

## The Energy Act, 2019

(No. 1 of 2019)

### The Draft Energy (Energy Management) Regulations, 2020

In exercise of the powers conferred by Section 93 (2) (r) of the Energy Act, 2019, the Cabinet Secretary for Energy makes the following Regulations –

#### Part I – Preliminaries

- Citation**
1. These regulations may be cited as the Energy (Energy Management) Regulations, 2020.
- Application**
2. These Regulations shall apply to the owner of any designated industrial, commercial, and institutional facilities using any form of energy.
- Definitions**
3. In these regulations, unless the context otherwise requires: -
    - a) **“Authority”** means the Energy and Petroleum Regulatory Authority established pursuant to Section 9 of the Act;
    - b) **“Act”** means the Energy Act, 2019;
    - c) **“Accreditee”** means a person or entity accredited by the Authority under these regulations;
    - d) **“corporate entity”** means a company registered under the Companies Act, a society registered under the societies Act or a partnership registered under the Partnerships Act or Limited Partnerships Act;
    - e) **“designated facility”** a facility designated by the Authority under section 204 of the Act;
    - f) **“energy audit”** means the monitoring, verification, and analysis of energy use with an aim of coming up with recommendations for energy conservation measures, and delivered in form of a technical report;
    - g) **“energy auditor”** means a person accredited by the Authority to undertake energy audits;

- h) **“energy audit firm”** means a corporate entity engaged in the business of undertaking energy audits;
- i) **“energy conservation”** means efforts leading to a decrease in energy consumption;
- j) **“energy investment plan”** means a list of recommended energy conservation measures and activities, as recommended in an energy audit report, with the allocated timelines, monetary and human resources;
- k) **“energy manager”** means a person(s) responsible for implementation of the energy management system activities and for delivering energy performance improvements in designated facilities;
- l) **“energy savings”** means the amount of reduction in energy units consumed in a facility as a result of implementation of energy efficiency and conservation measures;
- m) **“energy service company”/ “ESCO”** means a corporate entity engaged in the business of undertaking energy audits and the development, design, financing, and building of energy conservation projects and whose compensation is directly linked to actual energy savings;
- n) **“facility”** means any place in which energy is consumed including but not limited to factories, commercial buildings, power utilities, institutional buildings, local authorities, municipalities, pipelines, water companies, street lighting;
- o) **“facility owner”** means an owner, a charterer or a lessee of a facility;
- p) **“Kenya Standard”** shall have the meaning assigned to it under Standards Act, Cap 496 Laws of Kenya;
- q) **“measurement and verification”** means the process of planning, collecting data, analysing, verifying, and reporting energy performance or energy performance improvement;

- r) **"owner"** includes a lessee of a designated facility;
- s) **"person"** means any natural or juridical person;
- t) **"revoke"** means to withdraw and invalidate an accreditation issued under these regulations;
- u) **"suspend"** means to temporarily and for a defined period of time, withdraw and invalidate a certificate of accreditation issued under these regulations;
- v) **"Tribunal"** means the Energy and Petroleum Tribunal established under section 25 of the Act;
- w) **"walk-through audit"** means an inspection of a facility to identify maintenance, operational or deficient equipment issues and also to identify areas that need further evaluation.

## **Part II – Classification of Facilities and Energy Management Policy**

### **Classification of Facilities**

4. (1) The Authority shall, from time to time, classify facilities by energy consumption into high energy users, medium energy users and low energy users for purposes of these regulations.
- (2) The authority shall from time to time specify and publish the designated facilities in accordance with the Act.

### **Energy Management Policy**

5. (1) **The owner of a designated facility shall develop an energy management policy for the facility and submit it to the Authority for approval before implementation.**
- (2) The Authority shall review the policy and communicate its decision to the facility owner within thirty (30) days.
- (3) An energy management policy prepared under these regulations shall be in accordance with Kenya Standard KS ISO 50004 or any other subsequent or replacement standards and shall have the minimum requirements provided in the First Schedule.

**Designated facilities to maintain data**

6. (1) **The owner of a designated facility shall obtain and maintain records relating to energy consumption at the facility including:**
- a) Monthly consumption of electric power, fuel (including biomass and petroleum products), and water;
  - b) Monthly production data or occupancy levels;
  - c) Number of employees and;
  - d) Up to date building plans, infrastructure plans, and floor area.
- (2) **The owner of a designated facility shall submit energy consumption reports at the end of every financial year in a manner prescribed by the Authority.**

This includes the analyzed data/ trends for the past one year that should be submitted in form of report

**Designated facility to have energy manager**

7. An owner shall designate an **accredited energy manager for every designated facility who shall be responsible for the co-ordination and promotion of energy efficiency and conservation programmes.**

The Energy Manager Should be a CEM; Certified Energy Manager, you are allowed to outsource

### **Part III – Energy Audits**

**Energy Audits**

8. (1) The owner of a designated facility shall cause an energy audit of the facility to **be undertaken at least once every four (4) years.**
- (2) An energy audit shall be undertaken by an accredited energy auditor or energy audit firm or energy service company and shall be conducted in accordance with Kenya Standard KS ISO 50002 or any other subsequent or replacement standards.
- (3) The report of the audit undertaken under paragraph (1) shall at a minimum comply with the requirements in Kenya Standard KS ISO 50002 or any other subsequent or replacement standards and shall be in the form set out in the Second Schedule.
- (4) An energy auditor shall upon completion of an audit provide the owner of a facility with an executed quality assurance declaration in the form set out in the Third Schedule.

