



MAASAI MARA UNIVERSITY

ENERGY MANAGEMENT POLICY

Policy No.	MMU/CINRE/P01
Version	01
Principal Responsibility	Director, Centre for Innovations, New and Renewable Energy
Effective Date	15 th January, 2018

Policy Approval

This policy shall be known as the Energy Management Policy of Maasai Mara University (herein after referred to as “the Policy”) which shall take effect on the date of approval by the University Council.

In exercise of the powers conferred by Statute 17 (2d) of Maasai Mara University, section 35(1) (a) (iii) of the Universities Act No. 42 of 2012 and section 19 of the Charter for Maasai Mara University 2013, Maasai Mara University Council affirms that this Policy has been made in accordance with all relevant legislations.

Dated the day of2018

Signed:

Dr. Samuel Agonda Ochola, PhD

Chairman of Council

P.O. Box 861-20500 Narok, Kenya

Telephone: +254 - 205131400

Email: chaircouncil@mmarau.ac.ke

Website: www.mmarau.ac.ke

© Copyright Maasai Mara University 2018

Foreword

Maasai Mara University believes and understand that, energy regulations are beneficial for organizational management. Regulations can often feel like yet another piece of administration for businesses to deal with, or even something that seems to get in the way of progression. However, regulations can actually have a far-reaching effect on improving the way our university operates in subsequent years. In the case of sustainable business operations, we understand that, recent regulations disrupt the standard procedures and ways of thinking to allow institutions to improve their efficiency, saving the institutions money in the long run and helping it to become more productive ISO 50001 Energy Management Standard, LEED Energy Efficiency standard, the Building Energy Efficiency Certificate and the ERC Directive just to name a few.

The university will include greenhouse gas emissions in its annual Report. This Mandatory Carbon Reporting will facilitate changes that have a positive outcome for the institution's benefit. Carbon reporting means that the institution need to have a greater awareness and understanding of its energy usage and emissions, which inevitably will result in lower energy consumption and improved energy efficiency. As well as the financial and environmental benefits, energy management will create a corporate culture of social responsibility, which in turn will improve brand loyalty, brand reputation and even employee engagement.

The University will strive to join other Organizations across the globe in endeavoring to take part in the international energy management standard ISO 50001, which follows procedures from implementation stage through to maintenance and improvements.

For us, the aim is to realize a 30% reduction in energy usage after implementing the regulations, as well as increased engagement among management staff and enhanced O&M practices.

Prof. Mary K. Walingo, PhD, MKNAS, EBS

Vice-Chancellor

Definition of Terms

''The University'' means Maasai Mara University

Table of Contents

Policy Approval	i
Foreword	ii
Definition of Terms.....	iii
Table of Contents.....	iv
Acronyms and Abbreviations	v
1. Introduction	1
1.1 Vision, Mission and Core Values.....	2
2. Purpose	2
3. Policy Statement	3
4. Policy Objectives.....	3
5. Scope of the Policy	4
6. Energy Situation in the University	4
6.1 Energy Resource Potential	5
6.2 The Energy Demand and Supply	5
6.3 The Role of Energy in Institutional Economy	5
7. Key Drivers of the Policy development	6
8. Expected Outcomes	6
9. University Committee on Energy Management (UCEM).....	7
9.1 Membership of UCEM.....	7
9.2 Authority and Responsibility of UCEM.....	7
10. Policy Implementation	8
11. Policy Review	8

Acronyms and Abbreviations

DVC (A&SA) – Deputy Vice-Chancellor (Academic and Student Affairs)

ERC – Energy Regulatory Authority

kWh – Kilo Watt hour

O&M – Organizational Management

1. Introduction

Maasai Mara University is a successor of the then Narok University College which was established as a University College of Moi University in 2008. The university is located within Narok County. It attained full University status following the enactment of the University's Act, 2012 and the award of the charter on 12th February 2013 from which it draws its mandate. The University now operates five Schools namely: School of Science and Information Sciences, School of Education, School of Business and Economics, School of Tourism and Natural Resource Management and the School of Arts and Social Sciences.

The overall objective of the energy policy is to ensure efficient, affordable, competitive, sustainable and reliable production/use of energy to meet university developmental needs efficiently, while protecting and conserving the environment. Due to heavy use of conventional fossil based energy and unsustainable use of fuel wood, environmental degradation and increased CO₂ in the atmosphere, average global temperature will climb by more than 3°C by the end of the century. To arrest the situation, UN sustainable development goal no. 7 stresses on the increasing use of affordable and clean energy towards sustainable development. The Paris Agreement 2015 tasked member states to reduce CO₂ emissions to keep global warming below 2°C. The agreement recognizes the role of non-party stakeholders in addressing climate change, including cities, other subnational authorities, institutions, civil society, the private sector and others. They are invited to: scale up their efforts and support actions to reduce emissions; build resilience and decrease vulnerability to the adverse effects of climate change; uphold and promote regional and international cooperation.

