TECHNICAL DESIGN AUDIT FOR RETROFITTING OF PUBLIC BUILDINGS

TERMS OF REFERENCE

BOSNIA AND HERZEGOVINA/REPUBLIC OF SRPSKA

ENERGY EFFICIENCY PROJECT ADDITIONAL FINANCING

P143580-BA-BEEP-8906BA-RFP-CQ-21-94-RS

1. BACKGROUND

The Government of Republic of Srpska has received a credit from the World Bank towards the cost of an Energy Efficiency Project (BEEP). 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 objective of the Energy Efficiency Project's corresponds to goals underlined in the Law on Physical Planning and Construction of Republic of Srpska and the Law on Energy Efficiency of Republic of Srpska, both adopted in 2013.

BEEP will support energy efficiency investments ("subprojects") in schools, hospitals and clinic centres. A small number of other public facilities (e.g., elderly homes, orphanages, other administrative buildings) may also be included. The project will finance energy efficiency upgrades/renovations of buildings, as well as related technical consultancy services (e.g., energy audits, technical and social monitoring and evaluation, technical designs, supervision and subproject commissioning). The selection and implementation of subprojects will be conducted in three annual batches. It is estimated that up to 35 public buildings will be renovated in the Republic of Srpska within 4 years of project implementation.

These investments will reduce the energy consumption of selected public buildings, and demonstrate the economic viability of energy efficiency improvements, including reduced recurring energy costs and associated public expenditures. In addition, the subprojects will generate demonstrable co-benefits, such as reduced $C0_2$ emissions and improved indoor comfort levels (e.g., improved indoor temperature, better lighting and indoor air quality). The results indicators against which the implementation progress of BEEP will be measured against include: lifetime energy savings, lifetime fuel savings, greenhouse gas savings, increase in end-user satisfaction, number of buildings with EU compliant energy certification, number of municipal energy managers trained, number of subprojects commissioned, and direct project beneficiaries.

The Project Implementation Unit (PIU) within the Ministry of Physical Planning, Civil Engineering and Ecology will be responsible for preparation, coordination, management and implementation of the project, including procurement, contracting, and payments of all goods, works and services related to the project.

2. DESCRIPTION AND SCOPE OF SERVICES

2.1. SCOPE OF WORK

For the preparation and implementation of energy efficiency investments in public buildings that are planned to be retrofitted in 2021-2024, the PIU on behalf of the Ministry of Physical Planning, Civil Engineering and Ecology of Republic of Srpska ('the Client') intends to hire a consultant firm ('the Consultant') which will perform services described below.

The consultant shall prepare eight (8) site audits and eight (8) final design audits. List of buildings and their locations are provided in Annex 1 of the TOR.

The Consultant shall work in compliance with all relevant and valid regulations in Republic of Srpska, including but not limited to Law on Physical Planning and Construction of RS (Official Gazette of RS 40/13).

During audit of technical documentation, the consultant shall check the following:

- completeness of technical documentation,
- whether technical documents is prepared by legal entity with adequate license for preparation of technical documentation for particular type of building,
- whether the documents have been prepared in accordance with location conditions,
- whether the design solutions meet the requirements regarding the building safety,
- whether the project designs are prepared in accordance with the applicable technical standards, regulations, rules and provisions of laws of Republic of Srpska,
- Other aspects of the documentation in accordance with applicable laws of Republic of Srpska.

In addition, in order to eliminate or reduce additional and unforeseen works, the consultant shall perform the following tasks:

- Auditor of each phase shall visit the building site and compare the project design and bill of quantities with actual situation on the building. This includes visual inspection, calculations, measurements and other means, as auditor deem fit, to compare the design and actual situation.
- The auditor will recommend to revise design documentation if determines that there is a discrepancy between the design submitted for audit and actual situation in the building.

Output: As part of this task, the Consultant is expected to submit 1) Site audit report and 2) Final design audit report on the control of overall technical documentation.

1) Site audit report shall be made for each phase. Auditor of each phase shall prepare site audit report after his/her visit to the site and compare actual situation with the project design in order to eliminate or reduce additional and unforeseen works. Site audit report needs to confirm whether the bill of quantities and design documentation are in compliance with the actual situation on the building. If auditor finds that there is a discrepancy between the design submitted for audit and actual situation in the building, the auditor shall provide detailed description of works that are not included in design documentation but should have been to meet quality or law requirements. The consultant shall send the site visit report to the design consultant for improvement of the design, while a copy of the report shall be sent to the Client for information purposes. When design consultant revises design documentation, the auditor will send final site audit report to the design consultant and copy to the Client, confirming that the design consultant made corrections of all deficiencies.

   The consultant shall submit template of site audit report to the Client two (2) days after contract signing for approval.

   The consultant shall provide to the Client four (4) hard copies and one copy in electronic form of the final site report.

2) Final design audit report shall include individual parts of the technical documentation audit and shall be attached to the final audit report. Audit shall be done in accordance with Law on Physical Planning and Construction of RS.
The consultant shall provide four hard copies and one copy in electronic form of the final design audit report. Reports shall be in Serbian language.

