

Terms of Reference (ToR) for Solar PV Expert

Position:	Solar Photovoltaic (PV) Expert
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 Solar PV 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 PV Expert includes but are not limited to the following:

- To review and verify proposals and feasibility study report for C&I PV rooftops, solar mini-grids and solar irrigation pumps.
- Review the BoQ and cost estimate for C&I PV rooftops, solar mini-grids and solar irrigation pumps.
- Conduct and verify computer simulation of proposed PV systems using standard simulation tools (such as Solargis, PVGIS, PVsyst, HomerPro etc.).

- Review existing technical guidelines and regulations (NEPQA, feasibility study of solar mini-grid, grid-connected PV policy etc.) and verify the system design and components that are assigned as per standards.
- Review the current international standards of the solar PV technology, its best practices and integrate them in project implementation when possible.
- Support on developing the monitoring system of the implemented projects.
- Review invoices and bills submitted by Contractors.
- Support on developing the operation and maintenance (O&M) concept for PV projects.
- Review the eligibility of the proposed projects in all three sub-components
- Prepare technical design concepts for PV systems under the project components.
- Technical due diligence and preparation of detail project report.
- Support on preparing bid documents as well as evaluation of the bids.
- Conduct field monitoring as well as inspection of goods at the contractor's warehouse/factory.
- Support on T&C
- Support on capacity building and training activities for project stakeholders (private sector, local government, provincial government, beneficiaries etc).
- Support in the project implementation activities as assigned by the project manager.

Qualification and Experience

- Master's degree in Engineering or Science under the related disciplines with Bachelor's Degree in 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 projects feasibility study and implementation.
- Understanding of solar energy technologies status and implementation challenges in Nepal.
- Demonstrate strong written and oral communication in English and Nepali language.
- Professional work experience with the private, bilateral and multilateral organization in the field of solar energy.
- 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 solar PV system modelling tools.
- Willing to travel to the remote areas.

Duration:

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