

# THESIS

## IMPACT OF KALABAGH RESERVOIR ON POWER POTENTIAL OF GHAZI BAROTHA POWER STATION



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Submitted By

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## ABSTRACT

Power Generation is essentially required for improving and maintaining the infrastructure of the overall development of a nation. It is the tool to forge the economic growth of a country. There has been, therefore, an ever increasing need for more power generation to be developed in many developing countries. The design and operation of hydropower projects has to be such to meet the present and near future power requirement. The hydro projects with peaking facility are considered more favourable to meet the variable power demand within a day.

Ghazi-Barotha is a runoff river hydropower project with daily peaking facility located downstream of Tarbela and on left bank of Indus river. The project was studied to feasibility level in 1990. The detailed design and tender documents were completed in 1995 and project implementation was started in 1995. The project has been successfully constructed and being in operation since 2003. The project is being operated with full capacity during peak hours and with less capacity during off peak hours as per system requirement.

Ghazi Barotha located upstream of Kalabagh would be influenced by Kalabagh reservoir during August to March. The reduction in head to some reduce the power and energy to some extent. This research work has analyzed the extent of reduced power and energy considering 20 year flow data. The reduction in power and energy due to Kalabagh has been evaluated and analyzed. Finally conclusion and recommendations are given.