



TERMS OF REFERENCE (TOR)

FOR CONTRACTS FOR SERVICES AND WORK

Project Reference: SAP ID: 103130; Grant Nr. 200001164

- Project Title:** “Needs assessment and recommendations for training module development for industries with biogas potential in the ECOWAS region, focusing on Ghana as a case study”
- Statement of Work:** The contractor will conduct a biogas training module needs assessment for Ghana as a case study, with the view for replication and expansion to the ECOWAS region.

1. General Information and Aims of the Project

The ECOWAS Center for Renewable Energy and Energy Efficiency (ECREEE) recognizes that lack of knowledge and technical skills are major barriers to the dissemination and usage of renewable energy and energy efficiency technologies in the ECOWAS region. Therefore capacity development is one of the main pillars of activities implemented by ECREEE. A regional capacity needs assessment exercise conducted in 2012 identified existing capacity building institutions, programs and gaps in the fifteen ECOWAS countries and proposed a plan of action for a regional capacity development strategy of ECREEE.

The formulated strategy aims at strengthening the capacities of a broad range of private and public key market enablers in the sustainable energy sector. These include public institutions (e.g. ministries, municipalities, regulators, rural electrification agencies), investors and financial institutions, universities and training institutions, as well as local companies (e.g. utilities, project developers, manufactures, installation and maintenance service providers).

In accordance with the strategy, UNIDO is facilitating the development of a training module for the ECOWAS region, targeting private sector entrepreneurs with biogas potential for industrial applications. This training module will focus on enhancing the capacity of biogas companies and entrepreneurs to seize opportunities presented by industrial uses of biogas. The trainings will address both technical and business skills, including project appraisal with UNIDO’s Computer Model for Feasibility Analysis and Reporting (COMFAR) programme.

To maximize synergy with existing initiatives in the region, the training module development will be conducted in collaboration with UNIDO’s biogas industry development project in Ghana titled “Supporting green industrial development in Ghana: Biogas technology and business for sustainable growth”. The aim of the project is to increase access to sustainable energy for productive uses in Ghana, and contribute to inclusive and sustainable industrial development. To this end, the project will promote industrial-scale biogas technologies for electricity and thermal applications, and build capacity of companies for optimal exploitation of biogas opportunities. More information can be found in the project summary attached as Annex A.

An important component of this exercise would be close interaction with local institutions of higher learning with expertise in biogas (The Energy Centre at Kwame Nkrumah University

of Science and Technology, Koforidua Polytechnic, etc.) to establish a baseline on the biogas related research and available training in Ghana, and to identify the current gaps and how the proposed training module can address them. These institutions would also be the target of the first training courses (training of trainers) to verify effectiveness of the approach and for further refinement, after which expansion and replication is envisioned for Ghana and the ECOWAS region.

2. The Scope of the Proposed Contracted Services

The required services within the forthcoming contract will form the basis of the development and dissemination of training programmes for industries and companies with biogas potential.

As an initial step towards training module development, **the contractor will conduct a biogas training needs assessment**, focusing on Ghana as a case study, including, but not limited to, the following elements. The needs assessment will then inform the development of the training module initially for Ghana, with the view for replication and expansion to the other ECOWAS countries.

- **identification of priority industrial sectors** with potential for biogas applications
- **evaluation of existing technical and business capacities** of companies (including SMEs) in the priority sectors for biogas applications
- **survey of level of awareness and/or demand** of companies for biogas training
- **study of existing training materials/courses and identification of gaps**
- **analysis of specific training needs and proposals for training modules** for companies with biogas potential (with a focus on SMEs)

In close coordination with, and reporting to the UNIDO Project Manager (PM), the contractor is expected to perform the services listed below. Candidates are encouraged to further elaborate on the below table as part of their proposal submission.

