



United Nations Development Programme

Terms of Reference

1. Consultancy Information

Title	Capacity Building for Energy Management Assessment for Large Energy Consumers
Project	Implementation of Tanzania's Energy Efficiency Action Plan
Country	Tanzania
Post Level	Individual Consultant (International)
Language	English
Contract duration	100 Working Days
Start date	1 December 2022
End Date	1 May 2023

2. Introduction

The Ministry of Energy is currently implementing Tanzania's 1st Energy Efficiency Action Plan, with the support from UNDP and the European Union (EU). The overall objective of the Action Plan is to ensure access to affordable, reliable, sustainable, and modern energy for all in Tanzania. The project is dedicated to assisting the Government to prepare a comprehensive updated Energy Efficiency Action Plan, which will be integrated with the Tanzania Energy Efficiency Strategy (TEES) to support the implementation of the National Energy Policy and strategic goals set by the Tanzania National Development Vision 2025, in terms of ensuring that Energy Efficiency plays a key role in contributing to the economic and social development of the country.

Action 5 calls for the **Development and implementation of a framework for the management of large energy consumers**. Large Energy Consumers are businesses or facilities that are consuming energy above a certain threshold level at a given time. Meanwhile, large energy consumers use a significant share of energy, their impacts are immediate and costly. On the other hand, costly energy compromises the competitiveness of businesses. Therefore, it is in Government's interests to ensure rational energy uses by tracking energy consumption and instituting legislative requirements for energy management, audit, and reporting.

Over the years, several smaller initiatives relating to energy efficiency have been implemented in Tanzania, such as energy audits of industries, water utilities, and governmental buildings; studies on demand-side management potentials; and baseline studies for the preparation of the future implementation of national energy efficiency standards and labels. However, these initiatives have been implemented in isolation with a sporadic approach. There are no regulations, standards or incentives relating to energy efficiency in place that could assist Tanzania to improve the energy efficiency of its economy through the outcomes or recommendations of implemented initiatives. Moreover, the awareness of stakeholders, both decision-makers and end-users, about the potential of energy efficiency is low. Even industrial energy users are not aware of the energy efficiency potential within their businesses, apart from a few with strict energy reduction targets set and monitored, following the corporation's global group energy management system.

Through the implementation of the action plan, the capacity of key institutions will also be built or/and enhanced through short course training, hand-on-training, and pilot audit on energy-saving potentials for selected large energy consumers. The capacity building will include support in the preparation and implementation of the plant/building/facility energy efficiency action plan.

For Action 5, the Tanzania Industrial Research and Development Organization (TIRDO) is mandated to assist the industrial sector of Tanzania by providing technical expertise and support services to upgrade its technology base. As well, as carrying out applied research, for the development of suitable technologies, and value addition to indigenous resources through industrial processing. TIRDO has been earmarked to facilitate hands-on practical services related to large energy users (large buildings and industries) on energy management and auditing. Their role will be to design, develop and implement capacity-building activities for larger energy consumers and this call for the institution's (TIRDO) capacity-building.

3. Objectives

3.1 Policy Compliance

To prioritize the importance of energy audits in energy management, the National Energy Policy (2003) put energy audits mandatory for all large energy users. However, lack of capacity and policy implementation tools i.e., strategy, action plan, legal and regulatory framework, this ambition was not fulfilled. Among others, the revised National Energy Policy (2015) aims at ensuring energy uses are benchmarked to industry prudent practices.

3.2 Building National Capacity through TIRDO

The capacity building program will enhance TIRDO experts with the fundamental knowledge and experiences building from across several core principles and practices specific to energy management and auditing in buildings and facilities to be able to offer services on optimizing the use of energy in buildings and systems.

The capacity building is to be enhanced through short course training, hand-on-trainings, and pilot audits on energy-saving potentials for selected large energy consumers. TIRDO is a national dedicated institution for industrial research and has experience in conducting energy audits locally, part of its capacity enhancement must be facilitated with the necessary equipment and software to undertake planned pilot audits and energy management demonstrations but more equipping the intuitions to provide such services. It is expected that EWURA will also put legislations and regulations to bind large energy user compliance with energy management practices (i.e., facilities or industrial energy managers) and measures (i.e., audits, building codes etc.) set for which TIRDO services will be sustained but also benefiting practitioners (businesses and industries).

4. Scope, Methodology and Tasks

The consultants will be responsible for training and equipping TIRDO personnel or experts with current international practices, processes, and tools for conducting energy management assessments and audits but also training individuals and companies to accommodate and put in practices such measures and practices in their business environment as per regulation requirements.

In achieving the above objective, the consultant is expected to work together with a TIRDO-dedicated team in a collaborative and supportive manner to cater for the following tasks:

- i) Assess TIRDO's competencies and gaps to offer international energy management and audits services for businesses and industries
- ii) Assess and recommend required facilities, equipment, and software to support or enhance TIRDO functions in offerings of energy management and audits services.
- iii) Organize and implement house training for TIRDO personnel to increase their knowledge and skills in applying international practices for energy management and audits
- iv) Organize and implement in-house training for TIRDO personnel to gain access in using various methodologies, processes and tools or equipment used for conducting energy management and audits
- v) Designing and implementing pilot studies for conducting energy management and audits reflecting the international practices
Note: The pilot study should cover at least 3 key relevant large energy user categories i.e., Industries (manufacturing, mining, and utilities); services-based for-profit businesses (banks, shopping malls); households (large apartments); and services based for non-profit businesses (government institutions).
- vi) Supporting TIRDO business reengineering process to gain mastery of local market and regional or international markets (EAC etc.)

