

No.J-12011/19/2011 -IA-I
 Ministry of Environment & Forests
 Government of India
 (IA-I Division)

132
 Paryavan Bhavan
 CGO.Complex, Lodi Road
 New Delhi-110 003

Date: 12th June, 2013

To,

The Executive Director
 J&K Power development Corporation
 Exhibition Ground
 Srinagar-190 009
 Jammu & Kashmir

**Subject: Sawalkot HEP (1856 MW) Project in Ramban District of Jammu & Kashmir by
 M/s. J&K Power Development Corporation - for Scoping/TOR - regarding.**

Sir,

This is with reference to your letter no. JSKPDC/P-76/MoEF(3)/5143-47 dated 24.12.2012 on the above mentioned subject.

2. It is noted that the project envisages construction of a 193 m high concrete gravity roller compacted dam (from the deepest foundation of the river bed) across river Chenab to generate 1856 MW of hydropower. This is a run-of-the-river scheme. Total land requirement is about 1099 ha, out of which 600 ha is forest land. Total submergence area is about 900 ha. (Of which 160 ha is cultivable land – uncultivable land-140 ha + forest land is 600 ha). CEA approved an aggregate capacity of 1856 MW to be developed in two stages. An underground powerhouse is proposed on the left bank of river. The first stage would be an aggregate capacity of 1406 MW (6 units of 225 MW each + 56 MW). The second stage of the project is envisaged for an installation capacity of 450 MW. A total of 629 families comprising of 4400 individuals are likely to be affected due to this project. No national park/sanctuary/biosphere reserve/historical monument exists within 10 Km radius of the project area.

3. The proposal was considered by Environment Appraisal Committee (EAC) for River Valley and Hydroelectric Projects in its meeting held on 22-23rd February, 2013. The comments and observations of EAC on the proposal may be seen in the minutes of the meeting, which are available on the web-site of this Ministry.

4. Based on recommendations of the EAC, the Ministry of Environment & Forests hereby accords clearance for pre-construction activities at the proposed site as per the provisions of the Environmental Impact Assessment Notification, 2006 and subsequent amendment, 2009 along with the following Terms of Reference (TOR) for preparation of EIA/EMP report. The EIA/EMP report should contain the information in accordance with provisions & stipulations as given in the Annexure-I. While preparing the EIA/EMP report prevailing norms should be followed with respect to environmental flows and muck disposal sites and other aspects along with the following additional TOR:

U
R. K. Ranjan
 Executive Engineer
 Civil Const. Division-II

(2)

(i) Details of Methodology to Include- Source (s) of secondary information. This should be cited wherever required and citations included in a Reference List.

(ii) **Biological Environment** should Include following:

- (a) Valuation of Biodiversity and Ecosystem Services provided by 600 ha of forests should be studied.
- (b) Number and species of trees in the submergence area and their basal area to be provided
- (c) GPS reading of occurrence of RET species should be recorded for conservation and rehabilitation purpose.
- (d) Compensatory afforestation and loss of biodiversity.
- (e) Collection of primary data on other relevant component
- (f) For categorization of sub-catchments & draining catchment, Silt Yield Index methodology should be used.

(iii) **Fauna:** Herpeto-fauna "Amphibians" should also be studied.

(iv) The geological and seismicity of the project area to be described in detail in consulting available literature.

(v) A separate social impact assessment report is to be prepared since the displaced families exceed 200.

(vi) The mentioned Environmental flow of 39.97 cumec has to be increased during monsoon. Revise net flow to 30% release during monsoon months.

(vii) Due to increase environmental flow, capacity of dam toe powerhouse may be more which needs to be checked during the study

(viii) The type of de-sanding device going to be used in the project to be detailed in the study, since the reservoir is going to be filled up in 7-8 years, coarse sediments will enter the HRT and cause damage. The experience from Baglihar and Salal HEP projects is to be provided in the report

(ix) The dam height is 193 m. Therefore, a detailed dam break analysis (DBA) and disaster management plan has to be prepared

5. The Consultant engaged for preparation of EIA/EMP report has to be registered with Quality Council of India (QCI)/NABET under the scheme of Accreditation & Registration of MoEF. This is a pre-requisite.

6. Consultants shall include a "Certificate" in EIA/EMP report regarding portion of EIA/EMP prepared by them and data provided by other organization(s)/ laboratories including status of approval of such laboratories.

7. The draft EIA/EMP report prepared as per the above Terms of References should be submitted to the State Pollution Control Board / Committee concerned for conducting Public Hearing / Consultation as per the provisions stipulated in EIA Notification of 2006.

8. All issues discussed in the Public Hearing/Consultations should be addressed and incorporated in the EIA/EMP Report. Final EIA/EMP report should be submitted to the Ministry for Environmental Clearance only after incorporating these issues.

9. The TOR will remain valid for a period of 2 years from the date of issue of this letter for submission of EIA/EMP report along with public consultation.

