

Minutes of the 15th Meeting of the Expert Appraisal Committee for River Valley & Hydroelectric Projects held on 28.06.2018 at Teesta Meeting Hall, 1st Floor, Vayu Wing, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-3.

The 15th meeting of the re-constituted EAC for River Valley & Hydroelectric Projects was held on 28.06.2018 with the Chairmanship Dr. S.K. Jain in the Ministry of Environment, Forest & Climate Change at Teesta Meeting Hall, 1st Floor, Vayu Wing, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi. The following members were present:

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|----|--------------------|---|-------------------------|
| 1. | Dr. S.K. Jain | - | Chairman |
| 2. | Shri Sharvan Kumar | - | Representative of CEA |
| 3. | Shri N.N. Rai | - | Representative of CWC |
| 4. | Dr. A.K. Sahoo | - | Representative of CIFRI |
| 5. | Shri Chetan Pandit | - | Member |
| 6. | Dr. D.M. More | - | Member |
| 7. | Dr. T.P. Singh | - | Member |
| 8. | Dr. S. Kerketta | - | Member Secretary |

Dr. J.A. Johnson, Dr. Vijay Kumar, Prof. S.R. Yadav, Dr.(Mrs.) Poonam Kumria, Dr. J.P. Shukla, Dr. R. Vasudeva and Dr. Govind Chakrapani could not present due to pre-occupation. The deliberations held and the decisions taken are as under:

Item No. 15.0 Confirmation of minutes of 14th EAC meeting.

The Minutes of the 14th EAC (River Valley & Hydroelectric Projects) meeting held on 28.05.2018 were confirmed.

Item No. 15.1 Cumulative Impact Assessment and Carrying Capacity Study of Beas River Basin, Himachal Pradesh - Re-consideration of the Study Report before the EAC

The recommendations of the CIA & CCS report of Beas River Basin along with the site visit report of the Sub committee of EAC was deliberated in the 13th EAC meeting held on 27.04.2018, subsequent to this, Directorate of Energy, Government of Himachal Pradesh had requested to attend the EAC meeting for submissions of their comments on the recommendations of Beas River Basin Study on behalf of state of Himachal Pradesh. The Ministry agreed the request. And accordingly, two Officials of the Directorate of Energy, Govt. of H.P attended the 15th EAC meeting and *inter-alia*, made a detailed presentation on the recommendation of the study report.

EAC deliberated on all the issues. Project wise deliberation and the recommendation of the EAC is as follows:

1. **Jobire HEP (12 MW)** – The project has been recommended for dropping as some of project its components falls in Inderkilla Wildlife Sanctuary. Govt. of H.P. mentioned that some of the project’s components are on the boundary of the protected area and sought some time to redefine/revisit so that no component would fall within the protected area.

EAC deliberated on the matter and asked the H.P. Govt. representative to revise the project proposal so that it would completely fall outside the protected area and also the ESZ boundary. It was agreed that H.P. Govt. would approach MoEF&CC within 2 months with revised project details along with a certificate from Chief Wildlife Warden that all components of the revised project are located outside the protected area and ESZ.

2. **Manalsu HEP (21.9 MW)** – The project has been recommended for dropping as the project falls in Manali Wildlife Sanctuary. Govt. of H.P. agreed to it and confirmed that the project shall not be allotted.
3. **Bujling HEP (20 MW)** – The project has been recommended for dropping as some of project its components fall in Dhauladhar Wildlife Sanctuary. Govt. of H.P. mentioned that some of the project’s components are on the boundary of the protected area and sought some time to redefine/revisit so that no component would fall within the protected area.

EAC deliberated on the matter and asked the H.P. Govt. representative to revise the project proposal so that it would completely fall outside the protected area and also the ESZ boundary. It was agreed that H.P. Govt. would approach MoEF&CC within 2 months with revised project details along with a certificate from Chief Wildlife Warden that all components of the revised project are located outside the protected area and ESZ.

4. **Makori HEP (20.8 MW)** - The project has been recommended for dropping as the project falls in Dhauladhar Wildlife Sanctuary. Govt. of H.P. agreed to it and confirmed that the project shall be cancelled.
5. **Palchan Bhang HEP (9 MW) and Bhang HEP (9 MW)**– Beas basin study has recommended that Palchan Bhang HEP levels are 2,246 m to 2,035 m and Bhang HEP levels are 2,240 m to 2,104 m. Due to conflicts in level only one project was possible. Govt. of H.P clarified that these are two parallel schemes, one on Kothi Khad, a tributary of river Beas and another on Beas river and there is no level conflicts between these two schemes. EAC discussed the matter and recommended that both the schemes can be developed, as they are independent schemes. Govt. of H.P was requested to submit a location map showing the layouts of both the projects components and levels.
6. **Seri Rawela (7 MW)** – The Project has been recommended for dropping as the project is located at an elevation of 3000m in an area, which is characterized by moist alpine scrub and the area is rich in biodiversity.

