

# Terms of Reference for Bioenergy Development Strategy and Investment Plan for the Eastern African Region

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## 1 BACKGROUND AND INTRODUCTION

Despite efforts at providing universal access to electricity by many African countries, the use of biomass as a primary source of energy is not subsiding. Indeed, according to the latest IEA statistics, the use of biomass is increasing even though electrification is progressively increasing. Only North Africa and South Africa have little use of biomass energy. In other regions, the use of biomass surpasses the use of electricity. This suggests that even when households have access to electricity, the use of biomass does not stop. On average, access to electricity in Africa is 52 per cent, while 71 per cent of the population still uses biomass energy, in the form of firewood and charcoal, as the primary energy source for cooking and heating.

The negative impacts of traditional biomass use are well documented by the WHO, especially its impact on women and children. However, this sector can be modernized and play a significant role in improving access to modern energy in Africa, including clean cooking fuels and technologies, income generation, economic development, etc. Continuing the current consumption of biomass can reverse development gains and can lead to increased poverty, exacerbate climate change, threaten food security and lead to increased mortality caused by respiratory diseases.

There have been major world developments in the field of modern bioenergy, especially clean cooking technologies. However, on the whole, Africa is yet to properly harness this source of energy for its development purposes. There already exists good regulatory frameworks that manage negative impacts of bioenergy in the world. Again, this is not sufficiently done in Africa owing in part to the complex nature of biomass. This sector cuts across many ministries (agriculture, environment, energy, health, etc.). It is worth noting that almost all African RECs have targets for renewable energy, including bioenergy, but these will not likely be met because less focus is put on modernizing the biomass sector.

It is against this background that the African Union Commission (AUC) in partnership with the UN Economic Commission for Africa (ECA) and NEPAD Planning and Coordinating Agency (NPCA) initiated a programme to modernize the bioenergy sector in Africa, through a consultative process spanning several years and involving a cross section of stakeholders and African Union Member States. This culminated in the development of the *African Bioenergy Framework and Policy Guidelines* in 2013. The purpose of the Framework is to (a) build consensus on shared framework that inspires and provides guidance to individual countries and regions in developing bioenergy policies and regulations; and (b) enhance awareness among African policymakers and the civil society about the need for more environmentally friendly and socially acceptable bioenergy development policies.

There were a number of outputs generated by the Bioenergy programme since 2011. These outputs have been systematically implemented to build capacity and also exchange experiences on some of the best practices on the African continent. Since its inception, the programme has developed studies with the aim of supporting the African Countries to implement policy and regulatory framework for bioenergy that support modernization of the bioenergy sector. The studies conducted under this programme are:

1. Policy Options for Bioenergy Energy Development in Africa (2011)
2. Technical and Economic Assessment of Biofuels in Africa (2011)
3. Africa Bioenergy Policy Framework and Guidelines (2013);
4. A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Ethiopia (2015);
5. A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in South Africa (2015)
6. A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Mali (2015)
7. A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Cameroon
8. A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Mauritius;
9. A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Rwanda;
10. A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Kenya
11. Mainstreaming Gender in Bioenergy Development
12. Localisation of Clean and Renewable Energy Technologies in Africa.

While the bioenergy programme has achieved several important milestones, there are notable drawbacks that could influence its impacts at the national and regional levels. Against this background, building upon the achievements and lessons learnt from implementing the programme, the AUC in partnership with ECA and NPCA plan to develop Bioenergy Development Strategies and Investment Plans with associated action plans for each region of Africa (Northern, Western, Central, Eastern and Southern). These bioenergy development strategies and investment plans are expected to lead to the deployment of sustainable regional bioenergy projects that will accelerate the adoption of modern bioenergy technologies, practices that will have positive impacts on modern energy access, local industrial development, job creation and general improvement of local livelihoods and rural economic development.

The ultimate expected accomplishments are threefold:

- a) To ensure that bioenergy development is integrated into policy development and that countries and regions put priority in modernizing the bioenergy energy sector;
- b) Capacity is built across African stakeholders, particularly policy makers, civil society, local private sector, academia and community-based organizations; and
- c) To deliver demonstration projects that are centered on improving bioenergy for the household and transport sectors.

## 2 OBJECTIVE OF THE ASSIGNMENT

The objective of this assignment is to develop Bioenergy Development Strategy and Investment Plan for the Eastern African Region based on the Africa Bioenergy Policy Framework and Guidelines and previous studies done under the programme as well as international, continental and regional best practices. Furthermore, the Bioenergy Development and Investment Strategy should include Action Plan for required interventions to harmonize sustainable bioenergy development in the following countries: Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. It is also important to prioritize and focus on the specific types of bioenergy resources relevant to the region.

