

Minutes of the 6th Meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects held on 11.07.2017 at Narmada Meeting Hall, Jal Wing, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-3.

The 6th meeting of the re-constituted EAC for River Valley & Hydroelectric Projects was held with the Chairmanship of Dr. Sharad Kumar Jain on 11.07.2017 in the Ministry of Environment, Forest & Climate Change at Narmada Meeting Hall, Jal Wing, Ground Floor, Indira Paryavaran Bhawan, Jorbagh Road, New Delhi. The following members were present:

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| 1. Dr. Sharad Kumar Jain | - Chairman |
| 2. Shri Sharvan Kumar | - Representative of CEA |
| 3. Shri N. N. Rai | - Representative of CWC |
| 4. Dr. J.A. Johnson | - Representative of WII |
| 5. Dr. A. K. Sahoo | - Representative of CIFRI |
| 6. Dr. T.P. Singh | - Member |
| 7. Prof. Govind Chakrapani | - Member |
| 8. Shri Chetan Pandit | - Member |
| 9. Dr. J.P. Shukla | - Member |
| 10. Dr. Poonam Kumria | - Member |
| 11. Dr. D. N. More | - Member |
| 12. Dr. S. R. Yadav | - Member |
| 13. Dr. S. Kerketta | - Member Secretary |

Dr. R. Vasudeva and Dr. Vijay Kumar could not present due to pre-occupation. The deliberations held and the decisions taken are as under:

Item No. 6.0 Confirmation of minutes of 5th EAC meeting.

The Minutes of the 5th EAC (River Valley & Hydroelectric Projects) meeting held on 31.5.2017 were confirmed.

Item No. 6.1 Sita Rama Lift Irrigation project (Phase-I) in Bhadrachalam District of Telangana by Irrigation & CAD Department, Government of Telangana for Scoping/ToR clearance.

The Project Proponent (PP) and the Consultant, M/s WAPCOS, Gurgaon made a detailed presentation of the project and *inter-alia*, provided the following information:

Before the bifurcation of Andhra Pradesh, two projects viz., (i) Indira Sagar Lift Irrigation Scheme (ISLIS) (J-12011/21/2006-IA.I dated 19.07.2006) and (ii) Rajiv Sagar Lift Irrigation Scheme (RSLIS) (J-12011/32/2006-IA.I dated 28.07.2006) were proposed in order to harness the irrigation potential of left out ayacut from existing irrigation schemes, which is about 6.5 lakh acres of which 81,000 ha each was proposed to be covered by Indira Sagar Lift Irrigation Scheme and Rajiv Sagar Irrigation Scheme. Even after execution of this scheme, about 2.5 lakh acres will still remain to be covered by a future irrigation scheme.

After bifurcation of Andhra Pradesh, seven Mandals of Khammam district were transferred to Andhra Pradesh and were amalgamated in West Godavari district of Andhra Pradesh. In this process the intake structure of proposed ISLIS became part of the boundary of Andhra Pradesh. The State Government of Telangana decided not only to integrate earlier proposed ISLIS and RSLIS into one Lift Irrigation Scheme but also to cover the balance ayacut which was not the part of any of the present or future

Irrigation Schemes. Accordingly, the scheme has been renamed as Sita Rama Lift Irrigation Scheme (SRLIS) to cover 9.36 lakh acres of CCA in the Bhadradi Khammam, Kothagudem and Mahaboobabad Districts of Telangana.

The proposed Lift Irrigation project is located between 16°45' N-18°37' N and 79°49' E - 81°48' E. It is to divert 70.40 TMC Godavari River water from the upstream of existing Dummugudem Anicut to irrigate 2,72,921 ha (New Ayacut 1,33,085 ha and stabilization 1,39,836 ha) of Bhadradi Khammam, Kothagudem and Mahaboobabad Districts of Telangana. The Dummugudem Anicut is located at Dummugudem village in Bhadradi Khammam District of Telangana. The project is to provide water for irrigation for new command as well as en-route tanks, villages, towns and supplement some of the existing/proposed irrigation schemes. The gross command area (GCA) is 2,72,921 ha. As per the Form-I, the total land requirement for the project is 4,885 ha, out of which 1,930 ha is forest land, 2,955 ha is the private land. No village is coming under the submergence so there is no displacement. A wildlife Sanctuary (the Kinnerasani Wildlife Sanctuary) exists at NW direction of the project and is within 10 km radius of the project. The total submergence area is 1,930 ha and is the forestland only. The total cost of the project is about Rs. 11,931.73 Crores. The total power requirement of the project is 1075 MU (annual Energy Cost is Rs. 537.50 crores) for which the State Government of Telangana will ensure the supply. The BCR of the project is 1.80.

