

**F. No. J-12011/11/2019-IA-I (R)**  
Government of India  
Ministry of Environment, Forest & Climate Change  
(IA.I Division)

Indira Paryavaran Bhawan  
2<sup>nd</sup> Floor, Vayu Wing  
Aliganj, Jor Bagh Road  
New Delhi - 110 003

Dated: 02<sup>nd</sup> February, 2021

To,  
The General Manager  
**M/s UJVN Limited**  
Lakhwar Project, Lakhwar Bhawan  
Dakpathar, Dehradun  
Uttarakhand

**Sub: Lakhwar Multipurpose Project (300 Mw) in District Tehri Garhwal and Dehradun of Uttarakhand by M/s UJVN Ltd. - Environmental Clearance - Regarding.**

Sir,

This has reference to your, online proposal No. IA/UK/RIV/107946/2019 and Letter No. 108/UJVNL/03/Director Project/GM(C-LWR)/P-10/MoEF dated 18.11.2020 submitted to the Ministry for Environmental Clearance to the project on the above-mentioned subject.

2. The above proposal was appraised by the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric Power Projects (RV & HEP) in its meeting held on 02.12.2020. The comments and observations of EAC may be seen in the Minutes of the meeting that are available on the Ministry's website.

3. Project Proponent (PP) informed that combined Lakhwar Vyasi project was accepted by NITI AYOJ (erstwhile Planning Commission) in its Fifth five-year plan with an estimated cost of Rs. 140.97 crores on 09.01.1976. Lakhwar Vyasi project had three major components viz., Lakhwar dam, Vyasi dam and Katapathar barrage in the district of Dehradun, Uttarakhand. Environmental Clearance (EC) to combined projects was granted by MoEF in February, 1987. In 1987 after EC, work started by U.P. Irrigation Department and activities such as 40 km Road infrastructure, Dam stripping, Diversion tunnel, Intake, Underground power house, Adit to control room, Adit to erection bay, Tail race tunnel, etc. completed till 1992. Later, the project was bifurcated into two parts viz., Lakhwar MPP (300 MW) with Katapathar Barrage 3 km downstream of Vyasi HEP and Vyasi HEP (120 MW) 5 km downstream of Lakhwar MPP.

4. A fresh environmental clearance to Vyasi HEP (120 MW) was accorded on 07.09.2007. In Application No. 431 of 2015 (Manoj Kumar Mishra & Bhim Singh Rawat Vs Union of India & Others) on the plea that environment clearance granted by MoEF in 1987 was an administrative approval to the composite Lakhwar-Vyasi project and Lakhwar MPP has not been appraised under EIA notification; NGT has issued an order dated 10.01.2019 and directed EAC to appraise the project afresh in terms of EIA notification 2006 and impose additional general and specific conditions as may be considered necessary.



5. EAC deliberated the issue of Lakhwar Multipurpose Project vis-a-vis the NGT Order during its meeting held on January 28, 2019 for ToR and recommended for a visit by a Sub-Committee of the EAC to the project site for additional study, if any, to be taken up based on the standard ToR for River Valley Projects. Sub-committee of EAC has made a visit to project site during April 2019. Based on the EAC's observations and subcommittee site visit report, ToR was issued by MoEF&CC vide letter no. J-12011/11/2019-IA-I dated 5<sup>th</sup> December 2019. Public hearings were held on 30<sup>th</sup> September 2020 at Lakhwar Stadium, Near Mahasu Mandir, Village Lakhwar, District Dehradun and 12<sup>th</sup> October 2020 at Government Primary School, Ranogi (Debogi), District Tehri Garhwal, Uttarakhand. Primary Data was collected through field surveys for pre-monsoon and monsoon from May 2019 to August 2019. EIA/EMP report for Environment Clearance was submitted to the Ministry on 20.11.2020.