## 3 THE SCOPE OF WORK

A lot of work has been done in the regions, mainly by regional and national institutions to advance modern renewable energy agenda. However, it is observed that such efforts tend to focus on renewable options such as solar, hydro, wind and geothermal, at the expense of the bioenergy sector, on which the majority of African households rely. It is, therefore, expected that the consultant will take into consideration what exists in the Eastern African regions in terms of data availability and their quality, bioenergy value-chain, bioenergy market, private sector participation, available skills, linkages with improved cookstoves programmes, financing tools and mechanisms, bioenergy innovation, gender mainstreaming and bioenergy for productive use, the role of bioenergy in national energy plans, the important regional and international players.

Drawing on lessons learned from the implementation of the continental framework and policy guidelines, the consultant shall develop Bioenergy Development Strategy and Investment Plan with associated action plans for Eastern Africa region while taking into account the specificity of each country member of the East Africa Community (EAC). In consultation with the relevant stakeholders in EAC for Renewable Energy and Energy Efficiency, bioenergy developers in the region, among others, the consultant will make specific strategies on the bioenergy resources most prevalent in the region.

In carrying out the assignment, the consultant shall explore issues pertaining to bioenergy situation in the region, especially on how to:

- a) Address poor information among stakeholders on biofuels industry including existing opportunities, programmes, markets, technologies (such as improved cookstoves, efficient conversion platforms and use), and potentials of biofuels as a viable energy source. This would mainstream biofuels as one of the key and sustainable energy sources for households and transport sectors, as well as bedrock for rural development. This will also help to mitigate against climate change factors and job creation for the young people.
- b) Build partnerships to address the lack of awareness on high impact programmes as well as poor communication amongst stakeholders. In addition to the development of tailor-made communication packages, this intervention will lead to enhanced capacities through knowledge-sharing, financing and

improved delivery of biofuels programmes as well as improve communication between researchers, local communities and policy makers.

- c) Create enabling environment to address weaknesses in establishing a well-functioning and modern biofuels industry, such as weak policies, low levels of R&D, low levels of biofuels development and the absence of improved and localized cooking technologies. This will, among others, enhance the development of robust policies that support localized solutions, enhance incentives and integrate biofuels into the wider energy economy.
- d) Develop necessary policies, strategy, incentives and action plans to address inadequate enforcement and poor attitudes towards modern biofuels development, which will lead to the design of viable and effective regulatory frameworks, as well as a greater awareness by all stakeholders.
- e) Develop adequate regional funding and investments strategy in the bioenergy sector to address mainly the lack of support for innovative R&D, inadequate feedstock production by small-scale farmers, low levels of bioenergy market development and the lack of support for localized cooking technologies. Addressing these issues will lead to enabling frameworks that support and enhance innovative financing for local players and dedicated funding for R&D, while also enhancing the capacity of private projects developers to design viable and bankable projects.
- f) Enhance knowledge generation in the biomass/biofuels sector at all levels to address limited technical capacity at the local level, lack of capacity to manage the biofuels sector, and limited technical know-how of feedstock development. Addressing these issues will boost inclusive growth and improve local solutions and knowledge.
- g) Promote increased private sector participation (PSP) in the biomass/biofuels sector to address the lack of capacity to develop bankable projects, lack of enabling environment for PSP, technical skills deficiency in bioenergy development and the lack of awareness by financial institutions on the benefits of bioenergy. Addressing these barriers will lead to improved investments from financial institutions to project development, enhanced investor confidence, increased local participation, and effective implementation of biomass/biofuels projects/programmes.

All these issues will be explored against the regions' and national existing and planned strategies whose robustness in delivering a viable modern bioenergy economy will be analyzed with a view to strengthen them.

It is also expected that the strategy framework document will be organized around these issues.

## 4 EXPECTED OUTPUTS - DELIVERABLES

The bioenergy development strategy and investment plan should focus on the following core areas among other:

### ***a) Overview of the bioenergy industry:***

- Bioenergy/biofuels (liquid, solid and gaseous) and their sources
- Basic bioenergy technologies
- Various applications of biofuels
- Linkages of biofuels industry to other sectors of national economy
- Desired infrastructure and investment environment for biofuels
- Relationship between food, biofuels and ecosystem
- Barriers to the uptake of biofuels

***b) Enabling policies and regulations:***

- Stakeholder's analysis
- Existing Biofuel policy and formulations
- Biofuel regulatory framework
- Biofuel development strategy and their implementation
- Ensuring sustainable biofuel development

***c) Development of systems of innovation:***

- Research ethics and data management
- Principles of research project management
- Technology/knowledge transfer and commercialization issues
- Best practices in "life cycle" management of system of innovation
- Strategies to identify and access research funding opportunities
- Training and skills development

