Government of India
Central Water Commission
Project Appraisal (Central) Directorate

Tele Fax:011- 29583433
E-mail:pacent@nic.in

7th Floor, Sewa Bhawan,
R.K.Puram, New Delhi-110066

Sub: Record of Discussions of Screening Committee Meeting held on 15.05.2020 through Video Conferencing (VC) for consideration of Pre-feasibility Report for Bodhghat Multipurpose project, Chhattisgarh-reg

Pease find enclosed herewith the duly approved Record of Discussions of Screening Committee held under the chairmanship of Chief Engineer, PAO, CWC, New Delhi, on 15.05.2020 in his chamber through Video Conferencing, in respect of above project.

Encl: As Above

19.05.2020

(Rajiv Kumar)
Director PA(C)

1. Director, Hydrology(South), Dte, CWC, Sewa Bhawan, New Delhi.
2. Director, Irrigation Planning(South) Dte, CWC, Sewa Bhawan, New Delhi.
3. Director, ISM-I, Dte, CWC, Sewa Bhawan, New Delhi.
4. Director(HPA), CEA, Sewa Bhawan, New Delhi
5. Director(PAC), CEA, Sewa Bhawan, New Delhi.
6. Director(HPI), CEA, Sewa Bhawan, New Delhi

CWC, No. CHH/125/2020/PAC/254-263 Dated: 19.05.2020

Copy to:

1. PPS to Chairman, CWC, New Delhi.
2. PPS to Member(WP & P), CWC, New Delhi.
3. PPS to Chief Engineer(PAO), CWC, New Delhi.
4. Director, PA(N), CWC, New Delhi.

Screening Committee Meeting held on 15.05.2020 through Video Conferencing (VC) for consideration of Pre-feasibility Report for
Bodhghat Multipupose project, Chhattishgarh

Brief Record of Discussions

A meeting of the Screening Committee under the chairmanship of Chief Engineer, PAO, CWC, New Delhi, was held on 15.05.2020 through Video Conferencing, for consideration of Pre-feasibility Report (PFR) of Bodhghat Multipupose project, Chhattishgarh. The list of participants is annexed herewith.

The Chief Engineer, PAO, CWC, welcomed the participants, and requested the Director (Project Appraisal – Central), CWC, to take up the agenda.

The participants were informed that Govt. of Chhattisgarh had submitted Pre Feasibility Report (PFR) of Bodhghat Multipurpose Project (BMP) online through web enabled Project Appraisal Management System (e-PAMS), in April, 2020. Proposed Bodhghat Multipurpose Project (BMP) is located in district Dantewada of Chhattisgarh on River Indravati. It envisages construction of a dam, water conductor system, power house and tail race channel. From the power house the discharge to be let-out through tail race channel into Mandher river. The gravity canal which takes from a pick up weir on Mander river proposes to utilize 92.27 Cumec of maximum head discharge. The project envisages annual irrigation of 2,66,580 ha in CCA of 1,25,390 ha and 500 MW of power generation. The project also envisages 30 MCM for Drinking purpose and 500 MCM for Industrial uses in Dantewada and Bijjapur district of Chhattisgarh. The cost of the project has been estimated to be Rs. 21,000 crore at 2019-2020 price level. Further, it has been stated that by the construction of Bodhghat project, Chhattisgarh will be utilizing 131.12 TMC water.

The participants were also informed that the PFR has been duly examined by the specialised Directorates of CWC and CEA.

Thereafter, the Project proponents from Govt. of Chhattisgarh made a presentation bringing out the key aspects of the project, which was followed by detailed discussions by the various participants. The key technical aspects on which discussions were held during the meeting are :

1. Hydrology
2. Irrigation Planning
3. Inter-State
4. Power Potential Studies

The summary and outcome of the discussions, is briefly given as below:

1. Hydrology

Water availability, Design Flood, Diversion Flood and River Sedimentation studies given in PFR were found satisfactory by the concerned specialised Directorate of CWC. However, it was further suggested that the Diversion flood during DPR preparation may be suitably updated using the latest flood peak data of G&D sites of Indravati river duly considering the construction schedule and type of main dam. It was further suggested that availability of water may also be updated using the latest data of G&D sites of Indravati river.

