



Afşin-Elbistan A Power Plant Rehabilitation

CASE STUDY

RPI developed a rehabilitation work programme for Afşin-Elbistan A power station



The need for our expertise

Afşin-Elbistan A is a thermal power plant some 600km south east of Ankara, Turkey, with a total installed capacity of 1,355MWe in four units, which were commissioned between 1984 and 1987. The plant, owned by EÜAS, the state owned electricity company, utilises lignite of low calorific value mined at the near-by Afşin-Elbistan Lignite Mine.

For a long time, the power plant has performed below design capacity for a variety of reasons, including general wear, changes in coal quality and operations and maintenance practice. In order to cater for increasing electricity demand in Turkey, EÜAS, decided that the power plant should undergo major rehabilitation work to restore generation capacity and availability to design performance.

Putting our expertise into action

The services for the rehabilitation projects included:

- preparation of a feasibility study for the repairs and rehabilitation works

- development of tender documents
- bid evaluation assistance.

RPI sent a team of experts to site for an extensive inspection and measurement programme, which included mill performance, boiler efficiency and air ingress testing. Technical solutions were developed for the rehabilitation measures using an integrated approach and cost-benefit optimisation with due regard for the remaining life of the power station. About 150 individual measures were proposed and ranked according to urgency and effect.

After approval of the feasibility study, RPI prepared the tender documents for the rehabilitation. The works were to be tendered in accordance with the World Bank two-stage bidding procedure for supply and installation of plant and equipment.

During the subsequent tender period, RPI assisted EÜAS by clarifying bidders' queries, holding a site meeting and analysing the technical bids.

The assistance of RPI engineers during the technical negotiations with the bidders assured that EÜAS received technically comparable bids before proceeding to the commercial stage of the tender process.

The difference we made

RPI's feasibility study demonstrated the viability of the rehabilitating Afşin-Elbistan A power plant. The tender documents prepared by RPI enabled EÜAS to invite tenders for a complex work programme comprising some 150 sub-projects. During the subsequent bid evaluation RPI ensured that all bidders provided EÜAS with technically comparable information and documentation.

Findings

RPI prepared a feasibility study, tender documents and provided bid evaluation assistance for a major rehabilitation programme for Afşin-Elbistan A power plant.

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