

REGULATORY IMPACT ASSESSMENT REPORT

of

The Draft Energy (Integrated National Energy Plan) Regulations, 2023

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Project Information

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List of Abbreviations

BEV	Battery-Electric Vehicles
CEC	County Executive Committee
EIAL	Energy Intelligence Africa Limited
EPRA	Energy and Petroleum Regulatory Authority
ESAK	Electricity Sector Association of Kenya
ESCO	Energy Service Company
GDC	Geothermal Development Company
GHE	Green House Gas Emissions
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
INEP	Integrated National Energy Plan
IPP	Independent Power Producer
KAM	Kenya Association of Manufacturers
KenGen	Kenya Electricity Generating Company
KEPSA	Kenya Private Sector Alliance
KeREA	Kenya Renewable Energy Association
KETRACO	Kenya Electricity Transmission Company
KPLC	Kenya Power and Lighting Company
MoE	Ministry of Energy
NECP	National Energy and Climate Plan
NGO	Non- Governmental Organization
NuPEA	Nuclear Power and Energy Agency
PHEVs	Plug-in Hybrid Electric Vehicles
R & D	Research and Development

REREC	Rural Electrification and Renewable Energy Corporation
RIA	Regulatory Impact Assessment
SDG	Sustainable Development Goals
ToR	Terms of Reference
USA	United States of America

Executive Summary

This Study on the Regulatory Impact Assessment (RIA) of the Draft Energy (Integrated National Energy Plan) Regulations, (the Draft Regulations) was conducted by Energy Intelligence Africa Limited (EIAL).

EPRA developed the Draft Regulations to be issued by the Cabinet Secretary pursuant to the provisions of sections 5, 167 and 208 of the Energy Act.

The Draft Regulations are organized in five parts.

- a. **Part 1 on Preliminaries**, sets out the: citation, commencement, application, interpretation, objectives and purpose of the Draft Regulations.
- b. **Part 2** contains provisions for the planning process including the establishment and membership of the Integrated National Energy Planning Committee and County Energy Planning Committees.
- c. **Part 3** prescribes the roles, responsibilities, powers and functions of persons involved in the Integrated National Planning process and Implementation.
- d. **Part 4** gives the outline of the content of the energy plans and the INEP, and
- e. **Part 5** provides general principles of INEP, including provisions on monitoring, evaluation, mainstreaming of cross cutting issues, stakeholder consultations, provision of information, and offences and penalties.

The Statutory Instruments Act No. 23 of 2013 requires the regulation-making authority, before making any Regulations, to prepare a regulatory impact statement about the instrument. Consequently, it is incumbent upon EPRA to carry out a Regulatory Impact Assessment before the Draft Regulations are gazetted and to also prepare a Regulatory Impact Statement on the same.

The regulatory impact statement should address the following issues:

- Statement of the objectives of the proposed legislation and the reasons for them;
- Statement explaining the effect of the proposed legislation, including in the case of a proposed legislation which is to amend an existing statutory instrument, the effect on the operation of the existing statutory instrument;

- Statement of other practicable means of achieving those objectives, including other regulatory as well as non-regulatory options;
- Assessment of the costs and benefits of the proposed statutory rule and of any other practicable means of achieving the same objectives;
- Reasons why the other means are not appropriate;
- Other matters specified by the guidelines; and
- Draft copy of the proposed statutory rule to be Gazetted alongside the instrument.

The main objective of this Regulatory Impact Study, therefore, was to identify the potential financial, environmental, and social impacts of the Draft Regulations on the energy sector and the Kenyan economy, and prepare a Regulatory Impact Statement, as more particularly set out in the ToR (Annex A).

The objective was achieved by employing the following methods:

- (a) Desktop study
- (b) Stakeholder identification, population and sampling, analysis and mapping
- (c) Development of data and information gathering tools including data collection methods
- (d) Regulation Risk Analysis
- (e) Data analysis and reporting

This Report is structured under eight sections in the following manner –

- 1. Introduction:** sets the background of the study and emphasizes the importance of energy as an infrastructure enabler of the social and economic pillar in Kenya identified in Vision 2030. Hence, efficient and effective energy planning, regulatory oversight, monitoring and reporting are essential elements in enabling the country to achieve its energy objectives. The section references “the National Energy Policy, October 2018”, as a guide that preceded the enactment of the Energy Act, and the Draft Regulations are anchored on the Energy Act. Any reference to the Energy Policy 2018, in this Report as a legal instrument is predicated on completion of the policy making process for the Energy Policy, October 2018, as required by law. This section also outlines the planning process

embedded in the Act, the objectives set out in the Draft Regulations, and the objectives of this study as given in the ToR.

2. **Study Methodology:** expounds on the methodology already referred to above, providing detailed description of how the methodology was employed in the Study. The section includes a section on regulation risk analysis, describing the framework used, approach in identifying the risk, the source of the risk, and the basis of the risk ratings.
3. **Stakeholders Mapping,** is the section which expounds on the institutional framework as envisaged in the Draft Regulations, and the integrated national energy framework. The section discusses actors in the INEP and their respective roles and responsibilities in the preparation process, and gives an overview of the energy institutions framework, and the role of the respective stakeholders in the planning process.
4. **Legal Framework Governing Energy Policy in Kenya.** In this section, we look at the legal instruments providing the legal and policy framework for the Energy Sector in Kenya, with a focus on the Draft Regulations. The legal instruments discussed in this section have a direct or indirect impact on the Draft Regulations and, in terms of the ToR, synergy with the Draft Regulations. The instruments include the Constitution of Kenya, the County Governments Act, which actualizes the devolved government structure delineated in the Constitution, and the “National Energy Policy, October 2018”, predicated as at the time of this Report, on completion of the policy making process as already mentioned. The position taken in this Report is that it is a document relevant to this Study of which due cognizance ought to be taken and has been taken, with a caveat, owing to the very fact of its existence and availability in the public domain.

The key instrument for this section is the Energy Act which is discussed in some detail. This section also touches on other specified Acts and Policies which have some impact on the Draft Regulations.
5. **Integrated National Energy Plan in Other Jurisdictions:** This section presents the results of a benchmarking exercise of policies, regulations and practices in selected jurisdictions promoting effective and efficient development of integrated national energy plans, focusing on the guiding legislative, policy and regulatory frameworks, and highlights of the same, to draw out useful lessons or recommendations to take into account in the Draft Regulations.

- 6. Field Study Findings:** This section elaborates the outcome of engagement with stakeholders identified to be impacted as such directly by the framework on the development and administration of INEP. A sample size of 70 respondents was targeted in this work, and a total of 48 responses received, achieving a response rate of 68.57 %. From the field study findings, a proposal to have provision indicating the timelines for submission of energy plans has been adopted. A further proposal from the Counties to have a two-tier county energy planning structure comprising an executive committee and technical working groups has also been adopted. Both proposals are included in the amendments to the Draft Regulations (Annex B).
- 7. Impacts of the Draft Regulations:** This section demonstrates how the main objective of the assignment, which was is to conduct a regulatory impact assessment of the Draft INEP Regulations and identify the potential financial, environmental and social impacts of the Draft INEP Regulations on the energy sector as well as on the Kenyan economy, has been achieved, and includes a cost/benefit analysis for purposes of the Regulatory Impact Statement.
- 8. Proposed Amendments to the Draft Regulations:** This final section sets out proposed amendments to the Draft Regulations, based on the findings of the Study, specifying the regulation's current text, proposed changes and the rationale for the suggested changes.

I. Introduction

I.1. Background

Energy is a key ingredient in socio-economic development. The Kenya Vision 2030 identifies energy as one of the infrastructure enablers of its social and economic pillars. Consequently, efficient and effective energy planning, regulatory oversight, monitoring and reporting are essential elements in enabling the country to achieve its energy objectives.

Kenya's energy planning framework is anchored in the Energy Act, 2019 (the Act). In section 5 of the Act, the Cabinet Secretary has an unequivocal mandate to develop, publish and review energy plans in respect of coal, renewable energy and electricity so as to ensure reliable delivery of energy at least cost, in consultation with relevant stake holders. This provision contextualizes integrated national energy planning in this legislation giving the essential legal backing for the process, content and regulatory framework for the Draft Regulations.

The backdrop to the Act is the National Energy Policy document datelined October 2018, which contains statements relevant to this study. Predicated on completion of the policy making process as required by law as at the time of this Report, the National Energy Policy document 2018 is, however, prominent in the energy sector. It points to policy outlines and strategies that will guide the development of Integrated National Energy Planning. The document also articulates the significance of effective energy planning as an essential element and key prerequisite for attracting timely and efficient investments to the energy sector. It is, therefore included in this Report with a caveat. INEP will serve as an energy sector guide on the short, medium and long-term requirements based on evolving economic, socio-political and technical issues.

The Energy and Petroleum Regulatory Authority (EPRA) has developed the Draft Regulations. The Draft Regulations provide guidelines for the preparation, content, timelines, publication and monitoring of INEP.

The specific sub-objectives of the Draft Regulations are to:

- (a) Provide clarity, harmony and guidelines on a coordinated approach to energy planning within the country;

- (b) Guide in the identification of energy objectives, visions, and deliverables as well as reporting framework;
- (c) Set out the guidelines and timelines for the preparation and implementation of respective energy plans and INEP;
- (d) Set out guidelines to regulate the content of the energy plans and INEP;
- (e) Provide guidelines on stakeholder consultations in the development, publication and review of the energy plans and INEP;
- (f) Provide a framework for consolidation of energy plans into INEP;
- (g) Provide guidelines on planning for energy infrastructure investments, energy supply options and selection of appropriate technologies to meet energy demand;
- (h) Provide guidelines for monitoring, evaluation and reporting on the implementation of the energy plans and INEP;
- (i) Provide a mechanism for ensuring that county energy planning is aligned with National Planning; and
- (j) Define the roles and responsibilities of various stakeholders in the energy planning process and implementation of the energy plans and INEP.

The Statutory Instruments Act, No. 23 of 2013 requires that all regulatory instruments undergo Regulatory Impact Assessment (RIA) prior to enactment. The regulation-making authority is required to make appropriate consultations with persons likely to be affected by the proposed regulation. It is against this backdrop that EPRA with support from Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) contracted Energy Intelligence Africa Limited (EIAL), the Consultant, to undertake a regulatory impact assessment of the Draft Regulations. In addition to this, the Consultant was also required to propose amendments to the Draft Regulations based on the RIA findings.

1.2. Study Objectives

The main objective of this regulatory impact assessment conducted on the Draft Regulations, was to identify the potential financial, environmental and social impacts of the Draft Regulations on the energy sector and the Kenyan economy.

The sub-objectives that followed to achieve these objectives include:

- (a) To conduct a benchmarking exercise of policies, regulations and practices in other jurisdictions promoting effective and efficient development of integrated national energy plans.
- (b) To evaluate methodologies proposed in the Draft Regulations for undertaking integrated national energy planning and propose any amendments where necessary.
- (c) To evaluate the impacts of external factors such as government policies, regulations and practices on the Draft Regulations.
- (d) To identify barriers to achieving technical and operational efficiency as envisioned in the Draft Regulations.
- (e) To identify the players affected directly by the framework on the development and administration of INEP, consult them and analyze their inputs on the Draft Regulations.
- (f) To identify and design a Risk Assessment Framework to manage risks in the energy sector within the framework of INEP;
- (g) To estimate the cost of compliance to implementing agencies and the cost of enforcement by EPRA on the Draft Regulations.
- (h) Participate in the stakeholders' engagement process and assist in addressing their concerns on the Regulations based on the final Draft developed. The stakeholder engagement will occur in at least seven (7) regions covering all counties.
- (i) Propose amendments to the Draft Regulations based on the findings of the study.
- (j) Prepare a Regulatory Impact Statement (RIS) to be tabled in parliament and Gazetted alongside the Draft Regulations.

1.3. Scope of Works

To achieve the above objectives of the study, the following activities were carried out;

- i. Established the total number INEP stakeholders categorized as national energy service providers, counties and private sector players whose roles in the energy planning process was outlined in the Draft Regulations.
- ii. Used the total number of stakeholders identified to sample the key players as per the categories identified in (i) above.
- iii. Identified the different data collection methods and developed the data collection tools that were used to gather data/information to achieve the objectives of the study.

- iv. Collected data from the different stakeholders and analyzed the data to provide information that enabled achieve the objectives of the study.

2. Study Methodology

2.1. Introduction

The objective of the study was achieved by employing the following methods:

- (a) Desktop study
- (b) Stakeholder identification, population and sampling, analysis and mapping
- (c) Development of data and information gathering tools including data collection methods
- (d) Regulation Risk Analysis
- (e) Data analysis and reporting

A detailed description of the methodology employed is provided as follows:

2.2. Desktop Review

A document analysis was carried out into stages; the first stage focussing on the policy, legal and regulatory context for Kenya and other studies relevant to energy planning in Kenya, and in the second stage desktop benchmarking of selected jurisdictions. Lastly, the processes outlined in the Draft Regulations the legal actions developed were reviewed.

The existing legal frameworks in Kenya that touch on the energy affairs and resources utilized in the development of energy infrastructure that include the Kenya Constitution 2010, the Energy Act 2019, the County Government Act 2012, the Nuclear Regulation Act 2019, Water Act 2016, Wildlife Conservation & Management Act 2013, Environmental Management and Coordination Act 1999, Land use and Planning Act 2019, Forest Act 2016, Land Act 2012 and Land Registration Act 2012 were analyzed. This review was done to establish that the proposals of the current Regulations are in line with the existing regulatory framework in the country.

A review of the existing policies, strategies and plans developed in the energy sector was also conducted. The key documentation of interest included the National Energy Policy 2018, Least Cost Power Development Plan (LCPDP) 2021-2030, Bio Energy Strategy 2020, Kenya National Energy Efficiency and Conservation Strategy 2020, Kenya National Electrification

Strategy, Feed in Tariff Policy 2012, Gender policy in planning 2019, among other master plans developed in the five thematic areas of the integrated national energy plan framework.

The desktop study was extended to benchmark the Draft Regulations against regulations in other jurisdictions. In the review of integrated national energy planning in other jurisdictions, the challenges, opportunities, social impact, economic impact and environmental impact of the Regulations/policy were investigated. The European Union, Germany, South Africa, Thailand, and California in the USA were taken as the countries to benchmark the developed Regulations.

The rationale was to benchmark against countries with existing INEP framework/Regulations, and those that a substantial time had elapsed (a period of greater than 3 years) since the inception of the integrated national energy plan to provide useful lessons on the benefits, successes, challenges and potential risks of development and implementation of the INEP framework, stakeholder identification, populations, analysis and mapping.

Lastly, the Draft Regulations were interrogated against objectives whereby the analysis looked into the possible impacts of the Draft Regulations, which include social, economic, and environmental.

2.3. Stakeholder Population & Sampling

2.3.1. Stakeholder Population

To identify the key stakeholders in line with the objectives of the RIA exercise; the method of choice was stakeholder mapping and in particular the technique that seeks to place stakeholders in an interest-influence matrix formally known as stakeholder interest-influence mapping. The matrix developed was then used to identify critical stakeholders as seen in section 3.1.

The Integrated National Energy Plan (INEP) stakeholders were identified and grouped as:

- (a) National energy service providers,
- (b) Government ministries and departments,
- (c) Government Development partners,
- (d) Council of Governors (CoG) and county governments,
- (e) Private sector players and non-governmental organizations

The populations of the stakeholders as grouped is shown in Table 1.

Table 1: Identified INEP Stakeholders Population

Target Population		Population Size
National Energy Service Providers		9
Government Ministries and Department		20
Council of Governors/ CoG		48
Government Development Partners		10
Private Sector Players & Non- governmental Organizations	IPP's	15
	Sector Associations	7
	Research Institution	7
	Civil Society Organizations	3
Total		119

The different INEP stakeholders' influence and interest on the Draft Regulations is discussed in Chapter 3.

2.1.1. Sampling Techniques

A blend of purposive and stratified sampling methods was applied in the selection of respondents to be engaged from the list of stakeholders. Stratified sampling was useful when the population comprised of stakeholders' groups with specific interests from where strata (groups) were formed for in-group sampling. Purposive sampling was used in selecting specific stakeholders to be engaged based on their interest in the developed Regulations. The rationale used for selecting the sampling methods is provided in Table 2.

Table 2: Rationale for Selected Sampling Methods

Sampling Method	Rationale
Purposive sampling	The key stakeholders identified from the stakeholder population were targeted to provide critical views on the RIA exercise and included national energy service providers such as EPRA, MoE, KPLC and REREC among others and the counties together with the CoG.

Stratified Sampling	Respondents who were assessed as likely to provide responses with little variance such as IPPs and energy industry associations, were clustered and in-group sampling done to get representative opinions. These include energy sector associations, IPP's, energy CSO's among others.
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The identified stakeholders to be consulted in the different categories was populated in Section 2.3.1. Sampling was done following Eq. 1 to determine the sample size (n) for the different categories (strata) of stakeholders

$$n = \frac{\frac{Z^2 X P X (1 - P)}{e^2}}{\left[N - 1 + \frac{Z^2 X P X (1 - P)}{e^2} \right]} \quad \text{Eq. 1}$$

Where:

- Z Is the Z score
- P Population proportion
- E Is the margin of error
- N Is the population size

The selected sample sizes for the population clusters are provided in Table 3.

Table 3: Sample Size Selection and Population Proportion

Stakeholder Category	Population (P)	Sample Size (n)	% of Population
National Energy Service Providers	9	9	100%
Government Ministries & Department	20	6	30%
Counties & CoG	48	48	100%
Government Development Partners	10	4	40%
Private Sector Players	32	7	22%
Total	119	74	62%

2.4. Data Collection Methods & Tools

The techniques followed to gather primary data for this study included; administering questionnaires, conducting face-to-face interviews and organizing workshops for stakeholders to provide views and opinions on the Draft Regulations. The questionnaire used in data collection is provided as Annex C-I. Interview guides were used to collect qualitative data during interviews and workshops. Secondary data was collected by analyzing the Draft

Regulations and benchmarking the Draft Regulations against similar documents in other jurisdictions.

2.5. Regulation Risk Analysis

An analysis of the potential risks (identified from expert opinion, stakeholder feedback and the desktop study) associated with the implementation of Draft Regulations and the potential impact of these risks was done. The approach followed in the development of risk assessment framework identified the risks and mitigation measures through;

- Risk identification:
- Risk analysis and evaluation
- Risk mitigation measures
- Risk monitoring and evaluation

These risks were evaluated according to the likelihood of their occurrence and the potential impact of the identified risk on different INEP stakeholders and how the risk might impact the successful implementation of the Draft Regulations. Measures that can be put in place to mitigate this risk were proposed as well as the monitoring and evaluation technique for the same was identified.

2.6. Data Analysis

Statistical Package for Social Science (SPSS) was used to analyze the responses received from the questionnaires administered to various stakeholders sampled from the population. Compilation of all the outputs generated from SPSS was done to provide patterns and correlations, in addition to regression being applied to provide patterns and variances in the collected data.

3. Stakeholders Mapping

The stakeholders identified in the RIA exercise were sorted so as to place them on an interest-influence map. Here, the stakeholders, depending on their interest and powers in the INEP processes were placed in four quadrants;

- In the first quadrant (**high influence-low interest**); stakeholders that hold have a huge sway on how INEP is conducted but are not directly affected by them or are not active participants in the INEP process are placed.
- In the second quadrant (**high influence-high interest**); stakeholders in this quadrant are directly involved in the INEP processes and also have a huge sway in them politically, socially and economically.
- In the third quadrant (**low interest-low influence**); stakeholders in this quadrant are not involved directly in the INEP processes and have little sway on them. They are however affected by the INEP and thus placed in this quadrant.
- In the fourth quadrant (**low influence-high interest**); stakeholders in this quadrant have very little influence on the INEP processes as they are not directly involved but they have high interests in the processes since they affect their operations.

The developed Stakeholder Interest-Influence Map is shown in Figure 1.

