

Demwe Lower 1750MW

Brief Scope of Works : Consultancy services for preparation of Detailed Project Report including all field Investigations, EIA/EMP Report , Tender Documents and providing assistance in obtaining clearance of DPR, EIA/EMP reports for statutory authorities.

Name of Client : Athena Demwe Power Limited

Location of Project : Arunachal Pradesh, India

Duration Of Contract : Aug 2007 - Dec 2009

About the Project :



Demwe Lower HE Project as conceived by EIPL is a Run-of-the River scheme with diurnal storage. The proposed scheme consists of a Concrete Gravity Dam of maximum height of 163.12 m and length of 474.35 m at the Top. The Overflow length of 219.70 m constitutes of 12 bays. The Non overflow length of 254.65 m comprises of 11 blocks. For energy dissipation Flip bucket and plunge pool has been provided. Lohit River would be diverted through 5 diversion tunnels, each of 14.0 m diameters and average length of 1025 m and another diversion tunnel of 6 m diameter, 950 m length have been provided to ensure continuous water supply to Brahamkund, a holy place downstream of the proposed Dam. For diverting the water through the diversion tunnels an upstream coffer dam of 31.10 m height have been proposed. For the purpose of power generation, water is to be conveyed through 5 individual steel lined pressure shafts of 10 m diameter and lengths varying from 550 m to 640 m. These pressure shafts would feed 5 vertical Francis turbines of 342 MW capacity installed within a surface powerhouse located on the right bank of Lohit. An additional unit of 40 MW catering to Environmental releases downstream of the dam has also been provided.

Services Provided by EIPL :

The following activities have been successfully completed by Energy Infratech :

Preparation of Detailed project /Engineering report 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.

Preparation of Environment Impact Assessment including Environment Management Plan and Resettlement Action Plan and Assistance in obtaining Environmental Clearance & Forest clearance from Ministry of Environment and Forest, Govt. of India. Following were undertaken for preparing EIA / EMP report :

- Preparation of Terms of Reference (ToR) for conducting EIA studies and application to Ministry of Environment & Forest (MoEF), Govt of India for approval of same.
- Environmental Baseline Data Collection for air, water, noise and ecological for three seasons.
- Providing assistance in Conducting Public Hearing.
- Tender Design, Bid & Award
- Preparation of Detailed Tender documents including Tender Drawings, Technical Specification, BoQ, evaluation criteria for selection of contractors for Civil, Hydro-Mechanical, Electro mechanical Packages, and General & Special conditions of the Contract.

- Assistance to the Client in bidding process including conducting pre-Bid meetings, providing clarifications to bidders during pre-bid meetings.
- Techno-commercial evaluation of Bids received and carrying out pre-award negotiations on behalf of client with the best evaluated bidder.
- Preparation of Contract Agreement and assisting client in signing the same.

Concurrence for DPR has been accorded by Central Electricity Authority of India (CEA), in Nov 2009