



सत्यमेव जयते

File No: J-12011/22/2023-IA.I(R)
Government of India
Ministry of Environment, Forest and Climate Change
IA Division



Date 14/10/2025



To,

Mr. Yakama Koteswara Rao
M/s. Andhra Pradesh Power Generation Corporation Limited
Vidyut Soudha, Hyderabad, 500082 Vidyut Soudha, Hyderabad, 500082, NTR, ANDHRA PRADESH,
Vidyut Soudha, Khairathabad, 520004
environment.apgenco@gmail.com

Subject: Kamalapadu Closed Loop Pumped Storage Project (950 MW) in an area of 359.61 ha located at Village Attiraladinne, Kamalapadu & Kundanakota etc., Sub-district Peddapappur & Yadiki, District Anantpur, Andhra Pradesh by M/s Andhra Pradesh Power Generation Corporation Limited

Sir/Madam,

This is in reference to your online application No. IA/AP/RIV/547838/2025, submitted on 19/08/2025 to this Ministry for the grant of Environmental Clearance (EC) under the provisions of the EIA Notification, 2006, and its subsequent amendments. The application pertains to the Kamalapadu Closed Loop Pumped Storage Project (950 MW) in an area of 359.61 ha at Village Attiraladinne, Kamalapadu & Kundanakota etc., Sub-district Peddapappur & Yadiki, District Anantpur, Andhra Pradesh by M/s Andhra Pradesh Power Generation Corporation Limited.

2. The particulars of the proposal are as below :

(i) EC Identification No.	EC25A0000AP5458706N
(ii) File No.	J-12011/22/2023-IA.I(R)
(iii) Clearance Type	Fresh EC
(iv) Category	A
(v) Project/Activity Included Schedule No.	1(c) River Valley/Irrigation projects
(vi) Sector	River Valley and Hydroelectric Projects
(vii) Name of Project	Kamalpadu Closed Loop Pumped Storage Hydro Project
(viii) Name of Company/Organization	Andhra Pradesh Power Generation Corporation Limited

(ix) Location of Project (District, State)	ANANTAPUR, ANDHRA PRADESH
(x) Issuing Authority	MoEF&CC
(xi) Applicability of General Conditions as per EIA Notification, 2006	No

3. In view of the particulars given in the Para 2 above, the project proposal inter-alia including Form-1(Part A, B and C)/ EIA & EMP Reports were submitted to the MoEF&CC for an appraisal by the Expert Appraisal Committee (River Valley & Hydro-electric) under the provision of EIA notification 2006, as amended.

4. The above-mentioned proposal has been considered by the EAC in its 38th meeting held on 29.08.2025. The minutes of the meeting and all the project documents are available on PARIVESH portal which can be accessed from the PARIVESH portal by scanning the QR Code above.

5. The EAC after examining the information submitted and detailed deliberations recommended the proposal for grant of prior Environmental Clearance by the Ministry to Kamalapadu Closed Loop Pumped Storage Project (950 MW) in an area of 359.61 ha located at Village Attiraladinne, Kamalapadu & Kundanakota etc., Sub-district Peddapappur & Yadiki, District Anantpur, Andhra Pradesh by M/s Andhra Pradesh Power Generation Corporation Limited, under the provisions of EIA Notification, 2006 and as amended with subject to compliance of applicable Standard EC conditions with the certain specific environmental safeguard conditions (**Annexure I**).

6. The details of the Project as per the information submitted by the Project Propoent is enclosed as **Annexure II**.

7. The MoEF&CC has examined the proposal in accordance with the provisions contained in the Environment Impact Assessment (EIA) Notification, 2006, as amended and based on recommendation of EAC, the Ministry, hereby accords approval for grant of Environmental Clearance to the project for Kamalapadu Closed Loop Pumped Storage Project (950 MW) in an area of 359.61 ha at Village Attiraladinne, Kamalapadu & Kundanakota etc., Sub-district Peddapappur & Yadiki, District Anantpur, Andhra Pradesh by M/s Andhra Pradesh Power Generation Corporation Limited, under the provisions of EIA Notification, 2006, as amended subject to compliance of the Specific and Standard EC conditions as given in Annexure (1) for environmental safeguards.

8. The Environmental Clearance to the aforementioned project is under provisions of EIA Notification, 2006, as amended. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

9. The Ministry reserves the right to stipulate additional conditions, if found necessary at subsequent stages and the project proponent shall implement all the said conditions in a time bound manner. The Ministry may revoke or suspend the environmental clearance, if implementation of any of the above conditions is not found satisfactory.

10. The above conditions will 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, the Hazardous Waste (Management, Handling and Transboundary Movement) Rules, 2016 and the Public Liability Insurance Act, 1991 read with subsequent amendments therein.

11. The Validity of EC is upto 13 years to the start of production operations by the project or activity. Validity of EC becomes perpetual subject to the start of production operations by the project or activity. In case the project proponent fails to start the production operations within the EC validity date, application for EC validity extension shall be submitted to the regulatory authority as per the provision contained in the Para 9.0 of EIA notification, 2006, as amended.

12. General Instructions:

- (a) The project proponent shall prominently advertise it at least in two local newspapers of the District or State, of which one shall be in the vernacular language within seven days indicating that the project has been accorded environment clearance and the details of MoEF&CC/SEIAA website where it is displayed.
- (b) 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.
- (c) The project proponent shall have a well laid down environmental policy duly approved by the Board of Directors (in case of Company) or competent authority, duly prescribing 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.
- (d) Action plan for implementing EMP and environmental conditions along with responsibility matrix of the project proponent (during construction phase) and authorized entity mandated with compliance of conditions (during operational phase) shall be prepared. The year wise funds earmarked for environmental protection measures shall be kept in separate account and not to be diverted for any other purpose. Six monthly progress of implementation of action plan shall be reported to the Ministry/Regional Office along with the Six-Monthly Compliance Report.
- (e) 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.
- (f) 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.
- (g) 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.
- (h) PP needs to comply the OM dated 24.07.2024 of MoEFCC, where it is stated that the plantation of saplings shall be carried out in the earmarked 33% greenbelt area as part of the tree plantation campaign "EK Ped Ma ke Naam" (एक पेड़ माँ के नाम) (and the details of the same shall be uploaded in the MeriLife portal (<https://merilife.nic.in>)).

13. This issues with the approval of the Competent Authority.

Copy To

1. The Secretary, Ministry of Power, Sharm Shakti Bhawan, Rafi Marg, New Delhi 110 001
2. The Chairman, Central Electricity Authority, Sewa Bhawan R.K. Puram, New Delhi - 110 066.