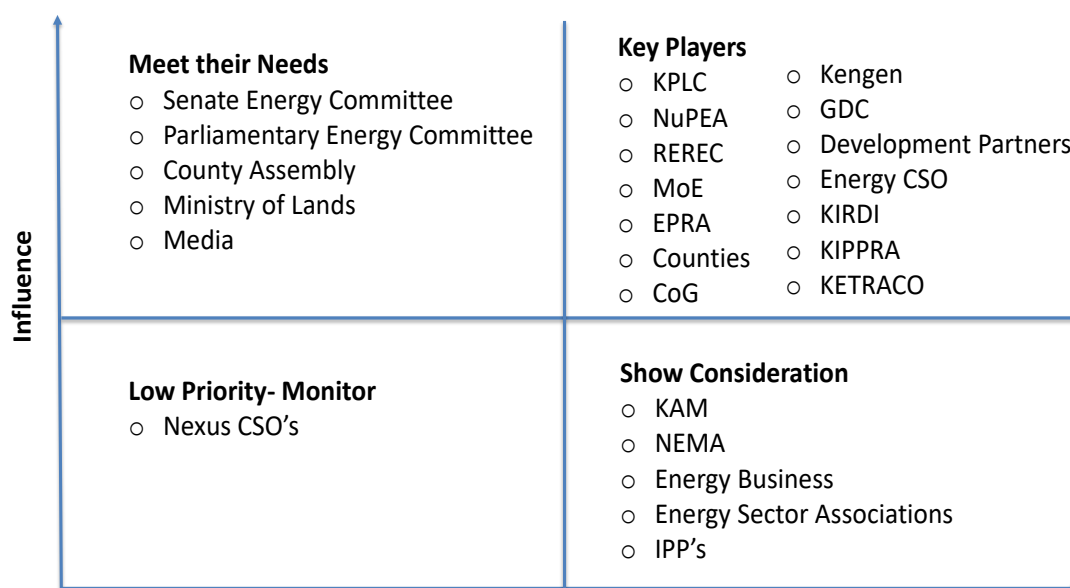


Figure 1: Stakeholder Interest/Influence Map

3.1. INEP Institutional Mapping

This section explores the institutional framework based on the Draft Regulations and the integrated national energy framework. The roles and responsibilities of the various institutions and offices in integrated energy planning are outlined as follows;

The roles and responsibilities of the various institutions and offices in integrated energy planning are outlined as follows:

3.1.1. Cabinet Secretary in Charge of Ministry of Energy

The Cabinet Secretary of the Ministry of Energy (MOE) sits at the heart of INEP and is responsible for enacting and overseeing the new Regulations. This responsibility is conferred to this office in accordance with sections 5 and 208 of the Energy Act 2019¹. Under the Draft Regulations, The Cabinet Secretary assumes the following responsibilities provided for in clauses 5 and 6:

- (a) Issuance of a Circular on Integrated National Energy Planning by the Cabinet Secretary to the National energy service providers and county governments for INEP commencement.
- (b) Upon receiving preliminary INEP from the INEP committee, the cabinet secretary shall subject the same to public participation.
- (c) Approving and publishing the INEP.
- (d) Review the INEP every three years.
- (e) Establish and maintain an INEP standing committee.
- (f) Appoint an Integrated National Energy Plan Programme Coordinator who shall be responsible for coordinating the Integrated National Energy Plan process.

The Cabinet Secretary's other roles and responsibilities are spelt out in clause 9 of the Draft Regulations, whereby the CS is required to: Provide policy priority areas for energy planning, provide technical support to County Governments in the preparation, implementation, review and monitoring of County Energy Plan, develop capacity for the preparation of energy plans and Integrated National Energy Plan, resource mobilization for Integrated National

¹ Ministry of Energy. (2019). *The Energy Act 2019*. <https://www.epra.go.ke/download/the-energy-act-2019/>

Energy Plan implementation, Develop and maintain an online Integrated National Energy Planning portal for purposes of facilitating public participation, submission of reports, submission of energy plans and publication of the Integrated National Energy Plan, monitor and report on the progress of the implementation of Integrated National Energy Plan.

3.1.1.1. Ministry of Energy (MoE)

The MoE is responsible for setting sector policies and overseeing the execution of such policies. It is also responsible for energy planning and resource mobilization in the sector. As the national government ministry in the energy sector, it is a key energy service provider; a fact that is reflected in the new regulation with the ministry having four (4) representatives, one of which shall chair the INEP committee and a separate INEP program coordinator also from the ministry (an appointee of the cabinet secretary) who shall be the secretary of the INEP committee.

3.2. Integrated National Energy Planning Committee

This is the main team established and maintained by the CS to prepare and monitor the INEP. It shall be composed of various stakeholder representatives as stipulated in the Draft Regulations and shall be chaired by an MoE representative. The committee will have the following responsibilities as set out in regulation 6(2) of the Draft Regulations:

- I. Develop a uniform framework to guide the preparation of national energy providers' energy plans and county energy plans;
- II. Consolidate energy plans into an Integrated National Energy Plan;
- III. Submit the Integrated National Energy Plan to the Cabinet Secretary for approval and publication;
- IV. Do an annual report on the implementation of the Integrated National Energy Plan;
- V. Undertake a review of the Integrated National Energy Plan after every three (3) years;
- VI. Identify, propose and facilitate capacity building areas relevant to energy planning;
- VII. Undertake any other tasks that relate to energy planning that may be assigned by the Cabinet Secretary for Energy.

3.2.1. Integrated National Energy Plan Technical Committee

The INEP committee shall execute its mandate through the establishment and maintenance of the following sub-committees:

1. Electricity plan technical committee
2. Energy access plan technical committee
3. Bio-energy plan technical committee
4. Energy efficiency and conservation plan technical committee
5. Energy resource and development plan technical committee

3.3. Governors.

As the chief executive officer of the county, the Governors in all 47 countries shall establish and maintain a county energy planning committee provided for in clauses 7 and 11 of the Draft Regulations, which shall ensure the county government:

- Prepares and submits to the Cabinet Secretary County Energy Plans in respect of its energy requirements within the timelines specified in the Circular;
- Undertakes a review of the County Energy Plans after every three (3) years;
- Prepares and submits an annual report on the implementation of the County Energy Plan to the Cabinet Secretary;
- Consults with other county governments, national energy service providers and other relevant stakeholders in preparation of the County Energy Plans
- Identifies, proposes and builds capacities relevant to energy planning;
- Provides data and information to inform the energy planning process;
- Mobilizes resources for the implementation of the County Energy Plan and Integrated National Energy Plan;
- Publishes their County Energy Plans and the Integrated National Energy Plan on their websites;
- Implements, monitors and reports on the progress of the implementation of the County Energy Plans.

The Council of Governors is expected to have three (3) representatives in the INEP committee.

3.4. County Energy Planning Committee

These committees shall coordinate the energy planning mandate at the county level. The composition of these committees is prescribed in the Draft Regulations and shall be chaired by the County Executive Committee Member for Energy. The committee's responsibilities under the Draft Regulations include:

- I. Preparation and submission of the County Energy Plan in respect of its energy requirements to the Governor for approval and onward submission to the Cabinet Secretary for incorporation into the Integrated National Energy Plan
- II. Preparation and submission of an annual report on the implementation of the County Energy Plan to the Governor for approval and onward submission to the Cabinet Secretary
- III. Monitoring, evaluation and reporting on county energy plans
- IV. Reviewing of the County Energy Plan after every Three (3) years
- V. Identifying, proposing and facilitating capacity-building areas relevant to energy planning.

3.5. National Energy Service Providers

In clause 10 of the Draft Regulations, the roles and responsibilities of the National Energy Service Providers are outlined as to:

- i. prepare and submit to the Cabinet Secretary energy plans for provision of energy services in accordance with their mandate within the timelines specified in the Circular;
- ii. undertake a review of their Energy Plans after every Three (3) years;
- iii. prepare and submit an annual report on the implementation of their Energy Plan to the Cabinet Secretary within One (1) month after the end of each financial year;
- iv. consult with the Cabinet Secretary, other national energy service providers and other relevant stakeholders in preparation of their Energy Plans;
- v. identify, propose and build capacities relevant to energy planning;
- vi. Resource mobilization for implementation of their energy plans and Integrated National Energy Plan;

- vii. nominate members to represent them in the Integrated National Energy Planning Committee and where applicable, the County Energy Planning Committee;
- viii. provide data and information to inform the energy planning process;
- ix. provide technical and other capacity building support to County Governments on energy planning;
- x. publish their Energy Plans and the Integrated National Energy Plan in their websites;
- xi. implement, monitor and report on the progress of the implementation of their Energy Plans.

The various national agencies and their roles in national energy provision under The Energy Act, 2019 as well as their representation as envisioned in INEP, are as follows:

3.5.1.1. Energy & Petroleum Regulatory Authority (EPRA)

This is the regulatory authority in the Kenyan energy space mandated with the licensed energy sector players, sets and reviews tariffs, and oversees and enforces Regulations. Under the INEP, the Authority has two (2) representatives in the INEP committee. The Authority shall provide revenue requirements/ investment prospects for the planning period as part of its submission under electricity plan.

3.5.1.2. Energy and Petroleum Tribunal (EPT)

This quasi-judicial entity is established under section 25 of the Energy Act 2019 to hear and determine disputes and appeals in the energy and petroleum sectors arising under the provisions of the Energy Act or any other written law. This body is not represented in the INEP committee unless one of its members is co-opted into the committee under special provisions as set out in the new Regulations.

3.5.1.3. Rural Electrification and Renewable Energy Corporation (REREC)

The Rural Electrification and Renewable Energy Corporation (REREC) is established under section 43 of the Energy Act, 2019 to mobilize the electrification of rural Kenya and develop alternative renewable resources. It is heavily involved in the planning as a stakeholder in energy planning in the following thematic areas:

- i. The Energy access plan.

- ii. Bio- energy plan.
- iii. Develop master plans in consultation with the county governments.

According to the Draft Regulations, REREC shall have two (2) representatives in the INEP committee and one (1) representative in each of county energy committee

3.5.1.4. Kenya Electricity Transmission Company (KETRACO)

KETRACO is the designated system operator responsible for matching consumer's requirements or demand with electrical energy availability or supply, maintaining electric power system security and arranging for the dispatch process as per the requirements of section 138 of the Energy Act 2019. It also is responsible for facilitating regional power trade by developing, owning, maintaining and operating a grid network and regional power interconnectors. The entity shall have two (2) representatives in the national committee.

3.5.1.5. Kenya Power & Lighting Company (KPLC)

This is the main power off-taker it purchases bulk power from producers, transmits it, distributes it and retails it to consumers at different levels in the power system. KPLC shall have representatives in both the national and county energy committees; two (2) in the INEP committee and one (1) in each of the county energy committees.

3.5.1.6. Geothermal Development Company (GDC)

Mandated to undertake surface exploration of geothermal fields and management, including commercialization of the same, it shall have two (2) representatives in the national energy committee.

3.5.1.7. Nuclear Power & Energy Agency (NuPEA)

Responsible for research coordination, development and awareness creation in the nuclear programme and nuclear energy sector, the entity shall have two (2) representatives in the national energy committee.

3.5.1.8. Kenya Electricity Generating Company (KenGen)

Undertakes generation of electricity from various sources, mainly geothermal, hydro and wind, within the country, the entity shall have two (2) representatives in the INEP committee.

3.6. Other National Government Ministries, Departments and Agencies.

Through their representatives, the various national government ministries, departments and agencies impacted as envisioned in the INEP framework shall be required to:

- a. Propose interventions in the Energy Plans and Integrated National Energy Plan;
- b. Provide resources for implementation and interventions of the Integrated National Energy Plan that are relevant to their mandate;
- c. Provide data and information to inform the energy planning process;
- d. Where required in these Regulations, nominate members to represent them in the Integrated National Energy Planning Committee and County Energy Planning Committee; and
- e. Monitor and report on the progress of the implementation of the Integrated National Energy Plan relevant to their mandate

The Ministry of Devolution shall have one (1) representative in the INEP committee, The Ministry of Petroleum and Mining shall have one (1) representative in the INEP committee and The National Treasury and The State Department for Planning shall have two (2) representatives in the INEP committee. The INEP committee shall also have a representative (1) from the Kenya National Bureau of Statistics, and the Kenya Forestry Service shall have one (1) representative in each county energy committee.

Others affected, enabled or impacted through cross-sectoral linkages by the INEP process, although not physically nor permanently represented in the INEP committees, include:

- The Office of the Attorney General which plays a legal advisory role when the GoK wants to operationalize and implement laws and policies in the energy space to ensure that they are constitutional.
- The office of East African Community (EAC) and Regional Development which is critical in regional power pooling and interstate cooperation in energy matters.
- Kenya Industrial Research Development Institute (KIRDI) which will play a critical role in offering knowledge-based solutions in industry which heavily relies on energy
- Kenya Agricultural and Livestock Research Organization (KALRO) and Kenya Forest Research Institute (KEFRI) that will give insights into the bio-energy space that heavily relies on agricultural and wood feedstock as energy resources

- The Ministries of Interior and Coordination of National Government; Transport, Infrastructure, Housing and Urban Department and Public Works; Lands and Physical Planning; Industry Trade & Cooperatives; Foreign Affairs; Environment and Forestry; Information Communications and Technology; Water and Sanitation; Tourism and Wildlife; and Education that in one way or another affect or are affected by INEP. For example, The Ministry of Lands and Physical Planning plays a critical land in securing physical space resources for energy infrastructure while the Ministry of Interior and Coordination and of National Government secures such installations from attacks and vandalism.

3.7. Development Partners

These are organizations that support, promote and fund projects in the Energy Sector across all the thematic areas identified in the INEP framework. They are required to participate in the preparation and implementation of INEP. The framework envisions them availing resources for development and capacity building to aid in the success of INEP.

Examples of such organizations are the African Development Bank, Japan International Cooperation Agency (JICA), GIZ InfraCo Africa, UKAid, USAid and Power Africa, Danish International Development Agency (DANIDA), EU-Africa Infrastructure Trust Fund (EU-AITF), Innovation Energie Development (IED) and the United Nations Environmental Program (UNEP).

3.8. Private Sector Players & Non-governmental Organizations

Regulation 15 of the Regulations, provides a framework for private sector players to participate in the INEP process by providing resources to build capacity and development and submitting their projects for consideration and inclusion in INEP. Some stakeholders that stand out in the private sector based on their impact and theme sector linkages include:

(a) Independent Power Producers (IPPs)

Linked to national energy service provision and bulk electric energy, these private investors in the power sector are involved in electric power generation.

(b) Bio-Energy Sector Players

As a key theme in the INEP framework and as the biggest energy source amongst low-income households and rural regions in Kenya, Bio-Energy planning requires a lot of consultative effort; as such, the stakeholders identified in the space include:

- a) Biofuel Producers - These are manufacturers of fuel products like bagasse and biodiesel produced from biomass processing, e.g., Kakuzi limited.
- b) Bio-Energy Research Institutes- These are organizations in both the public and private sectors that undertake systematic investigations in the Bio-Energy space for the purposes of knowledge-based development. Examples include International Center for Research in Agroforestry (ICRAF) in the private sector, while KARLO, KIRDI and KEFRI are public (governmental) organizations.
- c) Bio-Energy consumers - These are industry players that use biomass to produce heat and electric energy for industrial and domestic applications.
- d) Bio-Energy Sector Associations-These are players that consume and promote the use of bio-fuels in the energy sector, such as the Clean Cooking Association of Kenya (CCAK).

(c) Energy Service Companies (ESCOs) and Energy Audits Companies

An ESCO is a company or an entity that delivers energy services or other energy efficiency improvements in an energy user's premises, and accepts some degree of financial risk in doing so. In contrast, Energy Audit Companies map out facilities' energy use and recommend measures to improve energy efficiency and cost reductions.

(d) Energy Sector Associations

These organizations encompass players with the same interests and strengthen the influence of said players by uniting them under umbrella bodies.

- a) Electricity Sector Associations-These are associations in the electricity sector; mostly consumer associations and industrial manufacturers associations, e.g., KAM, Electricity Consumers Society of Kenya (ELCOS(K)), African Mini-grid Developers Association (AMDA), Electricity Sector Association of Kenya (ESAK).
- b) Bio-Energy Sector Associations; mentioned in Section 3.8.2.
- c) Energy Efficiency Sector Associations - These are organizations in the energy sector that provide and consume energy efficiency services in industry, e.g. Association of

Energy Professionals of East Africa (AEPEA), KAM, the Kenya Private Sector Alliance (KEPSA).

- d) GOGLA- An organization representing off-grid solar companies such as SunKing and Mkopa Solar.

(e) Civil Society Organizations and other relevant bodies.

Other stakeholders identified as players in the INEP process include:

- (a) NGOs promoting energy efficiency, i.e., organizations that work with industry players to promote energy conservation in performing both industrial and domestic activities, e.g., Global Environment Facility (GEF)
- (b) Other Civil Society Organizations (CSOs) or associations in the energy sector include: Access Coalition, Energy for Impact, Practical Action, Green Africa Foundation Sustainable Energy Access Forum Kenya (SEAF-K) etc.
- (c) Academia and Research Institutions, such as Strathmore Energy Resource Center and the Stockholm Environment Institute (SEI)

4. Legal Framework Governing Energy Sector In Kenya

4.1. Introduction

In this section, we look at the legal instruments providing the legal and policy framework for the Energy Sector in Kenya, with a focus on the Draft Regulations. The legal instruments discussed in this section have a direct or indirect impact on the Draft Regulations and, in terms of the ToR, synergy with the Draft INEP Regulations. These are -

- The Constitution of Kenya
- National Energy Policy, 2018
- The Energy Act, 2019
- County Government Act, No. 17 of 2012
- Other specified relevant Acts.
- Other specified relevant Policies

4.2. The Constitution of Kenya

The supreme law in the country is the Constitution. The Constitution gives national values and principles of governance applicable to all persons in Kenya in Article 10. We highlight in this report the national value of devolution of power and participation of the people both of which are evident in the Draft Regulations.

The Constitution provides for a two-tier structure of Government comprising the National Government and the County Governments and distributes the functions and powers between the two levels set out in Chapter Eleven and the Fourth Schedule [1].

With regard to the energy sector, the responsibility given to the National Government is found in the Fourth Schedule, Part I at section 22, namely, to protect the environment and natural resources with a view to establish a durable and sustainable development system, including the energy policy. Section 31 amplifies that energy policy includes electricity and gas reticulation, and energy regulation.

Article 174 of Chapter Eleven is also relevant to this Study. It sets out the objects of devolution of government, among which are to:

- a) Give powers of self-governance to the people and enhance the participation of the people in the exercise of the powers of the state and decisions affecting them [Article 174(c)];
- b) Recognize the right of communities to manage their own affairs and to further their development [Article 174(d)]; and
- c) Promote social and economic development and the provision of proximate, easily accessible services throughout Kenya [Article 174(f)].

Section 8 of Part 2 of the Fourth Schedule apportions to the County governments the responsibility for county planning and development, including –

- a) Statistics
- b) Land survey and planning
- c) Boundaries and fencing
- d) Housing; and
- e) Electricity and gas reticulation and energy regulation

Article 185(4) of Chapter Eleven is also relevant. It provides that a county assembly may receive and approve plans for managing and exploiting the county's resources and developing and managing its infrastructure and institutions.

The distribution of functions between the National Government and the County Governments given in Chapter Eleven and the Fourth Schedule of the Constitution is significant to this Study as a high-level legal and policy guide which underpins the legal framework for the National and County governments' input into the Draft Regulations.

4.3. Kenya National Energy Policy 2018

The Kenya Energy Policy 2018 ² (the Energy Policy) is included in this analysis with the caveat that its authority is predicated on completion of the policy making process as already mentioned. It is a document that has been given prominence by MoE and EPRA and it would be remiss of EIAL to ignore it in this Study. Hence any reference to “policy” is to be

² Ministry of Energy. (2018). *The Kenya National Energy Policy 2018*.

https://kplc.co.ke/img/full/BL4PdOqKtxFT_National%20Energy%20Policy%20October%20%202018.pdf

interpreted in the context that it has been published by MoE. For purposes of this Study, we focus on chapters 7 & 9.2, which directly impact the legal framework for the Draft Regulations.

4.3.1. Devolution and Provision of Energy Services (Chapter 7)

The policy on Devolution and Provision of Energy Services recognizes the overlap of responsibilities apparent in the constitutional provisions, which confer on both the National and County Governments the responsibility for electricity and gas reticulation and energy regulation.

The Energy Policy provides a framework under Section 7.2 for the functional devolution of roles between the two levels of government to remove operational uncertainties. This section gives the National Government at paragraph 7.2.1, the following responsibilities mentioned because of their relevance to the preparation of INEP –

- Formulation of the National Energy Policy
- Preparation of the Integrated National Energy Plan incorporating coal, renewable energy and electricity masterplans
- Provision of land rights and rights of way for energy infrastructure
- Implementation of the Rural Electrification programme and management of the Rural Electrification Fund
- Provision of technical and other capacity-building support to county governments

The County governments have the following responsibilities conferred by section 7.2.2, which are relevant to this Study-

- Preparation of county energy plans
- Physical planning relating to energy resource areas
- Implementation of county electricity projects
- Feasibility studies and maintenance of data to assist energy developers and
- Establishment of energy centers for the promotion of renewable energy technologies, energy efficiency and conservation

4.3.2. Cross-Cutting Issues (chapter 9) – Integrated Energy Planning (9.2)

Integrated National Energy Planning (INEP) is expressly provided for in this chapter of the Energy Policy. The provisions provide guidance for the development of INEP in the short,

medium and long term, the substance of the proposed Regulations. The policies and strategies set out under paragraph 9.2.3 are to –

- Establish structures and systems for integrated sectoral planning and monitoring implementation of planned projects
- Develop adequate human resource capacity to carry out integrated energy planning;
- Collect and maintain data for all energy forms
- Strengthen linkages and synergy with other sectors of the economy
- Establish a framework for monitoring and evaluation of the implementation of energy projects
- Develop systems that ensure security and reliability in the provision of energy services products
- Ensure the implementation of the integrated energy master plan; and that the Government may implement strategic energy projects through state corporations or PPPs arrangements where necessary.

4.4. Energy Act, 2019 (the Act)

The Act consolidates the laws relating to energy, provides, *inter alia*, for the National and County Governments functions in relation to energy, the establishment, powers and functions of the energy sector entities, promotion of renewable energy, regulation, production, supply and use of electricity and other energy forms.

It is organized into ten Parts (I to X). This section highlights the provisions on which the Draft Regulations are anchored.

