

MINUTES OF THE 13TH MEETING OF THE EXPERT APPRAISAL COMMITTEE FOR RIVER VALLEY AND HYDROELECTRIC PROJECTS HELD ON 16TH – 17TH JUNE, 2021 FROM 10.00 AM - 05:00 PM THROUGH VIDEO CONFERENCE.

The 13th 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 16th - 17th June, 2021 through video conference, under the Chairmanship of Dr. K. Gopakumar. Shri Balraj Joshi, Expert Member, participated in the discussion on agenda items no. 13.6 and 13.7 of the agenda of the 13th EAC (River Valley & Hydro-electric) meeting. The list of Members present in the meeting is at **Annexure**.

Agenda No. 13.1

CONFIRMATION OF THE MINUTES OF THE 12th MEETING

The minutes of the 12th EAC (River Valley Hydroelectric Project) meeting held on 25th May, 2021 were confirmed.

Agenda No. 13.2

Dulhasti Stage-II Hydro Electric Project of 260 MW (2x130 MW) as a Run of River scheme in an area of 390 ha by M/s NHPC Ltd. located in village Dul, District Kishtwar, Jammu & Kashmir – Terms of Reference – reg.

[Proposal No. IA/JK/RIV/214210/2021; F. No. J-12011/10/2021–IA.I (R)]

13.2.1 The proposal is for grant of Terms of Reference (ToR) to Dulhasti Stage-II Hydro Electric Project of 260 MW (2x130 MW) as a Run of River scheme in an area of 390 ha by M/s NHPC Ltd. located in village Dul, District Kishtwar, Jammu & Kashmir.

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

- (i) It was noted that M/s NHPC Limited signed a Memorandum of Understanding with the Government of Jammu and Kashmir on January 03, 2021 for execution of Dulhasti Stage-II HE Project, on Build, Own, Operate & Transfer (BOOT) basis for the period of 40 years on the River Chenab, in Kishtwar district in Union Territory of Jammu and Kashmir.
- (ii) Dulhasti HE Project, Stage-II is the extension of Dulhasti HE Project, Stage-I (390MW). Which is a run-of-the river scheme, was commissioned in 2006 (as per PFR) by NHPC and has been operating successfully since then. The catchment area of Chenab at Dulhasti dam lies between Longitude 75°55' E to 77°48' E and Latitude 32°06' N to 33°39' N.
- (iii) A separate Head Race Tunnel is proposed to be constructed for Dulhasti Stage-II HE Project along with surge shaft, pressure shafts and a separate underground power house and TRT.
- (iv) A concrete gravity dam 65m high from deepest foundation level across Chenab River near Dul has been constructed. The FRL and MDDL are fixed at EL1266.50m and at EL 1238.90m respectively. The length of the dam at top is 186m with EL1270m. The axis of dam has been

laid in such a way so that the spillway discharges remain within the river midstream as far as possible.

- (v) The proposed Dulhasti Stage-II power house is planned to utilize water of river Chenab which is surplus to existing Dulhasti Power house requirement and diverted water from river Marusudar through Pakal-Dul Power House turbines.
- (vi) Power potential study has been carried out based on 10 daily water availability series from 1975-76 to 2019-20 (44 years) of Dulhasti Power Station duly approved by Central Water Commission and regulated flow from Pakal Dul HEP with 90% dependable year's turbine outflow Approved for the year 1997-98. The annual energy generation with 95% machine availability known as design energy after releasing e- flow in 90% dependable year 1976-77 works out to be 1092.82 MU.
- (vii) Project Components: The existing Dam of Dulhasti Satge-I shall be used as Head works of Dulhasti HE Project, Stage II also. The brief details of which are as follows:

i. Existing structures (Dulhasti Stage-I Power Station)

- Concrete gravity dam is equipped with two types of spillways, first one is gated spillway, comprises of four bays, designed to discharge 8000 m³/s corresponding to the Maximum Water Level with a sill at EL 1225.00m.
- Second one is free overflow spillway with crest at FRL i.e., at EL 1266.50m with a very low discharging capacity.
- Power intake structure for Dulhasti St-II HE Project, has already been constructed alongside within take structure of Dulhasti Stage-I with a semi-automatic Bucket Type Trashrack cleaning machine has been installed and operated from top of the towers at El. 1275.
- Downstream from the intake towers, one 27.5m long in take tunnel with 7.7 minner diameter, of circular section shaped was already constructed with Intake tower for Dulhasti Stage-II HE Project.

ii. Proposed structures to be constructed (Dulhasti Stage-II H. E. Project)

- 1 Nos. intake tunnel of size 7.7m dia circular shaped to be connected with already constructed intake tunnel of same size.
- 2 Nos. branch intake tunnels (before u/s transition of desilting chambers) of size 6.5m horse shoe shape bifurcated from intake tunnel.
- 2 Nos., 300m (L) x 15m (W) x 14.5m (H) underground desilting chambers.
- 2 Nos. branch HRT (after d/s transition of desilting chambers) of size 6.5m horse shoe shape combining to form main HRT.
- 1 No. 3575 m long HRT of size 8.5m dia horse shoe shaped in left bank with revised alignment.
- 1 No. 18.25m finished dia. circular shaped, restricted orifice Surge Shaft.
- 1 no., 7 m dia circular shape steel lined pressure tunnels/ shafts and 2 nos., 5m dia circular shape steel lined penstocks.
- The present location of Power house and associated caverns have been shifted approximately 100m upstream. The proposed powerhouse cavern of size 100 m (L) x 23.5 m (W) x 52 m (H) shall house 2 units of 130 MW each having total installed

capacity of 260 MW and annual Energy generation 90% (Dependable year) are 1092.82 MU.