6. Lakhwar Multipurpose Project is located on Yamuna River in the Dehradun and Tehri Districts of Uttarakhand State and being developed by UJVN Ltd. The construction of dam and underground power house for Lakhwar Multipurpose Project (300 MW) is proposed near Lohari village in Kalsi Tehsil of Dehradun district of Uttarakhand. Proposed dam site is located at latitude 30°31'03" N and longitude 77°56'58" E. All the components of Lakhwar Multipurpose Projects are approachable from National Highway 507 (123). NH 507 is the one the busiest highway in the region from May to October, connecting Dehradun to Yamunotri (a Hindu pilgrim). The project site is approachable from Dehradun by NH-507 up to project site at Lohari village. Kalsi is the nearest important town from the project area which is 20 km away from Project site.

7. PP informed about project components which includes (i) A 204m high concrete gravity dam with top level of the dam at El 800 m and the riverbed level at the dam site is around El 623 m. The Full Reservoir Level (FRL) and minimum draw down level (MDDL) of the reservoir are El 796 m and El 752 m, respectively, with gross storage of 587.84 MCM at FRL for diurnal peaking capabilities. The intake structure has been proposed on right abutment just upstream of dam body. Submergence area at FRL of 796m has been worked out as 957 ha; which will provide a gross storage of 587.84 MCM and live storage of 330.40 MCM. Average width of submergence is 483 m and length of submergence is 23 km. Three steel lined penstocks, each of 4.30 m diameters with length of 186.5 m, 211 m and 235 m; (ii) An Underground Powerhouse (size of cavern- 165 m x 20 m x 48.05 m D -Shaped (unfinished) is proposed with Vertical Francis turbines at axis level of El. 616 m. The reservoir to be created by the dam will operate between FRL 796 m & MDDL 752 m with rated head of 148.0m. The installed capacity of the power house will be 300 MW.

8. PP informed that total land requirement is 927.0822 ha; out of which 158.927 Ha is private land and 768.1552 Ha is forest land. Approval of diversion of 868.08 ha forest land of combined Lakhwar-Vyasi Multipurpose Project in favour of Uttar Pradesh Irrigation Department was accorded by MoEF vide letter No -8-172/86-Fry (Cons) Dated 31.10.1986. MoEF&CC vide letter F. No. 8-172/1986-FC (pt-1) dated 31.01.2014 accorded the approval for transfer of the lease in favour of UJVN Ltd in respect of 768.1552 hectares of forestland already diverted during 1986 for construction of Lakhwar Project.

9. PP informed that the project is located within 10km aerial distance of Mussoorie Wildlife Sanctuary. Standing committee of National Board for Wildlife,

MoEF&CC in its meeting held on 07.04.2020 recommended the proposal for Construction and Commissioning of Lakhwar MPP and communicated the same vide letter no.F.No.6-2/2020 WL dated 20.04.2020.

10. PP informed that project benefit includes annual Generation- 572.54 MU and in addition, it will also bring irrigation and drinking water benefits to six states for overall development in the region, beneficiary states will utilize their share of water as per the agreement signed on 28.08.2018. A number of marginal activities and jobs would be available to the locals during construction phase. During construction about 2000 skilled and unskilled manpower will be engaged for various construction activities. The cost of power component as per the approved revised cost estimate was worked out to be as Rs. 1074.16 crores (18.7% of the total cost of Rs. 5747.17 Crore).

11. Above proposal was considered by the EAC in its 4<sup>th</sup> meeting held on 02.12.2020. EAC deliberated on the information submitted (Form 2, EIA/EMP report, Public Hearing issues kml file, etc.) and as presented in the meeting and observed that MoEF&CC vide letter F. No. 8-172/1986-FC (pt-1) dated 31.01.2014 accorded the approval for transfer of the lease in favour of UJVN Ltd in respect of 768.1552 hectares of forest land already diverted during 1986 for construction of Lakhwar Project. Further, the project is located within 10 km aerial distance of Mussoorie Wildlife Sanctuary. Standing committee of National Board for Wildlife, MoEF&CC in its meeting held on 07.04.2020 recommended the proposal for Construction and Commissioning of Lakhwar MPP and communicated the same vide letter F.No.6-2/2020 WL dated 20.04.2020.

