Terms of Reference (ToR): Individual Consultant – PV and RE in Buildings Expert

Item	Details
Assignment Title	Individual Consultant – PV and RE in Buildings Expert (National)
Project	Promoting Energy-Related Low Carbon Urban Development (LCUD) in Bangladesh (UNDP/GEF)
Implementing Agency	Sustainable and Renewable Energy Development Authority (SREDA), Power Division, Ministry of Power, Energy and Mineral Resources
Contract Type	Time-based individual consultancy contract (Selection of Individual Consultant – SIC)
Level of Effort	Up to 80 person-weeks (intermittent, not full-time), from contract signing to 31 March 2029 [extendable subject to need, performance, and approval]
Team Composition	The consultant (intermittent input), supported by one full-time Research Engineer fielded by the consultant, who will work full time with the project team at the PMU
Duty Station	Project Management Unit (PMU), LCUD Project, SREDA, Dhaka, with travel to partner cities and project sites as required
Supervision	Overall guidance of the Project Directorate, LCUD Project; Day-to-day supervision and reporting to the Project Manager

1. Background

The LCUD Project is implemented by SREDA with grant support from the Global Environment Facility (GEF-LDCF) through UNDP. It aims to promote energy-related low-carbon urban development in Bangladesh through energy efficiency and conservation (EE&C), renewable energy (RE) in buildings and industry, waste management and waste-to-energy, GHG accounting, and supporting policy, finance and capacity-building measures.

Rooftop solar PV and other RE technologies offer significant potential to reduce grid electricity demand and emissions from urban buildings. The project will therefore engage a national PV and RE in Buildings Expert to advise on RE integration in buildings and to provide technical inputs to project proponents and IDCOL.

2. Objective of the Assignment

The objective is to provide technical expertise on the integration of RE, such as rooftop PV and solar water heating, in buildings, so that project proponents, partner cities and financing institutions can design, assess and implement technically sound RE investments.

3. Scope of Services and Key Responsibilities

The consultant will carry out the following tasks. The Project Director may adjust tasks and inputs as needed. The consultant is not engaged full-time; to ensure timely delivery, s/he shall field a full-time Research Engineer as set out in Section 3.5.

3.1 RE Integration Advisory

- Advise on the integration of RE (such as rooftop PV and solar water heating) in buildings.
- Review applicable rooftop solar and net-metering guidelines and recommend practical improvements.

3.2 Technical Inputs to Project Proponents and IDCOL

- Provide technical inputs (design details, calculations, international experience) to project proponents (developers, building owners, contractors, public building managers, etc.) on feasibility assessment.
- Provide technical inputs to IDCOL for the techno-economic assessment of proposals.

3.3 Technical Quality

- Advise on technical specifications, installation quality, safety, and operation and maintenance of rooftop RE systems.

3.4 Capacity Building

- Support the project in training on selected topics and prepare training materials.
- Participate in or lead workshops and seminars.

3.5 Research Engineer Support

- The consultant shall field one full-time Research Engineer, who will work full time with the project team at the PMU and assist the consultant and other project consultants to ensure timely delivery of outputs.
- The Research Engineer will support data collection, site visits, technical analysis and modelling, PV/RE system design calculations, drafting of technical notes and reports, record keeping, and organisation of trainings and workshops.
- The Research Engineer will work under the technical direction of the consultant and the day-to-day supervision of the Project Manager, and shall observe regular office hours at the PMU.
- The cost of the Research Engineer shall be included in the consultant's financial proposal. Any replacement of the Research Engineer shall require prior written approval of the Project Directorate.

3.6 Other Duties

- Contribute to project progress reports.
- Perform any other related duties assigned by the Project Directorate and Project Manager.