- Transformer cavern located d/s of power house cavern which will also house the Draft Tube gates.
 - 1 no. 250m long (approx.) TRT of size 8.5m dia horse shoe shape.
 - To facilitate the construction and operation of the project components, suitable adits and Access tunnels have also been proposed.
- (viii) The project is proposed to be commissioned in 60 months. The cost of the project is Rs. 1336.71 Cr. (Nov. 2020 PL).
- (ix) **Land requirement:** A total of 166.85 ha of land will be required for construction of Dulhasti Stage-II HE Project. Out of which 6.95 ha land is already available with the project and 28.90 ha is private land will be acquired along with 131 ha is State Govt. Land. No protected area within 10 Km radius of project components.
- (x) **Environmental Flow:** For Dulhasti stage-II HE project, no separate dam is envisaged. The existing dam on Dulhasti (St-I) will be common for both the projects. However, 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 of existing power plant. Accordingly, 15% of average of all the water series in the lean season i.e., during Dec to March, of Chenab River has been calculated as e-flow which is calculated as 11.32 Cumecs. As such, provision of downstream discharge of 11.32 Cumecs as e-flow, has been kept from the dam of Dulhasti- I Power Station.
- (xi) The project falls under the ambit of Indus Water Treaty, 1960. Therefore, necessary procedure followed under Indus water treaty has been processed.
- (xii) **Seismicity:** The project, which is an extension of Dulhasti Stage-I is located in the Kishtwar tectonic zone between MCT and MBT and lies in Seismic Zone-IV as per seismic zonation map of India incorporated in IS 1893-(Part I) :2016- Criteria for earthquake resistant design of structures. Detailed Site Specific Seismic Design Parameter studies of Dulhasti Stage-I was taken up by DEQ-IITR (Report No. EQ 90-19).
- (xiii) **Muck Generation and Disposal:** 10 lakhs cubic meter (approx.) Excavated rock/ soil (Muck) will be generated due to the project construction. 2 Nos. of muck disposal area have been identified, one near powerhouse with an area of approx. 13 ha and other near dam site with an area of approx. 12 ha. Part of the muck will be used for development of construction area, aggregate, etc. and balance will be disposed at pre- designated muck disposal, which shall be landscaped after completion of the construction.

13.2.3 The EAC during deliberations noted the following:

The proposal is for Terms of Reference to Dulhasti Stage-II Hydro Electric Project of 260 MW (2x130 MW) as a Run of River scheme in an area of 390 ha by M/s NHPC Ltd. located in village Dul, District Kishtwar, Jammu & Kashmir

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 Chenab.

A separate Head Race Tunnel is proposed to be constructed for Dulhasti Stage-II HE Project along with surge shaft, pressure shafts and a separate underground power house and TRT. A concrete gravity dam 65m high from deepest foundation level across Chenab River near Dul has been constructed. The FRL and MDDL are fixed at EL1266.50m and at EL 1238.90m respectively. The length of the dam at top is 186m with EL1270m. The axis of dam has been laid in such a way so that the spillway discharges remain within the river midstream as far as possible.

Project involves total of 166.85 ha of land will be required for construction of Dulhasti Stage-II HE Project. Out of which 6.95 ha land is already available with the project and 28.90 ha is private land will be acquired along with 131 ha is State Govt. Land. No protected area within 10 Km radius of project components.

13.2.4 *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 along with the following additional ToR:*

- (i) *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.*
- (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) *The EIA study should be undertaken in accordance with recommendations of the Chenab River basin study and the project parameters/salient features of the project such as Dam height, FRL, Submergence area, total land requirement, e-flow etc. as discussed/deliberated during the Chenab River basin study should remain unchanged.*
- (iv) *Project shall be required to worked out details of ownership of 166.85 ha. land.*
- (v) *Requisite studies for the E-flow shall also be undertaken.*
- (vi) *The longitudinal connectivity/Free flowing sketch be provided in the EIA/EMP report.*
- (vii) *Impact of developmental activity/project on the wildlife habitat, if any, within study area shall be studied.*
- (viii) *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.*
- (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) Environmental Cost benefit analysis shall be done.
- (xvii) The salient features to be intimated to the Indus water commission.

Agenda No. 13.3

Enhancement of Capacity of Karcham Wangtoo Hydro Electric Project from 1000 MW to 1091 MW at village Karcham, Tehsil Nichar, District Kinnaur, (Himachal Pradesh) by M/s JSW Hydro Energy Limited – Amendment in Environmental Clearance (EC) – reg.

[Proposal No. IA/HP/RIV/208630/2021; F. No. J-12011/47/2005-IA.I]

13.3.1 The proposal is for Amendment of Environmental Clearance to Karcham Wangtoo Hydro Electric Project for enhancement of the capacity 1000 MW to 1091 MW at Village Karcham, Tehsil Nichar, District Kinnaur, (Himachal Pradesh) by M/s JSW Hydro Energy Limited.

13.3.2 Observation in Earlier EAC:

The proposal for EC was earlier considered in 11th EAC Meeting held on 6th May, 2021. The project was deferred by the EAC seeking additional information which is reflected in the Minutes of the 11th EAC Meeting held on 6th May, 2021. Point-wise replies in response to additional details sought (ADS) by EAC in its 11th meeting are as follows:

- (i) **Permission required form state electricity board for enhancing the capacity from 1000 MW to 1091 MW.**

Reply: Directorate of Energy (DOE) of Government of Himachal Pradesh (GoHP) is the Nodal Agency for the Power related issues in the State/Power projects installed in the State.

GoHP had already informed vide letter dated 26.11.2011 that the HP Govt. has "No Objection" for the installation of 300 MW turbines in place of 250 MW (i.e. 4 x 300 MW-1200 MW capacity instead of 4 x 250 MW-1000 MW) subject to CEA satisfying itself on the safety aspect. Also vide letter dated 05.05.2016, DOE directed IPP to apply for capacity enhancement beyond approved

capacity of 1000MW. CEA has approved the capacity enhancement from 1000 MW to 1091 MW vide its letter no. CEA/HPPI/08/2021/111 dated 29/04/2021.

Therefore, permission from State Electricity Board for Capacity Enhancement is not applicable.

(ii) Damage assessment on fishes if such velocity of water flow into the Downstream

Reply: For the damage assessment on fish fauna; data was collected from authentic sources about the existence of fish species in Satluj River in the stretch of Karcham Wangtoo HEP in elevation range of 1500m to 1800m.

Following documents were referred to explore the possibility of presence of fish fauna in Satluj River in the project area:

- (i) EIA Study of Karcham Wangtoo HEP carried out by NEERI, Nagpur, appraised by EAC and EC granted by MoEF&CC in 2005.
- (ii) EIA Study of Shongtong Karcham HEP carried out by WAPCOS, appraised by EAC and EC granted by MoEF&CC. Shongtong Karcham is an immediate upstream project.
- (iii) Satluj basin study carried out by ICFRE, discussed in EAC during its meetings held on February 2016, January 2019, December 2019 and December 2020.

