

MINUTES OF THE 12TH MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 25TH MAY 2021 FROM 02:30 PM- 05:00 PM THROUGH VIDEO CONFERENCE.

The 12th meeting of the re-constituted EAC for River Valley & Hydroelectric Projects organized by the Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi, was held on 25th May, 2021 through video conference, under the Chairmanship of Dr. K. Gopakumar. The list of Members present in the meeting is at Annexure.

Agenda No. 12.1

CONFIRMATION OF THE MINUTES OF THE 11th MEETING

Agenda No. 12.2

Expansion of Tidong-I Hydroelectric Project (Phase-II) for (Phase I -100MW+Phase II - 50MW) in an area of 42.2557 ha (without increase in area) by M/s Tidong Power Generation Private Limited in village Rispain, Tehsil Moorang, District Kinnaur (Himachal Pradesh) - Reconsideration of Environmental Clearance (EC) – Reg.

[Proposal No. IA/HP/RIV/105017/2019; F. No. J- 12011/09/2019 IA-I (R)]

12.2.1 The proposal is of Environmental Clearance (EC) of Third Unit of 50 MW (Phase-II) For Tidong-I Hydroelectric Project (100MW+50MW) as Run of River scheme in within same area (42.2557 ha) by M/s Tidong Power Generation Private Limited in village Rispain, Tehsil Moorang, District Kinnaur (Himachal Pradesh).

12.2.2 The EAC during deliberations noted the following:

The proposal was earlier considered by reconstituted EAC in its 8th EAC meeting held on held on 1st March, 2021 and 10th meeting held on 15th April, 2021 and project was deferred the proposal seeking additional information from Project Proponent (PP).Point-wise replies submitted by the PP vide letter dated 24th May,2021 in response to additional details sought (ADS) by EAC in its 10thmeeting are as follows:

S. No.	EACQuery	Compliance of EAC observation
1	Modified Fish Conservation plan under supervision expert from State Govt., CIFRI and experts from WII	<ul style="list-style-type: none">Fisheries Department of Government of Himachal Pradesh prepared Fishery Development Plan and granted No Objection Certificate (NOC) for Phase-I project.

		<ul style="list-style-type: none"> • An amount of Rs. 1.11 crore has already been deposited to Fisheries Department, State Government of Himachal Pradesh. • Copy of NOC by Fisheries Department, State Government along with fishery development plan has been submitted on 11.05.21. • It is requested that Conditional Clearance, may kindly be accorded and the project proponent gives an undertaking that they shall implement, additional measures, for Fisheries Conservation as suggested CIFRI and WII.
2	Statement on CER activity based on Public Hearing	<ul style="list-style-type: none"> • As far as Corporate Environmental Responsibility (CER) an amount of Rs. 238.0 lakh is earmarked for CER based on the comments and discussion held during the Public hearing with participants from Project Affected Panchayat's and District administration. • This amount shall be spent as per the directions of district Administration under CER.
3	Plan for beautification at muck disposal site with consent of Forest Department and local people.	<ul style="list-style-type: none"> • A provision of Rs 132.0 lakh towards development of muck disposal sites. • Muck disposal Plan including beautification of muck disposal sites has been approved by the Forest Department which also has been submitted. • It is requested that Conditional Clearance, may kindly be accorded and the project proponent gives an undertaking that they shall implement, additional measures for beautification of muck disposal sites as suggested by the State Forest Department and local people. • Current Status of Muck Dumping was also submitted: Estimated quantity of the muck is 0.025 million m³. 4 muck dumping sites were identified by the project proponent within the project area approved by Forest Department. Total capacity of these dumping site is 0.842 million m³. Excess capacity available as on 31/01/2020 is 0.168 million m³. It is estimated that all the muck available in the dump will be utilized at the end of the project construction activity. Muck dumping

