



**THE ENERGY (ENERGY MANAGEMENT)
REGULATIONS, 2021**

(Pursuant to Section 198 (1) and (2) of the Energy Act, 2019)

REGULATORY IMPACT STATEMENT

SEPTEMBER, 2021

Issued by the Energy and Petroleum Regulatory Authority

1. THE ENERGY(ENERGY MANAGEMENT) REGULATIONS, 2020

The Energy (Energy Management) Regulations, 2021 have been developed within the provisions of Section 198 (1) and (2) of the Energy Act, 2019 and constitute regulations to the same Act. They are a revision of the existing Energy (Energy Management) Regulations, 2012, gazetted on 28th September, 2012 via Legal Notice No. 102.

2. BACKGROUND TO THE REGULATIONS

Efficient use of energy in the commercial, domestic and industrial sectors is essential in reduction of the cost of living of Kenyans. In goods and service production particularly, this is an essential intervention tool for reduction of financial, environmental and social costs. Whenever energy is used efficiently, the overall production efficiency improves, leading to reduction in cost of production and a reduction in prices of goods and services in the economy. The overall rebound effect leads to increased consumption in the market, thus increased aggregate output of the country. The growth of industrial and service sectors in Kenya has occasioned increase in energy demand. This has necessitated proactive intervention to ensure energy is used efficiently.

Adoption of Energy Management philosophy has been identified as one of the channels through which industrial and service sectors-henceforth facilities-can improve their energy efficiency. In such a philosophy, facilities focus on the behavioural, technological, legal and financial spectrums of energy procurement and use. In Energy Management, facilities should establish and Energy Management Systems where they conduct energy audits, implement the recommendations of the audits, monitor, control and report the performance of the implemented measures, enhance capacity of employees in energy efficiency, ensure top level management commitment and adhere to the legal provisions of the jurisdictions within which they operate from.

To help facilities meet all these requirements, the Energy and Petroleum Regulatory Authority (the Authority) gazetted and started enforcing the Energy (Energy Management) Regulations

2012, in 2013. The Regulations were developed under the provisions of the Energy Act, 2006 (now repealed). Facilities were designated into industrial, commercial and institutional categories, and those with a minimum annual consumption of 180,000 kWh were supposed to comply. The Energy and Petroleum Regulatory Authority, together with other stakeholders, undertook an impact study of the current regulations to address gaps identified in the six years of implementation and align them with the Energy Act, 2019. The stakeholders included licensees, relevant government agencies like Kenya Bureau of Standards (KEBS), Kenya Industrial Research and Development Institute, non-government agencies like Kenyan Association of Manufacturers (KAM), Kenya Renewable Energy Association (KEREA) and Association of Energy Professionals of Eastern Africa (AEPEA). The objectives of the study inter alia were:

- i. To quantify the energy savings realized as a result of implementation of the Energy (Energy Management) Regulations, 2012 and project future potential savings
- ii. To collect views of the affected stakeholders on the relevance of the Energy Management
- iii. To Identify Gaps and areas of improvement for the Energy (Energy Management) Regulations 2012

A draft Energy (Energy Management) Regulations, 2021 was prepared, following the findings of the study. Presented herein in the regulatory impact statement of the draft Regulations. The statement covers benefits identified in the implementation of the current regulations and the projected economic, social and environmental impacts of new regulations.

3. SUMMARY OF FINDINGS OF THE IMPACT STUDY

This section presents results of the study.