Based on the above discussion and references, it is concluded that fish population reported in River Satluj, in upper reaches is scanty mainly due to the fact that the flow regime in River Satluj is very turbulent with high silt load and this makes the upper reaches, difficult habitats for fish. Fish fauna which is spotted in upper reaches is confined to tributaries.

iii. Damage Assessment on Fish Fauna due to increase in velocity

Reply: Damage assessment/impacts on fish fauna has been carried out and outcome is summarised below:

- a) The project got commissioned in September 2011 and is under operation since then.
- b) This is 98m high dam (from deepest foundation level) and HRT is 17.2 km long; making the intermediate river stretch between dam and powerhouse (tailrace outfall) about 20 km long.
- c) To ensure this 20km stretch does not remain dry especially during lean season, environment flow release provision is made for continuous release of water, downstream of dam. This release has continuous flow metering device with online data sharing with State Pollution Control Board.
- d) Even during the non-peaking hours the environment flow release ensures that stretch is not dry.
- e) Although all the studies indicate scanty fish fauna in the rivers stretch, environment flow release ensures that habitat is available for fish fauna if there is any movement from tributaries connecting the intermediate stretch
- f) Proposed changes, requiring amendment of EC, do not involve any additional civil construction or hydromechanical work. Only changes are operational changes to utilise the in-built overload capacity in already installed turbines. This will result in increase in discharge and velocity through

HRT from present values of 417 cumec and 4.83 m/s to 453 cumec and 5.25 m/s respectively i.e. an increase of about 8.6%. This change will largely be limited to monsoon period when additional discharge is available in river. The increase in discharge and velocity is within HRT and will not change anything from the present scenario downstream of the dam as well as that of the powerhouse. Water coming out of tailrace carrying slightly higher discharge, during limited period of additional capacity utilisation, will come to open channel environment (Satluj River), where average monsoon discharge is of the order of 600 cumec; therefore, about 8.6% increase in discharge from present scenario is not significant enough to cause any impact or damage to fish fauna.

(iii) **Certified compliance report of Regional office, MoEF&CC**

Reply: The Project Proponent vide email (billing.karcham@jsw.in) dated 15.06.2021 provided the Certified Compliance Report dated 09/06/2021 of MoEF&CC Regional Office at Dehradun.

(iv) **Undertaking stating that EC conditions have been complied and there will be no impact on environment after enhancement of the project capacity**

Reply: An Undertaking dated 4th June, 2021 has been submitted which certifies that:
*"All the conditions as per the Environmental Clearance issued vide dated 09.11.2005 are fully complied. Six monthly compliance for the EC conditions is being submitted regularly to the concerned authority.
It is further certified that there will be no impact on environment due to enhancement of the project installed capacity, as there is no new construction or acquisition of additional land."*

(v) **Current status of Wildlife species and how project establishment will affect wildlife species in the region**

Reply: A detailed primary and secondary data collection work on identifying the faunal species in the study area of Karcham Wangtoo HEP has been undertaken by NEERI during its EIA study report preparation during 2005. List of Wildlife species as recorded in EIA study is presented at Annexure-7.

In addition, the current data is also collected from Working Plan for the Forests of Kinnaur Forest Division (2019-2029). The plan has been prepared by Himachal Forest Department for a total geographical area of 4916.20 sq. km. The projects are falls in the lower reaches and is part of Karcham beat of Kilba Forest Range. A comprehensive list of fauna found in the entire Kinnaur Forest Division as extracted from the plan is enclosed at Annexure-8 for ready reference.

As discussed earlier, the project was commissioned in 2011 and there is no change in status of progress as of date. Change in installed capacity from 1000 MW to 1091 MW is proposed keeping in view the in-built overload capacity in turbines. This will change operational parameters such as

discharge and velocity and would not require construction/modification to any of the project components.

In the absence of construction phase, wildlife will not be impacted due to increase in noise and air pollution, increase movement of vehicles, congregation of labour, etc. Change in operational parameters i.e. discharge and velocity will be within the HRT and will not change anything which can impact the wildlife in the area.

- (vi) Comparative list of salient features of the project proposed at the time of EC vis-à-vis salient features actually executed at site

Reply: Comparative list of salient features of the project proposed at the time of EC with that of "As built and changes proposed for which EC amendment is requested has been submitted.

- (vii) **Clarify that forest land mentioned in EC letter is 136.2833 ha. Details presented by PP mentioned that Forest land is 167.42 ha. As per the details present on Parivesh website, Forest Clearance and amendment taken from time to time is 174.0182 ha.**

Reply: Details of the diversion of forest land is provided below to clarify the situation:

Sr. No.	Description	Surface Area in ha.	Underground Area in ha.	Total Area in ha.	Description
1	Diversion of Forest Land, vide MoEF letter no. F. No. 8-5/2002-FC dated 17-11-2005 for 167.4247 ha of forest land comprising of 136.2833 ha of surface land and 31.1414 ha of underground area	136.28330	31.14140	167.42470	EC letter mentioned just the surface land, whereas the diversion case approved also included the underground area as is clearly mentioned in enclosed letter.
2	Diversion of Forest Land and private (Forest) land vide MoEF letter no. F. No. 8-5/2002-FC dated 06-07-2006 for 4.7053 ha (surface land) and 0.2535 private (Forest) land.(Surface land)	4.70530	-	4.70530	Additional diversion during construction phase.
		0.2535		0.2535	

3	Diversion of Forest Land, vide MoEF letter no. F. No. 8-5/2002-FC dated 28-07-2008 for 1.6348 ha (surface land)	1.63480	-	1.63480	Additional diversion during construction phase.
		142.87690	31.14140	174.01830	Corrected detail as mentioned in the amendment of EC application online.

(viii) Last 15 years data of catastrophic events in 10 km region, whether construction of dam has caused or likely to cause in such events future specifically landslide.

Reply: The project is under operation since 2011 and before that project was under construction for 5 years. Project team is well aware of the project site and surrounding area and we have not observed any catastrophic event such landslides, floods or earthquake in last 15 years.

To substantiate the facts further, we have approached District Disaster Management Authority chaired by Deputy Commissioner, District Kinnaur. A letter has been issued by DC, Kinnaur on 02/06/2021 confirming that no catastrophic event recorded in Karcham Wangtoo HEP in last 15 years.

During 12th EAC meeting the EAC also recommended that The EAC also recommended to the MoEF&CC to examine the applicability of para 7 (ii) of the EIA Notification, 2006, as the present proposal is for EC for expansion of existing project for which EC was granted under the provisions of the EIA Notification, 1994.

Accordingly, the matter was examined in consultation with EIA Policy Sector (IA Division) in the Ministry. The policy sector has informed that this facility is available to those units which have obtained prior environmental clearance under EIA Notification, 1994 and EIA Notification, 2006.

