



Montenegro  
Municipality of Bar

***Title of the project:***  
***Improvement of Energy Efficiency through an Inter-Municipal Management Network –***

**Engagement of Consultant for Energy Auditing of public facilities**

**TENDER REF: EuropeAid/133-339/L/ACT/ME – 2013/335-263/05**

**Location: Bar, Montenegro**

**TERMS OF REFERENCE FOR SERVICE CONTRACT  
UNDER LOCAL OPEN TENDER PROCEDURE**

**1. BACKGROUND**

Municipalities of Bar, Ulcinj, Budva, Kotor, Tivat and Old Royal Capital Cetinje are the beneficiaries of the EU-funded project “Improvement of Energy Efficiency through an Inter-Municipal Management Network with the Instrument for Pre-accession Assistance (IPA)”, with the main objective - socio-economic development and environmental protection of the southern region and continual contribution to achieving of "National Indicative Energy Saving Target" as well as "EU 20-20-20 Targets", through establishing of regional energy efficiency structure and energy savings.

This project aims to improve energy efficiency in public sector in southern Montenegrin region, to find and propose best solutions for future investment through inter-municipal cooperation, taking into consideration that capacity building of energy managers in one region can cause huge positive influences at all other municipalities in Montenegro.

The consortium consists of 6 southern Montenegrin partner municipalities, one associate municipality (Herceg Novi) and 3 other associate partners (Ministry of Economy from Montenegro, Energy Cities from France and Goriška Local Energy Agency from Slovenia) offers optimal regional and governance coverage for setting up all necessary preconditions for achieving national and EU targets in energy sectors.

This consortium is going to make strong management structure consisting of energy managers and technical experts, which will act strongly during and after establishing of first Regional Energy Efficiency Agency in Montenegro, with the aim to act main role in regional energy management development.

The Action should encompass six partner municipalities with approximately 165.000 inhabitants, which will directly benefit from the Action as well as other 15 Montenegrin municipalities which will be positively influenced by the Action through establishment of information systems available for all of them.

The whole Action is divided in seven sub-actions which, if properly implemented will provide infrastructure and cause concrete energy savings in the region, providing preconditions for similar savings and energy and costs monitoring and maintenance in whole Montenegro. The sub-actions are as follows:

1. Developing of joint regional energy management structures.
2. **Energy audits of public facilities**
3. Development of regional database for public lighting system.
4. Defining local energy and energy efficiency policies.
5. Energy refurbishment through realization of 6 pilot projects.
6. Public awareness rising.
7. Capacity building of energy efficiency and implementation of EU funded projects.

With this project action six partner municipalities will fulfil the obligations from the Law on energy efficiency. Namely the Law foresaw that all public bodies must: organize and carry out energy audits of public buildings; establish energy management information system; and adopt programs and plans which allow efficient and sound planning of measures and targets in the field of energy efficiency.

Since there is no good quality database containing the energy performance of buildings, the first goal is to determine the current situation of existing public buildings in partners 'municipalities. Identification and creation of the database of already built public sector facilities which need certification in terms of energy efficiency is process that will create a good base for preparation of any future local energy plan. Beside public buildings analyses of other facilities responsible for energy consumption under responsibility of Municipality of Ulcinj, Budva, Kotor, Tivat and Cetinje should be done as well.

## 2. DESCRIPTION OF THE ASSIGNMENT

- 2.1. Beneficiaries: Municipality of Bar (in partnership with Municipalities of Ulcinj, Budva, Kotor, Tivat and Old Royal Capital Cetinje).

### 2.2. Objectives

Overall Objective: The overall objective of this Action is socio-economic development and environmental protection of the southern region and continual contribution to achieving of National Indicative Energy Saving Target through establishing of regional energy efficiency structure and energy savings.

#### 2.2.1. Specific Objectives

The main objective of this assignment is to perform preliminary energy audits of the public buildings and other facilities under jurisdiction of Local Self Government of Ulcinj, Budva, Tivat, Kotor and Cetinje. According to EBPD requirements and national legislation these audits can be performed only by trained professionals for energy auditing. Audits performed will provide sufficient information for energy efficiency improvements and all necessary data for already established Central Information System of Energy Consumption (CISEC) as well as National Information System for Monitoring and Verification of Energy Savings. Audits will also represent a basis for consideration of present building stock conditions giving overview of constructive and energy performances. All these information are necessary for any future analyses, programs and plans, as well as benchmark comparisons.

2.3. The expected results are as follows:

**Deliverable 1:**

- Recommendations for improvement of the existed methodology and questionnaire
- Improved methodology and questionnaire based on the agreement with Contracting Authority

**Deliverable 2:**

- Reports on preliminary energy audits performed for all buildings under jurisdiction of the Local Self Government of Ulcinj, Budva, Kotor, Tivat and Cetinje, as per list of buildings and facilities provided in the Annex c1
- Reports on preliminary energy audits and analyses for other facilities under jurisdiction of the Local Self Government of Ulcinj, Budva, Kotor, Tivat and Cetinje (public lighting system and water supply system's pumps facility), as per list of buildings and facilities provided in the Annex c1

**Deliverable 3:**

- Summary report on preliminary energy audit of all buildings and facilities
- Presentation of the results and recommendations to all five municipalities and at joint public event organized by Contracting Authority.

