

Minutes of the 6th Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects held on 20th January 2021 from 11.00 AM - 01:15 PM through Video Conference.

In the 6th meeting of the re-constituted EAC for River Valley & Hydroelectric Projects which was held on 20/01/2021 under the Chairmanship of Dr. K. Gopakumar in the Ministry of Environment, Forest and Climate Change through video conference (VC). The following members participated in the video conference:

1. Dr. K. Gopakumar - Chairman
2. Dr. N. Lakshman - Member
3. Dr. Chandrahas Deshpande - Member
5. Dr. A.K. Malhotra - Member
6. Dr. Narayan Shenoy K. - Member
7. Shri Balraj Joshi - Member
8. Shri A.K. Singh - Representative of CWC
9. Dr. A.K. Sahoo - Representative of CIFRI
10. Shri Y. P. Singh- Member Secretary

Item No. 6.1 Confirmation of the minutes of 5th EAC meeting.

The minutes of the 5th EAC (River Valley & Hydroelectric Project) meeting held on 30th December, 2020 were confirmed with corrections mentioned below:

Following para at page 12 against item 5.2.2 shall be deleted:

xxii. PP apprised EAC that passage/fish ladder/fish bypass to provide migratory passage have been assessed to evolve effective conservation strategies for sustainable management of aquatic biodiversity. However, these passages have been found more effective in low head barrage but for high barrage passage are not found viable due to immediate loss of habitats. The barrage shall act as a barrier between the upstream and downstream habitat of migratory fishes because neither any fish ladder/pass has been provided in original layout nor constructed. Since all barrage bays and u/s and d/s wing/walls and piers have been completed, nor it is now feasible to construct any fish pass

Item No. 6.2: Discussion on Project Proposals:

Item No. 6.2.1: Kundah Pumped Storage Hydro Electric Project (4x125 MW) in Tehsil Udhamandalam, district The Nilgiris, Tamil Nadu by M/s Tamil Nadu Generation and Distribution Corporation – Environmental Clearance - Regarding. [Proposal No. IA/TN/RIV/183831/2019; File No. J-12011/62/2006-IA.I (R) Pt.]

Project Proponent along with the consultant (Mantec Consultants Pvt. Ltd., Noida) made the detailed presentation on the project and provided the following information to the EAC:

1. The Kundah Pumped Storage Hydro Electric Project (4x125 MW) is a Pumped Storage Scheme in Nilgiris hills of Tamil Nadu (Lat: 11 °20' & 11 ° 22' N & Long. 76°33' & 76°37' E) for providing peaking benefits utilizing the existing reservoir at Porthimund (live storage 20.10 Mm³ between FRL 2220.46m and MDDL of 2207.55 m) as the upper reservoir and Avalanche-Emerald reservoir (live capacity 130.84 Mm³ between FRL 1985.80m and MDDL 1957.98m) as lower reservoir. In this project proposal, no new reservoir is proposed. Both the existing reservoirs will be connected with tunnels which will serve as Head race & Tail race water conducting system. An underground powerhouse will be constructed between the two reservoirs and connected with the tunnels having installed capacity of 500 MW which includes:
 - a. Phase I includes all the common civil and hydro-mechanical works for all the units, exclusive civil works for unit 1, facilitating civil works for the remaining 3 units and supply and erection of one unit of 125 MW turbo generator and connected accessories alongwith EOT Crane.
 - b. Phase II includes exclusive civil works for unit 2 & 3 and supply, erection, testing and commissioning of 2nd and 3rd units along with all the project enabling works.
 - c. Phase III includes civil works such as penstock lining & machine foundation pertaining to the 4th unit and supply, erection, testing and commissioning of 4th unit along with all the project enabling works.
2. The water conductor system shall comprise one headrace tunnel, 2 numbers pressure shafts, 4 numbers penstocks, one tail race surge shaft & one tail race tunnel. The underground powerhouse is proposed to house 4 units of 125 MW each, which can be reached by means of an Access Tunnel.