After detailed deliberations and considering all the facts of the project as presented by the PP, the EAC **recommended** for grant of scoping clearance/ToR for the proposed project with the following additional conditions:

- i. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines.
- ii. PP has proposed for micro irrigation scheme. A detailed irrigation management plan should be worked out so that at least 10% of the CCA would be covered by micro irrigation scheme.
- iii. The issue of conjunctive irrigation may also be considered in the project right from the formulation stage.
- iv. The static lift (head) involved is sizable. In addition, there will be frictional losses in pumping with mains of 8 km length. Economic viability of the project should be worked out based on the guidelines issued by CBIP, New Delhi, in April, 2002 or so in regard to the planning and design of large lift irrigation schemes. The true (not subsidized) cost of electricity is to be considered for economic analysis.
- v. Total power requirement to be provided and its firm linkage to be supported with documents.
- vi. Proof of application for diversion of forestland for non-forest purpose will be submitted to the Ministry within one month.
- vii. The detailed base line study to be including existing Anicut and reservoir for preparation of EIA/EMP report.
- viii. The existing environmental clearance given to RSLIS and ISLIS shall not be valid any more for the purpose of taking up of any minor or medium irrigation.
- ix. Wildlife clearance is to be obtained from the Competent Authority as per the Wildlife (Protection) Act, 1972.

Item No. 6.2 Ajansara Barrage Project for Lift Irrigation in Wardha of Maharashtra by Vidarbha Irrigation Development corporation, Government of Maharashtra for Scoping/ToR clearance.

The Project Proponent (PP) and the Consultant, M/s SMS Envocare Ltd, Pune made a detailed presentation of the project and *inter-alia*, provided the following information:

The PP made online application for grant of ToR on 07.06.2017. The proposed Lift Irrigation project is located between 20°24'15" N and 78°39'30" E. The project envisages construction of 14.36 m high barrage across river Godavari near Ajansara Village of Wardha district of Maharashtra state. The gross command area (GCA) is 35,940 ha, Irrigable Command Area (ICA) is 24,000 ha and Culturable Command Area (CCA) is 30,004 ha. The total land requirement for the project is 1,044.13 ha, of which 31.56 ha is forestland for which Forest clearance has already been accorded by the Regional Office, MoEF&CC, Bhopal on 25.04.2008. Total submergence is 1,044.13 ha, of which 463.36 ha is government land and 549.21 ha is private land. A total of five villages are coming under submergence. Out of these, one village is coming under full submergence. A total of about 100 families are likely to be affected due to this project. The total cost of the project is about Rs. 208.42 crore. However, the PP informed that this cost has been revised to Rs. 709.51 crore, but approval is pending from the Competent Authority.

After detailed deliberations and considering all the facts of the project as presented by the PP, the EAC **recommended** for scoping clearance for the project with the following additional conditions:

- i. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines.
- ii. The scheme involves lifting of water through a height of 30 m or so. Economic viability of the project should be worked out based on the guidelines issued by CBIP, New Delhi, in April, 2002 or so in regard to the planning and design of large lift irrigation schemes. The true (not subsidized) cost of electricity is to be considered for economic analysis.
- iii. The approval of revised project cost will be obtained approval from the Competent Authority and submitted to the Ministry.
- iv. Total power requirement is to be provided and its firm linkage to be supported with document.
- v. PP has proposed for micro irrigation scheme. A detailed irrigation management plan should be worked out so that at least 10% of the CCA would be covered by micro irrigation scheme.

Item No. 6.3 Par HEP (52 MW) in Papumpare District of Arunachal Pradesh by M/s KVK Par Power Pvt. Ltd. - For Environmental Clearance.

The Project Proponent (PP) and the Consultant, M/s R.S. Environlink Technologies Pvt. Ltd, Gurgaon, made a detailed presentation of the project and *inter-alia*, provided the following information:

Ministry of Environment, Forest and Climate Change has earlier accorded the Scoping/ToR Clearance for this project on 17.10.2012 for development of 60 MW capacity. Due to e-flow provisions, the capacity got revised to 52 MW and ToR for

revised capacity with extension of validity till 16.10.2015. Thereafter, the Ministry again revalidated the TOR till 16.10.2017 vide Ministry's OM date 22.10.2014.

The project is proposed on Pare River (a tributary of Brahmaputra river) in Papum-Pare District of Arunachal Pradesh. The project envisages construction of 27.52 m high barrage across Pare River near Balapu village. The total land requirement for the project is 28.25 ha, out of which 17 ha is unclassified forest land and 11.25 ha is private land. Total submergence area is 8.5 ha. A surface powerhouse is proposed on the left bank of the river with 2 units of 26 MW IC each. The catchment area of the project is 420 km². No family will be displaced but owners of 11.25 ha of private land will be affected due to this project. Total cost of the project is about Rs. 287.59 Crores. The proposed project is to be completed in 45 months.

