

Republic of North Macedonia  
Ministry of Finance

Public Sector Energy Efficiency Project  
(P149990)

MK-MOF-002-2021-CS-CQS

Terms of Reference (TOR)

**Consulting Company for development of the detailed energy audit reports, detailed designs with technical specifications for energy efficient building renovations and technical audit.**

**I. Introduction**

The global commitment to environmental protection and in particular to reduction of greenhouse gas emissions, Macedonia's dependence on energy imports, as well as the need to secure greater variety and thereby reliability of energy supply undoubtedly impose increased share of renewable energy sources in the final energy consumption. However, in parallel with activities and measures targeting increased share of renewable energy sources, measures and activities to increase energy efficiency of final energy consumption should be pursued. Thus, the target share of renewable energy sources in final consumption will be achieved much easily and faster, but the economy's competitiveness will also be improved due to reduced energy costs.

The Republic of North Macedonia signed and ratified the Agreement of the Energy Charter, the Energy Community Agreement, the United Nations Framework Convention on Climate Change and the Kyoto Protocol. Together with the signing of the Energy Charter Agreement Macedonia also signed a Protocol for Energy Efficiency and Relevant Environmental Protection Aspects.

The activities related to regulating specific issues related to the performance of energy activities specified in the Law on Energy are performed by the Energy Regulatory Commission (ERC) of the Republic of North Macedonia. The Energy Regulatory Commission works and decides independently within the framework of the competences determined in the Law on Energy. The Energy Regulatory Commission has the status of a legal entity. The Law for Energy Efficiency, in which the Energy Efficiency Directive, the Energy Performance of Buildings Directive and the Regulation for establishing a framework for labelling of energy consumption, has been transposed, and was adopted in February, 2020. The Ministry of Economy and Energy Agency are responsible for its implementation.

In partnership with the World Bank, Republic of North Macedonia through Ministry of Finance (MoF) intends to implement the Public Sector Energy Efficiency Project (PSEEP) and intends to apply part of the proceeds for consulting company.

The project development objectives are: (i) reduce energy consumption in the municipal sector; and (ii) support the establishment and operationalization of a sustainable financing mechanism for the public sector.

The project will be supported by a €25 million equivalent IBRD loan, to support energy efficiency investments in public buildings and policy/TA to help set-up and operationalize an energy efficiency revolving fund. Physical investments will be needed to help develop the market for energy efficiency materials and services.

The Project would include three components: (i) energy efficiency investments in the public sector; (ii) technical assistance and implementation support and (iii) establishing of Energy Efficiency Fund and its support.

Sub-component 1c of the project includes consultancies to support the investment component, including development of detailed energy audit reports, detailed designs and technical specifications. It would also include technical assessments needed for adequate disposal of any hazardous materials from the renovations as well as their actual disposal and a pre-and post-renovation building occupant satisfaction survey. A consultant will be selected in accordance with the Consultant Qualification (CQS) conducted according to the World Bank's Procurement Regulations for Investment Project Financing (IPF) Borrowers 'Procurement in IPF, Goods, Works, Non-Consulting, and Consulting Services' (Procurement Regulations) dated July 2016, revised November 2017 and August 2018, under the 'New Procurement Framework (NPF)'; the 'Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants', dated October 15, 2006 and revised on July 1, 2016; and other provisions stipulated in the Financing Agreements.

The Project implementation unit (PIU) has been established at the Ministry of Finance and has been delegated to assume overall responsibility for the project. This will include completion of the necessary activities to support project preparation as well as implementation for the five-year project period. PIU will administer all aspects of the project, including selection of the buildings, procurement of the various consulting services (e.g., seismic screening, detail energy audits, detail designs, technical specifications, construction supervision, technical assistance or consultancies, etc.), and monitoring.

Through the PSEEP, approximately 100 public buildings will be renovated for EE. Investments would include building envelope measures (roofs/wall insulation, windows, doors), heating/cooling systems, lighting, power systems and other energy-using systems. A limited amount of funds may be allocated for non-EE measures (e.g., rewiring, minor structural repairs, painting, seismic safety, etc.).

Within the framework of the PSEEP, a consulting company will be employed to conduct investment grade detailed energy audit reports, prepare detailed designs, Bills of Quantities (BoQ) and technical specifications of selected public buildings and technical audit.