3. The Chairman, Central Pollution Control Board, Parivesh Bhawan, CBD Cum-Office Complex, East Arjun Nagar, Delhi - 110 032.
4. The Principal Chief Conservator of Forests & Head of Forest Force, Aranya Bhavan, K.M. Munshi Road, Nagarampalem, Guntur – 522 004, Andhra Pradesh.
5. The Principal Secretary (DF S&T)Energy Forests and S&T Dept., D-Block, 2nd floor, A.P. Secretariat, Government of Andhra Pradesh, Hyderabad-500 022 Andhra Pradesh.
6. Assistant Inspector General of Forests (C), Ministry of Environment, Forest and Climate Change, Sub Office, Vijayawada Green House, Gopalareddy Road, Vijayawada – 520010, Andhra Pradesh
7. The Chairman, Andhra Pradesh State Pollution Control Board, D.No. 33-26-14 D/2, Near Sunrise Hospital, Pushpa Hotel Centre, Chalamalavari Street, Kasturibaipet, Vijayawada – 520 010
8. Compliance and Monitoring Division, Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi
9. Guard File/Record File/Monitoring File/Website of MoEF&CC.

Annexure 1

Specific EC Conditions for (River Valley/Irrigation Projects)

1. Disaster Management

S. No	EC Conditions
1.1	Disposal of the excavated muck and its filling on the low-lying area with proper measures for the stabilization and greenery to minimize the impacts of the generated construction muck shall be taken up pari passu with construction work.
1.2	Stabilization of muck disposal sites using biological and engineering measures shall be taken up immediately to ensure that muck does not roll down the slopes and does not pollute the natural streams and water bodies in surrounding area. The plantation on muck disposal site with local species for restoration of ecology and environment of the project site area.
1.3	Necessary control measures such as water sprinkling arrangements, and construction of paved roads leading to muck disposal sites etc. shall be taken up on priority to arrest fugitive dust at all the construction sites.
1.4	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.
1.5	Technical appraisal of project shall be obtained from CEA in terms of Office Memorandum no. 15-23/3/2021-Hydel-II dated 29.08.2025 issued by the Ministry of Power, before start of construction activities of the project.

2. Environmental Management And Biodiversity Conservation

S. No	EC Conditions
2.1	The Environmental Management Plan (EMP) shall be strictly adhered to as submitted in the EIA/EMP reports. 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.
2.2	The contract clause limiting the No. of vehicles used during excavation and transportation shall followed scrupulously and the same shall informed to the ministry.
2.3	Ambient Air Quality Monitoring Stations for real time data to be installed at project site before commencement of the construction, shall be displayed at project site and its report to be submitted to IRO, MoEF&CC.
2.4	No vehicle purchase shall be allowed from funds earmarked for implementation of Wildlife Conservation plan. Measures for minimizing the human-animal conflict specially for black bear and leopard be suitably incorporated in the wildlife conservation plan in consultation with State Forest Department.
2.5	10000 plants shall be planted around the muck disposal area and the survival of plants shall be submitted with the 6 monthly compliance report.
2.6	Plantation of saplings shall be carried out as a part of the tree plantation campaign "Ek Ped Ma Ke Naam" and the details of the same shall be uploaded in the MeriLiFE Portal (https://merilife.nic.in).
2.7	Watershed development plan prepared shall be implemented within 10 km radius of the project. Implementation status be submitted in the 6 monthly compliance report to the concerned regional office of the Ministry.
2.8	PP shall obtain necessary permission from the Tungabhadra Board to use water from the Tungabhadra Dam.
2.9	The water of rainfall yield of self-catchment of the reservoir shall be released to downstream through body of dam/ barrage/ embankment etc.

3. Socio-economic

S. No	EC Conditions
3.1	Land acquired for the project shall be suitably compensated in accordance with the prevailing guidelines of the state government and provisions under Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.
3.2	RO plant shall be installed in the nearby 5 villages and the maintenance shall be done by the project Authorities.
3.3	Solar panel be provided to the families living in rural areas within 10 km radius of project.
3.4	School up to 12 th Standard shall be established and managed to provide free quality education for children from project affected villages/Tribal villages. Adequate transportation facilities shall also

S. No	EC Conditions
	be provided to students to ensure connectivity and ease of access.
3.5	50 bed multi-specialty hospital shall be established to cater the need of tribal population/locals. The tribal population within 10 km radius of the project shall be given free of cost medical facility.
3.6	Skill development Centre shall be established within 10 km radius of the project and regular training programmes for development and promotion of traditional art/products of tribal/local population.
3.7	Bio-Gas plant shall be installed in the Project affected area for Utilizing Cattle waste (Cow Dung) into renewable source of fuel.
3.8	Preference in employment opportunities and admission to ITI institutions shall be given to Project Affected Families (PAFs).
3.9	An institutional mechanism to be developed to ensure the preference of jobs to PAFs and also a policy for preferential treatment for award of sundry works to the PAFs and their dependents.
3.10	The compliance of above conditions shall be monitored by IRO, MoEF&CC and regularly site visit once in year. The compliance report of IRO shall be regularly submitted to MoEF&CC.

4. Miscellaneous:

S. No	EC Conditions
4.1	After 5 years of the commissioning of the project, a study shall be undertaken regarding impact of the project on the environment. The study shall be undertaken by an independent agency.
4.2	A dedicated team to oversee environmental management activities (at project site) shall be set up comprising Environment Manager having post graduate qualification in Environmental Sciences/ Environment Engineering along with other supporting staff. The Environment Manager Shall report to Project Head directly.
4.3	PP shall procure construction material only from those Organizations having all valid legal/statutory clearances/permissions or necessary permission to be obtained for quarrying construction materials for the project as per the EIA Notification, 2006 and as amended thereof.

Standard EC Conditions for (River Valley/Irrigation projects)

1. Statutory Compliance

S. No	EC Conditions
1.1	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.
1.2	The project proponent shall obtain clearance from the National Board for Wildlife, if applicable.

S. No	EC Conditions
1.3	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).
1.4	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.
1.5	NOC shall be obtained from National Commission of Seismic Design Parameters (NCSDS) of CWC.
1.6	Necessary approval of CEA shall be obtained for those projects having the project cost more than Rs. 1,000 crores.

2. Air Quality Monitoring And Preservation

S. No	EC Conditions
2.1	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.
2.2	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.
2.3	Necessary control measures such as water sprinkling arrangements, etc. bet taken up to arrest fugitive dust at all the construction sites.
2.4	Conjunctive use of surface water to be planned in the project to check water logging as well as to increase crops productivity. The field drains shall be connected with natural drainage system (if applicable).
2.5	Remodelling of existing natural drains (link drains) and connecting them with irrigated land through constructed field drains, collector drains, etc. are to be ensured on priority basis (if applicable).
2.6	Before impounding of the water, Cofferdams for both at the upstream and downstream are to be decommissioned as per EIA/EMP report so that once the project is commissioned; cofferdam should not create any adverse impact on water environment including the rock mass and muck used for the Cofferdam.
2.7	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.
2.8	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

S. No	EC Conditions
	be submitted to the Regional Office, MoEF & CC and to the CWC on weekly basis.
2.9	Mixed irrigation shall be practised and necessary awareness be given to all the farmers and trained in the use of such systems. Proper crops selection shall be carried out for making irrigation facility more effective (if applicable).
2.10	On Farm Development (OFD) works like landscaping, land levelling, drainage facilities, field irrigation channels and farm roads, etc. should be taken up in phased manner prior to the start of irrigation in the entire command area. The Command Area Development Plan should be strictly implemented as proposed in the EIA/EMP report (if applicable).