3. Chronology of Environmental Clearance

- i. Initially, Environmental clearance for the Kundah Pumped Storage HEP (4x125 MW) in Nilgiris District of Tamil Nadu was accorded by Ministry vide letter dated 08.05.2007 and subsequently the validity of Environmental clearance was extended in stages and finally up to 07.05.2020 vide Ministry's letter dated 18.01.2018.
- ii. In the meanwhile, as the project could not be commissioned within the Environmental Clearance (E.C) validity period due to various reasons, Ministry was requested by TANGEDCO to extend the validity of E.C. vide letter dated 18.07.2019. However, MoEF&CC vide letter dated 17.10.2019, directed to initiate the process of obtaining Environmental Clearance de-novo. Accordingly, Project Proponent had submitted TOR application i.e. Form-1 and Detailed Project Report vide proposal No. IA/TN/RIV/121832/2019 on 21.10.2019.
- iii. Further, the Expert Appraisal Committee considered ToR proposal in its 28th meeting held on 31.10.2019 and directed that a Sub-committee may visit the site and submit their views for finalizing the ToR. Accordingly, a Sub-Committee of EAC/MoEF&CC visited the Kundah PSHEP project site on 06.12.2019. The Committee has recommended that it should be ensured that work at the project should not stop even if ToR is granted. The

recommendations of the Sub-Committee have also been endorsed by the EAC in its meeting on 27.01.2020.

- iv. Subsequently, the ToR issued vide F. No. J-12011/62/2006-IA-I (R) Pt., dated 05.06.2020 as per Standard ToR (Hydro projects) and additional ToR for preparation of EIA/EMP report for the activities at the proposed site as per the provision of the Environmental Impact Assessment Notification, 2006 and as amended time to time with one season fresh baseline data collection for preparation of EIA/ EMP report, permission to carry out construction work at the project site for a period of six months from the date of issue of this letter or grant of new Environmental Clearance, whichever is earlier and exemption of Public Hearing.
- v. In the meanwhile, baseline study for the preparation of EIA/EMP Report of Kundah PSHEP has been conducted during December 2019 to February 2020. Certified Compliance of earlier ECs has been obtained from Regional, MOEF&CC, Chennai dated 10.11.2020. EC application i.e. final EIA/EMP Report along with Form-2 has been uploaded on Parivesh portal of MoEF&CC on 19.11.2020.

4. Salient features of the project

- i. Head Race Tunnel (HRT) —1246.6 m long, 8.5 Dia D- shaped with peak discharge of 240 cumecs.
- ii. Head Race Surge Shaft (Restricted Orifice)-68 m for 28 m Ø. 16m for 10m Ø
- iii. Adit to Head Race Tunnel —433.5 m long, 7 m x 7 m, D-shape.
- iv. Pressure Shafts —2 Nos. each 298.5 m long, 5.5 m dia with peak discharge of 120cumecs.
 - v. Penstocks 4 Nos. each 50 m long, 3.9 m dia with peak discharge of 60cumecs.
- vi. Power House —An underground power house of size 156 m (L) x22m (W) x 48 m (H) including service bay to accommodate 4 nos. Francis reversible turbine type generating units of 125 MW each operating under rated generating net head of 236 m and a generating design discharge of 240 cumecs and rated pumping head of 248 m & a pumping design discharge of 183.28cumecs.
- vii. Transformer cavern —Size 137.00m (L) x 19.0 m (W) x 18.5 m (H)
- viii. Tail Race Tunnel (TRT) —939 m long 8.5 m Dia Circular with peak discharge of 240 cumecs.
 - ix. Tail Race Surge Shaft—72.50m high, 13m width and 52.0m length
 - x. Adit to Tail Race Surge Shaft —469 m long, 6.5m x 6.5m D —Shape
 - xi. Access Tunnel —1284 m long, 8 m x 8 m D-Shape.
 - xii. Cable Cum Ventilation Tunnel —869 m long, 6.5 m x 6.5 m D-Shape.
- xiii. **Land requirement:** Forest land requirement is 30ha. Forest clearance obtained vide letter dated 21.08.2013. Lease Agreement has been signed with State Forest Department.47.89ha of private land has been purchased. Out of this, 36 ha has been handed over to forest department towards compensatory afforestation. Balance 11.89ha of land is utilized for project purpose. No other additional land is required for the project. Total project cost comes to Rs. 1657.13 Crores (Rs. 1831.29 Crores including IDC) which includes the estimated cost of Phase I, II & III. The project would provide peaking benefits of 500 MW (daily peaking energy would be 3 MU with all 4 units of 125 MW each operating for 6 hours daily for the whole year except during the month of January). Annual average energy benefits (for 11 months) would be 1005 MU.

