

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

**TERMS OF REFERENCES**

**for the Consultant**

**for provision of services related to the development of Study of alternative heating systems  
in buildings in FBiH**

**Ref. No. BEEPAF-P165405-CQ-45-CS-23-FBIH**

**1. Background**

The Government of Bosnia and Herzegovina (BH) has recognized the importance of energy efficiency (EE) to support sustainable economic growth and move towards EU accession and has received financing for the Additional Financing for the Bosnia and Herzegovina Energy Efficiency Project (BEEP) 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 AF BEEP became effective March 2020.

The project is supported by a US\$32 million IBRD credit for BH, which is made available to the two entities, with US\$ 19.23 million allocated to the Federation of Bosnia and Herzegovina (FBH). The project consists 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) is responsible for the preparation, coordination, management and

procurement, contracting, and payments of all goods, works and services related to the project.

This Terms of Reference (ToR) defines the nature and detailed scope of an assignment of developing a Study of alternative systems for heating in buildings in FBiH, required in the process of obtaining urban planning consent for new buildings. In accordance with the current regulations the investor must, as part of the preliminary design project, attach an analysis of the use of alternative energy supply systems, in accordance with Article 25 of the Law on energy efficiency ("Official Gazette of the Federation of BiH No. 22/17) and Article 6 of the Directive on Energy Efficiency of Buildings EPBD 2010/31/EU"

The Consultant will coordinate activities with, report to and work under the direction of the PIU Project Manager/Coordinator and PIU Technical Experts.

### **Scope of Work for the Consultant**

The main purpose of an assignment is developing a Study of alternative systems for heating in buildings in FBiH, which will include inter alia the analysis of the potential of the location for the application of alternative heating systems, such as: a) decentralized energy supply systems based on energy from renewable sources; (b) cogeneration; (c) district or block heating or cooling, especially if it is based in whole or in part on energy from renewable sources; (d) heat pumps.

For this purpose, it is necessary to perform an analysis of the potential of the entire territory of the Federation of Bosnia and Herzegovina and to present the analysis results on an interactive map (on a cadastral basis or another geographic raster)<sup>1</sup>. It will be used by designers when creating legally obliged analysis of alternative heating systems as part of the preliminary design project, as well as urban planners in municipal urban planning departments for verification of the proposed analysis in the submitted preliminary project design, in the process of urban approval for the new building and defining the urban technical conditions for the listed alternative systems in the newly designed building.

The scope of the services of the Consultant will include **but not be limited** to the following

- a) Under this assignment the Consultant has the responsibility to design the Work Plan and Working Methodology
- b) Analyze data, studies and other relevant documentation on existing heating plants, production capacities that are suitable for cogeneration of thermal energy, capacities of solar energy, geothermal energy, etc., for all 79 municipalities in the territory of the Federation of Bosnia and Herzegovina.
- c) Based on the findings from the conducted Analysis, develop an adequate GIS database that will be an integral part of the Study of alternative systems for heating in buildings in FBiH

---

<sup>1</sup> The FMPP will provide cadastral data from the Federal Administration for Geodetic and Property Affairs

- d) Transfer the Database to the cartographic form created on the basis of the cadastral plans of all cadastral municipalities in the territory of the Federation of Bosnia and Herzegovina.
- e) Develop an Application (e.g. web GIS or similar) for using the specified cartographic format of the database of alternative systems in the Federation of Bosnia and Herzegovina.
- f) Create a Guidance for designers/architects for creating the legally obliged analysis of alternative heating systems; the Guidance shall comprise standardized methodologies of calculation of the potential for different application scenarios (such as residential, industrial, commercial, public) and the linkage to the GIS map
- g) Prepare and submit first draft of the Study of alternative systems for heating in buildings in FBIH to the PIU Program Manager / Coordinator for approval.
- h) Revise and submit the final version of the Study of alternative systems for heating in buildings in FBIH to the PIU Program Manager / Coordinator for approval.
- i) Organize and provide Training to the designers and urban planners in municipal urban planning services to use the application/map of alternative heating systems

Consultant will develop training plan, agenda with topics, schedules, list of participants, invitations etc. and will be responsible for all phases of training preparation, organization and delivering.

Detailed training plan and methodology will be presented in the technical proposal of the selected consultant for assignments performance.

Travel and accommodation expenses for participants of the training will not be covered by the Contractor, but expenses related for delivery of the Training(s) such as coffee breaks, lunch for all participants, training materials etc. will be included in the financial proposal and covered by the Contractor.