Govt. of H.P submitted that the project may be allowed with stringent conditions to conserve the Biodiversity, and ensured that all the necessary measures shall be adopted in designing of the project, during construction of the project and also after commissioning. EAC deliberated the concerns in detail and concluded that as the project is in near vicinity of Rohtang tunnel portal, Small HEP be taken up, with adequate precautions to minimize adverse impacts on biodiversity.

7. **Raison HEP (18 MW)** – Beas RBS has flagged this project for detailed deliberations. The project is proposed on the Beas river, upstream of Kullu, along the Kullu – Manali National Highway. The river stretch along with tributaries has several trout fishing sites, besides there was lot of constructional activities are in progress for widening of the NH.

Govt. of H.P. submitted that this project is proposed to be developed as a model project by using the head attained by the meandering of Beas river stretch at Raison. The technology to be adopted for the construction of this HEP with flexible weir option will have the least impacts in comparison to what has been anticipated in the report. The concept and proposal of the project have already been appreciated by the experts in the fields.

EAC deliberated on the issue in detail and considering the new technology, recommended this project for development.

8. **Four projects on Parbati River viz. Parbati HEP (12 MW), Sharni HEP (9.6 MW), Sarasadi HEP (9.60 MW) & Sarasadi-II HEP (9 MW)** – Beas RBS has flagged these projects, proposed on Parbati river in cascade in about 15 km of river stretch without any significant inter-project free flow stretch. Further, this river stretch is rich in fish fauna and trout is known to migrate upstream in Parbati river along this stretch from Beas. Development of this stretch would hamper trout movements and also during construction phase the road to Manikaran Sahib will be severely affected. Govt. of H.P. has submitted that they will redefine the projects to ensure the minimum free flowing river stretch is maintained between projects in cascade and shall also ensure fish movement by provisions of well-designed fish ladders. Further Sharni HEP (9.6 MW) and Sarasadi HEP (9.6 MW) are proposed to be dropped. It was also submitted that project construction will be taken up in phased manner.

EAC recommended that Govt. of H.P. may redefine these projects by ensuring minimum 1 km of free flowing river stretch between FRL and TWL of projects in cascade. E-flows have to be provided as per the norms and the impact on the river should be minimum. Revised project configurations be submitted within 2 months and the same shall be deliberated in EAC.

9. **Nakhtan HEP (460 MW)** – Beas RBS has flagged the project as the proposed project is located on the boundary of Khirganga National Park and falls within the ESZ boundary of Great Himalayan National Park Conservation Area (Khirganga National Park is a part). Further, the matter related to diversion of Tosh Nalla for Nakhtan HEP is sub-judice.

Govt. of H.P., requested that the recommendations on above two aspects may be left for the stage of individual EC of this project.

EAC noted the concerns raised and concluded that it is a legal requirement to keep the project components outside the ESZ. Further, the court order with respect to diversion of Tosh Nalla will be binding on project developer. Therefore, once the matters are resolved, a fresh look will be taken at the project at that point of time.

10. **Environment Flow Release Recommendations** – With respect to environment flow release recommendations of all the projects viz., operational, under construction and proposed as made in Beas river basin study report; GoHP has submitted that project specific e-flow release with respect to 8 operational projects and 3 under construction projects should not be considered. These Hydro Electric Projects are bound by GoHP Notification dated 09.09.2005 regarding release of e-flow which states that “threshold value of not less than 15% of the minimum inflow observed in lean season to the main river water body whose water is being harnessed by the project” shall be the quantum of minimum flow of water to be released and maintained immediately down stream of the diversion structure of existing and upcoming hydel projects. The same has also been incorporated in the respective agreements executed for these HEPs and accordingly the e-flow is being maintained and monitored through Himachal Pradesh State Pollution Control Board. However, few developers like Bhakra Beas Management Board, Punjab State Power Corp. Ltd., etc. were not following the notification and have moved to the Hon’ble NGT. Now as per 9th August, 2017 orders of Hon’ble NGT, all these HEPs have been directed to maintain e-flow @ 15-20% of the average lean seasons flow of a particular river. GoHP requested that let the e-flow release be as per NGT order rather than as per the basin study report because implementation of recommendation of basin study report on operational and under construction project would be a challenge for the state and developers can again take the legal recourse.

