United Nations Development Programme

TERMS OF REFERENCE

Local (Azerbaijani) Key Expert for EE (energy-efficient) Buildings to lead implementation of "Green Building NAMA"

Project:	**"Nationally Appropriate Mitigation Actions (NAMAs) for low-carbon end-use sectors in Azerbaijan"**
Position:	Local (Azerbaijani) Key Expert for EE Buildings
Application Deadline:	15 November 2018 COB
Type of Contract:	Individual Contract
Duty Station:	Baku
Expected Starting Date:	27 November 2018
Period of Contract:	50 (fifty) consultancy days (November 2018 to November 2019)
Expected duration:	12 months

Background

The "Nationally Appropriate Mitigation Actions (NAMAs) for low-carbon end-use sectors in Azerbaijan" Project's objective is to reduce the annual growth rate of GHG emissions from the energy end-use sectors. The project, which began in March 2015, targets 3 (three) energy end-use sectors, namely Buildings, Transport and Associated Gas Capture. The specific objective of project is to support State Oil Company of Azerbaijan Republic (SOCAR) in the implementation of its Climate Change Mitigation Strategy by promoting and upscaling green-house-gases (GHG) mitigation measures through a programmatic NAMA approach in the low carbon end-use sectors. SOCAR, being in the core business of oil & gas production, processing and distribution, is a major energy user and GHG emitter, and is the main stakeholder of project and implementing partner. The project also aims to improve the country's institutional & policy framework, address appropriate mechanisms and result in activities to realise significant GHG emission reduction achievements in the long term. The other key institutional stakeholders for this project are as listed below:

- Ministry of Ecology and Natural Resources (MENR);
- National Climate Change Centre (NCCC);
- Ministry of Energy of the Republic of Azerbaijan.

The "Energy Efficient Buildings" component of the project is improving the energy utilization efficiency in buildings by promoting the energy conserving design of new buildings and enhancing the efficiency in the operation of existing buildings. The realization of this objective is facilitated through the demonstration of building energy efficiency technologies, systems, and practices. The "Sustainable Transport" addresses fuel economy in SOCAR's vehicles fleet by introducing alternative energy sources resulting in a lower energy intensity of the transportation sector. Technological and market opportunities for improving the current fuel mix that is 98% dependent on gasoline and diesel engines will help in reducing the energy intensity of transport sector. The aim of "Associated Gas Capture" component is to recover low-pressure associated gas from the oil wells in Siyazanneft Oil and Gas Production Unit and to collect, compress and transport it to a gas processing plant. The processed and clean gas will be provided to the gas grid and utilized to nearby villages and communities to supply family houses as well as production facilities (e.g. chicken farms) with fuel. Significant physical progress has already been made on the buildings and transport components. The gas-capture component was recently launched and various options to be pursued are being studied in detail by SOCAR with the participation of an individual international expert.

Energy Efficiency in Buildings

The annual emissions from SOCAR's existing building stock offers a huge potential for undertaking energy efficiency improvements through retrofitting and installation of improved building technologies. The project aims to demonstrate EE technologies and measures in the existing and new buildings belonging to SOCAR, which owns usable floor space of residential, commercial/administration as well as social buildings of more than 400,000 square meters. SOCAR also develops and constructs buildings on behalf of other owners (mainly the public sector) and transfers to them upon completion and thus the benefits of applying EE technologies have the potential of being adopted by other entities in Azerbaijan. The project will (1) implement activities that will demonstrate best-practices in green building technologies and design practices in building construction, (2) transfer new technologies to Azerbaijani building design and construction and (3) support SOCAR in becoming an important stakeholder in further up-scaling activities under national programs (e.g. State Programme on the Use of Alternative and Renewable Energy Sources) to better reflect the building energy efficiency component of existing and new building stock in Azerbaijan.

A significant amount of physical progress has been made on the buildings component since the project's inception. Solar photo-voltaic (PV) systems and wind-turbines have been installed in Waste Management Building, Administration Buildings in Azerkimya and Eco-Park which are supplementing grid-supplied electricity with clean sources of energy. The use of energy-efficient building materials and insulations, glazed windows, and enhanced heating/cooling systems are helping to reduce energy consumption and thus mitigate GHG emissions which are the hallmark of several old buildings in SOCAR's use. These successes have led to the identification of some additional buildings and installation of retrofits and solar panels is now being undertaken in Chemists Palace – a three-story building with total area of 3500 m^2 – at the Azerkimya facilities in Sumqayit.