2. Irrigation Planning aspects

Irrigation planning as given in the PFR was found satisfactory by the specialised Directorate of CWC. It was further suggested during the meeting that the State Govt. may sort out and firm up the various parameters regarding Command Area, Irrigation Intensity and water requirement etc., as per guidelines of CWC and observations of IP(S) Dte. vide letter dated 12.5.2020, which has already been provided to the State Govt. The need for firming up the areas to be irrigated, including the proposed irrigation in Sukma District after accounting the water available for Power, Industrial, Drinking and other Irrigation uses, was also emphasised during the meeting.

3. Inter-State aspects

The participants were informed that certain additional information/ clarifications have been sought from the State Govt. vide letter dated 21.04.2020. However, the PPR has been considered acceptable from inter-State angle subject to compliances to the information/ clarifications sought as referred above, at the DPR stage.

4. Power Generation aspects

The CEA representative informed in the meeting that Power Potential Studies (PPS) have not been updated in light of regulated Irrigation releases and other consumptive uses. It was further suggested that evaporation losses and e-flows may also be considered during finalising PPS. While giving a go-ahead at this stage, the CEA representative emphasised that PPS chapter in Detailed Project Report may be prepared considering all CEA observations from CEA communicated vide letter dated 11.5.2020, firming up all the related parameters and prior approval from CEA, before submission of the DPR to CWC. The need to strictly follow the established procedures and guidelines of CEA in this regard.

In light of the above, the Screening Committee recommended In-Principle Consent of Pre-feasibility Report for preparation of DPR, with following Conditions to be complied by State Govt. at the time of preparation of DPR:

a) Consent for DPR preparation has been given by CWC based on the condition that it should be prepared in consultative mode and comply with the observations of CEA communicated vide letter no. 81/3/2020-HPP&I dated 23.04.2020. Any technical support/guidance required during the process of DPR preparation may be discussed with CWC/ CEA and the progress in this regard would be reviewed quarterly by CWC/ CEA.

b) Detailed survey & investigation may be carried out for preparation of DPR as per CWC guidelines.

c) All planning related data like hydrological data, irrigation planning data, PPS, etc. should be updated.

d) Detailed Cost Estimate should be prepared as per latest SOR.

e) All other limitations brought out in PFR, as brought out by the various specialised Directorates of CWC and CEA, may be addressed appropriately.

f) The DPR may be prepared strictly as per the "Guidelines for Preparation of Detailed Project Reports of Irrigation & Multipurpose Projects, Govt. of India, MoWR,RD&GR 2017" of CWC and concerned CEA guidelines for Hydro Power aspect.

g) The In-Principle consent for DPR preparation shall have a validity of three years,within which the State Govt. has to submit DPR, otherwise extension and/or fresh in-principle consent needs to be obtained.

h) All Statutory clearances including Environment and Forest Clearance from Ministry of Environment, Forests & Climate Change and Clearance for R&R plan for affected tribal population, if any, from Ministry of Tribal Affairs, GSI, CSMRS as per the standard procedure and Guidelines may be obtained by State Govt., as a parallel exercise.

i) Once the cost of the project is firmed up at CWC, State Finance Concurrence may also be furnished for consideration by the Advisory Committee.

j) As suggested by CEA, power parameters may be finalised in consultation with CEA for assuring water requirements both for designed power capacity and Irrigation command utilisation before submitting the final DPR to CWC for appraisal.

k) The State Government may also supplement the firmed up data of project as base data for PFR with respect to all factors including power, components wise water allocation, dam location, irrigation command, drinking and industrial uses etc., so as to have basic project data at the time of PFR for better understanding of the proposal and finalizing the DPR.

l) The State Government may submit a copy of PFR to CWC by incorporating all correct relevant data and layout of project as discussed in the meeting, within 10 days by the project authority.