12. EAC during the meeting also noted that though it is a Multipurpose Project, instant application for only hydroelectric component. EAC after detailed deliberation on the information submitted by the Project Proponent and as presented, recommended the proposal for grant of Environmental Clearance subject to compliance of applicable Standard EC conditions with the certain additional conditions. Accordingly, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance to the Lakhwar Multipurpose Project (Hydroelectric components including Lakhwar Dam) as per the provisions of Environmental Impact Assessment Notification, 2006 and its subsequent amendments, subject to compliance of the Standard Environmental Conditions as enumerated in the Annexure I and following additional conditions:

- i. The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP reports. The budgetary provisions (Rs. 29685.68 lakhs) for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also be updated proportionately.
- ii. After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment. The study shall be undertaken by an independent agency.
- iii. Any other clearances from any other organization/department as applicable to the proposed project shall be obtained.



- iv. Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.
  - v. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines. Private land shall be acquired as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
  - vi. PP shall procure construction material only from those Organizations having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof.
  - vii. An institutional mechanism to be developed to ensure the preference of jobs to PAFs and also a policy for preferential treatment for award of sundry works to the PAFs and their dependents.
  - viii. As the proposed project falls in Yamuna River Basin and its CIA & CCS is already complete, the recommendation of CIA & CCS shall be followed while implementing the Project.
  - ix. Beneficiary states of Lakhwar project shall take separate Environmental Clearance for irrigation as per the EIA Notification, 2006 and as amended thereof.
  - x. The clearance is valid for period of 10 years from the date of issue of this letter for commissioning of the project.
  - xi. The EC granted is strictly under the provisions of EIA Notification, 2006 and amendments thereof. It does not amount to be approval under any other acts or rules applicable for the project, the requisite approvals of which have to be ensured by the Project Proponent.
13. This has approval of the Competent Authority.

Yours faithfully,

  
**(Yogendra Pal Singh)**  
**Scientist 'E'**

**Copy to:**

1. The Secretary, Ministry of Water Resources, RD & GR, Sharm Shakti Bhawan, Rafi Marg, New Delhi-110 001.
2. The Secretary, Ministry of Power, Sharm Shakti Bhawan, Rafi Marg, New Delhi-110 001.
3. The Principal Secretary (Irrigation & Power), Government of Uttarakhand, Dehradun-248 006.
4. The Member Secretary, Uttarakhand Environment, Protection & Pollution Control Board, Paryavaran Bhawan, E-115, Nehru Colony, Dehradun.

5. The Chief Engineer, Project Appraisal Directorate, Central Water Commission, Sewa Bhawan R. K. Puram, New Delhi-110 066.
6. The Dy. Director General of Forests, Ministry of Environment, Forest & Climate Change, Regional Office (NCZ), Subhash Road, Dehradun-248 001.
7. Guard File.

Yours faithfully,

  
9.1.21  
9.2.2021  
**(Yogendra Pal Singh)**  
**Scientist 'E'**

**Standard EC Conditions for River Valley and Hydroelectric projects**

**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC.
- vi. Necessary approval of CEA shall be obtained for those projects having the project cost more than Rs. 1,000 crores.

**II. Air quality monitoring and preservation**

- i. Regular monitoring of various environmental parameters viz., Water Quality, Ambient Air Quality and Noise levels as per the CPCB guidelines at designated locations shall be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA / Monitoring purposes.
- ii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed standards.
- iii. Necessary control measures such as water sprinkling arrangements, etc. bet taken up to arrest fugitive dust at all the construction sites.

**III. Water quality monitoring and preservation**

- i. Before impounding of the water, Cofferdams for both at the upstream and downstream are to be decommissioned as per EIA/EMP report so that once the project is commissioned; cofferdam should not create any adverse

impact on water environment including the rock mass and muck used for the Cofferdam.

