Terms of Reference

For

Environment, Social, Health and Safety (ESHS) Manager

Upper Arun Hydroelectric Project (UAHEP)

Expertise : **Environment and Social Safeguards/Risk Assessment and Management**

Source : National

1.Brief Description of the Project:

As preparation of the projects for implementation, the study of Upper Arun Hydroelectric Project (UAHEP) & Ikhuwa Khola Hydropower Project (IKHPP), Detailed Engineering design and Environmental and Social Study is being carried out with the financial assistance of World Bank (WB) under Power Sector Reform and Sustainable Development Hydropower Projects (PSRSHDP). The World Bank has provided a credit of US$ 20 Million on the proposed credit number 5728- NP to the Government of Nepal (GoN). The credit has been sub-lent to Nepal Electricity Authority (NEA) as a subsidiary loan under the subsidiary loan agreement between GoN and NEA. The cost for the design and construction supervision of Access Road to UAHEP and IKHPP is funded by the GoN. The Upper Arun Hydroelectric Project, NEA is the implementing agency for the project.

With an installed capacity of 1061 MW, the Upper Arun Hydroelectric Project (The Project) is a peaking run of river (PROR) located in the district of Sankhuawasabha about 40 km north of Khandbari, (the district headquarters) and 200km due east of Kathmandu (See basis layout in the figure below). UAHEP is one of five cascade HEPs[1] planned on the Arun River, a tributary of the Saptakoshi River, which originates in Tibet, China and enters Nepal from Kimathanka at the Nepal-China border. UAHEP will be developed by Upper Arun Hydroelectric Limited (UAHEL), a subsidiary company of NEA established on 2073/10/12. Accordingly, UAHEL has been granted the study licenses of UAHEP along with the Ikhuwa Khola Hydropower Project (IKHPP, 40MW). In addition, UAHEL has acquired the survey licenses for two transmission lines to evaluate power from of UAHEP (400 KV) and IKHPP (132 KV) as well both up to Sub-station at Haitar Substation on 2077/05/11 and 2077/07/25 respectively.

The Updated Feasibility Study Report (UFSR) of UHHEP was finalized in May 19, 2021. As per the report, the design discharge of the Project is 235 m3/sec. The total Annual Energy generation will be 4,512 GWh (dry season energy 27.7%) and the total static project cost (CAPEX) of the project is 1,377.31 million USD. The Project consists of 100 m high dam, 8.4 km long Headrace Tunnel, Sediment Bypass Tunnel, 20 m diameter Surge Tank, 484 m high and 7.3 m diameter Pressure drop shaft, 39 m long Penstock before bifurcation leading to 6 individual penstocks to feed 6 units of Pelton turbines, and underground Powerhouse (230.05 m×25.7 m×59.43 m size). The rated head of the Project is 508.3 m. As per the report, the cost per kW of the project as

[1] The fiver projects starting near the Nepal-China border and heading south are Kimathanka Arun, UHEP, Arun IV, Arun III and Lower Arun.

1,324USD/kW, Levelized Cost of Energy is 3.9 US¢/kWh and the Financial Cost of the project is 1,749 Million USD.

The power from UAHEP is proposed to be evacuated to national grid by the construction of 5.99 km long 400 KV double circuit transmission line to the 400 KV substation located at Haitar, Sankhuwasabha. Similarly, the power from UAHEP is proposed to be evacuated to national grid by the construction of 2.74 km long 132 KV single circuit transmission line to the same sub-station. The feasibility study of Transmission line is being carried out by (Project Development Department) PDD, NEA.

The Expression of Interest (EOI) has been called for the procurement of Engineer for Tender Design, Bidding Document preparation, Construction Supervision & post construction services for Upper Arun HEP, and the evaluation of submitted EOI is ongoing. The Engineer will be expected to on board by January 2023.

A Tender has been called for the "Construction of Access Road for Upper Arun Hydroelectric Project" on 23 May 2022. The evaluation of the Bids is ongoing and as such, the access road contractor could be at site by February 2023 and the access road for the project will be completed by November 2025.

For Environmental study of the Project, three consultants namely, *Environment and Social Studies Department (ESSD) of NEA*, *Environmental Resources Management (ERM, USA) and NEFIN (Nepal Federation of Indigenous Nationalities)* are involved.