3.1 Feedback on Relevance of the Regulations

Facilities were requested to indicate the relevance of the Regulations. Figure 3.1 shows the responses:

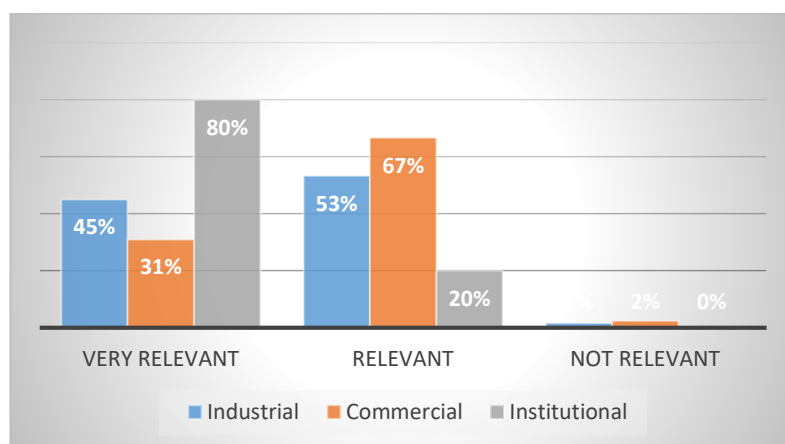


Figure 3.1: Relevance of the Regulations

In overall, 52 % of the sampled facilities thought the Regulations were very relevant, 46.6 % thought they were relevant while 1.3 % thought they were not relevant. The stakeholders further supported a continuation of implementation of the Regulations, even in a better form, given that they have been useful in reducing their costs of doing business. Instructively, it should be noted that the provision to conduct energy audits, as contained in the Regulations, helps facilities in saving energy costs, through efficient production.

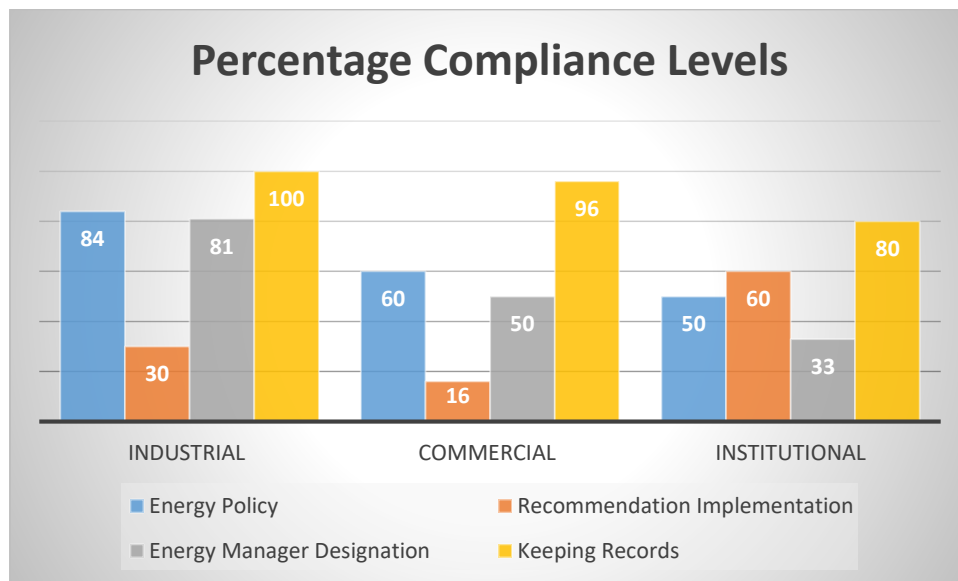
3.2 Compliance Levels

The Energy (Energy Management) Regulations 2012 had six compliance provisions:

- i. Development of energy policy
- ii. Conducting energy audits
- iii. Implementing recommendations of the audit to realize 50 % of projected savings

- iv. Designation of energy manager
- v. Keeping of production and energy consumption records

Compliance to these provisions was tested during the study. From records at the Authority, only 43 % of the total population of the designated facilities in the country have conducted energy audits. The following statistics on compliance levels are based on the sampled respondents. Figure 3.2 shows the levels:



In industrial and commercial facilities, implementation of audit report recommendations to realized more than 50 % of the projected savings is low. It should however be noted that implementation levels are higher than these, only that they targeted meeting less than the 50 % of the recommendations. The challenges of low compliance, as cited in the study, included lack of funds to carry out the energy audits, competing budget interests with other activities of facilities and marginal understanding of Energy Management Systems. There is therefore need to come up with interventions to increase the number of facilities that meet 50 % or more of the projected savings. The draft Regulations have incorporated provisions that will help improve compliance levels, through access to financial and technological support from ESCOS.

