

Terms of Reference (ToR) for Civil Expert

Position:	Civil Expert (Rooftop PV, Solar Mini-grid & Solar Irrigation Pump)
No of Positions:	One (1)
Duty Station:	AEPC-DKTI Project Office, Old Baneshwor, Kathmandu
Responsible To:	Project Manager, AEPC-DKTI
Working Relationship with:	Team Leader and Deputy Team Leader of DKTI-PIC Team

Context:

The development objective of Alternative Energy Promotion Centre (AEPC) is to improve the living standard, increase employment opportunities and productivity of rural women and men as well as reduce dependency on traditional energy and attain sustainable development through integrating the renewable energy with socio-economic activities people in rural as well as urban communities. AEPC is going to implement on-grid solar technologies (rooftop solar photovoltaic in the commercial and industrial entities) and off-grid solar technologies (solar irrigation pumps and solar mini-grids) with the financial support from KfW. The main objective of the project is promotion of solar energy in rural and semi-urban regions of Nepal. Within this objective, the purpose of the project is to increase the supply of solar electricity and reduce CO₂ emissions through investments in on-grid and off-grid photovoltaic (PV) systems.

In order to implement the project, AEPC has engaged project implementation consultant (PIC) team of TRACTEBEL Engineering GmbH. The PIC is supporting AEPC (project executing agency) during the planning and implementation of the project and is part of the Project Implementation unit (PIU).

Purpose of the Position:

To meet the objective of AEPC-DKTI project intervention, the Civil Expert (Engineer) will contribute to reach the targets of accelerating renewable energy service delivery for Rooftop PV, Solar Irrigation Pumps and Solar Mini-grids in the rural and semi-urban areas of Nepal for the economic growth, promotion of RE, reducing CO₂ emission, improving living conditions, and sustainable energy services.

Scope of the Works:

The duties and responsibilities of the Civil Engineering Expert includes but are not limited to the following:

- Review and verify system design and drawings of the feasibility study reports for PV rooftops, solar mini-grids and solar irrigation pumps.
- Review of BoQ and cost estimate for PV rooftops, solar mini-grids and solar irrigation pumps with the focus on the civil component
- Review and verify i the detailed feasibility study reports.

- Review structure analysis of C&I roofs suitable for solar installation. Conduct site assessment and verification of roof structure for Rooftop PV.
- Site assessment and verification of proposed civil structures for the SMG and SIP subprojects.
- Support on preparing bid documents and evaluation of the bids.
- Review invoices and bills submitted by Contractors.
- Review existing technical guidelines and regulations (NEPQA, feasibility study of solar mini, NEA grid code, grid-connected PV etc.) and verify the structural elements that are assigned as per standards.
- Support on developing the operation and maintenance (O&M) concept for PV projects.
- Review the compliance of all projects under the three sub- components with the eligibility criteria.
- Support on preparing forms, templates and, and monitoring sheets.
- Technical due diligence and preparation of project reports.
- Prepare civil design concepts for each of the three Technical Components, using computer added design tools such as AutoCAD, Etabs etc.
- Review and verification of T&C reports, focusing on the civil part.
- Support on capacity building and training activities for project stakeholders (private sector, local government, provincial government, beneficiaries etc.).
- Conduct inspection of goods and works at contractor's warehouse/factory as well as in the field.
- Develop standard operation procedures and quality as well as safety standards for solar PV system installation works.
- Support in the project implementation activities as assigned by the project manager.

Qualification and Experience

- Master's Degree in Civil/Structural Engineering or relevant field with Bachelor's Degree in Civil Engineering.
- Ten (10) years of professional work experience, out of which minimum five (5) years of proven work experience in the field of solar PV project, irrigation projects, and infrastructures construction design and supervision.
- Demonstrate strong written and oral communication in English and Nepali language.
- Understanding of solar energy technologies status and implementation challenges in Nepal is an advantage.
- Good understanding of Nepal government's procurement process will be an advantageous.
- Excellent interpersonal and communication skills.
- Experience and knowledge of Microsoft office tools and civil engineering design tools etc.
- Willing to travel to the remote areas.

Duration:

Initially for one year with possibility of further extension based on annual performance appraisal.