## **II. Scope of Services**

The Consultant will be required to develop detailed energy audit reports, prepare detailed designs with technical specifications for energy efficiency renovations in public healthcare buildings based on detail energy audit reports, including architectural, construction, thermo technic, mechanical and electrical phases, technical specifications, cost estimates and bills of quantities (BoQs) and submit technical audit of the detail design. The Consultant shall also identify environmental and social risks

associated with the planned renovation works and prepare Environmental and Social Management Plans (ESMPs) and Checklists.

Estimated total area of buildings for renovation with this ToR in 17 building is 45,663m<sup>2</sup>. (It should be noted that slight changes may occur in the list, in number of buildings and square meters). More data about above buildings are provided in Appendix 1.

No	Region	Number of the Healthcare centre	Settlement-urban/rural	Name of institution	Area of the buildings (m <sup>2</sup> )
<b>Lot 1: Skopje Region - total area of the buildings 8,309m<sup>2</sup></b>					
1	Skopje	29 Skopje	SK- Centar	PHI <sup>1</sup> Healthcare centre Skopje-Polyclinic Idadija	3464
2			SK- Centar	PHI University Clinic for Physical Medicine and Rehabilitation	4845
<b>Total Lot 1</b>					<b>8309</b>
<b>Lot 2: South-East, East and North-East Region - total area of the buildings 19.047m<sup>2</sup></b>					
3	South-East	03 Valandovo	Valandovo	PHI Health Center, Valandovo	3848
4	East	23 Pehchevo	Pehchevo	PHI Health Center, Pehchevo	1473
5		25 Probishtip	Probishtip	PHI Health Center, Probishtip	1825
6			Zletovo	PHI Health Center, Probishtip - r.e. ambulance Zletovo	430
7		33 Shtip	Shtip	PHI Health Center "Dr. Pance Karagjozov", Stip	6681
8	North-East	15 Kratovo	Kratovo	PHI Health Center, Kratovo	3938
9		16 Kriva Palanka	Kriva Palanka	PHI Health Center "Academic Prof. Dr. Dimitar Arsov ", Kriva Palanka - working unit (ie) main service	730
10			v. German	PHI Health Center "Academic Prof. Dr. Dimitar Arsov ", Kriva Palanka - r.e. ambulance German	122
<b>Total Lot 2</b>					<b>19047</b>
<b>Lot 3: South-West, Pelagonia and Vardar Region - total area of the buildings 18.307m<sup>2</sup></b>					
11	South-West	09 Debar	Debar	PHI General Hospital with expanded activity - Former building of PHI Healthcare centre	4193
12	Pelagonia	11 Demir Hisar	Demir Hisar	PHI Health Center, Demir Hisar	2250
13		27 Resen	Resen	PHI Healthcare centre Resen	4559
14	Vardar	21 Negotino	Negotino	PHI Health Center, Negotino	6250
15			Demir Kapija	PHI Health Center, Negotino - ie health station Demir Kapija	450
16			v. Dolni Disan	PHI Health Center, Negotino - ie Dolni Disan health center	260
17			Lozovo	PHI Health Center "Prim. Dr. Gjorgi Gavrilski ", Sveti Nikole - b.c. ambulance Lozovo	345
<b>Total Lot 3</b>					<b>18307</b>
<b>TOTAL Lot 1+2+3</b>					<b>45663</b>

### III. Key tasks are expected to include:

#### Task 1: Conduct detailed energy audit report

The consultant shall conduct detailed (investment) energy audit reports of public buildings to identify and recommend energy efficiency measures (EEMs) for implementation of energy efficiency (EE) investment according the Rulebook for energy audit from 2013 (Official Gazette 94

<sup>1</sup> PHI – Public Healthcare Institution

from July 4, 2013) and with content as it is prescribed in the Rulebook and the ESMF of the Public Sector Energy Efficiency Project. The activities required to conduct detailed energy audit reports include, but may not be limited to the tasks shortly described in the following sections.