**Submission of Reports to the Authority**

9. (1) The owner shall, within six (6) months of completion of an energy audit, submit the report of the energy audit to the Authority in a manner specified by the Authority.
- (2) The Authority shall, within thirty (30) days of receipt, examine the energy audit report submitted hereunder and: -
  - (a) where it is satisfied with the report, approve the same and communicate the approval to the owner, or;
  - (b) where it is dissatisfied, reject the report and communicate with the owner giving reasons for the rejection and;
- (3) Where the Authority rejects an energy audit report, it shall require the owner to either cause a review and re-submission of the report within thirty (30) days or cause the energy audit to be repeated within a period of six (6) months.
- (4) The Authority may subject the **energy audit report to verification** by conducting a quality control energy audit after giving a minimum of seven (7) days' notice to the facility owner.
- (5) The owner of a designated facility shall **allow the Authority or an agent appointed by the Authority access to the facility for purposes of conducting a quality control energy audit.**
- (6) A facility owner who fails to grant access to the Authority or its agent as required under this part commits an offence.

**Energy Investment Plan**

10. (1) An owner of a designated facility shall within six (6) months from the approval of the energy audit report, **prepare and submit to the Authority an energy investment plan for implementation of the energy conservation measures in the approved energy audit.**
- (2) An energy investment plan under paragraph (1) shall be reviewed after approval of the next energy audit.

(3) The owner of a designated facility shall implement the energy investment plan to:

- a) realize at least fifty (50) percent of the identified and recommended energy savings, within three years of submission of the energy investment plan to the Authority, and;
- b) Bring the designated facility into compliance with the energy performance indicators published by the Authority from time to time.

(4) The owner of a designated facility shall submit to the Authority an annual implementation report of the energy investment plan in the format set out in the Fourth Schedule.

(5) The Authority or its agent may, with notice, undertake inspection of a designated facility to verify the accuracy of the implementation report.

Apart from Submitting the Annual Energy Consumption Report, the facility should submit the implementation report indicating the projects implemented and savings achieved.

#### Part IV - Measurement and Verification of Energy Performance Improvement

##### Measurement and verification

11. (1) Measurement and verification shall be undertaken by a Category EAMV accredited auditor

(2) Measurement and verification shall be conducted in accordance with Kenya Standard, KS ISO 50015 or any other subsequent or replacement standards.

#### Part V – Energy Performance Indicators and Energy Savings Certificates

##### Energy performance indicators

12. The Authority shall publish on its website, the allowable benchmark and best performance indicators for each sector of the economy based on best practices for energy performance indicators within three (3) years from the date of these regulations and thereafter, the Authority shall review and publish the National energy consumption indices annually.

Developed during the audit; they can be used as benchmarks

13. Every designated facility shall during each energy audit establish its **energy performance indicator** in accordance with Kenya Standard, KS ISO 50006 or any other subsequent or replacement standards.

**Consumption of energy beyond acceptable limits**

14. (1) Where the Authority is of the view that any designated facility is **consuming unacceptable levels of energy** and above the benchmarks established under regulation 12, such facility shall, on written notification by the Authority, submit;

- a) A detailed energy audit report compiled by an accredited energy auditor;
- b) A detailed remedial plan of action to reduce energy consumption to acceptable levels, and
- c) A commitment to implement the approved remedial plan within three (3) years of its approval. Such remedial plan as in paragraph 14 may include the purchase of energy savings certificates or equivalent energy efficiency trading scheme as set out in the Fifth Schedule.

(2) The failure to submit a detailed energy audit report, a detailed remedial plan and the failure to implement such a plan on approval by the authority shall be an offence.

**Energy savings certificate**

15. The Authority may, upon **application by a designated facility issue an energy savings certificate.**

(1) An application for an energy savings certificate shall be accompanied by the information and documentation specified in the Sixth Schedule.

(2) The Authority shall within forty-five (45) days of receiving the application approve or reject it giving reasons for rejection.

(3) The Authority may issue a designated facility:

- a) **White Certificate** if the facility's energy performance indicator is **better than the published best indicator for the sector.**

- b) **Green Certificate** when the facility's energy performance indicator **meets the published allowable benchmark** for the sector.
- (4) An **energy savings certificate** shall indicate the number of **tradable credits** determined from the annual energy saved from implementation of energy saving measures as per the guidelines in the Fifth Schedule.
- (5) The authority shall maintain a register of all designated facilities issued with **energy savings certificates**.

## **Part VI - Accreditation of Energy Auditors, Energy Managers, Energy Audit Firms, and Energy Service Companies**

### **Accreditation of energy auditors and managers**

16. (1) A person shall not-
- a) carry out an energy audit under these regulations,
  - b) undertake measurement and verification of energy performance, or;
  - c) be employed or contracted as an energy manager as required under these regulations,
- unless he or she is accredited as an energy auditor or energy manager by the Authority.
- (2) A person shall be qualified to be accredited as an energy auditor or energy manager if he or she holds the qualifications set out in the Seventh Schedule.
- (3) The Authority may require a person applying for accreditation as an energy auditor or energy manager to be examined in such a manner as it may determine for purposes of ascertaining his or her ability to undertake, engage in, or perform energy audits or be employed or contracted as an energy manager.
- (4) The Authority may, on receipt of an application for accreditation of an energy auditor, grant the applicant one of the following categories of



accreditation certificates and the accreditee be entitled to undertake work within the scope indicated along the category: -

- a) Category EAMV - undertake energy audits of designated facilities classified by the Authority as either medium or high energy users and undertake measurement and verification of energy performance.
- b) Category EA1 undertake energy audits of designated facilities classified by the Authority as either medium or high energy users.
- c) Category EA2 - undertake energy audits of designated facilities classified by the Authority as medium energy users.

