



KTDA SMALL HYDRO-POWER

ENVIRONMENT AND SOCIAL MANAGEMENT SYSTEM

FOR

REGIONAL POWER COMPANIES (RPCS)

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Glossary of Terms

Acronym	Term
EMCA	Environment Management & Coordination Act
EPRA	Energy & Petroleum Regulatory Authority
ESMS	Environment and Social Management System
KFS	Kenya Forest Service
KPLC	Kenya Power & Lighting Company
KTPC	KTDA Power Company
KWS	Kenya Wildlife Service
OSHA	Occupational Safety, Health Act
PS	Performance Standard
RPCS	Regional Power Companies
SHPP	Small Hydro Power Plants
WRA	Water Resources Authority
WUA	Water Users Authority

1.0 EXECUTIVE SUMMARY

This document, comprises the Environmental and Social Management System for RPCS, is prepared in order to meet the Environmental and Social obligations and reporting, regarding KTDA's RPCS Small Hydro-power plants operations.

The scope of this document constitute the review of RPCS activities against each of the ESMS elements to determine the extent to which ESMS requirements will be met. KTPC as the managing agent will be responsible for the monitoring of the activities of ESMS.

2.0 BACKGROUND & SCOPE

This manual describes the Environmental and Social Management System (ESMS) for KTDA's RPCS Small hydro-power plants operations in consistent with ISO 14001 (without reference to certification process) and the IFC performance standards requirement. Also, this manual defines the ESMS approach of RPCs and provides a linkage of system documents to the various elements of the ISO 14001 standard.

All processes at each project sites shall be operated in compliance with the relevant Environmental and Social Management System (ESMS) requirements developed by KTPC in accordance with and to meet the requirements of International Finance Corporation (IFC) Performance Standard 1 (Social & Environmental Assessment and Management Systems, 1st January 2012).

Environmental and Social Management System (ESMS) guiding principles includes the following: -

- Avoid, reduce or limit negative environmental, and social impacts and improve the E&S benefits of its initiatives;
- Support the preservation and protection of biodiversity and sustainably manage natural resources;
- Avoid negative impacts on the living conditions, livelihoods and land tenure of communities;

- Ensure the health and safety at work of its own employees and require its subcontractors and partners to implement measures to protect the health and safety of their employees at work;
- Comply with all relevant international best practices.

3.0 ENVIRONMENT AND SOCIAL POLICY

The RPCs will operate their business in a responsible manner and will comply with all applicable environmental law and regulations. It shall further include commitment to management of waste, control of emissions and sound consumption of resources and upholding stakeholders' concerns and embracing the IFC applicable performance standards.

RPCs will put in place programs to reduce the probability of any environmental, social and safety & health related incidents and will develop contingency plans to deal with such incidents when they occur. The companies will engage relevant managers and representatives to be responsible for environmental, social, safety & health mitigations and monitoring procedures and policies.

The E&S managers including plant supervisors in the respective projects will be E&S champions throughout the project cycle. KTPC will demand the same level of commitments and performance from its agents, suppliers and contractors, subcontractors and will stipulate this in any legally binding agreement it enters with this parties. The provisions of the environmental, social, safety and health policy described below will be communicated to all employees, contractors and subcontractors.

3.1 Health, Safety, Social & Environment Policy Statement

It is the objective of KTDA Power Company Ltd to be the industry leader in the management of environment, social, health and safety risk and impacts including, accident prevention and to have a hands-on, progressive role in the protection of our environment. KPTC is committed to conducting its business in a manner that protects the health and

safety of its employees, and communities affected by our activities and the environment with respect to power generation activities.

In achieving these objectives, we will be guided by the following basic principles: -

- i) All accidents, occupational illnesses and environmental incidents are preventable.
- ii) Compliance with applicable regulatory and applicable standards requirement.
- iii) Working safely and protecting the environment are conditions of our operations.
- iv) Prevention of injuries, occupational illnesses and environmental incidents is good for our business.

In accordance with this policy, KTDA Power Company Ltd will: -

- Comply with applicable regulatory requirement governing occupational health, safety, and the environment and social aspect.
- Provide a healthy, safe and environmentally secure workplace for employees and communities affected by our activities.
- Maintain an ongoing process of workplace/environmental hazard/risks identification, take measures to eliminate or decrease the hazards and provide procedures, practices and personal protective equipment as required to provide a safe work atmosphere.
- Advise employees and stakeholders of their responsibilities to meet safety and environmental requirements.
- Provide employee and stakeholders training in safe work practices and environmental protection.
- Motivate employees to take personal responsibility for their safety and of their colleagues.
- Manage safety and environment like any other key aspect of our business by establishing goals and objectives for continuous improvement, measure and report performance.
- Conduct periodic health, safety and environmental performance audits to ensure compliance with existing laws, regulations, policies, procedures and stakeholders expectations.
- Devote sufficient resources to ensure exceptional health, safety and environmental/social performance.
- Ensure that health, safety & environment becomes a line responsibility in all of our activities for both management and operational staff.
- Require employees to report any health, safety and environmental hazards, social impacts, accidents and near miss incidents to their supervisor, or management, immediately and effectively.