- ii. As the reservoir will be acting as balancing reservoir and there would be fluctuation of water level during peaking period, efforts be made to reduce impact on aquatic life including impacts during spawning period both at the upstream and downstream of the project.
- iii. Water depth sensors shall be installed at suitable locations to monitor e-flow. Hourly data to be collected and converted to discharge data. The Gauge and Discharge data in the form of Excel Sheet be submitted to the Regional Office, MoEF & CC and to the CWC on weekly basis.

#### **IV. Noise monitoring and prevention**

- i. All the equipment likely to generate high noise shall be appropriately enclosed or inbuilt noise enclosures be provided so as to meet the ambient noise standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000, as amended in 2010 under the Environment Protection Act (EPA), 1986.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

#### **V. Catchment Area Treatment Plan**

- i. Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP report shall be implemented in consultation with the State Forest Department and shall be implemented in synchronization with the construction of the project.

#### **VI. Waste management**

- i. Muck disposal be carried out only in the approved and earmarked sites. The dumping sites shall be located sufficiently away from the HFL of the river. Efforts be made to reuse the muck for construction and other filling purposes and balanced be disposed of at the designated disposal sites. Once the muck disposal sites are inactive, proper treatment measures like both engineering and biological measures be carried out so that sites are stabilized quickly.
- ii. Solid waste management should be planned in details. Land filling of plastic waste shall be avoided and instead be used for various purposes as envisaged in the EIA/EMP reports. Efforts be made to avoid one time use of plastics.

#### **VII. Green Belt and Wildlife Management**

- i. Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of river basin or as per the ToR conditions or

minimum 15% of the average flow of four consecutive leanest months, whichever value is higher, shall be released as environmental flow.

- ii. Detailed information on species composition particular to fish species from previous study/literature be inventoried and proper management plan shall be prepared for insitu conservation in the streams, tributaries of river and the main river itself for which adequate budget provision be made and followed strictly.
- iii. Wildlife Conservation Plan approved by the Chief Wildlife Warden shall be implemented in consultation with the local State Forest Department.
- iv. To enrich the habitat of the project site, plantation shall be raised as envisaged in the EIA/EMP report. Plantation to be developed along the periphery of the reservoir in multi-layers with local indigenous species in consultation with the local State Forest Department.
- v. Compensatory afforestation programme shall be implemented as per the plan approved.
- vi. Fish ladder/pass as envisaged in the EIA/EMP report shall be provided for migration of fishes. Regular monitoring of this facility be carried out to ensure its effectiveness.

#### **VIII. Public hearing and Human health issues**

- i. Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt.
- ii. Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.
- iii. Preventive measures viz. fuming and spraying of mosquito control shall be done in and around the labour colonies, affected villages, stagnated pools, etc. Provisions be made to not to create any stagnated pools to avoid creation of breeding grounds of the vector borne diseases.
- iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Labour force to be engaged for construction works shall be examined thoroughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.
- vi. Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.
- vii. Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Disaster Management Plan.



## **IX. Miscellaneous**

- i. Skill mapping be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long time livelihood generation.
- ii. The Company shall have a well laid down environmental policy duly approve by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholders / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iii. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly to the head of the organization.
- iv. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- v. Post EIA and SIA be prepared for the project through a third party and evaluation report be submitted to the Ministry after five years of commissioning of the project.
- vi. Multi-Disciplinary Committee (MDC) be constituted with experts from Ecology, Forestry, Wildlife, Sociology, Soil Conservation, Fisheries, NGO, etc. to oversee implementation of various environmental safeguards proposed in EIA/EMP report during construction of the project. The monitoring report of the Committee shall be uploaded in the website of the Company.
- vii. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- viii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

- ix. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- x. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- xi. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- xii. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- xiii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- xiv. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- xv. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
- xvi. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xvii. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xviii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
- xix. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xx. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble

Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.

- xxi. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.

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