The Public Hearing was conducted in Papum-Pare District on 14.10.2015. PP informed that all the issues raised during the Public Hearing have been incorporated in the EIA/EMP report. The socio-economic impact assessment was carried out separately and report was also submitted. Thereafter, the final EIA/EMP reports were submitted online to the Ministry for environment clearance on 17.04.2017. During appraisal, it was noted that the baseline data collected are more than three years (Base line data for monsoon from June-July, 2014, that of winter during January, 2013 and that of Summer in April, 2014) old. The Member Secretary informed the Committee that as per the OM dated 07.11.2014 “*the date of Public Hearing and the primary data used in preparation of EIA/EMP report submitted after Public Consultation should not be more than three years old and in case these conditions are not met, the proponent will have to start the process de novo after obtaining fresh ToR.*”

The Committee deliberated on the issue and it was decided that the Member Secretary may consult the Policy Wing of the Impact Assessment Division and clarify the issue in detailed. Accordingly, the proposal has been **deferred** for the next EAC meeting.

Item No. 6.4 Kirthai Stage I (390 MW) in Kishtwar District of Jammu & Kashmir by JKSPDC Ltd., Government of Jammu & Kashmir For extension of validity of ToR.

The Project Proponent (PP) and the Consultant, M/s EQMS India Pvt. Ltd, New Delhi, made a detailed presentation of the project and *inter-alia*, provided the following information:

It is proposed to construct 122 m high concrete gravity dam across Chenab River near Gulabgarh village in Kishtwar District of Jammu & Kashmir to install 390 MW hydroelectric project. Total land requirement is about 290 ha, out of which 160 ha is forestland, 50 ha is private land and 80 ha is revenue land. Total submergence is 210 ha (out of which 160 ha is forestland). An underground powerhouse is proposed with 4 units of 95 MW each +10 MW dam-toe powerhouse to facilitate to release environmental flow. The estimated cost of the project is Rs. 3,126.59 Crores.

The Scoping/ToR clearance to this project was accorded on 10.6.2013 for a period of 2 years, which expired on 9.6.2015, i.e, 2 years back. Presently, the ToR validity for River Valley & HEP projects is 4 years. The PP presumed the same and applied for extension of validity after completing 4 years. In the present case, 4 years of ToR validity has been

ended on 09.06.2017. Now, as per the OM dated 8.10.2014, a provision extension by of 1 more year exists for River Valley & HEP projects.

The PP has submitted application for the validity of TOR for one more year, i.e. beyond 09.06.2017. It has been informed that the draft EIA/EMP report has been submitted to Jammu and Kashmir Pollution Control Board on 7.4.2017. PP further informed that the date of Public Hearing has not been fixed as yet and it may take another 4-5 months for conducting the Public hearing,

After detailed deliberations and considering all the facts as presented by the PP, the EAC **recommended** for extension of the validity of ToR for one more year, i.e. from 10.6.2017 to 9.6.2018. It is also mentioned that this is the last and final extension for the project. In case Public Hearing is not held in time, PP fails to submit the EIA/EMP report, and the total time of five years is fully exhausted, the PP has to apply afresh for scoping clearance.

Item No. 6.5 Kirthai Stage II (930 MW) in Kishtwar District of Jammu & Kashmir by JKSPDC Ltd., Government of Jammu & Kashmir For extension of validity of ToR.

The Project Proponent (PP) and the Consultant, M/s EQMS India Pvt. Ltd, New Delhi made a detailed presentation of the project and *inter-alia*, provided the following information:

It is proposed to construct 121 m high concrete gravity dam from the river bed (165 m from the deepest foundation level) across Chenab River to install 930 MW HEP. Total land requirement is about 416.25 ha, out of which 227.25 ha is forestland, 149 ha is private land and 40 ha is government land. Total submergence is 331 ha (out of which 155 ha is forestland). About 15 families will be fully affected due to this project. The estimated cost of the project is Rs. 6087.48 Crores.

The Scoping/ToR clearance to this project was accorded on 05.06.2013 for a period of 2 years, which expired on 04.06.2015, i.e. 2 years back. Presently, the ToR validity for River Valley & HEP projects is 4 years. The PP presumed the same and applied for extension of validity after completing 4 years. In the present case, 4 years of ToR validity been ended on 04.06.2017. Now, as per the OM dated 8.10.2014, a provision of extension by 1 more year exists for River Valley & HEP projects.

The PP has submitted application for the validity of TOR for one more year, i.e. beyond 04.06.2017. It has been informed that the draft EIA/EMP report has been submitted to Jammu and Kashmir Pollution Control Board on 7.4.2017. PP further informed that the date of Public Hearing has not been fixed as yet and it may take another 4-5 months for conducting the Public hearing.

After detailed deliberations and considering all the facts as presented by the PP, the EAC **recommended** for extension of the validity of ToR for one more year, i.e. from 5.6.2017 to 4.6.2018. It is also mentioned that this is the last and final extension for the project. In case Public Hearing is not held in time, PP fails to submit the EIA/EMP report and the total time of five years is fully exhausted, the PP has to apply afresh for scoping clearance.

Item No. 6.6 Lower Tizu HEP (42 MW) project in Kiphire District of Nagaland by Department of Power, Government of Nagaland for Scoping/ToR clearance.

