Abstract:

This paper focuses on the economic study carried out for the rehabilitation and uprating of the Dez hydro power plant's capacity. The importance of the study lies in the fact that the Dez hydropower plant is capable of operating as a base load peak load power plant in the national grid, hence in order to make any economic comparison, it is necessary to compare the Dez hydro electric power plant with OCGTS which would act as an index for the comparison of peaking power plants and CCGTS, as an index for base load power plants.

With due consideration to the standard economic indices, it is possible to determine whether the rehabilitation of the Dez Dam hydroelectric power station is economically viable or whether one should opt for the building of an equivalent OCGT or CCGT thermal power plant to replace the existing hydro electric power plant at the Dez Dam. In this paper, by using economic indexes, the rate of Benefits over costs ($^{B}/_{C}$) and the internal rate of return (IRR) in each option has been taken in to account and calculated and the compared with an equivalent thermal power plant. Ultimately, the best and most economically viable option having all the vequined indices has been determined.

- ✳ Open Cycle Gas Turbines
- ✳ Combined Cycle Turbines