2.4. The requested services are as follows (divided into Tasks):

**Task 1: Improving of the Methodology and Questionnaire for preliminary energy audits in the consultation with Contracting Authority**

The Contractor shall review existing methodology and questionnaire in use by Municipality of Bar and provide recommendations for its improvement. After consultation with Contracting Authority the Contractor shall integrate comments to the methodology.

**Task 2: Performing of the preliminary energy audits**

After harmonization of methodology and questionnaire with the Contracting Authority, and approval, Contractor will carry out energy audits and provide all information required in questionnaire.

Task 2.1: Preliminary audits performing in Ulcinj

Task 2.2: Preliminary audits performing in Budva

Task 2.3: Preliminary audits performing in Kotor

Task 2.4: Preliminary audits performing in Tivat

Task 2.5: Preliminary audits performing in Cetinje

In order to fulfill this task on best way possible, Contractor should analyze technical documentation of all buildings and other facilities, first, then collect all information on energy (electricity, energy and sanitary water) consumption, and visit sites (as many times as necessary) in order to compare facts from technical documentations and on site and to collect missing data. These site visits should serve to collect all information which do not exist in technical and design documentation and to make interviews with staff responsible for energy consumption, maintenance, interventions etc.

These audits should be focused on finding possible solutions for certain improvements in energy consumption, and attention should be given particularly to:

- Improving the thermal characteristics of the building envelope,
- Improving the energy performance of space heating systems,
- Improving the energy performance of space cooling system,
- Improving the energy performance of ventilation and/or air conditioning system,
- Improving the energy performance of the system for preparation of hot water,
- Improving the energy performance of lighting systems,
- Use of renewable energy sources for heat and/or electricity production,
- Improvement in supply and use of sanitary water.

A Contractor is not required to make a detailed analysis of individual energy efficiency measures. Contractor shall prepare a Preliminary Audit Reports for all buildings and other facilities prepared on harmonized template form from task 1. The Reports will include proposed measures with a total estimated amount of investment for each individual building, but also to make some recommendations in terms of used technology solutions required for implementation of certain measures in selected buildings. These Reports should contain also concrete measures which could help in decreasing energy consumption and costs for energy.

**Task 3: Preparing the Summary report based on the Reports elaborated within the Task 2 and Presentation of results and findings to all stakeholders and other relevant actors during public event organized by Contracting Authority.**

*The Service provider is requested to perform any activity that is necessary in order the above mentioned results and to achieve the specific objective of the service contract.*

#### WORK PLAN AND TIMETABLE

Task	Implemented By	Beginning of Task	End of Task	Duration
Task 1	Contractor in close communication with the Client (Advisory Group)	1 <sup>st</sup> day after contract signing	10 <sup>th</sup> day after contract signing	10 calendar days
Task 2	Contractor with support from the Project Coordinators	11 <sup>th</sup> day after contract signing	85 <sup>th</sup> day after contract signing	75 calendar days
Task 3	Contractor and Energy managers of partners municipalities	86 <sup>th</sup> day after contract signing	91 <sup>st</sup> day after contract signing	5 calendar days

### 3. EXPERTS PROFILE

The Contractor will have to provide an expert / a team of experts, engineers able to express the following professionalities (please note: Each proposed engineer is not required to have all the characteristics listed below, it is enough that the below listed characteristics are present in the team in such a way to allow to the team to deliver the final products).

He/she shall possess

#### **General qualification and experience:**

- To have at least graduate degree in engineering in the following fields: civil or mechanical or electrical or architecture
- To have at least 4 years of postgraduate experience working as trained professionals for energy auditing;
- To be fluent Montenegrin speaker and fluent in English;
- Computer literacy; very good computer skills: MS Office including Excel and PowerPoint, Internet;
- Proven experience with statistical and database applications is indispensable - ENSI software or similar

#### **Specific professional experience:**

- To have authorization to perform energy audits, issued by the Ministry of Economy of Montenegro;

- To have experience and good overview of energy efficiency at municipal level and proven experience working with municipalities in the field of energy auditing of public facilities;
- To have knowledge and most recent experience in South-East Europe (Energy Community Countries), specific and practical experience in EU-accession countries will be considered as an extra asset;
- To have experience in organizing and conducting presentations;
- To have excellent coordination and communication skills, as well as sound time management;
- To have proven experience working with energy efficiency indicators and statistic data processing;
- To have experience in preparation of inventory of building stock and similar documents.

In case of a team of experts, the Energy auditor should be team leader.

The contractor will have to select additional professionals (if necessary) to properly implement this service contract.

#### 4. DURATION AND LOCATION

##### 4.1. Duration: 3 months

Expected period from signing the contract is defined in the timetable under section 2.4 of this ToR.

The Contracting Authority, can extend if necessary the implementation period.

##### 4.2. Location of assignment: The experts shall work from home, with visits to the municipality of Bar, Ulcinj, Budva, Kotor, Tivat and Cetinje, as well as Ministry of Economy in Podgorica, as agreed with the Contracting Authority. The Contracting Authority will provide the working space for expert during his/her stay in the municipality.

#### 5. REPORTING

The following reports will have to be prepared:

Contractor is obliged to submit Reports as defined in the Section 2.

#### 6. BUDGET

This is global price contract. The available budget is equal to 16.000 euro without VAT. No price revision is allowed.