



भारत सरकार
Government of India
जल शक्ति मंत्रालय
Ministry of Jal Shakti
जल संसाधन, नदी विकास और गंगा संरक्षण विभाग
Department of WR, RD & GR
केन बेटवा लिंक परियोजना प्राधिकरण
Ken Betwa Link Project Authority



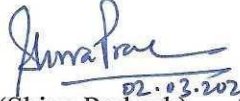
No: NWDA/CE(N)LKO/T-16/KBLPA/ 705- 27

Date: 02 .03.2023

Sub: Minutes of 1st Meeting of Technical Advisory Group of Ken Betwa Link Project Authority on 24.02.2023 at New Delhi

1st meeting of Technical Advisory Group of Ken Betwa Link Project Authority (TAG-KBLPA) under the Chairmanship of Shri D. P. Bhargava, Former Director, (Technical), NHPC, Faridabad was held on 24.02.2023 at 11:30 hrs. at Palika Bhawan, New Delhi.

Minutes of Meeting duly approved by the Chairman-TAG are enclosed for kind perusal and further necessary action.


(Shiva Prakash)
02.03.2023

ACEO (HQ/P), KBLPA

To: All the Members of TAG of KBLPA

1. Sh. D. P. Bhargava, former Director, (Technical), NHPC, Faridabad
2. Sh. Y. K. Handa, Former Chief Engineer, CWC
3. The Chief Engineer, Designs (NW&S), CWC, New Delhi
4. Sh. V. K. Niranjana, former HoD & E-in-C, I&WRD, UP
5. Sh. G. P. Soni, former Chief Engineer, WRD, MP
6. The Director, CSMRS, New Delhi
7. The Director, Hydrology (C), CWC, New Delhi
8. The Chief Engineer (Designs), WRD, Govt. of MP
9. The Chief Engineer (Designs), I&WRD, Govt. of UP
10. The Additional CEO (Head Works), KBLPA
11. The Additional CEO (Canals), KBLPA

अतिरिक्त मुख्य कार्यकारी अधिकारी (सु0/यो0).

कैम्प ऑफिस: 4/193 एफ, विशाल खण्ड, गोमती नगर, लखनऊ-226010

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Copy for kind information and necessary action to: -

1. The Engineer-in-Chief, WRD, Govt. of MP, Bhopal
2. The Engineer-in-Chief, HOD, I&WRD, Govt. of UP, Lucknow
3. The chief engineer (HQ), NWDA, New Delhi
4. The Chief Engineer, Betwa/ Betwa Pariyojana, I&WRD, Jhansi
5. The Superintending Engineer, NWDA, Gwalior
6. The Executive Engineer, KBLPA, Jhansi
7. The Executive Engineer, KBLPA, Bhopal
8. KBLPA cell, NWDA, New Delhi

Copy for kind information to: -

1. The Additional Chief Secretary, WRD, Govt. of MP, Bhopal
2. The Member, D&R, CWC, New Delhi
3. The Chief Executive Officer, KBLPA, New Delhi.
4. The Principal Secretary, I&WRD, Govt. of UP, Lucknow

अतिरिक्त मुख्य कार्यकारी अधिकारी (मु०/यो०).

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Minutes of 1st Meeting of Technical Advisory Group of Ken Betwa Link Project Authority

Steering Committee of Ken Betwa Link Project (SC-KBLP) in its 2nd Meeting held on 20th July, 2022 under the Chairmanship of Secretary, DoWR, RD&GR, Ministry of Jal Shakti agreed to constitute a Technical Advisory Group for KBLP (TAG-KBLP) to review and advise the Authority on various planning and technical matters in the implementation of various components of the project. Consequently the TAG-KBLPA was formed vide order no. NWDA/CE(N)LKO/T-16/KBLPA/3178-3200 dated: 26.08.2022 with the approval of Secretary, DoWR, RD&GR. The first meeting of **Technical Advisory Group** of Ken Betwa Link Project Authority (TAG-KBLPA) under the Chairmanship of Shri D. P. Bhargava, former Director, (Technical), NHPC, Faridabad was held on 24.02.2023 at 11:30 hrs. at Palika Bhawan, New Delhi to discuss the various issues. The list of participants is attached at **Annexure-I**.