4. Deliverables

The consultant shall provide the following deliverables:

SL	Deliverable	Timeline
1	Inception note and work plan	Within 15 working days of joining
2	Guidance note on RE integration in buildings, including technical specifications and O&M practice	As per work plan
3	Review note on rooftop solar and net-metering guidelines, with recommendations	As per work plan
4	Feasibility and technical review notes for project proponents, and techno-economic assessment inputs to IDCOL	As assigned
5	Training materials and workshop reports	As per training plan
6	Prepare a monthly work plan in consultation with the Project Manager and Project Directorate, and share a monthly progress report with timesheets of the consultant and the Research Engineer	Monthly
7	Final assignment report summarising work completed, outputs, lessons learned, and recommendations	At contract completion
8	Support any other project activities and documentation assigned by the Project Manager and Project Directorate	As assigned

5. Reporting Arrangement

The consultant shall work under the overall guidance and supervision of the Project Directorate, LCUD Project, and shall report to the Project Manager for day-to-day supervision. S/he shall coordinate closely with SREDA officials, IDCOL, partner cities, the Technical Experts, other project consultants, project associates and partner institutions.

The consultant is engaged on an intermittent (not full-time) basis. Input days shall be agreed in advance with the Project Manager in line with the monthly work plan, and on those days the consultant shall work from the project office at SREDA/Home or on approved field visits. The consultant and the Research Engineer shall comply with the SREDA and UNDP codes of conduct.

The Research Engineer shall work full time from the project office at SREDA and observe regular office hours. Any absence of the Research Engineer on a working day shall require the prior written approval of the Project Manager.

6. Inputs and Facilities to be Provided by the Procuring Entity

- Access to the Project Document, Annual Work Plan, and relevant RE policy and project documents.
- Introductions and official letters to partner cities, building owners and IDCOL.
- Office space at the PMU, with computer, internet, and office logistics, subject to project policy.
- Travel and daily subsistence for approved field visits, as per project and GoB/UNDP rules.

7. Required Qualifications and Experience

7.1 Education

- A PhD or master's degree in Renewable Energy, Electrical or Energy Engineering, Mechanical Engineering, or a closely relevant field from a recognized university.
- Additional training in climate change or environmentally friendly design is considered an asset.

7.2 Experience

- Minimum 10 years of experience in PV and RE projects.
- Experience in designing rooftop solar systems in buildings is preferable.

7.3 Skills and Competencies

- Fluency in reading, written and spoken Bangla & English.
- Proficiency in PV design and analysis tools (e.g., PVsyst, RETScreen), and Bangla typing.
- Training, facilitation and technical report writing skills.
- Good command of report writing in both English and Bangla will be an advantage.

7.4 Research Engineer (to be fielded by the consultant)

- A bachelor's degree (BSc) in Electrical/EEE, Mechanical, Energy, Renewable Energy or Environmental Engineering, or a closely relevant field, from a recognized university.
- At least 2 years of experience in PV/RE system design, rooftop solar installation or energy data analysis.
- Proficiency in MS Office and PV design tools (e.g., PVsyst, RETScreen).
- Good written and spoken Bangla & English, and Bangla typing.

8. Contract Type and Payment Modality

The consultant shall be engaged under a time-based individual consultancy contract on an intermittent basis, with total input not exceeding 80 person-weeks. Payment shall be made monthly for person-weeks actually worked, together with the Research Engineer's input, upon submission of a monthly progress report and timesheets and their approval by the Project Manager and the Project Director.

Continuation of the assignment shall be subject to certification of satisfactory performance by the Project Directorate and the Project Manager.

9. Confidentiality and Ownership of Outputs

All reports, data, drafts, correspondence, and outputs produced under this assignment shall remain the property of the Procuring Entity. The consultant shall maintain strict confidentiality regarding all official information, including commercial information of project proponents, and shall not disclose any information without prior written approval of the competent authority.

10. Conflict of Interest

The consultant must disclose any actual or potential conflict of interest, including any engagement with RE developers, suppliers or installers whose proposals may be assessed under the project. S/he shall comply with applicable ethics, integrity, and procurement requirements throughout the engagement.