3. Noise Monitoring And Prevention

S. No	EC Conditions
3.1	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.
3.2	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.

4. Catchment Area Treatment Plan

S. No	EC Conditions
4.1	Catchment Area Treatment (CAT) Plan as proposed in the EIA/EMP report shall be implemented in consultation with the State Forest Department and shall be implemented in synchronization with the construction of the project.

5. Waste Management

S. No	EC Conditions
5.1	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.
5.2	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.

6. Green Belt And Wildlife Management

S. No	EC Conditions
6.1	Based on the recommendation of Cumulative Impact Assessment and Carrying capacity study of river basin or as per the ToR conditions or minimum 15% of the average flow of four consecutive leanest months, whichever value is higher, shall be released as environmental flow.
6.2	Detailed information on species composition particular to fish species from previous study/literature be inventoried and proper management plan shall be prepared for insitu conservation in the streams, tributaries of river and the main river itself for which adequate budget provision be made and followed strictly.
6.3	Wildlife Conservation Plan approved by the Chief Wildlife Warden shall be implemented in consultation with the local State Forest Department.
6.4	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.
6.5	Compensatory afforestation programme shall be implemented as per the plan approved.
6.6	Fish ladder/pass as envisaged in the EIA/EMP report shall be provided for migration of fishes. Regular monitoring of this facility be carried out to ensure its effectiveness.

7. Public Hearing And Human Health Issues

S. No	EC Conditions
7.1	Resettlement & Rehabilitation plan be implemented in consultation with the State Govt. as approved by the State Govt.
7.2	Budget provisions made for the community and social development plan including community welfare schemes shall be implemented in toto.
7.3	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.
7.4	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.
7.5	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.

8. Risk Mitigation And Disaster Management

S. No	EC Conditions
8.1	Early Warning Telemetric system shall be installed in the upper catchment area of the project for advance intimation of flood forecast.
8.2	Drilling and blasting shall be done only either by licensed explosive agent or by the proponent after obtaining required approvals from Competent Authorities.
8.3	Emergency preparedness plan be made for any eventuality of the dam failure and shall be implemented as per the Disaster Management Plan.
8.4	Stabilization of muck disposal sites using biological and engineering measures shall be taken up to ensure that muck does not roll down the slopes and shall be disposed safely and that it does not pollute the natural streams and water bodies in surrounding area. The engineering measures for the muck disposal arrangements be evolved after carrying out required slope stability analysis.
8.5	Catchment area treatment plan shall be prepared and sufficient fund shall be provided for afforestation, rim plantation, pasture development, nursery development.

9. Corporate Environment Responsibility

S. No	EC Conditions
9.1	The project proponent shall comply with the provisions contained in this Ministry's OM vide F.No. 22-65/2017-IA.III dated 30th September, 2020, as applicable, regarding Corporate Environment Responsibility.
9.2	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
9.3	The company shall have a well laid down environmental policy duly approve 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 shareholders/ 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.
9.4	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.
9.5	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.
9.6	Post EIA and SIA be prepared for the project through a third party and evaluation report be submitted to the Ministry after five years of commissioning of the project.

S. No	EC Conditions
9.7	Multi Disciplinary Committee (MDC) 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 the Committee shall be uploaded in the website of the Company.
9.8	Formation of Water User Association/Co-operative be made involment of the whole community be ensured for discipline use of available water for irrigation purposes

10. Miscellaneous

S. No	EC Conditions
10.1	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.
10.2	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.
10.3	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.
10.4	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.
10.5	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.
10.6	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.
10.7	The project authorities must strictly adhere to the stipulations made by the State Pollution Control Board and the State Government.
10.8	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.
10.9	No further expansion or modifications in the plant shall be carried out without prior approval of the Ministry of Environment, Forests and Climate Change (MoEF&CC).
10.10	Concealing factual data or submission of false/fabricated data may result in revocation of this

S. No	EC Conditions
	environmental clearance and attract action under the provisions of Environment (Protection) Act, 1986.
10.11	The Ministry may revoke or suspend the clearance, if implementation of any of the above conditions is not satisfactory.
10.12	The Ministry reserves the right to stipulate additional conditions if found necessary. The Company in a time bound manner shall implement these conditions.
10.13	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.
10.14	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.
10.15	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.

Additional EC Conditions

The above conditions will 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 and the Public Liability Insurance Act, 1991 along with their amendments and rules made there under and also any other orders passed by the Hon'ble Supreme Court of India/High Court and any other Court of Law relating to the subject matter.

Kamalapadu Closed Loop Pumped Storage Project (950 MW) at Village Attiraladinne, Kamalapadu & Kundanakota etc., Sub-district Peddapappur & Yadiki, District Anantpur, Andhra Pradesh by M/s Andhra Pradesh Power Generation Corporation Limited

The details of the project: -

The Project Proponent and the accredited Consultant M/s. R S Envirolink Technologies Pvt. Ltd., made a detailed presentation on the salient features of the project and informed that:

- i. The Kamalapadu Pumped Storage Hydro Project (Kamalapadu PSHP) of capacity 950 MW is proposed at village Boyareddypalli in the Yadiki Mandal of Ananthapuramu district in Andhra Pradesh by M/s Andhra Pradesh Power Generation Corporation Limited (APGENCO). The project comes under the Rayalaseema region of Andhra Pradesh.
- ii. The Kamalapdu PSH Project is envisaged with a installed capacity of 950 MW (3 x 238 + 2 x 118 MW) located in the Ananthapuramu district of Andhra Pradesh. It is a standalone scheme with two new off stream reservoirs and drawl of water from existing Chagallu Barrage for initial filling into the proposed lower reservoir through a pipeline arrangement. Both the reservoirs are planned to be interconnected through water conductor system and the reversible generator pump turbine would be installed in the surface/ pit powerhouse. The scheme is envisaged to meet the peak demand of about 9 hours with an estimated annual energy generation of 2958.42 MU.
- iii. The project is located close to Boyareddypalli (Kamalapadu) Village in the Yadiki Mandal of Ananthapuramu district in Andhra Pradesh. The project site is easily accessible by Yadiki – Tadipatri Road. The project’s upper reservoir is at geographical co-ordinate 15°06'13.99"N and 77°56'10.56"E and lower reservoir at geographical co-ordinate 15°05'0.74"N and 77°56'43.39"E.
- iv. The Terms of Reference was granted by Ministry of Environment, Forest & Climate Change (MoEF&CC) vide letter no. F No J-12011/22/2023-IA. I(R) dated 7th August 2023 in the name of M/s New and Renewable Energy Development Corporation of Andhra Pradesh Ltd. (NREDCAP). Subsequently, MoEF&CC vide letter no. J-12011/22/2023-IA-I(R) dated 02.06.2025 has granted approval for transfer of Terms of Reference (ToR) for the Kamalapadu Closed Loop PSP (950 MW) from ‘M/s New and Renewable Energy Development Corporation of Andhra Pradesh Ltd. (NREDCAP)’ to ‘M/s Andhra Pradesh Power Generation Corporation Limited (APGENCO)’.

v. **Land requirement:**

Forest Land :0.00 ha

Non-forest Land :359.61 ha (257.38 Ha of private land & 102.23 Ha of Govt. land)

Total Land :359.61 ha

vi. **Demographic details in 10 km radius of project area:**

The study area falls under Ananthapuramu and Nandyal districts of Andhra Pradesh. A total of 46 inhabited villages fell within the study area. Out of 46 villages, 42 are in Ananthapuramu district (15 villages of Pedda Pappuru Mandal, 4 villages of Peddavaduguru Mandal, 9 villages of Tadpatri Mandal, and 14 villages of Yadiki Mandal), and 4 villages are in Nandyal district (1 village of Kolimigundla Mandal, 3 villages of Owk Mandal and no habitation/ village lies in Pyapalli Mandal).