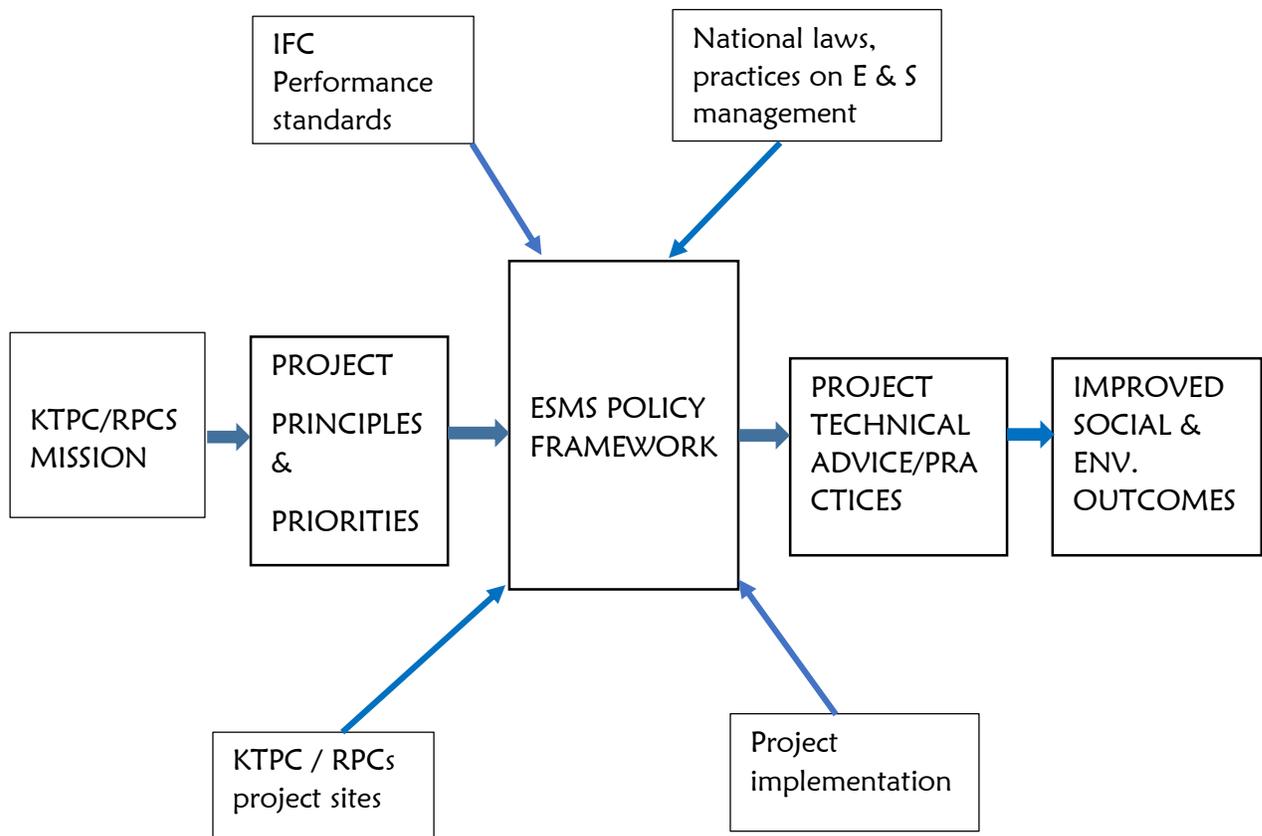
- Engage all stakeholders in a timely manner, and in line with the stakeholder Engagement Plan development in consultation with project – affected persons and other key stakeholders.
- Manage all grievances in a timely manner, and in line with a culturally appropriate and accessible Grievance Redress Mechanism developed in consultation with project-structured interventions for vulnerable individuals and households, as appropriate.
- Provide project-structured intervention for vulnerable individuals and households, as appropriate.
- Manage the risk of Gender - Based Violence and particularly Sexual Exploitation and Abuse of community members by project workers and Sexual Harassment amongst project workers in line with the GBV Management Plans, outlining GVB mitigation and response measures, developed in line with the KTPC GBV policy.
- Manage all grievances in a timely manner, and in line with a culturally appropriate and accessible Grievance Redress Mechanism developed in consultation with project-affected persons and other key stakeholders.
- Manage all land acquisitions and consultation processes in line with the Land Acquisition Framework.
- Develop and implement a Local Recruitment Plan to ensure locals are as much as possible prioritized for unskilled, semi-skilled and skilled positions.

Through these actions and with the full cooperation of all employees, contractors and subcontractors, KTPC will reach its objective of being effective in managing environment, social, health and safety issues.

4.0 ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM STRUCTURE

RPC's ESMS is designed to ensure that potential negative E&S risks and impacts are minimized, while positive effects on communities and the environment are enhanced. It follows the guidance of International Finance Corporation (IFC) Performance Standards (PS) on the assessment and management of E&S risks and impacts, in particular, Performance Standard 1 (PS1) and international best practices. Relevant elements of PS1 constitute the main building blocks of this ESMS. This ESMS includes: A Health, Safety, Environment and Social Policy statement management actions, organizational capacities and competencies needed, Stakeholder Engagement Plan (SEP), Grievances Redress Mechanism (GRM) and a monitoring and review process.

ESMS Structure intervention areas



4.1 Applicable Environmental and Social standards and guidelines;

At KTPC/RPCs the ESMS is premised on the following requirements: -

- EMCA 2012, OSHA 2007, Employment Act 2007, other social laws and standards in Kenya, including requirements for public disclosure and engagement established therein.
- Relevant international law including conventions and treaties adopted by Kenya.
- IFC Environmental and Social Performance Standards (2012);
- World Bank Group's General Environmental and Health and Safety (H&S) Guidelines (WBG EHS Guidelines);
- Core labour standards of the International Labour Organization (ILO);
- KWS, KFS, WRA, WUA, EPRA, KPLC laws & regulations.

5.0 IDENTIFICATION OF E&S RISK AND IMPACTS

5.1 Potential E&S risks inherent to RPCS interventions

KTPC/RPCS engages in a number of activities and operations that present associated E&S risks at project level, relating to land acquisition, grievances management and stakeholder engagement etc. KTPC/RPC has a set up interventions, such as those highlighted below, to mitigate all E&S risks and impact associated with their operations.