13.3.3 During the 13th (Present) meeting of the EAC examined the replies in response to additional details sought by EAC in its 11th meeting. The EAC asked the PP to submit the point-wise replies on certain points raised during meeting. The PP submitted the following information sought by EAC vide letter dated 16th June, 2021:

I. CER activities plan for next five years.

Reply: JSW believes in the comprehensive need assessment process for the community we belong. After the thorough consideration of all the major indicators and assessing the potentials,

we plan the three major flagship programs. These programs will be continued by us in next five years to achieve quantified results and sustainability.

- a) **SHIKHAR** - SHIKHAR is a program of developing the tribal talents by sports. This is the name of our boxing initiative, which we wish to continue for next five years. In this duration we will make operational two HABAS (High Altitude Boxing Academies). These HABAs are situated at Sangla and Nichar. This will prepare the international class boxers with proper training, gyming and orientation with the latest techno-tools. Apart from it, we will develop our remaining five centres as well and connect all the seven centres (including HABAs) to the IIS, Bellary (Inspire Institute of Sports run by JSW).

Our five years' agenda includes talent development to the level where we will give International Medals to the State of Himachal. Development of Sports culture and professionalism is our motto as we know a sport is a big life-learning process.

- b) **CHARKHA** - CHARKHA is our skill development program by conserving the conventional Kinnauri Craft. This is also addressing the gender needs of the 300+ ladies associated with this program. This one is the largest skill and livelihood program in the district.

In CHARKHA, we will conserve the conventional craft, diversify the designs and apparels to the next level. Even we are planning to launch new products in Pashmina and Super threads, considering the Pan-India demand.

In next five years, we will give it a new height by giving new market linkages, digital market space and diversified new cliental. We will also impart the training for the entrepreneurship in the different fields like Rajmah, Kala Zira, High Altitude Honey and Apricot Oil. We will also construct one emporium for the SHG ladies of CHARKHA for their sale.

- c) **Community Orchard Development** - We will enter into bi-party and tri-partite agreements with the community and stakeholders and entering into MOUs. In this program we will develop the land, insert all the technical and human efforts of modern farming and develop the orchard and hand over to the stakeholders. This will be a sustainable and income generative model for the stake holders.
- d) **Plantation to Stabilize Hill Slopes on bank of river** - After his recent visit to project, scientist from regional Office of MoEF&CC in his certified compliance report dated June 14, 2021 has made an observation that "More plantation activities may be adopted focusing to stabilize the hill slopes on the banks of river in consultation with the State Forest Department".

JSW is committed to comply with this recommendation and will include this as part of the CER activities under "Environment Sustainability". Over a period of time, the project has taken an initiative and planted about 22,000 plants of various species in and around the project area with the help of community, at present survival is about of 15000 plants.

Hill slope on the bank of the river is largely forest land and therefore, plan of plantation on the hill slopes - identifying and finalizing the area, identifying the species to be planted, process of plantation including their maintenance requirement and assessment of survival rate will be

prepared in consultation with forest department. The plan will be executed over period of next 5 years. Once the plan is prepared it will be communicated to Regional Office of MoEF&CC, Dehradun.

II. Submission of Copy of letter sent to CEA informing about changes in project features.

Reply: As desired copy of the letter no. JKHCL/MD/TEC/09 dated 19.03.2009 vide which changes done were informed to CEA, has been submitted.

III. Assessment of Change in River Profile d/s of tailrace outfall due to additional discharge

Reply: For assessment of river profile, a modeling study was carried out using one dimensional hydraulic flow modeling on Mike 11, a river model of Danish Hydraulic Institute (DHI) to model flow and water levels. Two scenarios have been simulated viz. one with a discharge of 417 cumec (present maximum discharge) and second for discharge value of 453 cumec (maximum discharge for enhanced capacity operation). Three river cross sections have been input into the model viz. at chain age 0.00 (tailrace outfall), 280.00 m and 510.00 m. Model interpreted the stretch and provided the output at each location for bed elevation, water surface elevation, water depth, flow velocity and flow top width.

As can be seen from the submitted data, due to increase in discharge from 417 cumec to 453 cumec at Tail Race Outfall, increase in depth, flow width and velocity is marginal as compared to present scenario.

13.3.4 *The EAC after deliberations recommended the proposal for amendment in Environmental Clearance dated 9th November, 2005 as per EIA notification, 2006 and its amendments as per para 7 section (ii) for change in capacity from existing 1000 MW to 1091 MW in two stages i.e. 1045 MW (with 10% continuous overload) in the first stage and then to 1091 MW (with 10% continuous overload) in the second stage along with the following additional/specific conditions:*

- (i) More plantation activities may be adopted focusing to stabilize the hill slopes on the banks of river in consultation with the State Forest Department. Plantation Plan will be submitted to the regional Office of the Ministry.*
- (ii) Compensatory afforestation by Forest Department, the survival rate of plant shall maintain more than 90%.*
- (iii) The status of compliance will be submitted to the regional Office of the Ministry along with six monthly compliance report.*
- (iv) The proposed capacity enhancement shall be implemented as per directions of the CEA. After enhancing capacity from 1000 MW to 1045 MW in stage-1, 1 month EIA study shall be carried out and report shall be submitted to Ministry. After getting satisfactory letter from MoEF&CC then only PP can move forward for stage -2 enhancement i.e. 1045 to 1091 MW.*
- (v) A multi-specialty hospital to cater the need of people living within 10 km radius of the project shall be established.*
- (vi) Solar panel be provided to the families living in rural areas within 10 km radius of project.*
- (vii) Computer labs with internet facility shall be established in primary schools within 10 km radius of project.*
- (viii) Sport complex with multi- sport facility shall be established. The children's from economically weaker section shall be given free of cost sport facility.*

- (ix) *The Multi-Disciplinary Committee needs to be reconstituted and the meeting needs to be held at regular interval*
- (x) *Recommendations of the Cumulative Impact Assessment and Carrying capacity Study of Satluj River Basin Study shall be followed strictly.*
- (xi) *PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis.*

Agenda No. 13.4

Tawang Hydroelectric Project Stage -I of 600 MW as Run of River scheme in an area of 277.06 ha by M/s NHPC Ltd in Jung village, District Tawang, Arunachal Pradesh - Extension of Validity of Environmental Clearance – reg.

