**BOSNIA AND HERZEGOVINA**

**FEDERATION OF BOSNIA AND HERZEGOVINA**

**Project BiH10/00103203 „Scaling-up Investment in Low Carbon Public Buildings in Bosnia and Herzegovina“ funded by Green Climate Fund (GCF) through the United Nations Development Programme in Bosnia and Herzegovina (UNDP BiH)**

**TERMS OF REFERENCE FOR CONSULTANCY SERVICES**

**AUDIT OF PROJECT DOCUMENTATION**

**for objects in Zenica Doboj Canton and Tuzla Canton**

**Contracts No:**

**UNDP/GCF- BiH10/00103203-CQ-07-CS-23-FBIH**

1. **Background:**

The Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina and United Nations Development Programme in Bosnia and Herzegovina (UNDP BiH) signed a Letter of Agreement on the implementation of the Project Scaling-up Investment in Low Carbon Public Buildings in Bosnia and Herzegovina "funded by Green Climate Fund (GCF).

Within the Project is planned that UNDP BiH will make available a GCF grant to the Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina in the amount of 4.002.697 USD. The amount is planned for the implementation of infrastructure energy efficiency measures in FBiH.

Building on UNDP's Derisking Renewable Energy Investment (DREI) approach, the proposed Project consists of two closely related outputs aimed at addressing financial and non-financial barriers, thereby reducing the risks and achieving an attractive and acceptable risk-return profile.

***Output 1.1: Addressing non-financial barriers to investment in low-carbon buildings and infrastructure ("Policy de-risking")***

***Output 1.2: Addressing financial barriers to low-carbon investment in buildings and infrastructure ("Financial de-risking and Investment support").***

These Terms of Reference (ToR) define the nature and detailed scope of an assignment to provide engineering services, including preparing audit of project documentation/design for buildings to be retrofitted.

1. **Objectives**

BiH recognized the potential of public sector buildings for GMH emission reduction and the need to increase emission reduction and develop a sustainable system for public building renovation and overcome identified barriers to investment in low-carbon retrofits of a public building.

The objective of the proposed Project is to scale up investment in low-carbon public buildings via design and implementation of the National Framework for Low-Carbon Investment in Public Buildings comprising an integrated package of policy, regulatory, technological, informational, financial, and managerial solution designed to address country-specific risks and barriers to investment. The GCF project will result in a four-to-five-fold increase in the level of investment in low-carbon public buildings; this, in turn, will enable BiH to meet its stated objective to reduce GHG emission from the public buildings sector.

For the implementation of energy efficiency investments in public buildings, the Project Implementation Unit (PIU) on behalf of the Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina - FMPP (‘the Client’) intends to hire a Consultant Company (‘the consultant’) who will perform the following services: preparation of audit of project documentation/design for buildings to be retrofitted.

1. **Description and Scope of Services:**

3.1 GENERAL DEFINITION OF SERVICES

The services will be performed for the public buildings listed in Annex 1 of this ToR. The services to be provided by the Consultant are described in detail in section 3.2. The assignment will be compensated on the basis of the Lump-Sum contract provisions.

The consulting services (“the Services”) include the Audit of Design and approval of the design for 13 objects. Measures that plan to be implemented are mainly: structure measures (Fire protection, Sewerage/Drainage…), Comfort Measures (Doors, Floors, Sun protection, Pavement…) and energy savings measures that include: thermal insulation of exterior walls, thermal insulation of roofs and ceilings, replacement of façade openings, boiler replacement and works in the boiler room (new equipment), TRV’s installation and lighting replacement. Consultant has to secure that the Design is carried out according to the technical propositions, all following local laws, energy efficiency regulations in FBiH, national standards, and regulations and environmental requirements.

3.2 DETAILED SCOPE OF WORK

**Task description: Audit of project documentations (designs)**

The Consultant will be responsible for preparing and delivering the documentation related to the Audit of Design to the Ministry of Physical Planning of Federation (FMPP).