Such interventions include, but are not limited to: -

- Land acquisition is performed on the basis of willing buyer willing seller option prior to site mobilization/construction, and aligned to the Land Acquisition Framework;
- Stakeholders engagement is conducted prior to the start of each project and throughout the project cycle;
- Grievances are managed in a timely manner, in line with a culturally appropriate and accessible Grievance Redress Mechanism;
- The risk of Gender – Based Violence and particularly Sexual Exploitation and Abuse of community members by project workers and Sexual Harassment amongst project workers are managed in line with project-specific GBV Management Plans, developed in line with the KTPC GBV policy.
- The negotiated land/biological assets/structures prices are based on prevailing land/assets valuation reports informed by the prevailing market rates;
- Implement CSR projects is guided by a CSR plan developed in consultation with beneficiaries and other relevant stakeholders;
- Involve relevant government agencies, counties, local administration in the project implementation;
- Comprehensive ESIA/ESMPs adequately capturing all environmental and social risks and impacts, and their appropriate mitigation measures are prepared and implemented before construction begins, and throughout the project cycle.

A list of potential E&S risks that result from the above-mentioned interventions are identified and are presented in the E&S risk assessment section 5.3 and 5.4 below. The E&S risk assessment serves as a reference to be consulted during the assessment of E&S risks which are to be managed at the project level.

5.2 The Company Overview

KTPC is in the business of developing, management and operation of small-scale run-of-river hydroelectric power projects in various locations in Kenya to provide captive power generation for the tea factories managed by Kenya Tea Development Agency (MS) Limited and sale of surplus to the national grid. In order to remain competitive tea factories had to reduce the energy costs by generating renewable energy through the regional power companies. The company (KTPC) has invested on 16 sites approved by the Ministry of Energy that has potential to produce **28.33 MW**. By developing its own energy source KTDA/RPCs has begun making supply for its tea factories reliable energy, while reducing

its green gas emission. This operation also allows reduction in energy costs and therefore contribute to increase to income for 350,000 tea farmers across the tea growing catchment.

5.3 Identification of E & S Risk and Impacts

The objective of a risk assessment is to identify the potential negative environmental and social impacts that directly or indirectly related to development, operation and decommissioning of the SHPP and perform appropriate strategies to address them.

5.3.1 Legal and Other Requirements

The KTPC Projects will maintain understanding of the full scope of legal and regulatory requirements that apply to all phases of the project life cycle, as well as any associated planning, operating, monitoring, or reporting requirements. KTPC will prepare project-specific checklist of regulatory requirements that is defined in the ESIA, as well as lender and industry-specific standards that applicable to the project (e.g., applicable IFC performance standards and sector-specific guidelines).

5.3.1 Environmental and Social Impacts, Risk Assessment and Management

Whilst power generation operations are necessary for economic development within the tea growing regions in the country, there are a number of potential E&S risks and impacts that are diverse and vary in level and degree of severity. An initial assessment of the social and environmental aspects and potential impacts associated with design, construction and operation, and decommissioning phases were documented in the original ESIA. Some of the potential examples E&S risks that may arise from project cycle in the small hydro power production in the KTDA's tea catchment zones is as shown below: -

- Budget constraints on implementation of the implementation of the E & S mitigations.
- Noise and vibration issues.
- Soil erosion from flooding.
- Soil contamination by petroleum waste oils etc.
- Land price negotiation variations during land acquisition.
- Occupational health and safety.
- Electrical and fire risks.
- Biological hazards.
- Inadequate Stakeholder engagement and grievances management.

5.4 Potential E& S Risks and Impacts

The projects will present both positive and negative E & S risks Impacts. In the event that the highlighted negative E&S issues are not adequately identified and mitigated these may impact on the KTPC's/RPCS operations. Some of the E&S risks and impacts that may affect company's operations are highlighted below: -

Negative Social Risks and Impacts

- Land acquisition process does not align with the willing – seller, willing – buyers principles, as well as the Land Acquisition Framework.

- Gender – Based Violence and particularly sexual Exploitation and Abuse of community members by project workers and Sexual Harassment amongst project workers.
- Inadequate identification and mitigation of social risks and impacts.
- Inadequate stakeholders' consultation and information disclosure.
- Inadequate management of grievances.
- Risk of COVID – 19 on projects workers and project-affected persons.
- Limited capacity by contractors and sub-contractors to manage social risks and impacts.
- Impacts on physical cultural resources.

Negative Environmental Risks and Impacts

- Risk of in-efficient use of water resources.
- Pollution risks during operation.
- Wastes generated.
- Greenhouse gas (GHG) emissions.
- Occupational health and safety.
- Intakes, canals fore-bays and tailrace associated risks.
- Downstream risks.
- Natural hazards, technological risks and infrastructure safety.
- Emergency plan and response.
- Water quality.
- Habitat changes.
- Minimum flow.
- Aquatic biodiversity
- Fish population protection.
- Adaptive management.
- Terrestrial biodiversity.
- Legally protected and internationally recognized areas.
- Visual impacts
- Operation related risks
- Disclosure of environmental parameters
- Emergency related information
- Monitoring information and reporting

5.5 Potential E& S Risks Categorization

KTPC/RPC's have adopted the IFC's risk E&S categorization guidelines to identify the potential E&S risks associated with potential power project operations based on the magnitude of risk that would lead to ceasing of power production and anticipated impacts. IFC'S PS (1) underscores the importance of managing environmental and social performance throughout the life of a project. The environmental and social risks and impacts identification, evaluation and categorization guidelines at KTPC will also align to the IFC PS (1) requirements on the potential E & S risk categorization.

The IFC categorizes risks as follows: -

- **Category A:** Project activities with potential significant adverse environmental or social risks and/or impacts those are diverse, irreversible, or unprecedented.
- **Category B:** Project activities with potential limited adverse environmental or social risks and/or impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures.
- **Category C:** Project activities with minimal or no adverse environmental or social risks and/or impacts.

5.6 Components of E&S Risk Rating Matrix

For the more significant risks and impacts identified during the ESIA/EA and the completion of the E & S risk identification checklist, its likelihood and its consequence are assessed and given a rating based on the E & S risk rating matrix. This will follow the steps below: -

Likelihood Rating

Determined by the probability of the event to occur and based on past experience at the site/project with regards to the reported incidents.

Consequence Rating

Determine by the severity of the likely impact and based on the assessment of residual risks on people, environment and legal compliance.