The Project Proponent (PP) and the Consultant, M/s R.S. Environlink Technologies Pvt. Ltd, Gurgaon, made a detailed presentation of the project and *inter-alia*, provided the following information:

The project envisages construction of 28 m high concrete gravity dam across the river Tizu near Moya Village in Kiphire District of Nagaland to install 42 MW HEP. This is a run-of-the river scheme. A surface powerhouse is proposed on the left bank with 3 units of 14 MW capacity each. Total land requirement for the project is 82 ha, out of which 49 ha is forest land and 33 ha is cultivated land. This project site is located within 5 km of International Border of Myanmar. Therefore, according to EIA Notification, 2006 and its subsequent amendments, in view of applicability of General Conditions the proposed project is categorized as 'A'. The total estimated cost of the project is about 601.36 Crores.

The PP clarified that the shortest aerial distance between the project dam axis to the international border of Myanmar is 13 km. There is no upstream and downstream hydroelectric project planned /proposed on Tizu river. As SEIAA in the state is not in operation now, this project is to be considered at the Centre Govt. level.

After detailed deliberations and considering all the facts of the project as presented by the PP, the EAC **recommended** for scoping clearance for the project with the following additional conditions:

- i. The Committee opined that even though there is no River Basin Study, relaxation may be given to the state for development of this project.
- ii. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines.
- iii. The Defence clearance shall be obtained from approval of the Competent Authority and submitted to the Ministry.
- iv. Proof of application for diversion of forestland for non-forest purpose will be submitted to the Ministry within one month.

Item No. 6.7 Sharavathy Pumped Storage project (8x250 MW) project in Shivamogga & Uttara Kannada Districts of Karnataka by Karnataka Power Corporation Ltd., Government of Karnataka for Scoping/ToR clearance.

The Project Proponent (PP) and the Consultant, M/s WAPCOS, Gurgaon made a detailed presentation of the project and *inter-alia*, provided the following information:

The proposed project is planned between existing Talakalale and Gerusoppa reservoir which are situated downstream of Liganamakki reservoir on Sharavathy river. The project site is near the village of Gerusappa in Shivamogga & Uttara Kannada Districts of Karnataka to install 2,000 MW of hydropower. Sharavathy Pumped Storage project envisages to utilize the balance storage water for Pumped storage project installation of 2,000 MW for 6 hours peaking. It is an underground powerhouse proposed with 8 units of 250 MW capacities each. Total land requirement for the project is 153 ha, out of which 150 ha is forestland. This project site is located 3.4 km from Sharavathi Wildlife Sanctuary. The total estimated cost of the project is about Rs. 4,862.89 Crores.

The Ministry noted that the PP mentioned in Form-1, from the tip/boundary of the Reservoir (Talakalale) which is upstream of the project, which is 3.4 km away from the Sharavathi Valley Wildlife Sanctuary. Therefore, the following documents have been verified:

- i. The draft Notification (ESZ) of Sharavathi Valley Wildlife Sanctuary (S.O. 3551(E)) issued by MoEF & CC on 29.12.2015. As per this, a total 80 villages are falling in the Eco-sensitive Zone of the Sanctuary. The Gerusappa village has not been mentioned in the ESZ.
- ii. Report of the HLWG (Dr. K. Kasturirangan Report, 2013) on Western Ghats mentioned that Hydropower projects may be allowed subject to following conditions:
 - a) Un-interrupted ecological flow at least 30% of the rivers in lean season till a comprehensive study establishes individual baselines.
 - b) After a cumulative study which assesses the impact of each project on the flow pattern of the rivers and forest and biodiversity loss.
 - c) Ensuring that the minimum distance between projects is maintained at 3 km and that not more than 50% of the river basin is affected at any time.
- iii. MoEF & CC has accepted the HLWG report "in-principle" and issued an OM in this regard on 19.10.2013. In OM Para-2 (v), it has been mentioned that -- "Hydro Power being a relatively clean source of energy has been recommended to be allowed in the ESA by the HLWG subject to stringent conditions. This recommendation is accepted by the Ministry"

After detailed deliberations and considering all the facts of the project as presented by the PP, the EAC **recommended** for scoping clearance for the project with the following additional conditions:

- i. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines.
- ii. Proof of application for diversion of forestland for non-forest purpose will be submitted to the Ministry within one month.
- iii. As the reservoir will be acting as balancing reservoir and there would be fluctuation of water level of 1-2 m during peaking period, study on the impact on Deccan Mahseer be carried out including impacts during spawning period.
- iv. Wildlife clearance is to be obtained as per the Wildlife (Protection) Act, 1972 from the Competent Authority.

Item No. 6.8 Any other item with the permission of the Chair.