The Consultant will conduct site visits to complete detailed energy audits for the listed buildings in the final list. This will include, inter alia, collecting baseline information on the facility (building description and function, age, heated area, drawings, equipment inventory) as well as analyses on existing building envelope, heating systems, and other energy-using systems (e.g., indoor/outdoor lighting, cooling and ventilation, cooking, etc.). The analysis should also take into account buildings connected to the district heating networks, fuel pricing, planned closures/expansions, etc. The baseline energy assessment reports will also specifically analyze the potential for implementation of solar water heating systems in selected buildings where there is a significant use of hot water. Consultant will conduct buildings walk through energy audits from the final list (collecting necessary energy data from the buildings, energy bills for last 3 years, checking the structural soundness of the buildings and check the feasibility of implementation of EE measures). From the building walk through EA, based on findings related to baseline energy consumption, specific energy consumption, greenhouse gasses (GHG) emission savings, buildings will be selected for preparing detail Energy Audit. The detailed energy audit will develop an energy baseline, assess building envelop measures based on economic criteria (e.g., payback, NPV, and Internal Rate of Return (IRR)), assess other changes to common spaces (e.g., lighting), and alternative heating options (e.g., district heating, building-level boiler, solar water heating). The audit report will help PEESP/PIU to determine the most advantageous investments in order to reduce their energy costs while preserving or increasing their comfort levels. The audit will be presented and explained to PEESP/PIU and WB.

The Consultant will prepare detailed energy audits, which shall include:

- On-site inspections

**Building info**

- Building state description: location, building orientation, year of construction, occupancy, and climate zone
- Collection of energy bills for the past three calendar years (all forms of energy should be included in this analysis)
- Review of available documentation (e.g., drawings of boiler plant, heating installation, etc)
- Interviews with building users, facility managers/engineers

**Equipment info** Equipment lists for main energy-using equipment

**HVAC**

- HVAC (Boiler and Chiller part)
- Airside and Other HVAC System equipment (furnaces, unit ventilators, radiators, etc.)
- Package units (Heat pumps, Rooftop Units (RTU), etc.)
- Building level/global controllers

**Domestic Hot Water (DHW)**

- Showers, kitchen, laundry, etc

**Lighting (Interior and Exterior)**

## **Pumps and fans (electrical motors, if not addressed in the HVAC chapter)**

### **Mechanical systems insulation**

- Equipment info should include an explanation for the assuming of working hours. It should note any deficiencies with the current operations – under/overheating/cooling, unused equipment, broken /missing lights, equipment capacity too big/small
- Showers, kitchen, laundry, etc

### **Energy consumption data**

- Rates and providers ( Electricity, Heat, Other energy providers)
- Energy consumption Profiles (Overview of the total consumption and cost of energy on a yearly basis included Energy consumption graphs)

### **Energy calculations**

#### **Establishment of an existing energy class of the building**

#### **Identified measures for EE and scenarios**

#### **New Energy calculations according to the recommended EE measures and scenarios**

#### **Establishment of a new energy class of the building**

#### **Establishment of the energy monitoring system**

#### **Establish different investment scenarios according to the proposed energy efficiency measures and appropriate scenarios**

#### **CO<sub>2</sub> emission calculations status before and after proposed EE measures**

#### **Write-ups of the detailed energy audit report**

According to the Construction Law (article 57), health centers from secondary and primary health care are II.

- Review of available documentation (e.g., drawings of boiler plant, heating installation, etc)
- Building state description and identified measures
- Interviews with building users, facility managers/engineers
- Energy calculations
- Economic calculations
- CO<sub>2</sub> emission calculations status before and after
- Write-ups of the detailed energy audit report

Based on analysis, the detailed (investment) energy audit report will propose technically-viable EE measures, calculate energy savings (both based on achievement of heating norms as well as expected actual energy savings), investment costs, payback times and net present value (10% discount rate), environmental benefits and CO<sub>2</sub> emission savings, along with implementation plans, operations and maintenance (O&M) and training requirements, and energy monitoring. Possible EE and renovation measures should include, but not be limited to, building envelope measures (e.g., windows, wall/floor/roof insulation and repair, doors), efficient heating (water and space) systems, heat meters and controls (for those with DH connections), fuel switching (including to renewable energy such as solar water heating, biomass, ground-source heat pumps), cooling and ventilation systems, fans and pumps, lighting system (indoor and outdoor), and improved O&M practices. The audit report will propose technically-viable EE measures, calculate

energy savings (both based on achievement of heating norms as well as expected actual energy savings), should also include detailed identification of potentially hazardous materials (asbestos, mercury from lighting) in the buildings as well as propose mitigation measures for the proper disposal according to the local laws and regulations and World Bank requirements.

