

Instalment of a 50 kW photovoltaic station on the roof of Oni sport building	Project number/ cost centre: G-011829-001
--	--

Contents

1. Context 2

2. Tasks to be performed by the contractor 3

 WP1 3

 WP2 4

 WP3 4

 General requirements 5

3. Costing requirements 5

1. Context

Background on the project:

The “Sustainable Urban Development in Georgia” project (SUD) is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in cooperation with several Georgian partners led by the Ministry for Regional Development (MRD). The project was launched in February 2023 and will continue until January 2027. The project works in the urban areas of Batumi, Zugdidi, Gori, Samtredia and Oni.

The project brings integrated urban projects to readiness for financing in the fields of energy efficiency, mobility, waste management, sustainable tourism and public spaces. For this, the project works closely with selected cities in Georgia, in cooperation with national and sub-national actors, as well as a professional network of experts and the local communities. The project applies the “Urban laboratory” method, which strengthens urban integration and citizen participation and supports the development of Neighbourhood Concepts (NCs). Additionally, as part of enhancing municipalities' capacity in energy efficiency, the project develops and pilots a municipal energy management system. To summarize, the project's goal is to contribute to participatory, climate-friendly, gender-sensitive and integrated sustainable urban development in Georgian cities in line with the New Urban Agenda by increasing capacities at local level, in cooperation with private and civil society actors, to better implement climate-relevant strategies

Additionally, the experience generated through the Urban Labs is shared with local urban practitioners through an exchange of urban practitioners. The focus is to support knowledge exchange among urban professionals through a series of events as well as knowledge products (e.g., trainings, guidelines, publications, etc.)

Background on Energy Efficiency Management:

According to the Law on Energy Efficiency, the Government of Georgia shall ensure the annual refurbishment of 1% of the total usable area of buildings, occupied by a public administrative body, which needs to be heated or cooled in order to achieve the minimum energy performance determined by the legislation of Georgia. These requirements shall apply to buildings occupied by an administrative body, the total usable floor area of which exceed 250 m².

One topic the project supports locally is energy efficiency in public buildings. Energy management is a systematic process of planning, monitoring, and optimizing the use of energy in an organization, such as an enterprise/company or a municipality. Energy management can help reduce energy costs, improve energy security, and achieve CO₂ emissions reduction targets.

Municipalities are important energy consumers, as they are responsible for providing public services such as street lighting, public transportation, administrative services, water supply, waste management, etc. The infrastructure owned and managed by municipalities consume significant amounts of energy. In addition, municipalities can influence the behaviour of

citizens and/or steer businesses' market decisions in terms of energy consumption through awareness raising and regulation.

In this context, SUD is currently introducing an Energy Management System (EMS) in 4 Georgian pilot municipalities – to support them in monitoring energy consumption of their municipal buildings and facilities and identifying energy efficiency measures. The project supports those Georgian municipalities in establishing EMS through the development of standard tools, processes, and training for municipal energy managers, enabling systematic planning, monitoring, and implementation of energy efficiency measures. Additionally, an open-source Energy Management Dashboard (EMDB) will be developed to track resource consumption, evaluate energy performance, and support decision-making at both municipal and national levels.

To transform theory into practice, SUD also has conducted energy efficiency audits in several municipal buildings and intends to increase their energy efficiency by the means of small renovations. These buildings will serve as test-cases for innovative solutions in the field of energy efficiency and will provide municipal staff with experience and knowledge which in the future can be applied in other buildings.

Assignment overview:

In context of introducing EMS, the Energy Efficiency Center (EEC) on behalf of SUD has conducted an energy audit for the sport complex building located in Oni. The Sport Complex Building is located in Oni, Park Bershev. The 3 storied building with total heating area 2,032 m² includes the administrative small rooms with different functionality and the main sport hall with average height 10 meter. The existing building was constructed in 1986. The building is connected to natural gas, electricity and water supply systems. A two-story kindergarten is located across the street on Agmashenebeli street, which does not have a PV station, but can be connected with net metering scheme.

The objective of this assignment reflected in this ToR is a turnkey implementation of a photovoltaic (PV) station on the roof of the sports building.

2. Tasks to be performed by the contractor

The tasks for the contractor are divided into 3 work packages:

- WP1: Turnkey installation of photovoltaic system.
- WP2: Connection to the electricity grid
- WP3: Real-time production display screen

WP1

The contractor shall carry out the complete, turnkey implementation of a 50 kW rooftop PV station, including all of the following:

- Site survey and structural assessment of the roof, including shading analysis and confirmation of load-bearing capacity prior to design.

