



F. No. J-12011/08/2021-IA.I (R)]
Ministry of Environment, Forest & Climate Change
Government of India
(Impact Assessment Division)

Indira Paryavan Bhavan
2nd Floor, Vayu Wing
Aliganj, Jor Bagh Road
New Delhi - 110 003

Date: 10th June, 2021

To,

The Executive Director (EDM)
NHPC Limited
NHPC Office Complex, Sector-33,
Faridabad - 121 003, Haryana

Subject: Uri-I Stage-II Hydroelectric project of 240 MW as Run of River scheme in an area of 102 ha by M/s NHPC Limited in Tehsil Uri, District of Baramulla (Jammu and Kashmir) - Terms of Reference (ToR) - Reg.

Sir,

This is with reference to your Proposal No. IA/JK/RIV/204853/2021 & letter NH/PC/8395 dated 19.03.2021 on the above cited subject.

2. The proposal was considered by the sectoral Expert Appraisal Committee (EAC) River Valley and Hydro Electric Power Projects (RV&HEP) in the Ministry in its 10th EAC meeting held on 15th April, 2021 through Video Conferencing. The details of the project, as per the documents submitted by the project proponent, and also as informed during the meeting, are reported to be under:

- (i) Project proponent informed to the EAC that NHPC Limited proposes to construct of Uri-I Stage-II Hydroelectric project of 240 MW, a run off the river scheme, is situated on river Jhelum in Uri Tehsil of Baramulla district in Jammu and Kashmir.
- (ii) It is about 72 km from Srinagar and 362 km from Jammu. The nearest rail head is Udhampur which is 275 km from project. Project location (Coordinates): Lat. 34° 8' 37" N Long. 74° 11' 14" E.
- (iii) URI-I Stage-II H.E. Project is the extension of URI-I H.E. Project. Utilizing the gross head of about 250 m between the Full Reservoir Level (FRL)/Full supply level as 1491.0m at Barrage and normal Tail Water Level (TWL) as 1241.0m at TRT outlet.
- (iv) The main components of the project are as follows:
 - a) 4.3.1. Constructed structures (URI-I Power Station) - Uri-I Power station Barrage 95m long and 21.5m high from its deepest foundation level.
 - b) The full supply water level upstream of the barrage is EL 1491.00m and barrage top is at EL 1495.50m. Spillway consisting of 6 bays of 8.0m(width) x 7.5m (height) and 3 No. under sluice bays 8m(width) x 8.25m (height).
 - c) A fish way is provided between bay No. 6 and bay No. 7. It is about 150 m long with the inlet at El 1489.0 m and the outlet at El 1475.50 m.