For facilities with existing energy audit reports, no baseline energy assessments will be required. However, these reports must be evaluated, any deficiencies identified, and additional data collected to upgrade them into complete and up-to-date reports.

The conclusions and recommendations from the detailed (investment) energy audit report will be the precise ToR for preparation of the Detail Renovation Design.

Task 2: Prepare detailed technical specifications and basic renovation designs:

- 2a) Analyze the building comparing the existing survey and the proposed retrofit according to detail energy audit report where the proposed measures and activities are the ToR for Detail Design;

Consultant shall include conclusion and recommendations from the Seismic screening Reports (SSR) for each from the listed buildings above and additional seismic analyses assessment on low cost and effective retrofitting if deemed applicable for particular buildings in the detail design particularly phase construction.

- 2b) Prepare any required supplemental drawings of audited facilities, where drawings do not otherwise exist. The Consultant will make site visits and prepare project plans (drawings) for selected buildings including actual measures of windows, entrance doors, building envelope, and unheated areas – building roof and basement; description of windows, doors, external walls, and materials of which buildings are made. During site visit the Consultant shall interview building users and record in minutes their observations and proposals.

- 2c) Prepare detailed technical specifications and detail renovation designs containing all phases and drawings needed. Following PEESP/PIU and World Bank approval of the energy audit reports and agreement from PEESP/PIU and the beneficiaries on the EE measures to be included, the Consultant will prepare detailed technical specifications for works to be tendered and implemented in the selected public buildings. The technical specifications should include description of individual actions and unit's measures (bill of quantities and costs estimates). Detail design will also define measurement and verification of energy savings and CO2 emission savings. If SSR conclusions and recommendations request and if construction loads are changed with adopted EE measures, Consultant should do additional seismic assessment with the required with the SSR recommendation steps and new load, according to legislation. This design will also include (i) the investigation and quantification of presences and amount of hazardous materials, specifically asbestos and mercury containing light-bulbs, including specifications and bill of quantities for removal, packaging, transport and disposal/interim storage of these hazardous materials, (ii) personal safety

equipment and (iii) overall environmental and social mitigation and monitoring requirements (the Environmental and Social Mitigation and Monitoring Measures based on the Environmental and Social Management Framework) and estimate of costs for the implementation of the measures. Consultant will prepare Environmental and Social Management Plan (ESMPs) and Checklist, detailed under Task 5.

This will also include the location where the asbestos and other hazardous wastes can be disposed and the interim storage location for the mercury containing light-bulbs as per ESMF and Macedonian legislation. It will also include any other types of waste to be generated during the retrofitting of buildings. They shall be included in the Detail Renovation Designs that shall be prepared by the Consultant. The Detail Renovation Designs shall be certified by the Consultant according to relevant provisions of the Macedonian Law on Construction. The draft Detail Renovation Design must be submitted to the beneficiary for formal consent, and to any required third parties for review and certification. Any comments provided by the beneficiary, third party auditor or PEESP/PIU must be taken into account and revised, as appropriate, before the design is finalized. Three hard copies of each design for each building shall be submitted to Contracting Authority and one soft copy (including drawings in PDF plus AutoCAD format).

Task 3: Prepare technical audit of the detail design:

- 3a) Consultant shall provide technical audit of the detail design for all phases, prepared by the separate licensed company.

Task 4: Prepare the Environmental and Social Management Documents:

The Consultant is required to get closely familiar with the Environmental and Social Framework Document (ESMF [DRAFT For public consultation: Environmental and Social Framework for Public Sector Energy Efficiency Project \(finance.gov.mk\)](#)) of the PSEE Project and be capable to design the sub-project specific information during the preparation of each individual Environmental and Social Management Plan (ESMP).