[Proposal No. IA/AR/RIV/18462/2013; F. No. J-12011/53/2006-IA.I (R)]

13.4.1 The proposal is for extension in validity of Environmental Clearance granted by MOEF vide letter no. J-12011/56/2006-IA-I dated 10th June, 2011 to Tawang Hydroelectric Project Stage -I of 600 MW by M/s NHPC Ltd in Jung village, District Tawang, Arunachal Pradesh

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

- (i) Tawang Hydroelectric Project Stage-I was allotted to NHPC on 24.06.2007 by Government of Arunachal Pradesh. The project is located on river Tawang Chu, in Tawang District of Arunachal Pradesh.
- (ii) The Project envisages construction of 26 m high Barrage with 1 No. HRT of Horse shoe shaped of Dia-7 m and underground Power House consisting 3 units of 200 MW each. The project will generate annual energy of 2963 MU in 90% dependable year. This is a run-of-the-river scheme. The catchment area of the project is 2937 ha Sq. km.
- (iii) Environmental Clearance for Tawang Hydroelectric Project (600MW) Stage –I was accorded by MoEF&CC vide letter F. No. J-12011/53/2006-IA-I dated 10th June, 2011, with the validity period of 10 years for commencement of construction work.
- (iv) Total land requirement is 277.06 ha, out of which 187.20 ha is forest land and 89.86 ha is private land. Total submergence area is about 12.46 ha. No National Park/Sanctuary/Biosphere Reserve/Historical monument etc. exists in the vicinity of the project area.
- (v) No family shall be fully affected due to Project. However, 292 families shall be partially affected due to the project. The total cost of project is about Rs. 5910.80 crores at Nov 2020 PL and the scheduled construction period is 78 months.

(vi) The Public Hearing for the Project was conducted on 19.11.2010 at Jang in Tawang District, Arunachal Pradesh.

(vii) However, Project could not commence due to non-accord of Forest Clearance (Stage-I) by MoEF&CC, which is pending for want of compliance under Forest Rights Act (FRA), 2006 by Govt. of Arunachal Pradesh and study regarding habitat of Black Necked Crane, which is to be conducted by the State Government as per the recommendation of Forest Advisory Committee (FAC) meeting held on 16.05.2017. Gram Sabha under FRA 2006 meetings are pending in 16 out of 19 villages since January 2016, due to local agitation. Presently, no activities are being carried out at project.

13.4.3: The EAC during deliberations noted that the proposal is for extension in validity of EC dated 10th June, 2011 since as per EIA Notification, 2006, the period of validity of EC is 10 years and extendable for 3 years in case PP applies within the expiry date of EC. PP has requested for extension in validity of EC as project could not commence due to non-accord of Forest Clearance (Stage-I) by MoEF&CC. Now, since PP has applied the proposal for extension in EC and considering extendable period is 3 years as per EIA Notification, 2006 and its amendments therein, the EC may be extended till 9th June, 2024. PP has submitted an application no. IA/AR/RIV/18462/2013 dated 16th June, 2021 i.e. within its validity period of EC.

13.4.4 *The EAC after deliberations observed that project has been delayed due to due to non-accord of Forest Clearance (Stage-I). Currently, no activities are being carried out at project. In view of this, EAC recommends the proposal for extension in validity of EC dated 10th June, 2021 to Tawang Hydroelectric Project Stage-I of 600 MW by M/s NHPC Ltd. in Jung village, District Tawang, Arunachal Pradesh till 9th June, 2024, under the provisions of EIA Notification, 2006 and subsequent amendments/circulars with the condition that Ministry of Power shall look into the progress of the project and make sure that project get commissioned within stipulated time period as project cost must have escalated since, 2011.*

Agenda No. 13.5

Tawang Hydroelectric Project Stage-II of 800 MW as Run of River scheme in an area of 237.88 ha by M/s NHPC Ltd. in Yusum/Kundung village, District Tawang, Arunachal Pradesh - Extension of Validity of Environmental Clearance – reg. [Proposal No. IA/AR/RIV/18461/2013; F. No. J-12011/54/2006-IA-I]

13.5.1 The proposal is for extension in validity of Environmental Clearance granted by MoEF vide letter no. J-12011/54/2006-IA-I dated 10th June, 2011 to Tawang Hydroelectric Project Stage -II of 800 MW by M/s NHPC Ltd. in Jung village, District Tawang, Arunachal Pradesh.

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

(i) Tawang Hydroelectric Project Stage-II was allotted to NHPC on 24.06.2007 by Government of Arunachal Pradesh. The project is located on river Tawang Chu, in Tawang District of Arunachal Pradesh.

- (ii) The Project envisages construction of 28 m high RCC raft with piers barrage, 1 No. HRT of Horse shoe shaped of Dia-8.1 m and underground Power House consisting 4 units of 200 MW each. The project will generate annual energy of 3622 MU in 90% dependable year. This is a run-of-the-river scheme. The catchment area of the project is 3419 Sq. km.
- (iii) Environmental Clearance for Tawang Hydroelectric Project (800MW) Stage –II was accorded by MoEF&CC vide letter F. No. J-12011/54/2006-IA-I dated 10.06.2011, with the validity period of 10 years for commencement of construction work
- (iv) Total land requirement is 237.88 ha, out of which 116.62 ha is forest land and 121.26 ha is private/community land. Total submergence area is about 6.19 ha. No National Park/Sanctuary/Biosphere Reserve/Historical monument etc. exists in the vicinity of the project area
- (v) No family shall be fully affected due to Project. However, 62 families shall be partially affected due to the project. The updated estimated cost & levellised tariff of Project are Rs. 7515.37 cr at Nov 2020 P and the scheduled construction period is 83 months.
- (vi) The Public Hearing for the Project was conducted on 21.9.2010 at Lumla in Tawang District, Arunachal Pradesh.
- (vii) Construction of Project could not commence due to non-accord of Forest Clearance (Stage-II) by MOEF&CC, which is pending for want of compliance under Forest Rights Act (FRA), 2006 by the Govt. of Arunachal Pradesh. Gram Sabha meetings under FRA 2006, are pending in 6 out of 13 villages since May 2015, due to local agitation. Presently, no activities are being carried out at project.

13.5.3: The EAC during deliberations noted the following:

The proposal is for extension in validity of EC dated 10th June, 2011 since as per EIA Notification, 2006, the period of validity of EC is 10 years and extendable for 3 years in case PP applies within the expiry date of EC. PP has requested for extension in validity of EC as Project could not commence due to non-accord of Forest Clearance (Stage-I) by MoEF&CC. EC is valid upto 9th June, 2021. Now, since PP has applied the proposal for extension in EC and considering extendable period is 3 years as per EIA Notification, 2006 and its amendments therein, the EC may be extended till 9th June, 2024. PP has submitted an application no. IA/AR/RIV/18461/2013 dated 16th June, 2021 i.e. within its validity period of EC.