Part II of the Act operationalizes the policy discussed in 4.3 on Integrated Energy Planning under the caption *Energy Policy and Integrated Energy Plan*. The key provisions of this part, foundational to this Study, are summarized below –

- National energy policy (Section 4) – requires the Cabinet Secretary in consultation with relevant stakeholders to develop and publish a national energy policy which shall be reviewed every five years, and to publish a report on the implementation of the energy policy within three months of the end of each financial year.
- Integrated national energy plan (Section 5) – requires the Cabinet Secretary in consultation with relevant stakeholders to develop, publish and review energy plans in

respect of coal, renewable energy and electricity so as to ensure delivery of reliable energy services at least cost, whereby:

- Each national energy service provider shall develop and submit to the Cabinet Secretary its plans;
- Each County Government shall develop and submit to the Cabinet Secretary its county energy plans;
- The Cabinet Secretary shall consolidate the above plans into an integrated National Energy Plan which shall be reviewed every three years.
- The Cabinet Secretary shall prescribe Regulations on the content and timelines for the preparation of the energy plans [section 5(6)];
- Monitoring and Implementation of National Integrated Energy Plan (section 6) – requires the Cabinet Secretary to prepare and publish a report on the implementation of the national integrated energy plan within three months of the end of each financial year.

Part III of the Act establishes the national energy entities including the Energy and Petroleum Regulatory Authority (EPRA). EPRA's role relevant to this Study is set out in section 208 which specifies that –

- The Cabinet Secretary may make Regulations on the recommendation of EPRA in respect of any matter required by the Energy Act to be prescribed [section 208(1)];
- The Regulations may be formulated by EPRA or proposed by any licensee or person [section 208(3)];
- Before making recommendations of any Regulations to the Cabinet Secretary, EPRA shall publish the proposed Regulations for public comment [section 208(3)].

Also, of relevance to the substance of the Draft Regulations is Part IV, of the Act, which provides for Vesting of Renewable Energy Resources, Resource Inventory and Map. All unexploited renewable energy resources are vested in the government and the Cabinet Secretary is required to undertake a country wide survey and resource assessment of renewable energy and publish an inventory and resource map, (sections 73 & 74).

The distribution of functions between the National and County governments is set out in the Fifth Schedule of the Act. All these functions are relevant to the INEP process and are

categorized for the National Government under *Policy Formulation and Integrated National Energy Planning, Energy Regulation and Operations and Development*. For the County governments, the functions are categorized under *County Energy Planning, County Energy Regulation and County Operations and Development*. However, key highlights for purposes of this Study are –

National Government functions –

- Formulation of national energy policy, including electricity and gas reticulation and energy regulation
- Preparation of Integrated national energy plan incorporating renewable energy and electricity master plans
- Provision of land and rights of way for energy infrastructure
- Protection of consumer, investor and other stakeholders' interests
- Collection and maintenance of energy data
- Provision of technical and other capacity building support to County Governments

County Governments' functions –

- Preparation of county energy plans incorporating renewable energy and electricity master plans
- Physical planning relating to energy resource areas
- Provision of land rights and rights of way for energy infrastructure
- Facilitation of energy demand by planning for industrial parks and other energy consuming activities
- To undertake feasibility studies and maintain data with a view to availing the same to developers of energy resources and infrastructure
- Preparation and implementation of disaster management plans
- Electricity and gas reticulation
- Collection and maintaining energy data
- Establishment of energy centers for promotion of renewable energy technologies, energy efficiency and conservation

4.5. County Government's Act, No. 17 of 2012

The County Government's Act, No. 17 of 2012³, gives county governments a broad mandate and detailed guidance on county planning in Part XI. These include the principles of planning and development facilitation, objectives of county planning, obligation to plan, county integrated development plan, integrating national and county planning, county sectoral planning and county geospatial plans. Energy is an integral part of these plans and consequently this Act has synergy with the proposed Regulations and part of the legal framework for purposes of this Study.

4.6. Other Relevant Acts

There are several other laws which impact the energy sector in one or more instances and deserve mention in this section as peripheral to the principal legal framework for the proposed Regulations. These include-

- The Nuclear Regulatory Act, 2019, which provides a framework for regulation of a safe, secure and peaceful utilization of atomic energy and nuclear technology [2];
- Water Act, 2016, which provides for the development, management and regulation of water resources;
- Wildlife Conservation and Management Act, 2013, which provides for conservation, protection and sustainable use and management of wildlife in Kenya [3];
- Environmental Management and Co-ordination Act, 1999, which regulates all environmental issues [4];
- Physical Land Use and Planning Act, 2019, which makes provision for use, planning and development of land [5];
- Forests Conservation and Management Act, 2016, which provides for the development and sustainable management, conservation and rational utilization of forest resources for the socio-economic development of the country [6];
- Land Act 2012, No. 6 of 2012, which provides for matters relating to public, private and community land [7]; and

³ Government of Kenya. (2012). *The County Government Act*. www.kenyalaw.org

- Land Registration Act, No. 3 of 2012, which guides registration of titles to land and the role of county governments [8].

4.7. Other Relevant Policies, Strategies and Plans

The following policies and Strategies are also of relevance to the policy, legal framework and content for the proposed Regulation –

- **Gender Policy in Energy, 2019**, launched by the Ministry of Energy in November 2019 to raise the level of gender awareness in the energy sector. The policy is a guide to mainstream Gender in institutions, policies and programs in the Ministry of Energy, County Governments and other energy sector stakeholders [9]. This policy should be taken into account the planning process, the content and establishment of the committees
- **Feed-in-Tariff Policy, 2012 (FiT)**, provides guidance on purchase obligations, modalities of dealing with escalating costs, currency fluctuations and eligible project sizes for small renewable energy projects including, wind, small hydro, bio- mass, bio-gas and solar PV. It is however to be noted that the Ministry of Energy is in the process of replacing FiT with Renewable Energy Auctions policy [10].
- **Kenya Vision 2030 and Kenya National Electrification Strategy (KNES)** are mentioned together because Vision 2030 provides the context for KNES. Vision 2030 is the blueprint for transforming Kenya into a newly industrializing middle-income country providing high quality life to all its citizens by 2030 [11], [12]. Of Vision 2030's three pillars, (social, economic and political), energy was identified as an enabler of the social and economic pillar. KNES was developed with the principal objective to define a strategy to achieve electricity access to all households and businesses in Kenya over the shortest timetable and at an acceptable quality of service. With the help of a geospatial planning tool, KNES identified the least cost technology options (grid extension, grid intensification, mini-grids or stand-alone systems), and associated investments.
- **Bio-Energy Strategy 2020** aims to guide the development and promotion of bio-energy as a formal industry that can be a vehicle for the country's economic development. It embodies the national and county governments' renewable energy

priorities and intentions to deliver modern energy solutions from available bioenergy feedstock through innovation and consultation [13].

- **Kenya National Energy Efficiency and Conservation Strategy 2020** identified five thematic sectors for improvement of energy efficiency and conservation. These are Households, Buildings, Industry and Agriculture, Transport and Power Utilities, and the strategy has established targets in each to be accomplished in a five-year timeline [13].
- **Least Cost Power Development Plan**, a twenty-year rolling plan whose primary objective is to develop a capacity expansion plan to meet projected demand at minimal cost [14].
- **The Integrated National Energy Planning (INEP) Framework, 2021**

INEP was developed by MoE to guide the planning process towards achieving the INEP objective which is to ensure a coherent and coordinated approach to meeting Kenya's energy needs. It does this by setting out the procedures for preparation of the energy plans at both the national and county levels to give effect to section 5 of the Energy Act, in the form of Regulations to be issued by the Cabinet Secretary under section 6 of the Act.

The Framework provides ten stages to be followed for a comprehensive energy planning process as well as guidelines on the content of the energy plans by the MoE, the national energy providers and the county governments. The guidance includes underlying principles and key components to be considered, and expected alignment of INEP to other national plans such as Vision 2030, Big 4 Agenda, Medium Term Plans, and Kenya's international commitments including Sustainable Development Goals and Africa's Agenda 2063. The Framework establishes the five dimensions upon which energy plans will be developed and monitored. These are *Energy Sources*, *Energy Access*, *Energy Efficiency and Conservation*, *Bio-energy* and *Electricity*.

Considering all the aspects of the policies, legislation, plans and strategies reviewed and outlined in this Chapter, it is a finding of this Study that there is no aspect of any such policy, legislation, regulatory instrument, strategy or plan inconsistent with or of concern in the context of the Draft Regulations. The Constitution, the County Governments Act, the Energy Act, as well as other legislations, policies, plans and strategies reviewed constitute solid

foundational documents that provide a supportive policy and legal framework in absolute harmony with the Draft Regulations.

5. Integrated National Energy Plan in Other Jurisdictions

5.1. Introduction

This section reports on the outcome of the benchmarking exercise of policies, Regulations and practices in selected jurisdictions promoting effective and efficient development of integrated national energy plans. The study looked at the European Union legislation, Germany, Thailand, California and South Africa as regards the guiding legislative, policy and regulatory framework. The jurisdictions were selected on the basis of similarities apparent in the policy, legal framework and planning process comparable to framework envisaged in the Draft Regulations. Specific interest is given to the policies and regulatory frameworks and the procedures outlined in the frameworks to achieve an integrated national energy plan

5.2. European Union

5.2.1. Legal Framework

Integrated Energy planning in the European Union (EU) is guided by Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action (the Energy Governance Regulation). This is the governing law for the EU Member States under the umbrella of the Energy Community Treaty of 2006, for the creation of an integrated energy market.⁴

5.2.2. Policy and Regulatory Framework

The governance mechanism seeks to align the energy targets with the European climate policy to become carbon-neutral by 2050. The regulation requires the plans to cover five dimensions, namely energy security, internal energy market, energy efficiency, decarbonization, and research, innovation and competitiveness

Article 3 of the Energy Governance Regulation requires the Member States to submit to the EU Energy Secretariat by June 2023 and subsequently by January 2028, and every ten years thereafter Draft national energy plans in the prescribed format. The prescribed format

⁴ <https://www.iea.org/policies/11773-regulation-eu-20181999-on-the-governance-of-the-energy-union-and-climate-action>

includes overview of the process, description of national objectives, description of planned policies and measures, and current situation on the five dimensions.

The Regulation further requires that the Draft national energy plans be subjected to public consultation, (Article 10), multi-level dialogue with public authorities, civil society organizations, business community and investors, (Article 11), and neighboring Member States (Article 12), The Energy Secretariat assesses and makes recommendations on the submitted energy plans to confirm compliance with Energy Community Treaty objectives.

The Secretariat then submits the Draft energy national plans to the High-Level Group, an organ of the Energy Community Treaty empowered to incorporate the plans into the Energy Community legislation (*acquis communautaire*).

The regulatory framework includes submission to the EU Energy Secretariat of updates every ten years, (Article 14), biannual progress reports (Article 17, and annual reporting, (Article 26). By October 31, 2025, and every two years thereafter, the Secretariat shall assess the progress of the Member States towards meeting the EU objectives. (Article 29).

The Regulation provides for online submission and reporting by the Member States to the Secretariat, (Article 28).

The process for submission of the national plans to the EU Energy Secretariat within a given time framework, the contents of the plans along policy for creation of an integrated energy market defined by the Energy Community Treaty and requirement for public participation is the same path followed in the planning process, the contents, and timeliness for submission to the Cabinet Secretary required of the national energy providers and the county governments provided for in the Energy Act, 2029, and the Draft Regulations.

Significant take-aways from this process are the provisions for consultation with neighboring countries, which takes into account potential points of regional co-ordination, the on-line platform for reporting and monitoring and the three levels of adoption, first by the member state, second by the Energy Secretariat and finally by the governing body of the Energy Community Treaty to incorporate the plans into the Energy Community legislation (*acquis communautaire*).

5.3. Germany

5.3.1. Legal Framework

Integrated Energy planning in Germany is governed by Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action (the Energy Governance Regulation). In the application of by this framework, Germany developed an integrated National Energy and Climate Plan (NECP) and the Climate Action Program was passed by the Federal Government in 2019.⁵

5.3.2. Policy and Regulatory Framework

The Climate Action Plan contains the measures and strategies to meet the goals for all sectors including energy within the policy established by the five dimensions of the Energy Governance Regulation (energy security, internal energy market, energy efficiency, decarbonization, and research, innovation and competitiveness). The core goals are reduction of primary energy consumption, increasing energy efficiency and expansion of renewable energy sources. An important point of note here is that the plan was passed by the Federal Government as an instrument of Government, a higher level of authority than the Cabinet Secretary who will issue the INEP under the Draft Regulations. The national plan then goes to the EU Energy Secretariat and for incorporation into a common legislation for an integrated energy market under the Energy Community Treaty, 2006.

The Federal Government developed the Draft NECP through a participatory process set up by the Federal Ministry of Economic Affairs and Energy the process involved the public, national entities, municipalities, Foundations, civil society organizations, as well as other stakeholders and EU Member states, and an iterative process with the EU Energy Secretariat. Information about the NECP process and the Draft NECP was published and over 200 responses were received and responded to. The consultations were conducted on-line over a period of six weeks. The NECP specifies in detail the central national goals, central strategies and measures along each of the five dimensions which are being implemented, have been implemented, adopted or planned in accordance with the Governance Regulation, and

⁵https://energy.ec.europa.eu/system/files/202101/staff_working_document_assessment_necp_germany_en_0.pdf

includes a summary of the responses received as part of the public consultation on each of the five dimensions ((energy security, internal energy market, energy efficiency, decarbonization, and research, innovation and competitiveness)

5.4. South Africa

5.4.1. Legislative Framework

South Africa is another example where integrated national energy planning is anchored in a statute, dedicated to this objective, Act No. 34 of 2008⁶, the National Energy Act, much like the EU Governance Regulation. The plan established by this Act is called the Integrated Energy Plan (IEP) defined in the Act as “the national energy plan contemplated in section 6, approved by the Cabinet and published in the Gazette by the Minister”.

5.4.2. Policy and Regulatory Frameworks

The 1998 White Paper on Energy Policy of the Republic of South Africa⁷ is the primary policy document guiding all subsequent policies, strategies and legislation in the energy sector. A key element for the IEP planning was to ensure alignment and identify synergies between various government policies including policy issues on economic growth and development, new growth path prioritizing employment creation, environmental sustainability, carbon tax policy and national water resource strategy within the framework of the White Paper on Energy Policy. In addition, the preamble to the National Energy Act states that it is an Act that ensures that diverse energy resources are available in sustainable quantities and affordable prices to support economic growth and poverty alleviation, to provide for energy planning and increased generation and consumption of renewable energy among other objects.

Chapter 3 of the National Energy Act prescribes the contents and methodology for development of the IEP. The Minister of Mines and Energy has an obligation under section 6 of this Act to develop, review annually, and published the IEP. The IEP ‘must’ deal with issues relating to the supply, transformation, transport, storage and demand in a way that accounts

⁶ Republic of South Africa. (2008). *National Energy Act, 2008 (Act No. 34 of 2008)*. https://www.gov.za/sites/default/files/gcis_document/201409/316381263.pdf

⁷ https://www.energy.gov.za/files/policies/whitepaper_energy_policy_1998.pdf

for, inter alia, security of supply, economically available energy resources, affordability, accessibility, social equity, the environment and international commitments. The IEP must also take into account the plans relating to the prescribed areas (which include electricity, macro-economy infrastructure development and greenhouse gases mitigation) within the energy sector and the integrated energy plans of local and provincial authorities. The section prescribes detailed regulatory requirements including, that –

- a) The IEP ‘must inform and be informed by plans from all supply, production and demand sectors whose plans impact on or are impacted by’ the INEP;
- b) The IEP must take into account sustainable development, optimum use of indigenous and regional energy resources, balance between supply and demand, economic viability and environmental, health, safety and socio-economic impacts and guide the selection of appropriate technology;
- c) The Minister must invite public comments and duly consider such comments before finalizing the IEP; and
- d) The planning horizon must not be for a period less than twenty years with annual reviews for previous year energy supply and demand, and annual forecast of next 20 years’ supply and demand.

The Minister has the power to make Regulations under this Act on several areas specified in section 19 of chapter 6. Regulations on IEP are not specifically mentioned but could be made under the catch-all omnibus clause 19(f) – as ‘*any other matter that may or has to be prescribed, determined or provided for by regulation in terms of this Act*’. However, the provisions of chapter 3 read together with chapter 2 on provision of data and data resources, give the broad regulatory framework on content and methodology

As regards the operationalization on of the above legislative provisions for integrated energy planning given in the South Africa’s National Energy Act, 2008, the status as at the date of this study is that the first Integrated Energy Plan is for the period 2015 – 2050 (the Integrated Energy Plan – Department of Energy).⁸ The IEP is the overall energy plan of action for

⁸ <https://policy.thinkbluedata.com/node/4350>

electrical power, gas and liquid fuels, gives demand forecasts, and provides alternatives for meeting that demand.

Therefore, South Africa regulatory framework for developing its integrated national energy plan is largely given in the legislation as at the date of this study.

A distinctive feature of this framework is that the IEP is approved by Cabinet and published by the Minister. This is a desirable feature which could strengthen the framework for the proposed Draft Regulations whereby the Cabinet Secretary is approves the INEP, in terms of political buy –in. The legislation also defines IEP which is one of the recommendations in this report to include such definition.

5.5. California- USA

5.5.1. Legislative and Regulatory Framework

The main statutes that govern integrated energy planning and regulation in the state of California are Senate Bill 350 (De Leon), Chapter 547 of Statutes of 2017⁹ (the Senate Bill 350), and the Senate Bill 1389 (Bowen), Chapter 568, Statutes of 2002 (the Senate Bill 1389), as amended by the De Leon Senate Bill 350.¹⁰¹¹

The Senate Bill 350 requires all publicly owned utilities to adopt an integrated resource plan under section 35. This law became effective in January 2019, whereby the public electric utilities were to adopt an integrated resource plan and a process for updating the plan every five years. The integrated resource plans and updates for each utility are submitted to the California Energy Commission (section 36) for review and adoption. The review includes mandatory consultation with the public before adoption.

The integrated resource plans submitted to the Energy Commission are also subject to the requirements of the Senate Bill 1389, as amended by the Senate Bill 350. The amendment required the State Energy Resources Conservation and Development Commission to set targets for statewide energy efficiency savings and demand reductions. The State Energy

⁹https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-efficiency-solicitations/SenateBill350.pdf).

¹⁰ http://leginfo.ca.gov/pub/01-02/bill/sen/sb_1351-1400/sb_1389_bill_20020915_chaptered.html

¹¹https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-efficiency-solicitations/SenateBill350.pdf

Resources Conservation and Development Commission¹² prepares an integrated energy policy report from assessments submitted by electric utilities. The public electric utilities and other market participants prepare and submit to the State Energy Resources Conservation and Development Commission every two years, their assessments of demand forecasts, resource plans, market assessments and related outlook which incorporate the energy efficiency savings and demand reduction targets. It is written in the law that the assessments are done in consultation with appropriate state and federal agencies, including the Public Utilities Commission, Office of Ratepayer Advocates, Independent System Operator, Department of Water Resources, and California Consumer Power and Conservation Financing Authority.

The process therefore entails each publicly held utility preparing its integrated energy plan after consultation with stakeholders, in accordance with targets set for statewide energy efficiency savings and demand reductions and submits it to the Energy Commission which reviews and adopts the plans every five years.

5.5.2. Policy Frameworks

The underlying policy written into the Senate Bill 1389 is that the government has an essential role to ensure reliable supply of energy is provided, and that timely reporting, assessment, forecasting and data collection activities are essential to serve information and policy development needs.,

The underlying policy objective derived from the Senate Bill 350 is to ensure that the utilities achieve the annual targets set for statewide energy efficiency savings and demand reductions by the State Energy Resources Conservation and Development Commission

5.6. Thailand

5.6.1. Legislative and Regulatory Framework

The legislative and regulatory framework for development of a national energy plan for Thailand is anchored in the Energy Industry Act B.E. 2550 (2007).¹³ The Energy Industry Act empowers the Minister for Energy “to consider the plan on electricity capacity development,

¹² <https://www.law.cornell.edu/Regulations/california/title-20/division-2>

¹³ <https://www.climate-laws.org/geographies/thailand/laws/energy-industry-act-b-e>.

the plan on electricity business investment, the plan on natural gas procurement and the plan on expansion of energy network system” for proposing to the Council of Ministers for approval [section 9(3)].

The Minister has power under section 6 of the Energy Industry Act to make Regulations for the execution of this Act. Section 8 of this Act also empowers the State to issue policy guidelines, inter alia, to encourage participation of local communities and public in the management and monitoring of energy related operations. This study did not however find any Regulations available in the English language that have been issued on integrated national energy planning as at the time of this Report.

Regulation of the energy sector is by the Energy Regulatory Commission (ERC) established under section 10 of the Energy Industry Act. ERC has powers, among others, to regulate energy business operation to ensure compliance with the objectives of the Energy Industry Act under the policy framework of the State, and give comments on the plans for electricity capacity development, electricity investment business, natural gas procurement and expansion on expansion of energy network system for proposing to the Minister.

The development of Thailand Power Development Plan 2015-2036¹⁴ [also known as the Thailand Integrated Energy Blueprint (TIEB)] followed the process given sections 9 and 10 of the Energy Industry Act. The Power Development Plan also affirms in the introductory chapter that development took into account comments and options obtained from all stakeholders and a number of public hearings were held. It also affirms the Energy Regulatory Commission commented on TIEB, and TIEB was endorsed by the Thailand’s National Energy Policy Council and approved by the Cabinet on June 30, 2015.