(5) Applications for accreditation as an energy auditor and/ or energy manager shall be in the form set out in the Eighth Schedule and shall be accompanied by proof of payment of the application fees set out in the Ninth Schedule.

**Accreditation of  
energy audit  
firms**

17. (1) No person shall engage in business as an energy audit firm unless it is accredited by the Authority.

(2) The Authority may, on receipt of an application grant the applicant one of the following classes of energy audit firm licenses and the accreditee shall be entitled to undertake audits within the scope indicated along the category: -

- a) EAF1 - Authorised to undertake energy audits of designated facilities classified by the Authority as either medium or high energy users and have in its employment at least one category EAMV or EA1 accredited energy auditor.
- b) EAF2 - Authorised to undertake energy audits of designated facilities classified by the Authority as medium energy users and have in its employment at least one category EA2 accredited energy auditor.

(3) Applications for accreditation as an energy audit firm shall be in the form set out in the Eighth Schedule and shall be accompanied by proof of payment of the application fees set out in the Ninth Schedule.

(4) An energy audit firm that conducts energy audits that are beyond its scope commits an offence.

**Accreditation of  
Energy Service  
Companies**

18. (1) No person shall engage in business as an ESCO unless it is accredited by the Authority.

(2) The Authority may, on receipt of an application grant the applicant an ESCO license and the accredittee shall be entitled to: -

- a) undertake audits of designated facilities classified by the Authority as either medium or high energy users;
- b) develop, design, finance and build or implement energy conservation projects whose compensation is directly linked to actual energy savings.

(3) The company shall have in its employment at least one category EAMV accredited energy auditor.

(4) Applications for accreditation as an ESCO shall be in the form set out in the Eighth Schedule and shall be accompanied by proof of payment of the application fees set out in the Ninth Schedule.

**ESCO Contracts**

19. (1) A designated facility and an ESCO shall enter an energy service contract to govern their relationship and setting out the obligations of each party prior to commencement of work.

(2) The energy service contract shall meet the requirements as to content set out in the Tenth Schedule.

(3) An accredited ESCO shall, within thirty (30) days of entering into an energy service contract, send a copy of the contract to the Authority for review to ensure compliance with this regulation 19.

(4) The Authority shall within twenty one (21) days communicate, in writing, to the facility and energy service company (ESCO) of receipt and any reservations therein.

**Accreditation  
Certificates**

20. (1) The Authority shall examine all applications for accreditation and shall, where it is satisfied that a person possesses the qualifications set out in these regulations for accreditation as-

- a) an energy auditor;
- b) an energy manager;
- c) an energy audit firm, or;
- d) an energy service company

issue an appropriate accreditation certificate.

(2) The Authority shall cause an applicant for energy auditor's certificate, including applicants for upgrading, to be examined in such a manner as it may determine and upon any matter or thing in connection with the application for the purpose of ascertaining the applicant's qualification and suitability for grant of the class of certificate to which the application relates.

(3) Accreditation certificates under this part shall be in such form as the Authority may, from time to time, determine.

(4) Issuance of accreditation certificates shall be subject to payment of the accreditation fees set out in the Ninth Schedule.

**Determination of  
Applications**

21. (1) Applications for accreditation under these regulations shall be made electronically or in any other manner that the Authority may, from time to time prescribe.

(2) The Authority shall process all applications and communicate the outcome to the applicants no later than: -

- a) Sixty (60) days from the date of receipt of the application for accreditation of energy auditors and energy managers.

b) Thirty (30) days from the date of receipt of application for accreditation of energy audit firms and energy service companies.

(3) Accreditation certificates issued under this part shall be valid for a period of three (3) years.

**Renewal and  
Replacement of  
accreditation  
certificates**

22. (1) An application for renewal of an accreditation certificate shall be made at least thirty (30) days before the expiry date of the current certificate.

(2) An accredittee who wishes to renew their accreditation shall demonstrate to the Authority accumulation of at least thirty (30) credit points through Continual Professional Development as outlined in Eleventh schedule.

(3) Where the Authority is satisfied that an applicant has continuously met the conditions of the current accreditation, and has obtained the requisite continuous professional development credit points, the Authority shall renew the certificate subject to payment of the renewal fees set out in the Ninth Schedule.

(4) If the application for the renewal of a certificate has been made before its date of expiry but has not been dealt with by the Authority before the date of expiry, that accreditation shall remain valid until the application for renewal is finalised, and any renewal in such case shall be deemed to have commenced from the day the accreditation certificate would have expired before the renewal thereof.

(5) Where, upon application, it is shown to the satisfaction of the Authority that an accreditation certificate has been lost, destroyed or defaced, the Authority may issue a duplicate certificate of accreditation subject to payment of the replacement fees specified in the Ninth Schedule.

**Upgrading of  
Accreditation**

23. (1) An accredittee who wishes to upgrade from one category of accreditation to another shall make an application to the authority for such an upgrade at least two (2) years after issuance of the current accreditation certificate.

(2) Where the Authority is satisfied that an accreditee has met the required experience for the accreditation category for which an upgrade is sought, it shall approve the upgrading of the accreditation.

(3) The Authority shall approve upgrading of an energy audit firm's accreditation from one category to the other where the firm demonstrates that it has in its employment an energy auditor with the required category of accreditation.

(4) Upgrading of accreditation shall be subject to the accreditee paying the accreditation fees for the new category as specified in the Ninth Schedule.