Item No. 6.8 Par-Tapi Narmada Link Project in Valsad District of Gujarat and Nasik District of Maharashtra by Water Resources, Government of Gujarat for Scoping/ToR clearance.
(a)

The project comprises of 7 composite dams, 3 weirs, 6 powerhouses and a canal. Total Culturable command area proposed is 1,88,414 ha in the reach of Par and Tapi rivers. Total land requirement is about 7,560 ha, out of which 3,570 ha is forestland, 2850 ha is agricultural land and 1140 ha is river land. About 14,800 persons from 75 villages are likely to be displaced due to this project.

MoEF&CC granted ToR to this project on 80.6.2009 as per the provisions of EIA Notification, 2006. No time period was mentioned in the ToR. The ToR for River Valley

& HEP projects is now valid for 5 years. Even if, MoEF&CC considers the same for this project, ToR given to this project shall no more be valid as it has been expired on 7.6.2014. Now, the Water Resources Department, Government of Gujarat has requested the Ministry to consider for a fresh ToR.

The project proponent made a presentation on the project. The Par-Tapi- Narmada Link Project is a multi-purpose scheme with irrigation, hydropower and water supply benefits. Gujarat state is the principal beneficiary and Maharashtra state will get the benefits of irrigation, water supply to tribal areas in Nasik District and power generation. The project will provide an annual Irrigation of 2.32 lakh ha utilizing about 1,330 MCM of water including water supply and also generate 21 MW of hydropower. Total land requirement is about 6,065 ha, out of which 4,439.40 ha is forestland. Purna & Vansa Wildlife Sanctuaries are falling within the study area and at a distance of 5 km. The project estimated cost is about Rs. 10,200 Crore (at 2014-15 price level).

After detailed deliberations and considering all the facts of the project as presented by the PP, the EAC **recommended** for scoping clearance (fresh TOR) for the project with the following additional conditions:

- i. The agreement for sharing of water of river Par between Gujarat and Maharashtra is yet to be concluded.
- ii. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines.
- iii. The cropping pattern contains a small amount (3 to 6%) of perennial crops. Instead the cropping pattern can be two seasonal and the perennial crops be allowed to sustain on groundwater during summer. This will ease out the problems of irrigation management and water could be used more economically.
- iv. Economic viability of the project should be worked out based on the guidelines issued by CBIP, New Delhi, in April 2002 or so in regard to the planning and design of large lift irrigation schemes. The true (not subsidized) cost of electricity is to be considered for economic analysis.
- v. The concepts of Participatory Irrigation Management and introduction of modern irrigation system and conjunctive irrigation may be brought in right in the initial stage.
- vi. Proof of application for diversion of forestland for non-forest purpose will be submitted to the Ministry within one month.
- vii. PP has proposed for micro irrigation scheme. A detailed irrigation management plan should be worked out so that at least 10% of the CCA would be covered by micro irrigation scheme.
- viii. Wildlife clearance is to be obtained as per the Wildlife (Protection) Act, 1972 from the Competent Authority.
- ix. One season base line data be collected and included in the old baseline data for preparation of EIA/EMP report.

Item No. 6.8 Kaleswaram Lift Irrigation Scheme Project in Jayashankar Bhoopalpally District, Telangana by Irrigation and CAD Department, Government of Telangana for Scoping/ToR clearance.

The project proponent made a presentation on the project. Kaleswaram Lift Irrigation Scheme envisages lifting of 4.5 TMC of water from Godavari River near Kannepalli village of Jayashankar Bhoopalpally district to fill 14 Minor Irrigation Tanks in Jayashankar Bhoopalpally in Telangana. Out of 4.5 TMC water, the project also

envisages supply of 0.3 TMC drinking water to the enroute villages. The gross command area (GCA) is 18,211 ha. The total land requirement for project is 1,457 ha out of which 258.028 ha is forestland. The Ministry on 21.1.2014 has accorded the Stage-I Forest Clearance. Sivaram Wildlife Sanctuary is located at a distance of 10 km from the boundary of command area. The total cost of the project is about Rs. 499.23 Crores.

The committee noted that the recently, ministry was granted to ToR clearance for Kaleswaram Project in Karimnagar District, Telangana. Now, the PP also used same name. Therefore, the EAC asked the PP to consider this fact so that there is no confusion due to same names of two projects.

After detailed deliberations and considering all the facts of the project as presented by the PP, the EAC **recommended** for scoping clearance for the project with the following additional conditions:

- i. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines.
- ii. The scheme involves lifting of water through a height of 80 meter or so. Economic viability of the project should be worked out based on the guidelines issued by CBIP, New Delhi, in April 2002 or so in regard to the planning and design of large lift irrigation schemes. The true (not subsidized) cost of electricity is to be considered for economic analysis.
- iii. Total power requirement to be provided and its firm linkage to be supported with document.
- iv. Solid waste management should be planned in details. Land filling of plastic waste shall be avoided and instead proposal for various uses may be proposed in the EMP report.
- v. PP should be proposed a unique name for the proposed project and intimate to the Ministry.
- x. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines.
- xi. PP has proposed for micro irrigation scheme. A detailed irrigation management plan should be worked out so that at least 10% of the CCA would be covered by micro irrigation scheme.
- xii. Wildlife clearance is to be obtained as per the Wildlife (Protection) Act, 1972 from the Competent Authority, if any