5. Present status of the Project:

A. Works completed:

- i. Mining in Main Access Tunnel' and 'Cable Cum Ventilation Tunnel' and all the Additionally Driven Inspection Tunnels (ADITs).
- ii. Pilot Tunnel excavation in Power House Cavern and Transformer Cavern.
- iii. Power House slashing, Transformer Cavern Slashing,
- iv. Mining in Unit Tail race tunnels I & II,
- v. Tail Race Surge chamber
- vi. Glory Hole excavation, Transformer Cavern benching.

B. Work under progress

- i. Power House Cavern benching, TRT benching,
 - ii. TRT surge chamber mining and TRT Gate shaft Excavation are under progress.
 - iii. Head Race Surge Shaft excavation, Pilot Tunnel Mining in Inclined portion of Pressure Shafts PS-1 & PS-2 and Ferrule erection chamber excavation and Head Race Tunnel mining are under progress.
6. Baseline data collection for the project is done for the Winter Season (December 2019 to February 2020). The analysis results show that soil is basic in nature as pH value ranges from 6.54 to 7.62 with organic matter 2.34%-3.09%. The concentration of Nitrogen (12.6 mg/100gm to 14.8 mg/100gm), Phosphorus (0.71 mg/100gm to 0.93 mg/100gm) and Potassium (8.1 mg/100gm to 9.2 mg/100gm) has been found to be in good amount in the soil samples.
7. Concentrations of Suspended particulate matter (SPM) in winter season the study area were observed from the minimum 57 $\mu\text{g}/\text{m}^3$ to the maximum value 123 $\mu\text{g}/\text{m}^3$. Concentrations of respirable suspended particulate matter less than 10 μm size (RSPM) in winter season the study area were observed from the minimum of 47 $\mu\text{g}/\text{m}^3$ to the maximum of 98 $\mu\text{g}/\text{m}^3$. Sulphur dioxide concentrations in winter season the study area were observed from the minimum of 3.30 $\mu\text{g}/\text{m}^3$ to the maximum value of 9.50 $\mu\text{g}/\text{m}^3$. Nitrogen dioxide concentrations in winter season the study area were observed from the minimum 7.00 $\mu\text{g}/\text{m}^3$ to the maximum value 14.50 $\mu\text{g}/\text{m}^3$.
8. Assessment of day time noise levels around the pumping station are ranging between 46.4 to 68.5 dB(A) during study period. Whereas the night equivalents were in the range of 37.5 to 56.5 dB(A). From the results it can be seen that the Day equivalents and the Night equivalents were within the Ambient Noise standards of residential areas standards.
9. Analysis results of surface water reveal that the pH varies from to 7.40 to 8.44, Total Hardness varies from 160 to 318 mg/l and Total Dissolved Solids varies from 122 to 340 mg/l. Analysis results of ground water reveal that the pH varies from to 7.36 to 7.68, Total Hardness varies from 154 to 188 mg/l and Total Dissolved Solids varies from 264 to 304 mg/l.

10. According to primary survey conducted in study area and consultation with the secondary resources, a total of 145 floral species belonging to 58 plant families have been listed in the project area. Based on the number of species, the most important plant families reported in this region are; Acanthaceae, Amaranthaceae, Euphorbiaceae, Fabaceae, Poaceae and Malvaceae etc.
11. As per inventory of the fauna recorded in the primary survey (by direct and indirect method) and reported in the secondary resources a total of 21 mammalian, 46 avian, 11 amphibian, 8 reptilian and 17 butterflies are found. The study area includes Nilgiris hills, upper small lake (Porthimund Lake) the lower large lake (Avalanche-Emerald Lake). The survey was carried out for assessment of aquatic flora and fauna and fisheries. The study recorded the presence of insects from 6 orders (Odonata, Hemiptera, Coleoptera, Ephemeroptera, Diptera and Trichoptera). Fishing activities are banned in the lakes of the Nilgiri hills. Common fishes reported in the area are-Trout, Nilgiri Danio, Black Mahseer, Ray-finned Fish, Gangetic Mystus, Black-line Rasbora, Common Carp, etc.
12. Based on the evaluation of baseline data and predicted impacts, suitable management plans have been prepared in order to ameliorate the negative impacts in the sphere of land, water, air, noise, biological and socio-economic environments. In Kundah Pumped Storage HEP, the environmental management actions will be integrated into the civil work contracts and other project planning and design activities. The EMP measures include mitigation or enhancement measures as appropriate to the nature of impacts. Detail break up EMP cost to mitigate the impacts is as follows:

Management Plan	Capital Cost (in lakhs)	Recurring Cost (in lakhs)	Total (in lakhs)
Catchment Area Treatment Plan	56.24	-	56.24
Fishery Management Plan	49.30		49.30
Greenbelt Development Plan	35.94	-	35.94
Biodiversity Conservation and Wildlife Management Plan	55.00	-	55.00
Muck Disposal Plan	12.695	11.77	24.465
Energy Conservation Measures	-	105.00	105.00
Restoration and landscaping of working Areas	35.00	-	35.00
Sanitation and Solid Waste Management Plan	50.00	-	50.00
Water and Air Quality & Noise Management Plan	40.00	-	40.00
Forest Protection Plan	25.00	-	25.00

Reservoir Rim Treatment Plan	50.00	-	50.00
Compensatory afforestation Plan	72.594	5.00	77.594
Disaster Management Plan	80.00	-	80.00
Local Area Development (Power Supply & Public Health Delivery system)	90.00	-	90.00
Total EMP Budget	651.769	121.77	773.539

13. The TNPCB had conducted public hearing meeting on 12.04.2007 for the Kundah Pumped Storage Hydro-Electric Project. During the above public hearing meeting it was requested to give priority to local public for employment. Unskilled labour from local public is being utilized to the extent possible. It was also requested that none of the houses shall be affected due to extension of roads. The same has been adhered. No other major issues were raised during the Public hearing meeting. Exemption from conducting fresh public hearing has been accorded by MoEF&CC in the fresh TOR issued.

Status of other statutory clearances-

S. No.	Statutory Clearances	Status
1.	Scoping and ToR from MoEF&CC, GoI	The application for ToR was filed on 21.10.2019. The Project proponent was granted ToR by MoEF&CC vide File No. J-12011/62/2006-IA-I (R) Pt, dated 05.06.2020.
2.	Signed Copy of the ToR	A signed copy of ToR was issued by MoEF&CC, New Delhi on 05.06.2020.
3.	Baseline Data Collection	December 2019-February 2020.
4.	Public Hearing	Exemption from conducting Public Hearing has been given by MoEF&CC while issuing ToR vide letter dated 05.06.2020
9.	MoEF / EAC Clearance	For seeking EC, the EIA/EMP report shall be submitted to EAC, MoEF&CC, GoI.
10.	NOC from State Pollution Control Board	Tamil Nadu Pollution Control Board accorded Environmental Consent to establish the project vide their letter dated 16.10.2007. Consent has been renewed up to 8.4.2020. Further renewal will be obtained on issue of fresh EC.
11.	Forest Clearance	<ul style="list-style-type: none"> • Stage-I Forest Clearance for the diversion of 30 ha of Forestland in Kaducuppa RF, Pothirmund RF & HiriyaShighe RF was obtained vide letter dated 27.11.2008.

		<ul style="list-style-type: none"> • Stage-II Forest Clearance for the diversion of 30 ha of Forest land in Kaducuppa RF, Pothirmund RF & Hiriyashighe RF was obtained from vide letter dated 21.08.2013.
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Observation and recommendation of the EAC in the earlier meeting:

Project was earlier considered in the 4thEAC 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 initially, Environmental clearance for the Kundah Pumped Storage HEP (4x 125 MW) in Nilgiris District of Tamil Nadu was accorded vide letter dt.08.05.2007 and subsequently the validity of Environmental clearance was extended in stages and finally up to 07.05.2020 vide dated 18.01. 2018. In the meanwhile, as the project could not be commissioned within the Environmental Clearance (E.C) validity period due to various reasons, MoEF&CC vide letter dated 17.10.2019, directed the Project Proponent to initiate the process of obtaining Environmental Clearance de-novo. Accordingly, proposal for ToR was submitted and granted with PH exemption, collection of one season baseline data. EAC further noted that the Kundah Hydro Power Project is located in the Buffer Zone of Nilgiri Biosphere Reserve area. The project area is surrounded by natural forests. The EAC after detailed deliberations and considering all the facts of the project deferred the project for want of following information:

1. As the project is located in the Buffer Zone of Nilgiri Biosphere Reserve area, impact study shall be carried out with detailed mitigation measures.
2. Conservation plan for Schedule I species to be prepared and submitted to the Chief Wildlife Warden for approval.
3. Details of CER to be made as part of EMP as per Ministry's OM dated 30.09.2020. Based on the concern/issues raised in the earlier Public Hearing, activities may be included in local area development of EMP.
4. Environmental matrix during construction and operational phase needs to be submitted.
5. Fisheries management plan alongwith budgetary provision to be submitted.

PP vide dated 11.01. 2021 submitted the above information (EDS reply) through Parivesh Portal and accordingly proposal was taken to the EAC for discussion in the 5th EAC meeting (present meeting).

Observation and recommendation of the EAC in the present meeting (6th EAC Meeting)

Project Proponent along with the consultant made the detailed presentation on the additional information sought by the EAC in the earlier meeting. After detailed presentation by the PP, EAC observed that PP has now submitted the information required in 4th EAC meeting. EAC also noted that Wildlife Conservation Plan has been prepared for Scheduled- I species and submitted to Principal Chief Conservator of Forests & Chief Wildlife Warden, Chennai for approval vide letter dated 07.01.2021. EAC also deliberated on the Fisheries plan and impact of the project on Nilgiri Biosphere Reserve area. EAC further observed that as per the Office Memorandum F. No. 22-65/2017-IA.III dated 30.09.2020 of the Ministry of Environment, Forest and Climate Change, the project proponents

submitted the provision for Power supply in nearby areas (esp. Governor Shola) (50 lakhs) and Public Health Delivery System (40 lakhs) based on the commitment made during Public hearing meeting held on 12.04.2007. As such, a provision has been made under Local Area Development Plan. EAC also noted that since the project is not on the stream and is a Pumped Storage Project; therefore EC conditions related to e flow, fish pass, and coffer dam are not applicable.

EAC after detailed deliberation on the other additional information and as presented by the PP, **recommended the proposal for grant of Environmental Clearance** subject to compliance of applicable Standard EC conditions with the following additional conditions:

1. The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP reports. 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.
2. Commitments made during Public consultation for the provision of Power supply in nearby areas (esp. Governor Shola) and Public Health Delivery System shall be taken up in time-bound manner. Implementation schedule be prepared and submitted to the concerned regional office of the Ministry.
3. Conservation plan for Schedule I species shall be implemented as approved by the CWLW.
4. Fisheries Management Plan shall be implemented in consultation with CIFRI.
5. 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.
6. Necessary permission to be obtained for quarrying construction materials, if any required, for the project as per the EIA Notification, 2006 and as amended thereof.
7. Disposal of the excavated muck and its filling on the low-lying area with proper measures for the stabilization and greenery to minimize the impacts of the generated construction muck shall be taken up pari passu with construction work. The muck shall not be allowed to go to water bodies.
8. The detailed Greenbelt Development Plan and Forest Protection Plan in consultation with forest department, Wildlife Conservation Plan duly approved by Chief Wildlife Warden, Fishery Management Plan in consultation with CIFRI and other EMP activities shall be implemented effectively by the project proponent for protection and restoration of ecology and environment of the project site area in the Nilgiri.
9. A detailed ecological monitoring and survey covering forestry, fisheries, wildlife and its habitat shall be done once in two years. Monitoring report shall be uploaded on the Parivesh Portal and a copy of the same be submitted to the regional office of MoEFCC.