5.6.2. Policy Framework

The policy objective is also given in TIEB. The Thai Ministry of Energy developed TIEB on the backdrop of three policy areas, focusing on Energy Security – coping with increasing power demand taking into account power diversification; Economy – maintaining an appropriate cost of power generation for long term power competitiveness; and Ecology – lessening carbon dioxide intensity in power generation.

¹⁴ https://www.eppo.go.th/images/POLICY/ENG/PDP2015_Eng.pdf

Thailand's National Energy Policy Council¹⁵ is prominent in the policy framework. It was established by the National Energy Policy Council Act, BE 2535 (1992), and its functions include making recommendations to Cabinet on national energy policies and national energy management and development plans. Its prior endorsement was required TIEB prior to Cabinet approval.

The take – away from the case study for Thailand is the three-level approval of the plan, first by the Ministry of Energy, second by the National Energy Policy Council and finally by parliament.

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¹⁵ https://www.eppo.go.th/images/policy/PDF/docs/p01_EnergySectorManagement.pdf

5.7. Lesson Learnt from INEP in Other Jurisdictions

Country	Guiding Legislative	Policy and Regulatory Framework	Key Highlights
European Union	Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action	<ul style="list-style-type: none"> Carbon-neutral by 2050 Five thematic areas - energy security, internal energy market, energy efficiency, decarbonization, and research, innovation and competitiveness Regulation by EU Energy Secretariat and member state government Prescribed content and methodology 	<ul style="list-style-type: none"> Multi –level approval process: first by member state, second by EU Energy Secretariat and finally by Energy Community Treaty governing body Member states' plans adopted under Energy Community Treaty governing body as legislation First plan for five years to 2025, and subsequent plans for ten-year periods Gives guidance on content and methodology Mandatory public consultation
Germany	<ul style="list-style-type: none"> Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action integrated National Energy and Climate Plan (NECP) and the Climate Action Program, 2019 	<ul style="list-style-type: none"> Carbon-neutral by 2050 5 thematic areas - energy security, internal energy market, energy efficiency, decarbonization, and research, innovation and competitiveness Regulation by EU Energy Secretariat and member state government EU prescribed content and methodology 	<ul style="list-style-type: none"> Consultation with public, national entities, municipalities, foundations, civil society organizations, other stakeholders and EU Member states, and the EU Energy Secretariat. On-line consultations conducted over a period of six weeks Consultation with stakeholders specified in the Regulation integrated National Energy and Climate Plan (NECP) and the Climate Action Program, 2019 passed by the Federal Government
South Africa	Act No. 34 of 2008, the National Energy Act	<ul style="list-style-type: none"> 1998 White Paper on Energy Policy of the Republic of South Africa is the primary policy document guiding all subsequent policies, 	<ul style="list-style-type: none"> The Integrated Energy Plan is for the period 2015 – 2050 The Act provides a definition of 'Integrated Energy Plan ' (IEP) defined as “the national energy plan contemplated in section 6, approved by the Cabinet and published in the Gazette by the Minister” The Act and Energy Policy give guidance on content and methodology

		<p>strategies and legislation in the energy sector.</p> <ul style="list-style-type: none"> ○ A key element for the IEP planning was to ensure alignment and identify synergies between various government policies. ○ The planning considered policy issues on economic growth and development, new growth path prioritizing employment creation, environmental sustainability, carbon tax policy and national water resource strategy. 	<ul style="list-style-type: none"> ○ Consultation with stakeholder for public comments specified in the Act; comments before finalizing the IEP; ○ The planning period is for a minimum period of 20years with periodic reviews. ○ Annual reviews for previous year demand and supply, ○ Annual forecast for next 20 years demand and supply
California	<ul style="list-style-type: none"> ○ Senate Bill 350 (De Leon), Chapter 547 of Statutes of 2017 the Senate Bill 350), ○ Senate Bill 1389 (Bowen), Chapter 568, Statutes of 2002 (the Senate Bill 1389), as amended by the De Senate Bill 350 	<ul style="list-style-type: none"> ○ To provide reliable supply of energy, ○ Timely reporting, assessment, forecasting and data collection activities essential to serve information and policy development needs., ○ To ensure the utilities achieve the annual targets set for statewide energy efficiency savings and demand reductions by the State Energy Resources Conservation and Development Commission. 	<ul style="list-style-type: none"> ○ The integrated plan is developed by the utilities in a bottom - up process whereby the utilities submit own state-wide integrated plans for review and adoption by the Energy Commission. ○ Integrated plans are consolidated by the Energy Commission ○ Consultation with stakeholders specified in the law ○ Legislation gives guidance on content and methodology ○ The Energy Commission collaborates with the State Energy Resources Conservation and Development Commission which sets targets for the utilities for state - wide energy efficiency savings and demand reductions. Its value is futuristic in contemplation of the development of a power market ○ Plan to be up-dated every five years

Thailand	Energy Industry Act B.E. 2550 (2007)	<p>3-pronged policy on</p> <ul style="list-style-type: none"> ○ Energy Security – coping with increasing power demand taking into account power diversification; ○ Economy – maintaining an appropriate cost of power generation for long term power competitiveness ○ Ecology – lessening carbon dioxide intensity in power generation. <p>Regulation is by the Energy Regulatory Commission with powers</p> <ul style="list-style-type: none"> ○ to regulate energy business operation to ensure compliance with the objectives of the Energy Industry Act under the policy framework of the state, ○ give comments on the plans for electricity capacity development, electricity investment business, natural gas procurement and expansion on expansion of energy network system ○ make proposals on the above to the Minister 	<ul style="list-style-type: none"> ○ Ministry of Energy developed the plan; ○ Content guided by the policy ○ Consultation with stakeholders and a number of public hearings held ○ The Energy Regulatory Commission to give comments on the plan by law. ○ Plan endorsed by the Thailand's National Energy Policy Council; required by law ○ Thailand Power Development Plan 2015-2036 approved by the Cabinet on June 30, 2015. ○ Multi-level approval process
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Kenya	<ul style="list-style-type: none"> ○ Energy Act, 2019 ○ Proposed Energy ((Integrated Energy Plan) Regulations 	<ul style="list-style-type: none"> ○ Energy Policy, 2018 (predicated on completion of the policy making process) ○ Regulation by proposed INEP Regulations 	<ul style="list-style-type: none"> ○ INEP to be published by the Cabinet Secretary ○ INEP to be reviewed every three years, ○ The Energy Act and Draft INEP Regulations gives guidance on content and methodology ○ Public participation is a legal requirement ○ INEP to be developed through consolidation by national INEP planning committee of the county energy planning committees' and national energy providers' energy plans ○ INEP not defined ○ Cabinet Secretary is the final approver for INEP.
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6. Field Study Findings

This section presents the views of the stakeholders involved in the integrated energy planning process as formulated in the Draft Regulations. The field study findings sought to find the opinions of the stakeholders regarding the development of national and county energy plans, composition of national and county energy committees, timelines provided for submission of energy plans and monitoring and evaluation of the energy plans.

6.1. Response Rate

A sample size of 74 respondents were targeted in this work. A total of 48 responses were received, making up a 64 % response rate, as shown in Figure 2 . At the time of reporting, 31 % of the targeted responses had not been successful. The list of successful respondents is provided in Annex C-2.

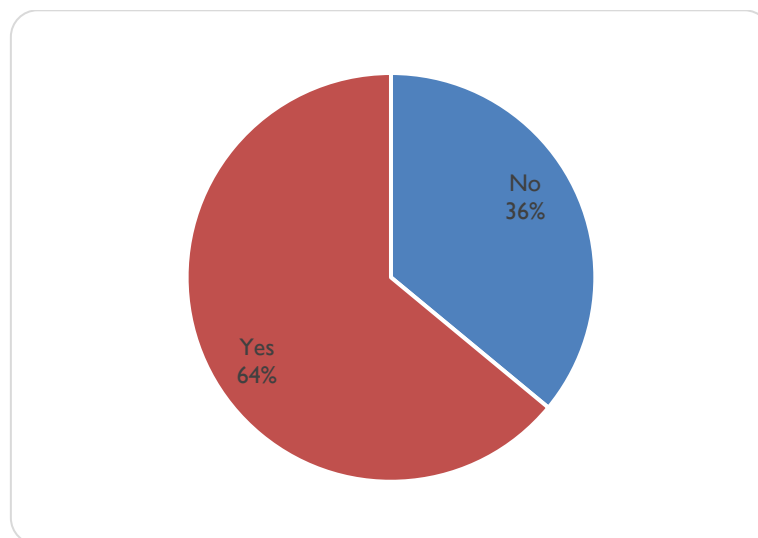


Figure 2: Study Response rate

6.2. Level of Awareness on the Draft Regulations

Most respondents (about 95.8 %) are aware of the provisions of the Draft Regulations. However, the level of awareness varies from low to high, as depicted in Figure 3.

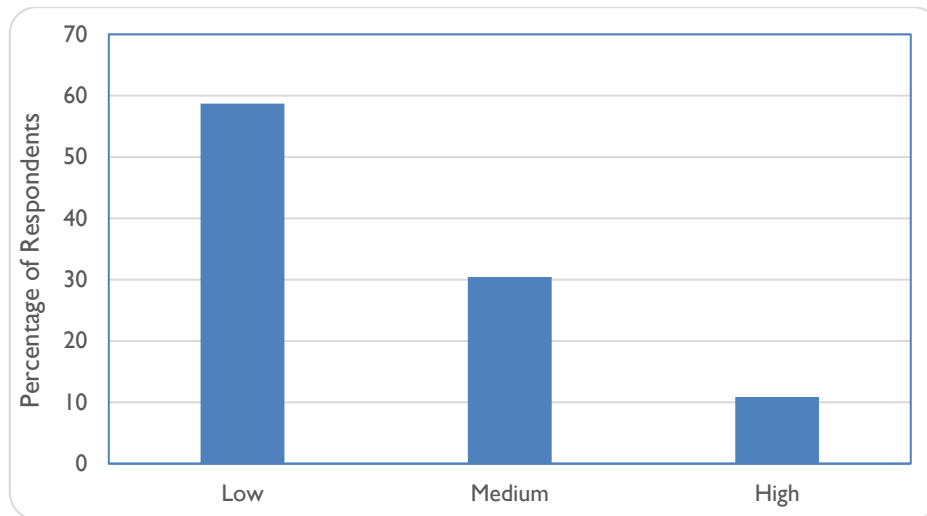


Figure 3: Respondents' Level of Awareness

The understanding of the provision of the Draft Regulations is quite low as indicated from the field study findings. It was observed that even among those who are aware of the provision of the Draft regulations, only about 11 % of the respondents have a high understanding of the provisions of the Draft Regulations.

INEP thematic areas are; electricity planning, energy access planning, energy resource development planning, bio-energy planning and energy efficiency and conservation planning. The study further investigated the number of respondents along the INEP thematic areas. As shown in Figure 4 the most covered thematic areas are; Energy Access, Energy Efficiency and resource planning with over 77% while 75 % of the organizations are engaged in electricity planning. Bio-energy planning is the least explored thematic area with about 58% of the organizations participating in the survey.

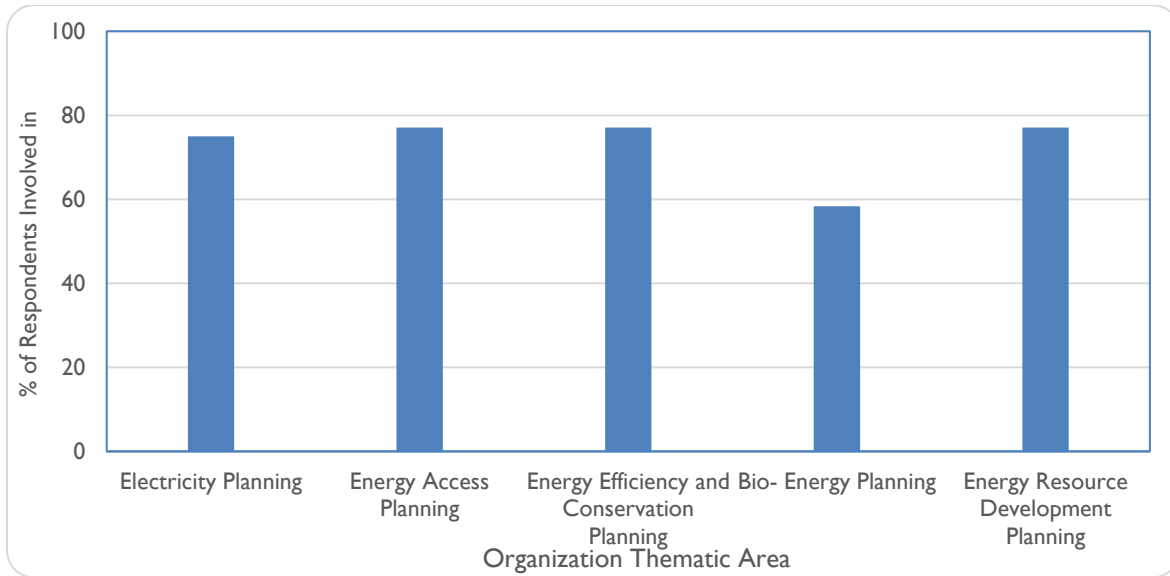


Figure 4: Organizations' thematic area

6.3. Preparedness for INEP

For the success of INEP, organizations need to have a fully functional energy planning department. This study also sought to establish if the organizations that participated in the survey have such departments. The response was as shown in Figure 5.

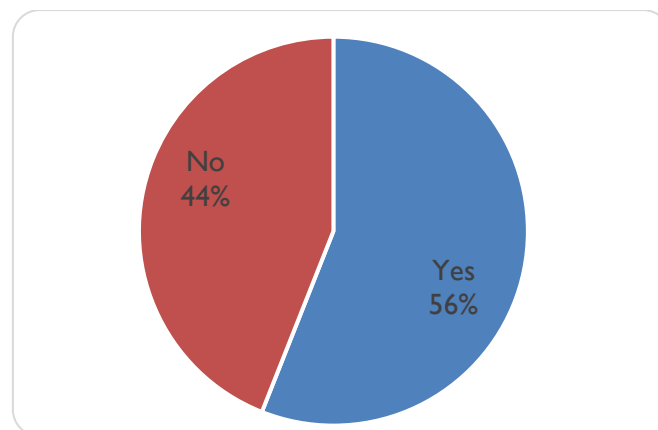


Figure 5: Existence of designated energy planning department

It was established that about 56 % of the respondents have a designated energy planning department, while the other 44 % have no such departments. To gain more understanding, the survey sought to find out the level of preparedness for the implementation of the requirements of the Draft Regulations in the various organizations. The results are as shown in Table 4. Most of the respondents rated their level of preparedness as sufficient; with 58%

of respondents under national energy service providers, 43% under counties & CoG and 40% under private sector & NGO's rating their level of preparedness as sufficient. Most of the respondents under government development partners rated their level of preparedness as high (75%).

Some of the respondent rated their level of preparedness as none and low. Under government ministries and departments, 14% of the respondents rated their level of preparedness as none, while 71% rated the level of preparedness as low. Similar trend was observed with counties with counties and CoG, 14% of the respondents rated their level of preparedness as none and 36% rated their level of preparedness as low respectively.

Table 4: Organizations Level of Preparedness for INEP

Category	Level of Preparedness					
	None	Low	Sufficient	High	Very High	Didn't Answer
National Energy Service Provider	0%	17%	58%	17%	8%	0%
Government Ministries & Department	14%	71%	14%	0%	0%	0%
Counties & CoG	14%	36%	43%	0%	7%	0%
Government Development Partners	0%	0%	0%	75%	0%	25%
Private Sector & NGO's	10%	20%	40%	30%	0%	0%

6.4. Proposed Energy Committees

6.4.1. National Energy Committee

The Draft Regulations propose the following constitution in the National Energy Committee:

- Four (4) representatives from the Ministry one of whom shall chair the committee.
- Integrated National Energy Plan Programme Coordinator who shall be the secretary to the committee and who shall be from the Ministry
- Two (2) representatives from Energy & Petroleum Regulatory Authority.
- Two (2) representatives from Kenya Electricity Generating Company.
- Two (2) representatives from Rural Electrification & Renewable Energy Corporation
- Two (2) representatives from Kenya Power & Lighting Company.
- Two (2) representatives from Kenya Electricity Transmission Company.

- h) Two (2) representatives from Geothermal Development Company.
- i) Two (2) representatives from Nuclear Power & Energy Agency.
- j) Two (2) representatives from The National Treasury & Planning.
- k) Three (3) representatives from Council of Governors.
- l) One (1) representative from Kenya National Bureau of Statistics
- m) One (1) representative from the ministry responsible for devolution
- n) One (1) representative from the ministry responsible for petroleum and mining

The study sought to know the stakeholders' views on this composition in terms of who could be added or removed for inclusiveness.

For various reasons 53.8 % of the respondents recommended the reduction of this list of members in the national energy committee. Some stakeholders feel having one representative per organization could save on cost as well as increase efficiency. Those in support felt maintaining two members per organization is good for succession and continuity. One exclusion that was suggested is the Ministry of Petroleum and Mining because Planning of Petroleum is well covered under the petroleum Act 2019, hence they need not to be in this list. Some respondent suggests that either one of the council of governors (COG) or Ministry in charge of devolution representative is enough and not both. Another exclusion that was proposed is NuPEA since they are yet to be involved in energy generation.

On the other hand, over 93 % of the stakeholders felt that the list could be enhanced for inclusivity. There were proposals to include some other players in the energy sector not only government entities. Some of the players that were suggested include;

- i) Private sector players such as Kenya Private Sector Alliance (KEPSA), some IPPs, Kenya Renewable Energy Association (KEREa), ESAK, Clean Cooking Association (CCAK) and research institutions and civil societies. There is a feeling that private sector investments comprise a significant portion of planned energy investments in the country and should not be left out. These associations and research institutions are also a forum for the dissemination and exchange of information and ideas on matters relating to renewable energy development and utilization in Kenya.

- ii) Representatives from Ministry of Environment and National Environmental Management Authority (NEMA) in order to ensure that environmental compliance is adhered to during the energy planning process.
- iii) Kenya association of Manufacturers (KAM) to represent the manufacturers because they are heavy consumers who should be included in energy planning.
- iv) Kenya Industrial Research and Development Institute (KIRDI)
- v) Ministry of transport since there is a lot of energy utilization in transport and now the advent of e-mobility.
- vi) Ministry of Lands because Land is critical in development of energy infrastructure.
- vii) The State department for Public Works since it is the principal government adviser on matters energy in the building environment.
- viii) Ministry of water matters on water resources for Hydro Energy Power generation and environmental issues.
- ix) Ministry of industrialization and Ministry of Agriculture

6.4.2. County Energy Committee

The Draft Regulations propose the following constitution in the Energy Planning Committee

- a) The County Executive Committee Member responsible for Energy who shall be the Chairperson of the Committee
- b) The Chief Officer responsible for Energy who shall be the Secretary of the Committee
- c) One (1) representative of the County Commissioner
- d) The County Executive Committee Member responsible for Finance and Planning
- e) The Chief Officer responsible for Economic Planning
- f) The Chief Officer responsible for Finance
- g) The County Executive Committee Member responsible for Lands, Housing, Physical Planning and Urban development
- h) The County Executive Committee Member(s) responsible for Water, Environment and Natural Resources
- i) One (1) representative from Kenya Power and Lighting Company
- j) One (1) representative from Rural Electrification and Renewable Energy Corporation
- k) One (1) representative from Kenya Forest Service County Representative

- I) Technical County Officer(s) responsible for either Coal, Renewable Energy and Electricity.

