turbines:                           | 6 x 112 MW                            |
| • Gross head:  | 44 m                                  |
| • Dam type:  | hybrid                                |
| earthfill embankment dam                               | 2,020 m                               |
| concrete gravity dam                                   | 140 m                                 |
| powerhouse / spillway section                          | 340 m                                 |
| max. dam height  | 62 m                                  |
| • Spillway capacity                                    | 17,350 m <sup>3</sup> /s              |
| • Total embankment volume                              | 8.5 x 10 <sup>6</sup> m <sup>3</sup>  |
| • Total concrete volume<br>(dam, powerhouse, spillway) | 1.75 x 10 <sup>6</sup> m <sup>3</sup> |

### **Execution:**

1994 - 2001

### **Services:**

- Review of construction contract.
- Review of final design.
- Site visits and review of engineer's reports throughout construction.
- Specialist technical advice during commissioning and testing.