Risk Rating Matrix

Determines the significance of the identified risks by combining the Likelihood Rating with the Consequence Rating.

Environment and Social Risks/Impacts and Management Actions

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
Overall E&S Management		
E&S Management Systems	Inadequacy of the ESMS to identify and manage E&S risks and impacts. Inadequate capacity (ample and qualified safeguards staff and budget allocation) for managing E&S-related issues. This inadequacy can have an impact on the regulatory compliance and E&S performance.	Ensure adequate capacity of staff and budget for implementation of ESMS. Comply with all the legal and regulatory requirements. Monitoring and evaluation on E&S compliance to be undertaken by an external consultant.
Environmental Risks and Impacts		

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
Soil Conservation and Management	<p>Physical degradation of soils (may result from unstable canal slopes, loose back filling, worn-out gabions and stone pitching, etc.).</p> <p>Possibility of debris obstruction of water canals leading to overflows, soil erosion and structural damage.</p>	<p>The designer/consultant to factor the risks mitigation at the design stage.</p> <p>The contractor must adhere to the project designs and site management.</p> <p>Minimize cut and fill for new development;</p> <p>Respect natural contours so that new development follows natural contours and avoids natural drainage areas as these areas are likely to be flooded and cause runoff;</p> <p>Construct project access roads parallel to the contours of the land to minimize erosion and to reduce the runoff rate.</p>
Disclosure of environmental parameters	Failure to comply with disclosure of the environmental monitoring data by hydropower project.	<p>Observe the KTPC SEP requirements.</p> <p>All environmental monitoring parameter must be disclosed.</p>
Downstream risks	Rapid variations of downstream flow (i) on a routine basis (peak energy production, sediments flushing); (ii) in the case of occasional events (turbine shut down, sand trap flushing); or (iii) in relation to flood or emergency management (spillway opening or closing).	These risks should be addressed during the environmental and social due diligence and mitigated.
Minimum flow	Risks that the river flow regime changes may cause problem to people or ecosystems.	The technical advisers to ensure economic viability and sustainable development of a project.
Water quality	A change in water quality up and downstream of hydropower project may affect the evolution of aquatic biodiversity.	Minimum flow requirements should be monitored and disclosed in real time.
Aquatic biodiversity	At operation time of the plant, the transformation of a river environment into a lentic environment as well as the changes of water quality and sediments transport may be beneficial to certain life stages or species of fish and detrimental to others.	Hydropower structures should be designed and operated to minimize negative impacts on the existing fish populations, taking into account habitats associated with refugia, feeding, spawning, overwintering, and so on.

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
Fish population protection	Threat to the existing fish populations during construction and operations phases.	A mix of structural measures (for example, fish passages/fish ladders, protection grids at intakes, low mortality turbines, fish diverters, and the enhancement or creation of instream habitats) and operational measures (minimum environmental flow, limitation of flow variations, river works or sediments flushing during spawning season, fish stocking programs).
Adaptive management	Insufficiently documented fish species ecology scientific information of the rivers.	Perform biodiversity survey and monitoring
Terrestrial biodiversity	The loss of terrestrial biodiversity resulting from the construction of hydropower plant.	<p>The identification of risks of specific habitats losses and, if required, their mitigation following the mitigation hierarchy.</p> <p>Reinstatement of temporary sites and project affected areas.</p> <p>Re-vegetation to compensate for the loss of cleared areas in terms of carbon content and biodiversity value.</p>
Legally protected and internationally recognized areas.	If Hydro Power Plants are located in or close to protected areas.	Demonstrate that the proposed development is legally permitted, which may have entailed that a specific assessment of the project-related impacts on the protected area has been carried out as required under national law.
Habitat changes	The downstream flow and sediment regime change (excess of sediments or insufficient water flow during fish spawning season, insufficient or inappropriate flooding of wetlands). Transformation of habitats: conversion of a river environment into a lentic environment, modification of water quality (physical or chemical)	The sites with the potential to affect importance biodiversity features, critical habitats, or protected and/or internationally recognized areas, habitat mapping (including priority biodiversity features and critical habitats) should be undertaken before any site disturbance as part of the baseline studies in order to inform the biodiversity screening and

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
	<p>from seasonal reduction of water flows and levels.</p> <p>Fragmentation of habitats: derivation and outlet channels, penstocks can fragment terrestrial habitats and migration routes.</p> <p>Creation of habitats: creation of riparian habitats.</p>	<p>the assessment of impacts on biodiversity and the application of the mitigation hierarchy.</p>
Intakes, canals fore-bays and tailrace associated risks	Banks' stability: steep slopes, erosion and landslide	<p>The measures adopted to mitigate downstream flow variations should be proportionate to the frequency and rapidity of such variations and should take into account the nature of land use and behavioral variability of river users.</p>
Natural hazards, technological risks and infrastructure safety.	Natural hazards and technological risks may affect the safety of hydropower project.	<p>The assessment on project shall take into account of the changes (such as climate change, land use change) that can affect the nature of the risks faced by the hydropower project.</p>
Waste Management	<p>Poor solid waste management at the staff housing, power house etc.</p> <p>Generation of significant volumes of wastes (waste oils, dredged materials or floating waste collected at intakes).</p>	<p>Waste management plans should be prepared and implemented on the basis of a detailed assessment of the nature and volumes of wastes.</p>
Herbicides Use	Herbicide use to clear overgrown vegetation has potential contamination of soils, wildlife, human health, groundwater, or surface water resources.	<p>Pesticides should be used through direct applications on the targeted plant only and should not be used where they may migrate to waterbodies.</p>
Biodiversity	Habitat conversion or degradation, water pollution, introduction of invasive species and reduced quality and/or availability of priority ecosystem services.	<p>Habitat mapping (including priority biodiversity features and critical habitats) should be undertaken before any site disturbance as part of the baseline studies in order to inform the biodiversity screening and the assessment of impacts on biodiversity and the application of the mitigation hierarchy.</p>