**Suspension or  
Revocation of  
Accreditation  
Certificates**

24. (1) The Authority may suspend or revoke any accreditation certificate issued under these regulations where it is satisfied that an accreditee has breached the provisions of these regulations or any conditions attached to the accreditation.

(2) The Authority shall, prior to suspending or revoking an accreditation under this regulation, by notice in writing afford the accreditee an opportunity to show cause why the accreditation should not be suspended or revoked.

(3) A notice to show cause issued hereunder shall contain sufficient information to enable the accreditee discern the specific incidences of non-compliance in issue.

(4) An accreditee shall be entitled to appear before the Authority with or without representation to show cause why his accreditation should not be suspended or revoked.

(5) Any accreditation certificate issued and is not renewed for six (6) months after expiry, unless the accreditee has before expiry of the accreditation informed the Authority in writing of the intention and reasons not to renew the accreditation, shall not be eligible for renewal and will require the accreditee to apply for the accreditation anew.

- Register of certificates** 25. The Authority shall maintain and publish on its website and/or any other medium, a register of all accredited energy auditors, energy managers, energy audit firms and energy service companies, and the status of their accreditation certificates.
- Local content requirements** 26. All certificates of accreditation offered under these regulations shall comply with the local content requirements.
- Professional indemnity** 27. Every accredited energy audit firm or energy service company shall take out and maintain professional indemnity insurance cover with a licensed insurance company of a value determined by the Authority.
- Submission of Data** 28. Every accredited energy auditor, energy audit firm or energy service company shall submit information regarding energy audits carried out and/or energy conservation projects implemented in such intervals and in such manner as the Authority may prescribe.

#### **Part VII – Powers of Inspection and Compliance Orders**

- Powers of Inspection** 29. The Authority or its agent may carry out inspection, in relation to the compliance with these regulations, in accordance with section 11 of the Act.
- Compliance Orders** 30. (1) Where the Authority finds that any provisions of these regulations have been contravened by an accredittee, or that a condition has arisen which may lead to the contravention of these regulations, the Authority may issue a compliance order compelling the person to comply with the regulations.
- (2) A compliance order issued under regulation 30(1) shall state: -
- a) the specific provisions which have been or are likely to be contravened;
  - b) the measures which should be taken to rectify the contravention; and
  - c) the period within which the order shall be complied with.

**Part VIII - Offences and Penalties**

**Operating  
without  
Accreditation**

31. (1) A person who undertakes employment as an energy manager or undertakes business as an energy auditor, energy audit firm or energy service company without accreditation by the Authority commits an offence and shall, upon conviction be liable to a maximum fine of one million shillings.
- (2) An owner of a designated facility who denies the Authority or its agent access to a designated facility for purposes of checking or enforcing compliance with these regulations commits an offence and shall upon conviction be liable to a maximum fine of one million shillings.
- (3) Where a person is charged with offences under this regulation, he may request the Authority to compound the offence and prescribe a fine to be paid and upon payment of such fine, the Authority shall withdraw any criminal complaint against the person.
- (4) Where the Authority compounds an offence and the person charged with committing the offence pays the prescribed penalty, the Authority shall withdraw the criminal complaint against the person.

**Other offences  
and Fines**

32. (1) An accredittee who is found to be guilty of any of the offences listed below shall be liable to the fine or penalty indicated beside the offence.

<b>Act</b>	<b>Regulation</b>	<b>Description of Offence</b>	<b>Penalty</b>
188(2)		Provision of false information to the Authority	A fine not exceeding ten million shillings or to imprisonment for a term not exceeding two years or to both

	Providing inaccurate or incomplete information to the authority	A fine not exceeding one hundred thousand shillings
5(3)	Failure to designate an energy manager	100,000.00 per default
5 (4)	Failure to keep records of information	A fine not exceeding one million shillings, or to a term of imprisonment of one year, or to both
6(5)	Failure to audit and/or submit an audit report within the stipulated time	A fine not exceeding one million shillings, or to a term of imprisonment of one year, or to both
6(11)	Failure to grant access	A fine not exceeding fifty thousand shillings for each day or part thereof that the obstruction occurs
7(2)	Carries out an energy audit/services without a valid certificate of accreditation	A fine not exceeding five hundred thousand shillings or to a term of imprisonment not exceeding six months or to both such fine and imprisonment
9	Failure to take out professional indemnity	50,000.00
13(4)		A penalty not exceeding Kenya Shillings thirty thousand for each day or part



thereof that the breach continues.

(2) Where an accredittee or designated facility has previously been penalised for an offence and commits another such offence, the fine payable shall be two (2) times the amount provided for such an offence.

(3) Payment of penalties or fines in 32(1) above shall not absolve or indemnify an accredittee from any obligations to compensate a consumer.

(4) Any fines or penalties which are not paid shall be a civil debt recoverable summarily.

(5) The fines or penalties in 32(1) above are without prejudice to the Authority's right to suspend or revoke the accredittee's certificate.

### **Part IX - Complaints, Disputes and Appeals**

#### **Complaints and Disputes to be Referred to the Authority**

33. Any complaints and/or disputes between a designated facility owner or a consumer and an accredittee under these regulations or between two or more accredittees shall be referred to the Authority for resolution in accordance with the Energy (Complaints and Disputes Resolution) Regulations 2012 or any replacement of the same.

#### **Appeals**

34. An accredittee, owner of a designated facility, or consumer who is dissatisfied or aggrieved by a decision of the Authority shall lodge an appeal with the Energy and Petroleum Tribunal.