During the consultation workshop with the counties held on 11th October 2022, at the Council of Governors in Nairobi the following was proposed with regards to the constitution of the county energy planning committee

- i. The committee should include a director in charge of energy officer who shall carry out different mandates in the energy planning for continuity of the planning process.
- ii. The Regulations should consider having two committees i.e. executive committee that is involved with the management of the energy planning and a technical committee people who shall have a direct input on the energy planning and implementation process.
- iii. The county energy committee should be headed by the Chief Executive Committee member responsible for energy with chief officer being the alternate chair. Director in charge of energy in the county shall act as the secretary for the energy planning committee and chair of the technical energy committee to ease of the planning process as county government administration changes.
- iv. There should be a representation of the agricultural sector in the energy planning as the sector plays a critical role in the energy consumption in some of the counties.
- v. Need to create a funds as an incentive to submission of plans instead of fines.
- vi. There was a proposal to align the INEP with other planning processes at the counties

6.5. Development and Implementation of Energy Plans

6.5.1. Preparation of Energy Plans

Section 5(2) and 5(3) of the Draft Regulations provide that the INEP planning process shall commence upon issuance of a circular by the Cabinet Secretary to the National energy providers and county governments, **three months** prior to the commencement of the financial year preceding the year of review of INEP. This study sought to find out the stakeholders view if the three months in the Draft is reasonable. To this about 64.6 % of the respondents agree with the time while 33.4 % do not as shown in Figure 6

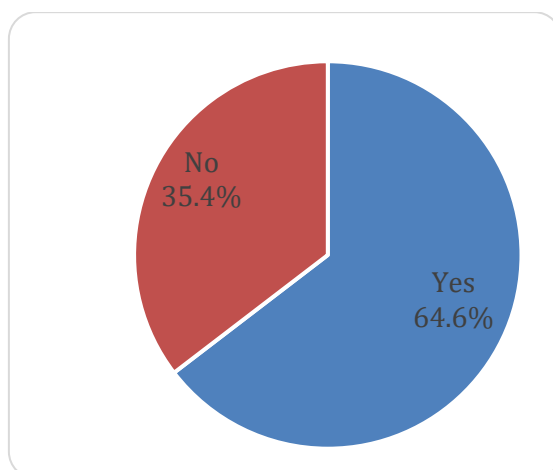
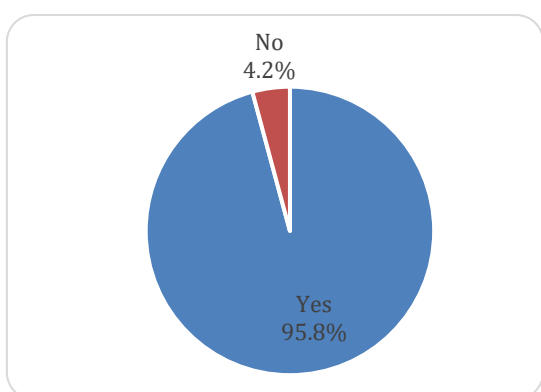


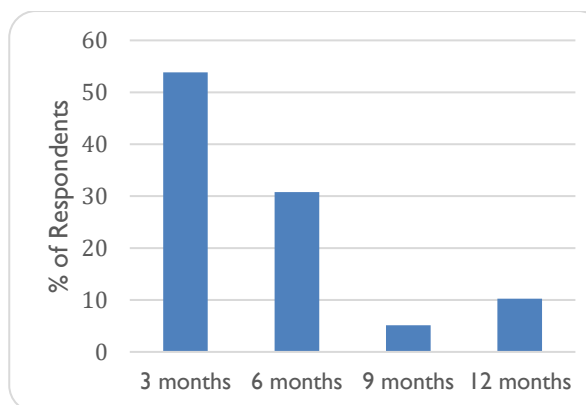
Figure 6: Suitability of three months period

Most (88.2%) of those who do not agree with this proposed period feel like the issuance of the circular should be 6 months prior to the commencement of the financial year preceding the year of review of INEP. 5.9% recommended 2 months and 12 months.

Section 20 (2) of the Draft Regulations stipulates that all Energy plans shall be submitted within the timelines specified in the Circular. This study sought to find out from the stakeholders need to specify the timelines in the Regulations and the reasonable timeline. Their response is as shown in Figure 7.



(a) Is it necessary to specify timelines



(b) Proposed reasonable timeline

Figure 7: Timelines for submission of energy plans

The overwhelming majority (about 95.8 %) of the respondents agree that the timelines for submission of these energy plans should be stipulated, with only about 4.2 % having a contrary opinion, as shown in Figure 7(a). Out of those who agree, majority (53.8%) propose 3 months as the preferred timeline, 30.8 % propose 6 months, 10.2 % propose after 12 months while

only 5.1 % of the respondents prefer 9 months, as shown in Figure 7(b). Based on these study findings the Draft Regulations should have provisions for timelines of submission of energy plans, preferably three months.

The INEP Regulations will require a preparation of the National Energy Plan, County Energy Plans, and energy service providers to provide their own energy plans. Some factors may hinder the provision of timely and accurate plans from a different organization. The stakeholders that participated in this study had varied opinions on how some of these factors hinder and the likelihood of it impacting the process, as shown in Table 5.

Table 5: Factors that could hinder provision of timely plans

Factor	Not Likely	Slightly Likely	Likely	Fairly Likely	Very Likely
Limited data to support the development of plans	19.5	17.1	22.0	7.3	34.1
Weak Inter- Sectorial Planning	14.3	11.9	21.4	21.4	31.0
Limited knowledge	26.2	21.4	19.0	9.5	23.8
Poor stakeholder coordination	14.6	14.6	26.8	14.6	29.3
Budgetary constraints	9.8	12.2	19.5	9.8	51.2

Budgetary constraints seem to be the factor that most respondents (51.2 %) feel is very likely to hinder provision of timely plans. Other factors that are very likely to hinder the energy planning process include; limited data to support the development of 34.1%, and weak intersectoral inter- sectoral planning 31.0%. It was also observed that there is adequate knowledge on energy planning as 47.6% of the respondents rated limited knowledge from not likely to slightly likely.

Section 15 of the Draft Regulations provides that NGOs and Private sector entities will prepare and submit their energy programmes/projects either to their respective Counties or to the Cabinet Secretary. The study wanted to establish what the stakeholders feel should qualify organizations for submission to the national government or county government. About 80.3 % of the respondents pointed out that energy consumption should be the basis of qualifying an organization for submission of the projects. This is followed by thematic areas with 54.2 %, number of counties the organization is operating in with 33.3 % and finance

turnover were pointed out by 31.3% of the respondents. The least pointed out factor was the number of personnel with less than 18.8 % of the respondent as shown in. Figure 8.

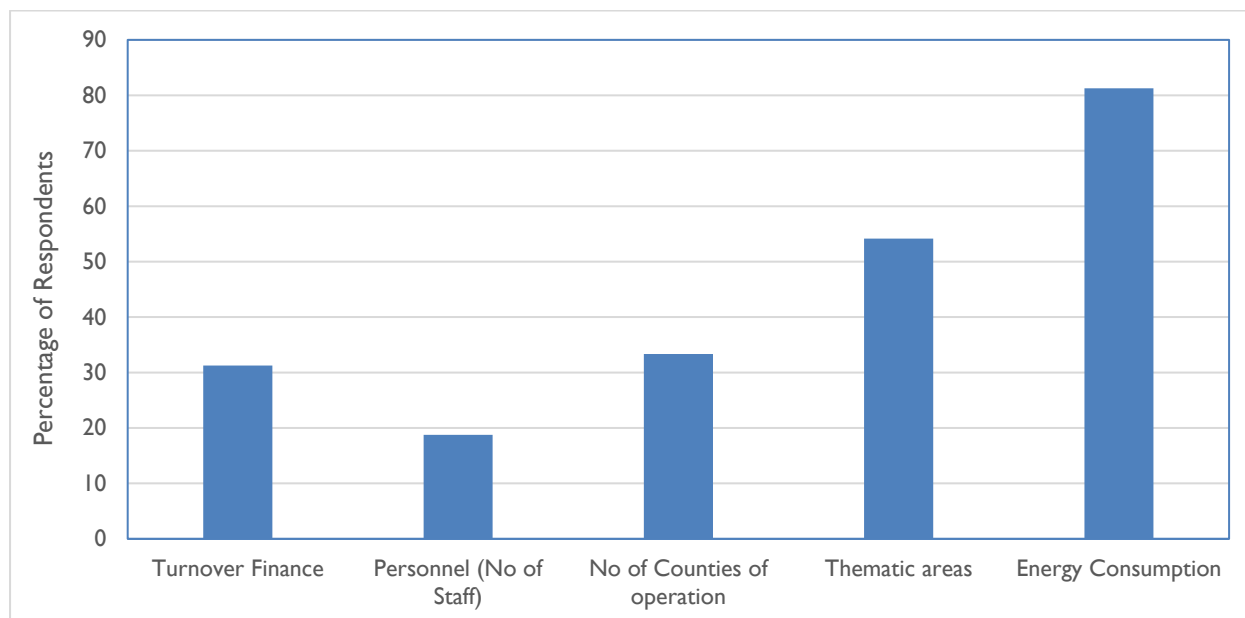


Figure 8: Factors that should qualify organizations for submission of energy projects

6.5.2. Implementation of energy Plans

There are many activities that will help to make the implementation and enforcement of INEP Regulations. Some of these were identified and the stakeholders' opinions sought on their importance on a scale of 1 to 5 (5 being most important and 1 being least important). The respondents' responses are as summarized in Table 6.

Table 6: Level of Importance of actions

	1	2	3	4	5
Hiring Energy Planners	6.8	11.4	15.9	27.3	38.6
Training Existing Staff	2.3	2.3	2.3	15.9	77.3
Public Sensitization	4.7	2.3	11.6	16.3	65.1
Budget Prioritization	2.4	0.0	7.1	9.5	81.0

In addition to the actions mentioned in Table 6 above, the respondents also gave the following important actions that would help in the successful implementation and enforcement of the new Regulations:

- i) Data management/regular updating at county and national level

- ii) Stakeholder coordination and Open Access to information
- iii) Policy Enforcement mechanism
- iv) INEP Calendar
- v) Consumer financing, business models
- vi) Support from trained and dedicated advisory team
- vii) Communication, Public Updates
- viii) Involvement of private energy providers
- ix) Incubation centers

Section 18 of the Draft Regulations outlines that a cross-cutting issues shall be identified from time to time and taken into consideration during the preparation, implementation, monitoring, and evaluation and reporting of energy plans. The stakeholders who responded in this study were asked to rank a number of cross cutting/mainstreaming issues in terms of the priority that should be placed on each of them from 1 – 5 (1 being the lowest priority and 5 the highest priority). Their responses are as detailed in Table 7.

Table 7: Cross cutting issues priority.

Cross cutting issue	Priority				
	1	2	3	4	5
Policy and political dialogue	0.0	2.2	6.7	17.8	73.3
Gender mainstreaming	2.4	9.5	16.7	33.3	38.1
Equity and social inclusion	0.0	0.0	17.0	27.7	55.3
Gender responsive budgeting	4.4	8.9	13.3	33.3	40.0
Climate change	0.0	0.0	2.3	22.7	75.0

The respondents placed the highest priority on climate change with 75 % of the respondents giving it the highest priority level of 5. Other issues ranked highly include policy and political dialogue, equity and social inclusion as seen in Table 7.

This study also sought to know if the stakeholders are aware of some national strategies and policies and how the Draft Regulations is likely to accelerate the Nation in achieving the goals which it has laid out in these strategies and policies. The stakeholders' response is as summarized in Table 8.

Table 8: Impact of INEP on Other Policies and Strategies

Strategy / Policy	Unaware	Not at all	Less Likely	Likely	Highly Likely
Kenya Vision 2030 medium term strategic plans	4.7	2.3	2.3	46.5	44.2
National Energy Policy 2018	2.5	2.5	2.5	32.5	60.0
National Industrialization policy	4.7	2.3	7.0	48.8	37.2
Gender Policy	4.7	4.7	30.2	32.6	27.9
SDG's	7.1	2.4	4.8	47.6	38.1
Agenda 2063	22.0	2.4	9.8	24.4	41.5
Budget review and outlook paper	5.6	2.8	16.7	38.9	36.1

From the field study, the findings shows that INEP will have an impact on most of these strategies and policies with most of the responses being either likely or highly likely. This is the case in most of them except the gender policy whereby the majority, 30.2% stated that it is less likely going to be affected by the INEP Regulations. A number of respondents are not aware of some of these strategies and policies. For instance, 22 % are not aware of the Agenda 2063, 7.1 % are not aware of the SDGs and the County capacity needs Assessment report while 4.7 % are not aware of the Kenya Vision 2030 medium term strategic plan.

6.6. Impact of Regulations on Stakeholders

6.6.1. Financial Implication of Draft Regulations

The cost implication associated with the implementation of the Draft Regulations to the stakeholders was also to be assessed in this study. As shown in Figure 9 about 84.4 % of the respondents agree that the Regulations will have a cost implication to their organizations while only about 15.6 % indicated that there will be no additional costs that will be brought by INEP Regulations to them.

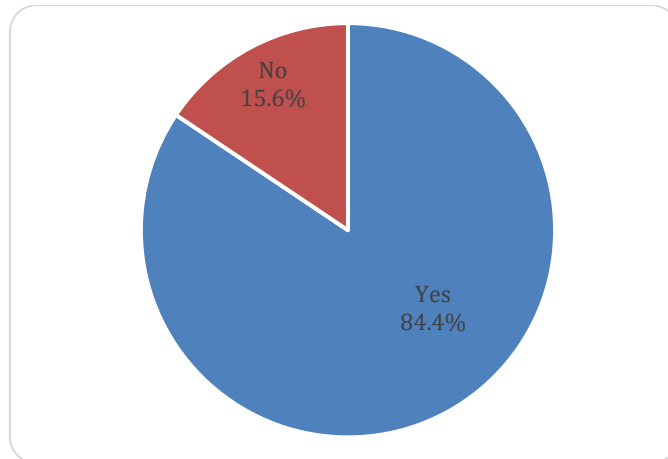


Figure 9: Will the implementation of INEP have a cost implication to your organization?

The aspects and level of cost implication that enforcing the INEP framework will bring according to the respondents was summarized in Table 9.

Table 9: Level of Cost implication brought by the implementation of INEP

Aspect	Level of Cost Implication		
	Low	Medium	High
Publishing of energy plans	40.0	40.0	20.0
Implementation of energy plans	6.1	27.3	66.7
Monitoring of plan progress	25.8	32.3	41.9
Capacity building & recruitment	9.4	46.9	43.8
Committee meeting and representation	12.9	48.4	38.7

Most respondents, 66.7 % indicated that Implementation of energy plans will have the high-cost implication as opposed to only 20 % of the respondents who think publishing of energy plans will have a high-cost implication. For monitoring of plan progress 41.9 % of the respondents felt that it will have a high-cost implication while 25.8 % indicated that there will be a low-cost implication.

The regulation could also impose some costs and benefits to organizations. This was also sought and the responses are as summarized in Table 10.

Table 10: Costs and Benefits of INEP Regulations

Aspect	Level of Benefit		
	Low	Medium	High
Tangible costs and benefits	10.0	33.3	56.7

Intangible costs and benefits	16.7	53.3	30.0
Direct costs and benefits	7.7	34.6	57.7
Real costs and benefits	3.8	38.5	57.7
Pecuniary costs and benefits	40.9	50.0	9.1

The range of additional average budgetary costs that will be imposed by the Regulations for the different respondents is as given in Figure 10. For most of the organizations that responded (47 %), they will incur an additional cost of between Kshs. 1,000,000 – 10,000,000. Only 5.9 % of the organizations will incur more than Kshs 100,000,000 as shown in Figure 10.

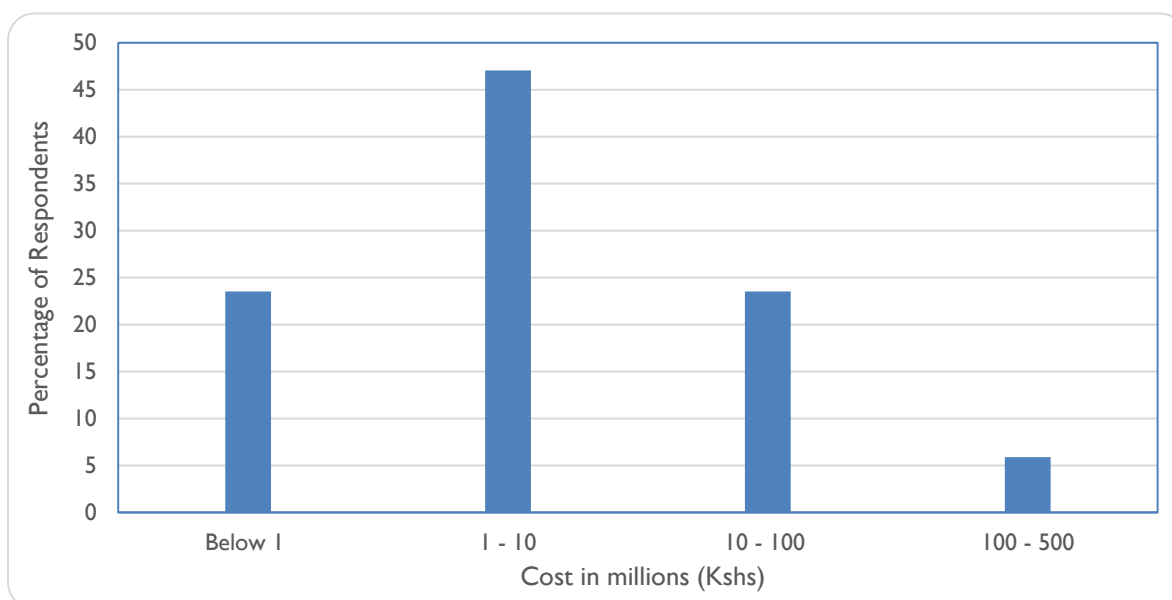


Figure 10: Additional budgetary costs

Investigating the responses from different categories of stakeholders, most of the national service providers (42%) and private sector and NGO's (43%) indicated that they will incur additional budget of about 1-10 million. Most of the respondents in other government ministries and departments (57%) feel that they shall incur an additional budget of below 1 million while majority of respondent under counties and CoG indicated that implementation of the Draft regulation will incur an additional budget of about 10-100 million as shown in Table 11.

Table 11: Additional Budgetary Cost to Different Stakeholders

Category	Cost Imposed (Millions)				
	Below 1	1 to 10	10- 100	100-500	Didn't Answer
National Energy Service Provider	0%	42%	25%	25%	8%
Government Ministries & Department	57%	14%	0%	0%	29%
Counties & CoG	14%	36%	43%	0%	7%
Government Development Partners	0%	0%	0%	0%	100%
Private Sector & NGO's	20%	40%	0%	0%	40%

For adequate implementation of the INEP Regulations, the respondents suggested the following other measures:

- i) The African development Bank can provide technical assistance on the implementation and capacity building of the respective representatives nominated by organizations under the National Energy Committee
- ii) Formation of various teams (A well versed technical teams, resource mobilization teams, gender officer and awareness creation teams)
- iii) Support to infrastructure education and compliance
- iv) Proper sensitization of the INEP framework and Regulations for ease of compliance
- v) Standardization of planning tools for ease in integrating the various energy plans into the thematic areas.
- vi) Enhance cooperation among stakeholders, financial enhancement to all finance activities
- vii) Inclusion of Non-state actors in the process
- viii) Capacity building in energy planning across board
- ix) Work with all stakeholders in the Energy Sector and not focusing on government institutions. Most of the plans will be implemented by other players except the government institutions and parastatals.
- x) Adequate support to the counties, creation specific departments to handle energy matters
- xi) Energy Departments should have their own budgets in the counties

6.6.2. Socio- Economic Implications of the Draft Regulations

A number of activities surround electricity planning which shall be captured during the reporting an implementation of the integrated national energy planning. As shown in Table 12, the stakeholders had the following views on how each of the following activities will be impacted INEP Regulations are enacted.

Table 12: INEP impact on electricity planning activities

	No Impact	Little Impact	Impact	Fair Impact	High Impact
Increase electricity generation capacity	4.2	8.3	33.3	25.0	27.1
Create Jobs	2.1	17.0	25.5	27.7	27.7
Use our existing developed renewable energy resources more efficiently and effectively	2.1	6.4	12.8	23.4	55.3
Ensure the protection of our environment (e.g., rivers, forests, oceans)	0.0	8.5	21.3	36.2	34.0
Boost Economy	0.0	8.5	21.3	36.2	34.0
Assist in mitigating electricity rates	2.3	14.0	27.9	27.9	27.9

Generally, most respondents feel that the INEP framework will impact the activities surrounding electricity planning once enacted. These impacts vary from little to high on various activities as depicted in Table 12. Only a small proportion of respondents have a feeling that enactment of the Regulations will have no impact on some electricity planning activities.

Energy access is categorized into electricity access and clean cooking sectors. 85.4 % of the respondents are involved in electricity access while 43.8 % are involved in clean cooking as shown in Figure 11.

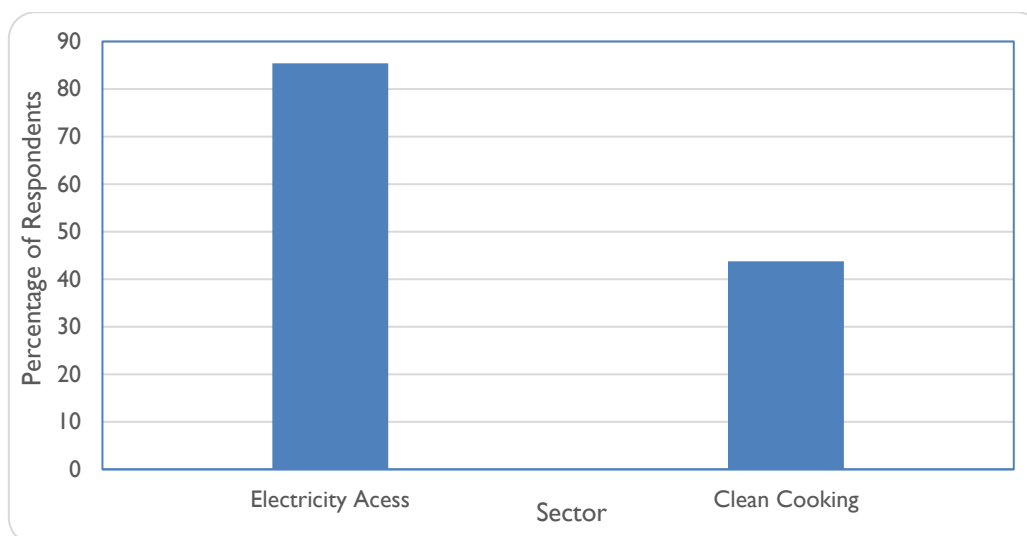


Figure 11: Energy Access respondents' sectors

The study also asked respondents to give their views on the level of impact some use cases in energy access planning by the developed regulation enforcing the INEP framework. The identified use cases and the stakeholders' views on the level of impact is a summarized in Table 13.