The total population of the study area is 130528, with 50.82% males and 49.17% females. The number of households is 32240, with an average occupancy of 4–5 persons per household. The child population below 6 years old was found to be 14406, which is 11.03% of the total population. The sex ratio was found to be 967 females per 1000 males. 59.89% of the population ((above the 6-year-old population)) in the study area is literate. The rates for males and females are 71.10% and 48.39%, respectively, resulting in a 22.71% gender difference.

In the study area, 15.99% and 2.43 percent of the population are members of Scheduled Castes and Scheduled Tribes, respectively.

Total population of workers in the study area is 73189 (56.07%). 66.18% of the working population are engaged in agriculture and allied services, out of which 19.50% are cultivators and 46.68% are agricultural laborers. 11.04% of the population engaged in household industry worker, and 22.75% of the population engaged in other services.

vii. **Water requirement:** Approximately 22.45 MCM will be required to meet generation of 950 MW for 9.02 hours. Annual losses due to the evaporation from the lower reservoir work out to 0.43 MCM. It will be recouped periodically from Chagallu Barrage reservoir.

viii. **Project Cost:** The estimated project cost is Rs 4676.50 crore. Total capital cost earmarked towards Environment Management Plan/environmental pollution control measures is Rs. 1966.11 lakh and the Recurring cost (operation and maintenance) will be about Rs. 2797.61 lakh about i.e. Rs 699.4 lakh per annum.

ix. **Project Benefit:** Total Employment will be 700 persons during construction phase and 200 during operational phase of the project. Rs. 733.50 lakh has been allocated under CER and

Local Area Development Plan for strengthening and development of basic infrastructural facilities with a view to improve the quality of life of residents in the project vicinity.

- x. **Environmental Sensitive area:** Nearest protected area to the project components is Rajiv Gandhi National Park, All the project components are way outside the notified ESZ, which is at a distance of 72 km.
- xi. **MoU / any other clearance/ permission signed with State government:**
a) MOU: File No.ENE01-APRE/17/2020-MLO-ENE-Part(3) Dated 22/09/2023
b) Water Allocation: G.O.Ms no.10.dt.11.03.2025 of GoAP.
- xii. **Resettlement and rehabilitation:** For the development of Kamalapadu Closed Loop PSHP, the total land requirement for the project is 359.61 ha, out of which 257.38 ha is private land and 102.23 ha is government land. The entire private land identified for the project falls in two revenue villages namely Kamalapadu and Kundanakota under Tehsil/Mandal-Yadiki in Ananthapuramu District of Andhra Pradesh. The private land identified for the projects belongs to 174 land owner families. All the 174 land owners will be losing their partial agricultural land holding and none of the families will be losing any house or any other assets. None of them is getting displaced due to the project from the above land procurement.
- xiii. **Schedule – I species:** According to WPAA, 2022, 13 species of mammals, one species of bird (Small Minivet), 06 species of herpetofauna (Python, Bengal Monitor Lizard, Indian rat Snake, Indian Cobra, Russel’s Viper and Indian Flap-shell Turtle) are listed under Schedule-I. Rest of the faunal species are listed under Schedule- II category of WPAA, 2022.
- As per the IUCN Red List of Threatened Species, Version 2022-2, Wild Dog is listed under Endangered (EN) category, Common Leopard, Sloth Bear, Four-horned Antelope, Sambar Deer, Bonnet Macaque and Flap-shell Turtle are under Vulnerable (VU) category, Striped Hyaena, Python, Bengal Monitor Lizard and Anamalai Hill Gecko are listed under Near Threatened (NT) category. As per the IUCN Red List of Threatened Species version 2023-1, all birds have been listed under Least Concern (LC) category.
- xiv. **Alternative Studies:** 5 alternatives have been studied for Kamalapadu Pumped storage Hydro Project.
- Alternative-1 (1400 MW)-Independent PSP
 - Alternative-2 (1200 MW)-Independent PSP
 - Alternative-3 (1370 MW)- Independent PSP
 - Alternative 4 (1120 MW)- (Independent PSP).
 - Alternative 5 (950 MW)- (Independent PSP).

After carefully considering the merits and drawbacks of all the alternatives, Alternative 5 has been selected as the final layout.

xv. **Baseline Environmental Scenario:**

Period	From April/May 2023 to December 2023				
AAQ parameters at 10 locations (min. & Max.)	Unit in microgram/m³				
	Core	Min	Max	Average	Standards
	PM 2.5	18.60	42.20	30.40	60
	PM 10	43.10	73.20	58.15	100
	SO2	6.50	12.60	9.55	80
	NO2	7.00	13.50	10.25	80
	Buffer	Min	Max	Average	Standards
	PM 2.5	19.60	44.90	32.25	60
	PM 10	45.40	77.80	61.60	100
	SO2	6.90	13.40	10.15	80
	NO2	8.30	14.40	11.35	80
Incremental GLC Level	Criteria Pollutant (PM10, PM2.5, SO2, NOx, Other parameters specific to the sector)	Unit (microgram/m ³)	Baseline Concentration (A)	Predicted incremental value considering worst case stability class (B)	Total GLC (A + B)
	PM10	microgram/m ³	73.20	20	93.20
	PM2.5	microgram/m ³	42.20	10	52.20
	SO2	microgram/m ³	12.60	10	22.60
	NOx	microgram/m ³	13.50	12	25.50
River water samples (2 samples)	Core Zone				
	S. No	Parameters	Min	Max	
	1	pH	7.9	7.9	A
	2	Total Dissolved Solids, mg/L	625	625	A
	3	Dissolved Oxygen (mg/l)	7.7	7.7	B
	4	Chloride (as Cl), mg/L	101	101	NA
	5	Total Hardness (as CaCO3), mg/L	233	233	A
	6	Biological Oxygen Demand (mg/l)	2.8	2.8	A
	7	Chemical Oxygen Demand (mg/l)	9	9	B
	8	Total Coliform (MPN/100 ml)	295	295	A