- ESSD carried out the IEE of Camp Facility, Fishery Baseline Study (FBS) and EIA of Access Road. The EIA of Access Road has completed on 2078/12/13.
- ERM Inc., USA was assigned the task of ESIA, CIA and SPS work of Hydropower component. The Environment and Social studies of the project are being carried out complying with the WB and EIB requirements including Free Prior Informed Consent (FPIC) of the local indigenous Community. The ES Consultant has submitted all the reports which are being reviewed by the NEA/WB/ESPOE. EIA of the project has been recently submitted to Department of Electricity Development (DoED) for approval.
- The NEFIN is facilitating the FPIC Process for the Project. The final AJAC meeting is schedule during the last week of September 022 and the FPIC process can conclude during the meeting.

The Study by ERM shows that about 22 households will be physically displaced whereas 334 households will be economically displaced by UAHEP.

The Project is expected to be funded through a debt-to-equity ratio of 70:30. 70% debt will be provided by Multilateral Development banks (MDB), Development Finance Institutions (DFI) and domestic lenders (DL). The remaining 30% will be raised as equity from NEA, the general public, employees of qualifying institutions, and other participating institutions. This capital structure is expected to socially insure the project from all stakeholders. The project is also a candidate for the GoN's flagship program, "Nepal ko Paani, Janta ko Lagaani Program" which is intended to ensure the participation of all citizens of Nepal in the development of hydropower. The World Bank, as requested to lead the Consortium of International Lenders,

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is keen on financing the project. Similarly, HIDCL is leading the Consortium of domestic financiers for debt financing of the project. Accordingly, a Memorandum of Understanding with the Consortium has been signed recently.

Soil, Rock and Concrete Laboratory (SRCL) has been assigned the responsibility for the Geotechnical investigation work including borehole drilling at different location of the project. The total drilling depth of 1700 m has been completed till date. It is expected to complete the remaining boreholes and all geotechnical investigation works by March 2023.

The notice has been published for land acquisition of 131.67 hectare of private land among 224.47-hectare of total land required for the project after the determination of the rates (Refer Gorkhapatra National Daily dated 2079/04/27 for detail).

The process for tree cutting also is ongoing. The land acquisition and tree cutting permission (forest clearance) is expected to be completed by end of February 2023.

The UAHEP is planned to start the construction work of project from November – 2024 and expected to complete by November - 2030.

2. Scope of works:

The scope of work includes;

1. To manage and coordinate the environment, social, health and safety (ESHS) works of the project conducted by the different environmental and social consultants, technical consultants working on the design to ensure that design takes into account E&S risks and impacts and measures in accordance with various E&S plans as well as civil works contractors.
2. Manage the environment and social section/unit of the project company, mobilize and supervise the works of environmental and social safeguard officers and E&S consultants working for the project as well as civil works contractors and sub-contractors.
3. Develop work plan in consultation with the ESHS team members for timely completion of the tasks.
4. Review and finalize the safeguard/ESF reports prepared by the ESHS team members and consultants and submit to the World Bank through Project Management Unit.
5. Manage and coordinate with the consultant for the finalization and implementation of E&S instruments, including but not limited to environmental and social impact assessment (ESIA), cumulative impact assessment (CIA), environmental and social management plans (ESMP – construction and operation), Biodiversity Management Plan (BMP) and Biodiversity Action Plan (BAP), Resettlement Action Plan (RAP), Indigenous People Plan (IPP), Stakeholder Engagement Plan (SEP), Grievance Redress Mechanism (GRM), Gender Action Plan, and Social Commitment Plan (ESCP) and other plans prepared in line with World Bank Environmental & Social Framework (ESF) and Government of Nepal (GoN) requirements.
6. Lead in the updating of site specific ESMPs and other E&S instruments to reflect any changes in project components/design during detail design / implementation phase; as required by country's environmental regulations and World Bank's ESF.
7. Develop schedule and cost estimates for the implementation of environmental and social management plans and related plans of the project in different packages.
8. Provide ESHS inputs for the preparation of tender documents (Drawings, BOQ, Technical specification and make sure that relevant provisions of the ESMP and other

environment and social safeguard documents are fully included in tender and contract documents for all contracts packages.