Table 13: INEP framework Impact on use cases.

	No Impact	Little Impact	Impact	Fair Impact	High Impact
Household and social (community) uses	0.0	14.0	30.2	23.3	32.6
Production and Manufacturing Uses	0.0	9.1	34.1	20.5	36.4
Education Uses	0.0	4.7	39.5	25.6	30.2
Health Uses	0.0	7.1	31.0	23.8	38.1
Public administration uses	0.0	12.2	41.5	29.3	17.1

The study went further to find out how important will the listed benefits of energy efficiency and conservation planning be when the regulation is implemented. The benefits that were considered are reduction in emissions, stabilization of electricity costs and volatility, job creation, economic growth and reduction of generation/transmission infrastructure as shown in Table 14.

Table 14: How important these benefits will be when INEP is implemented

	Not Important	Important	Very Important
Reduction in emissions	0.0	26.7	73.3
Stabilization of electricity costs and volatility	37.8	62.2	0.0
Creation of Jobs	0.0	46.7	53.3
Economic growth	0.0	40.9	59.1
Reduction of generation/transmission infrastructure	6.7	48.9	44.4

Majority of the respondents 73.3% feel that the Draft Regulations promote countries emissions reductions. On contrary, 37.8 % of the respondents are of the opinion that the Regulations will not be important in stabilization of electricity costs and volatility while the rest consider them important. This as however not the same for other benefits since majority of the respondents are of the opinion that the INEP Regulations will be important and very important as shown in Table 14.

The questionnaire further investigated the opinion of stakeholders on what will be the level of impact of regulation enforcing the framework on the challenges associated with bio- energy planning when the regulation is implemented. The identified challenges and the respondents' views are as given in Table 15.

Table 15: Impact of INEP on the challenges associated with bio- energy planning

	No Impact	Impact	High Impact
Change in water supply security and quality	12.5	52.5	35.0
Loss of biodiversity and ecosystem	17.5	42.5	40.0
Food Insecurity	21.6	45.9	32.4
Gender inequality in employment opportunities	23.1	56.4	20.5
Improved food security	13.5	43.2	43.2
Equity of distribution	10.8	56.8	32.4

Gender inequality in employment opportunities was reported to have no impact by 23.1 % of the respondents making it the challenge that majority of the respondents feel will not be impacted by INEP. 40 % of the respondents feel that INEP framework will have a high impact on loss of biodiversity and ecosystem.

The study also sought to understand how the Regulations will impact on some issues regarding energy resource development. The issues and the associated impacts are as shown in Table 16.

Table 16: Impact on energy resource development planning.

Issue	No Impact	Impact	High Impact
Reduce dependency on fossil fuel	6.5	37.0	56.5
Drive low-cost energy infrastructure	4.3	45.7	50.0
Improved energy efficiency at grid scale	6.5	45.7	47.8
Uptake of distributed energy resources	4.4	42.2	53.3
Consideration of the potential environmental impacts in exploitation of various energy resources	0.0	40.0	60.0

Most respondents (60 %) feel that the INEP Regulations will have a high impact on the potential environmental impacts in exploitation of various energy resources. No respondent feel that the Regulations will not impact this issue. This is followed by reduction in dependency on fossil fuel where 56.5 % of the stakeholders are of the view that INEP will have a high impact on.

6.6.3. Accelerating Objectives of the Existing Energy Plans

Most of the stakeholders who participated in this study engage in electricity planning. We sought their opinion on whether they think the INEP framework will facilitate the achievement of the objectives of some documentations/strategic plans that exist in the electricity planning context. Their responses on these specific documentations/strategic plans are as summarized in Table 17

Table 17: INEP impact with respect to electricity planning

	Yes	No	Unaware
Least cost power development plan	91.7	4.2	4.2
Feed In Tariff Plan	83.0	12.8	4.3
Generation and transmission master plan	95.6	4.4	0.0
Distribution master plan	91.3	4.3	4.3

There is an overwhelming concurrence among the stakeholders involved in electricity planning that the INEP framework will facilitate achievement of the objectives of the documentations

and strategic plans in Table 17. However, some respondents, 12.8 % feel that the objectives of the feed in tariff plan will not be facilitated by the INEP framework. It is also worth mentioning that 4.2 % of stakeholders in electricity planning are not aware of the least cost power development plan while 4.3 % of them don't know about the distribution master plan and the feed in tariff plan.

This study sought to find out the stakeholders' thoughts on whether the INEP framework will facilitate the achievement of the objectives of four selected documentations/strategic plans that exist in the energy access planning context. The selected documentations/strategic plans and the responses are shown in Table 18.

Table 18: Stakeholders view if INEP will facilitate achievement of documentations/strategic plans

Documentation/Strategic Plans	Yes	No	Unaware
National Electrification Strategy	93.5	6.5	0.0
Rural Electrification master plan	91.1	6.7	2.2
Geospatial Mapping for Mini Grids Potential in Kenya	72.7	20.5	6.8
Distribution master plan	88.6	6.8	4.5

As seen in Table 18, there is generally a high feeling that INEP will facilitate achievement of most of the mentioned documentations/strategic plans. Only a small proportion, 20.5 % feel that the Regulations will not facilitate achievement of Geospatial Mapping for Mini Grids Potential in Kenya. Also, some of the respondents are not aware of some the mentioned documentations as shown in Table 18.

This study also intended to find out the stakeholder's views on whether the INEP framework will facilitate the achievement of the objectives of the national energy efficiency and conservation strategy that exist in the energy efficiency and conservation planning context. On this, 97.8 % of those that responded agreed as opposed to only about 2.2 % of the respondents who feels that the Regulations will not facilitate the achievement of those objectives as shown in Figure 12

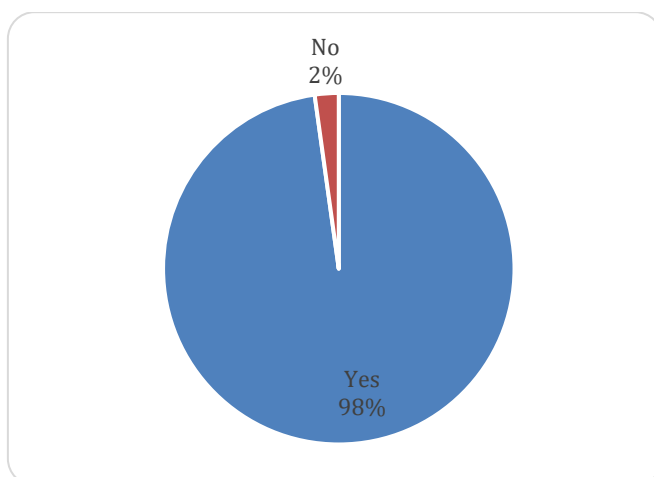


Figure 12: Will INEP achieve objectives of the national energy efficiency and conservation strategy?

The stakeholders also gave their views on whether the INEP framework will facilitate the achievement of the objectives of the Bio- energy strategy that exist in the bio- energy planning context. In this case about 97.6 % of the respondents agree while only 2.4 % of them don't think that the Regulations will facilitate achievement of the bio-energy strategy objectives. This is shown in Figure 13.

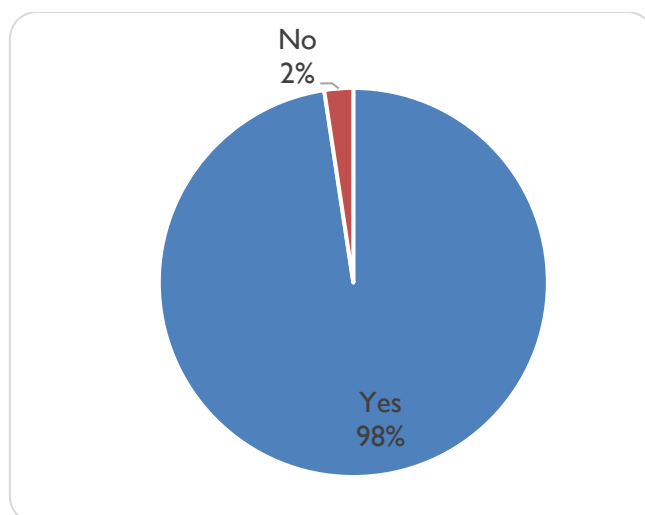


Figure 13: Will the INEP framework facilitate the achievement of bio-energy strategy objectives?

On whether the Draft regulation enforcing the INEP framework will facilitate the achievement of some documentations/strategic plans that exist in the energy access planning context, the stakeholders had the following views as summarized in Table 19.

Table 19.: Will INEP facilitate the achievement of these documentations/strategic plans?

Strategy	Yes	No	Unaware
Nuclear Master Plan and Nuclear Policy	56.5	26.1	17.4
Coal Master Plan	53.3	24.4	22.2
National Geothermal Strategy	91.3	4.3	4.3
Solar & Wind Resource Plan	93.5	0.0	6.5
National oil and gas master plan	77.8	8.9	13.3
Solar and wind resource assessment report for Kenya	89.1	4.3	6.5
Hydropower development plan	89.1	4.3	6.5
Renewable Energy technologies assessment of all counties	93.3	2.2	4.4

Most of the respondents (93.5 %) feel that the Regulations will facilitate achievement of Solar & Wind Resource Plan of all counties. This is followed by Renewable Energy technologies assessment with 93.3 %. Some respondents are not aware of the documentations/strategic plans the highest number being the Coal Master Plan with 22.2 % while Nuclear Master Plan and Nuclear Policy where 17.4 % of the respondents reported not to be aware of.

6.7. Suggestion for Successful Implementation of the Regulations

Several suggestions were provided by the stakeholders that will ensure adequate capacity for implementation of the new regulation that will better capture the activities associated with the five plans that are envisioned in the integrated national energy planning.

6.7.1. National Energy Planning

For successful implementation of the regulation at national level, the stakeholders provided the following suggestions:

- Harmonized data policy for the energy sector (e.g., access, repository)
- A harmonized and consistent reporting format for the different energy plans to be developed at different government levels.
- Research, innovation and development
- Sector players capacity building through trainings /workshops /seminars for energy planners and relevant stakeholder's representatives.

- v) Continuous review of policies governing energy planning by the sector players.
- vi) Adopting international best practices
- vii) Adequate and advance preparedness and involvement of the energy stakeholders
- viii) Customized trainings /workshops /seminars for energy planners and relevant stakeholder's representatives
- ix) Involvement of the private sector and association directly engaged in the five areas of the integrated plan in the planning process. These include stakeholders such as CCAK, AMDA, KEREK, KAM, ESAK KEPSA, academia among others.
- x) Creating awareness even up to the grass root level.
- xi) Stimulating demand Opening markets for research projects.
- xii) Coordinated resource mobilization from development partners to support the implementation of the Regulations.
- xiii) Mapping and capacitating the key players in the expected roles and ensuring that the different aspects of access beyond electricity are addressed including clean cooking.
- xiv) A well designed and implemented monitoring and evaluation mechanism is required to ensure the proper implementation of the new regulation and do fine tuning during the implementation period
- xv) More flexible Planning software's and associated training.
- xvi) Regular digital demand data collection, analysis and validation across the energy mix
- xvii) Regular communication among stakeholders as well multi stakeholder approach to planning and implementation of activities.
- xviii) Have Inter-sectorial engagement particularly agriculture and water
- xix) Public awareness and training on benefits of bio-energy
- xx) Stakeholders' engagement like Kenya Forest services and other investors
- xxi) Address how agricultural planning aligns with bio-energy planning
- xxii) Feasibility or baseline assessment to understand and mitigate possible challenges in the implementation.
- xxiii) Working with other related ministries who support energy resource development planning.

- xxiv) Introduction of carbon scale to determine emissions for all

6.7.2. County Energy Planning

With respect to the implementation of Integrated national energy planning at county levels, the stakeholders provided the following suggestion for a successful implementation of the Regulations:

- i) Ensuring that the right systems are in place in the counties for implementation at the counties.
- ii) Harmonize standardization and licensing and business procedures and Regulations across counties.
- iii) Capacitate CSOs and counties on the reporting of both direct and wider benefits beyond energy access.
- iv) Exchange and knowledge sharing among counties.
- v) Ensure clear guidelines on the level of projects to be undertaken by county and national government. This demarcation is not there at the moment creating conflicts
- vi) Need for sensitization on top county leadership
- vii) Need for institutionalizing energy directorate at the county level
- viii) Need to consider having incentive over penalties as a motivation for the energy planning process.
- ix) Need for adoption of modern technologies using the available resources in the counties.
- x) - Mapping out critical stakeholders for energy planning at the county level
- xi) Need to lobby for more funding at county level for planning and implementation of the county energy plan

6.8. Regulations Risk and Mitigation Measures

Table 20 shows the identified potential risk associated with the implementation of the Draft Regulations and proposed risk mitigation measures.

Table 20: Potential Risk and Mitigation Measures

Risk	Description	Likelihood	Impact	Mitigating Measures
Low level of understanding of the Draft Regulations	Only about 12.9% of fieldwork questionnaire respondents have a high understanding of the Regulations.	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	EPRA should undertake education and regulatory sensitization workshops to bring up the level of understanding of the Draft regulation.
Cost of implementation is high	At a national level, respondents of the fieldwork questionnaire, felt that the large size of the National Energy Committee led to increased costs.	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	Having one representative per organization could save on cost as National Energy Committee
Exclusion of the private sector players in the planning process.	Private players such as IPPs (ESAK, KERECA) felt that their participation in the National Energy Committee was overlooked yet their investment represent a significant portion of the planned generation.	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	Include Association representatives of IPPS (ESAK), KERECA and Clean Cooking Associations in the national Energy Committee for increased
Budgetary constraints of organizations who are to	The INEP Regulations will require a preparation of the	Low <input checked="" type="checkbox"/>	Low <input type="checkbox"/>	The Providers of INEP information including Counties should allocate

Risk	Description	Likelihood	Impact	Mitigating Measures
provide inputs and plans into the National Energy Plan	<p>National Energy Plan, County Energy Plans as well as energy service providers to provide their own energy plans to the National Energy Committee.</p> <p>There could also be a challenge in implementing and monitoring implementation of energy plans due to a lack of budget and resources</p>	High <input type="checkbox"/>	High <input checked="" type="checkbox"/>	<p>budgets (money) and resources for their energy departments or focal points to be able to provide their plans and information in a timely manner.</p> <p>Budgets (money) and resources should also be allocated for implementation and monitoring in a timely manner.</p>
High costs of implementation of INEP Regulations	Most respondents in the field study felt there shall be high cost in the implementation of INEP Regulations at an organizational level. 50 % of respondents felt they will incur an additional cost of between Kshs. 1,000,000 and above	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	Mechanisms should be put in place to reduce the cost of implementation, such as having standard templates that are automated and education of the implementors on how to implement and monitor the plans in a cost-effective manner.
Political Risk	A lack of a political will in its implementation of the INEP could lead to the regulation being poorly or not implemented at all.	Low <input checked="" type="checkbox"/> High <input type="checkbox"/>	Low <input type="checkbox"/> High <input checked="" type="checkbox"/>	MoE should seek political backing to facilitate the implementation of the INEP. This should be done in a proactive manner.
Lack of capacity at the organizational level	A lack of capacity at the organizational level in the competence of individuals of	Low <input checked="" type="checkbox"/>	Low <input type="checkbox"/>	Capacity building on the INEP and its implementation should be one extensively before the Draft INEP is

Risk	Description	Likelihood	Impact	Mitigating Measures
	organizations involved in INEP could to the regulation being poorly or not implemented at all.	High <input type="checkbox"/>	High <input checked="" type="checkbox"/>	rolled out. Especially to implementation agencies and organizations.
Non-sensitization of stakeholders on cross – cutting issues (policy and political dialogue; gender mainstreaming; equity/social inclusion; gender responsive budgeting; climate change)	The Regulations require cross cutting issues to be identified and considered. The respondents placed high priority on the cross-cutting issues	Low <input type="checkbox"/> High <input type="checkbox"/>	Low <input type="checkbox"/> High <input type="checkbox"/>	The county and national governments should undertake awareness programmes to actualize integration of cross- cutting issues in their respective energy plans
Absence of designated energy planning departments	Institutional capacity at the county government level is a risk to development of the CEPs. Up to 50% of the respondents do not have dedicated energy plans	Low <input type="checkbox"/> High <input type="checkbox"/>	Low <input type="checkbox"/> High <input type="checkbox"/>	

7. Impacts of the Draft Energy (Integrated National Energy Plan) Regulations 2022

7.1. Social Impacts

As stated in paragraph 1.2 above, the main objective of the assignment is to conduct a regulatory impact assessment of the Draft Regulations, to identify the potential financial, environmental and social impacts of the Draft Regulations on the energy sector as well as on the Kenyan economy.

The desirable socio-economic impact of the proposed Regulations is well- written into the provisions of clause 19 of the Draft Regulations entitled ‘Principles for preparation of energy plans and Integrated National Energy Plan’ at sub-clause 19(2), which reads in the relevant parts—

In the preparation of the energy plans and INEP, the following shall be taken into account.”

- a. National values and principles of governance as provided in Article 10(2) of the Constitution.
- b. Integrated National Energy Plan Objectives: Sustainable, adequate, affordable, competitive, secure and reliable energy supply at least cost geared to meet national and county needs while protecting and conserving the environment.
- c. Comprehensiveness:
 - i. All spheres of energy access: households, productive uses, and community facilities, noting the different needs of men and women.
 - ii. All forms of energy access: electricity, cooking, heating and mechanical power.
 - iii. All feasible and appropriate means of energy provision: grid-connected, mini-grid and stand-alone systems
- d. Strategic: The Integrated National Energy Plan shall include a deliberate and vetted plan of action with clear recommendations and initiatives that are set within measurable and achievable goals. In addition, the plans shall focus on the outcomes, including achieving all relevant objectives, reducing investment risk, attracting investors, and earning public acceptance/support for necessary infrastructure investments.

To this end, the desired outcomes are elaborated in the prescribed contents for each of the energy plans, in –

- Schedule Three paragraph 7, for the planned energy programmes/projects and actions of the National Energy Service Providers Plan, which shall include the implementation strategy for the goals and recommended actions, milestones and timelines;
- Schedule Four paragraph 5, with respect to the County Energy plan, whereby the County energy requirements and desired future shall be described in detail to clearly depict the intended outcomes, which shall include the implementation strategy for the goals and recommended actions, milestones and timelines; and
- Schedule Five, with respect to NGOs and private sector energy programmes and projects, shall include project timelines, activities, location and key outputs.

The upshot of the above provisions is that the proposed Energy (National Integrated Energy Plan) Regulations, 2021, are by design intended to and will have a positive impact on the society end to end, when implemented. Successful implementation will contribute to social transformation in that –

- i. At inception, the inclusive and participatory planning framework built into the Regulations involving end-users and multi-sectoral stakeholders, empowers the communities with information, a sense of ownership, knowledge and awareness.
- ii. The proposed Regulations will provide an opportunity to develop and implement energy plans tailored matched to grass root priorities, realities and challenges.
- iii. The Draft Regulations present a tool to optimize grid extension and distributed energy strategies to reduce energy poverty.
- iv. The context of the Draft INEP Regulations is the overarching obligation by Government through the Cabinet Secretary, to implement a fair, transparent and equitable strategy to ensure that all households are connected to a supply of electricity by 2030 in accordance with section 7 (3) of the Act. This presents huge opportunities and entry points for investment in the provision of energy services for households and enterprises, employment, and partnerships that will transform livelihoods.
- v. For the regulator (EPRA), the Regulations will provide a clear mandate for enforcement of the process.

Successful implementation of the Draft Regulations will mean that the INEP framework will provide a tool that will help direct resources effectively and efficiently where they are needed most regarding the supply side. On the demand side, the impact will be reliable and affordable electricity to improve the welfare and livelihoods of millions of Kenyans without electricity.

As the process is also largely data-driven, it will require investment in research and innovation both of which build knowledge on both the demand and supply side, which are prerequisites for socio-economic transformation. There will therefore, be need to also invest in proper structures for data collection and storage at both the national and county levels to support the planning process.

7.2. Economic and Financial Impacts

The adoption and successful implementation of the Draft Regulations will demand that the economic landscape at institutional, county and national levels be adopted to accommodate the Draft Regulations. The economic and financial impacts of the regulation will have short-, medium- and long-term implications on the energy sector and the Kenyan economy as a whole although at varied levels of likelihood and impact.

From the onset:

- i. Committees will be established and maintained and this will carry with it pecuniary costs that will be borne at the different levels. As this is lettered in the regulation, the county and national governments will have to have budgetary provisions for the same and as such will be the most impacted when it comes to this aspect.
- ii. Staff sensitization, training and hiring will also be done on a need be basis for the purposes of preparedness, maintenance and evaluation of plans in addition to energy management at the various levels.
- iii. Although apportioned low impact, the publishing of plans by the various players will carry with it some associated costs that include: preparation of plans, data gathering, consultancy and/or training on proper Drafting, internet publishing among others.
- iv. An initial scope of the available energy resources at the various levels and their potential will also have to be carried out if not available and this will come at a cost.