The meeting ended with a vote of thanks to the chair.

******

Annexure - I

Screening Committee through Video Conferencing (VC) held under the chairmanship of Chief Engineer, PAO, CWC, New Delhi on 15.05.2020 for consideration of PFR Bodhghat Multipupose project, Chhattisgarh

List of participants

1. Shri G.K Agarwal, CE(PAO),CWC
2. Shri P. Dorje Gymba, Director(WP&P-Coord.), CWC
3. Shri Rajiv Kumar,Director,PA(C) Dte.,CWC
4. Shri N.N Rai, Director,Hyd (S) Dte.,CWC
5. Shri N. Mukherjee, Director,PA(S) Dte.,CWC
6. Shri Kiran Pramanik, Director,PA(N) Dte.,CWC
7. Shri Vivek Pal,Director,IP(S) Dte.,CWC
8. Shri Srivnivasu Bairy,Director,ISM-1 Dte., CWC
9. Shri Sharvan Kumar,Director(HPA),CEA
10. Smt. Anita Gahlot, Director(PAC), CEA
11. Shri Manoj Tripathi, Director(HPI), CEA
12. Shri Guru Prasad, DD, PA(C), CWC
13. Smt. Priti Choudhary, DD(ISM-I)

Special Invitees

14. Shri A. S. Goel, CE(YBO),CWC
15. Shri J Pawar, E-in-C, Government of Chhattisgarh
16. Shri R K Nagaria, CE, Mahanadi Project, Chhattisgarh
17. Shri R S Naidu, SE, WRD, Chhattisgarh
18. Shri Sheikh Shakir, SE, WRD, Jagdalpur, Chhattisgarh
19. Shri N K Bijora, MD, CSPGCL, Chhattisgarh
20. Smt. Ujjwala Baghel, Director, CSPGCL, Chhattisgarh

Government of India
Central Water Commission
Hydrology (South) Directorate
7th Floor (S), Sewa Bhawan
R.K.Puram, New Delhi-110066
Phone/Fax:011-29583507
Email: hydsouth@nic.in

Subject : PFR Hydrology of Bodhghat Multipurpose Project, Chhattisgarh – reg.

Ref: epams receipt dated 06.04.2020 regarding PFR of Bodhghat Multipurpose Project, Chhattisgrah

Reference is invited to above epams receipt dated 06.04.2020 from PA(C) Dte, CWC forwarding the PFR hydrology of Bodhghat Multipurpose Project, Chhattisgrah. The hydrological studies have been examined and observations/findings of this office are as under:

A. PROJECT PROPOSAL

Bodhghat Multipurpose Project is proposed on Indravati river near village Barsoor in Geedam block of Dantewada district of Chhattisgarh. The latitude and longitude of dam site are $19^0$11'29.76"N and $81^0$24'24.48"E respectively. The catchment area of river at proposed dam site is about 15240 sq.km. At present the project envisages construction of a 94.5 m high dam of 1506.4 m length. The gross storage and live storage of reservoir is proposed to be about 4.418 billion cubic meter and 3.715 billion cubic meter respectively. The project envisages hydro power with installed capacity of 500 MW, irrigation of about 111075 ha of land in Dantewada and Bijapur districts, drinking water supply of about 30 million cubic meter and industrial water requirement of about 500 million cubic meter.