### **Part X – Transition and Repeal**

#### **Transitional Provisions**

35. The transition provisions set out in the Twelfth Schedule shall apply.

#### **Repeal L.N. No.102 of 2012**

36. The Energy (Energy Management) Regulations, 2012 are repealed.



## SCHEDULES

### FIRST SCHEDULE

#### GUIDELINES FOR PREPARATION OF AN ENERGY MANAGEMENT POLICY

- 1) An Energy Management Policy shall include-
  - a. A commitment to **improve energy efficiency** and conservation with clear targets;
  - b. A commitment to comply with the **Act and these Regulations**;
  - c. A commitment to **provide resources** necessary to achieve energy efficiency and conservation;
  - d. A commitment to establish and implement a **strategic plan for energy efficiency and conservation**;
  - e. A commitment to **train staff** to ensure competence in energy efficiency and conservation;
- 2) The owner of the designated facility shall ensure that the policy is endorsed by the **top management**.
- 3) The owner of the designated facility shall ensure that the policy is **communicated to all staff**.

### SECOND SCHEDULE

#### GUIDELINES FOR ENERGY AUDIT REPORT

##### *1. Cover Page*

- Report title
- Name of client (company for which the facility has been audited)
- Physical location of the facility
- Date of report (Month and year)
- Name and address of Lead Auditor and/or energy audit firm or energy service company.

##### *2. Page 2*

- Quality Assurance Declaration Form

##### *3. Page 3*

- Audit team members and their roles.

#### 4. Executive Summary

All information in the Executive Summary should be drawn from the detailed information in the full report. The Executive Summary should contain a brief description of the audit, including but not limited to:

- Name of client, location of facility audited and dates of the audit
- Objectives of audit
- Methods, tools used, and the areas audited
- Status of implementation of previous audit recommendations where applicable
- Summary of energy use and consumption, which must include energy utilization index
- Summary of recommended energy conservation measures, annual energy savings and cost savings using the table format below:

S No.	Recommended Measure	Estimated Implementation Cost	Estimated annual energy savings (kWh)	Estimated Annual Monetary Savings	Estimated annual CO <sub>2</sub> reduction (kg)	Discounted Payback period	Internal Rate of Return (IRR)	Discounted Return on investment (ROI)	Net Present Value (NPV)
1									
2									
Total									

- Summary of other recommendations (e.g. **Alternative Energy sources**)

S No.	Recommended source	Estimated Implementation Cost	Estimated annual energy supply (kWh)	Estimated Annual Monetary Savings	Estimated annual CO <sub>2</sub> reduction (kg)	Discounted Payback period	Internal Rate of Return (IRR)	Discounted Return on Investment (ROI)	Net Present Value (NPV)
1									
2									
Total									

- Suggested implementation plan

#### 5. Introduction

- Objectives of the energy audit;
- Brief description of the processes at the facility;
- Scope of audit.

## **6. *Methods and tools used***

The method section shall contain the following;

- The procedure used for collection and analysis of the secondary data
  - Process used for prioritization and obtaining the inventory of energy consumption equipment and systems
  - The list of data collection and measurement tools, and instruments used
  - A declaration of the error/accuracy and status of calibration of the equipment
  - Procedure used for primary data collection
  - Relevant variables provided by the organisation e.g. operating parameters and production data.
- Method used for analysis of the facility's energy performance and determination of energy performance indicators
  - Criteria for identification and ranking of opportunities for energy efficiency and conservation measures
  - The financial criteria and technical/operational limitations and assumptions.

## **7. *All the assumptions made in taking measurements, calculations, and financial analysis.***

## **8. *Energy consumption, historical data analysis and establishment of baseline***

- i) Inventory of key energy consuming equipment and systems, with their ratings and annual time of operation;
- ii) Review of energy, production and service level data for the baseline period (at least 12 months preceding the audit);
- iii) Description of systems or equipment audited, their capacities and ratings, design and operating conditions;
- iv) Establishment of baseline energy consumption data such as the energy efficiency index (EEI – kWh/m<sup>2</sup>/year) of buildings, defined as the amount of energy consumed annually per Gross Floor Area (GFA) of the building or specific energy intensity (kWh/unit of production);
- v) Heat and mass balance where applicable;
- vi) Comparison of consumption data with the energy balance.

## ***9. Identified Energy Saving Measures and/or Alternative Energy Solutions***

- i) Brief description of the present situation and shortcomings identified
- ii) Pictures and maps showing the locations of the instruments and sensors in use during the audit
- iii) Recommended energy saving measures with clear and detailed calculations of the projected annual energy and cost savings, estimated investment cost and the financial appraisal for each measure using life-cycle-costing. All the data used should be supported by primary and/or secondary sources and the assumptions must be stated.
- iv) Alternative energy solutions.

## ***10. Energy Investment Plan***

- i) A description of resource allocation for implementation of the energy efficiency and conservation measures recommended in the energy audit report. This should detail the time frame and required resources and anything else which is relevant for the project.
- ii) Summary of targets for the measures to include: projected annual kWh savings, estimated cost savings, estimated investment cost and investment indicators such as discounted payback period, discounted return on investment (ROI), internal rate of return (IRR) and net present value (NPV). All the data used should be supported by primary or secondary sources and the assumptions must be stated.

## ***11. Monitoring and verification***

Explain the monitoring and verification process to be used after implementation for assessment of the recommended energy conservation measures.

## ***12. Appendices***

Information of significant importance, which cannot be presented as a part of the main report shall be presented in appendices.

The appendices should include:

- Schematics and layout drawings of facility or building audited
- Details of instrumentation used – parameters monitored and duration of monitoring for each parameter
- Data plots of performance of systems or equipment audited

- Energy efficiency of major equipment compared against industrial benchmarks
- Measurement and verification (M&V) plan for monitoring and verifying energy savings for each of the recommendations
- Evidence of opening and closing meetings (minutes, attendance registers etc)
- Soft copy of all the raw measurement data.