In addition to the costs realized at inception, the economy will also be impacted in other ways based on key component requirements by INEP that include:

- a. Goals, scope and objectives;
- b. Policies guiding energy development;
- c. Vision for the energy sector;
- d. Assessment of energy resources and supply technologies;
- e. Assessment of the current energy profile, industries, and institutional capacity;
- f. Energy outlook, forecast or projection of future needs, including supply, demand, supply and demand balance, supply system configuration and evolution of energy costs;
- g. Challenges to be addressed;
- h. Set of prioritized and specific actions with implementation timelines;
- i. Identification of potential financing and funding mechanisms to support the implementation of the recommended actions; and
- j. Coordination and M&E frameworks.

Some of the requirements that carry significant economic and financial implications and ones that require careful planning and implementation include items d, e, f, h, i and j.

In addition to fulfilling the requirements of INEP as demonstrated above, counties will also be required to offer up or incentivize land and rights of way for energy infrastructure including dams, solar and wind farms, municipal waste dumpsites, agricultural and animal waste, ocean energy, woodlots and plantations for the production of bio-energy feedstock and this will have opportunity cost implications among other costs such as relocation costs and physical property acquisition and development cost. In addition, County Energy plans shall be for a period of up-to five (5) years, with a detailed monitoring plan for the first three (3) years. The County Energy Plan shall be align to the County Integrated Development Plan and this shall lead to better economic planning and economic benefits such as creation of jobs, both short term during project construction and permanent jobs during the operating life of the energy projects and assets. Supporting infrastructures such as roads, residential, commercial, and operational buildings, transmission lines and other regional infrastructure shall be planned for and developed to facilitate energy projects and the uptake of energy produced in a timely manner.

It is also important to note that if properly implemented, the Draft Regulations will result in:

- i. Increased funding and financing of energy sector project stimulated by well documented plans that include properly analyzed potentials and projections.
- ii. Job creation and development in the energy sector; with the amount of work that will go into ensuring successful implementation of INEP; from monitoring and evaluation of plans to the implementation of projects, human resource will be crucial.
- iii. Cheaper power owed to proper forecasting in terms of supply and demand and financial analysis of the various energy resources which leads to the utility of cheap energy and lesser margins demanded by energy suppliers.
- iv. Economic growth and industrialization occasioned by cheap and reliable energy resulting from proper plans.

It is evident that if successfully implemented, the economic benefits of integrated national energy planning outweigh the financial burdens associated with the planning process. The stakeholders are advised to review the roles of various officers to include roles envisioned under INEP and facilitate their training on the same to cut down on the potential human capital costs.

As per the guidelines highlighted in Schedule I of the Draft INEP, related to the Preparation of the Energy plans and integrated National Energy Plan. The key activities in the Energy planning process that comprises i. County Energy Planning Process; ii. National Service Providers Planning Process iii. Integrated National Energy Planning Process have a financial impact. Based on the field study 50% of the respondents stated that they will require an additional cost of between Kshs. 1,000,000 – 10,000,000 per year per organization.

In addition, responsible entities' failure to comply with the requirements of the INEP will have punitive financial impacts ranging from fines between Ksh. 100,000 - 10,000,000 per offence. These are highlighted in schedule 6 of the Draft Regulations.

Energy being a catalytic factor in economic development, with a higher energy consumption per capital having a direct positive co-relation to GDP/GNP per capital. Increased energy production and consumption at a county level will ultimately lead to increased economic activity, such as the production of and trade of goods and services. With increased economic activities, there shall be an increase in financial impact in the pockets of citizens at a micro

level in the counties. These will ultimately build up to improved financial impact at a national level due to enhanced GDP/ GNP.

The INEP will feed into their strategic and operational plans ensuring financing is allocated, in a timely fashion, from the central government and spending is also prioritized for greater economic impact. Enabling energy production resources to be provided when they are required and having a greater economic impact on citizens, businesses and organizations. The Integrated National Energy Planning Committee as comprised and stated under para. 6.3 of the Draft Energy INEP is bloated and not efficient from a financial point of view. It shall be an extra financial drain on the taxpayers. This is highlighted by respondents in the field study, with 53.8 % feeling that this list could be reduced. Some stakeholders feel having one representative per organization could save on cost as well as increase efficiency.

7.3. Environmental Impacts

The energy sector has in the recent past experienced a shift away from legacy energy resources such as diesel and coal and has tended towards renewables such as solar and wind energy; INEP recognizes this fact and cites it as one of the drivers that led to its formulation. In addition, the move towards Distributed Energy Resources (DERs) and the recognition that the energy sector and the world as whole is not only concerned that its energy demand is met but also in how the energy needs are met (at what cost to the environment, how safe it is and the carbon footprint of said energy sourcing and consumption among others) are facts that were in the minds of the proprietors of INEP. These facts are overwhelming indicators of the Draft Regulations enforcing the INEP framework will have a positive impact on the environment and the following were identified as some of the salient impacts of the Regulations is likely to have as far as the environment is concerned:

- i. Development of renewable energy resources which are traditionally good for the environment as they are clean and abundant and this will lead to reductions in the use of legacy resources.
- ii. Reinforcement of energy management efforts through the Energy Efficiency and Conservation Planning theme within the INEP framework.
- iii. Development of clean cooking technology by investing in R & D and intersectoral collaborations as envisioned in INEP.

- iv. Recycling and Reuse of waste that includes municipal waste, woodlots, plantations, agricultural waste and animal waste in generating energy.
- v. Development of clean fuels through R & D will limit the use of fossil fuels for energy needs.
- vi. Development of better cooking technology such as the improved stoves will have positive impact on the environment.
- vii. Expansion of Innovation, Research and Development in the energy space as envisioned in INEP will lead to the development of better technology that is safer and healthier for both man and environment.
- viii. Reduction in greenhouse gas emissions that ultimately results from all previously discussed developments from INEP.

Whereas INEP's impact on the environment will be largely positive, it is also important to highlight the possible negative impacts that INEP possess as envisioned:

- i. While INEP advocates for coal inclusion in the Kenya's energy plans; many would argue that coal is very unclean and should not feature at all in Kenya's energy conversation.
- ii. While NuPEA serves several functions other than the development of nuclear energy technology; some stakeholders were of the opinion that Kenya's preparedness for nuclear and the dangers nuclear development possess to the environment warrant a relook of the organization and what it stands for.
- iii. INEP in the thematic area of bio-energy planning should be cognizant of the global greenhouse potential of bio-energy resources and its overall impact on the environment and climate.

8. Conclusions and Recommendations

EPRA has developed the Draft Regulations and the views from the different stakeholders impacted by the regulation, including the national energy service providers, government agencies and private sector players regarding various aspects of the regulation obtained.

From the exploratory study conducted for national energy planning in Germany, South Africa, Thailand, the EU and California state in the USA; it was evident that the fulfilment of the objectives of national energy planning in any jurisdiction hinged mainly on clear separation of roles, responsibilities and powers of key stakeholders and the buy-in of the political and social class. It is therefore commendable that Kenya is in step to put in place a regulation that outlines the roles, responsibilities and powers to the various players. It is also good that INEP processes go through various public participation before progression and that would then mean that the last critical component would be to secure political goodwill so as to give INEP the best chance at succeeding.

The feedback from the stakeholders indicates an integrated energy planning will improve the efficiency of energy planning at national and county levels through the holistic approach to energy planning. This approach proposes energy planning along the five thematic areas identified in the Integrated Energy Planning Framework to achieve the overall objectives of the country's energy sector as outlined in existing policy frameworks developed along these thematic areas in the country. The stakeholders also indicated that these Regulations would accelerate the achievement of the objectives of different energy plans and strategies laid out in the country, aiming at achieving the country's energy goals in the short, medium and long run.

The major barriers during the implementation of the Regulations identified from the stakeholder engagement, including financial barriers associated with capacity building, energy plan data gathering and publishing, development and updating of energy plan with a high financial requirement pointed out on the implementation of energy plans both at national and county level. Establishing the financing mechanism to be followed during the implementation of the integrated planning at the county level will be important for the successful implantation of the Regulations.

Regarding the different committees outlined in the Draft Regulations, the stakeholders highlighted the need for a higher representation of the counties through the CoG at the National Energy Committee and the private sector. For the County energy planning Committee, the suggestion was to have a higher representation of technical people and the development of a technical committee at the county level.

In view of the best practices identified in other jurisdictions and the challenges outlined by the -stakeholders that we recommend the amendments outlined in Annex B to the Draft Regulations.

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Annex A: Terms of Reference (ToR)

**Project number/
cost centre:**

15.2079.0-001.00

STUDY ON THE REGULATORY IMPACT OF ENERGY (INTEGRATED NATIONAL ENERGY PLAN) REGULATIONS, 2021

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List of abbreviations

EPRA	Energy and Petroleum Regulatory Authority
INEP	Integrated National Energy Plan
MOE	Ministry of Energy
RIA	Regulatory Impact Assessment
VRE	Power system readiness for Integration of Variable Renewable Energies project

1. Context

1.1. Background

The Kenyan Ministry of Energy (MoE) and GIZ are implementing the technical assistance project “Power System Readiness for Integration of Variable Renewable Energies (VRE)”, which runs from January 2019 to December 2023. Four fields of cooperation have been identified: (A) Energy Policy; (B) Energy Planning; (C) Energy Regulation; and (D) Energy Operations. In each field, the technical capacity of the respective partner institutions (Energy and Petroleum Regulatory Authority (EPRA), Rural Electrification and Renewable Energy Corporation (REREC), Kenya Electricity Generating Company Limited (KenGen), Kenya Power and Lighting Company Limited (KPLC), Kenya Electricity Transmission Company Limited (KETRACO) and Geothermal Development Company (GDC)) and staff shall be enhanced by means of human capacity building, development/acquisition of implementation instruments (tools), advisory services and studies.

Under **Energy Policy**, the project aims for improved capacities to prepare technical facts/statements for policy and public dialogues on VRE power system integration. Trainings in communication and public dialogue as well as in translating technical arguments into policy messages will be carried out, enriched by exposure to international experience. The project also aims to support the finalization of the MoE communication strategy. In terms of substance, preparing policy briefs on national energy policy with focus on VRE is deemed a priority, followed by policy briefs on the national integrated energy plan, and on the transition from Feed-in-Tariff (FiT) to auctions in VRE-development.

Under **Energy Planning**, the project aims for improved analytical and planning capacities to increase the power system’s VRE-readiness. Based on recommendation after mapping, rapid assessment of the domestic capacities and a comparative study of other countries, the development and customization of the recommended planning tool(s) will follow. Cost Benefit Analysis (CBA) of VRE in the power system, including grid stability and system reliability & flexibility requirements is considered urgent, and these respective studies started in 2019. For a future systematic use, these topics will require different tools and methodologies, to be determined. Domestic capacity development for power system planning will be focusing on the existing power system planning committee, but also on organizations in the research and education institutions, to establish a planning expert pool and assure further training.

Under **Regulations**, the project will support EPRA to improve regulatory capacities for increasing the power system’s technical and economical VRE-readiness. Trainings are foreseen in the ability to perform economic and financial analysis of VRE in power generation, as well as regulatory impact assessment. On regulations development, the project will support the

ongoing updating of the VRE aspects in the grid code, help in the finalization of the county energy planning framework, followed by support for the regulation of the national integrated energy planning framework. The development of a VRE Feed-in-Tariff calculation tool is planned, which will also inform the transition from FiT to the auction system.

The activities under **Operations** aim to provide developers, power plant and grid operators with up-to-date expertise for the VRE - compatible design and operation of the power system. Studies for learning on the impacts and cost/benefits of existing plants will among others help to updating standardized PPAs. The establishment of a national weather forecasting facility for procurement of energy specific weather forecasting was considered urgent for system operations with increasing share of VRE. Capacity development activities are set on the agenda for system operators as well as power plant operators to facilitate the cooperation.

1.2. Context

The **draft Energy (Integrated National Energy Plan) Regulations, 2021** have been developed within the provisions of Sections 5 and 208 of the Energy Act, 2019. Previously, the functions envisaged under the section were covered by section 5g of the Energy Act 2006 while no regulations had been developed for the purpose.

Energy is a critical component in the economy, standard of living and national security of a country. The level and the intensity of energy use in a country is a key indicator of economic growth and development. The Kenya Vision 2030 identified energy as one of the infrastructure enablers of its social and economic pillars. Sustainable, competitive, affordable and reliable energy for all citizens is a key factor in realization of the Vision. Consequently, efficient and effective energy planning, regulatory oversight, monitoring and reporting are essential elements in enabling the country to achieve its energy objectives.

As provided for in section 5(1) of the Energy Act, 2019, the Cabinet Secretary shall in consultation with the relevant stakeholders develop, publish and review energy plans in respect of coal, renewable energy and electricity so as to ensure delivery of reliable energy services at least cost through the Integrated National Energy Plan (INEP). The plan will serve as an energy sector guide on the short, medium and long-term energy requirements based on evolving economic, socio-political and technical issues except petroleum that is covered under the Petroleum Act 2019.

Development of the Integrated National Energy Plan (INEP) shall take the following steps:

1. Each national energy service provider(s) develops and submits to the Cabinet Secretary plans for provision of energy services.
2. Each County Government develops and submit a county energy plan to the Cabinet Secretary in respect of its energy requirements.

3. The Cabinet Secretary consolidates the plans contemplated in (1) and (2) into an integrated national energy plan which shall be reviewed after every three (3) years.
4. The Cabinet Secretary shall prepare and publish a report on the implementation of the Integrated National Energy Plan within three months after the end of each financial year.

Draft regulations have been prepared as a guideline on the preparation, content, timelines, publication and monitoring of these Energy Plans and the resultant Integrated National Energy Plan. More specifically, the draft regulations shall—

1. Provide clarity, harmony and guidelines on a coordinated approach to energy planning within the country;
2. Guide in the identification of energy objectives, visions, and deliverables as well as reporting framework;
3. Set out the guidelines and timelines for the preparation and implementation of respective energy plans and Integrated National Energy Plan;
4. Set out guidelines to regulate the content of the energy plans and Integrated National Energy Plan;
5. Provide guidelines on stakeholder consultations in the development, publication and review of energy plans and Integrated National Energy Plan;
6. Provide a framework for consolidation of energy plans into Integrated National Energy Plan;
7. Provide guidelines on planning for energy infrastructure investments, energy supply options and selection of appropriate technologies to meet energy demand;
8. Provide guidelines for monitoring, evaluation and reporting on the implementation of energy plans and Integrated National Energy Plan;
9. Provide a mechanism for ensuring that county energy planning is aligned with National Planning; and
10. Define the roles and responsibilities of various stakeholders in the energy planning process and implementation of the energy plans and Integrated National Energy Plan.

Under the Sections 6 and 7 of the Statutory Instruments Act (No 23 of 2013), the Energy and Petroleum Regulatory Authority is required to conduct a Regulatory Impact Assessment before any Regulation is gazetted. It is in view of this, that the Authority proposes a consultancy to evaluate the potential impacts of this draft regulations

Objective of the Assignment

The main objective of the Regulatory Impact Assessment Study is to identify the potential financial, economic, environmental and social impacts of the draft Energy (Integrated National Energy Plan) regulations, 2021 on the energy sector as well as on the Kenyan economy.

2. Tasks to be performed by the contractor

The contractor is responsible for providing the following services:

1. Conduct a benchmarking exercise of policies, regulations and practices in other jurisdictions promoting effective and efficient development of integrated national energy plans.
2. Evaluate methodologies proposed in the draft Regulations for undertaking integrated national energy planning and propose any amendments where necessary.
3. Evaluate impacts of external factors such as government policies, regulations and practices on the draft regulations.
4. Identify barriers to achieving technical and operational efficiency as envisioned in the draft regulations.
5. Identify the players to be affected directly by the framework on the development and administration of the Integrated National Energy Plan, consult them and analyse their inputs on the draft regulations.
6. Identify and design a Risk Assessment Framework to manage risks in the energy sector within the framework of Integrated National Energy Plan;
7. Estimate the cost of compliance to implementing agencies and the cost for enforcement by EPRA on the draft regulations.
8. Participate in the stakeholders' engagement process and assist in addressing the concerns of the regulations based on the final draft developed. The stakeholder engagement will take place in at least seven (7) regions covering all counties.
9. Propose amendments to the draft regulations based on the findings of the study.
10. Prepare a Regulatory Impact Statement (RIS) to be tabled in parliament and gazetted alongside the Energy (Integrated National Energy Plan) Regulations, 2021.

The consultant shall facilitate an expert meeting to evaluate the findings before the validation workshop. The experts shall be drawn from the stakeholders mapped out as key to the implementation of the regulations during the study in consultation with the Energy and Petroleum Regulatory Authority.

Deliverables and Milestone

The assignment will be carried out within **a hundred and eighty (180) calendar days** from the date the contract is signed by both parties. Certain milestones, as laid out in the table below, are to be achieved by certain dates during the contract term, and at locations:

Milestone	Deadline (after contract signing)
Virtual kick-off meeting with EPRA, GIZ and VRE Technical Committee	2 weeks
Inception report	4 weeks
1st Draft RIA Report	10 weeks
Final 1st Draft Final RIA Report (with comments)	14 weeks
Stakeholder consultations and stakeholder consultation report.	20 weeks
Final RIA report	22 weeks
Regulatory Impact Statement	22 weeks
Revised Regulations	22 Weeks

Period of assignment: From **30.01.2022** until **30.07.2022**.

3. Concept

In the bid, the bidder is required to show how the objectives defined in Chapter 2 are to be achieved, if applicable under consideration of further specific method-related requirements (technical-methodological concept). In addition, the bidder must describe the project management system for service provision.

Technical-methodological concept

Strategy: The bidder is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1). Following this, the bidder presents and justifies the strategy with which it intends to provide the services for which it is responsible (see Chapter 2).

The bidder is required to describe the key **processes** for the services for which it is responsible and create a schedule that describes how the services according to Chapter 2 are to be provided. In particular, the bidder is required to describe the necessary work steps and, if applicable, take account of the milestones and contributions of other actors in accordance with Chapter 2.

4. Personnel concept

The bidder is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

Where a firm lacks sufficient expertise internally based on the pool of experts required to execute this assignment, it is encouraged to form consortiums comprising of external experts for purposes of fulfilling the outlined personnel concept.

The below specified qualifications represent the requirements to reach the maximum number of points.

Team leader: Lead Consultant

Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with EPRA, GIZ and other stakeholders involved in the project
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting short-term experts
- Regular reporting in accordance with deadlines

Qualifications of the team leader

- Education/training (2.1.1): University qualification (Masters) in Project Management, Engineering, Energy, Economics or Renewable Energy and related fields
- Language (2.1.2): Good business language skills in English
- General professional experience (2.1.3): 15 years of professional experience in the energy sector in power economics, power generation and transmission planning and knowledge in renewable energy.
- Specific professional experience (2.1.4): 5 years in conducting exploratory or similar regulatory studies in Sub Saharan Africa (provide at least 3 reference letters from previous clients)
- Leadership/management experience (2.1.5): 5 years of management/leadership experience as project team leader or manager in a company
- Regional experience (2.1.6): 5 years of experience in projects in Sub Saharan Africa region, of which 3 years is in projects in Kenya

Expert I: Power system expert

Tasks of expert I

- Technical assessment and analysis of the draft regulations with respect to power sector planning, renewable energy, energy efficiency, and conservation.

- Assessment of the technical components of the current energy market in the country and propose best practices to the regulations.
- Identify technical barriers to the operationalization of the regulations
- Propose amendments to the regulations from findings of the study.
- Preparation of the Regulatory Impact statement – technical component
- Stakeholder consultations

Qualifications of expert 1

- Education/training (2.2.1): Degree in Engineering
- Language (2.2.2): Fluency in English
- General professional experience (2.2.3): 10 years' experience in the energy sector
- Specific professional experience (2.2.4): 5 years' experience in project work involving renewable energy, energy efficiency and conservation, and regulation within the electricity market.
- Regional experience (2.2.6): 3 years of experience working in projects in Sub Saharan Africa, of which 2 years is in project in Kenya.
- Other (2.2.8): demonstrate understanding of power planning; energy sector applicable policies, rules, regulations, and codes. Be a registered professional engineer in respective country of origin (proof of registration required)

Expert 2: Financial/Economic expert

Tasks of expert 2

- Financial and economic assessment and analysis of the draft regulations.
- Identify possible financial/economic barriers to the operationalization of the regulations
- Propose amendments to the regulations from findings of the study.
- Preparation of the Regulatory Impact Statement (RIS)
- Stakeholder consultations

Qualifications of expert 2

- Education/training (2.2.1): Degree in Finance or Economics
- Language (2.2.2): Fluency in English
- General professional experience (2.2.3): 10 years of experience in the energy sector
- Specific professional experience (2.2.4): 5 years of experience developing financial models and undertaking investment analysis of power projects.
- Regional experience (2.2.6): 3 years of experience working in projects in Sub Saharan Africa, of which 2 years is in project in Kenya.