		sites will be handed over to forest department for reclamation. Amount for reclamation of muck disposal sites has already been paid to Forest Department, Himachal Pradesh
4	An Undertaking that future schemes of the State government which would need extraction of water from stream, PP will release water into the stream according to the requirement at that time	Undertaking for future schemes of the State government which would need extraction of water from stream, PP will release water into the stream according to the requirement at that time has been submitted. The PP vide letter no. PM-TPG-EAC-109 dated 24.05.2021 submitted the undertaking in this regard.
5	Preparation of Wildlife Conservation Plan in consultation with State forest and Wildlife Department and WII.	As a part of Forestry Clearance, was approved by State forest and Wildlife Department. Outlay of CAT is given below: <ul style="list-style-type: none"> • Establishment of Nurseries • Forest Conservation & Improvement of Tree Cover • Pasture Improvement • Soil & Moisture Conservation Works • Road side avenue Planting and Landscaping • Forest Infrastructure Development • Rural Infrastructure Development • Treatment of Private Lands • Fuel Saving Devices • Rain/ Snow Harvesting Structure • Wildlife Management • Training and Studies • Awareness and Publicity • Operational Supports • Agricultural Support • Horticultural Support • Animal Husbandry Support • Development of ECO Tourism • Eco Task Force • Allied Activities, etc <ul style="list-style-type: none"> • As part of CAT Plan, provisions of the Wildlife Conservation Plan along with musk deer farm has been approved. The outlay of approved CAT Plan

		<p>has been submitted.</p> <ul style="list-style-type: none"> • Proposed Wildlife Conservation Plan has been submitted. • Tidong Power Generation Pvt. Limited has given an undertaking which stated that any improvement in Wildlife Conservation Plan by above cited agencies suggested same shall be followed.
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Project was accorded Environmental Clearance (EC) vide Letter No. J-12011/35/2007- IAI on 7th September 2007 by Ministry of Environment and Forests (MoEF).

Forest Clearance was accorded through letter F. No. 9-HPC602/2007-CHA on 18th June 2008 by MoEF (Northern Region Chandigarh) for diversion of 39.0546 ha of forest land for non-forest purpose.

Consent to Establish (CTE) was granted by Himachal Pradesh State Pollution Control Board (HPSPCB) letter No. HPSPCB/Tidong HEP – Kinnaur /10140-47 dated 8th August 2008.

Terms of Reference for third unit of 50MW (Phase-II) for Tidong-I HEP (100MW+50MW), Himachal Pradesh to M/s TPGPL was accorded F. No. J-12011/09/2019-IAI (R) dated 27.11.2019 by MoEF&CC, New Delhi.

12.2.4 After detailed deliberations on presentation and information submitted by the PP, the EAC observed that Fish Conservation Plan has not been modified as per recommendations of the EAC. The proposal is for expansion of existing project; so, Certified Compliance report of Regional office, MoEF&CC on earlier granted EC dated 7th September 2007 is essentially required to know the compliance status of environmental safeguards suggested for 1st Phase Project, the same still not submitted by Project proponent.

*The proposal was **deferred** on above lines.*

Agenda No. 12.3

Basaveshwara Lift Irrigation Scheme in Belgaun District of Karnataka by M/s Karnataka Neeravari Nigam Ltd. – Environmental Clearance – reg.

[Proposal No. IA/KA/RIV/63339/2015; F. No. J- 12011/23/2015 IA-I (R)]

12.3.1 The proposal is for Environmental Clearance Basaveshwara Lift Irrigation Scheme in Belgaun District of Karnataka by M/s Karnataka Neeravari Nigam Ltd.