- Preparation of a detailed system design, including panel layout, string configuration, cable routing, and a single-line electrical diagram, to be submitted for client approval before procurement.
- Supply and installation of PV modules with a combined rated capacity of 50 kW (peak), carrying a minimum 10-year product warranty and 25-year performance warranty.
- Supply and installation of grid-tied inverter(s) with anti-islanding protection, certified for grid connection under applicable Georgian and international standards.
- Installation of a corrosion-resistant mounting structure (hot-dip galvanised steel or anodised aluminium) compatible with the roof type and designed to withstand local wind and snow loads.
- All DC and AC cabling, using UV-resistant, double-insulated cables installed in protective conduits where exposed.
- Earthing system for all metallic components, and surge protection devices (SPDs) on both the DC and AC sides.
- AC switchboard, main circuit breaker, and all protection devices.
- Pre-commissioning checks (insulation resistance, continuity, polarity) and full commissioning tests, documented in a written commissioning report.
- Handover session with facility staff covering system operation, safety procedures, and basic troubleshooting.
- Compliance with all applicable Georgian national electrical codes, IEC 62446 (PV system documentation), and IEC 61730 (PV module safety).

WP2

The contractor shall manage and carry out all steps necessary to connect the PV station to the national electricity grid, including:

- Preparation and submission of all documentation required by the distribution system operator (DSO) for grid connection approval.
- Acting as the primary liaison with the DSO (Energo Pro Georgia) throughout the approval and connection process, keeping SUD informed of progress. (DSO states that the building has currently an 80 kW connection to the grid)
- Physical connection of the PV station to the grid under either a Net Metering or Net Billing scheme, as determined during the permitting process, in full compliance with DSO technical requirements.
- Supply and installation of a bidirectional (import/export) energy meter compatible with the chosen scheme.
- Connecting a kindergarten building next to the sports complex building on Agmashenebeli street via virtual net metering scheme.
- Splitting the generated electricity from the PV station between sports complex and kindergarten buildings.

WP3

The contractor shall supply and install a screen displaying live electricity production data from the PV station, including:

- An external display screen with a diagonal of not less than 55 cm, with sufficient brightness for daytime visibility in its installation environment.
- Connection of the screen to the inverter's data output or a dedicated data logger via an appropriate communication interface (RS-485, Ethernet, or wireless).
- The screen shall display, at minimum, the following information in real time: current power output (kW), energy generated today (kWh), total cumulative energy generated (kWh), and estimated CO₂ emissions avoided.
- Secure mounting in a publicly visible location within or at the entrance of the kindergarten building, with appropriate housing to protect the screen and wiring.

General requirements

- All works shall be performed in accordance with applicable Georgian legislation, building codes, and electrical safety standards.
- The contractor shall obtain all necessary permits and approvals required to carry out the works.
- Upon completion, the contractor shall provide full as-built documentation, equipment manuals, warranty certificates, and the commissioning report.
- A defects liability period of at least 12 months shall apply from the date of final acceptance.

Milestones/process steps/partial services	Delivery deadline period
Start of works/ applying to DSO	June 2026
Work plan	June 2026
Inspection and adjustment works (if necessary)	August 2026
Completion of works	September 2026

3. Eligibility Criteria

1. Commercial assessment

To be eligible for participation in this tender, bidders must meet the following minimum requirements:

- 1.1 The bidder must be a legally registered company in Georgia or legally authorized to operate in Georgia.
- 1.2 The company must be in good standing, with no active bankruptcy or liquidation procedures.
- 1.3 Five (5) successfully completed projects similar in scope or technical complexity.
- 1.4 Average annual turnover for the last three financial years – 250 000 GEL.

2. Technical experience:

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

- 2.1 5 years of operational experience in photovoltaics
- 2.2 Ten (10) successfully completed projects similar in scope or technical complexity.
- 2.3 Four (4) projects conducted in western Georgia region during last two years.

4. Costing requirements

To ensure transparency and accurate evaluation of bids, all tender participants are requested to submit a detailed financial proposal that clearly separates the costs for each of the four work packages included in the Scope of Works. Bidders shall provide individual pricing for:

- WP1: Turnkey installation of photovoltaic system.
- WP2: Connection to the electricity grid
- WP3: Real-time production display screen

Each work package must include a full breakdown of material costs, labour costs, equipment, installation, transportation, and any other expenses necessary for the successful completion of that specific measure. GIZ retains the right to review, compare, and assess the cost structures of each work package independently.

Submitting clear and separate pricing for all four work packages is mandatory, and incomplete or aggregated cost proposals may be considered non-compliant.

Work Packages	Total Cost	Comments
WP1: Turnkey installation of photovoltaic system.		Detail information in chapter 2
WP2: Connection to the electricity grid, Fee for the connection to the grid		Detail information in chapter 2
WP3: Real-time production display screen		Detail information in chapter 2