B. WATER AVAILBILITY STUDIES

The hydrological studies of Bodhghat Multipurpose Project was carried out by Hydrology (South) Dte, CWC during the year 2004-05 on the request of Chattisgarh State Electricity Board. The same study report has been forwarded by the Project Authorities. As per the study the water availability series at project site for 30 years period from 1970-71 to 1999-2000 has been computed in catchment area proportion using the observed discharge data of Jagdalpur G&D site of Central Water Commission. While computing the water availability series at Bodhghat Project Site, due consideration has been given to the agreement of 1975 between Madhya Pradesh and Orissa Governments. It has been assumed that Orissa will ensure at its border with Madhya Pradesh (now Chhattisgarh) a flow of 45 TMC in the Indravati and its tributaries at 75% dependability for use by Madhya Pradesh (now Chhattisgarh) and during the years of shortages, the same will be shared proportionately between the two states and the assurance of flow on the Indravati will stand proportionally reduced. The figure of 45 TMC is on the assumption of total yield of 204 TMC from Indravati sub basin in Orissa and 91 TMC utilization for the Upper Indravati Project. Accordingly, where the assumption of 204 TMC is found to be high the figure of 45 TMC has been reduced in the same proportion. The 10 daily series at the Bodhghat for the period 1970-71 to 1999-00 (30 years) developed using the 10 daily data of Jagdalpur G&D site and as per the agreement of above two states is appended in Hydrological report. As per the water availability series at Bodhghat Project site, the average annual yield is about 4.905 billion cubic meter and 75% dependable yield is about 3.77 billion cubic meter.

B.1 Observations & findings

In order to verify the yield at Bodhghat Project site, this Directorate has also carried out certain computations to estimate the yield at Bodhghat Project site using the data of Chindnar G&D site of CWC on Indravati river where Catchment Area of river is about 17206 sq.km. Based on computed series by this Directorate for the period 2000-01 to 2013-14 (14 years), the average annual yield at Bodhght Project site has been found to be about 5.0 billion cubic meter which is very close to earlier estimate of 4.905 billion cubic meter. In view of that, the water availability series of Bodhghat Project for the period 1970-71 to 1999-00 submitted by Project Authorities, is generally appears to be in order for the PFR hydrology.

However, for the DPR hydrology the same may be updated suitably using the latest data of G&D sites of Indravati river.

C. DESIGN FLOOD STUDIES

The design flood study for the project was carried out by Hydrology (South) Dte in year 2004-05 by considering the 3 day storm of 28-30 August 1982 centered at Bijapur/Dugarpalli as candidate storm and dividing the catchment area at Bodhgaht Project site into 4 sub-catchments. The same report has been submitted by the Project Authorities. As per the study report, the 1-day, 2-day and 3-day storm isohyets were transposed in the project catchment. The MAF was considered as 1.24. The estimated 3 days PMP depth was about 708 mm corresponding to Project catchment area of 15240 sq.km. The estimated design flood (PMF) as per the above study report is 47,200 cumec.

C.1 Observations & findings

The PMP value adopted in study has also been checked from the PMP Atlas of Godavari basin published by CWC in November 2014 and as per this PMP Atlas, the grid value PMP depth for 3 day storm is about 649 mm for a catchment area of 15240 sq.km. Hence, the PMP depth adopted earlier is in agreement with the value of latest PMP Atlas also. In view of that, the design flood (PMF) study report with estimated design flood of 47,200 cumec for Bodhghat Project, submitted by Project Authorities appears to be in order and the same may be adopted for the planning purpose of the project.

D. Diversion flood study

As per the diversion flood study report, the proposed Bodhghat dam is a concrete dam and as per BIS 14815-2000, the design flood for river diversion work should be maximum non-monsoon flow observed at dam site or 25 years return period flood, calculated on the basis of non-monsoon yearly peaks. The diversion flood has been computed by flood frequency analysis of observed yearly non-monsoon peaks at Jagadalpur G&D site for the period (1981-99) and Chindnar G&D site for the period (1981-95). The estimated maximum 25 year non-monsoon flood at Jagadalpur G&D site is about 467 cumec which is on the basis of Log-Pearson distribution. The same at Chidnar G&D site on the basis of Log-Pearson distribution is 588 cumec. The maximum observed non-monsoon flood at Jagdalpur and Chindnar during the above period is 485.70 cumec and 590 cumec respectively. The maximum observed flood of the above G&D sites have been transferred to Bodhgat Project site using Ryves formula and estimated values are found to be 748 cumec on the

basis of Jagdalpur and 495 cumec on the basis of Chindnar. Based on the above values an average flood of 600 cumec is recommended as diversion flood.