Expert 3: Legal Expert

Tasks of expert 3

- Desktop study on the energy act, current energy policies and regulations and draft policies and regulations and their synergy to the draft INEP regulations.
- Develop a stakeholder's map to carry out interviews
- Propose amendments from results of this assignment.
- Develop a risk assessment framework to manage the risks that will arise from operationalization of the regulations
- Support the preparation of RIS

Qualifications of expert 3

- Education/training (2.2.1): Bachelor of Law, LLB
- Language (2.2.2): Fluency in English
- General professional experience (2.2.3): 10 years of legal experience in the energy sector
- Specific professional experience (2.2.4): 5 years of experience handling legal services and advisory roles including litigations relating to energy law.
- Regional experience (2.2.6): 3 years of experience working in projects in Sub Saharan Africa, of which 2 years is in project in Kenya.
- Advocate of the High Court of Kenya

5. Costing requirements

Assignment of personnel

Team leader: On-site assignment for 16 expert days

Expert 1: Assignment in country of assignment for 20 expert days

Expert 2: Assignment in country of assignment for 20 expert days

Expert 3: Assignment in country of assignment for 20 expert days

Travel

The bidder is required to calculate the travel by the specified experts and the experts it has proposed based on the places of performance stipulated in Chapter 2 and list the expenses separately by daily allowance, accommodation expenses, flight costs and other travel expenses. For the purposes of tendering a ballpark amount of KES 900,000 is estimated for the total travel and accommodation expenses for stakeholder engagement for the 7 regions (2 days and 2 nights per region) and should be used as the estimate. Travel reimbursements will be done

upon evidence of receipts while for daily allowances/accommodation expenses GIZ Kenya rates will apply. This will be discussed with the winning bidder.

Workshops, Consultative forums

The contractor shall implement the following workshops/consultative forums:

- Inception workshop - virtual
- Validation workshop – physical venue in Nairobi
- 7 Stakeholder consultative engagements at venues across all counties as will be agreed upon with EPRA and GIZ.

Flexible remuneration item

A flexible budget of up to 10% of the contract sum can be provided against evidence for other necessary expenditures.

Equipment

No purchase of software or any necessary equipment is foreseen within the contract. It is assumed that the consultant has the necessary tools (software and hardware) and experience to carry out all the tasks.

6. Inputs of GIZ and EPRA

GIZ and EPRA are expected to make the following available:

- Workshops (Hybrid – Physical and Virtual) logistics
- Reading materials and resources to support desk review. Contact with key stakeholders

7. Requirements on the format of the bid

The structure of the bid must correspond to the structure of the ToRs. In particular, the detailed structure of the concept (Chapter 3) is to be organised in accordance with the positively weighted criteria in the assessment grid (not with zero) that is provided as part of the bid documents. It must be legible (font size 11 or larger) and clearly formulated. The bid is drawn up in English language.

The complete bid shall not exceed 10 pages (excluding CVs).

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages. The CVs must clearly show the position and job the proposed person held in the reference project and for how long.

If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment.

Please calculate your price bid based exactly on the aforementioned costing requirements. In the contract the contractor has no claim to fully exhaust the days/travel/workshops/ budgets. The number of days/travel/workshops and the budget amount shall be agreed in the contract as 'up to' amounts. The specifications for pricing are defined in the price schedule.

8. Other Provisions

The consultant will be selected based on a technical and financial evaluation of the offer. The technical evaluation will assess the consultant's output, the methodology and approach, the schedule and organization, the consultant's qualification with regards to the assignment. A technical evaluation matrix is attached to these ToRs. The financial offer should include a detailed break-down of daily/hourly rates and the time needed to finish the assignment. Technical and financial offers are to be sent in separate documents.

- The bidder shall note that disclosing of financial information in the technical proposal is not permitted and is ground for disqualification. Cost-related information including the total cost of the assignment or the unit cost of the work packages should be provided exclusively in the financial proposal.
- Administrative costs should not be listed as separate budget items but captured within the costing requirements provided in the ToRs.
- The proposed consultants need to be available from the first day of the official start of the project.
- The proposal should clearly outline how the consultants complement each other according to their fields of expertise to give evidence that all relevant work fields are covered appropriately.
- All reports and information material need to be submitted in soft copy.
- Any additional information material apart from the ones mentioned above and that will add value to the assignment may be submitted.
- The Consultant will ensure that all material developed as part of the contract (studies, concepts, presentations, tools, etc) is branded according to partner guidelines.
- The consultant should note that while executing the assignment, communication with/on media (e.g., TV, radio, print and social media) in relation to the assignment must be approved prior by EPRA and the responsible person at GIZ.

9. Annexes

- Draft Energy (Integrated National Energy Plan) Regulations, 2021
- Evaluation criteria (technical evaluation)

EVALUATION CRITERIA:

a) Mandatory Evaluation:

Items No. 1 to 9; must be provided and failure to provide will lead to automatic disqualification: -

NO	REQUIREMENTS	YES/NO
1	Certificate of Registration/Incorporation	
2	Valid Tax Compliance certificate	
3	Duly filled, signed and stamped confidential business questionnaire (attached format)	
4	CR12 for companies (not older than one year)	
5	Name of partners (for partnerships)	
6	Business contact information (telephone/mobile numbers and email address)	
7	Postal address/ Physical address	
8	Valid Tax Compliance certificate	
9	Business permit/License	

Annex B: Study Tools

Annex B-I: Study Questionnaire

INEP Regulation Impact Assessment Stakeholder Questionnaire

Introduction

EPRA has developed the Draft Energy (Integrated National Energy Plan) Regulations 2021 pursuant to the provisions of Section 5 and 208 of the Energy Act 2019, following the adoption of the Kenya National Energy Policy, 2018. The preceding Energy Policy, Sessional Paper No. 4 of 2004 on Energy, had identified the need to integrate energy planning with the national social, economic and environmental policies as energy is a critical input in the social economic progress of the economy. Preparation of an indicative national energy plan was a function of the then Energy Regulatory Commission under section 5 of the repealed Energy Act, 2006.

The Energy Act, 2019, has given the Cabinet Secretary the responsibility for preparation of the integrated national energy plan under section 5, and to make Regulations on the recommendation of EPRA under section 208. The provisions of section 5 require the Cabinet Secretary, in consultation with relevant stakeholders, to develop, publish, and review energy plans for coal, renewable energy, and electricity to ensure the delivery of reliable energy services at the least cost through the Integrated National Energy Plan (INEP). INEP will serve as an energy sector guide on the short, medium and long-term requirements based on evolving economic, socio-political and technical issues.

EPRA and GIZ is currently conducting a regulation impact assessment on the Draft Energy (Integrated National Energy Plan) Regulations 2021 to identify the financial, economic, environmental and social impacts of the Regulations on the energy sector as well as on Kenyan economy. The envisaged Regulation impact assessment will provide amendments on the Draft Energy (Integrated National Energy Plan) Regulations 2021 and the developed INEP framework.

We, therefore, kindly request you, as an important stakeholder, to take a few minutes and provide your inputs to this questionnaire.

EPRA and the consulting partners will treat questionnaire responses as a-sensitive information. The findings will be aggregated across the pool of organizations that participate to avoid attribution to any particular entity.

The questionnaire is segmented into five sections, ONLY fill the sections that are relevant to you.

Point of Contact

Organization	
Department	
Title/Position	
Name and Surname	
Email	
Tel.	
Fax.	
Mobile	

1. Are you aware of the Draft Energy (Integrated National Energy Plan) Regulations, 2021?

Yes ☐ **No** ☐

What would you say is the level of awareness of the same among members of your organization?

Low ☐ **Medium** ☐ **High** ☐

2. Which of the following thematic areas does your organization have interest or deal with? Please tick all the relevant ones.

- (a) Electricity Planning ☐
- (b) Energy Access Planning ☐
- (c) Energy Efficiency and Conservation Planning ☐
- (d) Bio- Energy Planning ☐
- (e) Energy Resource Development Planning ☐

3. Does your organization have a designated energy planning department?

Yes ☐ **No** ☐

4. What is the level of preparedness for the implementation of the requirements of the Draft Energy (Integrated National Energy Plan) Regulations 2021 in your organization?

(a) None ☐ (b) Low ☐ (c) Sufficient ☐ (d) High ☐ (e) Very High ☐

5. The INEP Regulations propose the following constitution in the National Energy Committee

- (b) Four (4) representatives from the Ministry one of whom shall chair the committee.
- (c) Integrated National Energy Plan Programme Coordinator who shall be the secretary to the committee and who shall be from the Ministry
- (d) Two (2) representatives from Energy & Petroleum Regulatory Authority.
- (e) Two (2) representatives from Kenya Electricity Generating Company.
- (f) Two (2) representatives from Rural Electrification & Renewable Energy Corporation

- (g) Two (2) representatives from Kenya Power & Lighting Company.
- (h) Two (2) representatives from Kenya Electricity Transmission Company.
- (i) Two (2) representatives from Geothermal Development Company.
- (j) Two (2) representatives from Nuclear Power & Energy Agency.
- (k) Two (2) representatives from The National Treasury & Planning.
- (l) Three (3) representatives from Council of Governors.
- (m) One (1) representative from Kenya National Bureau of Statistics
- (n) One (1) representative from the ministry responsible for devolution
- (o) One (1) representative from the ministry responsible for petroleum and mining

Which stakeholder should be removed?.....

Why?.....

Which other stakeholder should be included?.....

Why?.....

6. The regulation will require a preparation of the National Energy Plan, County Energy Plans as well as energy service providers to provide their own energy plans. Which of the following factors may hinder the provision of timely and accurate plans from your organization, and what is the likelihood of it impacting the process?

	Not Likely	Slightly Likely	Likely	Fairly Likely	Very Likely
Limited data to support the development of plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weak Inter- Sectoral Planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate financial resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Limited knowledge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Poor stakeholder coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Budgetary constraints	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Fill in the following question regarding the different clauses of the Draft Energy (Integrated National Energy Plan) Regulations 2021.

Clause	Question	Suggestion
Section 5(2) and 5(3) of the Draft Regulations provide that the INEP planning process shall commence upon issuance of a circular by the Cabinet Secretary to the National energy providers and county governments, three months prior to the commencement of the FY preceding the year of review of INEP?	Is three months a reasonable amount of time? (a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>	If No, what would be a reasonable time? (a) 2 Months <input type="checkbox"/> (b) 6 Months <input type="checkbox"/> (c) 9 Months <input type="checkbox"/> (d) 12 Months <input type="checkbox"/>
Section 20 (2) of the Draft Energy Regulations 2021 stipulates that all Energy plans shall be submitted within the timelines specified in the Circular.	Is it necessary to specify the timelines in the Regulations? (a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>	If yes, what would you propose as a reasonable timeline? (a) 3 Months <input type="checkbox"/> (b) 6 Months <input type="checkbox"/> (c) 9 Months <input type="checkbox"/> (d) 12 Months <input type="checkbox"/>
Section 6 of the Draft regulation does not stipulate the frequency of the national INEP committee meetings.	Should the regulation stipulate the frequency of meetings for the National INEP committee? (a) Yes <input type="checkbox"/> (b) No <input type="checkbox"/>	If Yes, what would you propose as a reasonable frequency of meetings? (a) Monthly <input type="checkbox"/> (b) Quarterly <input type="checkbox"/> (c) Bi- Annually <input type="checkbox"/> (d) Annually <input type="checkbox"/> (e) Other _____

<p>Section 15 of the Draft Regulations provides that NGOs and Private sector entities will prepare and submit their energy programmes/projects either to their respective Counties or to the Cabinet Secretary in the format prescribed in Schedule Five (5).</p>	<p>What do you think should qualify the organizations for submission to the national government or county government?</p> <ul style="list-style-type: none"> (a) Turnover Finance <input type="checkbox"/> (b) Personnel (No. of staff) <input type="checkbox"/> (c) No. of Counties of operation <input type="checkbox"/> (d) Theme Areas <input type="checkbox"/> (e) Energy Consumption <input type="checkbox"/> 	
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8. On a scale of 1 to 5 (5 being most important and 1 being least important) rank the following as actions that would help in the successful implementation and enforcement of the new Regulations.

	1	2	3	4	5
Hiring Energy Planners	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training Existing Staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Sensitization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Budget Prioritization	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (ideas on this?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (ideas on this?)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Rate the following cross cutting/mainstreaming issues on importance to the regulation enforcing the INEP framework and priority assignment when developing the circular as outlined in Section 18 of the Draft Energy (Integrated National Energy Plan) Regulation 2021

	Low 1	2	3	4	High 5
Policy and political dialogue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender mainstreaming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equity and social inclusion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender responsive budgeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. How likely is the Draft Energy (Integrated National Energy Plan) Regulations 2021 accelerate the Nation in achieving the goals which it has laid out in following strategies and policies?

	I'm Unaware of this	Not At All	Less Likely	Likely	Highly Likely
Kenya Vision 2030 medium term strategic plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Energy Policy 2018	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Industrialization policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender Policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SDG's	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agenda 2063	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
County capacity needs Assessment report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Budget review and outlook paper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Will the implementation of the Draft Energy (Integrated National Energy Plan) Regulation 2021 have a cost implication to your organization?

Yes ☐ **No** ☐

12. If yes, in question 12, in what aspects and what level of cost implication will the regulation enforcing the INEP framework have to your organization?

	Yes	No	Level		
			Low	Medium	High
Publishing of energy plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implementation of energy plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring of plan progress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Capacity building & Recruitment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Committee meeting and representation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Specify)					

13. Will the regulation impose the following costs and benefits to your organization? If yes, how is the level of implication to your organization?

	Yes	No	Level		
			Low	Medium	High
Tangible costs and benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intangible costs and benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Direct costs and benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Real costs and benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pecuniary costs and benefits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. What is the range of additional average budgetary costs will the regulation impose to your organization to undertake the activities outlined in question 13 above?

- (a) Less than 1,000,000
- (b) 1,000,000-10,000,000
- (c) 10,000,001-100,000,000
- (d) 100,000,000-500,000,000
- (e) 500,000,000- 1 billion
- (f) Greater than 1 billion

15. Please suggest other measures that would ensure adequate capacity for implementation of the new Regulations.

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SECTION A: ELECTRICITY PLANNING

1. Do you think the INEP framework will facilitate the achievement of the objectives of the following documentations/strategic plans that exist in the electricity planning context?

	Yes	No	I'm Unaware of this
Least cost power development plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feed In Tariff Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Generation and transmission master plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distribution master plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. In terms of the level of impact, how do you think the INEP framework will impact the following activities surrounding electricity planning once the Draft Energy (Integrated National Energy Plan) Regulation 2021 is enacted?

	No Impact	Little Impact	Impact	Fair Impact	High Impact
Increase electricity generation capacity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Create Jobs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use our existing developed renewable energy resources more efficiently and effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ensure the protection of our environment (e.g., rivers, forests, oceans)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boost Economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assist in mitigating electricity rates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Please suggest other measures that would ensure adequate capacity for implementation of the new Regulations to better capture the activities associated with electricity planning.

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SECTION B: ENERGY ACCESS

1. Which of the following sectors of energy access does your organization fall in?

(a) Electricity Access ☐

(b) Clean cooking ☐

2. Do you think the INEP framework will facilitate the achievement of the objectives of the following documentations/strategic plans that exist in the energy access planning context?

	Yes	No	Unaware of this
National Electrification Strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rural Electrification master plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geospatial Mapping for Mini Grids Potential in Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distribution master plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Section 3 of the Draft Energy (National Integrated Plan) defines “Energy Access” as “means households, communities and businesses having reliable and affordable access to clean cooking facilities and to electricity, which is enough to supply a basic bundle of energy services initially, and then an increasing level of electricity overtime to reach the regional average” Do you agree with this definition?

Yes ☐ No ☐

4. What do you think will be the level of impact on the following use cases in energy access planning by the developed regulation enforcing the INEP framework?

	Not At All	Little impact	Impact	Fairly Impact	High Impact
Household and social (community) uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Production and Manufacturing Uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education Uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health Uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public administration uses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. Please suggest other measures that would ensure adequate capacity for implementation of the new Regulations to better capture the activities associated with energy access planning.....

SECTION C: ENERGY EFFICIENCY AND CONSERVATION PLANNING

1. Do you think the INEP framework will facilitate the achievement of the objectives of the national energy efficiency and conservation strategy that exist in the energy efficiency and conservation planning context?

Yes ☐ **No** ☐

2. How important will the following benefits of energy efficiency and conservation planning be when the regulation is implemented?

	Not Important	Important	Very Important
Reduction in emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stabilization of electricity costs and volatility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Creation of Jobs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduction of generation/transmission infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. How likely is the occurrence of the following risk associated with the implementation of EE projects and what is the level of preparedness for your organization to mitigate these risks? (1 low, 3 high)

	Likelihood			Preparedness		
	1	2	3	1	2	3
Inadequate Financing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of adequate capacity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Political risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project implementation risk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate professional competency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of innovation, research and development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please suggest other measures that would ensure adequate capacity for implementation of the new Regulations to better capture the activities associated with energy efficiency and conservation planning.

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SECTION D: BIO-ENERGY PLANNING

1. Do you think the INEP framework will facilitate the achievement of the objectives of the Bio- energy strategy that exists in the bio-energy planning context?

Yes ☐ **No** ☐

2. In your opinion, what will be the level of impact of the INEP framework/ regulation on the following challenges associated with bio-energy planning when the regulation is implemented?

	No Impact	Impact	High Impact
Change in water supply security and quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of biodiversity and ecosystem	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food Insecurity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender inequality in employment opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved food security	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equity of distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. The INEP framework will aim to drive the strategies outlined in the bio-energy strategy. In your own opinion, which of the following factors may hinder the success of bio-energy planning as envisioned in the INEP framework? What is the likelihood of this hindrance occurring?

	Hinderance		Level			
	Yes	No	0	1	2	3
Lack of capacity in the sector	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate financial incentives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender mainstreaming in bio-energy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reduction of traditional biomass use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental concerns such as water security, emissions control.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Equity of distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (Specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Please suggest other measures that would ensure adequate capacity for implementation of the new Regulations to better capture the activities associated with bio- energy planning.

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SECTION E: ENERGY RESOURCE AND DEVELOPMENT PLANNING

1. How do you think the regulation will impact on the following issues regarding energy resource development?

	No Impact	Impact	High Impact
Reduce dependency on fossil fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drive low-cost energy infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved energy efficiency at grid scale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uptake of distributed energy resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consideration of the potential environmental impacts in exploitation of various energy resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Do you think the Draft regulation enforcing the INEP framework will facilitate the achievement of the objectives of the following documentations/strategic plans that exist in the energy access planning context?

	Yes	No	I'm Unaware of this
Nuclear Master Plan and Nuclear Policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coal Master Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Geothermal Strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solar & Wind Resource Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National oil and gas master plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Solar and wind resource assessment report for Kenya	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hydropower development plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nuclear Master Plan and Nuclear Policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
National Oil and Gas Master Plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Renewable Energy technologies assessment of all counties	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Please suggest other measures that would ensure adequate capacity for implementation of the new Regulations to better capture the activities associated with energy resource and development planning.

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B-2: List of Successful respondents

#	Agency	Contact Person	Phone No.	Email
1	GIZ	Jackson Mutonga- Senior Energy Advisor	-	Jackson.mutonga@giz.de
2	ACCESS	Grace Ronoh- Programme Officer	+254741725508	Programmes@access-coalition.org
3	AfDB	Alemayehu Wubeshet Zegeye- Regional Sector Manager – Power Operations	+ 254 202 998 321	a.wubeshet-zegeye@afdb.org
4	AMDA	Kennedy Omutanyi -Government Relations Consultant	0708099688	komutanyi@africamda.org
5	CCAK	Mariam Karanja - Program Manager	0727875766	mkaranja@ccak.or.ke
6	DANIDA	Lasse Toft Christensen- Energy Counsellor	+254 114754162	laschi@um.dk
7	ECLOS	Dennis Keya- Country Manager	+254 721852515	Dennis.keya@edf.fr
8	EPRA	David Kibe Kariuki – Deputy Director, Energy Planning	0722362634	david.kariuki@epra.go.ke
9	ESAK	George Aluru - Chairperson	0714746590	chairperson@esa-k.org
10	GDC	Jared O. Othieno- MD and CEO	0719037000	jothieno@gdc.co.ke
11	KAM	CEO	0202324817	ceo@kam.co.ke
12	KENGEN Business Development 1	Willis Ochieng- Chief Energy Planner	0722861707	wochieng@kengen.co.ke
13	KENGEN Business Development 2	Ogonji Michael – Snr Engineer	0721458661	mogonji@kengen.co.ke
14	KENGEN Capital & Energy Planning	Capital & Energy Planning	0711036000	-
15	KENGEN Project Execution Department	Joseph Munyoki- Chief Eng., Solar Projects	0721577989	jmunyasya@kengen.co.ke
16	KENGEN Strategy & Innovation Department	Anne Kiburi – Chief Strategy Officer	0722228463	akiburi@kengen.co.ke
17	KeREA	Andrew Amadi - CEO	0788172795	ceo@kerea.org
18	KETRACO	GODFREY KARIUKI- MANAGER, STRATEGY AND CORPORATE PLANNING	+254 20 495 6000	gkariuki@ketraco.co.ke
19	KIRDI	Lucy Wangai – Head, Energy Research	0733256613	lkwangai@gmail.com

20	KNBS	Christine Magu – Senior Statistician	0202911000	cmagu@knbs.or.ke
21	KPLC	Erastus Kiruja - Power System Planning Manager	0711031485	EKiruja@kplc.co.ke
22	MoE	Tom Maruti – Principal Economist	0720927722	twmaruti@gmail.com
23	Ministry of Environment and Forestry	Faith Chirchir	0202221702	faithchirchir@gmail.com
24	Ministry of Lands and Planning	Administration	-	-
25	Ministry of Transport and Infrastructure, Housing, Urban development and Public works	Ouma Joel - Snr. Superintending Engineer	0719115221	joelnadebu@gmail.com
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