9. Review the DPR as well as bid documents of each subproject in line with safeguard implementation and management recommended in ESMP/ IEE/ EIA, are incorporated in the respective DPR.
10. To ensure contractors follow their obligations as prescribed in the ESMP and other ESF documents.
11. Review the ESMPs and related plans, Health Safety Plans, Labor Management Procedures, Stakeholder Engagement/Disclosure Plan etc. submitted by different Contractors as per their contract packages and provide approval/clearance through project management.
12. Develop compliance monitoring mechanism in consultation with Project Manager and Construction Manager of the Consultant assigned for the project to ensure the compliance of the tender clauses relevant to environmental and social safeguards.
13. Review of the environmental and social monitoring reports prepared and submitted by different Contractors.
14. Oversee compliance by all project contractors with good social practices adopted by the Project (including stakeholder consultation, beneficiary feedback, gender sensitivity including gender-based violence, sexual abuse and exploitation/sexual harassment, labor and working conditions, etc.).
15. Coordinate for the establishment of GRM as per approved documents and monitor the process and activities including registration, record keeping, information dissemination, reporting and ensure timely actions by all parties. Assist UAHEL for the implementation, monitoring and reporting of all safeguard matters as per national rules and World Bank ESF.
16. Prepare and submit periodic environmental and social management reports to the UAHEL, showing the progress made in implementation of mitigation measures, compliance and impact monitoring with clear identification of deviations in environmental and social performance, if any, and corrective and preventive actions taken or being taken.
17. Support UAHEL in integrating E&S risk management in its analytic, knowledge, and regulatory initiatives.
18. Any other tasks assigned by Employer to support the project with respect to environmental and social issues.
19. Assist MD/PM to monitor daily, weekly, monthly plan of project.
20. Assist MD/PM on resolving contractual issues/project related issues arising during pre-construction and construction phase.
21. Conduct orientation program to field level safeguard staff of UAHEL and contractor safeguard staff to make sure that they have proper information and understanding of the safeguard documents prepared for the project, procedures for the GRM, information disclosure and implementation of the safeguard measures as per ESMP.
22. Lead in the coordination with the World Bank Task Team on ESF matters and concerns.

3. Required Qualifications:

PhD/Master Degree in Environmental Science/ Environmental engineering/ Zoology/Botany/Forestry/ Social Science.

4. Required Specific Experience (relevant to assignment):
25 years of specific experience in the field of environmental and social sciences, environmental engineering, environmental and social monitoring and implementation of mitigation works in Hydropower and Transmission Line Projects. Experience in managing environmental and social risks for large infrastructure projects, including at least some experience in construction phase monitoring and international exposure. Good working knowledge and applied experience with international standards (e.g., WB, EIB, IFC, ADB). The candidate is desirable to have experience with ESMS and in the preparation of Environment and Social Impact Assessment Report, implementation and monitoring of Environment and Social management plans in accordance the requirements of multilateral development organization such as the World Bank and/or International Finance Corporation. The candidate should have experience in environmental and social studies, environmental and social monitoring and implementation of mitigation works in large scale hydropower projects (100 MW and above) and Transmission line projects (220 kV and above). All these qualifications and experiences will be considered in the evaluation. International exposure and experience will be an added advantage.

5. Work Arrangements: The ESHS Manager shall report to the Managing Director (MD) of the Upper Arun Hydroelectric Limited or to an officer assigned by him/her. He/she shall lead the ES team of the Project.

6. Deliverables: Deliverables shall be as directed by the Managing Director or his representative. Deliverables/assignments will include but not limited to coordinating, planning, organizing, analyzing, supervising, monitoring and reporting on the safeguard aspects of the Project. This will include undertaking relevant screening and assessments, designing appropriate enhancements and mitigation measures, and monitoring to ensure the effective implementation of the recommendations for sustainable results. The expert will also be responsible to respond to other related tasks that will be assigned in response to the project needs.

7. Office & Facilities:

1) Office space: The space will be provided by the Employer

2) Field Works: Daily allowances and transport facility (office-field-office) will be provided by the Employer.

8. Assignment period: 2 Years