Item No. 6.8 Water Re-circulation and Environmental Sustainability Project for Jog Falls in Shivamogga District of Karnataka M/s Jog Management Authority, Government of Karnataka - for Scoping/ToR clearance
(c)

The proposal was appraised by the re-constituted EAC for River Valley Projects which was earlier held in its 4th meeting on 12th April, 2017. After detailed deliberations and considering all the facts of the project as presented by the PP, the EAC decided that a Sub-committee consisting of the following members would visit the project site before finally considering the grant of ToR for the project. They would submit a report on the viability of the scheme, etc.:

1. Shri Sharvan Kumar	-	Representative of CEA
2. Dr. R. Vasudeva	-	Member
3. Dr. J. A. Johnson	-	Representative of WII
4. Dr. S. Kerketta	-	Director & Member Secretary

Therefore, the committee deferred the proposal. The following members of the Sub-committee visited the project site of the proposed project on 7-8 July, 2017:

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| 1. Shri Sharvan Kumar | - | Representative of CEA |
| 2. Dr. R. Vasudeva | - | Member |
| 3. Dr. J. A. Johnson | - | Representative of WII |
| 4. Dr. S. Kerketta | - | Director & Member Secretary, MoEF&CC |

The project site was visited by the Sub-Committee along with the Asst. Commissioner & Jt. CEO of Jog Management Authority, State Forest Department (DFO, Sirsi Division, DFO, Sagar Division, ACF, Siddapur Sub-division and RFO, Siddapur Range), Executive Engineer of M/s Karnataka Power Corporation Ltd. and General Manager of BRS Creation Pvt. Ltd. The representatives of the consultant, M/s Environmental Health & Safety Consultants Pvt. Ltd. Bengaluru were also present during the visit.

The Sub-committee visited the location of the proposed construction of the Power House, Pump House and Weir across the Sharavathi River. It was found that the proposed Pumped House and Power House are located on the right bank of the Sharavathi river, opposite to the existing Mahatma Gandhi Power House (130 MW), M/s KPCL. Proposed laying of Pipeline and Tunnel of about 2.6 km long have also been shown from this Power House which are located below the KPTCL transmission line. Proposed construction of Weir across the Sharavathi River and construction of Retaining walls of ~4 km long on both sides of the river and 5.5 m height have been proposed at the upstream of Sita Katte Bridge. All the sites have been seen from the Left bank of the Sharavathi river, as at present all the sites are inaccessible. There is an existing Ambutheerth reservoir owned by KPCL and leased to Ambutheerth HEP (22 MW), Ambutheerth Power Private Ltd. for power generation which is located around 500 m downstream of the Pumped House which will be also used by the Project Proponent for storing recirculating water.

Shri Sharvan Kumar, Member, Representative of CEA explained the details of the site visit and some observation of the site visit (a copy of the Site Visit of the Sub-Committee is enclosed) during the EAC meeting. After deliberation and considering the facts provided by the PP in the earlier EAC meeting held on 12th April, 2017, the EAC **recommended the project for grant of scoping/ToR clearance** with the following additional conditions including some observation made by the Sub-committee:

- i. No Government funding is involved in execution of the projects.
- ii. Baseline data of two seasons, i.e. Pre-Monsoon & Monsoon, will be collected and EIA/EMP report will be prepared. This has been considered based on the fact that there is no flow during the November-June period in the Jog falls.
- iii. Provision of minimum e-flow to be maintained throughout year.
- iv. Detailed hydrology of the Sharavathi river in respect of the proposed project shall be studied.
- v. Cascading effect of water drawl for the proposed project on downstream projects shall be worked out.
- vi. Construction of retaining wall in the upstream reaches shall act as a barrier between river and riparian vegetation/wildlife. Therefore, as decided in the EAC meeting the retaining walls shall not be constructed.

- vii. Permission for construction of weir across Sharavathi river shall be obtained from the concerned authority and the same will be included in the EIA report.
- viii. Details of forest and non-forestland required for the scheme shall be provided along with EIA report.
- ix. Necessary Forest and Wildlife Clearance shall be obtained from MoEF & CC and copy of the same shall be included in EIA/EMP report.
- x. The Power House is located in such a way that there is no further conduction of downstream reservoir is envisaged. However, for mutual sharing of this reservoir, the Project Proponent should obtain NOC from KPCL/Ambutheerth Power Private Ltd. for storage of circulating water.
- xi. Wildlife clearance is to be obtained as per the Wildlife (Protection) Act, 1972 from the Competent Authority, if any
- xii. Wildlife Conservation plan be prepared for the area located within the project and implemented by the project proponent in consultation with the State Forest Department.
- xiii. Wildlife Conservation plan also to be prepared for the impacted area due to construction of the project outside the project area and implemented by the local state Forest Department.