***d) Bioenergy standards/standardization:***

- The role of fuel quality standards and standardization in biofuel programmes
- Technical biofuel quality standards
- Blending mandates, infrastructural and end-use compatibility
- Standards relevant to vehicle fleets and compatibility
- Sustainability frameworks, criteria and certification
- Inspection, monitoring and evaluation
- Standard related to cross cutting issues

***e) Bioenergy markets and project development:***

- Understanding biofuels markets
- Business model for various feedstock
- Tools for mobilizing appropriate feedstock for biofuel production
- The development of appropriate feedstock supply chain
- Drafting a business model, investment profile and business plan for biofuels
- Role of public sectors to enable the private sector

- Financing biofuels projects

The consultant shall submit the following deliverables:

1. Inception Report describing the work programme and methodology. The consultant can mention specific cases such as those related to countries like Brazil and Argentina.
2. Draft full report of Bioenergy development strategy and Investment plan for review by AUC and the region's main stakeholders
3. Present the strategy in validation workshop to be organized by AUC
4. Final Report incorporating inputs from the validation workshop

## 5 CONSULTANCY'S COMPETENCIES

The consultant that is envisioned to undertake this assignment has to have proven track record in carrying similar types of work and should provide references that are not older than three (3) years. The following competencies and experience are required:

- Masters qualification or higher in related disciplines such as engineering, energy economics, statistics, social science, business science;
- More than 10 years of strategy development in similar areas of work;
- Excellent analytical and reporting skills (in English and French);
- Publication record

The AUC is an equal opportunities institution, and gender equity will be strived at in the selection of the suitable consultancy.

## 6 DURATION, SCHEDULING OF THE ASSIGNMENT AND REMUNERATION

Since there is already a body of knowledge in existence throughout the African region, it is anticipated that developing the framework and strategy document will not take more than 60 workdays per region. The consultant shall submit detailed plan, which will be subject to AUC approval, of carrying out the assignment. He is also required to submit his offer and may introduce some travels that he intends to undertake.

The remuneration will be paid according to the following milestones:

- 25% on submission of the inception report
- 50% on presentation of the draft report and presentation at the Stakeholders Workshop
- 25% on presentation of the accepted final framework and investment strategy document.

## 7 REFERENCES

- Policy Options for Bioenergy Energy Development in Africa (2011)
- Technical and Economic Assessment of Biofuels in Africa (2011)
- Africa Bioenergy Policy Framework and Guidelines (2013);
- A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Ethiopia (2015);
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- A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Mali (2015)
- A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Cameroon
- A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Mauritius;
- A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Rwanda;
- A Case Study on Regulatory Reforms for Adoption of Biofuels Programmes in Kenya
- Mainstreaming Gender in Bioenergy Development
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The African Union Commission now invites eligible **Individual Consultants** to indicate their interest in providing the Services. Interested candidate must provide information demonstrating that he/she has the required qualifications and relevant experience to perform the Services. Consulting firms may propose individual consultant, but only the experience and qualifications of individual shall be used in the selection process, and that his or her corporate experience shall not be taken into account, and the contract would be signed with the proposed individual.

The required services are in lots as follows:

- 1. Lot 1: : Consulting Services for Bio-energy Development Strategy and Investment Plan for Central Africa**
- 2. Lot 2: Consulting Services for Bio-energy Development Strategy and Investment Plan for Eastern Africa**

Interest individual consultants can bid for one or two lots, but only one contract can be issued per lot to a consultant.

Please find attached the detailed terms of reference for the both Central and Eastern African Regions.

For evaluation of the expressions of interest the following criteria will be applied:

- a) General Education Qualification and Relevant Training (20 points);**
- b) Experience Related to the Assignment (25 points);**

**c) Technical approach and methodology (40 points)**

**d) Work plan (10 points)**

**e) Language (5 points)**

Interested candidates are requested to submit the following documents for AUC's consideration:

***a) Technical Proposal not exceeding 8 pages on:***

- I. understanding and interpretation of the TOR
- II. methodology to be used in undertaking the assignment
- III. time and activity schedule

***b) Financial proposal not exceeding 1 page***

- I. Consultant's daily rate in US\$
- II. Other costs e.g. travel
- III. Total cost

***c) Personal Capacity Statement***

- I. Relevant experience related to the assignment (include samples of two most recent similar works and/or references for the same)
- II. Contacts of at least 3 organizations previously worked for
- III. Curriculum Vitae of the Consultant (s)

Further information can be obtained at the address below during office hours 8:00-13:00hrs and 14:00-17:00 hours Local Time.

Proposal must be delivered in a written form to the address below not later than 15:00 hours local time, May 14, 2018.

**African Union Commission,**

**Attn: Carine Toure Yemitia (Mrs.)**

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