**13. General Notes to the Report**

- i) Documentation – All numbers related to the results should be supported by information showing how they were derived. This includes all energy savings, cost savings and financial appraisal tools.
- ii) All calculations in the report should be checked for mathematical accuracy.
- iii) SI units must be used in all parts of the report.
- iv) Grammar and style – The report should be in English, legible, paginated and written in proper prose. The language should be clear, concise and understandable.
- v) All graphs and plots should be properly labelled and should indicate the dates when the readings were taken. These should first be introduced in the text, then discussed and cross referenced.
- vi) The report should be printed on both sides to save paper and either book or spiral bound.
- vii) Reference to all the appendices should be made in the main report.
- viii) A hard and soft copy of the report shall be submitted to the Authority.
- ix) Citation, referencing and plagiarism – Proper and accurate citations and referencing should be indicated for all materials and works attributable to other sources. Clearly identify and cite (according to academic conventions) any borrowed numbers, ideas, or material and document all source material. Self-plagiarized reports shall not be admitted.

**THIRD SCHEDULE**

**QUALITY ASSURANCE DECLARATION FORM**

I/ We have conducted an energy audit as set out in the Energy (Energy Management) Regulations 2020, which comprise the company energy consumption and costs as at .....(Date).

## **Owner’s Responsibility for the Energy Investment Plan**

The facility Owner/ Occupier are responsible for the preparation and fair presentation of the Energy Investment Plan and the requirements of the Energy Management Regulations 2020. This responsibility includes: designing, implementing and maintaining internal controls relevant to the preparation and fair presentation of the Energy Investment plan that is free from material misstatement, whether due to fraud or error, selecting and applying appropriate energy audit methodologies; and making audit estimates that are reasonable in the circumstances.

## **Auditor’s Responsibility**

Our responsibility is to express an opinion on the energy supply and end use based on our audit. We conducted our audit in accordance with International Standards on Energy Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance whether the energy audit and investment plan are free from material misstatement.

An energy audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the energy and financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, we considered the internal controls relevant to the company’s preparation and fair presentation of the energy investment plan in order to design audit procedures that were appropriate in the circumstances, but not for the purpose of expressing an opinion on the company’s internal controls.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

## **Opinion**

In our opinion, the accompanying Energy Investment Plan gives a true and fair view of the possible intervention to improve energy efficiency and conservation of the company as at .....,  
(Date).



## Report on Other Legal Requirements

We wish to report to you, based on our audit that –

- a. We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit;
- b. In our opinion proper energy and financial records have/have not been kept by the facility owner/occupier, so far as appears from our examination of those records; and
- c. The company's energy supply and end use are/are not in agreement with the records.

Accredited Energy Auditor (Kenya) Name: \_\_\_\_\_

Accreditation Certificate Number: \_\_\_\_\_

National ID/Passport Number: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## FOURTH SCHEDULE

### GUIDELINES FOR IMPLEMENTATION REPORT

#### 1. Cover Page

- Report title
- Name of Designated facility
- Physical location of designated facility
- Date of report
- Name and certificate number of accredited energy manager.

#### 2. Executive Summary

All information in the Executive Summary should be drawn from the detailed information in the full report. The Executive Summary should contain a brief description of the following:

- Name of designated facility, location of facility or building audited;
- Measures implemented;
- Summary of energy saving measures, and the measured annual energy and cost savings in table format as shown below.

S. No.	Recommended energy saving measure	Projected annual energy savings	Actual annual energy savings	Percentage deviation	Projected annual cost savings	Actual annual cost savings	Percentage deviation	Projected Implementation cost	Actual implementation cost	Percentage deviation	Discounted Return on Investment (ROI)	Annual CO <sub>2</sub> Reduction (kg)
1												
2												
Total												

#### 3. Measures implemented and cost of implementation

- Details of measures implemented;
- Description of systems or equipment modified, their capacities and ratings, design conditions, equipment schedules, including information such as the type of systems, type of controls, type and number of auxiliary equipment, etc.

- Milestone chart showing the timeline of implementation;
- Cost breakdown of each measure in table format, with reference to the payment documents.

#### **4. *Measurements and Calculations***

- Details of the measurement and verification system adopted to measure and compare actual savings to the savings projected in the detailed audit report;
- Formulae and key data used for calculations;
- Detailed instrumentation plan;
- Parameters monitored and duration of monitoring of each parameter;
- Dates of data collection and logging;
- Performance of systems or equipment;
- Findings and observations.

#### **5. *Savings Achieved***

- Summary of the measures implemented, the projected and actual annual kWh savings, and the projected and actual annual cost savings. This should be normalized using CUSUM analysis
- Statement by the organisation on whether or not the implementation meets the organisation's savings target stated in the audit report.

#### **6. *Appendices***

Information with significant importance, which cannot be presented as a part of the main report (because of number of pages, quality of presentation, etc.) shall be presented as appendices.

- Data plots of performance of systems or equipment improved
- Data plots of energy consumed vs. time before and after implementation on the same graph, showing the improvement
- Energy efficiency of major equipment compared against benchmarks set during the detailed audit
- Current energy bills.

