

Bioenergy Task Force Composition and Terms of Reference



Initiative for Climate Action Transparency - ICAT

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Deliverable I

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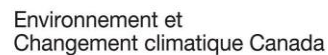
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Acronyms and abbreviations

BTF	Bioenergy Task Force
CSER	Centre for Sustainable Energy Research
EEC	Eswatini Electricity Company
ESA	Eswatini Sugar Association
ESERA	Eswatini Energy Regulatory Authority
GHG	Greenhouse Gas
GHGMI	Greenhouse Gas Management Institute
GoE	Government of Eswatini
ICAT	Initiative for Climate Action Transparency
MNRE	Ministry of Natural Resources and Energy
MTEA	Ministry of Tourism and Environmental Affairs
MoA	Ministry of Agriculture
NDC	Nationally Determined Contributions
NEP	National Energy Policy
RE	Renewable Energy
RES	Royal Swaziland Sugar Corporation
SGEP	Short Term Generation Expansion Plan
UNESWA	University of Eswatini
UNFCCC	United Nations Framework Convention on Climate Change
UNOPS	United Nations Office for Project Services



TERMS OF REFERENCE

Development of National Bioenergy Policy and Implementation Framework

1. Background

The Kingdom of Eswatini relies heavily on imports to meet its electricity demand. As of 2023, Eswatini was importing about 80 percent of its electricity from South Africa (ESKOM) and Mozambique (UDM). In order to improve the security of supply, while balancing costs with the risks, the Ministry of Natural Resources and Energy (MNRE) has (with the help of development partners) undertaken a number of studies to explore the use of local resources for electricity generation.

Studies such as the Short Term Generation Expansion Plan (SGEP) of 2018 and the Energy Master Plan of 2018 extensively considered the expansion of renewable energy technologies in the country's electricity generation mix. These studies culminated in the National Energy Policy (NEP) of 2018. As a guiding policy on national energy use and supply, the NEP aims to achieve not just security of energy supply, but also to cater for a number of other national development goals including:

- i) Full access to modern energy;
- ii) Eradication of energy poverty;
- iii) Energy Efficiency;
- iv) Liberalisation of the electricity market; and,
- v) Improving access of independent power producers to the market, etc.

While the reduction of greenhouse gases (GHG) is not an explicit goal of the NEP, it is implied in the access to modern energy policy statement. In this statement, the government of Eswatini (GoE) seeks to see a transition to provide access by all Emaswati to modern energy. It recognizes that traditional sources, which also contribute to GHG emissions and climate pollutants, are harmful to both the environment and human life.

Additionally, the GoE's desire to increase renewables in the national electricity generation mix will significantly positively impact the achievement of the country's NDC targets. Through the Ministry of Tourism and Environmental Affairs (MTEA), the GoE has committed to reducing GHG emissions by undertaking specific measures in the energy sector. In the 2016 Intended Nationally Determined Contributions (iNDC) in the energy sector, the GoE committed to ensuring that the local electricity generation mix is 50 percent renewables by 2030.

In the revised updated NDC 2021, the GoE committed to additional mitigation measures in the energy sector that can help meet its GHG reduction targets. The MNRE, as per the Energy Master Plan, is looking at biomass electricity generation as an energy resource to cover at least the country's base load, if not more.

Eswatini is currently producing biomass electricity using cogeneration in the sugar industry. Royal Eswatini Sugar Corporation (RESC) has an installed capacity of 65.5 MW for self-consumption. Ubombo Sugar Limited (Illovo) has an installed capacity of 41.5 MW for self-consumption and is exporting the excess of its bagasse-generated electricity to the national grid (on average, 14 MW)[2]. In the SGEP and in the revised NDC, the GoE is committed to increase biomass electricity by an additional 40 MW by 2030, i.e. an increase of at least an additional 26-30 MW exported to the national grid.