EAC noted the issue and asked Govt. of H.P. to make a comparative statement within 2 months for all under construction and operational projects about the e-flow and energy generation under all the three scenarios viz. present release, release as per NGT order and release as per basin study report. The matter will be again deliberated in EAC on receipt of this information.

E-flow release recommendation of 3 proposed projects viz. Thana Plaun (191 MW), Triveni Mahadev (96 MW) and Malana-III (30 MW) HEPs has been accepted by the state government.

E-flow release recommendation with respect to Dhaulasidh HEP (66 MW), may require revision as the 90% dependable year as per the approved DPR and as taken in Beas river basin study appears to be different. EAC opined that the results be re-examined and submitted.

GoHP also requested that e-flow release requirement with respect to Nakhtan HEP should not be fixed at this stage because based on court order and ESZ boundary resolution, project components will undergo certain changes. Based on final project components, a fresh e-flow requirement study will be undertaken and presented along with the EIA report at the time of environment clearance. EAC agreed with the submission.

Beas RBS shall be deliberated after receiving the requisite information from Govt. of H.P. after two months.

Item No. 15.2 Head Regulator and Indo-Nepal Link Canal at village Sailanigoth, Tanakpur, district Champavat, Uttarakhand by M/s NHPC Ltd - for Scoping/TOR. (File No. J-12011/53/2018-IA.I(R) & Online No. IA/UK/RIV/75334/1993)

Project Proponent submitted online application on 08.06.2018 for amendment of Environmental Clearance for the above mentioned project and *inter alia*, presented the following information:

- i. The proposed head regulator (35 m length) and Indo-Nepal link canal (1.15 km length) on the left bank of Mahakali River (Sharda river) and Tanakpur Barrage will transport the water of about 28.35 cumecs (1000 cusecs) and 8.5 cumecs (300 cusecs) during wet season and dry season, respectively to Nepal for irrigation purpose. The command area for which water is supplied is in Nepal.
- ii. The water of 28.35 cumecs (wet season) and 8.5 cumecs (dry season) is to be supplied to Nepal as per the Mahakali Treaty, a bilateral agreement between Nepal and India which was entered in 1996.
- iii. As a part of the Mahakali Treaty, India is obliged to supply 70 MU per annum of energy generated from Tanakpur Power Station to Nepal, to construct a head regulator near the left under sluice of the Tanakpur Barrage and to construct waterways of required capacity up to India-Nepal Border for supplying 28.35 cumecs and 8.5 cumecs of water during dry and wet seasons, respectively.
- iv. The main component of the proposed project includes inlet waterway (11.25 m), approach channel (31.0 m), Head regulator (35.0 m), canal (1.15 km) and cross drainage work (23.0 m width).
- v. Total land required for the proposed waterway is 38 ha (including 26 ha of stone quarry area, Reserve Forest) which is a forestland. Proposal for Forest Clearance is in progress which will be submitted to the State Forest Department.
- vi. The quarry area is proposed downstream of Tanakpur Barrage for which 26 ha of Reserve Forestland is to be acquired. In case, Uttarakhand Forest Corporation gives permission to lift construction materials from the river bed, the forestland of 26 ha Reserve Forestland proposed for quarry sites may not be diverted in future.

- vii. Cost of the project is Rs. 80 crores (which includes escalation cost of Rs.5 Crores, July, 2016 PL).

Project Proponent further submitted the details of existing Tanakpur Power Station and Barrage as follows:

- i. Environmental Clearance for Tanakpur Barrage and Power Station of 94.2 MW was accorded by the Ministry/DST on 20.01.1983.
- ii. Government Sanctioned the Tanakpur Power Station on 20.09.1984.
- iii. Forest Clearances have been accorded for Tanakpur Power Station on 05.06.1986 and 16.11.1988 for an area of 304.5 ha forestland.
- iv. 350 ha of non-forest land was acquired and handed over to State Forest department as a part of the Compensatory Afforestation. Rs. 65 Lakhs was paid against cost towards compensatory afforestation.
- v. Commercial operations of Tanakpur Power station started in 1992.

Earlier the PP applied for grant of ToR for construction of Indo-Nepal Link canal with a length of 1.15 km and allied facilities. However, the Committee noted that as per the EIA Notification dated 25.6.2014, the following activities require prior Environmental Clearance:

Project Activity	Category with threshold limit		Conditions if any
	A	B	
1(c)	(i) ≥ 50 MW HEP generation; (ii) $\geq 10,000$ ha of CCA	(i) < 50 MW ≥ 25 MW HEP generation (ii) $< 10,000$ ha & $\geq 2,000$ ha CCA	General Conditions; Note: i. Category 'B' river valley projects falling in more than one states shall be appraised at the Central Govt. Level.