Item No. 6.2.2 Expansion of Tubachi-Bableshwar Lift Irrigation Scheme (CCA: 52,700 ha) in Bagalkot District of Karnataka by M/s Karnataka Neeravari Nigam Ltd. (KNNL), Government of Karnataka – Terms of Reference (ToR) - Reg. [File No. J-12011/05/2015-IA I (R), Proposal No. IA/KA/RIV/ 70372/2017]

Project Proponent alongwith consultant (Environmental Health and Safety Consultants Pvt. Ltd.) made the detailed presentation before the EAC and inter-alia provided following information:

1. The proposed project is situated near Kavatagi village in Jamakhandi Taluk, Bagalkot District, Karnataka. Intake point of the proposed scheme is located at 16°31'50" N 75°25'28" E. Tubachi-Bableshwara Lift Irrigation Scheme was accorded Environmental Clearance by the Ministry of Environment, Forest and Climate Change, New Delhi on 31.07.2017 to irrigate 42,000 ha of command area by utilizing 3.8 TMC of water from Krishna River to benefit 36 villages of Vijayapura, Bagalkot and Belagavi Districts. The expansion proposal of Tubachi-Bableshwara Lift Irrigation Scheme involves expansion of command area from 42,500 ha to 52,700 ha with an additional water allocation of 2.473 TMC of water (totaling to 6.273 TMC) benefitting 31 more villages. The benefit cost ratio of the project is 1.29 considering the annual administrative expenses, depreciation charges and electrical energy charges. Construction work involves intake canal, pumping stations, pressure main and gravity canals. An intake canal of length 1800 m will be used to convey water to Pump house. The Government of Karnataka issued GO No.WRD 20 KBN 2016, dated 31/08/2017 w.r.t allocation of 21 TMC of available water under Indira-Pollavaram project for various Lift Irrigation Schemes. 6.273 TMC of water has been allocated for the proposed. The estimated project cost is Rs. 3572 Crores.
2. The Scoping/TOR clearance for the project was accorded on 29.11.2017. In order to assess the baseline environmental status, command area, 10 Km radius from the lift component and command area were considered and the data was collected for three seasons namely Post monsoon (Dec, 2017-Feb, 2018), Pre monsoon (March, 2018-May, 2018) and monsoon (June, 2018-Aug, 2018). As per the ToRs, the EIA/EMP report of the expansion project has been uploaded in the Karnataka State Pollution Control Board website for one month for receiving comments from common public during the period i.e., from 21.02.2019 to 20.03.2019 and no comments were received from the public. EC application for the expansion project was submitted to the Ministry on 08.01.2020.
3. The project was considered in the EAC meeting held on 27.01.2020 and sought additional information. Subsequently, based on the compliance submission, the project was again considered in the EAC meeting held on 24.06.2020. The EAC deferred the subject and deliberated as violation of EIA Notification, 2006.
4. Regional office of MoEF&CC was monitored project site. Certified Compliance Report issued by RO, MOEF&CC reported that, project attract violation of the EIA Notification, 2006. During the inspection **non-compliance's** to EC conditions, stipulated vide Environmental Clearance letter No. J-11011/5/2015-IA.I dated 31.07.2017, were observed. The comparative statement with reference to proposal for which EC was granted and expansion proposal is given below:

Sl. No.	Project component	42500 Ha Command area EC dt: 31.07.2017	52700 Ha Command area	Status of Construction	Start date	End date
1.	Intake Canal	1.3 Km	1.8 Km	Completed	September-2016	February-2018
2.	Jack well cum pump house	5+1	6+1	Completed	September-2016	February-2018
3.	Installation of pumps					
3a	Phase I	4+1	--	Completed	January - 2017	February - 2018
3b	Phase II	--	2	Completed	January - 2018	January - 2020
4.	MS Raising Main					
4a	Phase-I	28.94 Km	21.81 Km	Completed	January-2016	February-2018
4b	Phase-II	13.30 Km	21.48 Km	Completed	January-2018	December-2020
5.	Delivery Chambers	2	2	Completed	October - 2016	December - 2017
6.	Surge Tanks					
6a	Phase I	6	--	Completed	January-2017	February-2018
6b	Phase II	--	6	Nearing Completion	March-2019	-
7.	Main Canals					
7a	Kalbilgi East Canal	10.17	9.8	Completed	-	-
7b	Kajibilgi West Canal	21.14	20.0	Completed	-	-
7c	Tikota East Canal	22.70 km	22.70 km	Completed	31.01.2018	18.12.2019
7d	Kanamadi West Canal	27.19 km	27.19 km	Completed	04.07.2017	12.01.2019
8.	Aqua duct	10 Km	10 Km	Completed	04.07.2017	12.01.2019
9.	Branch Canals					
9a	North Canals	17.785	17.785	Under Progress	12.09.2018	Under Progress
9b	South Canals	18.47 Km	18.47km	Under Progress	12.09.2017	Under Progress
10.	Total Land requirement (ha)	105.73	2419.73	-	-	-
10a	Forest	0.73	0.73	Stage I approved & stage II under	December-2015	-

