Terms of Reference (ToR):

Conducting Investment Grade Energy Audits

Impact Hub Yerevan seeks to engage a **qualified consulting firm** to conduct investment-grade energy audits of selected tourism facilities within the framework of the CirculaTIA initiative. The purpose of this assignment is to provide technically rigorous, financially sound, and implementation-ready audit reports that will directly inform subgrant investment decisions. All audits must be conducted in full compliance with applicable national standards and regulatory requirements. Given the complexity and financial significance of the assignment, only legally registered and licensed entities with demonstrated institutional experience and technical capacity in conducting investment-grade energy audits are eligible to apply.

Background

Title of the Initiative: CirculaTIA - Transitioning Tourism Businesses Towards Circular and Energy-Efficient Business Models

The CirculaTIA initiative aims to support tourism SMEs in Armenia to transition toward circular business models and EE/RE solutions. Through capacity building, mentorship, and targeted subgrants, the initiative seeks to embed sustainability and competitiveness across six key regions of Armenia. The CirculaTIA Program, carried out by the Impact Hub Yerevan, is financed by the European Union and German Government through the PSD TVET and SE4Resilience projects, implemented by GIZ.

- **Initiative Participants**: 40 tourism SMEs from the target regions of Shirak, Lori, Tavush, Gegharkunik, Vayots Dzor, and Syunik.

Scope of Work: Conducting Investment Grade Energy Audits

General Scope

- **Duration of Assignment:** *April 2026 – June 2026*
- The contractor is expected to conduct 40 investment-grade energy audits within the assignment period. Site visits to each facility are mandatory.

- Energy audits will in general follow the principles stipulated within standard AST 371-2016 “Methodology for performing energy audit in residential and public buildings”.

Contractor should analyze the following measures:

- **Measures for thermal insulation of envelope (up to a minimum level of compliance with local codes/regulations requirements)**
    - Insulation of facades to reach compliance with local codes/regulations requirements (to reach the minimum norm compliance level and any level beyond, if cost-optimal), thermal insulation and waterproofing of flat roof or thermal insulation of attic or technical floor in case of a pitched roof, insulation of basements; replacement of inefficient glazing; optimization of glazing (i.e. partial replacement of glazing with insulated walls); replacement or thermal insulation of doors (considering wind-porch).
    - The contractor is to provide a list of envelope components specifying construction element/layer; thermal properties of each layer; calculation of R-value (and/or U-value), openings and glazing; reference to the location of each envelope component in the building.
    - The contractor should provide data regarding indoor comfort levels for selected buildings.
- **Indoor lighting system**
    - Replacement of incandescent or fluorescent bulbs with LED bulbs; usage of daylight & motion sensors, dimmers, automation modules to adjust the light intensity etc. where economically justifiable; replacement of luminaires where needed, seeking possibilities to refurbish existing luminaries to work with LED bulbs.
    - As a baseline for evaluation, average daily operation of the luminaries for each area and type must be specified in cooperation with the buildings management.
- **Heating system**
    - Insulation of indoor and outdoor heating and hot water pipes and the system; Revamping of heat boiler units including new condensing boilers; Weather compensation systems; heat generation controls, distribution controls; Installation of solar thermal (water heating) systems where technically and economically justifiable.
- **Hot water preparation**
    - Refurbishment of DHW boilers; water flow controls; installation of solar thermal (water heating) systems.
- **Ventilation**
    - Cost-optimal (locally mounted) mechanical systems to ensure compliance with norms; Passive or active ventilation (and cooling) measures (or combination of both) should be taken into account.
    - The contractor should provide analysis of normative requirements for cooling and ventilation and estimation of energy saving potential for heat-recovery with specification of the technical parameters for the heat recovery unit.
- **Other applicable EE/RE measures (PV, heat pumps etc.)**
    - Rooftop solar PV system for electricity generation: in compliance with electrical load of the facility and according to the appropriate place available on the roof or in the yard (shading, roof repair works etc. should be considered as well); Heat pumps and other technically and economically justifiable measures.

Other requirements for energy audit report

- The energy audits must be based on up-to-date operational or measured data on energy consumption;
- The contractor should seek most recent (3-5 years) and detailed information on energy consumption of the building and use this as baseline for calculation of savings;
- As reference information, the contractor should correct and normalize the energy consumption to comfort levels (as of the acting codes), and calculate the energy consumption level necessary for maintaining adequate thermal and lighting comfort (based on heated/lit area, hours, levels);
- The audit report should include a detailed review and breakdown of energy consumption per use;
- The contractor should provide a concise technical description of the potential EE measures;
- The contractor is to estimate the investment and return of investment (for Base and Normalized options);
- The parameters for the cost-benefit analysis will comprise of a simple payback calculation as well the annuity method. The calculation parameters for the annuity method will be provided by the contracting body;
- The contractor is to stipulate in the report if any of the measures proposed could have an implication on the sanitary and fire safety in the building;
- The contractor shall provide analysis on the improvement of comfort levels and improved conditions for the operation of the building;
- The contractor shall provide breakdown of net EEMs, as well auxiliary and adjacent measures, i.e. construction works supporting the main EEMs and additional actions/works/expenses required but not ensuring energy savings;
- Cash flow projections-profitability analysis (NPV, IRR, and PB) of the preferred EEM package should be provided for both Base and Normalized options;
- Comprehensive analysis of GHG reduction potential (for Base and Normalized options) aimed to systematically de-carbonize the existing building stock while achieving sustainable development benefits;
- The contractor shall develop and provide energy efficiency labels and energy passports (RA standard on "Energy efficiency. Building energy passport" developed and registered (AST 362-2013)) and energy performance indicators of the audited buildings, based on actual condition and normalized level of comfort.

As an annex to the audit report, the following documents are to be included:

- Specification of operational set points and other requirements e.g. indoor temperatures, equipment operations schedules etc.;
- Layouts/ List of envelope components;
- Equipment list with relevant technical requirement for technical components proposed (boilers, valves, air-handling-units, heat-exchangers, lamps and luminaires, controls and sensors etc.);
- Sheets with detailed technical and financial calculations and from any modeling tools used;
- An energy passport and energy performance label of the building.

All audit reports shall be submitted in both editable (Word/Excel) and signed PDF formats.

Required Qualifications

The applicant firm shall propose a project lead and relevant team members by submitting CVs demonstrating experience aligned with the scope of work.

The below specified qualifications represent the requirements for the project lead.

- Advanced degree in Energy Engineering, Environmental Engineering, Energy Management, Renewable Energy, or related fields
- Professional experience: 7+ years in conducting energy audits, planning EE/RE measures for buildings, experience with financial analysis
- Strong knowledge of national EE/RE standards, construction norms, laws and regulations.
- Knowledge of English – B2 level
- Only legal entities are eligible to apply.

Selection Criteria

Proposals will be assessed based on the following:

- Proven prior experience in conducting energy audits for buildings
- Proven expertise in energy efficiency and renewable energy solutions
- Familiarity with applicable national standards and regulatory requirements
- Clarity and feasibility of the proposed approach and methodology
- Qualifications and experience of the proposed team
- Capacity to deliver the assignment within the required timeframe
- Reasonableness and overall value for money of the financial offer

Impact Hub Yerevan reserves the right to request clarifications and negotiate final terms with the selected firm prior to contracting.

Application Process

To apply, kindly submit your **technical** and **financial offers** to **programs.yerevan@gmail.com** by **March 18, 2026,** mentioning “CirculaTIA Energy Audits” in the subject line. Proposals will be reviewed by the CirculaTIA project team.