- d) Head regulator of 34m length, four bays of cut and cover culvert, 44- 66m wide desilting basin with two bays of 300m length. Headrace canal of about 470m length and 12m width and side slopes in 1V:1.5 H. Intake forebay at the downstream end of the canal of 195m. A siphon type surplus escape at a water level of El 1491.30m
- e) Proposed structures (URI-I Stage-II H.E. Project- 1 No HRT of size 6.5m Horse shoe shape in left bank and parallel in valley side to existing HRT. 1 no. 5 m dia Steel lined pressure tunnels/shafts and further bifurcated to 2 no. 3.25m dia. Steel lined pressure tunnel for auxiliary units. Underground power house cavern of size 91.0 m (L) x 20 m (W) x 40.7 m (H), housing 2 no. main units of 120 MW each. Transformer cavern of size 79 m (L) x 16.5 m (W) x 23.5 m (H) located d/s of power house cavern. 1 no. main TRT of size 6.5m Horse shoe shape having tailrace surge galleries.
- (v) **Land requirement:** Total land requirement of the project is about 102 ha of which about 85 ha is private land and about 17 ha is forest land (for underground works). Private land required for the project is in possession of NHPC.
- (vi) There is no submergence due to the project, wildlife sanctuary, tiger reserve, elephant corridor, critically polluted area within to 10 km of the project.
- (vii) **Project benefit:** The project will generate clean and green power of 120 MW which will help in reduction of GHG emissions from conventional source of energy. It will bring about local area development and will provide employment opportunities locally with contractors.
- (viii) **Water availability studies:** The average 10-daily water availability flow series from 1994-95 to 2019-20 (26 years) at Uri-I Barrage has been approved by CWC Hydrology (N) Directorate vide their file no. T-11025/1//2021-HYD(N) DTE, dated 15-03-2021. The average annual yield for the series Jun-94 to May-20 is 8080 Mcum (i.e. 633.7 mm). Uri-I (Stage-II) H. E. project also utilizes diverted (additional) waters available after generation of Kishanganga Power station. The water availability series of Kishanganga PS from 1971 to 2004 has been developed and approved by CWC and the same is used for Uri-I (Stage-II) H. E. project.
- (ix) **Power Generation:** The 10-daily inflow series was taken from 1975-76 to 2019-20 of Uri-I power station and from 1971-72 to 2019-20 for Kishanganga Power station was taken for power potential study. Only the turbine discharge of Kishanganga Power station has been considered which is being added to Wular Lake and further to Jhelum River.
- (x) In view of recent NGT order, provision of e-flow as 15% of average of inflow in the lean season, needs to be made in dam/barrage of existing power plant. Accordingly, 15% of average inflow of all the water series in the lean season i.e., during Oct-Jan, has been calculated as 13.05 Cumecs. There is already a provision of 2.5 cumecs downstream discharge through fish ladder of barrage of Uri power station. As such, provision of additional downstream discharge of 10.55 Cumecs as e-flow, has been kept from the barrage of Uri Power station.
- (xi) As Uri-I Stage-II Project is utilizing the surplus water of Uri Power Station, the e-flow discharge is going to have negligible impact on power potential of Uri-I Stage-II Project. The power potential study carried out based on the 10-daily series indicates that an installed capacity of 240 MW comprising 2 nos generating units of 120 MW each would be the best option for Uri-I stage-II HEP. Design energy of the project has been estimated as 662.20 MU.



- (xii) **Inter-State Matters:** The project lies entirely in the UT of J&K and no inter-state issues are involved.
- (xiii) **INTERNATIONAL MATTERS:** The projects on river Jhelum are covered under Indus Water treaty for which Clearance will be taken after firming up of DPR.
- (xiv) **COST ESTIMATE:** The preliminary estimated project cost at November 2020 price level has been worked out as Rs. 1930.00 crores
- (xv) **Status of other statutory clearances:**
- a) Environment clearance was accorded to Uri-I Project on 27.06.1980 by Department of Science & technology (DST) and additional conditions were given by MoEF&CC on 30.05.1989. Forest clearance for diversion of 54.7 ha land was accorded by MoEF vide letter dated 21.05.1986. For the present extension proposal of for Uri-I St-II HEP, EC process has been started.
 - b) Forest proposal is being formulated for diversion of approx. 17 ha forest land required for the project. DPR formulation for Concurrence by CEA is also in process.
- (xvi) **Background of the project:**
- a) NHPC Limited signed a Memorandum of Understanding with the Government of Jammu and Kashmir on 3rd January 2021 for execution of URI-I Stage-II HE Project (240 MW) on Build, Own, Operate & Transfer (BOOT) basis for the period of 40 years on the River Jhelum, in Uri Tehsil of Baramullah district in Jammu and Kashmir.
 - b) URI-I Stage-II H.E. Project is the extension of URI-I H. E. Project (480MW). Stage-I of URI H.E. Project a purely run –of-the river scheme which was allotted to NHPC Limited and was commissioned in 1997 and since then operating successfully.
 - c) URI-I Stage –II H.E. Project is planned as per provision kept in the DPR of URI-I H.E Project. In addition to Barrage, the provision of surface water conveyance system for URI-I Stage-II Project from Head regulator to the Intake of HRT has been utilized from URI-I Power Station already constructed. This project also utilizes diverted (additional) waters available after generation of Kishanganga Power station.
 - d) The general layout of the Project, size and dimensions of various components/ structures have been adopted based upon built in structures of URI-I Power Station.
 - e) Separate water conveyance structures and separate Power house complex structures are proposed to be constructed for URI-I Stage-II H.E. Project.