At the outset, the Chairman welcomed all the participants and the meeting started with introduction of all the participants. Director General, NWDA/CEO, KBLPA also warmly welcomed the Chairman of the TAG and all the members present in the meeting. Shri V. K. Niranjana, ex Engineer-in-Chief, I&WRD, Uttar Pradesh attended the meeting online in view of ill health. CEO, KBLPA informed that the tender of Daudhan Dam is ready and shall be discussed consequently along with other agenda items. He further requested Sh. Shiva Prakash, ACEO (HQ/P), KBLPA to present a brief on the project. The details of discussion carried out agenda-wise are as follows:

1. Brief about KBLP:

Sh. Shiva Prakash, ACEO, KBLPA discussed about Ken-Betwa Link Project in brief. The project includes Diversion of surplus water of Ken basin to water deficit areas of Upper Betwa sub-basin by substitution and to Irrigate drought prone area of Uttar Pradesh and Madhya Pradesh including drinking water. A 77 m high Daudhan Dam with gross capacity of 2853 MCM is proposed across river Ken, about 2.5 km upstream of existing Gangau Weir (Phase-I). Reservoir involves a submergence of 9000 ha area, out of which 5761 ha is Panna Tiger Reserve including 306 ha Terrestrial forest. Out of which 4141 ha is Panna Tiger Reserve core area which is about 7.6% of the total Panna Tiger Reserve area. Total length of the link canal will be 221 km including 2 km long tunnel. Two power houses, one at the toe of the dam and other at the outlet of lower level tunnel are also proposed to generate power with the total installed capacity of 78 MW. The Project also include 2 new barrages in Uttar Pradesh, remodeling/ rejuvenation of main canal system, renovation of existing tanks in KBLP command in Mahoba District of Uttar Pradesh and three projects namely, Lower Orr dam, Kotha barrage and Bina Complex Multipurpose Project (Phase-II) in Madhya Pradesh.

He also informed about the implementation mechanism of the project, funding pattern and the present status of works under the project.

Chairman of the Committee desired to have a detailed presentation on the Project including components alongwith their salient features, layout, drawings etc. to have better understanding of the project in the next meeting.

2. Preparatory activities required before issuance of NIT of Daudhan dam:

In the 3rd meeting of SC-KBLPA, suitable mode of tendering as EPC mode had been agreed. It was further discussed that most of the data/investigations have already been collected during DPR preparation stage.

Sh. Anil Jain, Chief Engineer, Designs (NW&S), CWC mentioned that all additional collection of data/ investigation, as required, shall be responsibility of the contractor and is not required to be mentioned in EPC.

Accordingly, it was agreed that no further detailed investigations is needed at this stage.

3. Tender document for Daudhan Dam:

Tender of Daudhan Dam in EPC mode is to be floated without Power house in view of conditions imposed by MoEF&CC in the Stage-I Forest Clearance. NHPC has prepared the tender document for Daudhan Dam, Lower level Tunnel and Upper level Tunnel with and without Power house in 2019 as per DPR of Ken-Betwa Link Phase-I. The tender document now revised includes power house embedded components. It was suggested to include, in the scope of work, coffer wall to protect power house area from the river.

Director General, NWDA/ CEO, KBLPA informed that proposal has been submitted to PCCF (LM), Forest Department, Govt. of MP for limited area work permission. Further it is proposed that the tender document be finalized and circulated to all the members for their observations and thereafter, a stakeholders meeting (potential bidders) shall be held (proposed in third week of March) for seeking their views and firm up the document by end of March, 2023 for issuing. Thereafter the tender document will be placed before the Steering Committee of KBLPA for approval.

Chairman of the Committee suggested to have site visit. He suggested that next meeting may be carried out in April, 2023 near to Dam site. It is to be ensured that the land required for construction and for the construction facilities has been acquired or would be acquired as per the work programme.

It was opined by the Chairman that contractors has a tendency to front load the contract prices so that they get more payment during initial stages of the work. This leads to shortage of funds at later stages and the work get stalled. To avoid this, KBLPA, in the bid document, may fix percentage payment for each milestone based the estimated value of work involved in completing the particular milestone vis a vis the total estimated value of the whole work.

Sh. Anil Jain, Chief Engineer, Designs (NW&S), CWC mentioned that that the main concern in EPC is the variation in the work which may arise due to situation/ problem encountered during construction specially foundation component. He further added that such surprises or variation usually occur in Himalayan terrain and are less likely to occur in Ken-Betwa basin. Chief Engineer, Designs (NW&S), CWC discussed that modalities and formula for variation in work and respective cost should be finalized before hand to determine the extra cost in event of variation in work. Chairman suggested to devise some mechanism for compensation during idling in case of partial or complete stoppage of work due to the reasons attributable to the owner/ beyond the control of the contractor.