3.3 Estimate of Financial and Environmental gains from the Energy (Energy Management) Regulations 2012

The immediate output of compliance with the Regulations is the energy saved by the facilities. This can be quantified in terms of cost savings, CO₂ abatement and the energy saved. Figure 3.3 illustrates these benefits. Detailed study findings can be found in the Impact Study Report, on EPRA website.¹

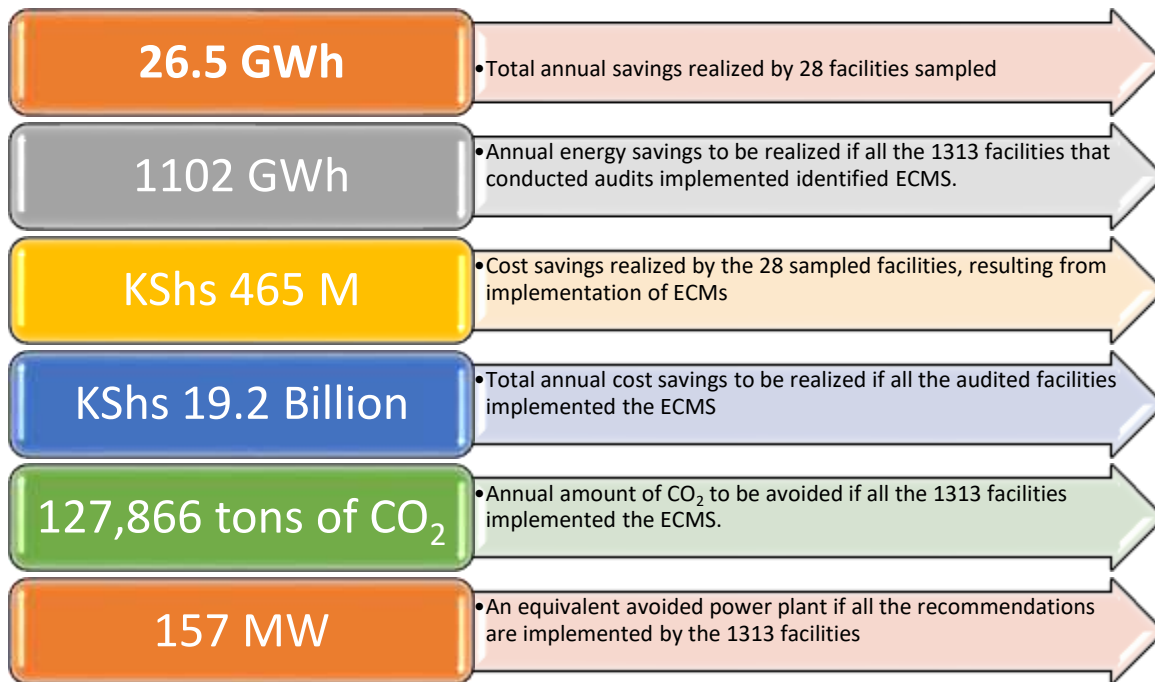


Figure 3.3: A Summarized Presentation of the Impact Assessment Findings.

As illustrated in Figure 3.3, there is potential to save energy and production costs if there is full compliance to the provisions of the Regulations. The figures presented herein are only representative of 43 % compliance in terms of conducting energy audits.

