

Terms of Reference (ToR)

for

Site Supervision Engineer for Large Biogas and Waste to Energy Sub-projects

(Full Time Individual Consultant)

1. Introduction

Alternative Energy Promotion Centre (AEPC) is the apex government body under the Ministry of Energy, Water Resources and Irrigation (MoEWRI), established to promote the use of alternative/renewable energy technology to meet the energy needs in Nepal. The Private Sector Led Mini Grid Energy Access Project (MGEAP) was initially launched in April 2019 to promote sustainable and decentralized energy solutions in Nepal. Following a series of restructurings, the project's closing date has now been extended to September 30, 2026. The objective of the project is to increase electricity access and delivery from renewable energy mini-grids (solar, hydro, wind, and hybrid) and large biogas plants by mobilizing private Energy Service Companies (ESCOs) and developers. The project is designed to support RE mini-grids market by introducing conditions to gradually shift from heavily subsidized to commercial model. The project will support mobilization of credit from participating Banks (PBs) to ESCOs for the development of mini-grid subprojects.

Nepal is one of six countries identified for assistance under the Scaling-up Renewable Energy Program in Low Income Countries (SREP). As one of three programs under the Strategic Climate Fund, SREP aims to demonstrate the social, economic and environmental viability of low carbon development pathways in the energy sector. In particular, the objectives of SREP in Nepal are to: (i) leverage complementary credit and grant co-financing, (ii) bring about transformational impacts through scaling up energy access using renewable energy technologies (RETs), poverty reduction, gender and social inclusiveness and climate change mitigation, and (iii) ensure sustainable operations through technical assistance and capacity building. MoEWRI has designated the Alternative Energy Promotion Centre (AEPC) as the lead agency for SREP-related mini grids renewable energy initiatives and activities. SREP will support MGEAP to fulfill its objectives and target.

2. Background

Since 2014, the World Bank has been actively supporting the growth of the large biogas sector in Nepal. To date, over 25 large-scale biogas plants, each with a capacity exceeding 3,000 cubic meters have been successfully implemented. These plants contribute to a range of end uses, including bio-CNG bottling, electricity generation, vehicular fuel supply, and industrial energy applications. The current position pertains specifically to the third component, focusing on the development and supervision of large biogas plants.

In addition to energy production, these plants have played a vital role in environmental sustainability by producing significant quantities of organic fertilizer, thereby reducing reliance on chemical fertilizers and promoting eco-friendly agricultural practices.

To ensure effective implementation and oversight of this component, the project requires a Site Supervision Engineer who will be responsible for supervising civil construction works, verifying technical drawings, and ensuring the timely delivery and quality compliance of electromechanical equipment related to large biogas plant installations. This is a site based position.

3. Objectives:

The objective of the Site Supervision Engineer assignment is to oversee and coordinate day-to-day activities at the designated large biogas plant project sites under MGEAP, as assigned by AEPC. The engineer will ensure that all construction and installation works are carried out in accordance with approved designs, technical specifications, and project timelines, while maintaining high standards of quality, safety, and compliance.

4 Scope of Services

The scope of Services shall include, but not necessarily be limited to the following:

- Supervise and monitor all on-site civil construction activities to ensure compliance with approved drawings, specifications, and timelines.
- Review and verify detailed engineering drawings and designs, ensuring alignment with project requirements and site conditions.
- Coordinate with design teams and contractors to address discrepancies or issues identified during drawing verification or construction.
- Ensure quality control procedures are implemented and maintained across all civil works and structural components.
- Monitor the installation and integration of electromechanical equipment, ensuring conformity with technical standards and specifications.
- Inspect delivered electromechanical equipment for quality, completeness, and compliance with contractual requirements.
- Track and report on the delivery and shipping schedules of critical equipment and materials, flagging delays or deviations.
- Collaborate with procurement and logistics teams to ensure timely shipment and proper storage of electromechanical components.
- Enforce adherence to environmental, health, and safety (EHS) standards throughout the construction and installation phases.

- Maintain detailed records of construction progress, site observations, equipment arrivals, and any deviations from project plans.
- Support commissioning teams by verifying readiness of systems and infrastructure as per project milestones.
- Prepare regular reports and updates for project management and stakeholders, highlighting risks, progress, and recommendations.
- Any other tasks assigned by the Project Manager.

4. Duration of Contract

The duration of the Consultant's service shall be for **six months** from the date of signing of contract, subject to annual renewal upon Consultant's satisfactory performance and need for the project. The Consultant is expected to work on full time at the construction site with required travels to AEPC head Office, Kathmandu on tasks related matters. It is expected about 90% of time is required for field based.

5. Types of Contract and Terms of Payment

The contract with the Consultant will be Time Based. The payment to the consultant will be made on monthly basis upon submission of payment request including invoice, required report(s) and time-sheets. The consultant should submit a monthly report including the task activities of daily works, and get it approved from Project Manager. If no of days are not justified with the progress, Project Manager will verify the actual progress and payment shall be made accordingly. The fee, other than remuneration of consultant, will be reimbursed based on actual expenses incurred for the task, within the ceiling specified in the Contract.

6. Performance and Reporting Requirement (Deliverable):

- Monthly Progress Reports detailing the status of civil works, equipment delivery and installation, key activities undertaken, and any deviations from project plans.
- Quarterly Summary Reports providing a consolidated overview of progress, challenges encountered, corrective actions taken, and coordination with stakeholders.
- Photographic Documentation of construction progress, equipment installation, and any site-specific issues, with clear annotations and timestamps.
- Issue Logs capturing technical, logistical, or coordination-related issues observed on site, along with proposed or implemented solutions and responsible parties.
- Site Visit Records including dates of visits, key observations, and interactions with contractors or local stakeholders.

- Verification Checklists confirming compliance with approved drawings, specifications, and equipment standards for each project milestone.

7. Consultant's required Qualification and Experience

- Candidates should have at least a bachelor's degree in Engineering with 3 years relevant and proven experience in construction sector. Preference shall be given to those candidates having prior experience in monitoring of large biogas plants.

8. Facilities and logistics to the Consultant by the Client:

The consultant will be paid a monthly remuneration (Consultancy Service Fee) for the services rendered, upon submission and approval of monthly time-sheet and invoice. Necessary stationery, printing and copying facilities will also be provided by the Client. Authorized travel expenses will be reimbursed. The Consultant will manage accommodation and other logistic facilities by themselves. Additional benefits such as festival allowances, leave, gratuities etc. will not be provided. If consultant is absent, the respective remuneration for particular period will be deducted from the payments.