Director General, NWDA/CEO, KBLPA mentioned that provisions should be kept in EPC to compensate for such surprise situation and for escalation in cost. Director, CSMRS suggested that tentative cross sections may be provided for discussion with Geotechnical head, CSMRS. Director, CSMRS suggested that provision of any confirmatory test or additional investigation test in respect of even construction material to be conducted by Contractor may be kept in tender document. Secondly, it should be mentioned in tender document that contractor has to establish a Quality Control Lab (QC) and provide spaces for maintaining quality control at different level. Cost proportion for quality control may also be kept.

The draft qualifying requirement proposed in the tender document was presented by Sh. P.K. Saxena, Consultant, KBLPA. It was discussed that annual construction turnover atleast Rs.2000 Crores and atleast 3 months working capital shall be available with the contractor which comes out to be 250 Crores. The Chairman, TAG-KBLPA suggested that the criteria seems to be on higher side and may be relaxed for wider participation. The same was discussed and it was decided to take annual construction turnover atleast 1500 Crores and working capital as 200 Crores. However, the figures shall be finalized after stakeholders meeting proposed to be held in third week of March, 2023.

Similarly works experience as kept in the original tender prepared by NHPC may be relaxed to include wider participation. It was discussed whether to consider 80% of work as completed.

It was further decided that the disposal of muck shall be beyond PTR and shall be carried out by the contractor as per discussion with local authority.

It was desired by the TAG members to clearly mention the details of quarry and dumping sites, whether it will be in the scope of KBLPA or the Bidder.

It was informed that the Drawings were not revised from the old DPR as they seemed incomplete. However the power house portions were marked out of scope. It was proposed that as per DOE, the sub-contract amount may be capped at 25% of the total cost and the sub-contracting shall be carried out after approval of Competent Authority.

Based on the discussion, it was desired that the Tender may be circulated to all the Members of TAG and both the States for their observations.

4. DPR of UP for Restoration of Ken Main Canal (Part-I) under KBLP by I&WRD, UP.

Member Secretary, TAG-KBLPA informed that renovation/modernization of irrigation facility in 1.92 lakh ha area by repairing /strengthening the existing Canal system in Banda district of U.P. and increasing the command area of Canal by using pressurized pipe micro irrigation system is one of the component of UP in KBLP, which require repair and strengthening of Ken Canal System.

The State of Uttar Pradesh has submitted mainly estimate for restoration in only main canal and therefore, it has been requested to submit a comprehensive DPR as ERM including renovation/ modernization of Ken Main Canal, Branch Canal (Banda and Attara Branch) system of complete project.

He further informed that the proposed works include stone pitched lining of Ken Main Canal from km 0.00 to km 59.338, repairing of aqueduct of Ken Main Canal, Construction of protection wall in different reaches at Ken Main Canal, E/W in restoration of Main Canal, Distributaries & Minors, Construction of 9 VRB in Ken Main Canal, Erection & fabrication of cross & head regulator gates of Ken Main Canal and repairing of falls, inlets & outlets of Ken Main Canal.

The Chairman of TAG sought whether the complete canal is in bad shape. It was proposed to have a visit to know the exact status of work needed.

The basis on which the lining of main canal had been proposed, presence of excessive seepage and necessity of lining was inquired by the members and its necessity. It was mentioned that the seepage from canals in Bundelkhand region is extremely less. For clay soil, CNS lining is generally used and lining is mainly for stabilization purpose rather than seepage issue.

Chief Engineer, Design, WRD, MP Shri, G.P.Soni also desired to know the effect of lining on the canal section, flow etc.

Shri V.K.Niranjan, Member TAG informed that the canal system is more than 100 years old. Its sections are stabilized. Seepage may not be the issue. Since it is a running canal, lining may be included with due diligence.

Shri A.K. Niranjan , SE , I&WRD, UP, informed that the canal is heavily eroded on both sides and needs repair.Stone piched lining is to restore the canal, to avoid erosion and to achieve its full capacity.

TAG desired that the reaches where canal is damaged may be identified and included for renovation in complete system.