The Committee also noted that the proposed activity has neither cultural command area nor hydroelectric power component. Accordingly, it will not require prior Environmental Clearance. The command area of the project is in the Nepal area. Project Proponent submitted that the requisite clearances for canal and command area in Nepal portions is being obtained from the Govt. of Nepal. Accordingly, the proposal was returned to the PP as the proposed activity does not require prior Environmental Clearance as per the EIA Notification and its amendments thereof. The PP further submitted that as per the recommendation of the EAC, amendment of environmental clearance has been applied and the same may be recommended so that early execution of the project work can be taken up. Committee noted that as the Ministry/DST has issued the Environmental Clearance for Tanakpur barrage and power station on 20.01.1983 and the project is now in operation.

After deliberation, **the EAC recommended for grant of amendment in Environmental Clearance** of the proposal with the following additional conditions:

1. In case acquisition of private land and displacement of families is involved, then the R & R to be followed as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
2. Stage-I forest clearance to be submitted for acquisition of 26 ha of forestland as per the Forest (Conservation) Act, 1980.
3. In case mine quarry is envisaged for borrow materials, necessary permission be obtained as per the EIA Notification, 2006 and amendments thereof.

Item No. 15.3 Renukaji Dam Project (40 km) in Sirmaur district, Himachal Pradesh, M/s Himachal Pradesh Power Corporation Ltd.- reg. Amendment of Land requirement in the EC. (File No. J-12011/53/2018-IA.I(R) & Online No. IA/HP/RIV/10073/2018)

Project Proponent applied on 02.06.2018 online for amendment of land requirement in the Environmental Clearance (EC) letter online on 02.06.2018. The PP presented the proposal and inter-alia provided the following:

- i) The land requirement shown in the EC letter is 1477.78 ha. The extend of land requirement as shown in the EC letter is based on the summary submitted at the time of submission of the application for grant of EC in September, 2008 and was based on the land requirement calculated up to FRL/MRL. For safety reasons land is being acquired at 5.5 m above FRL. Total land requirement for the project worked out in final EIA/EMP submitted was 2239 ha. The total land requirement of the project after detailed investigation & survey and physical verification under Sections 6, 7 & 8 of Land Acquisition Act has been re-assessed as 1988.27 ha instead of 2239 ha.
- ii) Now the land requirement has been finalized to be 1988.27 ha. Out of which 909 ha is forestland (Territorial Forest = 646.00 ha, Sanctuary area = 49.00 ha, Deemed forest (Govt. land) = 80.00 ha, Kisam jungle jhadi = 134.00 ha), 1064.27 ha is private and 15 ha is Govt. Land. Out of total land to be acquired, an area of 1508.04 ha will be submerged. In-Principle approval for diversion of 909 forest land has already been accorded by Ministry of Environment, Forest and Climate Change, Government of India during February, 2015 vide F.No.8-41/2009-FC dated 20.02.2015.
- iii) Subsequently, grant of Environment Clearance was challenged by local people before the National Environment Appellate Authority (NEAA) (later on National Green Tribunal) during November, 2009 and before High Court, Shimla during 2010. All the three PILs have also been filed in

Hon'ble High Court on the similar issue. The petition and PIL's Hon'ble High Court have been transferred and clubbed with the case in NGT. The Hon'ble NGT has disposed off all appeals by a common judgment on 02.02.2016.

- iv) In the order, the Hon'ble NGT has constituted an eight-member committee to study and examine the sufficiency of all compliances on the Project which shall submit its report. Committee submitted the affidavit in Hon'ble NGT that State Govt. will make necessary amendments in land requirement of EC as finalized. However, the report of the committee couldn't be placed before the EAC.

After detailed deliberations, the Committee deferred and stipulated the following additional conditions:

- i) A copy of the report submitted by the 8-member committee that has been constituted by the Hon'ble NGT, Principal Bench, New Delhi, may be provided.
- ii) Point-wise EC compliance report of the project.
- iii) Status of implementation of CAT plan.
- iv) Present status of the construction work.

Accordingly, **the proposal has been deferred** and shall be taken up in the subsequent EAC meeting after submission of satisfactory reply.

Item No. 15.4 Extension, Remodeling and modernization of Kosi Canal system in Rampur district, Utter Pradesh by U.P. Irrigation and Water Resources Department, Govt. U.P. – For Fresh EC. (File No. J-12011/6/2008-IA.I & Online No. IA/UP/RIV/74762/2017)

This is Extension, Remodeling and Modernization of Kosi Canal System in Rampur District of Uttar Pradesh by U.P. Irrigation & Water Resources Department, Government of Uttar Pradesh.

