BRIEF ON DHAULIGANGA INTERMEDIATE (225 MW) HYDROELECTRIC PROJECT

INTRODUCTION

Dhauliganga Intermediate HE Power Project is proposed on river Dhauliganga, 35 km away (north) from Dharchula Town, Distt. Pithoragarh, Uttarakhand. The river Dhauliganga is one of the right bank tributaries of river Kali or Mahakali in Distt. Pithoragarh of Uttarakhand. The river falls under Sarada Valley catchment and has enormous potential of renewable sources of hydropower. The project site is well connected with a National Highway measuring 245 km in length from Tanakpur up to Tawaghat and through a State Highway up to project site, 16 km away from Tawaghat. The nearest "Air-Strip" is available at Pithoragarh, which is about 115 km from project site.

FEATURES

The project envisages construction of a 106 m high concrete dam having a Gross Storage of 21.99 M cum at FRL is a run of the river scheme near Nyu village. The FRL is fixed at 1706 m. The construction of 106 m high concrete dam with a 75 m long gated portion with crest elevation at EL 1663.0 m is envisaged to pass a flood of about 4301 cumec. The Head Race Tunnel having a diameter of 5.5 m will be 6 km in length. A gross head of 291.00m is developed for generating 225 MW of power. The HRT will carry a design discharge of 91.6 cumecs. The project will have an underground power house near Khet village to accommodate 3 units of 75 MW each to generate 838.7 MU energy per annum on 90% dependable year. The Catchment Area of Goriganga is 1249 sq km out of which about 375 sq km is under snow. Construction of the dam will result in submergence of about 49.22 ha of land at FRL. The Project area falls in Zone V of Seismic Zoning map of India which corresponds to seismically active area. The proposed features are tentative and may undergo change during preparation of Detailed Project Reports (DPR) of the project and accordingly capacity of the project may also change.

LAND REQUIREMENT

The total land requirement (tentative) is 155 ha, out of which approximately 138 ha is forest area and approximately 17 ha is revenue/ Pvt land. About 89.66 ha of project area fall under Askot Wild Life Sanctuary. In this regard, MOEF vide letter dated 6.07.2006 conveyed the approval for "diversion of 91.701 ha of forest land from Askot Wildlife Sanctuary for Dhauliganga Intermediate Stage Power Project by NHPC" in accordance with NBWL decision. Further, Hon'ble Supreme Court vide its order dated 06.02.2008 permitted the applicant (National Hydroelectric Power Corporation) to execute the work subject to certain conditions stated in the order.

EARLIER STUDIES

The Dhauliganga Catchment area comprises nearly 215 species of angiosperm belonging to 166 genera of 73 families. The following forest types have been identified according to the dominant species and altitude – Banj Oak forest, Muruoak forest, Kharsu Oak forest, Moist temperate deciduous forest, Upper and Himalayan Pine forest, West Himalayan Birch Fir forests, West Himalayan Upper Oak Fir forests, Alder forests and Hippophac scrubs. The important plants of these forests are *Quercus leuctrichophora, Q. dilatata, Q. Semecarpifolia, Aesculus indica, Pinus roxburghii, Abies spectabilis, Rhododendron sp., Alnus nepalensis, Hippophae* etc.

The catchment area contains snow Leopard, Himalayan Brown Bear, Black Bear, Musk Deer and Ghoral etc. Area also falls under Askot Wild Life Sanctuary. The usual habitat of animals in the area is

cold temperate and generally does not descend below 2000 m where proposed site is located. The Z.S.I. reported that the breeding and feeding ground of above animals would not be affected by the project. There is no crocodile in the area and only one species of fish i.e. *Schizothorax plagiostomus* is reported. During PFR studies, no species of endangered, threatened or endemic plants or animals was found in the project affected area. However, presence of RET species will be ascertained during EIA/EMP studies.

The detailed Environmental studies will be carried out as part of EIA & EMP studies based on the approved ToR. Based on the findings of the Environmental Impact Assessment study, following Environmental Management Plans may be formulated to mitigate the adverse impacts and to maximize the positive impacts of the project construction on the environment:

- ☐ Resettlement and Rehabilitation Scheme
- ☐ Compensatory Afforestation
- ☐ Catchment Area Treatment Plan
- ☐ Biodiversity Conservation
- ☐ Reservoir Rim Treatment
- ☐ Restoration of Quarry Areas
- ☐ Control of Air, Noise and Water Pollution
- ☐ Rejuvenation Plan for Muck Disposal Sites
- ☐ Sewage and Solid Waste Disposal
- ☐ Fisheries Management Plan
- ☐ Subsidised Fuel Arrangements
- ☐ Public Health Management Plan
- ☐ Dam Break Analysis & Disaster Management Plan
- ☐ Landscaping and Restoration Plan
- ☐ Green Belt Development Plan
- ☐ Environmental Monitoring Programme

CONCLUSION

During the process of power generation, no environmental pollution/degradation is envisaged. Water from the river will be diverted to powerhouse through HRT and after generation of electricity, the same shall be released back to the main river. Power generated from the project will boost the economy of the area. Presently, the project is located in a very remote area. Construction of the project will improve the communication and road network in the project area. New trade, business and work opportunity will open up for the inhabitants of the area due to coming up of this project.

The construction of the project will accelerate economic development in the area and enhance infrastructure facilities in the area.

Some of the likely positive aspects due to construction of the project are as follows:

- generation of power will meet the energy shortages of the northern region;
- generation of work opportunities, expansion of communication facilities; infrastructural development;
- improvement in local and regional economy, medical and education facilities;
- road networks; sanitation and water supply facilities;
- besides R&R Plan, community and social development scheme shall also be implemented for overall socio-economic development of the project area.