

No. J-12011/02/2020-IA-I
Government of India
Ministry of Environment, Forest & Climate Change
(IA.I Division)

Indira Paryavaran Bhawan
3rd Floor, Vayu Wing
Jor Bagh Road
New Delhi-110 003

Dated: 13th April, 2020

To

M/s Greenko Energies Private Limited
Plot No. 1071, Road No. 44
Jubilee Hills, Hyderabad-500033
Telangana

Sub: Shahpur Pumped Storage Project (2520 MW) in District Baran, Rajasthan by M/s Greenko Energies Private Limited- reg. Terms of Reference (ToR).

Sir,

This has reference to online proposal No. IA/RJ/RIV/142374/2020 and letter no SHAHPUR/SPSP/MoEF&CC /ToR/ 20200210 Dated 10.02.2020 submitted to the Ministry for ToR to the project cited in the subject.

2. The above referred proposal was considered by the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric projects in its 31st meeting held on 05.03.2020. The comments and observations of EAC on the project may be seen in the Minutes of the meeting which are available on the web-site of this Ministry.

3. Above proposal is for to develop Pumped Storage Project (PSP) in Shahpur (Village), Shahabad (Tehsil) of Baran (District) in the State of Rajasthan. Total capacity of the proposed PSP is 2520 MW (17640 MWH, based on 7-hour operation per day). Project involves creation of new upper reservoir and lower reservoirs consisting of rock fill embankment with central clay core. The geographical coordinates of the proposed upper reservoir are at Latitude 25°11'25.21"North and Longitude is 77°10'55.78" East and that of lower reservoir are at 25°11'40.00" North and 77°11'50.00" East.

4. The upper reservoir is proposed to be located on flat / gradually sloping land which is suitable for creating the desired gross storage capacity of 1.70 TMC. Out of 1.70 TMC, the live storage capacity is 1.63 TMC and the dead storage capacity is 0.075 TMC by keeping FRL & MDDL at EL 512.00m & EL 489.00m, respectively. For creating this storage, it is proposed to construct rockfill embankment for the average height of around 28 m (with maximum height of 30m) for the length of 6985m. Similarly, the lower reservoir is proposed to be located in the

flat / gradually sloping portion which is suitable for creating the desired gross storage capacity of 1.71 TMC in which the live storage capacity is 1.64 TMC and dead storage capacity is 0.07 TMC by keeping FRL and MDDL at EL 354.00m & EL 323.00m, respectively. For creating this storage, it is proposed to construct rockfill embankment for the average height of 34m (with maximum height of 42m) for the length of 3842 m.

5. Water conductor system consist of 52.20m high Power Intake Structure; 8 nos. each of 909 m long and 7.5m dia. surface circular steel lined Penstock / Pressure Shaft (i.e. consisting of 711 m long surface penstock, 121 m long vertical pressure shaft and 77 m long Horizontal pressure shaft) to feed 8 units of 315 MW; A surface Powerhouse having an installation of eight nos. reversible Francis turbine each of 315 MW capacity (6 units of fixed speed and 2 units of variable speed turbines) operating under a rated head of 157.00m in generating mode and 168.00m in pumping mode. 8 nos. 8.5 m diameter, 190m long Tailrace Tunnel. 125 m wide and FSD of 5.5m is the Tail race channel of 953 m long joining with the proposed lower reservoir. As such, the proposed project will generate 2520 MW by utilizing design discharge of 1817.98 Cumec with rated head of 157.00 m. Upper and lower reservoir (both are to be constructed newly) and one-time water will be pumped from existing nearby Shahabad Kuno river to the proposed Shahpur Standalone PSP lower reservoir which is about 150 m away from the toe of the embankment of lower reservoir

6. Total land required for construction of various components, including infrastructure facilities and muck disposal area is estimated to be around 777.44 ha, involving 543.52 ha of forest land and 233.92 ha of non-forest land. An estimated cost of the project is Rs. 11736.73 Crores. As per the Form 1 there is no Protected Area notified under the Wild Life (P) Act, 1972; Critically Polluted areas as identified by the CPCB constituted under the Water (P) Act 1974; Eco Sensitive Areas as notified within 10 km of the project boundary.

7. The above proposal was appraised by the EAC in the 31st meeting held on 05.03.2020. EAC in the 31st meeting held on 05.03.2020 deliberated on the information submitted (Form 1, PFR, kml file, etc.) and as presented in the meeting and observed that in the instant project upper is located away from all existing natural water systems and have no/negligible catchment area therefore CAT Plan, RIM treatment, L-section of river and Environmental flow study for the upper and lower reservoir will not be required under EMP.

8. Based on recommendations of the EAC, the Ministry of Environment, Forest & Climate Change hereby **accords a fresh Terms of Reference (TOR)** as per the Standard ToR (Hydro projects) for the proposed activity as per the provisions of the Environmental Impact Assessment Notification, 2006 and as amended time to time along with the following additional ToR for preparation of EIA/EMP report:

Standard ToR

The EIA/EMP report should contain the information in accordance with provisions & stipulations as given in the **Standard ToR for hydro projects** (Please visit the following link to download the Standard ToR:

Additional ToR

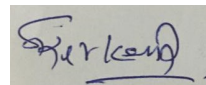
- i. Land acquired for the project shall be suitably compensated in accordance with the law of the land with the prevailing guidelines. Private land shall be acquired as per provisions of Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
- ii. The project involves diversion of about **543.52 ha** of forestland. Forest clearance shall be obtained as per the prevailing norms of Forest (Conservation) Act, 1980.
- iii. Application to obtain prior approval of Central Government under the Forest (Conservation) Act, 1980 for diversion of forest land required should be submitted as soon as the actual extent of forest land required for the project is known, and in any case, within six months of issuance of this letter.
- iv. Funds allocation for Corporate Environment Responsibility (CER) shall be made as per O.M. No. 22-65/2017-IA.III dated 01.05.2018 for various activities therein.
- v. The details of funds allocation and activities for CER shall be incorporated in EIA/EMP report.
- vi. The EIA report should clearly mention activity wise EMP and CER cost details and should earmarked clear break-up of the capital and recurring cost along with the timeline for incurring the capital cost.
- vii. Consolidated EIA/EMP report is to be submitted as per the generic structure (Appendix III & IIIA) given in the EIA Notification, 2006.
- viii. Conservation plan for the Scheduled I species, if any, in the project study area shall be prepared and submitted to the Competent Authority for approval.
- ix. Pre-DPR Chapters viz., Hydrology and Layout Map and Power Potential Studies duly approved by CWC/CEA shall be submitted.
- x. Dam break analysis, Disaster Management Plan and Fisheries Management Plan be prepared and submitted in the EIA/EMP report.
- xi. Environmental matrix during construction and operational phase needs to be submitted.
- xii. Both capital and recurring expenditure under EMP shall be submitted.
- xiii. Impact of developmental activity/project on the wildlife habitat, if any, within 10 km of the project boundary shall be studied.
- xiv. 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& CC. This is a pre-requisite.

- xv. Consultant 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. Declaration by the Consultant that information submitted in the EIA/EMP is factually correct and shall be submitted along with EIA/EMP reports.
- xvi. An undertaking as part of the EIA report from Project proponent, owning the contents (information and data) of the EIA report with the declaration about the contents of the EIA report pertaining to a project have not been copied from other EIA reports.
- xvii. The draft EIA/EMP report prepared as per the Generic Structure (Appendix III of EIA Notification, 2006) incorporating information as per the Standard ToR, should be submitted to the State Pollution Control Board concerned for conducting Public Consultation, district wise, as per the provisions stipulated in EIA Notification, 2006. Public Hearing, which is a part of Public Consultation, shall be held district wise at the site or in its close proximity as prescribed in Appendix (IV) of EIA Notification, 2006. The draft EIA/EMP report is to be submitted to SPCB sufficient before the expiry of the ToR validity so that necessary amendments in EIA/EMP can be undertaken based on public hearing and the same is to be submitted to MoEF&CC before expiry of validity.
- xviii. All the tasks including conducting public hearing shall be done as per the provisions of EIA Notification, 2006 and as amended from time to time. Public hearing issues raised and compliance of the same shall be incorporated in the EIA/EMP report in the relevant chapter. Final EIA/EMP report should be submitted to the Ministry for Environmental Clearance only after incorporating these issues, before the expiry of validity of ToR.
- xix. As per Ministry’s Notification 17.02.2020, the ToR will remain valid for a period of 5 years from the date of issue of this letter for submission of EIA/EMP report along with public consultation. The ToR will stand lapsed after completion of 5 years in case final EIA/EMP is not submitted.
- xx. Baseline data and public consultation shall not be older than 3 years, at the time of submission of the proposal, for grant of Environmental Clearance.
- xxi. In case of any change in the scope of the project such as capacity enhancement, change in submergence, etc., fresh scoping clearance has to be obtained.
- xxii. The PP should submit a copy of TEC of the DPR along with EIA/EMP report.
- xxiii. Details of the name and number of posts to be engaged by the project proponent for implementation and monitoring of environmental parameters be specified in the EIA report.
- xxiv. The EIA/ EMP report must contain an Index showing details of compliance of all ToR conditions. The Index will comprise of page No. etc., vide which compliance of a specific ToR is available. It may be noted that without this index, EIA/ EMP report will not be accepted.

- xxv. The PP should complete all the tasks as per the provisions of EIA Notification, 2006 and as amended time to time) and submit the application for final clearance within the stipulated time.
- xxvi. Appropriate Biodiversity Conservation and Management plan for the Native, Rare & Endangered floral and faunal species getting affected due to the project shall be prepared.

This has approval of the Competent Authority.

Yours faithfully,

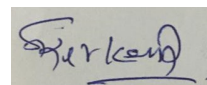


(Dr. S. Kerketta)
Director

Telefax: 011-24695314

Copy to:

1. The Secretary, Ministry of Water Resources, RD & GR, Sharm Shakti Bhawan, Rafi Marg, New Delhi-3.
1. The Secretary, Ministry of Power, Sharm Shakti Bhawan, Rafi Marg, New Delhi-110001.
2. The Pr. Secretary to Government Energy Department, Govt. of Rajasthan, Room No. 8340, SSO Building, Government Secretariat, Jaipur, Rajasthan
3. The Principal Chief Conservator of Forests, (HOFF), Rajasthan, Aranya Bhawan, Jhalana Institutional Area, Jaipur-302004, Rajasthan.
4. The Member Secretary, Rajasthan State Pollution Control Board, 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur, Rajasthan-302004
5. The Chief Engineer, Project Appraisal Directorate, Central Water Commission, Sewa Bhawan R.K. Puram, New Delhi-110066.
6. The Deputy Director General of Forests (C), Regional Office (CZ), Ministry of Environment, Forest & Climate Change, Kendriya Bhawan, 5thFloor, Sector "H", Aliganj, Lucknow — 226020
7. Sr. PPS to JS(GM)
8. NIC Cell of MoEF&CC with a request to upload on MoEF&CC Website.
9. Guard File.



(Director)