	Buffer Zone						
	S. No	Parameters	Min	Max			
	1	pH	8.3	8.3	A		
	2	Total Dissolved Solids, mg/L	286	286	A		
	3	Dissolved Oxygen (mg/l)	5.5	5.5	B		
	4	Chloride (as Cl), mg/L	110	110	NA		
	5	Total Hardness (as CaCO ₃), mg/L	431	431	A		
	6	Biological Oxygen Demand (mg/l)	6	6	A		
	7	Chemical Oxygen Demand (mg/l)	15.4	15.4	B		
8	Total Coliform (MPN/100 ml)	430	430	A			
Ground water samples (10 samples)	Core Zone						
	S. No.	Parameters	Min	Max			
	1	pH	6.99	7.4	7.2	8.5	
	2	Total Dissolved Solids (mg/l)	433	1594	1013.5	2000	
	3	Chloride (as Cl) (mg/l)	65	229	147.0	1000	
	4	Total Hardness (as CaCO ₃) (mg/l)	129	474	301.5	600	
	5	Fluoride (mg/l)	0.16	0.57	0.4	1.5	
	Buffer Zone						
	S. No.	Parameters	Min	Max			
	1	pH	7.01	7.4	7.2	8.5	
	2	Total Dissolved Solids (mg/l)	377	943	660.0	2000	
	3	Chloride (as Cl) (mg/l)	57	141	99.0	1000	
	4	Total Hardness (as CaCO ₃) (mg/l)	112	280	196.0	600	
	5	Fluoride (mg/l)	0.14	0.34	0.2	1.5	
Noise levels Leq (Day & Night) at 10 locations	Noise Level	Zone	Leq Day dB(A)		Leq Night dB(A)		
			From	To	From	To	
	Core	Residential	44.9	45.9	34.6	35.4	55
	Buffer	Commercial	46.8	58.5	36.1	45.2	55
Soil Quality at 10 Locations	Monitoring Location (Core /Buffer)	Criteria Parameter [Calcium, Carbon, Nitrogen, Phosphorus, Potassium, Magnesium, Sodium Absorption Ratio, Salinity]	Unit [gm/mg/ Other (please specify)]	Observed Value		Permissible standard	
				From	To		
	Core Zone	Calcium	(mg/kg)	140	165	500	

	Magnesium	(mg/kg)	54	64	500					
	Available Nitrogen	(kg/ha)	232	244	500					
	Available Phosphorus	(kg/ha)	27	30	50					
	Available Potassium	(kg/ha)	267	310	500					
	Organic carbon	(%)	0.32	0.37	1					
	Sodium Adsorption Ratio		2.3	2.5	10					
	Salinity	(ppt)	0	0	0.01					
Buffer Zone	Calcium	(mg/kg)	140	250	500					
	Magnesium	(mg/kg)	54	96	500					
	Available Nitrogen	(kg/ha)	167	296	500					
	Available Phosphorus	(kg/ha)	25	28	50					
	Available Potassium	(kg/ha)	223	323	500					
	Organic carbon	(%)	0.36	0.45	1					
	Sodium Adsorption Ratio		2.3	3.1	10					
	Salinity	(ppt)	0	0	0.01					
	Particle Size Distribution									
	Sand (%)		Silt (%)		Clay (%)		Water Holding Capacity (%)		Porosity (%)	
	From	To	From	To	From	To	From	To	From	To
Core	62	69	8	10	21	29	34	40	38	48
Buffer	60	71	7	9	21	31	29	42	33	49
Flora & Fauna	<p>According to WPAA, 2022, 13 species of mammals, one species of bird (Small Minivet), 06 species of herpetofauna (Python, Bengal Monitor Lizard, Indian rat Snake, Indian Cobra, Russel's Viper and Indian Flap-shell Turtle) are listed under Schedule I. Rest of the faunal species are listed under Schedule II category of WPAA, 2022.</p> <p>As per the IUCN Red List of Threatened Species, Version 2022-2, Wild Dog is listed under Endangered (EN) category, Common Leopard, Sloth Bear, Four-horned Antelope, Sambar Deer, Bonnet Macaque and Flap-shell Turtle are under Vulnerable (VU) category, Striped Hyaena, Python, Bengal Monitor Lizard and Anamalai Hill Gecko are listed under Near Threatened (NT) category. As per the IUCN Red List of Threatened Species version 2023-1, all birds have been listed under Least Concern (LC) category.</p>									

- xvi. **Details of Solid waste/ Hazardous waste generation/ Muck and its management:**
 Generation of Municipal Solid Waste- Bio degradable (575.0 Tons in four years),
 Generation of Non degradable (197.02 Tons in four years)

Solid waste management shall involve Reuse/Recycling, Storage/Segregation, Collection and Transportation and Disposal of Degradable component, non-degradable component & bio-medical waste.

Total quantity of Muck to be dumped: 12.87lakh cum.

The entire excavated material is proposed to be dumped at two dumping sites identified over a combined area of 81.91 ha. Dumping site no. 1 has been identified covering an area of 51.91 ha area, while dumping site no. 2 covering 30 ha is formed by filling up the quarry area after obtaining the rock for construction. The toes of the disposal piles would be retained and protected by providing suitably designed gabion walls erected over concrete bases. Biological measures have also been suggested.

- xvii. Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 22nd, December 2023, at Kamalapadu (V), Yadiki (M), Ananthapuram District, Andhra Pradesh. The main issues raised during the public hearing are:

Summary of Issues

Issues/Comments/Observations	Reply by the User Agency
<p>To provide employment opportunities to the local youth based on their skills and qualifications.</p> <p>Project authorities should hire local vehicles during construction.</p>	<p>During construction a large number of skilled and unskilled workers shall be engaged in project activities, majority of them will be from the local population/surrounding villages.</p> <p>Employment opportunities shall be provided in the company or through the construction company as per eligibility during the construction phase of the project.</p> <p>For development of required basic infrastructure facility during construction and maintenance, contract will be awarded to local villagers through the construction company and priority has been given to locals during hiring of vehicles.</p>
<p>Clarify the basis of compensation for the land acquired for the project.</p>	<p>Land Compensation shall be as per Provisions of “The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act” (RFCTLARR) 2013 involving direct negotiations with the landowners under monitoring of district administration. (Rules issued through the Andhra Pradesh G.O.MS. No. 389 dated 20-11-2014)</p>

<p>No basic infrastructure facilities in the villages</p>	<p>For infrastructure development in the villages surrounding to the project, Local Area Development Fund of Rs 7.335 Crore has been allocated and will be spent during construction phase of the project.</p>
<p>Need to address the land ownership issues. Some of the villagers have not Patta passbook for the land.</p> <p>Fair compensation for the land to be acquired.</p>	<p>District administration assured to resolve the issues regarding land ownership and issuing a Patta passbook.</p> <p>Accordingly fair compensation will be provided.</p>
<p>Provide alternate sources of livelihood for the land losers.</p>	<p>Skill development training will be imparted to local youth to improve their employment opportunities in the project under local area development plan.</p>
<p>Support for the development of basic infrastructure facilities at Kamalapadu Boyareddypalli, Chintalayapalli and other surrounding villages.</p>	<p>Provision of development and strengthening of basic infrastructural facilities in project affected village panchayats and surrounding villages shall be taken up under Local Area Development Plan after consultation with the concerned Gram Panchayats and District Administration.</p>
<p>Provision of free electricity to the surrounding villages.</p>	<p>APGENCO is committed to following the provisions and guidelines issued by the State and Central Governments regarding free or subsidized power to the project area as well as to the state.</p>
<p>Support for the construction of Kalyan Mandapam in Chinthalayapalli village.</p> <p>Laying of BT road to the temple.</p> <p>Construction of toilets to the female near the temple.</p>	<p>Provision for the upgradation of religious places has been kept under Local Area Development Plan after consultation with the concerned Gram Panchayats and District Administration.</p> <p>Development of basic amenities including community toilets has been considered and shall be taken up under the provisions made under Local Area Development Plan after consultation with the concerned Gram Panchayats and District Administration.</p>