3. DELIVERABLES

No.	Deliverables	Number of copies / languages	Deadline
1.	Site audit report – all eight (8) buildings	Four (4) hard copies, one (1) electronic (1) copy: in Serbian.	Contract signing + 6 weeks
2.	Final design audit report – all eight (8) buildings	Four (4) hard copies, one (1) electronic (1) copy: in Serbian.	Contract signing + 16 weeks

List of buildings are provided in Annex 1 of TOR.

Consultant shall complete and submit site audit report six (6) weeks from contract signing and final audit report sixteen (16) weeks from contract signing. All site audit reports and final audit reports are expected to be prepared during 2021.

4. QUALIFICATIONS OF THE FIRM AND KEY SPECIALISTS INDIVIDUALS

The Consultant should be a qualified firm, or a Joint Venture that has demonstrated experience in areas required for this assignment, including performance of design and revision of technical documentation for buildings. Interested companies must provide information indicating that they are qualified to perform the services by providing a reference list. The reference list should contain information about the clients, assignment descriptions, value of the contracts and period of execution, etc. The Consultant must propose a team capable of successfully carrying out all aspects of the ToR with in-depth experience in executing similar assignments.

The company must have a license for auditing of technical documentation for mechanical phase/ thermotechnics heating, ventilation and air conditioning; electrical phase/ installation of high voltage and of electric power plants; construction phase; architecture phase; for which the permits are issued by municipalities.

Key experts with personal licenses for auditing of technical documentation have to be employed in firm or firms which possess licenses for auditing of technical documentation for above mentioned phases.

Interested company must provide information indicating that they are qualified to perform the services by fulfilling following requirements in last five (5) years:

- Having at least five (5) audit reports of final designs in the field of mechanical engineering; t thermo mechanics, heating, ventilation and air conditioning, solar system, reconstruction of boilers houses, etc. and related technical design documentation;

- Having at least five (5) audit reports of final designs in the field of electrical engineering / installation of high voltage and of electric power plants and related technical design documentation;

- Having at least five (5) audit reports of final design in the field of construction engineering / construction phase and related technical design documentation;

- Having at least five (5) audit reports of final design in the field of architecture engineering / architecture phase and related technical design documentation;

Key personnel are expected to include (basis for evaluation of the technical proposal):

- Team Leader/Main auditor, responsible for managing/overseeing the entire consultancy contract implementation; control of individual phases or parts of technical documentation; University degree (Master's equivalent) in mechanical filed/ thermo mechanics, heating, ventilation and air conditioning or architecture field; minimum eight (8) years of relevant experience, with minimum ten (10) final audit report in related field.

- At least one (2) university graduate mechanical engineer (university degree) or related field; minimum eight (8) years of relevant experience / thermo mechanics, heating, ventilation and air conditioning in final design and related technical design documentation; minimum three (3) final audit report in relevant field.

- At least one (2) university graduate electro engineer (university degree) or related field; minimum eight (8) years of relevant experience / installation of high voltage and of electric power plants in final design and related technical design documentation; minimum three (3) final audit report in relevant field.

- At least one (2) university graduate construction engineer (university degree) or related field; minimum eight (8) years of relevant experience / construction phase, minimum three (3) final audit report in relevant field.

- At least one (2) university graduate architecture engineer (university degree) or related field; minimum eight (8) years of relevant experience / architecture phase, minimum three (3) final audit report in relevant field.

5. SUPPORT FROM THE CLIENT

The client will provide to the selected consultant the technical documentation (final design) of buildings, including adopted scenario with a description of the measures envisaged in order to increase energy efficiency, and Terms of Reference (ToR) for final design.

6. TYPE OF REMUNERATION

The Consultant will submit its technical and financial proposals for tasks described in paragraph 2.1 for buildings which will be implemented in 2021-2024.
Tasks will be based on lump-sum remuneration inclusive of all expenses.

Annex 1- List of public buildings for retrofitting

No.	School	Location	Area	Group of buildings
1.	High School Centre "Petar Kočić", building 1 and building 2	Šipovo	2.074 m²	Group I
2.	"Main library"	I. Sarajevo	570 m²	
3.	Elementary School "Ozren"	Trbuk/Doboj	473 m²	
4.	University of Banja Luka "Faculty of Philosophy"	Banja Luka	2.085 m²	
5.	General Hospital "Dr Mladen Stojanović"	Prijedor	20.430 m²	Group II
6.	"Polytechnic School"	Banja Luka	1.954 m^2	Group III
7.	"Economy School"	Banja Luka	3.406 m^2	
8.	High School Centre "Petar Kočić"	Srbac	/	Group IV
		Total area of nine (9) buildings:	30.992 m²	

Aforementioned area of the buildings refers to approximate heated area of the building.

*NOTE:

For I Group of Buildings, the following works will be subject of the main design:

- Architectural and construction works,
- Works on mechanical installations,
- Work on electrical installation.

For II Group of Buildings, the following works will be subject of the main design:

- Architectural and construction works (replacing existing windows and doors with new ones),
- Works on mechanical installations,
- Work on electrical installation (accompanying works on mechanical installations).

For III Group of Buildings, the following works will be subject of the main design:

- Works on mechanical installations,
- Work on electrical installation (accompanying works on mechanical installations).

For IV Group of Buildings, the following works will be subject of the main design:

- Architectural and construction works (construction of heated corridor connection between the school building and the gym).