The University's energy policy has been guided by the policy set out in Sessional Paper No. 4 of 2004 and governed by a number of statutes, principally the Energy Act, No. 12 of 2006. Adoption of the Kenya Vision 2030 and the promulgation of the Constitution of Kenya 2010, made it possible to develop the policy and all the statutes so as to align them with Vision and the Kenyan Constitution.

University and its environs is endowed with abundant Renewable Energy resources including Solar, Wind, and Biomass. To enhance energy security, mitigate climate change, generate income

and create employment, energy resources have to be explored in a diversified manner. To exploit these resources efficiently and sustainably, it requires a robust legal and regulatory framework as well as sound institutional set up. The institution has witnessed increasing university enrollment and general institutional operations, leading to high energy bills. Diversifying the energy supply sources apart from the National Grid, to respond to new challenges in the energy requirements has become eminent. The overall long-term objective of the policy is to establish an efficient institutional energy development production, storage, and end-user systems in an environmentally sound manner with due regard to gender issues for sustainable socio-economic transformation.

1.1 Vision, Mission and Core Values

Vision

To be a world class university committed to academic excellence for development

Mission

To provide Quality University education through innovative teaching, research and consultancy services for development

Core Values

Excellence

Team Work

Professionalism

Equity and Social Justice

Creativity and Innovativeness

Transparency and Accountability

2. Purpose

The policy reflects the vision of the university and the society in transforming the Academic Training. Particular attention will be given to the overall structure and mechanisms of the energy

and university recurrent expenditure, research development ambitions, priorities of the university and prudent use of scarce resources.

3. Policy Statement

As the University we are committed to continuously improving of our Energy efficiency and performance and thereby reducing energy costs, emissions and wastage. We will strive to improve energy management within our operations and work towards energy-efficient best practices which are cost-effective. Reducing our energy cost per kWh produced will give us a competitive advantage over others in our industry.

4. Policy Objectives

Main Objective

The overall objective of the energy policy is to ensure sustainable, adequate, affordable, competitive, secure and reliable use and supply of energy to meet institutional needs at least cost, while protecting and conserving the environment.

Specific Objectives

- i. To utilize energy as a tool to accelerate academic, research and economic empowerment for the institutional development and the country.
- ii. To improve access to affordable, competitive, and reliable energy services.
- iii. To provide an environment conducive for the development and provision of energy services.
- iv. To prioritize and promote development of indigenous primary and secondary energy resources.
- v. To prioritize and promote the development of local technologies in energy development.
- vi. Promote energy efficiency and conservation.
- vii. To ensure that prudent environmental, social, health and safety considerations, as well as issues of climate change are factored in training programmes.

- viii. To ensure that a comprehensive, integrated and well informed New and Renewable Energy sector plan is put in place for effective development.
- ix. To foster local, national and international co-operation in New and Renewable Energy investments and development.
- x. To promote capacity building in the sector through research, development and training.
- xi. To promote institutional manufacture of plant, equipment, appliances and materials.
- xii. Promote diversification of renewable energy sources to ensure security of supply.
- xiii. To ensure that investments and operations in New and Renewable Energy sector comply with institutional strategic plan requirements.
- xiv. To promote and develop Institutional departmental innovation groups in the development of energy resources.
- xv. To promote an elaborate response strategy in the management of energy related disasters.
- xvi. To encourage generation of electricity from renewable resources and build the necessary infrastructure developments.

5. Scope of the Policy

The scope of this policy is to enhance energy security, mitigate climate change, generate income and create employment, energy resources have to be explored in a diversified manner

6. Energy Situation in the University

Energy sector play a critical role in the academic, research and training development of an institution. All productive academic functions; Research, training, technological advancement and innovations of the University are driven by an adequate, reliable, affordable and sustainable energy supply. At the present, affordable, reliable and accessible electricity from the National Grid is identified consistently as a major constraint in achieving desired academic transformation in institution. The use of Charcoal, firewood, and petroleum is too costly, a public health hazard, environmentally unfriendly and a danger to global warming phenomenon.

