

**BOSNIA AND HERZEGOVINA
FEDERATION OF BOSNIA AND HERZEGOVINA
ADDITIONAL FINANCING FOR ENERGY EFFICIENCY PROJECT-ID P165405**

TERMS OF REFERENCES

**ENERGY CERTIFICATION FOR PUBLIC BUILDINGS UNDER THE
IMPLEMENTATION OF THE ENERGY EFFICIENCY IMPROVEMENTS IN PUBLIC
BUILDINGS**

Contracts No: BEEPAF-P165405-CQ-13-CS-21-FBIH

1. Background:

The Government of Bosnia and Herzegovina (BH) has recognized the importance of energy efficiency to support sustainable economic growth and move towards EU accession and has received the financing for the Additional Financing for the Bosnia and Herzegovina Energy Efficiency Project (AF) from the International Bank for Reconstruction and Development (IBRD) credit funds. The project development objective is to demonstrate the benefits of energy efficiency improvements in public sector buildings and support the development of scalable energy efficiency financing models.

The project will be supported by a US\$32 million IBRD/IDA credit funds for BH, which is made available to the two entities (US\$ 19.23 million allocated to the Federation of Bosnia and Herzegovina (FBH). The project will consist of three components implemented separately in each entity:

Component 1: Energy efficiency investments in public facilities

Component 2: Support for the development of scalable financing mechanisms and capacity building

Component 3: Project Management

The project implementation unit (PIU) established within the Federal Ministry of Physical Planning (FMPP) will be responsible for the preparation, coordination, management and implementation of the project in the Federation of Bosnia and Herzegovina, including procurement, contracting, and payments of all goods, works and services related to the project.

2. Objectives

The FMPP as the Client plans to hire a company ('the Consultant') to provide services for Energy certification of thirtyseven (37) public buildings included in the AF BEEP;

The Consultant will refer to the FMPP for all issues related to the execution of the assignment, and for decisions to be made in reference to the present contract. FMPP will be considered as the Client, even if some actions and/or decisions will have to be coordinated with the relevant Line Ministries and with the local administration, schools, hospitals, Cantons and Municipalities. The Consultant service is expected to be implemented within 3 months.

3. Description and Scope of Services:

Energy certification of thirtyseven (37) project public buildings includes energy audit of building in order to issue energy certificate for it, and includes the following tasks:

- Implementation of the energy certification process for thirty seven (37) buildings renovated under AF BEEP, which includes but is not limited to:
 - Detailed review of existing documentation for the buildings (e.g. architectural, structural, mechanical, electrical engineering project, building physics, available energy audits) to determine the condition of the site;
 - Provision of relevant information and calculations for each building in accordance with the applicable regulations for energy certification: Regulation of Performing Energy Audits and Issuing Energy Certificates (Official Gazette of Federation of B&H N° 87/18); Regulation of Conditions for Getting License for Performing Energy Audit and or Energy Certifications (Official Gazette of Federation of B&H N° 87/18);Rulebook of Minimum Energy Performance of Buildings (Official Gazette of Federation of B&H N° 81/19) , Annexes of that Rulebook (Official Gazette of Federation of B&H N° 85/19), and Rulebook of Information System in Federation of B&H (Official Gazette of Federation of B&H N° 2/19) that among others include:
 - Description of applied regulations and standards;
 - A description of the location data of the building;
 - Technical description;
 - Information on the construction of the building (e.g. type of construction and year, building renovations, etc.);
 - Calculation related to the piping (distribution) system in the building;
 - Heat loss calculation through building elements of the building envelope (walls, roof, floors);
 - Heat loss calculation through external openings, their description and characteristics;
 - Calculation and characteristics of the total transmission losses;
 - Calculation of the required energy for heating and cooling;
 - Drafts of the heated part of the building and details of thermal bridges;
 - ⊖ Determination of the energy class of the building (A+ to G) based on the results of above referenced calculations and in accordance with the Regulation of Performing Energy Audits and Issuing Energy Certificates (Official Gazette of Federation of B&H N° 87/18);
 - Issuance of energy certification of the building from Register of Energy Certifications (REC), established in FMPP, with recommendations on the

use, maintenance and operation of the building in order to maximize energy savings and avoid heat losses and other wasteful use of energy resources;

- Provision of relevant data for each of the certified/labeled buildings for the buildings database within the period of max 8 days after issuance of energy certificate;
 - Ensure proper placement of the energy certificates/labels in the buildings.
- In total, thirty seven (37) energy certificates and energy labels are expected to be issued.

4. Output/Deliverables:

1. Report of energy audit with provision of relevant information and calculations for each building in accordance with the applicable regulations for energy certification shall be submitted in three (3) hard copies and one (1) copy on CD ROM (MS Word, Power Point, Excel) in local language. Report for one (1) building shall be submitted in three (3) hard copies and one (1) copy on CD ROM (MS Word, Power Point, Excel) in English language. These reports shall be consistent with the requirements outlined under Description and Scope of the Services.
2. Report on Energy certification for each AF BEEP building shall be submitted in three (3) hard copies and one (1) copy on CD ROM (MS Word, Power Point, Excel) in local language. Report for one (1) building shall be submitted in three (3) hard copies and one (1) copy on CD ROM (MS Word, Power Point, Excel) in English language. These reports shall be consistent with the requirements outlined under Description and Scope of the Services and contained at least the following information:
 - Identification of the building that is certified, including cadastral reference and other general technical details (type, location, beneficiary);
 - The energy class of the building;
 - Data on the person who issued the energy certificate;
 - Data on the building (e.g. usable area, volume of the heated part of the building, coefficient of heat transmission loss);
 - Results of the analysis on the construction performance of the building in terms of technical protection and heat loss through individual elements of the building envelope;
 - Data on climate characteristics (e.g. the average outdoor temperature during the heating season, interior design temperature during the heating season);
 - Data on thermo-technical systems of the buildings (e.g. energy performance of air-conditioning and ventilation);
 - Data on required energy (e.g. annual energy use for heating based on reference climate data, on actual climate data, energy use for hot water consumption, etc.);
 - Data on energy supply and emission of CO₂;
 - Suggestions for improvements of energy efficiency of the building, including through changes in maintenance practices;
 - Technical description of the energy certificate;
 - A detailed description of the regulations, standards and procedures for the determination and calculation the data specified in the energy certificate;

5. Time Schedule

The Consultant is expected to provide required activities from January 2022 to March 2022.