Make donation to the Chariot Kotha Ranganatha Swamy temple at Chinthalayapalli village	
Provide free technical education for the higher education students.	Skill development and training to interested local youth shall be taken up under the provisions provided in the section for Local Area Development Plan in consultation with the concerned Gram Panchayats and District Administration.
Provide free primary education in the area for the poor people in the area.	Provision of scholarships for poor and meritorious students from the schools adjacent to project area have been made under Local Area Development Plan
Requested to construct school from the area under CSR fund	Financial provision of Rs 1.30 Crore has been kept for infrastructure development and quality education for existing government schools in the area. Construction of new school shall be explored to be taken up under CSR by APGENCO.
Approach roads in Kamalapadu village are in bad condition and requested the management to maintain and upgrade the village road in the area.	Development of basic amenities including village approach roads has been considered and shall be taken up under the provisions made under Local Area Development Plan after consultation with the concerned Gram Panchayats and District Administration.
Kundanakota village also comes under the purposed project and requested the authorities to include their village name in the project title of the proposed project.	Inclusion of a village name in the project title is a decision that rests with the State Government. It was suggested to submit request or representation to state authorities for their consideration.
Provide basic infrastructure to the	Development of basic amenities including development of infrastructure in schools and beautification of temples in the area has been considered and shall be taken up

villages, schools and temples in the area.	under the provisions made under Local Area Development Plan after consultation with the concerned Gram Panchayats and District Administration.
Authorities should develop green belt in the project	Development of green belt around the project components, road site planation and plantation over proposed muck dumping sites after restoration have been proposed - under Environmental Management Plan.
Provide RO Plant to the surrounding villages	Facility of safe drinking water shall be taken up under the provisions made under Local Area Development Plan after consultation with the concerned Gram Panchayats and District Administration.
Adopt hospital in area and provide free medical camps, for regular medical checkups for the villagers.	<p>Under the Local Area Development Plan, provisions has been kept for upgradation of infrastructural facilities of existing medical institutes and medical camps. These initiatives will be undertaken in consultation with the District Administration to ensure that the upgrades meet the specific needs of the communities.</p> <p>Furthermore, our Environmental Management Plan includes provisions for establishing a First Aid posts at all construction sites within the project area. This will be complemented by an ambulance facility to ensure prompt medical assistance in case of emergencies. Also provision has been kept for organize medical camps in the neighboring villages in collaboration with the district health department.</p>
Administration utilize District Mineral Fund (DMF) collected by district administration for the development of surrounding villages.	District Administration assured that District Mineral Fund available with district administration will be utilized development of surrounding villages
There is no availability of water in the Pendekallu Reservoir, how the management of the project will get the water from the reservoir	Project management informed that the total quantum of water required for initial filling of both reservoirs together is worked out to 22.32 MCM. Source of water has been changed from Pendekallu Reservoir to Chagallu barrage reservoir as explained in Chapter 1 of EIA report.

Provisions to avoid obstruction of the natural water flow due to the proposed establishment.	Both the reservoirs are proposed to be constructed on multiple streams which further downstream merges and is known as Pedda Vanka, a left tributary of Penneru River. The catchment area of these streams at the dam of both the reservoirs is 6.05 sq km. As per CEA guidelines, all the water intercepted from catchment of new reservoirs has to be discharged downstream through appropriate provisions like spillways or interception drains etc. to be provided in the project design.
Provide water supply for about 8000 acres by constructing reservoir.	Drinking water supply provisions have been kept under Infrastructure development in local area development plan for all the hamlets of Kamalapadu, Kundanakota, Gudipadu villages. Also, provisions have been kept for repair/ renovation of the existing drinking water resources (Overhead tanks, wells, distribution points, pipelines etc.) in same area. A total cost provision of Rs 20.50 lakh has been kept for purpose.
Management shall provide mini library in their area for the educated youth.	Provision of Mini Library has been made under Local Area Development Activities under upgradation of Education Facilities head.

xviii. Status of Litigation Pending against the proposal, if any: Not Applicable

xix. The salient features of the project are as under:

- Project details:**

Name of the Proposal	Kamalapadu Pumped Storage Hydro Project (950 MW)
Proposal No.	IA/AP/RIV/547838/2025
Location (Including Coordinates)	Near Kamalapadu village, Ananthapuramu district of Andhra Pradesh State Lower Reservoir- Lat: 15° 5' 0.74" N Long: 77°56' 43.39" E Upper Reservoir- Lat: 15°6' 13.99" N Long: 77°56' 10.56" E

Company's Name	Andhra Pradesh Power Generation Corporation Limited
CIN no. of Company/user agency	U40109AP 1998SGC 109187
Accredited Consultant and certificate no.	R S Envirolink Technologies Pvt Ltd; NABET/EIA/25-28/RA 0415
Project location (Coordinates /River/ Reservoir)	Near Boyareddypalli (Kamalapadu) Village in the Yadiki Manda I of Ananthapuramu district in Andhra Pradesh
Inter- state issue involved	No
Proposed on River/ Reservoir	Chagallu reservoir
Type of Hydro-electric project	Pumped Storage Project
Seismic zone	Seismic Zone II

- Category details:**

Category of the project	A
Capacity / Cultural command area (CCA)	950 MW
Attracts the General Conditions (Yes/No)	No
Additional information (if any)	-

- TOR/EC details:**

ToR Proposal No.	IA/AP/RIV/429576/2023
EAC meeting date	02.06.2023
ToR Letter No.	J- 12011/22/2023 -IA.I (R)
ToR grant Date	07.08.2023
Cost of project	Rs 4676.50 crore
Total area of Project	359.61 ha
Height of Dam from River Bed (EL)	Upper Dam-36.50 m Lower Dam-34.70 m
Details of submergence area	247.11 ha
District to provide irrigation facility (if applicable)	NA
Details of tunnels on upper level.& lower level and length of canal (if applicable)	
No. of affected Village	Two revenue villages namely Kamalapadu and Kundanakota under Tehsil/Mandal-