#### **7. *General Notes to the Report***

- i. Documentation – All numbers related to the results should be supported by information showing how they were derived. This includes all energy savings, cost savings and financial appraisal tools.
- ii. All calculations in the report should be checked for mathematical accuracy.
- iii. SI units must be used in all parts of the report.
- iv. Grammar and style – The report should be in English, legible, paginated and written in proper prose. The language should be clear, concise and understandable.
- v. All graphs and plots should be properly labelled and should indicate the dates when the readings were taken. These should first be introduced in the text, then discussed and cross referenced.
- vi. The report should be printed on both sides to save paper and either book or spiral bound.
- vii. Reference to all the appendices should be made in the main report
- viii. A hard and soft copy of the report shall be submitted to the Authority.
- ix. Citation, referencing and plagiarism – Proper and accurate citations and referencing should be indicated for all materials and works attributable to other sources. Clearly identify and cite (according to academic conventions) any borrowed numbers, ideas, or material and document all source material. Self-plagiarized reports shall not be admissible.

## **FIFTH SCHEDULE**

### **ENERGY EFFICIENCY TRADING SCHEME**

Trading scheme

Guidelines for determination of tradable credits

## SIXTH SCHEDULE

### INFORMATION AND DOCUMENTATION TO ACCOMPANY APPLICATIONS FOR ENERGY SAVINGS CERTIFICATE

- i) An **energy management policy approved by the authority.**
- ii) **Records of data relating to energy consumption** as in regulation 6 for a period of 5 years prior to the application for energy saving certificate.
- iii) **Letter of appointment for facility energy manager.**
- iv) Latest/current energy audit report approved by the Authority.
- v) Energy investment plan with proof of receipt from the Authority.
- vi) **Annual reports on the implementation of the energy investment plan.**
- vii) Report from an **accredited energy manager or energy auditor**, that includes proof that the applicant's energy **performance indicators are equal or better than the prescribed benchmark indices** as set out in regulation 12.
- viii) Any other information that the Authority may from time to time prescribe.

## SEVENTH SCHEDULE

### QUALIFICATION AND EXPERIENCE FOR ACCREDITATION

#### Part I: Energy Auditor – Minimum Academic Qualifications and Professional Experience

To be accredited as an Energy Auditor an applicant must have a minimum of any one of the following combinations of academic and professional qualifications.

<i>Qualification/ experience</i>	<i>Minimum requirement</i>
Academic (Education)	A Bachelor of Science or Technology or Engineering degree or Higher National Diploma in Electrical, Mechanical, Chemical, Mechatronic, or Energy Engineering or any other relevant degree from a recognized University. The relevant degree must have half of its course units related to the electrical and mechanical engineering aspects of energy.
Professional or post graduate	Have a relevant energy management certification from a body recognised by the Authority or Post Graduate Diploma in Energy Management or Master of Science degree in Energy Management from a recognised University.
Experience	Have conducted at least five (5) energy audits under the supervision of an accredited auditor that are NOT walk-through audits.

#### Part II: Categories of Energy Auditor Accreditation

##### a) Category EAMV Auditor

A holder of a category EAMV auditor accreditation certificate shall be authorized to conduct audits, and develop, design, and build or implement energy conservation projects of all facilities designated by the Authority.

An applicant for a category EAMV auditor accreditation certificate shall be required to have:

- i) Met all the qualifications in Part I of the Seventh Schedule;
- ii) Have certification in measurement and verification from a body recognized by the Authority;
- iii) Conducted at least five (5) energy audits, two (2) of which must have been of facilities designated as high energy users as specified in these regulations, and;
- iv) Carried out measurement and verification of at least one energy conservation project.

**b) Category EA1 Auditor**

A holder of a category EA1 auditor accreditation certificate shall be authorized to conduct audits of all facilities designated by the Authority.

An applicant for a category EA1 auditor accreditation certificate shall be required to have:

- i) Met all the qualifications in Part I of the Seventh Schedule and;
- ii) Conducted at least five (5) energy audits, two (2) of which must have been of facilities designated as high energy users as specified in these regulations.

**c) Category EA2 Auditor**

A holder of a category EA2 auditor accreditation certificate shall be authorized to conduct audits of designated facilities classified by the Authority as medium energy users.

An applicant for a category EA2 auditor accreditation certificate shall be required to have:

- i) Met all the qualifications in Part I of the Seventh Schedule and;
- ii) Conducted at least five (5) energy audits, two (2) of which must have been industrial facilities.







- a) .....
- b) .....

13. Have you applied for accreditation in the past? Yes  No . If yes,

- i. Certificate No .....
- ii. Date of Issue .....

14. Has any previous application for accreditation been rejected under these regulations? Yes  No  (If Yes, give details)

.....  
 .....  
 .....  
 .....

15. Has any previous accreditation been revoked under these regulations? Yes  No  (If Yes, give details)

.....  
 .....  
 .....  
 .....

16. Employment Record

Period from /To	Name of Company	Position Held	Responsibilities and Experience

17. Previous energy audits conducted in the last five (5) years.

Energy Audit Dates (Month/year)	Audited facility Location	Class of facility (medium/ high energy user)	Client's Name, Address/ Contact Information	Lead Auditor	
				Name	Accreditation certificate No.





4. National Identity Card/Passport Number: .....

5. KRA Personal Identification Number (PIN): .....

6. Contact details:

a. Telephone number(s): .....

b. Postal Address: .....

c. Email Address: .....

7. Name and address of present employer, if any

.....  
.....

8. Designation: .....

9. Academic Qualifications: .....

a) .....

b) .....

10. Professional Qualifications:

a) .....

b) .....

*(You may provide detailed information in separate sheets)*

11. Other specific qualification on energy related subjects (if any)

.....

*(You may provide detailed information in separate sheets)*

12. Membership of professional and/or technical associations

a) .....

b) .....