3. EAC deliberated on the information submitted (Form 1, PFR, km. file, etc.) and as presented in the meeting and observed that the project is located on the river Jhelum. The project is for developing a 240 MW Capacity on the Jhelum River. The project is located in Tehsil Uri, District of Baramulla, Jammu and Kashmir. URI-I Stage-II H.E. Project is the extension of URI-I H.E. Project. Utilizing the gross head of about 250 m between the Full Reservoir Level (FRL) /Full supply level as 1491.0m at Barrage and normal Tail Water Level (TWL) as 1241.0m at TRT outlet. The tentative land to be acquired/ diverted for the project is about 102 ha of which about 85 ha is private land and about 17 ha is forest land (for underground works). Private land required for the project is in possession of NHPC. Application for Forest Clearance yet to be submitted. There is no submergence due to the project, wildlife sanctuary, tiger reserve, elephant corridor, critically polluted area within to 10 km of the project.

4. The Expert Appraisal Committee after detailed deliberations in its 10th meeting held on 15th April, 2021 on the information submitted and as presented, **recommended** the proposal for grant of Standard TOR applicable for Hydro Power projects along with additional TOR to the proposed project.
5. Matter was further examined in the Ministry and additional clarification was sought from M/s NHPC in view of CEA's suggestion regarding dropping the proposed project. As submitted by the PP vide their letter dated 7.06.2021, matter has been taken up with CEA for reconsideration of their recommendation and CEA has opined that Stage-II in isolation, does not appear commercially viable. However, in case beneficiaries of existing Uri-I Stage-I HE Project agree for purchase of power from planned project, tariff of both the projects combined together may be reasonable (as indicated by M/s NHPC Ltd.).
6. Based on the recommendations of the EAC, followed by further examination, the Ministry of Environment, Forest and Climate Change hereby grants approval to the following Terms of References (TOR) to Uri-I Stage-II Hydroelectric project of 240 MW by M/s NHPC Limited in Tehsil Uri, District of Baramulla, Jammu and Kashmir for preparation of EIA/EMP reports, under the provisions of the Environment Impact Assessment Notification, 2006 and subsequent amendments/circulars thereto:
- i. EIA report for the proposed expansion project Uri-I Stage-II should be prepared keeping in view the cumulative impact of existing Uri-I HE Project and proposed Uri-I Stage-II HE Project.
 - ii. Three season (Pre-monsoon, Monsoon and winter season) baseline data of all the environmental attributes including biological environment as mentioned in the Standard ToR shall be collected for preparation of EIA/EMP report.
 - iii. Requisite studies like simulation study for the E-flow shall also be undertaken.
 - iv. The project involves diversion of 17ha of forestland. Forest clearance shall be obtained as per the prevailing norms of Forest (Conservation) Act, 1980. Application to obtain prior approval of Central Government under the Forest (Conservation) Act, 1980 for diversion of forestland required should be submitted as soon as the actual extent of forestland required for the project is known, and in any case, within six months of issuance of this letter.
 - v. CAT plan, Dam break analysis, Disaster Management Plan and Fisheries Management Plan be prepared along with other EMPs and incorporated in the EIA/EMP report.
 - vi. The EIA report should also describe the cumulative environmental effects due to proximity to other existing or planned projects with similar effects, if any.
 - vii. All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/EMP report in the relevant chapter.
 - viii. An undertaking as part of the EIA report from Project proponent, owning the contents (information and data) of the EIA report with the declaration about the contents of the EIA report pertaining to a project have not been copied from other EIA reports.
 - ix. Consolidated EIA/EMP report is to be submitted as per the generic structure (Appendix III & IIIA) given in the EIA Notification, 2006.



- x. Conservation plan for the Scheduled I species, if any, in the project study area shall be prepared and submitted to the Competent Authority for approval.
- xi. Pre-DPR Chapters viz., Hydrology, Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted.
- xii. Environmental matrix during construction and operational phase needs to be submitted.
- xiii. Both capital and recurring expenditure under EMP shall be submitted.
- xiv. The salient features to be intimated to the Indus water commission.
- xv. Environmental Cost benefit analysis for the proposed project shall be done duly keeping in view the actual cost-benefit of the existing operational Uri-I HE Project and that of proposed expansion of the same.
- xvi. PP shall apply to obtain prior approval of Central Government under the Forest Conservation Act, 1980 for diversion of forest land required for such projects will be submitted as soon as the actual extent of forest land required for the project is known to the project proponent, and in case, within 6 months of issuance of ToRs.