The ESMP shall be developed in parallel with the detailed renovation design, not as a separate, individual chapter. The Contractor's Environmental and Social Experts shall strongly collaborate with its engineering team, aiming to conduct the following tasks:

4a) Understand the scope of work of each individual sub-project, especially:

- The EE measures to be implemented, based on the Energy Audit Report; clarify the energy and CO<sub>2</sub> emissions savings;
- Proposed construction works within the Detail Renovation Design and their adverse environmental and social impacts;
- Classify and specify the construction waste quantities and types, including hazardous waste; identify appropriate waste management for each specific type (collection, transportation, disposal or reuse);

4b) Fulfillment of Parts 1 and 2 from the ESMP checklist provided in Appendix 6 from ESMF, based on the information provided in the early prepared Environmental and Social Screening Checklist (Appendix 7 from ESMF) by the PIU and further elaborated:

- If relevant, where some information is up-dated during the process of project development, it shall be adequately presented in the Parts 1 and 2 from the ESMP Checklist.

4c) Propose most efficient Health & Safety scheme for project workers and users in communication with the User Committee of the beneficiary:

- For sub-projects for retrofitting of health care buildings to define a specific organizational scheme for regular work of the targeted institutions, without jeopardizing the daily activities, especially those for citizen' services; Discuss with the User Committee's the actual closure of smaller parts and propose temporary reallocation of services, if needed.
- Envisage direct or indirect hazards to public traffic and pedestrians by construction activities for all sub-projects and propose relevant mitigation measures in the Part 3 of the ESMP.

4c) Preparation of the project-specific Mitigation Measures of the ESMP as defined in the ESMF (updated ESMP will be provided to the pre-selected candidates in the ToR for the second stage), in the following manner:

- Collect necessary data for the proposed project site and consult the mitigation options from the relevant national environmental and social legislation for the specific parameters of the ESMP: Air quality, Noise, Water quality and waste-water discharge and treatment, Waste management, Toxic / hazardous waste management (including asbestos), Medical waste infrastructure and management, Protection of natural habitats, Cultural heritage and Land Acquisition Plan/Framework;
- Propose most relevant and site-specific mitigation measures for all above listed parameters within the ESMP matrix.

4d) Preparation of the project-specific Monitoring Plan of the ESMP as defined in the ESMF (updated ESMP will be provided to the pre-selected candidates in the ToR for the second stage).

4e) The completed ESMP Checklist document for each sub-project shall be submitted to the PSEEP PIU for review and approval. Upon the final approval by the PIU, the Contractor shall submit it in electronic and hard copy form. The completed ESMP Checklist shall be subject of a 30 days public disclosure concluded by a public consultation meeting, preferably combining few similar projects, using virtual technologies. The Contractor's Environmental and Social Experts shall participate to these public consultation meetings, more specifically: provide brief presentation of the ESMP including potential impacts and proposed measures, respond to public questions and prepare Minutes with conclusions. In cases there are acceptable revisions on the mitigation measures/monitoring plan, the Contractor shall update the ESMP with these revisions.

Final project-specific ESMP shall be submitted in three hard copies and one electronic version to the PIU within 5 days of the conclusion of the public consultation meeting.

#### IV. Reporting

A number of reports are scheduled to be provided over the course of the assignment. Although a detail of those reports has already been described in general terms earlier in this document, a more comprehensive description is provided below:

**-Inception Report**, to be issued within two weeks from the signing the contract. It shall: (i) further define the aims and objectives of the services to be provided; (ii) set out a detailed work program for the rest of the project; (iii) state when the field work will take place for the site visit for the audit, (iv) identify potential problems to be overcome and possible solutions; (v) identify counterpart staff in the Client's office and other organizations,; (vi) include a stakeholder analysis identifying other third party organizations involved in the project implementation process.

**-Draft Final Report**, to be delivered 4 weeks prior to completion of the contract period. These will provide an overview and measure of success of the project. They shall contain: (i) an overall review of the assignment; (ii) a description of physical progress, with reference to the program; (iii) explanations for differences between actual and forecast progress; (iv) a report on problems encountered and how they were overcome.

**-Final Report**, to be delivered 2 weeks prior to completion of the contract period or after comments on the Draft Final Report provided by the Client. The contents will be as for the draft report, with the incorporation of comments/suggestions from the reviewing parties.