12.3.2 Project Details are as follows:

- (i) Basaveshwara Lift Irrigation Scheme envisages the utilization of 4TMC of water by lift from Krishna River to provide irrigation facility to 27462 Ha of lands belonging to 22 Villages of Athani Taluk of Belagavi District in Karnataka.
- (ii) The MoEF&CC has accorded Terms of Reference vide dated 17th November, 2015 reference.
- (iii) Project Proponent (PP) had submitted an application no. IA/KA/RIV/63339/2015 for grant of Environmental clearance dated 21st March, 2017. Therefore, the project was appraised in 4th EAC held on 12th April, 2017 and 8th EAC held on 22nd September, 2017.
- (iv) During the deliberations of 8th EAC meeting the committee sought additional information from the PP. As per the latest status at PARIVESH portal of the Ministry, the proposal has been delisted.
- (v) M/s Karnataka Neeravari Nigam Ltd has submitted vide letter KNNNL/CEN/BLIS-MoEF/WGF/TAW-3/21-22/509 dated 5th may, 2021 regarding withdrawal of proposal.
- (vi) PP has submitted following reasons for withdrawal of proposal:
 - a) Due to heavy monsoon and floods in Krishna River in 2019 and subsequently in the year 2020, the flood levels are crossing the proposed Jackwell cum Pump house.
 - b) Hence, it was decided to modify the floor level of switch gear and control room from RL 534.069m to 537.00.
 - c) Accordingly, the designs of switch gear room, control room which are adjoining the Jackwell cum pump house have been modified. Also, the salient features of the project are being modified to suit the site conditions. Therefore, PP will be applying for the Environmental Clearance through Parivesh portal with the finalized technical details.

12.3.3 *The EAC after detailed deliberation on the information available as submitted by project proponent on PARIVESH portal, has no objection on withdrawal of proposal from Parivesh portal.*

Agenda No. 12.4

Naba Hydro Electric Project of 1070 MW as Run of River scheme in an area of 391.20 ha by M/s Naba Power Private Limited located near Naba village, Upper Subansiri district of Arunachal Pradesh– Terms of References (TOR) – reg.

[Proposal No. IA/AR/RIV/212176/2021; F. No. J-12011/09/2021-IA.I(R)]

12.4.1 The proposal is for grant of Terms of Reference (ToR) to Naba Hydro Electric Project of 1070 MW as Run of River scheme in an area of 391.20 ha by M/s Naba Power Private Limited located near Naba village, Upper Subansiri district of Arunachal Pradesh.

12.4.2 The details of the project submitted by project proponent and ascertained from the document submitted are mentioned below:

(i) The project is a Run-of-River scheme which envisages utilization of discharge of River Subansiri, a major tributary of the mighty Brahmaputra.

(ii) The dam site of Naba H.E. Project is located at about 1250m downstream of Jok Soko Nala and the Powerhouse site is located on right bank about 250m downstream of Thru Nala with Subansiri River. The power house is 32 km U/s to Nacho town. Nacho is about 115 km from Daporijo and is accessible by all-weather Daporijo- Limeking road.

(iii) The catchment lies between Longitude 91° 48' 30" E to 93° 47' 09" E and Latitude 27° 46' 52" N to 28°59'35" N. The total catchment area up to the dam site has been estimated as 11272sq km. The proposed dam site is located at Longitude 93°35'52.63" E and Latitude 28°22'18.53" N.

(iv) The Project will utilise design head of 235.33 m (net), the installed capacity of the project would be 1000 MW. The length of the dam at its top would be 285 m.

(v) HRT will culminate into 8.5m & 7.0m diameter circular Steel lined underground Pressure Shafts which in turns bifurcates into five 5.00 m diameter pressure shafts to feed five generating units (Vertical Francis turbines of 200 MW each) housed in underground power house. An auxiliary power house of 70MW (55MW + 15MW) is given on the right side of the NOF block of the dam to cater environment release.

(vi) The various components of the project are:

- A concrete gravity dam of 285m length at the top and 99.19m high (Max. Height) from foundation level.
- It comprises of 8 Nos. of Non-overflow blocks and 8 Nos. of overflow bays. The overflow bays comprise one surface bay of 6.0m X 8.50m with crest at EL 1020.00m and 7 Nos. Orifice type bays, each of 8.00 X 12.00m with crest at EL 970.00m. Energy dissipation arrangements by Flip bucket and Plunge Pool have been provided.
- One number of Power Intake of total length 54.0m comprising of an inclined trash rack on right bank.
- One numbers of 12.0m Dia. horseshoe shaped concrete lined headrace tunnel of

length 9669.00 m.

