

No. 16/27/2019-PA(N)/ 106-34
Central Water Commission
Project Appraisal Organization

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7th Floor (S), Sewa Bhawan,
R. K. Puram, New Delhi.

Dated: 09/01/2019

Minutes of Meeting

A copy of the Summary Record of Discussion of the 139th Meeting of the Advisory Committee of MoWR, RD&GR on Irrigation, Multipurpose and Flood Control Projects, held under the Chairmanship of the Secretary, MoWR, RD&GR on 07/01/2019 at New Delhi is enclosed herewith for information and further necessary action please.

Comments, if any, may kindly be forwarded to the undersigned within 15 days.

Encl: As above



(C K L Das)

**Member Secretary of the Advisory Committee &
Chief Engineer (PAO)**

To,

Members of the Committee:

1. Chairman, CWC, Sewa Bhawan, R. K. Puram, New Delhi.
2. Secretary (Expenditure), Ministry of Finance, 1st Floor, North Block, New Delhi.
3. Secretary, Department of Power, Room No. 205, S.S. Bhawan, II Floor, New Delhi.
4. Secretary, Ministry of Environment & Forests & CC, 4th Floor, Prithvi Block, Indira Paryavaran, Jor Bagh, New Delhi.
5. Secretary, Department of Agriculture, Cooperation & Farmers Welfare, R. No. 126, Krishi Bhawan, New Delhi.
6. Secretary, Ministry of Tribal Affairs, Room No. 738, A-Wing, Shastri Bhawan, New Delhi.
7. Director General, ICAR, Room No-108, Krishi Bhawan, New Delhi.
8. Chairman, CEA, Sewa Bhawan, R. K. Puram, New Delhi.
9. Chairman, Central Ground Water Board, Jam Nagar House, New Delhi.
10. Adviser (Power), NITI Aayog, Room No. 248, Yojana Bhawan, New Delhi.
11. Adviser (WR), NITI Aayog, Room No. 230, Yojana Bhawan, New Delhi.
12. Joint Secretary & Financial Adviser, MoWR, RD & GR, Room No-401, S.S. Bhawan, New Delhi.

Special Invitees:

13. Secretary, Irrigation & Flood Control Department, Govt. of Jammu and Kashmir, Civil Secretariat, Jammu -180 001
14. Managing Director, Jammu and Kashmir State Power Development Corporation, Govt. of Jammu and Kashmir, Ashok Nagar, Satwari, Jammu -180 004

15. Additional Secretary, MoWR, RD&GR, New Delhi
16. Member (WP&P), CWC, New Delhi.
17. Member (D&R), CWC, New Delhi.
18. Member (RM), CWC, New Delhi.
19. Joint Secretary (RD&PP), MoWR, RD&GR.
20. Joint Secretary (IC&GW), MoWR, RD&GR.
21. Chief Advisor (Cost), Department of Expenditure, Ministry of Finance, 2nd Floor, Lok Nayak Bhawan, New Delhi.
22. Commissioner (State Projects), MoWR, RD & GR, Room No-411, S. S. Bhawan, New Delhi.
23. Commissioner (Indus), MoWR, RD & GR, New Delhi.
24. Commissioner (FM), MoWR, RD & GR, CGO Complex, 11th Block, 8th Floor, Lodhi Road, New Delhi.
25. Chief Engineer (IBO), CWC Chandigarh
26. Chief Engineer (PPO), CWC, New Delhi
27. Chief Engineer (IMO), CWC, New Delhi
28. Chief Engineer, Rabi and Tawi, Irrigation Complex, Canal Road, Jammu

Copy for kind information to:

29. Sr. PPS to Secretary, MoWR, RD & GR, Room No. 407, Shram Shakti Bhawan, New Delhi.

Government of India
Ministry of Water Resources, River Development & Ganga Rejuvenation
Central Water Commission

**SUMMARY RECORD OF DISCUSSIONS OF THE 139th MEETING OF THE
ADVISORY COMMITTEE FOR CONSIDERATION OF TECHNO-ECONOMIC
VIABILITY OF MAJOR & MEDIUM IRRIGATION, FLOOD CONTROL AND
MULTIPURPOSE PROJECT PROPOSALS HELD ON MONDAY, JANUARY
07TH, 2019 AT CENTRAL WATER COMMISSION, NEW DELHI**