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
Pollution risks during operation	Risk associated with use of herbicides for clearance of vegetation. Non – pollutant free turbines and hydro-mechanical equipment.	
Risk of inefficient use of water resources	Changes to water flow, water level or river bed morphology and any impacts or changes to downstream water availability may be a risk. Diverse water or river uses that may be potentially a risk resulting from water to availability or fluctuation. Water quality changes downstream and in the reservoir taking into account the influence of the inputs into the river in the catchment area	Works associated with critical water pollution risks should be identified in the early project preparation stages, and risk avoidance and/or minimization measures should be developed and implemented accordingly, including the set-up of a permanent or integrative monitoring mechanism during these critical stages.
Visual impacts	Failure to take into account the importance of landscapes of landscape for both occasional visitors (tourist, pilgrims) and the people who live in the project area.	This should address taking into account the importance of landscapes for both occasional visitors (tourists, pilgrims) and the people who live in the project area and may have a spiritual link to the landscape where the project is being developed.
Greenhouse gas (GHG) emissions	Atmospheric emissions are primarily associated with emissions of combustion of fuel products—including carbon dioxide (CO ₂), sulfur dioxide (SO ₂), nitrogen oxide (NO _x), and particulate matter (PM) — resulting from the operation of start-up generators or from combustion solid waste. Emissions are associated with combustion of fuel products (start – up generators).	There shall be comparison with other sources of energy, the lifecycle assessment of GHG emissions that include a calculation of annual emissions during the project cycle.
Occupational H&S, Labour Condition		
Occupational health and safety	Operational and workplace hazards (slips, trips, and falls). Machinery (unguarded machinery, etc.). Confined and restricted space (entry for intake, fore-bay).	The KTPC'S HSE policy and procedures developed to manage occupational health and safety risks associated with the project cycle.

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
	<p>Drowning in the river, canals, fore bays etc.</p> <p>Exposure to noise (generated by turbines or start-up generators).</p> <p>Flooding causing damage of homesteads.</p> <p>Works on or close to open intake</p> <p>Works in areas subject to rapidly water flows</p> <p>Works on electrical systems</p> <p>Works inside penstock waterways</p> <p>Interaction with the public</p> <p>Emergency management.</p> <p>Work at height</p> <p>Work in severe climate or altitude conditions.</p>	
Risk of fire and explosion	Fires and explosion resulting from the electrical system fault which can lead to a loss of property or cause possible injury to or fatality of people.	The KTPC'S HSE policy and procedures developed to manage occupational health and safety risks associated with the project cycle.
Operation related risks	Limited communication and education to stakeholders on risk associated with operations of the plant.	Structural (buffer reservoir, fences, signs), operational (sequential operation of turbines or gates, identification of lower risks days or hours) or communication actions (awareness campaigns, public information, warning signs, alarms).
Risk of electrocution	Electrocution resulting from the fault to electrical system at the power house, power line or substations which can lead to injury or fatality of staff or public.	..
Biological hazards	Contact with venomous animals, such as stinging insects, spiders, scorpions, snakes, disease vectors (e.g., mosquitoes, ticks), and with certain wild animals.	..
Community Health and Safety (H&S).		
H&S Management	Land use changes or to the loss of natural buffer areas/ecosystem services/sloppy grounds (such as wetlands, upland forests, backfilling,	The KTPC'S HSE policy and procedures developed to manage occupational health and safety risks associated with the project cycle.

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
	<p>that mitigate the effects of natural hazards, such as flooding, landslides, and mudslides) due to construction of water canal, fore bay, intakes, and penstocks.</p> <p>Potential interference of foot paths and access roads local homesteads and farms by obstruction of the canals.</p>	
Emergency related information	Lack of emergency plan to address public safety	Emergency related information (action plans, early warning, alarm sounds, and so on) should be shared with the public regarding public safety, as agreed with the relevant authorities.
Emergency plan and response	Lack of an emergency prevention and response plan (to address natural event, an unexpected flood (natural of caused by an upstream hydraulic structure) or an internal technical problem).	Share key information such as flooding maps with the authorities in charge of public security.
Social Risks and Impacts.		
Project benefits and opportunities	Project benefits and opportunities are inaccessible to project-affected persons, including vulnerable individuals and households.	Ensure all project-affected persons have equal access to project benefits and opportunities, and effectively participate in the project.
Stakeholder Engagement (consultations and information disclosure).	<p>Stakeholder engagement in not aligned with the Stakeholders Engagement Plan. E.g.</p> <ul style="list-style-type: none"> • Inadequate or partial stakeholder identification. • Lack of or inadequate stakeholder engagement. • Inadequate or partial disclosure of project information. • Untimely disclosure of relevant project information e.g. project instruments, risk management plans, positive and negative impacts, full rights entitlements and opportunities. 	Implement stakeholder engagement at the onset of the project and throughout the project cycle and align stakeholder engagement to the provisions within the KTPC Stakeholder Engagement Plan.

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
	<ul style="list-style-type: none"> • Inadequate and non-inclusive consultation process. • Exclusion of vulnerable individual and households in consultation and decision-making processes on projects to be implemented. • Exclusion of and vulnerable individual and households from any project management committees. 	
Grievances Management.	<p>Grievances are not managed and resolved in a timely manner, and the process of grievances management is not aligned with the Grievances Redress Mechanism, leading to escalation into legal claims. E.g</p> <ul style="list-style-type: none"> • Inability of the hydropower project in establishing and maintaining effective grievance mechanisms, for project-affected persons and project workers. • Inadequate sensitization or failure to sensitize stakeholders (beneficiaries and their leaders) on the GRM and its processes. • Lack of a GRM that ensures confidentiality, and anonymous reporting for those who choose to report anonymously. • A GRM that impedes access to judicial or administrative remedies. 	Manage all grievance in a timely manner, and in line with the provisions within the Grievance Redress Mechanism.
Land Acquisition through the willing-seller, willing - buyer option.	<ul style="list-style-type: none"> • Land acquisition processes and consultations with stakeholders are not aligned with the Land Acquisition Framework. • Land price negotiation violation that may hamper the smooth acquisition of land for project implementation. • Construction activities precede finalization of for project implementation. 	Align land acquisition and consultation processes with the provisions within the Land Acquisition Framework.