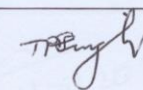


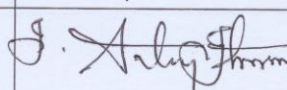
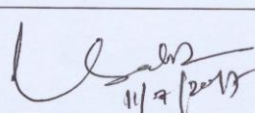

As, there was no Agenda Item left for discussion, the meeting ended with thanks to the Chair.

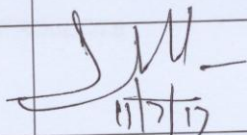
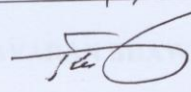
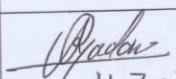
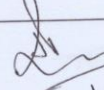
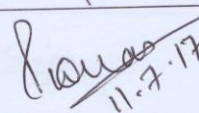
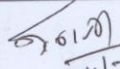
Attendance Sheet

LIST OF MEMBERS

6th MEETING OF RE-CONSTITUTED EXPERT APPRAISAL COMMITTEE (EAC) FOR RIVER VALLEY & HYDROELECTRIC PROJECTS

DATE : 11th July 2017
TIME : 10:00 AM to 5:30 PM
VENUE : NARMADA 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	
6.	Dr. B. K. Das/ Dr. AK Sahoo Member	 11/7/2017
7.	Dr. Vijay Kumar, Member	

8.	Prof. Govind Chakrapani, Member	G. J. Chakrapani 11 th July 2017
9.	Dr. Chetan Pandit, Member	 11/7/17
10.	Dr. Dinkar Madhavrao More, Member	
11.	Dr. R. Vasudeva, Member	Abs
12.	Prof. S.R. Yadav, Member	 11-7-2017
13.	Dr. Jai Prakash Shukla, Member	 11/7/2017
14.	Dr. Poonam Kumria Member	 11.7.17
15.	Dr. Kerketta, Member Secretary Director (IA-1)	 11/7/2017

Approval of Chairman of the EAC –RV&HEP

7/24/2017

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Subject: **Minutes of 6th meeting of EAC (RVH)**

Date: 07/22/17 11:51 AM

To: "Dr S. Kerketta" <s.kerketta66@gov.in>,
"Dr. S. Kerketta" <suna1466@rediffmail.com>

From: Sharad Jain <s_k_jain@yahoo.com>
Reply-To: Sharad Jain <s_k_jain@yahoo.com>

MoM_6th_EAC_Hydro_held on 11.07.2017.pdf (349kB)

MoM_6th_EAC_Hydro_held on 11.07.2017.docx (45kB)

Dear Dr Kerketta,

I am retruning the approved minutes of 6th meeting of EAC (RVH).

It is presumed that the data mentioned in the minutes have been checked and are correct.

Regards,

Sharad Jain
Chairman, EAC

Site visit report of the Sub-committee of Expert Appraisal Committee for River Valley and Hydroelectric Projects for the proposed Water Re-circulation and Environmental Sustainability Project for Jog Falls in Shivamogga District of Karnataka M/s Jog Management Authority, Government of Karnataka carried out on 07.07.2017 and 08.07.2017

During the 4th meeting of the Expert Appraisal Committee for River Valley and Hydroelectric Projects (EAC) held on 12th April, 2017 at Ministry of Environment, Forest and Climate Change, New Delhi - 110003 and it was decided by the EAC that a Sub-committee consisting of 4 members would be constituted and would visit the project site of Water Re-circulation and Environmental Sustainability Project for Jog Falls in Shivamogga District of Karnataka of M/s Jog Management Authority, Government of Karnataka. Then, based on the site visit, the sub-committee would submit a report on the viability of the scheme, etc. and then the proposal would be considered for the recommendation of grant of ToR for the project, if any, for collection of base line data for preparation of EIA/EMP report as per the EIA Notification, 2006 and amendment thereof. The Sub-committee consists of the following members:

- | | |
|------------------------|--|
| 1. Shri Sharvan Kumar- | - Representative of CEA |
| 2. Dr. R. Vasudeva | - Member |
| 3. Dr. J.A. Johnson | - Representative of WII |
| 4. Dr. S. Kerketta | - Director & Member Secretary,
Ministry of Env., Forest &
Climate Change |

The above sub-committee was duly approved by the Competent Authority vide Ministry letter No. J-12011/9/2007/IA.I (R) dated 23.06.2017. The sub-committee visited the project site on 07.07.2017 and 08.07.2017. The project site is located at Jog Falls, Sagar Taluk, Shivamogga and Uttara Kannada districts, Karnataka.