## **Deliverables**

- a) Work Plan and Working Methodology
- b) Analysis of data, studies and other relevant documentation on existing heating plants, production capacities that are suitable for cogeneration of thermal energy, capacities of solar energy, geothermal energy, etc., for all 79 municipalities in the territory of the Federation of Bosnia and Herzegovina
- c) Database that will be an integral part of the Study of alternative systems for heating in buildings in FBIH
- d) Cartographic form of Database created on the basis of the cadastral plans of all cadastral municipalities in the territory of the Federation of Bosnia and Herzegovina.
- e) Application for using the specified cartographic format of the database of alternative systems in the Federation of Bosnia and Herzegovina.

- f) Guidance for designers/architects for creating the legally obliged analysis of alternative heating systems; the Guidance shall comprise standardized methodologies of calculation of the potential for different application scenarios (such as residential, industrial, commercial, public) and the linkage to the GIS map
- g) Study of alternative systems for heating in buildings in FBIH
- h) Report on conducted Training to the designers and urban planners in municipal urban planning services to use the application/map of alternative heating systems

Report on conducted training will include all relevant and detailed information, place and date of training, duration, present institutions, number/list of participants with contact details and signatures on attendance, presentation(s) etc.

### **Duration of Contract**

Expected duration of the contract is 7 months during the period from June 2023 to January 2024.

### **Schedule of Payments**

The assignment will be compensated on the basis of the Lump-Sum contract provisions.

The schedule of payments will be as follow:

- 10% of the contract value will be paid upon submission of the Work plan and Working Methodology (as described in Terms of References), acceptable to the Client
- 40% of the contract value will be paid upon submission of the Study of alternative systems for heating in buildings in FBIH with Database and Cartographic form created on the basis of the cadastral plans of all cadastral municipalities in the territory of the Federation of Bosnia and Herzegovina (as described in Terms of References), acceptable to the Client
- 40% of the contract value will be paid upon submission of the Application for using the specified cartographic format of the database of alternative systems in the Federation of Bosnia and Herzegovina and Guidance for designers/architects for creating the legally obliged analysis of alternative heating systems with standardized methodologies of calculation of the potential for different application scenarios (such as residential, industrial, commercial, public) and the linkage to the GIS map (as described in Terms of References), acceptable to the Client
- 10% of the contract value will be paid upon submission of the Report on conducted Training to the designers and urban planners in municipal urban planning services to use the application/map of alternative heating systems (as described in Terms of References), acceptable to the Client

Selected Consultant for the assignment performance at the proposal stage will propose timeline for each of the above stated phases within the methodology of the technical proposal.

### **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 providing services in energy efficiency and systems for heating in buildings. The firm must propose a team capable of successfully carrying out all aspects of the ToR with in-depth experience in the related fields. The Consultant shall demonstrate their capability to mobilize enough skilled staff for carrying out the project activities within the allocated timeframe 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, year of establishment, contact person for the project, fields of expertise;
- Minimum of 10 years of successful provision of services in area of energy efficiency analysis and providing educational activities
- 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 Ministry of Spatial Planning of the Federation of BiH for performing energy audit and certification of buildings for complex building systems in FBH or if not available will be obtained within 30 days as condition to sign the contract. The 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.
- Details of experience in minimum two (2) similar assignments on the area of at least similar in size to Federation BiH undertaken in last five (5) years, including value of consulting services, location, name of the Client, type of service provided, contract period of execution
- Curricula Vitae (short version, specifying experience in similar assignments, seven (7) CVs of key personnel 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 mechanical or electrical engineering with the competence exam passed; with a valid GIS certificate; a minimum of ten (10) years of experience in relevant field
  - At least one (1) graduate architect and/or civil engineers with the competence exam passed and at least five (5) years of work experience in relevant field;
  - At least one (1) mechanical engineer with the competence exam passed and at least five (5) years of work experience in relevant field;
  - At least one (1) electrical engineer with the competence exam passed and at least five (5) years of work experience in relevant field;

- At least one (1) IT engineer with at least five (5) years of work experience in database development and administration;
- At least one (1) GIS expert, with a valid GIS certificate with at least five (5) years of work experience in database development and administration;
- At least one (1) expert for energy engineering, with expertise in heating systems, and planning of renewable energy systems,
- One (1) administrative assistant with experience in relevant field.