The 139th meeting of the Advisory Committee of Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR, RD&GR) for consideration of techno-economic viability of major & medium irrigation, flood control and multi-purpose project proposals was held under the Chairmanship of Shri U. P. Singh, Secretary to the Government of India, MoWR, RD & GR on Monday, January 07th, 2019 at Central Water Commission, New Delhi. The list of members of the Committee or their representatives/nominees/ special invitees and officers from various Ministries/ Organizations and representatives of State Governments who attended the meeting is at **Annexure.**

(i) Confirmation of the minutes of the 138th Meeting of the Advisory Committee

Chief Engineer (PAO), CWC and Member Secretary of Advisory Committee stated that the 138th meeting of the Advisory Committee of MoWR, RD&GR on Irrigation, Flood Control and Multi-purpose Projects was held on 31/10/2018 at CWC, New Delhi. The Summary Record of Discussions of the 138th Meeting was circulated vide letter No. 16/27/2018-PA(N)/1698-1725 dated 05/11/2018.

The Advisory Committee confirmed the Summary Record of Discussion of the 138th meeting of the Advisory Committee.

(ii) Follow up action after the 138th meeting of the Advisory Committee

NIL

(iii) Project proposal considered by the Advisory Committee

A. Irrigation and Multi-purpose Projects:



1. **Modified Detailed Project Report of the Ujh Multipurpose Project, Jammu & Kashmir (National Project; Multipurpose; Estimated Cost Rs. 5850 Crore @ July, 2017 PL)**

Background

The Detailed Project Report (DPR) of Ujh Multipurpose Project, J&K was initially prepared by Central Water Commission, Jammu in 2013. In the DPR, the height of the dam was envisaged as 116 m (with Dam top level as 619m) with FRL as 614m. The DPR was considered in 131st meeting of the Advisory Committee of MoWR, RD&GR for consideration of techno-economic viability of Major/Medium Irrigation, Flood Control and Multipurpose project proposals on 16th November, 2016 wherein the project was agreed to 'In- Principle'. However, due to the issue of large submergence of land measuring about 41 sq km, the Advisory Committee decided that a team comprising of concerned officers from CWC and other experts shall visit the project site / area and explore the alternative options with reduced submergence.

The Expert Committee constituted under the chairmanship of Chief Engineer (IBO), CWC, Chandigarh after visiting the project site on 16th March, 2017, submitted its Report during May, 2017 and recommended to construct the dam and other appurtenant structures with reduced FRL of 608 m. Subsequently, MoWR, RD & GR vide its communication dated 14th July, 2017 desired to explore the possibility of retaining the dam height as originally envisaged so as to cater for future requirement if need arises. After consideration, it was decided that the DPR should be modified by keeping the dam height same, as envisaged in the original DPR, however, as recommended by Expert Committee, the Full Reservoir Level (FRL) may be brought down to 608 m to reduce submergence from 41 sq km to around 34.50 sq km.

Revised proposal

After a brief introduction of the project proposal by the Chairman, CWC, a presentation on the project was made by the Director (M&A Dte), CWC, Jammu. It was stated that the Indus Waters Treaty, 1960 was signed between India and Pakistan for sharing of the waters of the Indus system of rivers. According to the Treaty, India got the full rights for utilization of waters of the three Eastern Rivers namely Ravi, Beas and Sutlej. To utilize the waters of river Ujh which is a tributary of Ravi, the Ujh project has been envisaged. The proposal of this project does not fully satisfy economic viability as per the existing criteria. However, keeping in view its strategic importance from Indus Waters Treaty angle for utilisation and regulation of waters flowing across the border and also potential future use



of the stored water in an optimal manner, special funding for this project has been proposed.

Project details

The Ujh Multipurpose Project is located on river Ujh, one of the main tributaries of river Ravi, in district Kathua of Jammu and Kashmir. A 116.00 m high dam is proposed at River Ujh with FRL at 608 m. The proposed dam site is in the village Barbari about 1.6 km downstream of Panchtirthi. The powerhouse site is approximately 9.5 km downstream of dam site near a village called Deoli.

A barrage has been proposed 1.5 km d/s of powerhouse which also lies in Tehsil and district Kathua. Two canals, Right Main Canal (RMC) and Left Main Canal (LMC) will be emanating from barrage along both the banks of the river. From each of the canals 10 cusec water has been earmarked for drinking water for the district Kathua of J&K. While the RMC will provide irrigation in tehsil Kathua, Hiranagar and Samba district, the LMC will provide irrigation in district Kathua. The CCA of RMC is 5595 ha and CCA of LMC is 3053 ha with 200 % intensity of irrigation. In addition to that, the RMC will irrigate an additional area of 8095 ha in Kharif season and 5989 ha in Rabi Season from Samba to Vijaypur in the command area of existing Ravi and Tawi canals.

