



Call for Expression of Interest
for
Development of Municipal Waste to Energy Projects for
Cleaner Cities Initiative in ECOWAS Region

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1. Background

In the ECOWAS Region, most countries face the challenges of municipal waste collection and disposal. While the municipalities continue facing the challenges of waste management, the urban populations however continue to grow by the day and thereby compounding the existing problems.

The challenges of municipal waste management is characterized by the lack of adequate and sustainable infrastructural services, especially in the new and ever expanding settlements. One of the services that is severely hampering the development of these expanding settlements is the unavailability of adequate energy services. This therefore results in inadequate energy services and hence rationing of the available resource through frequent power outages. Other infrastructural services such as roads, water and telecommunication services are equally hampered by the expanding urban populations.

The expanding urban populations contribute to the current waste management problems as well. The municipalities, who have the ardent task of keeping the cities clean, face numerous challenges in the collection, transportation and disposal of the waste, that is either incinerated in open dumpsites (and often indiscriminately) or left in the open without any proper management system. This can be a source of underground water contamination/pollution, emission of methane, attraction of flies and mosquitos that can transmit diseases and very unpleasant sight and odour for population living close to the dump sites.

The Energy Access Challenge

The ECOWAS region continues to face interrelated challenges of energy access, energy security and climate change mitigation and adaptation, which are intertwined with the region's economic development. These energy challenges are impacting negatively on the implementation of regional programmes and strategies aimed at fostering socio-economic development, attracting foreign investment, providing basic social services, and achieving the SE4ALL goals.

In order to create a vibrant socio-economic development, the Region must address these challenges in an integrated manner that focuses on social, economic and environmental sustainability. One of the policies that the ECOWAS Region has set itself is the attainment of Sustainable Development Goals (SDG7) goals. The ECOWAS Region has already adopted the ECOWAS Bioenergy Policy in June 2017 in addition to the 2 regional policies on Renewable Energy and Energy Efficiency. The ECOWAS Bioenergy Policy addresses sustainable production, transformation and utilization of biomass resources to meet both the energy and food security needs. The Policy will enhance the development of Bioenergy Service delivery in the ECOWAS Region, including the sustainable and efficient transformation and management of municipal wastes.

Challenges and opportunities for energy recovery from waste

The ECOWAS Bioenergy Policy recognizes the quantity of waste generated in the region and foresees huge potential in utilizing these as a resource. The waste generated includes both liquid and solid municipal waste, agricultural and industrial waste. Technology has evolved over the years for the efficient and sustainable utilization of waste resources for energy generation with very little effect on the environment. While the biological wastes are carbon neutral, its utilization in a sustainable manner can provide huge opportunities of addressing the challenges of energy access, energy security, health, environment and climate change challenges.

However, to be able to use the waste resources, data and information needs to be available for better planning and implementation. In most urban cities, the data and information are not readily available. Where the data is available, it does not suit the planning purposes in terms of quality and quantity for energy generation purposes.

In addition to meet the challenges faced with the availability of data and information, there exists no methodology and awareness on the potentials and the opportunities municipal waste can provide. In most countries, the best option for managing the waste is open disposal and open burning.

On the basis of the aforementioned and to bring better management system to Municipal Solid Waste (MSW) in the ever-growing cities and town in the ECOWAS Region, a Pre-feasibility Study would be conducted in interested cities/municipalities who show interest to conduct this assessment. The Study would enable the development of a framework document for waste availability and potential for energy generation in the cities, as a means to better manage the waste for better health, environmental and climate change issues.

The Approach

In an effort to seek solution to address these problems, ECREEE would explore various waste management options that could generate energy from the 'waste'. These options include:

- a. Direct combustion of the waste to generate steam in boilers for electricity generation.
- b. Use of gasification/pyrolytic furnaces to generate steam in boilers for electricity generation.
- c. Landfill Gas requires special preparation of land to be filled with MSW to produce gas that can be used for power generation or otherwise. It requires engineering skills in the preparations to ensure successful operation and the capture of the gas.
- d. Biogas from bio-digesters from sorted vegetative waste. The gas can be used for power generation or otherwise.

2. Objective of the EOI

The objective of this EOI is to select a maximum of 6 WTE projects from municipal waste from cities in ECOWAS member states to carry out pre-feasibility studies.

The pre-feasibility study will among other things:

- a. Assess the amount of waste generated in selected cities in terms of the quantity and quality;
- b. Assess the waste management system in terms of the collection, transportation, and disposal mechanisms and its sustainability;
- c. Propose sustainable options for better waste management systems for the city;
- d. Provide scenarios on the possible options for generation of energy from the information and data collected/available;

Cities that already have conducted a Pre-feasibility Study recently and submit a prefeasibility study report have a chance of selection to conduct detailed feasibility study

3. Who can apply?

This call for projects is intended for promoters of public and private projects as well as other stakeholders involved in Management of Municipal Solid Waste:

- Public promoters of PPP projects or public / utility projects; mainly municipalities with the involvement of the ministry in charge of energy and that in charge of public health according to the institutional frameworks of the countries.
- Private developers with municipal waste management agreements.

4. How will technical assistance work in practice?

ECREEE will hire a consulting firm that will work with the promoter and public or private and ECREEE to carry out the pre-feasibility or feasibility study if necessary.

Promoters of public and private projects and other stakeholders wishing to receive this assistance, should send an official request to ECREEE.

In the case of requests from private promoters, it is strongly recommended that the request include a declaration of approval or non-objection from the competent public institution or institutions in the country or countries concerned. When approval or non-objection is not provided by the private promoter, ECREEE will request it from the government concerned through its national coordinating institution (NFI) upon receipt of the request. The request will not be evaluated until this non-objection has been obtained.

ECREEE will assess the applications against the selection criteria mentioned below and may request additional information about the project during this process. Once the eligibility of the application has been confirmed and selected, ECREEE will develop the terms of reference (TOR) for the study in collaboration with the sponsor/municipality.

5. Selection criteria

Applications from these candidates will be selected based on the following criteria:

- The priority nature of the project in national planning
- The project must have:
 - a minimum concept note for projects requiring a pre-feasibility study
 - and a pre-feasibility study for projects requiring a feasibility study
 - Other maturity indicators could include the fact that the promoter has obtained exclusivity on the municipal waste constituting the raw material of his project, the land as well as the necessary permits and licenses or that he has concluded a preliminary agreement with government (if necessary).
- Experience and qualification of the promoter (the project team) for this type of project.
- Geographic equity and diversity - coverage of a maximum number of ECOWAS Member States

Documents must be provided to meet the above criteria

6. Provisional Implementation Schedule

Date	Tasks	Stakeholders
Launch of the EOI	1 August 2020	ECREEE
selection	7 September 2020	ECREEE
Preparation and finalization of ToR	18 September 2020	ECREEE, Promoter
Publication and selection of the consultant	10 October 2020	ECREEE
Completion of the Study	From 25 October 2020	Consultant

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7. Information

Interested promoters should submit proposals as detailed in item 5 in English, Portuguese or French language and electronically to ECREEE using the following email address **ONLY:** tender@ecreee.org **no later than August 28, 2020-, 18h UTC**, clearly indicating in the subject: “DEVELOPMENT OF MUNICIPAL WASTE TO ENERGY PROJECTS FOR CLEANER CITIES INITIATIVE IN THE ECOWAS REGION”

For any clarification or information, please contact bioenergy@ecreee.org