Sl. No.	Project component	42500 Ha Command area EC dt: 31.07.2017	52700 Ha Command area	Status of Construction	Start date	End date
				process		
10b	Private/Govt	105	2419	-	-	-
11.	No. of benefitting villages	36	61	-	-	-
12.	No. of benefitting district	3	3	-	-	-
13.	Project Cost	2488.97 Cr	3572 Cr	-	-	-
14.	Power Requirement	9 MW	76.50 MW	Completed	Jan- 2017	Feb-2018
15.	Type of irrigation	Drip	Gravity Flow	-	-	-
16.	Water requirement	3.8 TMC	6.273 TMC	-	-	-
17.	B C Ratio	1.51	1.29	-	-	-

Observation and Recommendation of the EAC in the earlier meeting

The EAC in the 30th meeting held on 27.01.2020 deliberated on the information submitted by the PP (EIA/EMP report, Form 2, R.O compliance report etc). EAC observed that as per the R.O report, PP had commenced the construction activities like Intake canal, Delivery Chamber- 1 and 2 and Pipe line from Intake canal to DC-1 and from DC-1 to DC-2 prior to the grant of the Environmental Clearance hence violation of EIA Notification 2006 and as amended thereof. Ministry may take up this matter as per the extant provisions and law. EAC further observed that in the instant project, PP proposed for drip to flood irrigation as the farmers are demanding for recharge the ground water. EAC is of the view that reasons for flood irrigation is not convincing and change in technology from drip to flood is against the Government policy i.e. per drop more crop. Therefore, EAC opined that instant proposal involving flood irrigation shall be revised. EAC after detailed deliberation deferred the proposal and sought additional information.

PP submitted the information as sought by the EAC on 26.05.2020 and accordingly proposal was considered in the 33rd meeting held on 24.06.2020. PP alongwith the consultant made the detailed presentation on the additional information. PP informed EAC that proposed project being the run of river lift irrigation and there are no structures proposed for storage of water, the project is planned to irrigate only during Kharif season hence providing drip irrigation only for one season is uneconomical and the infrastructure will be unutilized in the remaining crop season. Therefore, providing drip irrigation for only one season may not be economically feasible. On the issue of clarification on the forestland involved in the project from Divisional Forest Officer, PP informed that no forest land is involved in the expansion area, forest clearance is not required. Hence, clarification from DFO is not required. Conservation Plan for Schedule I species has been submitted to PCCF Chief Wildlife Warden Bangalore vide CE office letter No. KNNL/CEN/TBLIC-ENV/WGF/TAW-3/20-21/269 Dated. 12. 05.2020.

EAC in the 33rd meeting deliberated on the additional information and observed that PP did not submit the approval from CWC regarding total availability of 6.273 TMC of water for the instant project, clarification from the Divisional Forest Officer that only 0.73 ha of forest land is involved in the total 2419 ha of land and closing/status report from Regional Office of the MoEF&CC on the non-compliances. EAC after detailed deliberation observed that this proposal attracts the provisions of Ministry's Notification 804 (E) dated 14.03.2017 and recommended that proposal may be transferred to the Expert Appraisal Committee dealing with the proposals committed violation of EIA Notification, 2006 and as amended thereof, for further consideration. Further, matter was referred to the violation sector for consideration. Project was listed in the agenda of 35thEAC meeting for violation cases held on 06th-07th August 2020. However, PP vide letter dated 30.07.2020 informed that due to preoccupied programme, they will not be able to attend the 35thEAC (Violation) meeting. Thereafter a policy decision was taken by the MoEF&CC that the violation cases shall be considered by the respective EAC; accordingly, the present matter was then referred to the River Valley and HEP sector.