5. Deliverables, Timeline and Payment terms

Under the guidance of the Ministry of Energy and UNDP, in collaboration with TIRDO, the consultant shall ensure delivery of the required services with the highest standards of being relevant, cost-effective and sustainable to benefit TIRDO, businesses and the nation at large.

Key deliverables

- 1) Inception report with a clear methodology and work plan for conducting the service.
- 2) Assessment report of TIRDO competency and gaps to offer energy management, audits, and buildings certification services (EPC) services as per widely accepted international practices
- 3) Detailed report of recommended facilities and equipment to enhance or facilitate TIRDO's capacity to offer energy management, audits services and buildings certification services (EPC)
- 4) Detailed report of in-house capacity-building training conducted.
- 5) Summary report of selected businesses and institutions to do pilot studies i.e., criteria and methodology used to select, the education plan and formal commitments by both parties.
- 6) Summary report on progress and results of the pilot studies
- 7) Final report

A tentative timeline for deliverables and payment schedule is as follows.

Deliverable	The timeframe from the date of contract effectiveness (weeks)	Payment (% of the contract sum)
1. Inception report with a clear methodology and work plan for conducting the service.	1 st week	10%
2. Assessment report of TIRDO competency and gaps to offer energy management and audits and buildings	2 nd week	30%

certifications services as per widely international accepted practices		
3. Detailed report of recommended facilities and equipment to enhance or facilitate TIRDO’s capacity to offer energy management/audits and buildings certification services (EPC)	3 rd week	
4. Detailed report of in-house capacity building training conducted	8 th week	
5. Summary report of selected businesses and institutions to do pilot studies i.e., criteria and methodology used to select, the education plan and formal commitments by both parties.	9 th week	
6. Summary report on progress and results of the pilot studies	14 th week	30%
7. Final report	15 th week	30%
6. Qualifications		
Qualifications:	The consultant should possess a minimum of a master’s degree in Electrical / Mechanical / Process Engineering or a related field.	
Experience	<ul style="list-style-type: none">• Demonstrated understanding of electrical systems, industrial processes, material flow• At least 10 years of international experience in implementing energy management systems in industries, utilities, and large buildings with 5 years of hands-on energy auditing; experience in conducting awareness and capacity building in energy management.• Demonstrated practical knowledge and experience in the Fundamentals of Industrial Energy Audits and Energy Management Systems• Demonstrated practical knowledge and experience in Energy Savings Performance Contracting and Energy Savings Measurement & Verification• Demonstrated practical knowledge and experience in Building Automation Systems, Process Automation Systems & Energy Management and Control Systems• Being a certified energy manager and auditor by a recognized international organization is a must.• Experiences in the energy performance certification process for buildings	
Language Requirements	Excellent command of written and spoken English	
7. Competencies		

Core competencies

- Demonstrates integrity by modelling the UN's values and ethical standards.
- Promotes the vision, mission, and strategic goals of UNDP.
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability.
- Treats all people fairly without favoritism.

Technical Competencies:

- Demonstrated ability to coordinate processes to collate information and facilitate discussion and analysis of the material.
- Technical competencies in undertaking complex evaluations which involve a variety of stakeholders.
- Demonstrated strong research and analytical skills. Strong facilitation and collaborative skills
- Strong report writing and communication skills.

Functional competencies

- Strong analytical skills, including the identification of key issues and how they relate.
- Strong writing skills including the development of a results framework and project conceptualization.
- Ability to conceptualize problems and generate innovative, practical solutions.
- Ability to plan for and produce quality results in meeting the established goal.
- Ability to deliver high-quality products within the set timelines.

8. How to apply

Please submit the following documents:

I. Technical proposal comprising of the following:

- Letter of Confirmation of Interest and Availability using the template provided by UNDP.
- Personal CV and P-11. Proposals without a P-11 form will not be accepted.
- Application Proposal (maximum 10 pages in total):
 - Proof of relevant academic education and training (Academics certificates etc.)
 - Proof of business services certifications (AEE certifications etc.)
 - Proof of business services provisions (Services certificates etc.)

II. Financial Proposal:

This shall indicate an all-inclusive fixed total contract price, supported by a breakdown of costs, as per the template provided below.

9. Criteria for Selection of the Best Offer

Offers received will be evaluated using a Combined Scoring method, where the qualifications and proposed methodology will be weighted 70%, and combined with the price offer, which will be weighted 30%.

Criteria to be used for rating the qualifications:

Technical evaluation criteria (total 70 points):

- 1) Relevant academic education and training (15 marks)
- 2) Being a CEM and CEA by AEE (15 marks)
- 3) Experience in conducting CEM and CEA training for at least 10 years in Africa (30 marks)

- 4) Experience in facilitating energy performance certification for buildings for at least 5 years in Africa (30 marks)
- 5) Experiences in developing practical guidance for EPC in buildings (10 marks)

Only candidates obtaining a minimum of 40 points in the Technical Evaluation will be considered for the Financial Evaluation.

Financial evaluation (total 30 points):

All technically qualified proposals will be scored out of 30 based on the formula provided below. The maximum points (30) will be assigned to the lowest financial proposal. All other proposals receive points according to the following formula:

$$p = y (\mu/z)$$

where:

- p = points for the financial proposal being evaluated
- y = maximum number of points for the financial proposal
- μ = price of the lowest-priced proposal.
- z = price of the proposal being evaluated

Submitted by: Aaron Cunningham, Project Manager, Energy Efficiency Project

Signature: _____
DocuSigned by:
Aaron Cunningham

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Date: _____

Approved by: Sergio Valdini, Deputy Resident Representative, UNDP

Signature: _____
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Sergio Valdini

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Date: _____