5. Recommendation/Suggestion of Expert Group upon visit of Bariyarpur PUW, Parichha weir & Barwa Sagar dam.

The Expert Group members from CWC, GSI & CSMRS alongwith officials from KBLPA and I&WRD, UP visited Bariyarpur PUW, Parichha weir & Barwa Sagar dam for assessment of Structures on 05-01-2023 to 06-01-2023. Director General, NWDA informed that in the third meeting of KBLPA held on 23.02.2023, it was agreed that based upon the recommendations of Expert Group, the Project Screen Template may be prepared and the Contrator shall investigate, design, engineer and execute the works. The issue was further decided to be discussed in next meeting.

It was informed that main issue in Barwa Sagar was siltation and desiltation may be taken up. During the visit of Expert Group it was observed that the structures did not have any stability issue and majorly required maintainence and hydro-mechanical replacement. Issue of silt is major concern in Barwa sagar and Parichha weir. TAG discussed in length and asked the CWC to explore the possibility of sluices. **Shri Anil Jain, Chief Engineer, Design (NW&S), CWC agreed that they will study the possibility of sluices in the existing structures.**

UP raised concerns that if the hydro mechanical work needed to be replaced then the masonry which is already 100 years old shall also be affected if works are not carried out properly and may result in crack formation and damage.

After detailed discussion, it was agreed that the next meeting of the TAG will be convened near to proposed Daudhan Dam site alongwith field visit of proposed Daudhan Dam, Lower Level tunnel, Upper Level tunnel, Power houses, Bariyarpur PUW, Ken Main Canal etc. in the 2nd week of April,2023.

The meeting ended with vote of thanks to Chair and all the members present in the meeting.

Annexure-I

List of Participants of the 1st Meeting of Technical Advisory Group of KBLPA held on 24.02.2023 (11:30 AM) at Palika Bhawan, New Delhi

S.N.	Name (Shri/Smt.) & Designation	
1.	Sh. D.P. Bhargava former Director (Technical), NHPC & Managing Director, Teesta Urja Limited	Chaiman, TAG- KBLPA
2.	Sh. Y. K. Handa, Former Chief Engineer, CWC	Member
3.	Sh. Anil Jain, Chief Engineer, Designs (NW&S), CWC, New Delhi	Member
4.	Sh. V. K. Niranjn, Former HoD & E-in-C, I&WRD, UP	Member
5.	Sh. G. P. Soni, Former Chief Engineer, WRD, MP	Member
6.	Dr. R. Chitra , Director, CSMRS, New Delhi	Member
7.	Sh. Goverdhan Prasad, Director, Hydrology (C), CWC, New Delhi	Member
8.	Sh. G. P. Soni, Chief Engineer (Designs), WRD, MP	Member
9.	Sh. Anil Kumar Niranjn, SE(Designs), I&WRD, UP representing Chief Engineer (Designs), I&WRD, UP	Member
10.	Sh. Shiva Prakash, ACEO (HQ/P), KBLPA	Member-Secretary
Other Officials		
1.	Sh. Bhopal Singh , CEO, KBLPA	
2.	Sh. Baleshwar Thakur, Chief Engineer (HQ), NWDA, New Delhi	
3.	Sh. D.K. Sharma, Dir (Tech), NWDA, New Delhi	
4.	Dr. Manish Gupta, Scientist 'E', CSMRS, New Delhi	
5.	Sh. S.C. Awasthi, SE(N), NWDA, New Delhi	
6.	Sh. S.R. Mahor , SE (S), NWDA, New Delhi	
7.	Sh. Shyamji Chaube, SE, Irrigation Circle, I&WRD, Banda	
8.	Sh. N.P. Sahu, SE, NWDA, Gwalior (I/C)	
9.	Smt. Deepti Verma, Deputy Director, NWDA, Lucknow	
10.	Sh. Ashish Singh Kushwaha, EE, KBLPA, Jhansi	
11.	Sh. R. Vinod Kumar, EE(HQ), NWDA, New Delhi	
12.	Smt. Ekta Sharma, Liaison Officer, WRD, MP, New Delhi	
13.	Sh. Hari Om Varshney, Assistant Engineer, NWDA, Lucknow	
14.	Sh. Pradeep Kumar Saxena, Consultant, KBLPA, Bhopal	
15.	Sh. R.K. Kharbanda, Consultant (Tech), NWDA, New Delhi	