No.	Reports Name	Submission Date
1.	Report of energy audit with provision of relevant information and calculations for each building in accordance with the applicable regulations for energy certification	January 2022
2.	Report on Conducted energy certificates	February/March 2022

6. Qualification requirements

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

- General qualification of the firm (including documents defining the constitution or legal status, place of registration, and principal place of business of the Consultant firm, year of establishment, fields of expertise);
- Hold a license from FMPP for detailed energy audit and certification of buildings for complex technical 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;
- Reference list of similar assignments: Minimum three (3) energy certifications assignments conducted in the last five (5) years. The reference list should contain the list of issued energy certificates with individual number / label of each certificate. All submitted lists will be checked in FMPP's database.

The key personnel:

- At least one (1) university graduate mechanical engineer, at least one (1) university graduate architecture/civil and at least one (1) university graduate electrical engineer, all with minimum five (5) years of professional experience or minimum 3 years in buildings energy audit conducting;
- Engineers have to have proof that they have passed competency examination and completed training program for Module 2 (energy auditing and certification for complex technical systems).

Annexes

Annex 1 - The list of buildings with details

Nco.	Building Name	Location; Canton	Heated area
#			m2
1	Policijska akademija Sarajevo	KS	9960
2	Klinika za fizikalnu medicinu i rehabilitaciju, Klinika za infektivne bolesti, Klinika za kožne i spolne bolesti i Centar za kliničku farmakologij, Ravnateljstvo SKBM Mostar Objekt 1	HNK	582
3	Klinika za fizikalnu medicinu i rehabilitaciju, Klinika za infektivne bolesti, Klinika za kožne i spolne bolesti i Centar za kliničku farmakologij, Ravnateljstvo SKBM Mostar Objekt 2	HNK	835
4	Klinika za fizikalnu medicinu i rehabilitaciju, Klinika za infektivne bolesti, Klinika za kožne i spolne bolesti i Centar za kliničku farmakologij, Ravnateljstvo SKBM Mostar Objekt 3	HNK	3.597

5	Klinika za unutarnje bolesti sa centrom za dijalizu Mostar	HNK	3.845
6	JZU UKC Tuzla - Klinika za plućne bolesti	TK	3843
7	JZU UKC Tuzla - Poliklinika za laboratorijsku dijagnostiku	TK	2487
8	O.Š. "Safvet-beg Bašagić", Breza	ZE-DO	2.260
9	O.Š. "Mula Mustafa Bašeskija", Visoko,	ZE-DO	2.378
10	O.Š. "Kulin ban", Visoko,	ZE-DO	3.008
11	O.Š. "Safvet-beg Bašagić", Visoko	ZE-DO	2.740
12	O.Š. "Vareš", Vareš	ZE-DO	2.849
13	JU Mješovita srednja stručna škola Kakanj	ZE-DO	2.659
14	JU O.Š. "Rešad Kadić" Kakanj,	ZE-DO	1.627
15	JU Medicinska Škola Zenica, Zenica,	ZE-DO	3448
16	JU Mješovita srednja škola Zenica, Zenica	ZE-DO	3.967

17	JU OŠ „Mak Dizdar“ Zenica	ZE-DO	5.375
18	JU OŠ „Skender Kulenović“ Zenica,	ZE-DO	3.461
19	JU „Mašinski fakultet“ Zenica	ZE-DO	6.216
20	JU „Metalurško-tehnološki fakultet“ Zenica	ZE-DO	5.819
21	JU „Filozofski fakultet“ Zenica	ZE-DO	2.680
22	OŠ „Kulin Ban“ Tešanjka	ZE-DO	1.634
23	OŠ „Novi Šeher“, Novi Šeher- Maglaj	ZE-DO	1.082
24	OŠ „01. Mart“ Jelah-Tešanj	ZE-DO	1.919
25	OŠ „Mustafa Mulić“ Šije, Matuzići	ZE-DO	950
26	Federalna uprava za geodetske i imovinsko-pravne poslove Sarajevo	KS	1299,8
27	Federalni hidrometeorološki zavod - Meteorološka stanica Sarajevo, upravna zgrada	KS	458,10
28	Federalni agromediteranski zavod- Enološki laboratorij Mostar	HNK	689,60

29	Zavod za javno zdravstvo FBiH Mostar	HNK	1.692,60
30	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat A	Ramići bb Pazarić, KS	179
31	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat B	Ramići bb Pazarić, KS	179
32	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat C	Ramići bb Pazarić, KS	179
33	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat D	Ramići bb Pazarić, KS	732
34	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat Sumero	Ramići bb Pazarić, KS	150
35	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat Holandija	Ramići bb Pazarić, KS	140
36	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat Bungalo	Ramići bb Pazarić, KS	97
37	JU Zavod za zbrinjavanje mentalno invalidne djece i omladine Pazarić, Objekat paviljon 6-7	Resnik bb Pazarić, KS	311