Kholongchu HEP 600MW

Brief Scope of Works : Consultancy services for preparation of Detailed Project Report including all field Investigations, providing assistance in obtaining clearance of DPR.

Name of Client : Satluj Jal Vidyut Nigam, (A Govt of India Enterprise)

Location of Project : Trashiyangtse Dzongkhag, Bhutan

Duration Of Contract : Nov 2009 - Nov 2012

About the Project :

The scheme as proposed by EIPL, consists of a Concrete Gravity Dam of maximum height of 95m and length of 165 m at the Top, with the Overflow length of 81 m, consisting of 5 no. low level spillway bays and 1 no. surface bay. The dam comprises of 5 Non-overflow blocks. The Diversion arrangement of the River Kholongchu for construction of Concrete Dam consists of Horseshoe shaped Diversion tunnel 10m dia and 420 long, capable of diverting 1,112 Cumecs.River flows up to 89 cumec are proposed to be diverted for power generation through a 15.8 Km long headrace tunnel of 5.7m diameter. 2 no. underground Desilting chambers(350 L x 13.00 W x 17.50 H) are proposed at the beginning of the HRT to facilitate elimination of sediment particles greater than 0.2 mm, from the water that flows through the turbines. The water is further carried down to the powerhouse through 2 no underground Pressure shafts of length 1.2 Km. The underground powerhouse(132 m L x 21 m W x 42.5 m H) will be equipped with 4 units of 150 MW each (Pelton type turbines) to have a total installed capacity of 600 MW. The design net head of the project is 760m.

Services Provided by EIPL :

The following activities have been successfully completed by Energy Infratech :

Preparation of Detailed project and provided all the necessary assistance in obtaining Concurrence for the DPR from Central Electricity Authority of India (CEA)/ Central Water Commission of India. Following Studies were undertaken for preparation of Detailed Project Engineering Report :

- Topographical Survey of the project area covering all major project structures and their components, reservoir, infrastructure facilities, quarry & borrow area, river etc.
- All geological surface and sub-surface survey and investigations including drilling, drifting, etc.
- All geological, geophysical, photo-geological studies and their interpretation including procurement, supply and interpretation of photo geological / satellite/GIS maps.
- Construction materials survey and testing for estimation of quantities and engineering quality of various materials.
- All Hydrological, Flood, Sedimentation and Power Potential studies considering mandatory environmental release and Fixation of optimum Project parameters based on various alternatives.

- Design and drawing of various structures and equipment based on various alternative studies, including proposal for the best alternative.
- Planning and design for various approach road.
- Planning and study for requirement and availability of construction power.
- Cost estimation for the project and financial analyses.

DPR has been concurred by to Central Electricity Authority of India (CEA), in Nov 2012.