The names of State Govt. Officials present from the Karnataka State are as follows:

A. Jog Management Authority

- | | |
|-----------------------------|------------------------------|
| 1. Shri Nagaraj R. Singreri | Asst. Commissioner & Jt. CEO |
|-----------------------------|------------------------------|

B. State Forest Department

- | | |
|------------------------|----------------------------|
| 2. Shri K.B. Manjunath | DFO, Sirsi Division |
| 3. Shri Mohan Gangolli | DFO, Sagar Division |
| 4. Shri Ajeez | ACF, Siddapur Sub-division |
| 5. Shri L.R. Patankar | RFO, Siddapur Range |

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C. M/s Karnataka Power Corporation Ltd.

6. Shri Nanjundappa Ex. Engineer

D. BRS Creation Pvt. Ltd

7. Shri Kushal Shetty General Manager

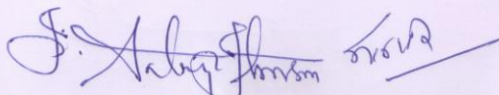
E. EHS Consultant Pvt. Ltd

8. Shri Shivanand M. Dambal Managing Director
9. Shri Santosh Vice President

The project proponent gave a power point presentation and informed the Sub-committee that the project involves water re-circulation by pumping of 400 cusecs of water in the non-monsoon months (November to June) from Sharavathi River for Jog falls and use of reversible flow in the pipeline for generating 33.22 MW of power during monsoon season (July - October). The various components of the project include Pump House, Laying Pipeline, Tunnel of about 2.6 km long, Weir across the Sharavathi River and construction of Retaining walls (~4 km long on both sides of the river and 5.5 m height) to avoid submergence in the forest area during rainy season. Total land requirement is about 2 ha of forestland. This project site (Pump House) is 6.69 km and 3.6 km away from Sharavathi Valley Wildlife Sanctuary and Aghanashini Lion Tailed Macaque Conservation Reserve, respectively.

The Sub-committee visited the location of the proposed construction of the Power House, Pump House and Weir across the Sharavathi River. It was found that the proposed Pumped House and Power House are located on the right bank of the Sharavathi river, opposite to the existing Mahatma Gandhi Power House (130 MW), M/s KPCL. Proposed laying of Pipeline and Tunnel of about 2.6 km long have also been shown from this Power House which are located below the KPTCL transmission line. Proposed construction of Weir across the Sharavathi River and construction of Retaining walls of ~4 km long on both sides of the river and 5.5 m height have been proposed at the upstream of Sita Katte Bridge. All the sites have been seen from the Left bank of the Sharavathi river, as at present all the sites are inaccessible. There is an existing Ambutheerth reservoir owned by KPCL and leased to Ambutheerth HEP (22 MW), Ambutheerth Power Private Ltd. for power generation which is located around 500 m downstream of the Pumped House which will be also used by the Project Proponent for storing circulating water. The photographs of the site visit are enclosed as Annexure.

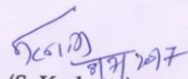
The Sub-committee deliberated at length regarding construction of retaining walls at the upstream of the proposed weir. The project proponent even proposed to construct the retaining wall on the river bed i.e. 3 m away from the banks so that any spillover of water will find ways into the forest area. The Sub-committee felt that construction of these retaining walls, interaction between the forest and river is being obstructed including movement of

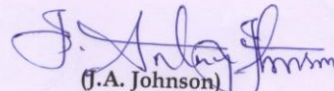



wildlife animals in the areas, if any. Besides, there may be an isolation and obstruction of wildlife animal across the river. In addition, during construction of this retaining walls may have also likely impact on the nearby forest areas. After detailed deliberation, the project proponent agreed to shelve the proposal of construction of retaining walls and agreed also to revisit the proposal so that the forestland to be submerged due to storage of water in rainy season at the upstream of the weirs would be ascertained. The Officials present from the Forest Department also agreed that the quantum of forest land to be submerged can be estimated and submitted to the Ministry accordingly.

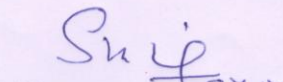
The Sub-committee suggested the following for consideration of the project -

- i. As the construction of retaining wall have been dropped now, a written commitment be submitted to this effect by the project proponent to the Ministry. The Sub-committee also found that now the project seems to be more viable and impact to the forest, river and wildlife animals and their mutual interaction may minimal.
- ii. The Power House is located in such a way that there is no further constction of downstream reservoir is envisaged. However, for mutual sharing of this reservoir, the Project Proponent shouldobtain NOC from KPCL/Ambutheerth Power Private Ltd.for storage of circulating water.
- iii. Wildlife Conservation plan be prepared for the area located within the project and implemented by the project proponent in consultation with the State Forest Department.
- iv. Wildlife Conservation plan also be prepared for the impacted area due to construction of the project outside the project area and implemented by the local state Forest Department.


(S. Kerketta)


(J.A. Johnson)


(R. Vasudeva)


(Sharvan Kumar) 8.7.17

**Site visit by a sub-committee to Jog Falls in Shivamogga
District of Karnataka during 7-8th July, 2017**



Meeting of sub-committee with PP



**Sita Katte bridge downstream of
weir location**



Pump house



**Downstream of weir
below Sita Katte bridge**



Weir location