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
Physical Cultural Resources	<ul style="list-style-type: none"> • Failure to identify potential project impact on physical cultural resources. • Inability to adequately mitigate negative impacts on areas of cultural significance e.g., Graves, places of worship, sacred sites and other culturally sensitive assets located in the reservoir area of a hydropower project. • Failure to involve and engage local community in a timely manner on matters of river significance on cultural importance. 	<p>Liaise with relevant authorities and project affected communities for the identify and map physical cultural resources present in project areas.</p> <p>Avoid damage to, relocation of, or restriction of communities to access physical cultural resources.</p>
Labour Influx and related impacts E.g., GBV-SEA/SH	<ul style="list-style-type: none"> • Inability of the report to manage the inflow of workers into the project area. • GBV management is not aligned with the GBV Management Plan, including signed codes of conduct by all project workers with physical presence on site. • Lack of a GRM that ensures confidential reporting and handling of GBV cases. 	<p>Manage the risk of GBV in line with the KTPC GBV policy. Contractors and sub-contractors to develop and implement specific GBV management plans informed by the KTPC GBV policy. Contractor and sub-contractors to develop and implement a local recruitment plan to ensure locals are as much as possible prioritized for job opportunities, and minimize the risks and impacts associated with influx of labour into project areas.</p>
Vulnerable individuals and households	<p>There are individuals or groups that will be disproportionately disadvantaged by KTPC interventions e.g. women, youth, People With Disability (PWD), the elderly, minority clans etc.</p>	<p>Implement project – structured interventions to ensure vulnerable individuals and households effectively participate in the project, and equally access project benefits and opportunities.</p>
Labour Management	<p>Non-Adherence to national labour laws and good labour practices leading to: -</p> <ul style="list-style-type: none"> • Abusive terms of employment by contractors. • Excessive and /or uncompensated overtime hours. • Inadequate worker housing and sanitization. 	<p>Adhere to the Employment Act and KTPC’s Human Resource policy. Develop and implement a labour plan to manage employment issues and will include the identification of project’s labour needs, the envisaged training opportunities and enhancements and a clear outline of how the employment process will be</p>

Key risk areas.	Description of risk / impacts.	Management Actions/Interventions/Plans.
	<ul style="list-style-type: none"> • Unemployment of locals, women and PWDs (for jobs they can perform). • Use of child and forced labour. • Lack of a worker GRM. 	<p>communicated and managed. Contractor and sub-contractors to develop and implement a local recruitment plan to ensure locals are as much as possible prioritized for the opportunities.</p>
Monitoring and reporting on social and environmental aspects	<ul style="list-style-type: none"> • The monitoring process does not capture or inadequately captures social and environmental aspects and emerging risks in the sub-project. • Risks, impacts, and mitigation measures are not comprehensively captured in the monitoring plan. • Social processes, e.g., land acquisition, and information disclosure and grievances management, are not captured in the monitoring. • Missing annual report on environmental and social performance, implementation of commitments in action plans. 	<p>Routine information should be made available to the public, including an annual report on environmental and social performance, implementation of commitments in action plans.</p> <p>Monitor project compliance on social and environmental aspects, including project activities and processes.</p>
COVID - 19	Non-observance of COVID – 19 protocols, rules, and procedures while delivering the sub-project promptly.	Adhere to the Ministry of Health guidelines on mitigation and response to COVID-19.

6.0 EMERGENCY PREPAREDNESS AND RESPONSE

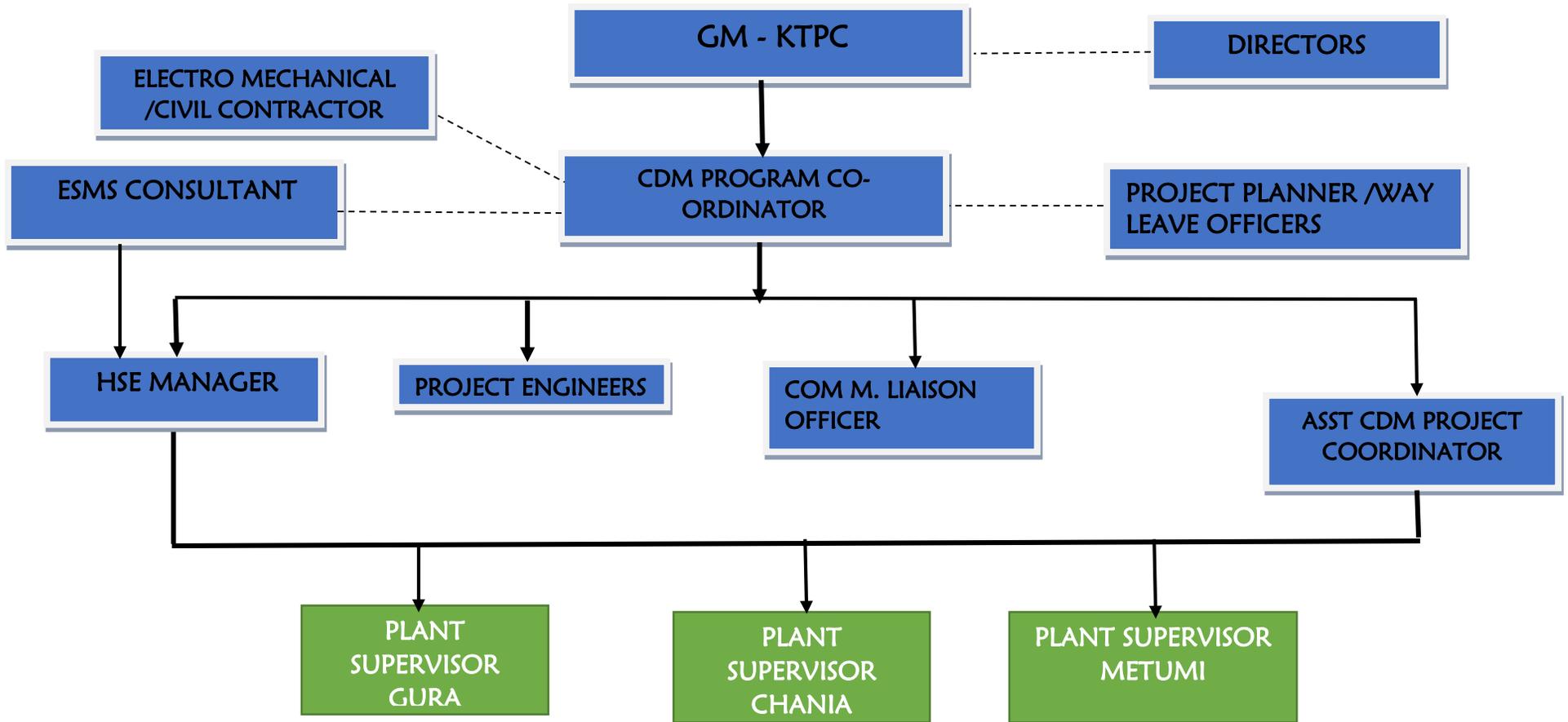
KTPC/RPCs will prepare an emergency preparedness and response plan for the hydropower plants to cover the entire project cycle. Emergency Prevention and Response Plan shall contain key information such as infrastructural designs of the plants. This plan is necessary to address any potential emergency situations over the lifecycle of the project as a result of a natural event, an unexpected flood (natural or caused by an upstream manual gate structure) or an internal plant technical problem.

