

Terms of Reference

Nationally Appropriate Mitigation Actions (NAMAs) for low-carbon end-use sectors in Azerbaijan” Project

Position:	Local Environmental Consultant (LEC) for gas capturing component of NAMA project
Project:	Nationally Appropriate Mitigation Actions (NAMAs) for low-carbon end-use sectors in Azerbaijan” project
Type of contract:	Individual Contract
Period of contract:	One Year (01 June 2018- 31 May 2019)
Starting date:	01 June
Deadline for application:	23 May 2018
Location:	Baku, Azerbaijan, Siyazanneft

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 will target 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 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 greenhouse gases (GHGs) emitter and will act as the main stakeholder of project and implementing partner to further the company’s long-term sustainable development strategy. It will simultaneously target the country’s institutional & policy framework, address appropriate mechanisms and result in activities to realize significant GHG emission reduction achievements in the long term. Individual international experts to carry out the study and implementation of Buildings and Transport activities are already on-board and performing their work.

For the Associated Gas Capture component, an international individual consultant (IC) is already a part of the team. To assist her in carrying out the activities on this component, the need has been identified to engage a local environmental consultant (LEC) specialized and experienced in estimating the quantity of associated gases emitted from oil and gas fields and developing a viable plan for their effective utilization. SOCAR currently uses technologies that makes the capturing process highly inefficient and not economically feasible. In order to avoid large amounts of gas leakages in the future, modern technology and practice need to be applied to significantly improve the current gas collection & production regime at SOCAR’s on-shore wells. These leakages are primarily Methane gas emissions, which have an enhanced effect on climate change because methane has a climate forcing effect 25 times greater on a

100 year basis than that of carbon dioxide, the primary greenhouse gas (GHG). Methane's impact is almost three times greater on a 20 year basis and there is research that may cause both factors to be further increased.

Objective

The oil wells, in addition to producing crude oil, also produce some amount of natural gas. The associated gas discharged at the wellhead is often captured and sent to the transmission network for sending it for distribution to consumers. However, as there is no existing transmission network in the area of Siyazanneft oil-field, the options are for gas to be either vented or flared. The aim of "Associated Gas Capture" component is to apply the best available technology to plug the venting of low pressure associated gas by capturing it and compressing and transporting it to a gas processing plant. This can be done by adding the leaking gas to the gas grid in the proximity of oil-field or, alternately, directly distributed to nearby communities.

The households and small-sized industry/businesses in the neighborhood of Siyazanneft oil-field mostly use wood or very expensive kerosene and LPG in low-quality stoves. By replacing these fuel-sources, which have a relatively large Carbon footprint, a more efficient fuel source will become available to the area's residents. There will thus be a two-fold benefit, namely (i) reduction of GHGs being added to the atmosphere and (ii) recovery and use of captured gas as a fuel to replace fuels viz. wood, LPG, kerosene, etc.

Duties and Responsibilities

The main thrust of LEC's effort will be to support the development of a pilot program for capturing gas leakages in Siyazanneft oil-field and directing the gas for use by end consumers living in 12 nearby villages (approximately 600 households comprising of a population of 2,500) to meet their heating and cooking needs and (if viable) produce electricity.

The LEC will work closely with and assist the international Individual Consultant (IC) who is leading the design and implementation of Associated Gas Capture component of the subject project. The LEC shall carry out the field measurements, analytical support activities and conduct research work related to the project. Under the supervision and day-to-day guidance of the Project Manager, the LEC will be continuously provide field support by conducting measurements to confirm and assess the quantities of gas leakages into atmosphere from oil-wells in Siyazanneft, including:

- preparing focused reports and other communication materials;
- supporting the estimation of the economic value of methane gas leakages and the savings by implementing measures to capture these leakages;
- supporting the implementation of identified viable alternatives for the most effective end-use of captured gases and the integration of the data into SOCAR's energy balance and GHG inventory;
- setting-up a detailed monitoring mechanism for the gas capturing process as well as the avoided emissions data;
- assisting the IC in obtaining necessary data and information from SOCAR and acting as a liaison in Azerbaijan;

- conducting a preliminary assessment of environmental benefits occurring due to the introduction of most effective end-use of captured gases (decreased cutting of trees for heating, health impact, reduced emissions of GHGs, etc.);
- carrying out five field trips per year, each two days long (if additional trips are required during the assignment this will be covered separately according to UNDP rules).

Deliverables

1. Complete the installation of compressors and other gas capturing equipment in Siyazanneft oil fields, by assisting a company to be selected for these works (25%);
2. Submit focused reports and other communication materials (25%);
3. Submit interim monitoring report providing an overview of gas capturing process and avoided emissions data (25%);
4. Submit a report summarizing findings of the preliminary assessment of environmental benefits (25%).

Required Skills and Experience

Education

- Bachelor or Master's Degree in Environmental or Earth Sciences or related subject preferred with focus on oil and gas industry.

Experience

- At least 5 years' experience as environmental consultant preferably in upstream petroleum sector of Azerbaijan;
- Knowledge of best practices in the project related fields, state of the art techniques and approaches in capturing associated gases from oil-fields;
- Knowledge and experience of handling gas leak detection equipment viz. infrared cameras and handheld leak detection equipment;
- Good data analysis and report preparation skills and experience;
- Demonstrated interest and/or experience in climate- and sustainability-related areas;
- Knowledge of key issues relating to the Azerbaijanian agenda of Climate Change prevention and mitigation

Language

- Fluency in Azeri language
- Knowledge of English is desirable

Competencies

- Demonstrates integrity by modelling the UN's values and ethical standards;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;
- Demonstrates good oral and written communication skills,
- Good attention to detail, with problem-solving and data interpretation skills;
- Demonstrates ability to manage complexities and work under pressure, as well as conflict resolution skills;

- Ability to travel, work efficiently in a team, and reporting;
- Highly motivated and conscientious.