13.5.4 *The EAC after deliberations observed that project has been delayed due to due to non-accord of Forest Clearance (Stage-II). Currently, no activities are being carried out at project. In view of this, EAC **recommended** the proposal for extension in validity of EC dated 10th June, 2021 to Tawang Hydroelectric Project Stage-II of 800 MW by M/s NHPC Ltd in Yusum/Kundung village, District Tawang, Arunachal Pradesh till 9th June, 2024, under the provisions of EIA Notification, 2006 and subsequent amendments/circulars with the condition that Ministry of Power shall look into the progress of the project and make sure that project get commissioned within stipulated time period as project cost must have escalated since, 2011.*

Agenda No. 13.6

WRD- Govt. of A.P - Environment clearance for Rayalaseema Lift Scheme to supplement 3 TMC per day to SRMC on D/s of Pothiredypadu Head Regulator, which is an integral part of 1. Galeru Nagari Sujala Shravanthi (GNSS) Project in District Kurnool, Andhra Pradesh. 2. Srisailam Right Branch Canal, Andhra Pradesh. 3. Telugu Ganga Project, Andhra Pradesh - Amendment to the Existing Environmental Clearances to include Rayalaseema Lift Scheme - Reg. [Proposal No. IA/AP/RIV/214491/2021; F. No. J-12011/18/2006-IA.I (R)]

13.6.1 The proposal is Amendment to the existing Environmental Clearances granted by MoEF to Srisailam Right Branch Canal, Andhra Pradesh and Environmental clearances granted by MoEF vide letter no. J-11016/70/83-IA dated 19th September, 1988 to Telugu Ganga Project, Andhra Pradesh.

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

1. Rayalaseema Region consisting of 4 Districts is a drought prone area. The river Krishna is the main source of supply of water for the schemes in Rayalaseema Region. The erstwhile State of Andhra Pradesh was allocated 811 TMC of water under KWDT-I. In the first Apex council meeting it was agreed upon by the both the states to share the water in the ratio of 63.13: 36.87. The share of Andhra Pradesh is 512 TMC. Accordingly, out of which 101 TMC is being utilised to Schemes in Rayalaseema. The water requirements for the various existing/proposed schemes under the system through Pothireddypadu Head Regulators are as follows:

Telugu Ganga Project	:	29TMC
Srisailam Right Branch Canal	:	19 TMC
Galeru Nagari Sujala Sravanthi	:	38TMC
Madras Water Supply Scheme (through TGP)	:	15TMC
TOTAL	:	101TMC

2. In view of dwindling number of flood days required to draw the flood water from the foreshore of Srisailam Reservoir and the inability to draw “allocated and supposed to be assured water from the dependable flows for Rayalaseema projects and due to impossibility of maintain sufficient water level in Srisailam Dam, the Government of Andhra Pradesh proposed Rayalaseema Lift Scheme to supplement 3 TMC/day to SRMC on D/s of Pothireddypadu Head Regulator in Kurnool District, when the water level is below +854.00 ft. in Srisailam reservoir to feed already existing systems i.e., TGP, SRBC, GNSS and Chennai drinking water supply. The Government of Andhra Pradesh have accorded Administrative Sanction G.O.Rt. No.203 dt. 05.05.2020 for Rayalaseema Lift Scheme (RLS) for Rs. 3825.00 crores.
3. The Salient features of the proposed scheme are as follows:
 - i. **Forebay** : Forebay is proposed from the end of approach channel upto the pump house.
 - ii. **Pump House** :
 - The pump house is proposed to accommodate 12 nos. of pumps and motors with operating system.

- 12 nos. of volute pumps with a capacity of 81.93 cumecs capacity are proposed.
 - Total Power requirement is estimated at about 420 MW and suitable H.T/L.T Panels, SCADA, HT/LT Cables, HM/EM Components will be provided.
 - The proposed Water drawl level: 800 Ft (+243.84 m) and above and Delivery level will be 885.14 Ft (269.82 m)
- iii. **Pipe line :** The M.S pipe line of 5000mm dia is proposed from Pump House to Delivery Cistern (200 M)
 - iv. Excavation of Link Canal is proposed from delivery cistern to SRMC, downstream of Pothireddypadu Head Regulator. (0.5 km)
 - v. **Approach channel:** The approach channel is proposed for 8.89 km length in Srisailam foreshore area to reach 800 feet level upto proposed pump house including fore bay on left side of existing Pothireddypadu Head Regulator.
4. Original Proposal of the Rayalaseema Lift Scheme:
- i. Pump House located to the East of Mutchumarri Village
 - ii. Approach channel running along the ridge line in submergence area for a length of 4.5 Km
 - iii. Link Canal Running for a length of 22.9 Kms parallel to the FRL for most part, passing adjacent to/ in-between resettlement villages/ colonies of Sankirenipalle/ N/M Ghanapuram and joining SRMC @ 4th Km.
 - iv. Nearly 500 acres of private lands are to be acquired for this proposal.
5. Modified Present Proposal (Finalized) of the Rayalaseema Lift Scheme:
- I. Various alternative proposals are studied and finalized the best proposal without land acquisition.
 - II. The Pump House on the 'higher ground' adjacent to existing PRHR on *Northern side*.
 - III. Approach channel running along the valley in Bhavanasi river for a length of 8.89 Km.
 - IV. *Delivery carried through pipelines into the DC.*
 - V. Link canal for a length of 0.5 Km *constructed on SRMC D/S of HR.*
 - VI. This proposal does not require any Land Acquisition.
6. Features of the Project:
- i. To assure the needs of Drinking, Irrigation and Industrial needs of the Rayalaseema Region including Nellore and Prakasham Districts and Chennai drinking water supply
 - ii. No new ayacut is proposed.
 - iii. The project does not require additional allocation of water.
 - iv. There is no widening or increase in dimension of the canals.
 - v. The project does not require any Land Acquisition.
7. Environmental Clearance:

Requirements of prior Environmental Clearance (EC): The following projects or activities shall require prior environmental clearance from the concerned regulatory authority, which shall

hereinafter referred to be as the Central Government in the Ministry of Environment and Forests for matters falling under Category 'A' in the Schedule and at State level the State Environment Impact Assessment Authority (SEIAA) for matters falling under Category 'B' in the said Schedule, before any construction work, or preparation of land by the project management except for securing the land, is started on the project or activity.

The Rayalaseema Lift Scheme is not a new project, its only supplement the existing schemes when the water level in the Srisailam Reservoir is below +854 ft. The Rayalaseema Lift Scheme is envisaged to support the following schemes whose Environmental Clearances are already obtained, the details are as below.

