



# NORTH EASTERN ELECTRIC POWER CORPORATION LTD.

(A Govt. of India Enterprise)

**CORPORATE IDENTITY NUMBER (CIN) U40101ML1976GOI001658**

**OFFICE OF THE EXECUTIVE DIRECTOR (DESIGN & ENGINEERING),**

2<sup>nd</sup> Floor, NEEPCO Bhawan, R.G. Baruah Road, Sundarpur, Guwahati-781005, Assam

Tel. No. 0361-2207284, Fax No. 0361-2203187/ 2201608

No. NEEPCO/GHY/D&E/T-25/2014-15/ 1859

Dtd. 17/10/2014

To

✓ **The Director (Impact Assessment),**  
River Valley Projects,  
Ministry of Environment , Forest & Climate Change,  
Govt. of India,  
Indira Paryavaran Bhawan, 3<sup>rd</sup> Floor,  
Vayu Wing, Jor Bagh Road,  
New Delhi-110003.

**Sub: Kameng Hydro Electric Project (600 MW), Arunachal Pradesh – Fish pass reg.**

Ref: 1) F.No. J-1201/17/2000-IA-I Dated 29.3.2001.

Sir,

- 1) Kindly refer to the above. North Eastern Electric Power Corporation ( NEEPCO, a Govt. of India undertaking under Ministry of Power) is executing the Kameng Hydro electric Project (4X150 MW) in West Kameng District of Arunachal Pradesh. The Environment clearance of the Project was accorded by the Ministry of Environment & Forest vide letter mentioned under reference above. Interalia, the terms and conditions of the clearance letter includes the suitability of specific fish pass applicable to this project. The consultancy work of Design of Fish pass facilities in Bichom and Tenga Dam of the Project was entrusted to the Central Inland Fisheries Research Institute (CIFRI), Barrackpore, Kolkata. CIFRI, in their Report (copy enclosed-**annexure-1**) recommended providing Fish Ladders for both the Dams. The operational requirements (as mentioned below) recommended in the report found contradicting some techno-economic parameters of the project –
  - a. Minimum flow of 6 cumecs of water should be maintained for maintenance of the fish passes.
  - b. Fish pass should be operated round the year. However, keeping the pass open from February to end of October is mandatory.
- 2) The report was forwarded to M/S SMEC International Pty Ltd, the Design consultant of the project for the detail design of fish pass. M/S SMEC got the report studied by an international expert in the field and suggested that current international practice in the area of fish ways, for high dams (height> 20m) is to use fish lifts rather than fish ladders both on the basis of costs as well as success rates. M/S SMEC further emphasized that numerous fish ladders for high dams world-wide have failed to meet objectives of successfully passing fish upstream of dam structures greater than 20m height (copy enclosed **annexure-2**).
- 3) Further, NEEPCO expressed its concerns that the lean season discharge of Tenga River at Dam site is not even 6 cumec and release of 6 cumec for fish pass throughout the year will jeopardize the power generation and feasibility of the project. Also the release of 6 cumec was not considered in the approved power potential studies of the project.



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In view of above, a meeting was held amongst the concerned officials of CIFRI, NEEPCO and M/s SMEC to address the issues.

CIFRI reviewed their design and recommended, provision of hatcheries/farms at suitable location to artificially produce the seed may be an alternative arrangement for Tenga Dam (copy enclosed-**annexure-3**).

- 4) In the mean time, the parameters of both the Bichom and Tenga Dam were reviewed by committee constituted by the Ministry of Power, Govt. of India, comprising of the officials of CWC and CEA. As suggested by the committee the crest levels of spillways of both dams were lowered (copy of revised salient features enclosed- **annexure-4**). The crest of Bichom Spillway was lowered from El. 755.0masl to 735.0masl and of Tenga spillways from El.758.0 masl to El756.0masl (the River bed level of Tenga Dam at Dam site).
- 5) Under the revised design parameters the Tenga water will not be used for power generation during monsoon season because of high silt and River will flow as a natural stream since the spillway crest is provided in the river bed level. Therefore, NEEPCO feels that the fish pass is not necessary for Tenga dam under the present circumstances. In regard to the Bichom Dam, keeping in view that all other techno-economic issues including design energy already approved by the concerned authorities like CEA and CWC which are going to be affected by the provision of fish ladders, and in view of the observations of our consultant M/S SMEC as highlighted at para.2 above, provision of hatcheries/farms at suitable location as an alternative as recommended by CIFRI for Tenga Dam, may please be considered for Bichom Dam.

Encl: As above

Yours Faithfully

  
f. Executive Director (D&E)  
NEEPCO Ltd., Guwahati.