The Installed capacity of the main powerhouse of the Ujh Multipurpose Project has been envisaged as 186 MW. In addition to that, a dam toe powerhouse comprising four units of 2.5 MW each has been proposed to harness the hydro-electric potential of the water meant for mandatory environmental releases.

The estimated cost of the project is Rs. 5850 cr. at price level July, 2017. The cost bifurcation has been made between water component (irrigation and drinking water) and power component as **Rs. 4919.94 Cr (84.10%)** and **Rs. 930.06 Cr (15.90%)** respectively. Corresponding to cost estimate of Rs. 4919.94 crore at July 2017 price level for the irrigation and drinking water component, the benefit cost ratio for the project comes out to **0.62:1**. However, for the project to be economically viable, the B. C. ratio needs to be more than 1.0, in the hilly states like J&K.

The Committee noted that the project has been planned as a storage project to store water which is flowing freely across the border. The dam height has been kept much higher than the FRL so as to keep space for more storage for potential future uses because it may not



be possible to raise the dam height once it is constructed.

The possible financial model for implementation of this project to achieve sustainable tariff and irrigation benefits alongwith other benefits was presented as under:

Bearable Cost of irrigation & drinking water component:

The economically viable cost of water component has been worked out by assuming bearable cost which renders **BC ratio more than 1.0** Accordingly, the total cost of the water component works out as **Rs. 2970.00 Cr** (as against the actual water component cost of Rs 4919.94 Cr).

Bearable Cost of Power Component:

Similarly, by taking average tariff rate of Rs.2.21 per Kwh (furnished by JKPDC vide their letter no JKSPDC/P-168/1200-02 dated 19th November, 2018), bearable cost for power component works out as **Rs. 262.31 cr**. However, as per cost apportionment, the cost of power component is Rs. 930.06 Cr.

Gap Funding for the Project:

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|--|-----------------------------|
| Total cost of the project: | Rs. 5850 Cr. |
| • Bearable cost of water component (irrigation & drinking): | Rs. 2970 Cr. (51 %) |
| • Bearable cost of power component: | Rs. 262 Cr. (5 %) |
| • Total viable cost of water and power component: | Rs. 3232 Cr. (56 %) |
| • Balance cost: | Rs.2618 Cr. (44 %) |

To have the project economically viable both for irrigation as well as power generation, balance cost of Rs. 2618 Cr. may be funded by the Govt. of India as gap funding keeping in view the strategic consideration from Indus Waters Treaty angle.

Secretary, MoWR, RD & GR and the Chairman of the Committee observed that the power tariff reported by JKPDC as Rs. 2.21/unit seems to be on lower side. Secretary, Power Development Department, Govt. of J&K stated that average cost of power could be taken as Rs. 3.5/unit. Further, the plant load factor of 14.67% seems to be low. The Committee thereafter advised that the average price of power per unit and number of units of energy generation may be relooked for reviewing the cost of the power component, in consultation with CEA and the Govt of J&K.



Detailed discussions on the project proposal were held during the meeting. Secretary (WR, RD & GR) and the Chairman of the Committee stated that the consumptive water use from the project was of the order of 248 MCM whereas the live storage of the project was 781 MCM. In this regard, the Chief Engineer (IBO), CWC stated that once the proposed 2nd Ravi-Beas Link Project comes up, additional usage of the order of 250 MCM of Ujh water going across the border can be expected. The Committee appreciated that the demand of water is growing at a fast pace and very limited storage sites are available. The site of the Project is an ideal one and if a dam of lower height is built, the possibility of raising the height of the dam and storing additional water at a later date, if needed, is practically lost forever. The Secretary (I & FC Dept), Govt of J&K also emphasized the importance of the project for the development of J&K State and assured for finding avenues for the optimal utilization of the stored water behind the dam. The Chief Engineer (PAO), CWC in this context stated that such water resources project have huge intangible socio-economic benefits which cannot be evaluated or quantified in terms of BC ratio or such economic criterion.

The Committee also noted that for ensuring full consumptive utilization of water beyond already envisaged through Ujh Project, possibility of additional utilization should be explored at the earliest so that water released to generate hydropower may not flow out of the country and such projects should be implemented on priority.