The project is an extension/remodeling/modernization of Kosi canal system taking off from Lalpur weir across Kosi river in Rampur District of Uttar Pradesh. It comprises of 197.63 km long distribution system to cater to CCA of 24,250 ha. Being more than 122 years old and after having withstood the onslaught of fury of historical floods in 1924 (0.94 lakh cusec), in 1947 (0.69 lakh cusec) and 2010 (1.278 lakh cusecs) and many flash floods, the weir had been under severe stress with its few bays, wells and downstream floor getting scoured, damaged and cracks have appeared in the downstream floor and piers and frequent boiling was encountered in the downstream bays. Damages observed from 1969 revealed that the structure of Lalpur weir has outlived its

useful life because some of the damages cannot be repaired and are of permanent type. The maintenance of the old weir had become quite costly proposition and the danger of its collapse was looming large. In the wake of aforementioned technical grounds and to ward off the most frightening exigency of the irrigation system being severely affected, it is, judicious and prudent to construct a new barrage on war footing in lieu of more than century old weir well in advance before any calamity happens.

The said proposal was appraised by the EAC for River Valley and Hydro Electric Power Projects (RV&HEP) in its meeting held on 22.9.2017 and EAC recommended scoping/TOR clearance for this project. Accordingly, the Ministry issued TOR on 11.10.2017. This being a modernization of the project of existing irrigation system, public hearing is exempted as per EIA Notification. Accordingly, vide letter dated 4th December, 2017, exempted the public hearing for modernization of irrigation projects (item 1 (c) (ii) of the Schedule). However, the project proponent is advised that after preparation of EIA/EMP report, the same could be displayed for at least one month on the website of the SPCB to invite any comments/suggestions from the general public. The comments, if any received, shall be intimated to the Ministry and also included in the EIA/EMP report. The PP and State Pollution Control Board informed Ministry that the same was followed and no comments have been received.

The PP has mentioned that against annual irrigation intensities of 57%, about 50% could hardly be achieved mainly because the weir unable to divert the discharge into canal. The maintenance of the old weir had become quite costly proposition and the danger of its collapse was looming large. Therefore, to construct a new barrage on the downstream was urgently required to obviate any unfortunate situation of the sudden failure of the structure. The ERM project envisages construction 352 m long replacement barrage and appurtenant works, about 3 km d/s of old Lalpur weir. It also involves remodeling of canal and distributary system to cope-up with 200 cusec increase in discharge from 400 cusec to 600 sec, with 0.47 m increase in FSL at existing head regulator. Due to EMR, the existing annual irrigation intensities of 57% (13,823 ha) shall be increased to 90% (21824 ha). The total land requirement is 147.36 ha, out of which 27.51 ha is revenue land and 119.85 ha is private land under 4 villages. No forest land is involved. There will be no displacement of people and agricultural land and revenue land will be submerged. The compensation for private land will be followed as per UP State Government norms based on the G.O. 2/2015/215/F-13-20(48)/2011 dated 19.3.2015. The estimated cost of the project is about Rs.216.36 crores.

It has been mentioned that after modernization, the crop intensity during kharif and rabi shall be adopted as 55% and 35% respectively with annual irrigation intensity adopted as 90% of the culturable command area (CCA). The 10 daily water requirement of Kosi canal system has been analyzed and peak water peak water requirement for Kharif irrigation has been assessed as 15.7 cumecs. The overall head discharge for feeding main canal has been adopted as 17 cumecs. The total volumetric requirement of water during Kharif, Rabi and

Zayad shall be 86.81 MCM, 59.61 MCM and 6.95 MCM respectively. Micro irrigation system shall be adopted in 8% of the command area towards tail distributaries. The design flood has been calculated on the basis of Dicken's formula. The design discharge has been computed as 1,87,200 cusec (5513 cumecs) against the ever maximum observed 127845 cusecs (3531 cumecs). The percentage of inflow to the average discharge on d/s of the barrage during lean (Dec-Feb) shall be 30.4%, monsoon season (June-Sept) 69.4% and non-lean/non-monsoon season (Oct-Nov, Mar-May) 62.3%. The baseline data has been collected for 2 seasons (Monsoon and Post Monsoon 2017) as per the TOR.