13. Have you applied for accreditation in the past? Yes  No . If yes,









4. KRA Personal Identification Number (PIN): .....
5. Contact details:
  - a. Physical Address: .....
  - b. Telephone number(s): .....
  - c. Postal Address: .....
  - d. Email Address: .....
  - e. Website (If any): .....
6. Details of accredited Energy Auditor (i.e. Lead Auditor):
  - a. Name: .....
  - b. Nationality: .....
  - c. National ID/Passport Number: .....
  - d. Telephone number(s): .....
  - e. Email Address: .....
  - f. Accreditation Certificate Number: .....
7. Provide legible copies of the following documents:
  - a. Certificate of incorporation or business registration certificate
  - b. Form CR12 from the registrar of companies not older than 12 calendar months from the date of issue
  - c. Personal Identification Number (PIN) certificate from the Kenya Revenue Authority
  - d. Valid tax compliance certificate from the Kenya Revenue Authority
  - e. Valid single business permit from the County Government
  - f. Proof of occupancy of Company's office
  - g. Identification documents (National IDs or Passports) for all company directors

- h. Certified copy of a valid Work Permit Class "G" for foreign directors working in Kenya or notarized declaration of non-residence for foreign directors not residing in Kenya
- i. National ID or passport of Lead Auditor
- j. Accreditation certificate of Lead Auditor
- k. Signed consent letter between the energy audit firm/energy service company and the accredited energy auditor
- l. Any other document/information that the Authority may from time to time prescribe.

I/We declare that the particulars given by me/us are true and accurate. I/We understand that it is an offence to give false information in an application for accreditation.

Date: ..... Signature of Applicant: .....

#### **NINTH SCHEDULE– ACCREDITATION FEES**

1. To be accredited as an energy auditor or energy manager, the following fees shall apply:

<b>Accreditee</b>	<b>Application fees (Kshs)</b>	<b>Accreditation fees (Kshs)</b>	<b>Renewal fees (Kshs)</b>	<b>Replacement fees (Kshs)</b>
Energy Auditor Category EAMV	1,000	2,500	2,000	500
Energy Auditor Category EA1	750	2,000	1,500	500
Energy Auditor Category EA2	500	1,500	1,000	500
Energy Manager	250	1,000	750	500

2. To be accredited as an energy audit firm or energy service company, the following fees shall apply:

<b>Accreditee</b>	<b>Application fees (Kshs)</b>	<b>Accreditation fees (Kshs)</b>	<b>Renewal fees (Kshs)</b>	<b>Replacement fees (Kshs)</b>
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Energy Audit Firm Category EAF1	750	2,000	1,500	1,000
Energy Audit Firm Category EAF2	500	1,500	1,000	1,000
Energy Service Company	1,000	3,000	2,500	1,000

## TENTH SCHEDULE – ENERGY SERVICE CONTRACTS

Energy Service Contracts shall at least have:

**1. Client Details**

- a. Physical address
- b. Postal address
- c. Email address
- d. Phone Number

**2. Details of the Energy Service Company**

- a. Physical address
- b. Postal address
- c. Email address
- d. Phone Number

**3. Terms of the contract**

- a. Scope of the work;
  - i. Setting of energy measurement baseline
  - ii. Energy baseline period
  - iii. Measurement and verification protocol to be applied (*how to measure energy and financial savings*)
  - iv. Target savings
  - v. Mode of payment:
    - Whether profits sharing and profit formula
    - payment from savings (*state percentage for ESCO and Client*)
    - Payment period (how long will the ESCO earn from the project)
- b. Dispute Resolution Mechanism
- c. Exit clause:
  - i. In this clause the client and the ESCO should state all possible situations that can lead to one party terminating the contract.
  - ii. The exit clause should state the losses likely to be incurred by each party and who will bear the cost.

## **ELEVENTH SCHEDULE**

### **CONTINUAL PROFESSIONAL DEVELOPMENT**

The accreditee shall accumulate a minimum of ten (10) credit points per year and thus, thirty (30) points at the expiry of the accreditation as follows:

1. Attending relevant trainings or seminars or workshops; 0.2 credit points per contact hour
2. Giving relevant seminar or training or workshop as a resource person; 0.5 credit points per contact hour
3. Presenting a paper on a relevant topic at a conference or publishing a paper in a journal; each paper 2 credit points
4. Project credit points earned through experience gained from:
  - a. Conducting energy audits or measurement and verification of energy savings according to the category of accreditation as follows.

<i>Type of audit</i>	<i>Project credit points</i>
Walk-through audit	2
Medium energy consumption facility	5
High energy consumption facility	10

The project credit points shall account for a minimum of 25 points.

### **TWELFTH SCHEDULE – TRANSITIONAL CLAUSES**

- a) All energy auditor and audit firm licenses issued by the Authority under the Energy (Energy Management) Regulations, 2012 shall become invalid on expiry.
- b) Holders of the existing licences shall be transitioned to the new categories under the following conditions:
  - i) Payment of the renewal fees.

ii) The accreditation categories shall be as follows:

<b>Accreditee</b>	<b>Old Licence Class</b>	<b>New Accreditation Category</b>
Energy Auditor	A	EAMV
		EA1
	B	EA2
Energy Audit Firm	A	EAF1
		ESCO
	B	EAF2

- c) The Authority may verify the details of energy audits provided before transitioning the applicant to a new category of accreditation.
- d) The Authority may waive the requirement for experience in measurement and verification in the first instance under energy auditor category EAMV.
- e) The fines in regulation 32(1) shall apply for any falsified records.
- f) The application for transition shall be processed within thirty (30) days from the date of application.