- One number of 25.00m Dia. restricted orifice type surge shafts has been proposed.
- Two numbers of 8.5m & 7.0m diameter circular pressure shafts. The lengths of pressure shafts are 509.69m and 522.012m.
- An Underground powerhouse of 185.15 m (L) x 23.5 m (W) x 55.80 m (H) housing 5 units of 200 MW vertical Francis turbine each with a downstream with transformer hall of size 185.15 m(L) x 16 m (W) x 28.3 m (H) has been proposed. An Auxiliary powerhouse of 59.86 m (L) x 18.5 m (W) x 30.7 m (H) housing 2 units of 55 MW & 15MW vertical Francis turbine each located on the right NOF block of the dam.
- 5 nos. of unit TRT of size 5.90 m Diameter D-shaped tunnel has been proposed for each unit.
- A main Tail Race Tunnel (1No) of size 11.70 m diameter D-shaped tunnel has been proposed at the downstream of the unit TRT to discharge the Tail Water from all the 5 units.
- 400 kV open Pot head yard with DG room and auxiliary building near service bay of Powerhouse.

(vii) The project is scheduled to be completed in 60 months after financial closure. On completion of the project, it will provide 1000 MW of peak power with generation of 3665.13MU of electricity in a 90% dependable year at 95% machine availability. The plant load factor of this scheme would be about 42.57% and will also provide (55MW + 15MW) of peak power with generation of 301.40MU of electricity in a 90% dependable year at 95% machine availability. The project has been estimated to cost Rs. 6817.91 Crores at March 2021 price level.

(viii) **Land requirement:** Total land required for construction of various components, including infrastructure facilities and muck disposal area is estimated to be around 391.20 Ha, out of which 250 ha is forest land is estimated including river bed area and 141.20 ha is private land. The submergence area at FRL is 29.55 ha, which includes 5.95 ha of river bed area.

(ix) **Ecological Sensitive Area:** No protected area within 15 Km radius of project components.

(x) **Project benefit:** Project will provide all the benefits of a hydropower projects, Electricity generation of 3665.13MU of electricity in a 90% dependable year at 95% machine availability. It will provide benefits of free power to Arunachal Pradesh as provided in the MoA signed with them. The development of the project will enhance the quality of life of the people living in and around the project by way of development of roads & communications, availability of reliable, dependable, uninterrupted power for development of small/medium industries, employment generation, development of tourism etc.

(xi) **Status of other statutory clearances:**

- Forest Clearance: Online application will be submitted subsequently thereby seeking forest diversion for around approx. 250 ha.
- Hydrology: yet to be approved
- Power potential studies: yet to be approved.

(xii) **R&R Details:** Total private land requirement for the project is about 141.2 ha. Details will be worked out about the ownership of land during the EIA study. No displacement is envisaged as there is no habitation on the land required for the project. R&R package will be developed in line with RFCT LARR Act, 2013 and R&R policy of Arunachal Pradesh during the course of EIA study.

12.4.3 The EAC during deliberations noted the following:

The proposal is for Terms of Reference to Naba Hydro Electric Project of 1070 MW as Run of River scheme in an area of 391.20 ha by M/s Naba Power Private Limited located near Naba village, Upper Subansiri district of Arunachal Pradesh.

EAC deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that the project is a Run-of-River scheme which envisages utilization of discharge of River Subansari.

The dam site of Naba H.E. Project is located at about 1250m downstream of Jok Soko Nala and the Powerhouse site is located on right bank about 250m downstream of Thru Nala with Subansiri River. The total catchment area up to the dam site has been estimated as 11272sq km. The Project will utilise design head of 235.33 m (net), the installed capacity of the project would be 1000 MW. The length of the dam at its top would be 285 m. Project will provide all the benefits of a hydropower projects, Electricity generation of 3665.13MU of electricity in a 90% dependable year at 95% machine availability.

Project involves Forest land of 250 ha for diversion for non-forestry activities. It was noted that PP has not yet applied for Forest Clearance for diversion.