The Consultant shall:

* Cooperate closely with the Consultant responsible for preparing the technical design documentation (Design Consultant) and already initiate the audit of the design while the Design Consultant is working on and finalizing the Design/Project documentations;
* Verify and approve technical documentation and detailed technical designs, verify compliance of the design work in accordance with the provisions outlined in the terms of reference for the Design Consultant and with the applicable regulations;
* Carefully review and provide concise written comments, suggestions, or approvals to the Client and the Design Consultant on any revisions and improvements needed/suggested in the design documentation;
* Provide a lead auditor who is responsible for coordinating the components of the project documentation and related audit work;
* Verify that the design documentation complies with the requirements relating to safety and environmental protection, mechanical strength and structural stability, noise and vibration, energy saving measures and fire protection;
* Submit a final Auditor's report (based on individual auditors reports related to the different aspects of design, including architecture, mechanical and electrical), which includes suggestions that the Design Consultant preparing the project documentation must adopt and incorporate into the project;
* Be available to the Client (or the Design Consultant) for questions within the scope of this task;
* Verify that the Design Consultant preparing the project documentation adequately addressed and integrated the suggestions and observations provided by the audit consultant.

The objects, for which development of Audit of design is required, are listed in Annex 1.

**4. Output/Deliverables and Time Schedule:**

The deliverables include the following documents for each building separately:

* Individual audit reports (refers to audit report of technical documentation per building) including all suggestions and comments on technical documentation;
* Report/approvals of the revised technical documentation confirming that all suggestions and observations of audit where adequately addressed, if necessary;
* The final audit report of review of the overall project documentation.

Individual Reports of audit shall be submitted in two (2) hard copies and one (1) copy on CD ROM (MS Word, Excel) in local language for each object.

Report / approval of the suggestions included in accordance with the audit observation must be submitted in two (2) printed copies and one (1) copy on CD-ROM (MS Word, Excel) in local language.

Final Auditor’s report in two (2) hard copies and one (1) copy on CD ROM (MS Word, Excel) in local language.

The time schedule for the Consultant(s) is as follows:

* Individual audit reports shall be completed and submitted to the Client within 5 business days from delivered Design draft documentation;
* Final Audit Reports with confirmation of compliance with the individual Audit suggestions provided, will be delivered to the Client within 3 business days from delivered revised Design documentation.

**5. Duration**

Expected duration of assignment is 12 months.

**6. Qualification requirements and basis for evaluation**

The Consultant should be a qualified firm or joint venture of firms (up to 3 companies for a joint venture) that have demonstrated experience in conducting audit of project documentation/design. The firm must propose a team capable of successfully carrying out all aspects of the ToR with in-depth experience in executing similar consultancies. The Consultant shall demonstrate his capability to mobilize enough skilled staff for carrying out the project activities within the allocated timeframe and include all necessary engineering specialists as part of the proposal by including in the technical proposal the Curriculum Vitae of the proposed key staff, including educational background, relevant working experience in similar projects, and by confirming their availability during the period of the contract.

Interested consultants must provide information indicating that they are qualified to perform the services by fulfilling following requirements:

* Company information: name, registration, address, telephone number, email address, year of establishment, contact person for the project, fields of expertise;
* Confirmation on no obligations relating to the payment of direct and indirect taxes in accordance with the relevant laws of Bosnia and Herzegovina (may not be older than three (3) months) or with the relevant law of the country from the EOI submitter
* Hold a license from the Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina for Design or if not available will be obtained within 30 days as condition to sign the contract. Such consultant shall provide a confirmation along with the EOI that he will secure the license in case he is selected to submit technical/ financial proposals;
* Hold a license/authorization from the Ministry of Spatial Planning of the Federation of Bosnia and Herzegovina for Performing energy audits and/or energy certification for complex systems or if not available will be obtained within 30 days as condition to sign the contract. Such consultant shall provide a confirmation along with the EOI that he will secure the license in case he is selected to submit technical/ financial proposals;

The shortlisting criteria are:

Qualified consulting firms and their staff for this assignment should have extensive experience in the services mentioned above. The required minimum experience should be demonstrated by at least (3) three assignments that included similar tasks during the last five (5) years with a value of at least BAM 64,000 per assignment.

Details of the referenced assignments would include the contract(s) value, location(s), number of staff involved in the contract(s), name of the Client(s), name of partners for contract(s) execution, source(s) of financing, type of services provided, contract(s) commencement and completion dates, a brief description of the contract(s).