As a minimum, the emergency plan is expected to address the management of situations resulting from the following events (eventually combined): -

- The systems and procedures developed to manage occupational health and safety risks associated with the construction and operation of hydropower.
- Extreme natural floods
- Abnormal flows resulting from the emergency operation of upstream of the power house.
- Abnormal flows resulting from the failure of canal structure leading to spilling and flooding.
- Loss of control of safety related structures (such as overflow spillways, tailrace).
- In the case of occasional events of turbine shut down, sand trap flushing etc.
- People accessing the canals through the foot bridges that connects their pieces of land.
- The plant to take into account the changes (such as climate change, land use change) that can affect the nature of the risks faced by the projects.

7.0 ESMS MANAGEMENT & ORGANIZATION

7.1 Overview of RPC's E&S organizational structure



This section presents an outline of the roles and responsibilities within KTPC/RPCS to successfully implement the ESMS. As the ESMS evolves, KTPC will continuously assess required capacities within the organization for effective implementation.

7.2 E&S roles and responsibilities

This section presents an outline of the roles and responsibilities within KTPC/RPCS to successfully implement the ESMS. As the ESMS evolves, KTPC/RPCS will continuously assess required capacities within the organization for effective implementation. Below is the overview of the ESMS roles and responsibilities.

	Roles	Responsibility Related to E&S Management
1	Directors	KTPC/RPCS directors are responsible for the overall operationalization (resources) of the ESMS
2	GM- KTPC	Accountability for ensuring ESMS implementation, monitoring and reporting throughout KTPC/RPCS operations.
3	CDM Program Co-ordinator	Responsible for ensuring overall coordination of the integration and compliance of ESMS across KTPC's/RPCS interventions. Support to the delivering of E&S training at RPCS to enhance capacity building.
4	HSE Manager	Overall responsibility for ensuring compliance and management of E&S issues/risks across KTPC's/RPCS. Lead, monitor and provide ongoing feedback to CDM Program Co-ordinator on E&S agenda.
5	ASST CDM Project Coordinator	Conduct environmental audits and ensure implementation of EMPs at the plants, review of audit reports, site visits, and other E&S monitoring requirements. Support to the HSE Manager in delivering E&S training identification E&S risks and developing mitigation measures.
6	Project Planner /Way Leave Officers	Directly report and provide feedback of communities and stakeholders concerns within the RPCS to the HSE Manager and CDM Program Co-ordinator. Reporting 'red flag' E&S issues to the HSE Manager and CDM Program Co-ordinator.
7	Plant Supervisor	Support the implementation of ESMS in their various RPCS functions. Reporting 'red flag' E&S issues to the GM, Planner, HSE Manager or CDM Program Co-ordinator. Support to the HSE Manager and CDM Program Co-ordinator in delivering E&S training at RPCs.
8	ESMS Consultant	To perform overall monitoring and report on the implementation of the Environment Social Management System (ESMS) performance.
9	Community Liaison Officer (CLO)	Recruited from the project area, the CLOs will be the point of contact between project stakeholders and KTPC/RPC. Support stakeholder engagement and grievance management processes at the project level.

8.0 ESMS COMPLIANCE MONITORING AND REPORTING

8.1 Monitoring Compliance

Throughout the project cycle the CDM coordinator, Assistant CDM coordinator and HSE Manager will internally monitor progress and performance of the ESMS. Monitoring also ensures that the action plan and mitigation and also measures identified in the ESMS are implemented. Where recommended measures are ineffective, corrective actions are implemented. The ESMS Consultant will externally perform overall monitoring and reporting on the implementation of the Environment Social Management System (ESMS) performance.

The assessment at the RPC level will identify mitigation measures. Such mitigation measures will typically include: -

- Engagement with stakeholders to ensure adequate evaluation of project E&S risks and to benefit from stakeholder opinion;
- Regularly perform project internal audits and monitoring visits (e.g. site visit, biodiversity survey, Annual Environmental Audits);
- Tracking of staff, public and media sentiments;
- Training of awareness creation to stakeholders on in the management of E&S risks management.

9.0 AWARENESS AND CAPACITY BUILDING

A comprehensive training for employees of the KTPC/RPCS will be undertaken on the ESMS and will be facilitated by a consultant. Training will cover the ESMS application to SHP projects.