Tasks	Deliverables/ Expected work days ¹
1. Concept note development <ul style="list-style-type: none"> ○ Draft a concept note detailing <ul style="list-style-type: none"> → methods and structure of the needs assessment exercise → format and structure and contents of the final document → activities involved and their timelines → target sector identification criteria → list of key stakeholders to be engaged in the exercise ○ Finalize concept note in close consultation with the UNIDO PM 	<ul style="list-style-type: none"> ○ Concept note approved by UNIDO – 4 days
2. Research and literature review <ul style="list-style-type: none"> ○ Conduct preliminary desk research and literature review on <ul style="list-style-type: none"> → industrial sectors with biogas potential → current technical and business skills of companies → key barriers to industrial applications of biogas → training needs of companies → available training materials/courses ○ Report on the findings of the research and identify information gaps 	<ul style="list-style-type: none"> ○ Preliminary research report on findings approved by UNIDO – 4 days

¹ Indicative expected workdays.

<p>3. Field visits and interviews</p> <ul style="list-style-type: none"> ○ Prepare a field visit plan detailing <ul style="list-style-type: none"> → objectives → types of information/data to be collected → data gathering methods (sample questions etc.) → list of meetings and interviews to be scheduled → meeting/interview report template ○ Conduct field visits and interviews ○ Report on the findings of the field visits <ul style="list-style-type: none"> → individual meeting/interview reports to be attached 	<ul style="list-style-type: none"> ○ Field visit proposal approved by UNIDO – 3 days ○ Field visits and meetings/interviews conducted – 5 days ○ Report on field visits and interviews approved by UNIDO – 3 days
<p>4. Report on needs assessment and recommendations</p> <ul style="list-style-type: none"> ○ Compile a needs assessment report including <ul style="list-style-type: none"> → analysis of the current landscape of biogas applications and gaps to be addressed → priority target sectors, and proposal differentiated types of engagement according to management level and job function → recommendations for training module development, including a suggested outline of the training module 	<ul style="list-style-type: none"> ○ Needs assessment report approved by UNIDO – 7 days

3. General Time Schedule

A maximum duration of 4 weeks is foreseen for this contract, starting in November 2013. A detailed time schedule will be determined after award of the contract.

4. Personnel

The contractor will provide:

- At least one senior expert with:
 - Advanced university degree in energy, energy management, environmental engineering, or other relevant fields
 - Expertise in scientific and technical aspects of renewable energy, particularly biogas
 - In-depth knowledge of issues surrounding expansion of industrial-scale biogas applications
 - Extensive network of biogas stakeholders, in particular the private sector, in Ghana and the ECOWAS region
 - Over 7 years of experience in biogas related research, training, and/or project management at an international level, preferably with further experience in Africa
 - Excellent command of written and spoken English and ability to communicate in a Ghanaian language.
- At least one junior expert with:
 - Advanced university degree in energy, energy management, environmental engineering or proven expertise in scientific and technical aspects of renewable energy
 - Over 3 years of experience in biogas related research, training and/or project management at an international level, preferably with further experience in Africa
 - Excellent research and report writing skills.

- At least one local counterpart (in Ghana) with:
 - Over 5 years of experience in the biogas industry and/or biogas related research, training and/or project management in the ECOWAS region
 - Extensive network of biogas stakeholders, in particular the private sector, in Ghana
 - Excellent command of written and spoken English and ability to communicate in a Ghanaian language.

5. Language Requirements

All official communications will be conducted in English. All documents will be submitted in English.

6. Key Deliverables

Deliverables	Expected Date ²	Proposed Payment Structure
Signature of contract	29 November 2013	15%
Concept note - final	4 December 2013	20%
Preliminary research report	10 December 2013	-
Field visit proposal	13 December 2013	30%
Report on field visit	20 December 2013	-
Needs assessment report – final	30 December 2013	35%

All deliverables will need to be confirmed and approved by UNIDO.

7. Submission of proposals

Applicants are requested to submit their proposals **no later than 27 November 2013** by registering on the UNIDO procurement page (www.unido.org/procurement). In case of technical difficulties, applications may also be sent to procurement@unido.org with Mr. Gentjan Sema in carbon copy (g.sema@unido.org).

The application package must include:

- a technical proposal detailing activities to be conducted under the contract, and their expected timelines
- a price proposal including all travel expenses
- introduction of the applying institution, including track record of relevant biogas and/or capacity-building experience at the organizational level, and CVs of the experts to be involved including the local counterpart
- any other relevant documents to demonstrate competency of the applying institution for the required services

² Dates are indicative only, and subject to change.