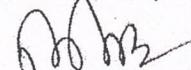
U. H. Ranas
Executive Engineer
Civil Services Division

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158

10. In case of any change in the Scope of the Project such as capacity enhancement, shifting of dam site/powerhouse and change in submergence etc., fresh scoping clearance has to be obtained by the project proponent.
11. Information pertaining to Corporate Environmental Responsibility and Environmental Policy shall be provided in the EIA/EMP Report as per this Ministry's circular dated 19.5.2012.
12. This has approval of the Competent Authority.

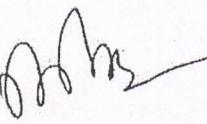
Yours faithfully,



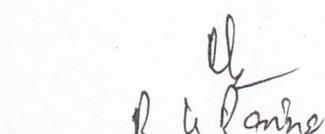
(B. B. Barman)
Director

Copy to:

1. The Secretary, Ministry of Power, Shram Shakti, Bhawan, Rafi Marg, New Delhi-1
2. The Adviser (Power), Planning Commission, Yojna Bhawan, New Delhi-110 001.
3. The Principal Secretary (MPP & Power), Government of Jammu & Kashmir, Srinagar.
4. The Secretary, Department of Environment, Government of Jammu & Kashmir, Srinagar.
5. Chief Engineer, Project Appraisal Directorate, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi- 110 066.
6. The Regional Office, Ministry of Environment & Forest, Chandigarh.
7. The Member Secretary, Jammu & Kashmir State Pollution Control Board, Parivesh Bhawan, Gladni, Transport Nagar, Narwal, Jammu-180 006.
8. NIC Cell – with a request to upload in MoEF's website
9. PS to JS (AT)/Director (IA-I)/PVSRao
10. Guard file.



(B. B. Barman)
Director



R. K. Kanhe
Executive Engineer
Civil Const. Division-II
Sawalkote HEP Ram

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188

भारत सरकार
Government of India
विद्युत मंत्रालय
Ministry of Power
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
संचित का कार्यालय
Office of Secretary
परियोजना मूल्यांकन समन्वय निदेशालय
Project Appraisal Co-ordination Directorate

File No. 2/J&K/19/CEA/03-PAC / 1047-1090

Date: 18th April, 2018

OFFICE MEMORANDUM

Subject: Sawalkot Hydro Electric Project [(6x225 MW+1x56 MW) (St I) + (2x225 MW) (St II)] = 1856 MW] in Jammu & Kashmir by M/s J&K State Power Development Corporation Ltd. at an Estimated Cost of Rs. 20317.66 Crores at Feb., 2016 PL including IDC of Rs. 6348.56 Crores & FC of Rs. 298.67 Crores. - Issue of Appraisal.

M/s J&K State Power Development Corporation Ltd. (M/s JKSPDCL) submitted to Central Electricity Authority the Detailed Project Report (DPR) of the generation scheme of Sawalkote Hydro Electric Project (1856 MW) in Jammu & Kashmir in April, 2014. Thereafter, the DPR was forwarded to various appraisal divisions of CEA, CWC, GSI, CSMRS, MoWR for examination of their respective portions. After clearance of all appraisal divisions, the proposal was considered in the 342th Meeting of CEA held on 27th December, 2016 based on the Agenda notes circulated vide CEA letter No. 2/J&K/19/CEA/2003-PAC/2680-2715 dated 27th December, 2016 at Sewa Bhawan, R. K. Puram, New Delhi.

Based on the modified chapter on "Construction methodology and Equipment Planning" submitted by JKSPDC on 02.06.2017, the CMC Dte of CWC issued their final clearance on 28.6.2017 with a provision of equipment worth Rs. 368.00 Lakh under sub-head 'Q-Special T&P of the Civil Cost estimate, and re-scheduling the construction period from 9 years to 8 years. Based on the revised cost and design energy, the total project Cost (including IDC & FC) estimated as 20317.66 Crores at Feb. 2016 PL was approved by Authority on 27.09.2017, which was earlier approved as Rs. 22190.66 Crores at Feb 16 PL.

2. As the Electricity Act, 2003 does not extend to the state of Jammu & Kashmir, the proposal has been appraised on the request of M/s JKSPDCL. The Central Electricity Authority accords Appraisal to the aforesaid scheme at an Estimated Cost of Rs 20317.66 Crores at Feb. 2016 PL including Interest During Construction (IDC) of Rs

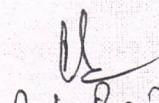
R. K. Raising
Executive Engineer
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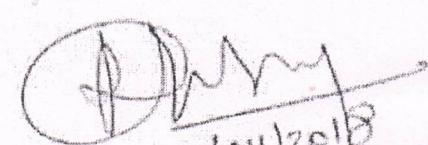
**Abstract of Total Project Cost
(Present Day Cost at February, 2016 PL)**

S.No.	Item	Total (Rs. Crores)
1	Hard Cost (Excluding IDC & FC)	13670.43
2	IDC	6348.56
3	FC	298.67
4	Total Project Cost (Including IDC & FC)	20317.66

Break-up of total hard cost as given below:

Item	(Rs. Crores)
	(April, 2016 PL)
Civil Works	10569.79
E&M Works	3100.64
Total Hard Cost	13670.43


 R. K. Rambal
 Executive Engineer
 Civil Const. Division-II
 Sawalkote HEP Rambal


 D. D. Dabhade
 15/04/2018