

No. J-12011/12/2018-IA-I (R)
Government of India
Ministry of Environment, Forest & Climate Change
(IA.I Division)

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

Dated: 14th July, 2020

To

M/s Greenko Energies Private Limited
Plot No. 1071, Road No. 44
Jubilee Hills, Hyderabad-500033
Telangana
Email id: envifor.irepap@greenkoenergyprojects.com

Sub: Pinnapuram Integrated RESP-Storage Project (1200 MW) in Tehsil Nandyal, District Kurnool, Andhra Pradesh by M/s Greenko Energies Private Limited - regarding Environmental Clearance

Sir,

This has reference to your online proposal no. IA/AP/RIV/85218/2018 and your letter No. IREP/MoEF&CC/EC/20181113 dated 13.11.2018 on the above mentioned subject.

2. The above referred proposal was considered by the Expert Appraisal Committee (EAC) for River Valley & Hydroelectric projects in its 20th meeting held on 27.11.2018. 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. Pinnapuram IREP has been conceived as integrated project with solar, wind and pumped storage components. GoAP has approved the project with 1000 MW Solar, 550 MW Wind & 1200 MW of Standalone Pumped Storage capacities to be developed in Phase I. All three components of Pinnapuram IREP are in close vicinity of each other and therefore power from all three components will be pooled into common pooling station and will be connected to PGCIL/CTU sub-station at Orvakallu for further supply into the National Grid. Proposed Standalone Pumped Storage Project (1200MW) is a part of Pinnapuram Integrated Renewable Energy Project (IREP). Environmental Clearance is being sought for Standalone Pumped Storage component only. Proposed project is located near village Pinnapuram in Panyam Mandal District Kurnool of Andhra Pradesh.

Terms of Reference (ToR) to Pinnapuram IREP of 1000 MW project was accorded by Ministry of Environment Forests and Climate Change (MoEF&CC), Government of India vide letter no. J-12011/12/2018-IA. I(R), dated: 17.05.2018. Subsequently, amendment to ToR for Standalone Pumped storage component (1200 MW) of Pinnapuram IRE Project was accorded by this Ministry vide letter no. J-12011/12/2018-IA. I (R) dated 25.09.2018 for change in installed capacity, location, land, etc. Public hearing was held on 02.11.2018 near Mandal Parishad Upper Primary School, Pinnapuram, Panyam Mandal, Kurnool District, Andhra Pradesh. EIA report was submitted to the Ministry on 13.11.2018.

Project Proponent (PP) submitted in the EIA report and as informed to the EAC in the 20th meeting that the project envisages creation of two new reservoirs near Pinnapuram village in Panyam Mandal, which is about 81 km from Kurnool, Andhra Pradesh. It involves non-consumptive re-utilization of 1.20 TMC of water to be taken from existing Gorakallu Reservoir to fill up Pinnapuram Upper reservoir. The Geographical coordinates of the proposed Pinnapuram upper reservoir are at longitude 78°15'13" East and latitude is 15°36'26" North and that of lower reservoir are 78°15'30" E and 15°37'26" N. The full reservoir level and gross storage capacity of Upper reservoir are EL +463.00 m and 1.37 TMC, respectively whereas full reservoir level and gross storage capacity of Lower reservoir are EL +340.00 m and 1.42 TMC, respectively. The scheme envisages construction of Rock fill embankments of average height of around 12 m to 14 m with maximum of 33 m height in lower reservoir and 35 m in upper reservoir for very short reach; 45 m high RCC Intake structure; 6 Nos. of 760 m long and 7.0 m diameter inclined circular steel lined Penstock/ Pressure Shaft five for each unit of 200 MW and one bifurcated into two penstocks to feed two units of 100 MW; a surface Power house having an installation of 7 Nos. reversible Francis turbine - 5 each of 200 MW capacity and 2 each of 100 MW capacity; operating under a rated head of 119.27 m in generating mode and 125.77 m in pumping mode ;70 m wide concrete lined Tailrace channel with FSD of 6.00 m and 1300 m long connecting Tail race channel to the lower reservoir.