	Yadiki in Ananthapuramu District of Andhra Pradesh
No. of Affected Families	The private land identified for the projects belongs to 174 land owner families.
Project Benefits	<p>The levelized cost of generation of the project has been found to be Rs 6.50/kWh considering cost of pumping @ Rs 3.00/kWh. Kamalapadu pumped storage hydro project is a technically feasible project and will be beneficial in meeting the peaking requirement of energy during evening/night in the beneficiary state i.e., Andhra Pradesh. For construction of Kamalapadu PSH Project, no forest land shall be diverted, and the proposed project is off-stream pumped Storage project and have not any impact on natural water bodies. To develop Greenbelt in the surrounding of project area, plantation over 82 ha is proposed over restored muck dumping other construction sites.</p>
	<p>The entire private land identified for the project falls In two revenue villages namely Kamalapadu and Kundanakota under Tehsil/Mandal-Yadiki in Ananthapuramu District of Andhra Pradesh. The private land identified for the projects belongs to 174 land owner families. All the 174 land owners will be losing their partial agricultural land holding and none of the families will be losing any house or any other assets. None of them is getting displaced due to the project</p> <p>A. Purchase of Private Land The private land required for the project is proposed to be purchased through a voluntary sale with a willing seller and willing buyer basis. The process is undertaken through direct negotiations between landowners and Project Proponent. The landowners are informed in advance , and each landowner negotiates on the price of land as part of land take.</p> <p>B. Govt. Land: For the Government land required for Project, APGENCO has submitted land acquisition proposal to the District Collector, Ananthapuramu. Allotment is under process. The District</p>

	Collector, Ananthapuramu has issued orders for Advance Possession of Govt land.
ToR Proposal No.	IA/AP/RIV/429576/2023
EAC meeting date	02.06.2023
ToR Letter No	J-12011/22/2023-IA.I (R)
ToR grant Date	07.08.2023
Cost of project	Rs 4676.50 crore
Total area of Project	359.61 ha
Height of Dam from River Bed (EL)	Upper Dam-36.50 m Lower Dam-34.70 m
Details of submergence area provide irrigation facility (if applicable)	247.11 ha District to
Details of tunnels on upper level.& lower level and length of canal (if applicable)	NA
No. of affected Village	Two revenue villages namely Kamalapadu and Kundanakota under Tehsil/Mandal-Yadiki in Ananthapuramu District of Andhra Pradesh
No. of Affected Families	The private land identified for the projects belongs to 174 land owner families.
Project Benefits	The levelized cost of generation of the project has been found to be Rs 6.50/kWh considering cost of pumping @ Rs 3.00/kWh. Kamalapadu pumped storage hydro project is a technically feasible project and will be beneficial in meeting the peaking requirement of energy during evening/night in the beneficiary state i.e., Andhra Pradesh. For construction of Kamalapadu PSH Project, no forest land shall be diverted, and the proposed project is off-stream pumped Storage project and have not any impact on natural water bodies. To develop Greenbelt in the surrounding of project area, plantation over 82 ha is proposed over restored muck dumping other construction sites.
R&R details	The entire private land identified for the project falls. In two revenue villages namely Kamalapadu and Kundanakota under Tehsil/Mandal-Yadiki in Ananthapuramu District of Andhra Pradesh. The private land identified for the projects belongs to 174 land owner

	<p>families. All the 174 land owners will be losing their partial agricultural land holding and none of the families will be losing any house or any other assets. None of them is getting displaced due to the project</p> <p>A. Purchase of Private Land The private land required for the project is proposed to be purchased through a voluntary sale with a willing seller and willing buyer basis. The process is undertaken through direct negotiations between landowners and Project Proponent. The landowners are informed in advance, and each landowner negotiates on the price of land as part of land take.</p> <p>B. Govt. Land: For the Government land required for Project, APGENCO has submitted land acquisition proposal to the District Collector, Ananthapuramu. Allotment is under process. The District Collector, Ananthapuramu has issued orders for Advance Possession of Govt land.</p>
<p>Catchment area/ Command area</p>	<p>Both Upper and Lower reservoirs are proposed to be constructed on multiple streams which further downstream merge and is known as Pedda Vanka, a left tributary of Penneru River. The catchment area of these streams at the dam of both the reservoirs is 6.05 sq km.</p>
<p>Types of Waste and quantity of generation during construction/Operation</p>	<p>Municipal Solid Waste- Bio degradable (575.0 Tons in four years), Non degradable (197.02 Tons in four years)</p>
<p>Material used for blasting and its composition as per DGMS standards.</p>	<p>It has been assessed that one magazine of 20 MT capacities would be sufficient to meet the requirements of the project. A mobile explosive van shall be deployed to carry explosives at the site of use at upper and lower dam area. Movement of the vans should be done with armed guards and proper documentation recommended by PESO.</p>

E-Flows for the Project	Proposed project is standalone Closed loop pumped storage scheme and provision of E-flow is not required for the scheme. However to maintain the inflow run-off from the catchment through the spillway designed for both upper and lower reservoir.
Is Projects earlier studied in Cumulative Impact assessment & Carrying Capacity Studies(CIA&CC) for River in which project located. If yes then c) E-flow with TOR/Recommendation by EAC as per CIA&CC study of River Basin. d) If not the E-Flows maintain criteria for sustaining river ecosystem. Details on provision of fish pass	No
Project benefit including employment details (no of employee)	The proposed project is Off-stream Closed Loop project. It is proposed to utilize the water from existing Chagallu barrage for initial filling of the Kamalapadu PSH reservoir. Both the proposed upper and lower reservoirs are artificial reservoirs and are not located on any active streams. Kamalapadu PSH Project is planned to be completed in 42Calendar months (excluding pre-construction activities), at the time of peak construction work in the project, around 700 persons may be engaged. Out of 700 nos., about 70% will be from the local population/surrounding Villages and balance persons will be skilled/semiskilled from other area. In addition, the project would lead to creation of direct and indirect employment opportunities as new factories would come up. In and around the project due to reliable power supply/availability, contract works for the locals during construction and operation phase, etc. Since there is no requirement of any forest land diversion for construction of various components, therefore requirement of preparation of Compensatory Afforestation Plan is not applicable in the present case.
Area of Compensatory Afforestation (CA) with tentative no of plantation.	500

Previous EC details	
EC Compliance Report by R.O, MOEF&CC	
No. of trees/saplings proposed in the view of 'Ek Ped Maa Ke Naam' campaign	

- Electricity generation capacity:**

Powerhouse Installed Capacity	950 MW
Generation of Electricity Annually	2958.42 MU
No. of Units	5; 950 MW [3 x 238 + 2 x 118]

- Muck Management Details:**

No. of proposed disposal area/ (type of land- Forest/Pvt land)	Net Quantity of Muck to be rehabilitated/disposed of is estimated as 12,873,413 cum. Keeping the above requirement and topography of the area , dumping site no. 1 has been identified covering an area of 51.91 ha area with a total capacity of 8,283,413 cum muck . The dumping site no. 2 covering 30 ha is formed by filling up the quarry area after obtaining the rock for construction.
Distance of muck disposal area(location), from muck generation sources (project area)/River, HFL of proposed muck disposal area	500 m
Total Muck Disposal Area	81.91 ha
Estimate Muck to be generated	1,18,32,187.99 cum

Transportation	The generated muck will be carried in dumper trucks tightly covered in line with international best practices. All precautionary measures will be followed during the dumping of muck. All dumpers will be well maintained to avoid any chances of loose soil from being falling during transportation. All unpaved routes will be periodically wetted with the help of sprinklers prior to the movement of dump trucks.
Monitoring mechanism for Muck Disposal Transportation	The provisions of Monitoring have been kept under proposed Environmental Monitoring Plan.