3.4 Qualitative Summary of Gap Analysis by the Respondents

The gap analysis of Regulations was approached in two ways:

¹Regulatory Impact Assessment for Energy Management Regulations, www.epra.go.ke

- i. Through document analysis of the Energy Act 2019. This analysis was useful to understand the sections of the Act that were supposed to be operationalized using Regulations
- ii. Through data collection from the respondents. As part of the stakeholder engagement exercise, the stakeholders were given an opportunity to identify gaps of the Energy (Energy Management) Regulations, 2012 and propose amendments. These amendments have been captured in the draft Energy (Energy Management) Regulations 2020. They include:
 - i. Review the number of years between cycles of energy audits from 3 years to 4 years. Energy audit to be carried out once in 4 years
 - ii. The regulations to include accreditation of energy managers that work in designated by facilities for ease of implementation of identified energy saving measure and ensure quality audits
 - iii. Authority to license Energy Service Companies (ESCOS)
 - iv. Authority to add a third category of energy auditors, who will facilitate measurement and verification in ESCO market
 - v. Publication of energy consumption benchmarks for designated facilities
 - vi. Introduction of Green and White Certificates

These suggestions were incorporated into the draft Regulations, and it is expected that they will improve compliance levels which will in turn increase the cost and energy savings and abate the CO₂ emissions.

4. COSTS AND BENEFITS OF THE REGULATIONS

The Authority envisages continued adoption of Energy Management practices, through improvement in compliance levels to the Regulations, in case the draft Regulations will be gazetted.

4.1. Projected Overall Benefits of the proposed Regulations

Introduced first is Table 4.1, illustrating the expected benefits, drawn from the study² and extrapolated:

Table 4.1: Comparison of Benefits from existing Regulations and projected Benefits on Proposed Regulations

Variable	Benefits at 100 % facility compliance, with national compliance level of 43% (Current Regulations)	Benefits at 100 % facility compliance, with national compliance level of 100 % (Proposed Regulations)
Annual Energy Saved	1102 GWh	2563 GWh
Annual cost savings	KShs 19.2 billion	KShs 44.7 billion
Annual CO ₂ abatement	127,866 tons	297,363 tons

The values in Table 4.1 were used in this Regulatory Impact Statement to argue the socio-economic and environmental benefits of the proposed Regulations. These benefits will be achieved because of the envisaged fully compliance, which will be boosted by the new provisions in the proposed Regulations, in the following ways:

- i. Introduction of ESCOS in the market will help enhance financing mechanisms for implementation of the ECMS. Previously, facilities have had financing challenges, limiting their abilities to implement the recommendations of energy audit reports. ESCOS will create a pipeline of projects and finances, which will mostly be through foreign direct investments and this will create more jobs.
- ii. The expansion of the cycle of conducting audits from 3 years to 4 years will give facilities adequate time to measure, verify, document, report and appreciate the importance of carrying out audits
- iii. The introduction of licensing of energy managers for facilities will help create capacity for facilities to have a better understanding of energy efficiency, especially in guiding energy auditors during audit activities, guiding fellow employees on best energy

² Ibid, 5

management practice and helping top management with right information that will enable their commitment to be energy efficient

- iv. Introduction of the requirement to define performance benchmarks will help companies strive towards meeting targets, in order to benefit from the White and Green Certificate markets

4.2 Socio-Economic Impacts of the Proposed Regulations

The provisions of the proposed Regulations will be useful in improving the current performance in Energy Management in designated facilities. The following are the projected socio-economic impacts of the proposed Regulations:

- i. Facilities incur costs due to the energy audit exercise and due to implementation of the ECMS. However, energy efficiency projects are only implemented if they have a favorable return on investment (ROI), payback period and minimum acceptable rate of return. Provisions of the proposed Regulations cater for this, by giving guidelines on how the auditor should carry out the audit to ensure the benefits from energy efficiency outweigh the costs of implementing the same. The benefits of implementing energy audits supersede the costs.
- ii. The existing Regulations have so far created employment directly to more than 200 people as energy auditors and 1500 people as those who participate in implementation of the ECMS and has thus supported thousands of families in Kenya. With introduction of ESCOS and improvement in compliance, this number is expected to increase.
- iii. The KShs 44.7 billion likely to be saved annually in the full compliance scenario will help ease the cost of production on the factories. With this saving, two positive effects will be incurred:
 - a) The facilities will have more money to expand their production lines or output. This results in creation of employment, increasing disposable income of Kenyans, which will increase the aggregate demand, thus increasing the national aggregate output