D.1 Observations & findings

The diversion flood study submitted by Project Authorities is generally appears to be in order for the PFR hydrology.

However, for the DPR hydrology the same may be updated suitably using the latest flood peak data of G&D sites of Indravati river and considering the construction schedule and type of main dam.

E. **Reservoir sedimentation study**

The reservoir sedimentation study has been carried out taking the average annual sediment yield as 0.465 mm/year. The estimated new zero elevation on the basis of Area Increment method after 25 years and 70 years are 394.35 m and 398.10 m respectively.

D.1 Observations & findings

The reservoir sedimentation study submitted by Project Authorities appears to be in order and the same may be adopted for the planning purpose of the project.

This issues with the approval of Chief Engineer (HSO), CWC.

24.04.2020

(NITYA NAND RAI)
(Director)

Director, Project Appraisal (Central) Directorate, CWC, New Delhi
CWC U.O 7/Chhattisgarh-32/2019-Hyd(S)/ 28 Dated 24/04/2020

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन नदी विकास एवं गंगा संरक्षण विभाग
केंद्रीय जल आयोग
अंतरराज्यीय मामले- I निदेशालय

सत्यमेव जयते

Government of India
Ministry of Jal Shakti
Dept. of Water Resources, RD&GR
Central Water Commission
Inter-State matters-1 Directorate

Subject: - Preliminary project report (PPR) of Bodhghat multipurpose project of Chhattisgarh-reg.

Ref.: - PA(C) Dte. email dated 06.04.2020.

Please refer above mentioned email vide which Preliminary project report of Bodhghat multipurpose project of Chhattisgarh has been forwarded in this Directorate through ePAMS portal for examination from inter-state angle.

Project in brief :

The Bodhghat multipurpose project proposed on River Indravati River which originates in Kalahandi district of Odisha State and it is one of the major tributary of Godavari River. The proposed project is located at Latitude 19°12'00" N & Longitude 81°24'00" E. The project envisages construction of a 94.5 m (310 ft) high dam of 1506.4 m (4941 ft) length with gross capacity of 4418 MCM. The project envisages construction of power house d/s of dam with installed capacity of 500 M.W. with tail race tunnel /channel of 4.8 km length leading to Indravati river d/s of dam where a pick up weir is proposed. The gravity canal which takes from a pick up weir on Mander river, proposes to utilize 92.27 Cumec (3257 Cusec) of maximum head discharge to provide irrigation facilities to 1, 11,069 ha. of land in Dantewada and Bijapur district. The intensity of irrigation will be 136% which will give annual irrigation of 266580 (111069x136/100=151053)Hac. It is also proposed to lift 14.93 Cumec (527 Cusec) from the Bodhght canal (there will be regulated releases from Bodhghat Power house all round the year) which will irrigate 19807 Hac. In addition to above, it is proposed to produce power of 19MW from Bodhghat Gravity canal and 2 MW from Madded sub-branch canal.

Drinking and industrial water requirement are projected as 30 MCM and 500 MCM respectively for Dantewada and Bijjapur district of Chhattisgarh. Further, it has been stated that by the construction of Bodhghat project, Chhattisgarh will be utilizing 131.12 TMC water.

पंचम तल(दक्षिण), सेवा भवन
राम कृष्ण पुरम, नई दिल्ली -110066
दूरभाष: 011-29583426,
ई मेल: ism-1dte-cwc@nic.in
♦जल संरक्षण-सुरक्षित भविष्य♦

5th Floor(South), SewaBhawan,
R.K. Puram, New Delhi-110066
Tel: 011-29583426,
E-mail: ism-1dte-cwc@nic.in
♦Conserve Water- Save Life♦

The 90%, 75% and 50% dependable inflow in the reservoir has been assessed as:

S.No	Dependable Flow	Total (Mcum)	Monsoon(Mcum)	Non Monsoon(Mcum)
1	90%	2818.93	2298.97	519.963
2	75%	3776.14	3467.14	309
3	50%	4791.39	4309.13	662.85

The project has been examined from inter-state angle and the comments are as under:

Comments:

1. The aforesaid Project is proposed to utilize 131.12 TMC of water. However, break up of the same is not available in the report. Further, utilization of water for irrigation may be provided during the meeting.
2. The value of Gross Storage, live Storage, FRL are different in different chapters. Besides there are some conversion errors like 4418 MCM shown as 9.53 MAF and CCA of 111069 ha with 136% intensity showing irrigated area as 266580 ha. Same needs to be reconciled.
3. The Index Map enclosed with the PFR does not depict different components of the project clearly, therefore, it is requested to furnish Index map showing State boundaries, Hydro-electric project outline with tail race output with T-diagram, location of weir, rivers etc.
4. The water availability assessed at 75 % dependability is 3776.14MCM (132.4 TMC). However, the utilization from constructed Scheme, under constructed Scheme and proposed Bhodghat project is 144.12 TMC(=13 TMC+ 131.12 TMC), which is more than the water availability.
5. The water availability has been assessed by using data till 1999. Further, during examination of Middle Kolab Multipurpose project, Odisha, Chhattisgarh vide letter dated 12.10.2018 has raised the concern about the water availability in Indravati and Jouranalla and suggested for review of inter State agreement dated 11.07.1979 at high level. In addition to it, Chhattisgarh has also raised the inter-State issues regarding obstruction to change the flow of water towards Chhattisgarh State at the hydraulic control structures built for inter State water distribution on Indravati river. In view of above, it is suggested to assess water availability with recent data i.e. till 2019 or 2020. The effect on water availability as raised by Chhattisgarh and assessed by using latest data needs to be addressed before taking up the project.

6. As per clause I & II of Agreement between the States of Orissa and Madhya Pradesh on 9-12-1975, the States of Orissa and Madhya Pradesh will be entitled to utilise in any way not more than 200 TMC and 300 TMC respectively below Pochampad Dam site for new projects. Further as per clause 2(a) and 2(c) of the inter-State agreement between erstwhile MP and Odisha reached in July 1979, erstwhile MP can utilise 273 TMC of water upto Bhopalpatnam I HE project on Indravati river from existing, ongoing and future projects in CG (erstwhile MP). The details of utilisation of 273 TMC from existing, ongoing and future projects in CG (erstwhile MP) is not provided in the FR.

The clarification with respect to points 1,2 and 3 may be provided during the meeting. Subject to compliance to above comments at 4, 5 and 6 at DPR stage, the PFR is considered acceptable from inter-State angle at present.

Choudhary 21.4.2020

(Preeti Choudhary)
Deputy Director

Director, PA(C), CWC, T.K.Puram, New Delhi
4/11/CG/ISM-1/2017/223 dated: 21.04.2020

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन नदी विकास एवं गंगा संरक्षण विभाग
केंद्रीय जल आयोग
सिंचाई आयोजन (द) निदेशालय

सत्यमेव जयते

Government of India
Ministry of Jal Shakti
Department of Water Resources, RD & GR
Central Water Commission
Irrigation Planning (S) Directorate

विषय: Preliminary Feasibility Report (PFR) of Bodhghat Multipurpose Project, Chhattisgarh - reg.
सन्दर्भ: Received through e-PAMS portal dated: 06.04.2020.

In supersession of this office email dated 21.04.2020, with reference to the letter cited above vide which project authorities submitted the project through e-PAMS, the comments/ views on PFR in respect of Irrigation Planning aspects regarding accepting the project for the preparation of Detailed Project Report (DPR) of the project are as under:

Introduction:

As per the PFR, the project envisages construction of a 94.5 m high dam of length 1506.4 m to store the gross capacity of 4418 MCM of water. From this reservoir, water would be carried to power house through head race tunnel (HRT) of 13.00 m diameter and length of about 4.80 km to drive four turbines of 125 MW each (total installed capacity of 500 MW). After producing power, the water will be released to Mander river. The project is estimated at the cost of Rs. 21,000.04 Cr.

