Terms of Refence

Installation of a PV solar power plant on the roof of the “Sakinvesti LLC” located at Rafiel Agladze str.#32, Tbilisi, Georgia, cadastral code: 01.13.05.004.252 building 38 (1)

**Background**

The Renewable Energy Solutions LLC is a leading Georgian IPP that build-own and operates the largest chain of distributed small and medium scaled solar power stations across Georgia. The company is committed to reducing its carbon footprint, improving energy efficiency, and reducing electricity costs through the integration of renewable energy sources. As part of this strategy, it intends to install a rooftop solar photovoltaic (PV) system on the Aleksandre Rafiel Agladze str.#32 Tbilisi, Georgia to harness solar energy for on-site power consumption.

**Objectives**

The objective of this assignment is to install, test, and commission a rooftop grid-connected solar PV system on the designated building rooftop, including all associated civil, mechanical, and electrical works.

**General information and requirements**

The scope of work includes the construction, installation, and commissioning of a rooftop-mounted PV solar power plant with a capacity of 626,56 kW (DC) and 500 kW (AC). Detailed design and engineering documentation is attached to this ToR

* The project must be implemented according to the general design drawings.
* The project must be planned, and installation work should be carried out in such a way as to avoid damaging the existing roof. Water leakage from the roof must be prevented. In the event of damage or leakage, the damaged area must be repaired by the Contractor.
* PV panels, inverters, support structures, communication devices, AC and DC cables, MC4 connectors, earthing materials, AC cabinets, cable trays, and all other materials will be provided by the Customer and the Contractor shall install the equipment as prescribed by the design, applicable standards and in accordance with good engineering practice.
* The Contractor must have qualified personnel equipped with all the necessary tools for the job.
* Transportation and unloading of materials and equipment is the Customer's responsibility and shall be arranged by the Customer based on the schedule provided by the Contractor.
* Lifting of materials and equipment to the rooftop by crane, elevator, or other machinery is the Contractor’s responsibility.
* The necessary machinery for the installation of cables on the walls is the Contractor’s responsibility.
* Road closure/restriction permissions with the police or local municipality, if applicable, are the Customer’s responsibility.
* Construction Permit from the municipality is provided by the Customer.
* Provision and following the safety measures required during works at height is the sole responsibility of the Contractor. The Customer is authorized to inspect the work performance and stop the works in case required safety measures are not followed. Such inspections does not relief the Contractor from its liability to observe and follow applicable labor safety rules and standards.
* The works on the rooftop are to be performed in a manner not to disturb working process of the offices located in the building.

**Scope of Work**

The scope of work for the contractor shall include but not be limited to:

**Site Assessment & System Design**

* A bidder may request a site visit with a prior written application to the Customer referenced email
* Conduct site survey including structural integrity of the roof. Report of structural integrity of the roof is provided by the Customer.
* Assess shadow analysis and advise the Customer on potential solutions.
* System Design an optimal solar PV system layout is provided by the Customer. The Contractor has to evaluate and confirm completeness or provide optimization advise for Customer approval before proceeding the installation.
* Ensure compliance with local regulations, grid codes, and standards.

**Equipment Supply**

* Equipment and materials are provided by the Customer
* In case of discovered lack of required materials or a need in additional materials not covered by the design the Contractor has to duly notify the Customer for final decision and procurement if judged necessary.

**Installation & Commissioning**

* Preparation of the rooftop for work performance including arrangement of required fencing, labeling and other as per labor safety code acting in Georgia
* Lifting required equipment and materials to the rooftop. *The task has to be performed not during normal working hours to avoid disruption of working process in the building.*
* Installation of support structure (aluminium rails) on the existing roof with proper positions and marking.
* Installation of 1424 pcs of 430w PV panels on support structure.
* Installation of five inverters: Huawei Sun2000 100ktl,
* Connections between PV panels.
* DC cabling: Connection between PV panels (strings) and Inverters.
* Installation of cable trays
* Installation of AC cables from inverters to the AC cabinet
* Connection between PV AC cabinet and main AC cabinet or Trafo of building.
* Arrangement of earthing according to drawings.
* Installation of communication device (smart logger or dongle)
* Commissioning and fine-tunning of PV plant.

**Documentation & Training**

* Provide system as built documentation
* Conduct basic operation and maintenance training for designated staff of the Customer.

**Post-installation Support**

* Provide a minimum of [1] year of maintenance (O&M) support. O&M program for 1 year shall be provided as a separate quotation.
* defects notification/ warranty period is 12 months starting from commissioning of the plant. Defect/ failure elimination response time shall not exceed 24 hours.

**Deliverables**

* Site assessment completion statement.
* Detailed design and technical drawings review report.
* Method statement of works execution with identification of safety measures to be taken and followed by the Contractor
* installation report for each subsystem approved by the Customer representative.
* Test and commissioning report.

**Duration**

Bid duration is limited to 5 business days.

The assignment is expected to be completed within a period of 30 calendar days from the date of contract signing, including all approvals and commissioning.

**Eligibility and Qualification Criteria**

* Proven experience in design and installation of at least 10 similar solar PV systems. Reference list shall be provided along with bid proposal
* Licensed to operate as an electrical/renewable energy contractor. Available licenses and permits shall be provided along with bid proposal
* Technical staff with necessary certifications. Staff list with CVs shall be provided along with bid proposal
* Financial capacity to execute the project and coverage of advance payment by irrevocable bank guarantee.

**Payment Terms**

* A detailed financial proposal shall be submitted along with the technical proposal.
* Payments shall be made in milestones linked to deliverables, e.g.:
* 30% on contract signing against advance payment bank guarantee
* 30% on mechanical installation completion
* 20% on electrical installation completion
* 20% on final commissioning and handover

**Evaluation Criteria**

Proposals will be evaluated based on:

* Technical soundness
* Experience and track record
* Financial competitiveness
* After-sales service and warranty conditions

**Reporting & Coordination**

The contractor shall report to the Customer Project Manager and submit regular updates on project progress.

**Compliance and Standards**

The installation must comply with:

* Grid Code of Georgia[Insert local/national grid codes]
* International standards such as IEC, IEEE, or equivalent
* Health, Safety, and Environmental (HSE) regulations acting in Georgia