The EMP has been prepared based on predicted impact, actual requirement and with the details as under:

Table: Cost estimates for implementation of EMP

Sl. No.	Environmental Management Plan	Cost (Rs. in lakhs)
1.	CAT Plan	375.00
2.	CAD Plan	2,830.00
3.	Greenbelt Development	11.00
4.	Biodiversity & Wildlife management Plan	15.00
5.	Fisheries Development	58.00
6.	R & R Plan	3,899.00
7.	Reservoir Rim Treatment	4.00
8.	Muck Management Plan	5.00
9.	Land Scape restoration Plan	7.00
10.	Restoration of Quarry Areas	6.00
11.	Disaster management plan	10.00
12.	Water, Air & Noise management Plan	12.00
13.	Public Health delivery system	22.00
14.	Labour Management plan	10.00
15.	Sanitation and Solid Waste Management	25.00
16.	LAD Plan	54.00
17.	Environmental safeguard during construction	8.00
18.	Energy Conservation Measures	12.00
19.	Environmental Monitoring	15.00
Total		4,548.00

After detailed deliberations, the EAC recommended for grant of Environmental Clearance to the proposed project with the following additional conditions:

1. In case of acquisition of private land and displacement of families to done, then the R & R to be followed as per the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.

2. In case mine quarry is envisaged for borrow materials, necessary permission be obtained as per the EIA Notification, 2006 and amendments thereof.
3. Fish pass has been suggested for the migration of fishes. The proposal has been found to be not as per the scientific understanding. Therefore, detailed design proposed be submitted for authentication by the EAC members.
4. Inventorization of fish species as reflected in the EIA report is incomplete. Data may be collected from the secondary sources and be submitted so that the same can be authenticated from the domain experts.
5. Once the above sought information are reconciled, grant of EC shall be processed.

Item No. 15.5 Kirthai Stage I (390 MW) in Kishtwar District of Jammu & Kashmir by J&K State Power Development Co. Ltd., Govt. of Jammu & Kashmir – For Fresh environmental Clearance. (File No. J-12011/6/2008-IA.I & Online No. IA/JK/RIV/64942/2012)

Project Proponent applied for grant of Environmental Clearance on 02.06.2018 online for development of hydropower of 390 MW IC. As the Project Proponent did not attend the meeting and requested for deferment, the proposal has been deferred for the subsequent EAC meeting accordingly.

Item No. 15.6 Kirthai Stage II (930 MW) in Kishtwar District of Jammu & Kashmir by J&K State Power Development Co. Ltd., Govt. of Jammu & Kashmir – For Fresh environmental Clearance. (File No. J-12011/16/2012-IA.I & Online No. IA/JK/RIV/64947/2012)

Project Proponent applied for grant of Environmental Clearance on 02.06.2018 online for development of hydropower of 930 MW IC. As the Project Proponent did not attend the meeting and requested for deferment, the proposal has been deferred for the subsequent EAC meeting accordingly.

Item No. 15.7 Myntdu Leshka Stage-II HEP (210 MW) in West Jaintia Hills of Meghalaya by Meghalaya State Electricity Board – for Scoping/TOR. (File No. J-12011/13/2018-IA.I(R) & Online No. IA/ML/RIV/74834/2018)

Project Proponent applied for grant of ToR on 02.06.2018 online for development of 210 MW IC powerhouse in West Jaintia Hills, Meghalaya. The PP presented their proposal and *inter-alia* provided the following:

The Myntdu Leshka Stage-II HEP (3x210 MW) is proposed on Myntdu River in West Jaintia Hills District of Meghalaya. The project envisages construction of 44 m high concrete gravity across Myntdu River near village Trangbland for

hydropower development with an installed capacity of 210 MW. This is run-of-the-river scheme. The catchment area of the project is 480 km². The total land requirement for the project is about 1,000 ha. Total submergence area is about 140 ha. Dam is constructed to provide a live storage of 2.93 million m³ with a FRL at EL 270 m and MDDL at 253 m. The tailrace water level is at an elevation of 13 m to release water back to the river. The water will be diverted through 6.257 km long, 6 m diameter horse-shoe shaped Head Race Tunnel (HRT) to a surface powerhouse. A surface powerhouse is proposed with 3 units of 70 MW capacity each. This project is located at lowest most position of the Leshka river and the tailrace water goes to Bangladesh. The total cost of the project is Rs. 2881.19 Crores and proposed to be completed in 6 years after the zero date is established.

The studies for assessment of power benefits have been carried-out for hydrological years 2004-05 to 2014-15. The maximum, minimum and average annual flows observed are to be 2914.44 MCM, 1668.71 MCM and 2290.85 MCM, respectively. The total design discharge would be 99.62 cumecs for all the three units. The water availability series for the project has been taken as total sum average of water for calculation the average flow during the last 10 years and not as 10 daily series in 90% dependable year.