As per the PFR, the project has two components through which irrigation will be provided in the command.

a) Through gravity canal which takes off from a pick up weir on Mander river, where the regulated releases of Bodhghat Power house are left out, utilizes 92.27 cumec (3257 cusec) of maximum head discharge to give irrigation facilities to 1,11,069 Ha. of land in Dantewada and Bijapur district. This will be done by 194 km of main canal and 228 km of branch canals to provide annual irrigation of 266580 Ha with intensity of irrigation of 136% as per Executive Summary of the PFR.

b) Through lift irrigation, water will be lifted from the Bodhghat canal where there will be regulated releases of Bodhghat Power house all round the year. Therefore, it has been proposed to lift 14.93 cumec (527 cusec) by 45 m which will irrigate 19,807 Ha cultivable land in Dantewada Tahsil between lift canal and gravity canal up to Dhankini river through 42 Km main canal which will give annual irrigation of 35,653 Ha.

Comments:

(i) It has been observed that the project authorities have submitted only one page of irrigation planning chapter with very limited data / information. Some of the basic details such as Gross Command Area (GCA), CCA, Live Storage of reservoir etc. in respect of the project have not been provided in the PFR. Project Authorities may provide the basic data sought at the earliest.

(ii) Index map has been provided in the PFR which lacks required information and details. It is suggested that Index Map should be clear and coloured in A3 size paper showing the details of river systems, project site / location of dam, weir, powerhouse, head race tunnel, command area of the project envisaged for irrigation through gravity canal and lift irrigation, alignment of canal and distribution system, command of adjacent project, if any etc. Project Authorities may provide the index map.

saovaa Bavana, rama kRYNa purma\
na[- idllal - 110066
dUrBaaYa na: 011 29583236,
[- maola : ipdte@nic.in

5th Floor, Sewa Bhawan, R. K.Puram,
New Delhi-110066
Tel. No. 011 29583236,
E-mail: ipdte@nic.in

(iii) Project authorities have mentioned gross capacity of reservoir as 4418 MCM without mentioning live storage available for utilization of water form this reservoir. Drinking and industrial water requirement have been projected as 30 MCM and 500 MCM respectively for Dantewada and Bijjapur district of Chhattisgarh, however, water to be provided for irrigation purpose has not been mentioned in the PFR. These points need to be clarified and elaborated by project authorities.

(iv) It has been mentioned in the PFR that 92.27 cumecs of water will be picked up for Kharif irrigation of 1,11,075 Ha and 1,11,075 Ha of Rabi and 44,430 Ha of Summer crops in Dantewada and Bijapur districts. Project Authorities may clarify the proposed crop water requirement / consumptive use of the same in MCM or TMC.

(v) It has also been mentioned that in latter part of the project, scope of irrigation in Sukma District would also be explored, as more than sufficient water is available in the dam for irrigation. The details of the above may be worked out at Detailed Project report (DPR) stage.

(vi) The possibility for conjunctive use planning of surface and ground water may be discussed along with the scope for the use of modern irrigation technology viz. micro irrigation etc. in the command.

In view of above, project authorities may be requested to clarify above points.

This issues with the approval of Chief Engineer, IMO, CWC, New Delhi.

नीरज कुमार शर्मा
23/04/2020
(नीरज कुमार शर्मा)
उप निदेशक (सिंचाई योजना-दक्षिण)

निदेशक (PA-C), केंद्रीय जल आयोग, नई दिल्ली
पत्रांक संख्या: 2/1559/IP-S/2020/156 - 157 दिनांक: 23 /04/2020

प्रतिलिपि सूचनार्थ हेतु:
मुख्य अभियंता (PAO), केंद्रीय जल आयोग, नई दिल्ली।

भारत सरकार
जल शक्ति मंत्रालय
जल संसाधन,न.वि. एवं गं.सं.विभाग
केंद्रीय जल आयोग
सिंचाई आयोजन (दक्षिण) निदेशालय

सत्यमेव जयते

Government of India
Ministry of Jal Shakti
Dept. of Water Resources, RD & GR
Central Water Commission
Irrigation Planning (South)Dte.