- Land Area Breakup:**

Private land	257.38 ha Private land
Government land	102.23 ha Govt. land
Forest land	0.00
Total land	359.61 ha
Submergence area/reservoir area	247.11 ha
Additional information (if any)	

- Presence of Environmentally Sensitive areas in the study area**

Forest Land/ Protected Area/ Environmental Sensitivity Zone	Yes/No	Details of Certificate/ letter/Remarks
Reserve Forest/Protected Forest Land	No	No project component falls in any notified protected area. The nearest protected area to the project components is Rajiv Gandhi National Park, which is at a distance of 72.0 km. All the project components are outside the notified ESZs of Rajiv Gandhi National Park.
National Park	No	
Wildlife Sanctuary	No	
monuments/historical temples Archaeological sites etc	No	No places of historical, religious or archaeological importance were reported from the study area. Each

		village in the study area has some cultural sites or sites of religious significance like temples, mosques, Church, graveyards etc.
Additional information (if any)	-	
Availability of Schedule-I species in Study area		Conservation Status of Fauna According to WPAA, 2022 , 13 species of mammals, one species of bird (Small Minivet), 06 species of herpetofauna (Python, Bengal Monitor Lizard, Indian rat Snake, Indian Cobra, Russel's Viper and Indian Flap-shell Turtle) are listed under Schedule I. Rest of the faunal species are listed under Schedule II category of WPAA, 2022. As per the IUCN Red List of Threatened Species, Version 2022-2, Wild Dog is listed under Endangered (EN) category, Common Leopard, Sloth Bear, Four-horned Antelope, Sambar Deer, Bonnet Macaque and Flap-shell Turtle are under Vulnerable(VU) category, Striped Hyaena, Python, Bengal Monitor Lizard and Anamalai Hill Gecko are listed under Near Threatened (NT) category. As per the IUCN Red List of Threatened Species version 2023-1, all birds have been listed under Least Concern (LC) category.

- **Public Hearing (PH) Details**

Advertisement for PH with date	Publications of notice for public hearing were given in state/national level Telugu newspaper "Sakshi" and English newspaper "The New Indian Express" dated 21.11.2023.
Date of PH	22nd December 2023
Venue	22nd, December 2023, at Kamalapadu (V), Yadiki (M), Ananthapu ram District, Andhra Pradesh.

Chaired by	Meeting was chaired by District Revenue Divisional Officer/ Sub-Divisional Magistrate, Guntakal, District Ananthapuram.
Main issues raised during PH	<ul style="list-style-type: none"> - Provision of Employment of local Youth. - Fair compensation for the pattaland to be acquired - Provide free technical education for the higher education students Support for the development of basic infrastructure facilities
No of people attended	151

• **Brief of base line Environment:**

Particulars	Details		
	Parameters	Summer/ Pre-Monsoon	
Period of baseline data collection/Sampling period. (Air, noise, water, land)	Soil	June 2023	
flora and fauna of the project area,	Air Environment	May-June 2023	
	Noise & Traffic	June 2023	
aquatic ecology, etc.	Water Quality	June 2023	
	Vegetation	June 2023	
	Fauna surveys	June 2023	
	Socio-economic survey	June 2023	

<p>Brief description on hydrology and water assessment as per the approved Pre-DPR:</p>	<p>The Project is a standalone scheme with two new greenfield reservoirs and initial filling proposed from existing Pendekallu Balancing reservoir through a pipeline.</p> <p>While approving the water availability, Water Resources Department (WRD), Govt of Andhra Pradesh has changed the water source from Pendekallu Balancing reservoir to Chagallu Barrage, where additional flood water IS available. The Pendekallu Balancing Reservoir and the Chagallu Barrage are integral components of the Penna Ahobilam Balancing Reservoir (PABR) Stage-II irrigation initiative in Anantapur district, Andhra Pradesh.</p> <p>Chagallu Barrage, has a capacity of 1.50 TMC .WRD, Andhra Pradesh allotted 0.800 TMC (0.720 TMC +0.080 TMC) in two fillings at the rate of 0.400 TMC (including losses) or inmore no.of fillings based on the actual availability of water from Chagallu Barrage in Anathapuram District.</p>
<p>Additional detail (If any)</p>	<p>-</p>

- **Court cases: Nil**
- **Status of other statutory clearances**

Particulars	Letter no. and date
Status of Stage- I FC	Diversion of forest land is not required for the proposed project
Approval of Central Water Commission Approval of Central Electricity Authority	<p>The Layout Map, hydrology and Power Potential Studies have been examined by CWC/CEA and necessary clearances/observations have been issued:</p> <p>i. CWC vide letter no. T-16012/12/2023/HCD (NWS) dated 16.11.2023 for layout of the project and letter no. T-11012/9/2023-HYD (S) DTE dated 15.07.2025 for hydrology aspect.</p> <p>ii. The CEA has issued observation</p>

	regarding layout vide letter no. 10/440/HETD&RM/2025 dated 3.07.2025.
Additional detail (If any)	
Is FRA (2006) done for FC-1	NA

13. Details of the EMP

S. No.	Components of EMP	Capital Cost (Rs. in lakh)	Recurring Cost (Rs. in lakh)							Total Cost (Rs. in lakh)
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
1	Catchment Area Treatment Plan	3.36	00.00	00.00	00.00	00.00	00.00	00.00	00.00	3.36
2	Compensatory Afforestation and NPV*	0.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	0.00
3	Biodiversity Conservation & Wildlife Conservation	160.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	160.00
4	Fisheries Development Plan	89.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	89.00
5	Muck Dumping and Management Plan	70.00	255.45	225.40	523.90	342.00	155.20	53.75	3.00	1628.70
6	Landscaping, Restoration of	18.00	78.00	70.25	80.00	42.75	0.00	0.00	0.00	289.00
7	Sanitation and Solid Waste Management	173.00	33.96	33.96	33.96	33.96	5.00	0.00	0.00	313.84
8	Public Health Delivery System	60.00	52.50	52.50	47.50	47.50	0.00	0.00	0.00	260.00
9	Energy Conservation Measures	32.00	53.00	53.00	53.00	53.00	0.00	0.00	0.00	244.00
10	Labour Management	25.00	7.00	2.00	12.00	7.00	0.00	0.00	0.00	63.00
11	Green Belt Development Plan	2.25	0.50	5.45	13.40	8.00	3.00	3.00	0.00	35.60
12	Pollution Mitigation Measures	0.00	16.00	16.00	16.00	16.00	0.00	0.00	0.00	64.00
13	Environmental Monitoring Program	0.00	23.68	38.68	38.68	38.68	15.00	0.00	0.00	154.72
14	Rehabilitation and Resettlement Plan**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

15	Local Area Development Plan	733.50	00.00	00.00	00.00	00.00	00.00	00.00	0.00	733.50
16	Disaster Management Plan	275.00	25.00	25.00	25.00	25.00	25.00	00.00	0.00	400.00
17	Watershed Development Plan	325.00	00.00	00.00	00.00	00.00	00.00	00.00	00.00	325.00
	Total	1966.11	545.09	532.24	843.44	613.89	203.20	56.75	3.00	4763.72

* Diversion of Forest land is not involved in proposed project

** Cost of private land acquisition (R&R) will be part of DPR cost.