12.4.4 *The EAC after detailed deliberation on the information submitted and as presented during the meeting **recommended** for grant of Standard ToR to the proposed project under the provisions of EIA Notification, 2006 and its amendments therein along with the following additional/specific ToR:*

- Detailed study on by-pass to be done on e-flow if, powerhouse is not working. There shall be no variations in e-flow.*
- Detailed study on identification of Compensatory afforestation land area shall be included in EIA study.*

- (iii) *Carry out detailed study on revamping of forest area, to attain its original condition of forest land at the project site.*
- (iv) *Detailed study to be carried out on impact on other closely situated dam projects in case of any catastrophic events/dam failure.*
- (v) *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.*
- (vi) *Requisite studies like simulation study for the E-flow shall also be undertaken.*
- (vii) *The project involves diversion of 250 ha 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'*
- (viii) *CAT plan, Dam break analysis, Disaster Management Plan and Fisheries Management Plan be prepared alongwith other EMPs and incorporated in the EIA/EMP report*
- (ix) *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.*
- (x) *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.*
- (xi) *Consolidated EIA/EMP report is to be submitted as per the generic structure (Appendix III & IIIA) given in the EIA Notification, 2006.*
- (xii) *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.*
- (xiii) *Pre-DPR Chapters viz., Hydrology, Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted*
- (xiv) *Environmental matrix during construction and operational phase needs to be submitted.*
- (xv) *Both capital and recurring expenditure under EMP shall be submitted.*
- (xvi) *PP shall conduct Environmental Cost benefit analysis of the project. PP shall further submit CO2 emission due to the project.*

The meeting ended with vote of thanks to the Chair.

Annexure

ATTENDANCE LIST

Sr. No	Name& Address	Role	Attendance
1	Dr. K. Gopakumar	Chairman	P
.2	Dr. N. Lakshman	Member	A
3	Dr. Mukesh Sharma	Member	P
4	Dr. B. K. Panigrahi	Member	A
5	Dr. Chandrahas Deshpande	Member	P
6	Dr. A. K .Malhotra	Member	P
7	Dr. Uday Kumar R.Y.	Member	P
8	Dr. Narayan Shenoy K	Member	P
9	Shri Balraj Joshi	Member	P
10	Shri Sharvan Kumar	Member(Representative of CEA)	A
11	Shri A. K. Singh	Representative of CWC	P
12	Dr. J. A. Johnson	Representative of WII	A
13	Dr. A. K. Sahoo	Representative of CIFRI	P
14	Dr. Vijay Kumar	Representative of Ministry of Earth Sciences	A
15	Shri Yogendra Pal Singh	Member Secretary	P

APPROVAL OF THE CHAIRMAN

Fwd: Draft MOM of 12th EAC (R.V. &HEP)-reg. Inbox x



Yogendra Pal Singh via nic.in
to me ▾

5:00 PM (1 minute ago) ☆ ↶ ⋮

From: kgopa@iisc.ac.in
To: "Yogendra Pal Singh" <yogendra78@nic.in>
Cc: balrajjoshi@hotmail.com
Sent: Monday, June 14, 2021 4:54:54 PM
Subject: Re: Draft MOM of 12th EAC (R.V. &HEP)-reg.

Dear Sir
Yes it is Ok and we approve it.

With warm regards
Prof. K.Gopakumar, FIEEE, FNAE
DESE, Indian Institute of Science
Bangalore-560012, INDIA

From: Yogendra Pal Singh <yogendra78@nic.in>
Sent: Monday, June 14, 2021 3:52 PM
To: Gopakumar K <kgopa@iisc.ac.in>
Cc: balrajjoshi@hotmail.com <balrajjoshi@hotmail.com>
Subject: Fwd: Draft MOM of 12th EAC (R.V. &HEP)-reg.

External Email

The MOM of 12th EAC have been modified as per comments suggested by Dr. Balraj Joshi Sir.

The Chairman Sir is requested to approve the modified MOM attached herewith.