- (i) **Srisailam Right Branch Canal:** The scheme has been examined from environmental angle and accorded the environmental clearance for this project by the Ministry of Environment and Forests vide MOEF, GOI vide MOEF, GOI vide letter No.J.12011/7/95-IA.I dt.07.07.1995.

It is contemplated to utilize 19 TMC of assured water from Srisailam reservoir through Pothireddypadu Head Regulator and to irrigate an ayacut of 1,57,422 acres in Kurnool district and 32,578 acres in Kadapa district by excavating Srisailam Right Branch Canal for a length of 199kms and forming two balancing reservoirs namely Gorakallu Balancing Reservoir and Owk balancing reservoir. The Balance ayacut to be developed is 36,064 acres.

- (ii) **Telugu Ganga Project:** The environmental clearance for this project was accorded by the Ministry of Environment and Forests vide MOEF, GOI vide P&F Dept. vide Lr. No. J-11016/70/83-IA dt. 19.09.1988. In this order all the environmental aspects were discussed in detail.

Its main aim is to supply 15 TMC of drinking water to Chennai city as agreed by the 3 states viz., Maharashtra, Karnataka and erstwhile Andhra Pradesh in addition to that it is contemplated to create irrigation potential to an extent of 529039 acres out of which 114500 acres in Kurnool district and 167000 acres in Kadapa district and 38938 acres in Chittoor district and 208601 acres in Nellore District. The total water requirement for irrigation is about 29 TMC to be drawn from the allocated waters as per KWDT II. The Balance ayacut to be developed is 89,584 acres.

- (iii) **Galeru Nagari Sujala Sravanthi:** The environmental clearance for this project was accorded by the Ministry of Environment and Forests vide MOEF, GOI vide letter no. J-12001/18/2006-1/A-I dt.21.06.2006. In this order all the environmental aspects and water utility for drinking as well as irrigation were discussed in detail.

The project is formulated to supply drinking water to 20 lakh populations living in Kadapa, Chittoor, Nellore districts besides to provide irrigation water to an extent of 1,55,000 acres in Kadapa district, 1,05,800 Acres in Chittoor district and 1,500 Acres in Nellore district. The total water requirement for irrigation and drinking water supply is about 38 TMC to be drawn from surplus flows of River Krishna from Srisailam reservoir. The Balance ayacut to be developed is 2,60,800 acres.

8. As seen from the above that the present proposed Rayalaseema Lift Scheme is not a new scheme and only supplements to the above existing schemes when the water level in the Srisailam Reservoir is below + 854 ft.
9. The details of the ayacut of the above projects in detail IP Contemplated and IP Created under the above schemes is stated below:

Name of the Project	IP Contemplated in Acres	IP Created in Acres	Balance in Acres	Technology
Telugu Ganga Project				Drip irrigation/ stabilization of existing irrigation facility by adopting better technologies i.e. sprinkler irrigation/ micro irrigation
Kurnool	114500	103717	10783	
Kadapa	167000	128214	38786	
Chittoor	38938	23023	15915	
Nellore	208601	194501	14100	
Srisailam Right Branch Canal				
Kurnool	157422	153936	3486	
Kadapa	32578	0	32578	
Galeru Nagari Sujala Sravanthi				
Kadapa	155000	1500	153500	
Nellore	1500	0	1500	
Chittoor	105800	0	105800	
Total	981339	604891	386448	

10. As per the Ministry of Environment, Forest and Climate Change, Notification, dt. 14-08-2018, though the instant project/ activity falls under 1(c), because of change in irrigation technology having environmental benefits (Eg. From flood irrigation to drift irrigation etc.). By an existing project leading to increase in CCA but without increase in dam height and submergence will not require amendment/ revision of E.C. As the project has been conceived as an integral part of the existing projects and having E.C.s and thus the proposed addition may require E.C./ amendment of E.C.
11. It is intended to lift the water below +854 level and the water so lifted will be used for stabilization of existing command area by changing the technology method i.e. lift/micro/ sprinkler irrigation. So as to the above para will be applicable to our proposed project thus the NGT order will also be followed without any intention and the present proposal may be considered for amendment to EC under the above notification.
12. The DPR for the project has to be submitted for approval of the Central Water Commission (CWC) and Krishna River Management Board (KRBM).

13.6.3 Deliberations by the EAC:

The EAC examined the information submitted by the Project Proponent and as presented during the meeting and observed that the proposal is for amendment in Environmental Clearance granted by the Ministry to the following projects:

- (i) **Srisailam Right Branch Canal:** Environmental clearance for this project by the Ministry of Environment and Forests vide MOEF, GOI vide MOEF, GOI vide letter no. J-12011/7/95-IA.I dt. 07.07.1995.
- (ii) **Telugu Ganga Project:** The environmental clearance for this project was accorded by the Ministry of Environment and Forests vide MOEF, GOI vide P&F Dept. vide Lr. No. J-11016/70/83-IA dt. 19.09.1988.
- (iii) **Galeru Nagari Sujala Sravanthi:** The environmental clearance for this project was accorded by the Ministry of Environment and Forests vide MOEF, GOI vide letter No.J-12001/18/2006-1/A-1 dt.21.06.2006.

With reference to the directions passed by Hon'ble Tribunal vide its Order dated 29.10.2020 in OA No. 71 of 2020 in the matter of Gavinolla Srinivas Vs Union of India the committee observed that Hon'ble Tribunal has *inter-alia* raised concerns on the following issues:

- i. Impacts due to widening of existing irrigation canals
- ii. Impacts of pumping of water from a level lower than 854 feet
- iii. Impacts on geological formations
- iv. Impacts on ecologically sensitive areas.

The Hon'ble Tribunal has *inter-alia* directed to conduct EIA study and get prior Environmental Clearance for the proposed project.

It was noted that the present proposal is for lifting of water from Srisailam Reservoir for irrigation and drinking purpose as well. It was intimated that as per revised proposal there would be no land acquisition and no R&R is thus involved. However, it was also observed that layout drawing is not showing the approach channel and link canal properly. It is difficult to deliberate and enumerate the possible impacts based on project details submitted. Moreover, it is not clear that in which environmental clearance the PP wants amendment.

The committee after detailed deliberations was of the view that in view the changed profile of the existing scheme and concerns raised by the Hon'ble NGT it is necessary to have information on following points for further assessment:

1. Clear drawings of layout showing all components proposed in the current proposal.
2. Comparative chart & drawings/layouts of proposal vis-a-vis the one considered by the Hon'ble NGT.
3. PFR/DPR with updated details as the DPR available on the PARIVESH is showing different figures as presented before EAC.
4. Change in land requirement details and land use
5. Details of Ecologically Sensitive Areas within 10 km of the proposed project.
6. Clarification on the water withdrawal methods. Will both the mechanism of water drawl

continue to operate?