**All Documents need to be in Macedonian language, while the first Energy Audit and detailed renovation design and the summary of the EE Audit, and Summary of Detail Design shall be in English language as well. All approved energy audit reports, detail designs with specification and technical audit must be submitted as Hard Copy in three copies signed and stamped, one soft copy (including drawings in PDF plus AutoCAD format).**

In order to comply with local legal requirements, the firm should hold relevant licenses for preparation EE audit and preparation of design of works in public buildings, applicable with the Macedonian laws.

**-Facilities provided by the consultant:** The Consultant must ensure that his / her professional staff has adequate support and equipment. All costs for equipment and administrative and logistic support will be within the jurisdiction of the Consultant including:

-All costs arising from the activities of its staff during the contract period, including accommodation, allowances, transportation, insurance, etc.

-Automotive, equipment, office supplies and hardware and software to ensure that the monitoring is fully functional;

-All communication costs, including fax, email, telephone, etc.

-All the equipment, instruments, services and logistical support required for the implementation of the contract, and any costs incurred during its preparation of documents and drafts, copying, printing, etc.

-Technical equipment at the monitoring site;

-Other equipment, instruments, services and logistical support necessary for the implementation of the contract.

Excellent written and spoken English and Macedonian is required. If the Consultant will require a translation service, it will be at his own expenses and the Consultant will be responsible for the accuracy of the translation.

The Consultant is required to obtain all the necessary permits, approvals, payment of all fees and contributions, as well as all the other elements necessary for the work of his professional staff who is engaged at his own expense for the performance of this Contract.

## V. Deliverables and payment schedule

The deliverables for each task will be submitted to and approved by the PEESP/PIU. The consulting firm must obtain approval for each deliverable before moving to subsequent tasks. The table below summarizes the deliverables and includes an indicative timeline and payment schedule.

Task		Deadline (months after contract signing)	Payment (% of total payment)
1	Completion of detailed energy audit report per building	1,5	30%
2	Prepare detailed technical specifications and detail renovation designs with included environmental and social framework documents	3,5	60%
3	Prepare technical audit of the detail design	4,5	10%

## VI. Timeline

The estimate time for this assignment will be from February 2022 and to be continued until the end of July 2022, subject of completion of the work contract and DLP period.

## VII. Experience and Qualifications of the Consultant

The Consultant should be a consulting firm with relevant project experience. The work should be undertaken by a consulting team consisting of experts who have following skills and credentials:

### 1) Economic and financial capacity of the Consultant

— The average annual turnover of the Consultant must exceed 600.000 EUR for the last 3 financial years each (2018, 2019 and 2020)

### 2) Professional capacity of the Consultant

Criteria for legal and natural persons:

- The Legal entity must possess valid Company License for conduct of energy audit issued by the Ministry of Economy of the Republic of North Macedonia
- For Lot 1, the Legal entity must possess valid Company License A for design issued by the Ministry of Transport and Communication of the Republic of North Macedonia
- For Lots 2 and 3, the Legal entity must possess valid Company License B for design issued by the Ministry of Transport and Communication of the Republic of North Macedonia
- At least 20 permanent staff working for the Consultant/JV

The work should be undertaken by a consulting team consisting of experts with below required skills and qualifications. The team will consist of minimum 7 key experts employed by the Consultant and supported by a subsidiary team of senior and junior non key experts. The staffing structure is as follows:

## **1. Project Manager/ Engineer**

Qualification and skills:

- University degree

General professional experience:

- Minimum of 8 years of relevant working experience
- At least two projects as a project manager for an energy efficiency project
- Authorization A for preparation of design documentation issued by the Macedonian Chamber of certified architects and certified engineers
- Larger experience in the field of energy efficiency and degree for master of science will be evaluated as advantage.

## **2. Civil engineer- 2 (two)**

Qualification and skills:

- University degree in civil engineering, specialization in structural engineering will be evaluated as advantage and specialization in structural seismic engineering also.

General professional experience:

- Minimum of 5 years of relevant working experience.
- Authorization A for preparation of design documentation issued by the Macedonian Chamber of certified architects and certified engineers
- Larger experience in the field of energy efficiency will be evaluated as advantage.

## **3. Architect- 2 (two)**

Qualification and skills:

- University degree in architecture

General professional experience:

- Minimum of 5 years of relevant working experience.
- Authorization A for preparation of design documentation issued by the Macedonian Chamber of certified architects and certified engineers
- Larger experience in the field of energy efficiency will be evaluated as advantage.