The Expert Appraisal Committee (EAC) considered the project for River Valley & Hydroelectric Projects in the meeting and observed the following:

- i. At least three alternates (including the present one) of the proposed sites be submitted to ensure the best viability of the project.
- ii. The working table for utilization of the water availability for the project based on the total sum average for the last 10 years (from 2004-05 to 2014-15) was not proper. The water availability is based on 10-daily water discharges corresponding to 90% dependable year showing the intercepted discharge at the barrage/dam. Therefore, the committee observed that a detailed table depicting hydrology for the last 10 years be prepared and presented. The annual rain fall may also be presented for getting a clear idea of the project.
- iii. The free flow stretches between Myntdu Leshka Stage-I and this project is about 0.63 km only and this is not as per the norms of maintaining 1 km minimum distance between 2 consecutive projects. The project is located at deep gorges and no suitable area to shift the dam axis and other are possible. In order to get a clear picture of the project area, a detailed map showing the upstream and downstream project be provided along with the L-Section and the bed slope of the river.
- iv. It has also been noted that environmental flow of 5% of average of river discharge during monsoon period and 2.5% of average river discharge during lean period have been proposed and this is also not as per the norms. Norms for release of Environmental flows, i.e. 30% in monsoon

season, 20% in lean season and 25% in non-monsoon & non-lean season corresponding to 90% dependable year, area to be followed.

- v. PP presented that the project area to be covered within 7 km radius of the project. Therefore, to know the present status of environmental conditions in the area, baseline data with respect to environmental components viz., air, water, noise, soil, land and biology & biodiversity (flora & fauna), wildlife, socio-economic status, etc. should be collected within 10 km radius of the main components of the project/site i.e. dam site and power house site.
- vi. pH value of the river water is stated to be around 4.2. Therefore, it has been suggested that including the pH value of the river water at the dam axis location, two more locations (upstream and downstream) be selected and pH values be measured for atleast one month (preferable during lean season) to ensure the suitability of the proposed project and submitted to the Ministry for consideration before the EAC

After detailed deliberations, the EAC recommended for a site visit by a sub-committee and after getting the site visit report on the above observation, the Ministry may further reconsider this project for scoping/TOR clearance. After detailed deliberations, the EAC recommended for a site visit by a sub-committee and after getting the site visit report on the above observation, the Ministry may further reconsider this project for scoping/TOR clearance. The sub-committee consisting of the following EAC members shall ensure the viability of above observed points:

1. [Dr. S.R. Yadav](#) - Chairman
2. Shri Sharvan Kumar - Member
3. Shri N.N. Rai - Member
4. Dr. S. Kerketta - Member Secretary

It has also been opined that a Scientist from the RO, MoEF & CC, Shillong would also be included in the site visit along with the sub-committee. The site visit shall be taken **efup** during 1st or 2nd week of August, 2018.

Accordingly, **the proposal has been deferred** and shall be taken up in the subsequent EAC meeting.

Item No. 15.8 Construction of Thana Plaun HEP (191 MW) in Mandi District of Himachal Pradesh by M/s Himachal Pradesh Power Corporation Ltd. – For Fresh EC. (File No. J-12011/12/2011-IA.I & Online No. IA/HP/RIV/74781/2013)

Project Proponent submitted online application for grant of Environmental Clearance on 19.05.2018. Terms of Reference (ToR)/Scoping Clearance for the above mentioned project has been issued vide Ministry's letter dated 29.11.2014. Public Hearing for the proposed project has been conducted by the Himachal

Pradesh State Pollution Control Board, Himachal Pradesh at villages Mahan, Khalanu, Kotli and Kadakalayan, Tarnosh, Kotli and Gram Panchayat Office at Barhi, Dharampur, Mandi during on 22-23 March, 2018. The Project Proponent made a detailed presentation for the project for consideration of EC and *inter alia* provided the following information:

The Terms of Reference for carrying out the EIA studies and preparation of EMP as per the provisions of Environmental Impact Assessment Notification 2006 and subsequent Notification in 2009 was approved and permission for pre-construction activities was accorded vide letter No. J-12011/12/2011-IA-I dated 29.11.2012 for Thana Plaun HEP with installed capacity of 141 MW of Mandi District of Himachal Pradesh by M/s. HPPCL.

M/s HPPCL submitted application dated 12.09.2013 for revalidation of approved ToR for the enhanced installed capacity for the project from earlier 141 MW to revised installed capacity of 191 MW which entailed change in layout also. EAC noted that the capacity of the project has been enhanced from 141 MW to 191 MW and it is not a case of merely extension of the validity of TOR. The scope of the project has been changed as the capacity has been substantially revised to 191 MW. Therefore, the project will be reconsidered by the EAC and examined afresh.