The first phase of the ICAT-Eswatini project (June 2022 to August 2023) showed that Eswatini has significant biomass resources, including considerable biomass resources from the country's extensive timber industry. This can be used to increase its biomass electricity generation. It is noteworthy that the biomass resource can contribute significantly to the country's baseload requirements which has potential significant positive economic and environmental implications. The project also brought to light the challenges that can be addressed through enacting a national Bioenergy Policy for biomass electricity generation.



The second phase of the ICAT-Eswatini Project (which commenced in September 2023) aims to assist with the setting up of a Bioenergy Task Force (BTF) to develop a Bioenergy Policy which will provide clear direction to Eswatini's commercial biomass sector to create an enabling environment to enhance biomass renewable energy development and investment in this sector. This will, in turn, assist the country to achieve the energy emission targets set out in Eswatini's NDCs, as well as to improve electricity security of supply.

These Terms of Reference (ToRs) provide information on the overall objectives of the Bioenergy Task Force, the general methodology and approaches, expected outputs and deliverables and the composition of the BTF. This work will include stakeholders' consultation and desk review of policy documents, national development plan documents and other related studies.

2. Objectives and Assignment

The objective of this assignment is to develop a Bioenergy Policy Framework and Guidelines using previous studies undertaken during the first phase of the ICAT project as well as international, continental and regional best practices using sustainably produced biomass as a major resource for generating 'clean' electricity. Furthermore, the Bioenergy Policy should enable required interventions to harmonize sustainable bioenergy development in the country. This will provide an enabling environment for enhancing the renewable biomass electricity contribution in the country and reduce energy emissions. It is also important to prioritize and focus on the specific types of bioenergy resources available in Eswatini.

3. Scope of the Work

The first phase of the ICAT project quantified the country's biomass resources and the potential to use those resources to increase biomass electricity generation. The scope of work for the BTF is to develop a bioenergy policy that will provide an enabling environment for renewable biomass electricity. Working with the Centre for Sustainable Energy Research (CSER) with support from ICAT (Initiative for Climate Action Transparency), the BTF shall compile a Draft Bioenergy Policy. In carrying out the assignment, the BTF shall explore issues pertaining to the bioenergy situation in Eswatini. In particular, the BTF will undertake the following:

- i) Carry out an overview of the bioenergy industry (i.e. Identify and assess the potential for bioenergy development in Eswatini).
- ii) Review the existing literature on international energy policy and bioenergy for electricity best practices.
- iii) Review bioenergy electricity standards/standardization.
- iv) Study existing bioenergy electricity markets and project development.
- v) Review 'international best practice' biomass electricity tendering and bidding procedures.
- vi) Develop a draft bioenergy policy for Eswatini that is aligned with the country's national development goals and international commitments. This will include:
 - a. A definition of bioenergy
 - b. A vision for bioenergy development in Eswatini
 - c. Goals and objectives for bioenergy development
 - d. Key policy measures and incentives to promote bioenergy development
- vii) Develop recommendations for the promotion and development of bioenergy in Eswatini, including the following:
 - a. Appropriate policy instruments and incentives
 - b. Research and development priorities
 - c. Capacity building needs
- viii) Review Measurement, Reporting and Verification (MRV) arrangements that will be used to gauge and report on the impact of bioelectricity on GHG emissions. The MRV documents will be prepared by the CSER working with GHGMI.



The responsibilities of the various Task Force members are as follows:

- a. **MNRE Representatives:** Will be the lead and chair the Task Force, and provide information and consult in areas such as electricity technology, the operations and requirements for the operation of Eswatini's electricity grid, the technical elements of any generation, transmission and distribution system of any addition to Eswatini's electricity generation, transmission and distribution, as well as customer relations (liaising with the ESERA and EEC (Eswatini Electricity Company) on technical and operational issues).
- b. **ESERA (Eswatini Energy Regulatory Authority):** Will provide information and consult in areas that involve any Independent Power Producer (IPP) work, legal and regulatory framework for bioenergy electricity.
- c. **Center for Sustainable Energy Research (CSER):** CSER's role includes doing the spade work preparing zero-drafts, serving as the BTF's secretariat and overall coordination. CSER is also responsible for ensuring that project resources and support are available to the BTF.
- d. **Ministry of Agriculture Representative(s):** Will provide information and consult in areas involving farmers and agricultural practices (e.g. sugar cane).
- e. **Forestry Department Representative:** Will provide information and consult in areas dealing with forestry estates (large and small) as well as communities/farmers/companies who are producing and supplying wood for electricity generation – particular attention needs to be paid to the sustainability of the forestry extraction, best practice in both production and harvesting the wood for electricity generation, etc.
- f. **Biomass Group:** Will include companies and their associations to provide information and consult from the private sector with bioenergy interests.

4. Reporting

The task team will submit a draft bioenergy policy and a report on its findings and recommendations to the Minister of Natural Resources and Energy for approval.

5. Expected Outputs - Deliverables

The BTF shall develop the zero order draft of the bioenergy policy. A validation workshop for the zero order draft with all relevant stakeholders shall be held. The first draft shall be developed using information from the validation workshop. The two outputs are:

- A. Zero order draft of the bioenergy policy
- B. First order draft of the bioenergy policy

6. Duration, Scheduling of the Assignment and Remuneration

The BFT shall work for at least 8 months, holding at least eight (8) meetings, with five (5) physical meetings and at least three (3) virtual meetings.¹ For face-to-face meetings lunch and transport reimbursement shall be provided

¹ *These is the minimum period of BTF operation and number of meetings. Should the MNRE and other members of the BTF feel the need to extend the duration of the BTF's operation and mandate, that should be considered.*



by the CSER through the ICAT Project.

7. Approval and Implementation

Once approved by the Minister of Natural Resources and Energy, the bioenergy policy will be submitted to the Cabinet for final approval. Once approved by the Cabinet, the policy will be implemented by the relevant government agencies and stakeholders.

8. Final List of BTF Members

The table shows the list of Stakeholders that the various organizations forwarded to be members of the BTF.

ORGANIZATION	Contact Person	Role in the Project
MTEA-CCU	Kuhle Hlophe	BTF Member
UNESWA-CSER	Gcina Mavimbela	Consultant
UNESWA - CSER	Nosiphiwo Zwane	Consultant
MTEA-CCU	1. Bafana Simelane, 2. Simangele Mahlinza	BTF Member BTF Member
MNRE	3.Thembinkosi Ndzimandze 4.Mzwandile Ndzinisa 5.Khulekani Sifundza	BTF Leader BTF Member BTF Member
Ministry of Agriculture	6.Thapelo Hlatshwayo 7.Christopher Mtsetfwa	BFT Member BTF Member
MTEA-Dept of Forestry	8.Mbhekeni Nxumalo	BTF member
ESERA	9.Sihle Magagula 10. Ntokozo Dlamini	BTF Member BTF Member
Biomass Group	11.Oloff Marais	BTF member

The members of the Task Force were drawn from the following stakeholders through consultations at the inception meeting with MNRE and at the inception workshop with the wider energy stakeholders.

- i) Ministry of Natural Resources and Energy – Energy Department (which leads the BFT)
- ii) Ministry of Economic Planning and Development
- iii) Ministry of Tourism and Environmental Affairs – Forestry Department
- iv) Ministry of Agriculture - Crops
- v) Eswatini Sugar Association (ESA)
- vi) Ubombo Sugar Limited
- vii) Royal Eswatini Sugar Corporation
- viii) Montigny Investments
- ix) Peak Timbers/Shiselweni Forestry Company
- x) Eswatini Cane Growers Association (ECGA)

The consultations concluded that the BTF shall have at least one representative from Energy, the Regulator, MTEA, Ministry of Agriculture and the Biomass group. The Biomass group represents private sector companies interested in Bioenergy.