Duties and Responsibilities

The Local Consultant (hereafter referred to as LC) shall lead the design, implementation and supervision of EE buildings component under the overall supervision of Project Manager. In the fulfillment of his/her duties the LC will complete the following tasks:

- Take part in the Development of a Building Energy Efficiency Program for SOCAR under the supervision of Project Manager
- Provide guidance in conducting detailed visual building condition assessment studies by SOCAR to develop an energy inventory for SOCAR buildings and facilities
- Review architectural and engineering plans, specifications and related technical documents
- Document the physical description and specifications of all buildings
- Develop a detailed energy inventory of all existing SOCAR buildings based on pre-determined parameters (such as Age, function, number of floors, materials, energy consumption values etc.) by Project Manager.
- Work closely with concerned SOCAR staff to identify buildings for Energy retrofits
- Carry out the detailed energy audit of buildings with the assistance of a qualified energy audit firm (EAF).
- Develop/supervise life cycle cost estimates/analysis for required energy retrofits for SOCAR buildings
- Critically review the EAF's report and verify that its estimates of GHG reduction and cost are bankable.
- Supervise the physical implementation of proposed retrofits by engaging suppliers and contractors.
- Provide support for updating building energy inventory
- Support the MRV expert in the measurement, reporting and verification of the GHG reductions that result due to the retrofit measures.
- Prepare documentation (including specifications, cost data, sources of equipment & materials, etc.) of all the retrofit measures that are done for use by SOCAR staff on buildings to be retrofitted in the future.
- Develop training materials and conduct training workshop for SOCAR's construction-related staff as well as external architects and builders relating to EE measures in buildings.
- Contribute development of a concept for SOCAR Energy Efficiency Info Center
- Propose energy efficiency show cases to be demonstrated in the building

- Work closely with concerned SOCAR staff to finalize the concept
- Provide guidance in installation of show-cases
- Develop and arrange the installation of electronic screen based energy information system to collect and display information about installed retrofits.

Deliverables

1. Building Energy Inventory Populated with data of SOCAR buildings (20%)
2. A brief report providing comments on the recommendations of the energy audit firm. (15%)
3. Make arrangements and supervise the installation of proposed retrofits and measure their results. (20%)
4. Successful completion of a comprehensive training program explaining the methods and benefits of energy-efficiency improvement in buildings. (20%)
5. Completing the implementation of an energy information centre. (15%)
6. Prepare a detailed annual progress report of the project including documenting all the retrofit measures that were completed. (10%)

Timeframe of the assignment

The LC will be engaged under an Individual Contract, immediately after the completion of the selection process. The initial contract will be for a period of 50 (fifty) consultancy days, and is expected to start on 27 November 2018. Any further contract extensions will be subject to the overall performance as evaluated jointly by the Project Manager and Lead Advisor, based on (a) results and impacts of the activities s/he implemented/facilitated, supported and/or conducted; (b) quality of reports, documents and presentations made, and (c) the relationship s/he developed with the Project Team and the beneficiaries of Project.

Required Skills and Experience

Education:
- University degree in a related engineering discipline.
- Advanced course-work of energy efficiency applications in large buildings.
- Knowledge of GHG inventories of buildings and setting up MRV systems.

Experience:
- At least 7 years of practical experience in EE applications, preferably in the energy management of buildings;
- Hands-on or supervisory experience of carrying out the energy audits of buildings/facilities;
- Experience in preparing materials and implementing workshops, awareness training and seminars.

Competencies:

Functional Competencies:
- Knowledge of energy conservation and energy efficient technologies;
- Strong knowledge in energy and GHG standards;
- Demonstrates strong analytical skills and consistently approaches work with energy and a positive, constructive attitude;
- Ability to work independently towards the achievement of broad objectives of the project with minimum guidance.

Development and Operational Effectiveness:
- Ability to apply peer reviewer guideline production procedures;
- Ability to analyze technical requirements in energy efficiency and energy management applications;
- Strong analytical skills.

Submission of applications

Interested individuals are requested to submit their applications by 15 November 2018, along with the names and contact information of at least 2 references who are familiar with their recent work as applicable to requirements of the position. The application should contain:

- A duly completed CV or signed Personal History Form (P11 Form)
- Offeror's letter/filled-in template to UNDP confirming interest and Breakdown of Costs Supporting the Final All-Inclusive Price as per Template
- Description of Approach to Work (Methodology)

UNDP is committed to achieving workforce diversity in terms of gender, nationality and culture. Individuals from minority groups, indigenous groups and persons with disabilities are equally encouraged to apply. All applications will be treated with the strictest confidence.