Observation and Recommendation of the EAC in the present meeting (6th)

Project proponent submitted the letter to the Ministry requesting to consider the proposal in next EAC meeting. Accordingly, proposal was considered during 6thEAC (River Valley and HEP sector) meeting. Project proponent made the detailed presentation before the EAC. EAC after detailed presentation observed that as per the R.O report, PP had commenced the construction activities like Intake canal, Delivery Chamber- 1 and 2 and Pipe line from Intake canal to DC-1 and from DC-1 to DC-2 prior to the grant of the Environmental Clearance hence violation of EIA Notification 2006 and as amended thereof. EAC further noted that PP has already collected the baseline data and prepared the EIA/EMP report.

EAC deliberated on the project and opined that Project proponent shall prepare additional chapter on the damage assessment and validate the EIA/EMP report with one season fresh base line data. EAC further noted that clarification from the Divisional Forest Officer that only 0.73 Ha of forest land is involved in the total 2419 ha of land is yet to be submitted by the PP. Further, as project is being taken on the interstate Krishna River, Pre DPR approval from CWC shall be submitted with the updated EIA/EMP report. After detailed, deliberation EAC recommended the following additional ToR:

- i. The State Government/SPCB to take action against the project proponent under the provisions of section 19 of the Environment (Protection) Act, 1986.
- ii. Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR) institution working in the field of environment.

- iii. Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.
- iv. The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter in the EIA report by the accredited consultants.
- v. Validation of present base line data with one-season fresh base line monitoring of all the environmental attributes.
- vi. Clarification from the Divisional Forest Officer that only 0.73 Ha of forest land is involved in the total 2419 ha of land.
- vii. As project is being taken on the interstate Krishna river, Pre DPR approval from CWC shall be submitted with the updated EIA/EMP report.
- viii. A statement regarding issues raised during earlier Public hearing and activities proposed to address such issues as per provisions of the Ministry's Office Memorandum dated 30.09.2020 regarding CER, shall be made part of EMP under local area development plan.

Item No. 6.2.3: Any other items with the permission of the Chair:

Item No. 6.2.3.1: Dugar Hydroelectric Project in Chamba District of Himachal Pradesh – Amendment of ToR – Reg. [Proposal No: IA/HP/RIV/184065/2020; File No. J-12011/08/2020-IA-I (R)]

The proposed Project is located in Pangri valley of Chamba district of Himachal Pradesh. Project is envisaged as a run-of-river scheme for utilizing the flow of Chenab River to harness the head created by constructing a 128 m high (from deepest foundation) concrete gravity dam near Luj village with FRL of EL 2114.00 m a.s.l. and the proposed underground power house (412 MW main plant) located on the left bank of Chenab River just downstream of dam.

Earlier project was considered in the 4th EAC meeting held on 02.12.2020. EAC after detailed deliberation and information submitted by PP to this ministry, **recommended the proposal** for the amendment in the granted ToR i.e. change in the installation capacity from earlier vetted 449 MW (main plant 380MW + Aux. Plant 69 MW) to 500MW (Main Plant 412, Aux. Plant 88MW). PP submitted that there is no change in other important project parameters like Dam height, FRL, Submergence area, total land requirement etc.

It was brought to the notice of the committee that the instant proposal in CIA/CCS of Chenab river basin has been approved for 449 MW whereas present application for an amendment envisage 500 MW.

In present meeting, the matter regarding enhancement in installed capacity to 500 MW was deliberated in terms of recommendations of the Chenab river basin study. After detailed deliberation, EAC recommended that the proposed change in the installation capacity from earlier vetted 449

MW(main plant 380MW + Aux. Plant 69 MW) to 500MW (Main Plant 412, Aux. Plant 88MW) is due to recalculation of power potential based on the updated hydrological data as approved by Central Electricity Authority(CEA). Since, there is no change in other important project parameters like Dam height, FRL, Submergence area, total land requirement etc., the proposed change in installation capacity will not have considerable impact on ecology in the region. However, 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.