6. PP submitted that for the development of Standalone Pumped Storage component of Pinnapuram IREP, land would be acquired for construction of project components, reservoir area, muck dumping, quarrying, construction camps and colony. etc. Based on the final project layout, land requirement has been finalized as 713.65 ha. Online application for diversion of 365.66 ha of forestland has been submitted vide proposal No. FP/AP/HYD/35371/2018 dated 28.08.2018. The Ministry of Environment, Forest & Climate change had issued in-principle approval for diversion of 365.66 Ha forestland for construction of pumped storage project in Kurnool Forest Division, Kurnool District of Andhra Pradesh in favour of M/s Greenko Energies Pvt. Limited on 23.04.2020. PP submitted that there is no National Park/Wildlife Sanctuary within 10 km radius of the project area. Rollapadu Wildlife Sanctuary is about 11.50 km from the Lower Reservoir area of the Pinnapuram IRE Project. **Total cost of the project is about Rs. 5468.03 Crores.**

7. Project benefits: Pinnapuram IREP has been conceived as integrated project with solar, wind and pumped storage components that can supply Schedulable Power on Demand (SPOD) which is Dispatchable & Schedulable Renewable Energy. The Project would facilitate employment creation for 2,350 people during construction (2,000) and operation (350).
8. The proposal was earlier considered in the 20th EAC meeting on 27.11.2018. After detailed deliberations, and considering all the facts of the project as presented by the PP including the Public Consultation, EAC has recommended the proposal for grant of Environmental Clearance. Accordingly, the Ministry of Environment, Forest and Climate Change hereby accords Environmental Clearance for the above project as per the provisions of Environmental Impact Assessment Notification, 2006 and its subsequent amendments, subject to compliance of the Standard Environmental Conditions as enumerated in the Annexure I and following additional conditions:
- i. Approval from Competent Authority for allocation of 1.2 TMC of water on a non-consumptive basis from the Gorakallu Reservoir shall be obtained.
 - ii. The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP reports and a sum of **Rs. 11839.55 lakhs**, the budgetary provisions for implementation of EMP, shall be fully utilized and not to be diverted to any other purpose. In case of revision of the project cost or due to price level change, the cost of EMP shall also be updated proportionately.
 - iii. Investment of **Rs 27.35 Crore** under Corporate Environmental Responsibility (CER) shall be strictly utilized for the activities proposed as per the Ministry's office memorandum dated 01st May, 2018. Activities proposed by the Project Proponent under CER includes provision to following focus area viz., education (200.00 lakhs) Health care (550.0 lakhs), Infrastructure development (Rs. 425.0 lakhs), Skill Development and Training for improved job opportunities (Rs. 1100.00 lakhs), Common Interest Activity (Rs. 150.00 lakhs), Environment Conservation and Protection Awareness (Rs. 15.00 lakhs), Sports (Rs. 120.00 lakhs), Agriculture and Animal Husbandry (Rs. 75.00 lakhs) and Rain Water Harvesting (Rs. 100.00 lakhs). Under CER activities, preference should be given to strengthen the basic amenities in the project affected villages.
 - iv. The clearance is valid for period of 10 years from the date of issue of this letter for commissioning of the project.
 - v. After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment and downstream ecology. The study shall be undertaken by an independent agency, decided in consultation with the Ministry.
 - vi. Solid waste generated, especially plastic waste, etc. should not be disposed of as landfill material. It should be treated with scientific approach and recycled. Use of single-use plastics may be discouraged.

- vii. 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.
- viii. Necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and subsequent amendments thereof.
- ix. Preference to be given to the local villagers as per the requirements and suitability, in the job/ other opportunities in the project, etc.
- x. Measures to be taken to develop skills of the local villagers particularly with respect to the trades related to construction works such as electrician, welder, fitter, etc.
- xi. All required permissions if any should be taken for the proposed Muck Dumping areas. Adequate protection measures should be taken up to avoid any spillage of muck to the adjoining agricultural fields.
- xii. Under CER activities, preference should be given to strengthen the basic amenities in the project affected villages like maintaining drinking water supply, providing health care facilities, etc.
- xiii. Preference to be given to the local villagers as per the requirements and suitability, in the job/ other opportunities in the project.
- xiv. Measures to be taken to develop skills of the local villagers particularly with respect to the trades related to construction works such as electrician, welder, fitter, etc.
- xv. Approval of Central Electricity Authority may be obtained for 1200 MW Pumped Storage Project.
- xvi. Any other clearances from any other organizations/departments as applicable to the project shall be obtained.

This has approval of the Competent Authority.