The team of an individual consultant available under the assignment may include the following experts: civil, mechanical, electrical engineers, and architects. The team members must have at least a university degree and, as a minimum, five years of professional experience. CVs of Key Experts are not required /will not be evaluated/ at the shortlisting stage.

Consultants may associate with other firms in the form of a joint venture or a sub consultancy to enhance their qualifications. All the members of the joint venture shall be jointly and severally liable for the entire assignment. However, the experience of the sub-consultant will not be considered while shortlisting.

During the proposal stage selected consultant within its technical-financial proposal will submit:

* Curricula Vitae (short version, specifying experience in similar assignments, fourteen (14) CVs of key personnel from various professions requested under such services) of key staff who will be working on the assignment(s) with minimum:
* Team Leader, responsible for managing/overseeing the entire consultancy contract implementation; University degree (Master’s equivalent) in architecture, or civil construction engineering; minimum ten (10) years of experience in relevant field, including project management of similar assignments;
* At least three (3) graduate architect with competency exam passed and at least five (5) years of work experience in relevant field;
* At least two (2) graduate civil engineers with competency exam passed and at least five (5) years of work experience in relevant field;
* At least four (4) graduate mechanical engineers with competency exam passed and at least seven (7) years of work experience in relevant field;
* At least three (3) graduate electrical engineer with competency exam passed and at five (5) years of work experience in relevant field.
* One (1) administrative assistant (support personnel, not needed CV);