7. Further, Ministry in suppression of OM dated 1st May 2018 regarding CER has issued an another OM dated 30.09.2020 (enclosed). In this regard, it is advised that issues raised during Public hearing and activities proposed to address such issues shall be made part of EMP.

8. **Standard ToR:** The EIA/EMP report should contain the information in accordance with provisions & stipulations as given in the standard ToR for Hydroprojects (please visit the following link to download the Standard ToR: <http://environmentclearance.nic.in/writereaddata/standardtorreference.pdf>)

9. This grant of Terms of Reference (ToR) for the said project is further subject to the general conditions as under:

- i. All documents should be properly indexed, page numbered.
- ii. Period/date of data collection should be clearly indicated.
- iii. Authenticated English translation of all material provided in Regional languages.
- iv. After the preparation of the draft EIA-EMP Report as per the aforesaid TOR, the proponent shall get the Public Hearing conducted as prescribed in the EIA Notification 2006 and take necessary action for obtaining environmental clearance under the provisions of the EIA Notification 2006.
- v. The letter/application for EC should quote the Ministry's file No. and also attach a copy of the letter prescribing the ToR.
- vi. The copy of the letter received from the Ministry on the Tor prescribed for the project should be attached as an annexure to the final EIA-EMP Report.
- vii. General Instructions for the preparation and presentation before the EAC of TOR/EC projects of Coal Sector should be incorporated/followed.
- viii. The aforesaid ToR has a validity of five years only.
- ix. Grant of ToR does not necessarily mean grant of EC.
- x. Grant of ToR to the present project does not necessarily mean grant of TOR/EC to the captive/linked project.
- xi. Grant of ToR to the present project does not necessarily mean grant of approvals under the Forest (Conservation) Act, 1980 or the Wildlife (Protection) Act, 1972.



- xii. Grant of EC is also subject to circulars issued under the EIA Notification 2006, which are available on the Ministry's website.
- xiii. You are required to submit the final EIA/EMP prepared as per TORs to the Ministry within 5 years as per this Ministry's Notification vide S.O. 751 (E) dated 17th February, 2020 for considering the proposal for environmental clearance.
10. You are required to submit the final EIA/EMP prepared as per TORs to the Ministry within 5 years as per this Ministry's Notification vide S.O. 751 (E) dated 17th February, 2020 for considering the proposal for environmental clearance.
11. The consultants involved in the preparation of EIA/EMP report after accreditation with Quality Council of India/National Accreditation Board of Education and training (QCI/NABET) would need to include a certificate in this regard in the EIA/EMP reports prepared by them and data provided by other organizations(s)/laboratories including their status of approvals etc. vide Notification of the MoEF dated 19th July, 2013.
12. This issue with the approval of the Competent Authority.

Yours faithfully,


(Yogendra Pal Singh)
Scientist 'E'

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110 001.
2. The Secretary, Ministry of Water Resources, RD & GR, Shram Shakti Bhawan, Rafi Marg, New Delhi - 110 001.
3. The Secretary, Department of Power, Government of Jammu and Kashmir, Civil Secretariat, Jammu, Jammu & Kashmir.
4. The Secretary, Department of Forest, Environment & Wildlife Management, Government of Jammu and Kashmir, Civil Secretariat, Jammu, Jammu & Kashmir.
5. The Chief Engineer, Project Appraisal Directorate, Central Electricity Authority, Sewa Bhawan, R. K. Puram, New Delhi - 110 066.
6. The DDG of Forests (Central), Ministry of Environment, Forest & Climate Change, Integrated Regional Office, Jammu IWDP Complex, Gladin, Narwal, Near J&K Pollution Control Board, Jammu - 180 006.
7. The Chairman, Jammu and Kashmir State Pollution Control Board, Gladin, Narwal, Jammu, Jammu & Kashmir - 180 004.
8. NIC Cell - uploading in MoEF&CC's website.
9. Guard file.


(Yogendra Pal Singh)
Scientist 'E'