Yours faithfully,



(Dr. S. Kerketta)

Director-IA.I

Copy to:

1. The Secretary, Ministry of Power, Sharm Shakti Bhawan, Rafi Marg, New Delhi-1.
2. The Secretary, Ministry of Water Resources, Sharm Shakti Bhawan, Rafi Marg, New Delhi-3.
3. The Chairman, Central Electricity Authority, Sewa Bhawan R.K. Puram, New Delhi-66.
4. The Chief Engineer, Project Appraisal Directorate, Central Electricity Authority, Sewa Bhawan R.K. Puram, New Delhi-110066.
5. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD-Cum-Office Complex, East Arjun Nagar, Delhi-32.
6. The Deputy Director General, Regional Office (SEZ), Ministry of Environment, Forest & Climate Change, 1st and 2nd Floor, Handloom Export Promotion Council, 34 Cathedral Garden Road, Nungambakkam, Chennai-34.
7. The Principal Secretary Environment, Science and Technology, Government of Andhra Pradesh, Secretariat Office, 4th Block, Ground Floor, Room No.187, Velagapudi, Amaravathi- 38, Andhra Pradesh.
8. The Chairman, Andhra Pradesh Pollution Control Board, D. No. 33-2-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamvari Street, Kasturibajpet, Vijayawada-8. Andhra Pradesh
9. The District Collector, Karnool District, Collectorate Lane, Alluri Sitarama Raju Nagar, Opposite of Govt. General Hospital, Karnool, Andhra Pradesh.
10. NIC Cell- request to upload on the MoEF website.
11. Guard File/Monitoring File


(Director-IA.I)

Standard EC Conditions for River Valley and Hydroelectric projects**I. Statutory compliance:**

- i. The project proponent shall obtain forest clearance under the provisions of Forest (Conservation) Act, 1986, in case of the diversion of forest land for non-forest purpose involved in the project.
- ii. The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.
- iii. The project proponent shall prepare a Site-Specific Conservation Plan & Wildlife Management Plan and approved by the Chief Wildlife Warden. The recommendations of the approved Site-Specific Conservation Plan / Wildlife Management Plan shall be implemented in consultation with the State Forest Department. The implementation report shall be furnished along with the six-monthly compliance report. (in case of the presence of Schedule-I species in the study area).
- iv. The project proponent shall obtain Consent to Establish / Operate under the provisions of Air (Prevention & Control of Pollution) Act, 1981 and the Water (Prevention & Control of Pollution) Act, 1974 from the concerned State Pollution Control Board/ Committee.
- v. NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC.
- vi. Necessary approval of CEA shall be obtained for those projects having the project cost more than Rs. 1,000 crores.

II. Air quality monitoring and preservation

- i. Regular monitoring of various environmental parameters viz., Water Quality, Ambient Air Quality and Noise levels as per the CPCB guidelines at designated locations shall be carried out on monthly basis and a detailed database of the same shall be prepared and recorded. This shall be used as a baseline data for post construction EIA / Monitoring purposes.
- ii. Appropriate Air Pollution Control (APC) system shall be provided for all the dust generating points including fugitive dust from all vulnerable sources, so as to comply prescribed standards.

- iii. Necessary control measures such as water sprinkling arrangements, etc. be taken up to arrest fugitive dust at all the construction sites.

III. Water quality monitoring and preservation

- i. As the reservoir will be acting as balancing reservoir and there would be fluctuation of water level during peaking period, efforts be made to reduce impact on aquatic life including impacts during spawning period both at the upstream and downstream of the project.
- ii. Water depth sensors shall be installed at suitable locations to monitor e-flow. Hourly data to be collected and converted to discharge data. The Gauge and Discharge data in the form of Excel Sheet be submitted to the Regional Office, MoEF & CC and to the CWC on weekly basis.

IV. Noise monitoring and prevention

- i. All the equipment likely to generate high noise shall be appropriately enclosed or inbuilt noise enclosures be provided so as to meet the ambient noise standards as notified under the Noise Pollution (Regulation and Control) Rules, 2000, as amended in 2010 under the Environment Protection Act (EPA), 1986.
- ii. The ambient noise levels should conform to the standards prescribed under E(P)A Rules, 1986 viz. 75 dB(A) during day time and 70 dB(A) during night time.

V. Waste management

- i. Muck disposal be carried out only in the approved and earmarked sites. The dumping sites shall be located sufficiently away from the HFL of the river. Efforts be made to reuse the muck for construction and other filling purposes and balanced be disposed of at the designated disposal sites. Once the muck disposal sites are inactive, proper treatment measures like both engineering and biological measures be carried out so that sites are stabilized quickly.
- ii. Solid waste management should be planned in details. Land filling of plastic waste shall be avoided and instead be used for various purposes as envisaged in the EIA/EMP reports. Efforts be made to avoid one time use of plastics.

