TERMS OF REFERENCES FOR THE ELECTRICAL ENGINEER

Background

Public Sector Energy Efficiency Project derives from the Country Partnership Framework for the Republic of North Macedonia for the period January 2019 – June 2023. In Focus Area III- Sustainable Growth, planned investments in energy efficiency and renewable energy (RE) will directly contribute to the reduction of CO2 emissions. The country aims to develop a more low-carbon energy sector and reduce its dependence on coal, creating a more secure and efficient energy supply. Public and private buildings retrofit for energy efficiency have significant potential for energy savings and reduced GHGs (which are five times higher than the EU average as a ratio of GDP) because of how much electricity and oil products they currently use.

The Project Development Objectives are: (i) reduce energy consumption in the public sector; and (ii) support the establishment and operationalization of a sustainable financing mechanism for the public sector.

The Project would include three components: (i) energy efficiency investments in the public sector; (ii) technical assistance (TA) and project implementation support; (iii) initial capital for the proposed Energy Efficiency Fund (or 'EE Fund').

The project will provide sub-loans to municipalities for renovation of buildings under their management, improvement public lighting systems and/or renewable resources investments. In addition, it will support the Ministry of health in its efforts to make the buildings under its management more energy efficient. It will also support the process of creation and establishment of the Energy Efficiency Fund, as a long-term mechanism for providing funding for energy efficient projects. The project would cover operational costs associated with project implementation, and support project management.

An Electrical Engineer shall be hired under the PIU to assist MOF in all technical aspects of project implementation, including technical reviews of energy audit reports and ensure that they comply with national and international energy auditing standards and best practices, he/she shall conduct oversight of the detailed technical designs, renovation works and commissioning, development of technical norms to ensure consistent technical quality, formulation of energy saving measurement methodologies, and other technical functions as requested by the PIU Lead Coordinator.

Scope of Services

The Objective of the assignment is to assist the PIU in:

- Support prospective PSEEP clients in the identification of investment project proposals;
- Ensure the preparation of energy audit documents in accordance with the criteria detailed in the OM;
- Evaluate results of energy audits;
- Coordinate and quality assure the preparation of the necessary preliminary and detailed engineering and design studies;
- Conduct, in close coordination with Procurement and Financial Management Operations Officers the final appraisal of the technical, financial, and economic feasibility of the proposed investments, including review of most cost benefit alternatives etc;

- Ascertain the compliance of the all investment project proposals with the regulations and/or requirements of the respective ministries of the Government and ensure that all necessary permits or licenses are obtained;
- Supervise the work of the technical consultants and works contractors, including: energy auditors, project designers, technical supervision companies, construction companies and commissioning consultants. The PIU will hire firms through a competitive process. The engineer will be required to review the audit report and provide comments on behalf of the PIU.
- Assess existing electric installations of building or street lighting and review the proposed energy efficiency solutions provided in technical documents. Ensure that the proposed lighting solution for the building is feasible and appropriate for the project to achieve cost effective energy savings.
- Evaluate proposed solutions for installation of rooftop solar PV system in the project and ensure that the proposed solution provided by technical consultants is appropriate and feasible and ensuring safe and proper connections to the grid
- Based on early project experiences and inputs from the design firms, develop/propose technical standards and norms to be used in all future bidding documents to ensure a high and consistent quality.
- Update and further refine the methodology for determining the energy savings for each project for reporting purposes. The engineer will help develop methodologies for determining and monitoring energy savings, operational performance, and reasons for any variations between the audit energy savings estimates and actual savings (variance reports).
- Identify training needs for the auditor/design/construction firms based on early implementation experiences, audit/design/construction deficiencies, variation reports, etc. and managing the development and implementation of suitable training modules.
- Assist in bid evaluations for the energy audits, detailed design, renovation works and construction supervision to ensure that bids conform to the technical specifications in the bidding documents.
- Coordinating the monitoring of results indicators including the achieved energy savings.
- Ensuring that all local licenses, permits, standards, etc. are fully complied with throughout the building renovations.
- Carry out other technical studies and assignments as requested by the PIU Lead Coordinator.

Necessary qualifications

- University Degree in Electrical Engineering; Master's degree in the field would be an advantage;
- At least 5 years of professional experience in the energy, energy efficiency, lighting systems and/or solar PV installations, prior experience on energy auditing of buildings and preparation of detailed project designs;
- Experience in working with International Institutions-financed projects would be an advantage;
- Previous experience in implementation of Energy Efficiency Projects;
- Experience in solar PV installations is a strong advantage
- Good understanding of national regulations pertaining to the environment, communal services, and procurement through government agencies;
- Good communication skills;
- Very good Computer skills (Word, Excel, Access);
- Fluency in Macedonian and excellent knowledge of English.

Working conditions

The Electrical engineer will be stationed in the PSEEP PIU premises in Skopje, but should be ready to hold numerous meetings in the field and work under pressure. Payment shall be made on a monthly basis, in accordance with the Contract provisions.

Duration

The Contract shall be concluded for 3 (three) years with the first 6 months set as a probation period. The contract may be extended, subject to Client's business needs and satisfactory performance of the Consultant.

Reporting

The Consultant will report to PIU's Project Coordinator for the duration of this assignment. Notwithstanding the schedule for submission of deliverables beneath the Consultant shall bi-weekly report on work completed. The Electrical Engineer will provide full support to the Project Lead Coordinator as requested.