b) Savings from energy efficiency will help reduce the price of goods and services. Such a reduction will help Kenyans either consume more of the product or service, or divest their money to other sectors, thus improving the economy. Increased consumption leads to increased economic activity which leads to improvement in Gross Domestic Product

iv. Introduction of White and Green Certificates will create employment, because of creation of the trading market, which will need credit trading experts. Alongside helping incentivize facilities to strive achieving targets, it will help those who will be managing and running the trading platforms

4.3 Environmental Impacts of the Proposed Regulations

As shown in Table 4.1, the proposed Regulations are projected to help the facilities abate emissions of 297,363 tons of CO₂. Kenya is a signatory to The United Nations Framework Convention on Climate Change (UNFCCC) and to COP 21 agreements, launched in Paris in 2015. Reduction of CO₂ emissions is a vital international obligation the country has and these proposed Regulations work towards helping Kenya meet the objectives.

5. ALTERNATIVES TO PROPOSED REGULATIONS

In lieu of implementing the Regulations, then self-regulation is the considered alternative. In this alternative, non-government players come together and work towards improving their trade, for their own benefit and that of the consumers. In order to implement these requirements using self-regulation, three players should have forged three common associations:

i. Energy auditors, who should be licensed by the Authority, should be licensing themselves, through a professional association. Currently, there is no such an association that has frameworks for professional accreditation. Association of Energy Professionals of Eastern Africa focuses on offering trainings but has no

frameworks for accreditation or certification of energy auditors. This option is therefore not viable, and the only route to ensure that the country has well trained and disciplined auditors is through licensing, as provided for in the existing and proposed Regulations

- ii. The facilities should be having an association that can have self-discipline measures where there is a mandatory requirement to conduct the audits. In Kenya, some facilities are members of Kenya Association of Manufacturers (KAM). Membership to KAM is not mandatory and in most cases, only industrial facilities are members here. Furthermore, KAM has Centre for Energy Efficiency and Conservation(CEEC), which runs at the patronage of the Ministry of Energy and it has been responsible for most of the audits carried out by KAM members. This therefore eliminates the concept of autonomy, even at the KAM, necessitating the government to have Regulations that help it sponsor the CEEC.
- iii. The ESCOS will also have to form a self-regulating mechanism that will help them work well with facilities. However, ESCOS cannot function in any economy without being registered by relevant state agencies. This has been proven through studies in all countries where ESCOS function. There must be regulatory tools to ensure level playing field between the ESCOS and the facilities.

From the three points elaborated herein, it is not possible to achieve the projected benefits without having a regulation in place.

6. COST OF IMPLMENTATION OF THE REGULATIONS

Implementation and enforcement of the proposed Regulations requires the Authority to have employees who are experts in Energy Management. This cost is however not new, for currently, the Authority already has an Energy Efficiency Department which has been implementing and enforcing the existing Regulations. The Authority is funded through levies provided for in the Energy Ac 2019.

7. CONCLUSION AND RECOMMENDATIONS

This regulatory impact statement has analysed two available options of self-regulation and explicit regulation through the Energy (Energy Management) Regulations, 2020. The Authority recommends adoption of the recommended regulations as opposed to self-regulation. Self-regulation as it is will not allow for achievement of the energy efficiency aspirations of the country. Once adopted, the regulations will build on the foundation already set by the Energy (Energy Management) Regulations, 2012.

7. IMPLEMENTATION AND REVIEW

The Authority will implement the proposed Regulations through publishing in the Kenya Gazette. Review shall be done as per the provisions of the Statutory Instruments Act No. 23 of 2013 and in consultation with all stakeholders.