The project proponent submitted Form-1 afresh and the same has been presented before the EAC at its meeting held during 20-21 February, 2014. The EAC recommended for a fresh TOR for Thana-Plaun HEP (191 MW) as per MoEF& CC norms and also recommended to use already collected base line data for the purpose of EIA/EMP studies subject to the condition that the data should not be older than 3 years and with some additional TOR conditions. The ToR was accorded on 05.06.2014 for a period of 3 years, which was further extended for one year. Hence, the validity of the ToR was up to 04.06.2018.

PP has submitted the application for fresh EC online on 19.05.2018. However, the base line data collected for the EIA / EMP studies is from 1st March 2013 to 31st December, 2013. EAC noted that the data collected for the study is more than three years old and hence could not be considered for appraisal of the project.

After detailed deliberation, considering all the facts as presented by the project, EAC recommended that PP should collect baseline data for one more season afresh and resubmit the EC application. The following more additional information are also sought:

1. Recommendation of E-flow and maintenance of free flow stretches between two HEPs as per the CIA and CC of Beas River Basin studies to be followed.
2. Resultant pollution loads of all the environmental parameters be derived again for all the possible pollution sources. Based on the findings, mitigative measures be suggested including allocation of capital budgets for different heads.

Accordingly, **the proposal has been deferred** and shall be taken up in the subsequent EAC meeting.

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Item No. 15.9 Any other items with the permission of the Chair

As there being no agenda item left, the meeting ended with a vote of thanks to the Chair.

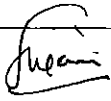
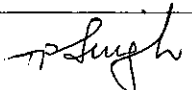
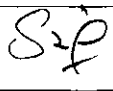
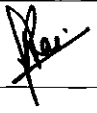
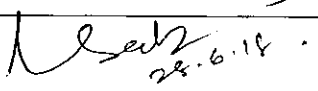
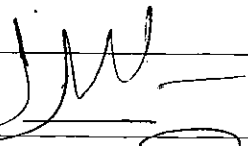
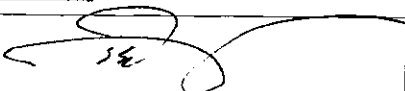
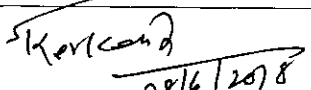
LIST OF MEMBERS

15th MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) FOR RIVER VALLEY & HYDROELECTRIC PROJECTS

DATE : 28th June 2018

TIME : 10:30 am onwards

VENUE : TEESTA HALL, INDIRA PARYAVARAN BHAWAN, NEW DELHI

Sl.No.	Name of Member	Signature
1.	Prof. Sharad Kumar Jain, Chairman	
2.	Shri. T. P. Singh Member	
3.	Shri. Sharvan Kumar, Member	
4.	Shri N. N. Rai, Member	
5.	Dr. J.A.Johnson, Member	ABS
6.	Dr. B. K. Das/ Dr. AK Sahoo Member	 28.6.18
7.	Dr. Vijay Kumar, Member	ABS
8.	Prof. Govind Chakrapani, Member	ABS
9.	Dr. Chetan Pandit, Member	
10.	Dr. Dinkar Madhavrao More, Member	
11.	Dr. R. Vasudeva, Member	ABS
12.	Prof. S.R. Yadav, Member	ABS
13.	Dr. Jai Prakash Shukla, Member	ABS
14.	Dr. Poonam Kumria Member	ABS
15.	Dr. Kerketta, Member Secretary Director (IA-1)	 28/6/2018

Subject: **Re: 15th MOM of EAC meeting for RVP held on 28.07.2018 - regarding**
To: Dr S Kerketta <s.kerketta66@gov.in>

Date: 07/04/18 11:41 PM
From: Sharad Jain <s_k_jain@yahoo.com>
Reply-To: Sharad Jain <s_k_jain@yahoo.com>

15th_EAC_MOM_28.06.2018-skj.docx (44kB)

Dear Dr Kerketta,

I am sending back the edited minutes.

Regarding the site visit to Myntdu, please identify a senior member who can lead the team, talk to him, and write his name in the minutes.

Pls send back the minutes after that to me.

Regards,

Sharad Jain
NIH Roorkee

On Tuesday, 3 July, 2018, 5:49:36 PM IST, Dr S Kerketta <s.kerketta66@gov.in> wrote:

Sir,

Please find the attachment. The draft minutes were circulated to all the EAC members. One member sent the comments. It is requested to kindly approve the minutes for uploading in the website of the Ministry.

--
regards,

Dr. S. Kerketta
Director- IA (Thermal, River Valley & HEP)
MoEF&CC, New Delhi
Phone: 011-24695314 (O), 26113096 (R)