VI. Green Belt and Wildlife Management

- i. Wildlife Conservation Plan approved by the Chief Wildlife Warden shall be implemented in consultation with the local State Forest Department.
- ii. To enrich the habitat of the project site, plantation shall be raised as envisaged in the EIA/EMP report. Plantation to be developed along the periphery of the

reservoir in multi-layers with local indigenous species in consultation with the local State Forest Department.

- iii. Compensatory afforestation programme shall be implemented as per the plan approved.

VII. Public hearing and Human health issues

- i. Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt.
- ii. Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.
- iii. Preventive measures viz. fuming and spraying of mosquito control shall be done in and around the labour colonies, affected villages, stagnated pools, etc. Provisions be made to not to create any stagnated pools to avoid creation of breeding grounds of the vector borne diseases.
- iv. Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
- v. Labour force to be engaged for construction works shall be examined thoroughly and adequately treated before issuing them work permit. Medical facilities shall be provided at the construction sites.
- vi. Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.
- vii. Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Disaster Management Plan.

VIII. Corporate Environment Responsibility

- i. The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 01.05.2018, as applicable, regarding Corporate Environment Responsibility.
- ii. Skill mapping be undertaken for the youths of the affected project area and based on the skill mapping, necessary trainings to the youths be provided for their long time livelihood generation

- iii. The company shall have a well laid down environmental policy duly approved by the Board of Directors. The environmental policy should prescribe for standard operating procedures to have proper checks and balances and to bring into focus any infringements/deviation/violation of the environmental / forest / wildlife norms / conditions. The company shall have defined system of reporting infringements / deviation / violation of the environmental / forest / wildlife norms / conditions and / or shareholder's / stake holders. The copy of the board resolution in this regard shall be submitted to the MoEF&CC as a part of six-monthly report.
- iv. A separate Environmental Cell both at the project and company head quarter level, with qualified personnel shall be set up under the control of senior Executive, who will directly report to the head of the organization.
- v. Action plan for implementing EMP and environmental conditions along with responsibility matrix of the company shall be prepared and shall be duly approved by competent authority. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Year wise progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six Monthly Compliance Report.
- vi. Post EIA and SIA report shall be prepared for the project through a third party and evaluation report shall be submitted to the Ministry after five years of commissioning of the project.
- vii. Multi-Disciplinary Committee (MDC) shall be constituted with experts from Ecology, Forestry, Wildlife, Sociology, Soil Conservation, Fisheries, NGO, etc. to oversee implementation of various environmental safeguards proposed in EIA/EMP report during construction of the project. The monitoring report of the Committee shall be uploaded in the website of the Company.

IX. Miscellaneous

- i. The project proponent shall make public the environmental clearance granted for their project along with the environmental conditions and safeguards at their cost by prominently advertising it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days and in addition this shall also be displayed in the project proponent's website permanently.
- ii. The copies of the environmental clearance shall be submitted by the project proponents to the Heads of local bodies, Panchayats and Municipal Bodies in

addition to the relevant offices of the Government who in turn has to display the same for 30 days from the date of receipt.

- iii. The project proponent shall upload the status of compliance of the stipulated environment clearance conditions, including results of monitored data on their website and update the same on half-yearly basis.
- iv. The project proponent shall submit six-monthly reports on the status of the compliance of the stipulated environmental conditions on the website of the ministry of Environment, Forest and Climate Change at environment clearance portal.
- v. The project proponent shall submit the environmental statement for each financial year in Form-V to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently and put on the website of the company.
- vi. The project proponent shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities, commencing the land development work and start of production operation by the project.
- vii. The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
- viii. The project proponent shall abide by all the commitments and recommendations made in the EIA/EMP report, commitment made during Public Hearing and also that during their presentation to the Expert Appraisal Committee.
- ix. No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change (MoEF&CC).
- x. Concealing factual data or submission of false/fabricated data may result in revocation of this environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
- xi. The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
- xii. The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.

- xiii. The Regional Office of this Ministry shall monitor compliance of the stipulated conditions. The project authorities should extend full cooperation to the officer (s) of the Regional Office by furnishing the requisite data / information/monitoring reports.
- xiv. The above conditions shall be enforced, inter-alia under the provisions of the Water (Prevention & Control of Pollution) Act, 1974, the Air (Prevention & Control of Pollution) Act, 1981, the Environment (Protection) Act, 1986, Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 along with their amendments and Rules and any other orders passed by the Hon'ble Supreme Court of India / High Courts and any other Court of Law relating to the subject matter.
- xv. Any appeal against this EC shall lie with the National Green Tribunal, if preferred, within a period of 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010.