After detailed deliberations, the proposal was accepted by the Advisory Committee

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

A handwritten signature in black ink, consisting of a stylized 'S' followed by a horizontal line.

LIST OF OFFICERS PRESENT IN THE 139th MEETING OF THE ADVISORY COMMITTEE ON IRRIGATION, FLOOD CONTROL AND MULTI-PURPOSE PROJECTS ON MONDAY, THE 07th JANUARY, 2019 AT 03:00 PM IN THE COMMITTEE ROOM OF CENTRAL WATER COMMISSION, 2nd FLOOR, SEWA BHAWAN, R K PURAM, NEW DELHI.

Shri U.P. Singh, Secretary, MoWR, RD&GR

In Chair

Members of the Advisory Committee or their representatives/nominees

S/Shri

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|----|---|------------------|
| 1. | S. Masood Husain, Chairman, Central Water Commission | Member |
| 2. | Jagmohan Gupta, JS & FA, MoWR, RD& GR | Member |
| 3. | P. C. Jiloha, Chief Engineer (CEA) (Representing Chairman, CEA) | Member |
| 4. | S Kerketta, Director, MoEF&CC (Representing Secretary, Ministry of Environment & Forests & CC) | Member |
| 5. | Prabir Kumar Naik, Senior Hydrogeologist, CGWB (Representing Chairman, CGWB) | Member |
| 6. | Vishal Pal Singh, Deputy Secretary, Ministry of Power (Representing Secretary, Ministry of Power) | Member |
| 7. | R.A.S. Patel, Assistant Commissioner, DAC&FW (Representing Secretary, Deptt. of Agriculture Cooperation & FW) | Member |
| 8. | C.K.L. Das, Chief Engineer, PAO, CWC | Member Secretary |

Special Invitees:

MoWR, RD&GR

S/Shri

1. K. Vohra, Commissioner (SPR)
2. P K Saxena, Commissioner (Indus)
3. Manoj Kumar, Senior Joint Commissioner (Indus)

O/o Chief Adviser (Cost)

S/Shri

1. B. Bandyopadhyay, Adviser (Cost)

Central Water Commission

S/Shri

1. N.K. Mathur, Member (D&R), CWC
2. S.K. Halder, Member WP&P, CWC
3. R.K. Pachauri, Chief Engineer, PPO, CWC
4. Atul Jain, Chief Engineer, IBO, CWC
5. Bhupinder Singh, Director, NP Dte, CWC
6. N. Mukherjee, Director, PA(S) Dte., CWC
7. Rajiv Kumar, Director, PA(C) Dte., CWC
8. G.L. Bansal, Director, EA Dte., CWC



9. Balram Kumar, Director, Cost Appraisal (Irrigation-1) Dte., CWC
10. B C Vishwakarma, Director (IP-North), CWC
11. Piyush Ranjan, Director, PA (N) Dte., CWC
12. Yoki Vijay, Director, M&A, CWC, Jammu
13. Ashish Tripathi, Dy Director, Cost Appraisal (Irrigation-1) Dte., CWC
14. A.K. Madhok, Dy. Director, PA (C) Dte., CWC
15. K. Iyappan, Dy. Director, PA(N) Dte. CWC
16. Sanjay Meena, Dy. Director, PA(N) Dte. CWC
17. Mahesh Kumar Gupta, Dy. Director, NP Dte., CWC
18. Nagendra Kumar Singh, Dy. Director, NP Dte., CWC
19. Durgendra Singh, AD-II, PA (N) Dte., CWC

Officers from the State Government

Jammu & Kashmir

S/Shri

1. Farooq Shah, Secretary, I and FC Department, Jammu
2. Hirdesh K. Singh, Commissioner-Secretary, Power Development Department/
Managing Director, JKSPDC
3. Dheeraj Gupta, Principal Resident Commissioner, Govt of J&K, New Delhi
4. A K Sharma, General Manager (Civil), JKSPDC, Jammu
5. Ashok Gandotra, Chief Engineer, Ravi Tawi Irrigation, Jammu
6. Buntty Bhole, DGM (Finance), JKSPDC
7. Vikas Sharma, Liaison Officer, Power Development Department, New Delhi
8. Mecnakshi Raina, Liaison Officer, JKSPDC
9. K. K. Gupta, Executive Engineer, RCC Upper Division, Kathua

Others:

1. Moumita M Ghosh, ACE, WAPCOS