The EAC *deferred* the proposal on the above lines.

Agenda No. 13.7

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)]

13.7.1 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).

13.7.2 The EAC in earlier meeting during deliberations noted the following:

The proposal was earlier considered by reconstituted EAC in its 8th EAC meeting held on 1st March, 2021, 10th meeting held on 15th April, 2021 and 12th meeting held on 25th May, 2021 and project was deferred the proposal seeking additional information from Project Proponent (PP). Point-wise replies submitted by the PP vide letter dated 14th June, 2021 in response to additional details sought (ADS) by EAC in its 12th meeting are as follows:

(i) Fish Conservation plan has not been modified as per recommendation of EAC

Reply:

- a) Fisheries Department of Government of Himachal Pradesh prepared Fishery Development Plan and granted No Objection Certificate (NOC) for Phase-I project. An amount of Rs. 1.11 crore has already been deposited to Fisheries Department, State Government of Himachal Pradesh. The copy of NOC by Fisheries Department, State Government along with fishery development plan has been submitted.
- b) While the State authorities need to be pursued for an early establishment of fish hatchery for which payment has been made, the project shall implement additional measures in consultation with State authorities, as suggested by CFRI and WII. It is therefore requested that Conditional Clearance, may kindly be accorded and the project proponent has given an undertaking that they shall implement, additional measures, for Fisheries Conservation as suggested CIFRI and WII.

(ii) Certified Compliance report of Regional office, MoEF&CC on earlier granted EC dated 7th September 2007.

Reply: The certified Copy Compliance report of Regional office, MoEF&CC on earlier granted EC dated 7th September 2007 has been submitted. The site visit from RO, MoEF&CC was done on 10th June, 2021.

13.7.3 *The EAC after deliberations observed that as per the R.O report, some points are stated as partially/being complied as project is in construction phase. The EAC recommended the proposal for*

the grant of Environmental Clearance to the project subject to compliance of applicable Standard EC along with following specific conditions:

- (i) Wildlife Conservation plan need to be prepared in consultation with Authorized department and allocated fund should be submitted to Forest Department within six months of issue of this letter.*
- (ii) The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP report. The budgetary provisions 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.*
- (iii) Environment matrix provided in EMP be revised if any data change. Number and period of stocking of Fish be incorporated in EMP.*
- (iv) Pasture Development Plan be revised in terms of Rate of plantation and their Cost.*
- (v) 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.*
- (vi) 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.*
- (vii) 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.*
- (viii) 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.*
- (ix) 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.*
- (x) Necessary control measures such as water sprinkling arrangements, and construction of paved roads leading to muck disposal sites etc. shall be taken up on priority to arrest fugitive dust at all the construction sites.*
- (xi) Stabilization of muck disposal sites using biological and engineering measures shall be taken up immediately to ensure that muck does not roll down the slopes and shall be disposed safely and that it does not pollute the natural streams and water bodies in surrounding area. Report of the same to be submitted to Ministry and its Regional office.*
- (xii) A multi-specialty hospital to cater the need of people living within 10 km radius of the project shall be established.*
- (xiii) Solar panel be provided to the families living in rural areas within 10 km radius of project.*
- (xiv) The e-flow shall continue to be released as per the previous EC granted to the project. Additionally, as committed, the PP shall release water from the barrage for any upcoming scheme of the HP Govt. in the intermediate stretch as and when required by them.*
- (xv) Computer labs with internet facility shall be established in primary schools within 10 km radius of project.*
- (xvi) Sport complex with multi- sport facility shall be established. The children's from economically weaker section shall be given free of cost sport facility.*
- (xvii) A time bound action plan for compliance of each of the above condition will be submitted to RO, MoEF&CC within 3months.*
- (xviii) Observations raised by RO, MoEF&CC in certified compliance report shall be complied with and if not done in stipulated time/ before commencement of Project, Environmental Clearance will be withdrawn.*

- (xix) *The Multi-Disciplinary Committee needs to be reconstituted and the meeting needs to be held at regular interval*
- (xx) *Recommendations of the Cumulative Impact Assessment and Carrying capacity Study of Satluj River Basin Study shall be followed strictly.*
- (xxi) *PP should establish in house (at project site) environment laboratory for measurement of environment parameter with respect to air quality and water (surface and ground. A dedicated team to oversee environment management shall be setup which should comprise of Environment Engineers, Laboratory chemist and staff for monitoring of air, water quality parameters on routine basis.*

The meeting ended with vote of thanks to the Chair.

ATTENDANCE LIST16th/ 17thJune, 2021

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	
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	
9	Shri Balraj Joshi	Member	Present only for item 13.6 and 13.7
10	Shri Sharvan Kumar	Member (Representative of CEA)	P
11	Shri A. K. Singh	Representative of CWC	P
12	Dr. J. A. Johnson	Representative of WII	
13	Dr. A. K. Sahoo	Representative of CIFRI	
14	Dr. Vijay Kumar	Representative of Ministry of Earth Sciences	A
15	Shri Yogendra Pal Singh	Member Secretary	P

APPROVAL OF THE CHAIRMAN

Fwd: corrected draft minutes of the 13th EAC Meeting- approval of the chairman (EAC)-reg. Inbox x



Yogendra Pal Singh via nic.in
to me ▾

4:04 PM (13 minutes ago) ☆ ↶ ⋮

From: kgopa@iisc.ac.in
To: "Yogendra Pal Singh" <yogendra78@nic.in>
Cc: "Munna Kumar Shah" <munna.shah@gov.in>
Sent: Friday, June 25, 2021 2:50:56 PM
Subject: Re: corrected draft minutes of the 13th EAC Meeting- approval of the chairman (EAC)-reg.

Dear Sir

Yes I approve it after taking care of all our expert's suggestions.

With warm regards

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

From: Yogendra Pal Singh <yogendra78@nic.in>
Sent: Friday, June 25, 2021 2:07 PM
To: Gopakumar K <kgopa@iisc.ac.in>
Cc: Munna Kumar Shah <munna.shah@gov.in>
Subject: corrected draft minutes of the 13th EAC Meeting- approval of the chairman (EAC)-reg.

External Email

Dear Sir,

The comments received from EAC members till date have been incorporated. Please find attach the corrected draft minutes of the 13th EAC Meeting held on 16-17 June, 2021 for approval please.