**ANNEXES**

Annex 1 – Draft List of selected public buildings

Annex 2 – Detailed Energy audits for selected public buildings

**Annex 1 – List of selected public buildings**

*This annex includes the list of selected public buildings and might be a subject to change.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Building Name | Canton | Location | Works to be implemented (ENG) | Heated area  (m2) |
|  | JU OŠ "Centar" Tuzla | Tuzla Canton | Tuzla | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  **Measures to improve comfort in the facility**  M1- Sanitary facilities  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5- Sun protection  M6-Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of exterior walls  M2- Replacement of façade openings  M3- Thermal insulation of the flat roof of the hall  M4- Thermal insulation of the basement ceiling  M5- Thermal insulation of the ceiling towards the attic  M6- Improvement of the heating system, heat pumps  M7-Lighting replacement | School 1.854 m²  Gym 600 m² |
|  | Srednja mašinsko-saobraćajna škola | Tuzla Canton | Tuzla | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  **Measures to improve comfort in the facility**  M1- Sanitary facilities  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5- Sun protection  M6-Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of exterior walls  M2- Replacement of façade openings  M3- Thermal insulation of the flat roof of the hall  M4- Thermal insulation of the sawtooths roofs  M5- Sanation of floors to outside area  M6-Thermal insulation of the basement ceiling  M7- Improvement of the heating system, heat pump  M7-Lighting replacement | School 4.274 m²  Gym  1.339 m² |
|  | Srednja građevinsko-geodetska škola | Tuzla Canton | Tuzla | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  **Measures to improve comfort in the facility**  M1- Sanitary facilities  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5- Sun protection  M6-Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of exterior walls  M2- Replacement of façade openings  M3- Sanation of floors to outside area  M4- Thermal insulation of the basement ceiling  M5- Improvement of the heating system, heat pump  M6- Lighting replacement | School 1.892 m² |
|  | Gimnazija Tuzla | Tuzla Canton | Tuzla | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  **Measures to improve comfort in the facility**  M1- Sanitary facilities  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5- Sun protection  M6-Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of exterior walls  M2- Replacement of façade openings  M3- Thermal insulation of the flat roof  M4- Sanation of floors to outside area  M5- Improvement of the heating system, heat pump | School  6.670 m²  Gym 560 m² |
|  | JU OŠ "Kalesija" | Tuzla Canton | Kalesija | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Construction of boiler room  **Measures to improve comfort in the facility**  M1- Sanitary facilities  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5- Sun protection  M6-Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of exterior walls  M2- Replacement of façade openings  M3- Thermal insulation of the flat roof  M4- Thermal insulation of the top floor ceiling  M5- Improvement of the heating system, pellet  M6- Lighting replacement | School 1.304 m² |
|  | Prva osnovna škola Zavidovići | Zenica Doboj Canton | Zavidovići | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Construction of boiler room  **Measures to improve comfort in the facility**  M1- Connection between main building and  Elementary school  M2-Sanitary facilities  M3- Wall/ceiling surfaces  M4- Floors  M5- Doors  M6- Sun protection  M7-Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of exterior walls  M2- Replacement of façade openings  M3- Thermal insulation of the top floor ceilings elementary school/gym  M4- Improvement of the heating system  M5- Lighting replacement | School  2.343 m²  Gym 606 m² |
|  | Zavidovići OŠ Vozuća PŠ Ribnica | Zenica Doboj Canton | Zavidovići | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Moisture ground floor  **Measures to improve comfort in the facility**  M1- Sanitary facilities  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5- Sun protection  M6- Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of exterior walls  M2- Replacement of façade openings  M3- Thermal insulation of the top floor ceilings  M4- Improvement of the heating system, pellet boiler  M5- Lighting replacement | School 983 m² |
|  | Zavidovići OŠ Kovači PŠ Brezik | Zenica Doboj Canton | Zavidovići | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Moisture in the bottom part of the walls  M5- Storage room  M6-Roof and chimney  **Measures to improve comfort in the facility**  M1- Sanitary facilities  M2- Wall/ceiling surfaces  M3- Floors  M4- Sun protection  M5- Pavement/Outside area  **Measures to reduce energy consumption**  M1- Replacement of façade openings  M2- Thermal insulation of the top floor ceilings M3- Improvement of the heating system  M4- Lighting replacement | School 275 m² |
|  | Zavidovici OŠ Gostović PŠ Poljice | Zenica Doboj Canton | Zavidovići | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Storage room  M5- Finishing of the attic floor  **Measures to improve comfort in the facility**  M1- Playground outside  M2- Sun protection  M3- Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of the exterior walls M2- Replacement of façade openings  M3- Thermal insulation of the top floor ceilings M4- Improvement of the heating system  M5- Lighting replacement | School 419 m² |
|  | OŠ Alija Nametak | Zenica Doboj Canton | Zenica | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Storage room  **Measures to improve comfort in the facility**  M1- Sanitary rooms  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5-Sun protection  M6- Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of the flat roofs  M2- Replacement of façade openings  M3- Thermal insulation of the exterior walls M4- Improvement of the heating system  M5- Lighting replacement | School 1.829 m² Gym 354 m² |
|  | OŠ Edhem Mulabdić | Zenica Doboj Canton | Zenica | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  **Measures to improve comfort in the facility**  M1- Sanitary rooms  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5-Sun protection  M6- Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of the exterior walls  M2- Thermal insulation of the basement ceillings  M3- Replacement of façade openings  M4- Improvement of the heating system, heat pump  M5- Lighting replacement | Elder School 1.058 m²  New school 2.182 m², Gym 745 m² |
|  | OŠ Kakanj Termoelektrana | Zenica Doboj Canton | Zenica | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Roof corridor and Gym  **Measures to improve comfort in the facility**  M1- Sanitary rooms  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5-Sun protection  M6- Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of the exterior walls  M2- Thermal insulation of the basement ceillings  M3- Thermal insulation of the top floor ceillings  M4- Replacement of façade openings  M5- Improvement of the heating system, pellet boiler  M6- Lighting replacement | Main building 900 m²  Gym 237 m² |
|  | OŠ Hamza Humo Babino | Zenica Doboj Canton | Kakanj | **Structural measures**  M1- Improvement and modernization of fire protection measures  M2- Modernization and improvement of electrical installations, school building  M3- Checking and improving drainage/sewage around the building  M4- Roof coverings  M5- Base slab and top floor ceillings  M6- Pellet storage  **Measures to improve comfort in the facility**  M1- Sanitary rooms  M2- Wall/ceiling surfaces  M3- Floors  M4- Doors  M5-Sun protection  M6- Pavement/Outside area  **Measures to reduce energy consumption**  M1- Thermal insulation of the exterior walls  M2- Thermal insulation of the top floor ceillings  M3- Replacement of façade openings  M4- Improvement of the heating system, pellet boiler  M5- Lighting replacement | Elder school 856 m²  newer part, ca. 405 m², gym  with ca. 375 m² |

**Annex 2 – Detailed Energy audits for selected public buildings**