## **4. Mechanical engineer -1 (one)**

Qualification and skills:

- University degree in Mechanical Engineer

General professional experience:

- Minimum of 5 years of relevant working experience

- Authorization A for preparation of design documentation issued by the Macedonian Chamber of certified architects and certified engineers
- Larger experience in the field of energy efficiency will be evaluated as advantage.

### **5. Electrical engineer-1 (one)**

Qualification and skills:

- University degree in electrotechnical engineering.

General professional experience:

- Minimum of 5 years of relevant working experience
- Authorization A for preparation of design documentation issued by the Macedonian Chamber of certified architects and certified engineers
- Larger experience in the field of energy efficiency will be evaluated as advantage.

### **6. Environmental expert-1 (one)**

Qualification and skills:

- University degree in relevant technical science, such as: biology, chemistry, technology, environmental protection, geography, and similar;
- Certificate for Environmental Impact Assessment examination, issued by a relevant National Authority
- Previous experience in Environmental Impact Assessment studies/reports/elaborates for minimum 5 infrastructure projects

General professional experience:

- Proven understanding and knowledge of the latest World Bank's Environmental and Social Framework Policy especially development of Environmental Mitigation and Monitoring sample structures;
- Previous experience in Environmental Impact Assessment studies/reports or Environmental Management Plans (Mitigation and Monitoring Plans with specific measures) for minimum 3 infrastructure projects funded by international finance institutions, preferably World Bank, EBRD, EU IPA, etc.

### **7. Social Expert -1 (one)**

Qualification and skills:

- At least a university degree in social sciences, or other related field

General professional experience:

- Proven successful expertise in the last 5 years in preparation of social surveys and detailed reports;
- Proven successful experience in collaboration with government institutions including local self government (municipalities) and

- Proven successful experience with international financial institutions will be an asset.

Minimum two persons shall have Authorization for energy auditor issued by the Ministry of Economy of Republic of North Macedonia

Non key experts

Additional senior or junior experts required for the assignment will be defined by the candidate.

### **3) Technical capacity of the Consultant**

#### **References:**

The reference period which will be taken into account will be the last 5 years from submission deadline.

— The Consultant/JV should have successfully completed at least 3 service contracts for energy audit/design over energy efficient construction.

#### **Required standards:**

- ISO 9001: 2015

#### **Required minimum access to equipment:**

- Multifunction measuring instrument,
- IAQ probe-CO2 probe, humidity, temperature, pressure,
- Air flow measurement probe,
- U value temperature probe, triple sensor with wall mounting material,
- Light measuring probe,
- Wireless humidity probe
- And others equipment if is necessary
- 2 vehicles

Consultants may associate with other firms in the form of a joint venture or a sub-consultancy to enhance their qualifications. The “association” may take the form of a Joint Venture or a sub-consultancy. In case of a Joint Venture (JV), all members of the JV will be evaluated jointly for the purpose of short listing and shall be jointly and severally liable for the assignment and shall sign the contract in case of award is made to that JV group. Interested consultants should clearly indicate the structure of their “association” and the duties of the partners and sub-consultants in their application. Unclear expression of interests in terms of “in association with” and/or “in affiliation with” and etc. may not be considered for short listing. Keeping one expression of interest per firm as principle, a consultant firm may decide whether it wishes to participate as a sub-consultant or as an individual consultant or as a partner in a joint venture. Please note that a firm

shall submit only one expression of interests in the same selection process either individually as a consultant or as a partner in a joint venture. No firm can be a sub consultant while submitting an expression of interests individually or as a partner of a joint venture in the same selection process. A firm, if acting in the capacity of sub consultant in any consultant or JV, may participate in more than one consultant, but only in the capacity of a sub consultant.

Interested Consultants should submit separate expressions of interest, identifying clearly the assignment in which they are interested to compete. Each of the 3 assignments (3 lots) referenced above shall be subject to a separate contract; therefore, 3 different short lists for each of the assignments shall be established. Consultants who are interested in and would like to submit their Expression of Interest for more than one contract should confirm that they have sufficient financial and human resources to carry out more than one such contract as relevant, and that for each different contract the Consultants should provide in their proposal's different individuals in the teams of key personnel.