विषय: Preliminary Feasibility Report (PFR) of Bodhghat MultiporpuseProject, Chhatisgarh-reg.

संदर्भ: (i) Received through e-PAMS portal dated: 30.04.2020.

(ii) Email received from PA (C) Directorate dated 07.05.2020

May please refer to the references above vide which project authorities have submitted the reply in respect of comments of this Directorate issued on 23.04.2020. The same has been gone through and observations are as under.

(i) In their reply, the project authorities have now clarified about the GCA and CCA of the project as 207743 Ha and 137912 Ha respectively. The season wise breakup has also been provided by the project authorities as 1,11,075 Ha for Kharif, 1,11,075 Ha for Rabi and 44,430 Ha for summer. Therefore, the annual irrigation of the project comes out to be 266580 Ha with Intensity of Irrigation as 1.93, whereas in the Irrigation Planning chapter of PFR, project authorities have mentioned Irrigation Intensity as 1.3. This discrepancy needs to be reconciled.

(ii) In the reply submitted by project authorities, the irrigation water requirement has been worked out as 1206.19 MCM (42.6 TMC) which seems to be underestimated. The calculations in respect of the Crop water requirement may be worked out using the CWC Guidelines and the same may be submitted at the DPR stage for further examination.

(iii) Earlier, the project authorities considered the Drinking and Industrial Water requirement as 30 MCM and 500 MCM respectively. Now in their reply, the project authorities have revised the industrial water requirement as 200 MCM. Thus, total water demand of the Bodhghat project comes out to be 1436.19 MCM (50.73 TMC). The same may be reconciled and firmed up.

(iv) The project authorities have clarified that after generation of power, water will be conveyed to Mandher river, from Mandher river it will be used for irrigation after constructing a weir. As water available after generation of power is more than sufficient for proposed irrigation, possibility of its diversion to Sukma district will also be explored at DPR stage. The project authorities have informed that the live storage of the proposed dam is 3715.40 MCM. The same may be planned suitably at the DPR stage.

(v) In the Interstate aspect chapter of PFR submitted by the project authorities, it has been mentioned that by the construction of Bodhghat Project, Chhattisgarh would be using 131.12 TMC water, whereas in reply to this directorate, the project authorities have

पांचवा तल (दक्षिण), सेवा भवन
राम कृष्णा पुरम, नई दिल्ली-110066
दूरभाष: 011-29583236
ई मेल: ipdte@nic.in
जल संरक्षण- सुरक्षित भविष्य

5th Floor(South), Sewa Bhawan
R. K. puram, New Delhi - 110066
Tel: 011-29583236
E-mail: ipdte@nic.in
Conserve Water – Save Life

clarified that the water utilisation will be 50.73 TMC. The same may be firmed up and the discrepancy may be rectified at the DPR stage.

Based on the input provided by the project authorities about the proposed water utilization for the project against the water availability of the project, the project seems to be feasible from Irrigation Planning point of view, however, many features needs to be firmed up at DPR stage.

In this regard in-principle approval can be considered to prepare the DPR of the project as per the guideline of CWC and the observations of this directorate mentioned above and issued vide letter dated 23.04.2020.

This issues with the approval of Chief Engineer, IMO, CWC, New Delhi.

Vivek Pal
12/05/2020
(Vivek Pal)
Director (IP-S)

Director, PA(C), CWC, New Delhi
Letter no. 2/1559/IP-S/2020/ 187-188 Dated 12.05.2020

Copy for information:
Chief Engineer, PAO, CWC, New Delhi

पांचवा तल (दक्षिण), सेवा भवन
राम कृष्णा पुरम, नई दिल्ली-110066
दूरभाष: 011-29583236
ई मेल: ipdte@nic.in
जल संरक्षण- सुरक्षित भविष्य

5th Floor(South), Sewa Bhawan
R. K. puram, New Delhi - 110066
Tel: 011-29583236
E-mail: ipdte@nic.in
Conserve Water – Save Life