6.1 Energy Resource Potential

The Renewable energy resources base in the University includes: Biogas, Solar, wind, and biomass wastes and residues. The Narok region has a lot of sunshine and wind resources almost throughout the year from which solar and wind energy can be tapped. Also, within the university and its surroundings, there are plenty of Biomass and biogas energy resources. This resource has not been fully developed because the institution is only dependent majorly on electricity from the National Grid. At the present, the Biomass is exploited in form of firewood and charcoal.

6.2 The Energy Demand and Supply

At the present, the energy balance in university is dominated by traditional use of biomass in the form of charcoal and firewood. On average demand for electricity is growing at 20-30 percent per annum. To foster the desired academic transformation, university's access to modern energy services in an affordable, reliable, sustainable and environmentally-friendly manner is inevitable.

6.3 The Role of Energy in Institutional Economy

Energy is a critical component in the academic training, research, technological, innovation advancements, and institutional security of a university. The level and the intensity of energy use in a university is a key indicator of academic growth and development. The Kenya Vision 2030 identified energy as one of the infrastructure enablers of its socio-economic pillar. Sustainable, competitive, affordable and reliable energy for all academic and training institutions is a key factor in realization of the Vision.

Energy shortages and supply disruptions coupled with high cost remain serious obstacles to academic training, research, innovations and technological activities. Plans are underway to develop renewable energy such as wind, solar and biomass.

The cost of energy has significant impact on institutional core functions, particularly those that are energy intensive such as science laboratories, library, kitchen, security, workshops etc.

7. Key Drivers of the Policy development

The institutional energy sector faces a number of challenges which include: increasing access to modern energies, security of supply, reducing the cost of energy supply, environmental protection, research and development of appropriate energy technologies; raising necessary financing for energy projects and inadequate awareness of the benefits and methods of energy conservation and efficiency.

Academic and training needs, environmental and economic situation of the institution and indeed the country has significantly changed both locally and internationally. Even more significantly, the government has formulated several policies and enacted legislation in other sectors which require addressing. The key drivers for the policy development include: the institution's desires to promote alternative energy sources to improve energy mix; national and global growing environmental concerns; meeting growing demand for modern energies; improving governance and performance of the energy sector; accommodating National Vision 2030 goals, ERC 2006 guidelines.

The University Energy Policy 2016 spells-out university's intentions to improve the sector performance and governance to propel academic, research, technology and innovations growth and reduce emissions. It communicates the institution's intended actions and the desirable future conditions of the energy sector. It seeks to actively mobilize the staff, students and other resources towards improving sector performance and governance.

8. Expected Outcomes

The University policy reflects the vision of the university and the society in transforming the Academic Training. Particular attention being given to the overall structure and mechanisms of the energy and university recurrent expenditure, research development ambitions, priorities of the university, prudent use of scarce resources. The formulation and implementation of this policy is expected to:

- i. Increase access to modern energy services, particularly in essential university sectors;
- ii. Promote Security of supply of energy;

- iii. Encourage efficient production and utilization of energy resources;
- iv. Minimizes the negative environmental and health effects from energy production, conversion, transportation and use;
- v. Reduce dependence on imported petroleum, electricity from the national grid and switch to locally available energy supplies;
- vi. Promote cost effective utilization of energy; Increase sustainable production and utilization of renewable energies;
- vii. Promote cross-sectoral linkages.

9. University Committee on Energy Management (UCEM)

The University Committee on Energy Management shall be established and shall be responsible for making policy recommendations to the Vice-Chancellor on energy management and related mechanisms for the protection/exploitation of Energy resources.

9.1 Membership of UCEM

The membership shall consist of 8 members namely:

- i. The Deputy Vice-Chancellor, (A&SA)
- ii. Registrar planning and Development
- iii. Director, Centre for Innovation, New and Renewable Energy (CINRE)
- iv. Representatives from Schools.

9.2 Authority and Responsibility of UCEM

The committee shall have the following authority and responsibility with respect to Energy Management:

- i. To develop and recommend the University policy to the Vice Chancellor dealing with energy management, including the revision of this document.
- ii. To make recommendations to the Vice Chancellor on energy efficiency and saving measures and standards.

- iii. To promulgate such guidelines and procedures as may be necessary for the implementation of this policy, subject to review and approval of the Vice Chancellor.
- iv. To review as appropriate, agreements on Energy matters that may be entered into as a prerequisite to University participation in a sponsored project or receipt of a grant or contract.
- v. To establish deadlines for the disposition of energy development materials.
- vi. To advise the vice Chancellor on the appropriate Renewable energy projects

10. Policy Implementation

The responsibility of implementing this policy will be vested in the Director, New and Renewable Energy

11. Policy Review

This policy shall be reviewed from time to time