STAFF	TRAINING & FREQUENCY	TRAINING CONTENT
RPC Staff/Way leave officers	Internal training (Once in 2 years)	<p>The training content should include as a minimum the following: -</p> <ul style="list-style-type: none"> • RPC's HSE policy. • Introduction to environmental legal compliance. • Environmental awareness & management. • Pollution prevention and management (air, water, soil, waste, noise etc.) • Management of cultural resources. • Hazardous materials management. • Waste and wastewater. • Stakeholders Engagement and Grievances Management (SEP and GRM). • Land Acquisition Framework. • KTPC GBV Policy and project – specific GBV Management Plans. • Case studies in environmental and social issues such as: - <ul style="list-style-type: none"> - Water management & Biodiversity

STAFF	TRAINING & FREQUENCY	TRAINING CONTENT
		<ul style="list-style-type: none"> - Natural disasters and environmental performance - Gender and non-discrimination - Labour practices • Review the ESMS requirements and the tools used to ensure compliance with the ESMS. • Environmental reporting
ALL KTPC'S STAFF	E&S Comprehensive training (Every 2 years)	<ul style="list-style-type: none"> • Environmental Management Systems and related Instruments. • Monitoring auditing and environmental and social reporting. • Stakeholder Engagement and Grievance Management (SEP and GRM). • Stakeholders' engagement. • Land Acquisition Framework. • KTPC GBV Policy and project-specific GBV Management Plans. • Environmental impact assessments including: - <ul style="list-style-type: none"> - International perspectives on Environmental Assessment (EA). - Legal mandate for ESIA. - ESIA process, cost and techniques - Quality and effectiveness of ESIA reports and processes - Project E&S Life Cycle Assessment (LCA) - Strategic Environmental Assessment (SEA) - Social Impact Assessment (SIA).
RPCS DIRECTORS	External training (once in 2 years)	<ul style="list-style-type: none"> • ESMS guideline documents and implementation. • Environmental and social awareness and management. • Stakeholders Engagement and Grievances Management (SEP and GRM). • KTPC GVB Policy and project specific GBV Management Plans. • Land Acquisition Framework.

10.0 STAKEHOLDER ENGAGEMENT & GRIEVANCE PROCEDURES

10.1 Stakeholder Engagement (SEP)

KTPC has developed a Stakeholders Engagement Plan. Stakeholder engagement measures will work pro-actively towards developing and fostering positive relationship of KTPC/RPCS and all stakeholders particularly those affected by the project activities throughout the project cycle. Stakeholders engagement will aim to: -

- Provide stakeholders with relevant project information (negative and positive impacts, benefits, opportunities, and their full rights and entitlements), in a timely manner to allow for meaningful consultations, in accessible forms, using culturally appropriate technique such as public barazas and FGDs.
- Communicate planned project phases, developments and any changes (however minimal) to all stakeholders in a timely manner (e.g., opening of new operations).
- Involve all stakeholders in decisions that will affect/influence their livelihood.
- Enhance stakeholders' capacity to identify unanticipated projects risks and impacts, and to be able to communicate these to the developer such that they can be resolved/included in the project risk management plans /procedures.
- Assist affected people in adapting to the social and economic changes brought about by the project through information and participation. and
- Ensure that stakeholders can report concerns and grievances easily through culturally appropriate and accessible GRM, and ensure prompt resolution of all grievance reported.

The management of impacts through stakeholders' engagement shall be approached by: -

- Proactive engagement where the E&S teams including community liaison officer will hold stakeholder engagement sessions based guided by the project SEP to elicit the involvement of stakeholders and share relevant project information in order to address key issues of concern prior to them arising. This process shall be ongoing throughout the project cycle, and as guided by the project SEP.
- Reactive engagement responding to concern or grievances raised by stakeholders in a coherent and predetermine manner. This approach is facilitated through the KTPC Grievance Redress Mechanism developed. KTPC will ensure ongoing reporting to affected communities on the implementation of risk/impact management measures/procedures instituted.

11.0 GRIEVANCE REDRESS MECHANISM (GRM)

The aim of the GRM is to achieve mutual agreed resolution of grievance raised by stakeholders, managed through a transparent process, acceptable to all segments of affected communities and other stakeholders, culturally appropriate and accessible. A grievance is a complaint or concern linked to an operation within the project performed with expectation or a change to the activity that has caused the grievance. The KTPC

Grievance Redress Mechanism procedure shall be applicable to all grievances relating to KTPC/RPCs, raised by project-affected persons and other stakeholder.

12.0 ESMS REVIEW

The ESMS will be reviewed on a regular basis, at least every three (3) years/ with an annual management review meeting, and updated if necessary to reflect any changes in legislation, international standards, lenders' requirements as well as changes within the KTPC organization. The review will be done by the ESMS implementation team (CDM Program Coordinator, ASST CDM Project Coordinator and HSE Manager) who will work with the KTPC/RPCS management to assess the effectiveness of the system and decide if any changes are necessary. The review will continuously track emerging E&S risks that may affect the KTPC/RPCS operation in future and ensuring they are incorporated into the ESMS.

The team will also ensure that changes do not result in deviation from international best practice and applicable legislation.

The review may also be triggered by any change of scope in the project cycle which when introduced will change material environment, social or occupational health and safety risk, any failures of this ESMS to appropriately manage E&S risks to the satisfaction of the WBG/IFC standards or change in KTPC/RPCS HSE policies.

1. Ag. General Manager – KTPC: **Ephantus Gathongo**

Signature..... Date **12th AUGUST 2021**

13. ANNEX – LEGAL REGISTER

Institutional and Regulatory Framework		
Laws	Relevance	Applicable Sections / Articles
National Environmental Management Authority (NEMA)	NEMA must approve the project before implementation and also participate in its subsequent stages of construction environmental management and annual audits review. This report is to ensure compliance with the associated conditions	Environmental Management and Co-ordination (Amendment) Act, 2015
Kenya Electricity Grid Code & Kenya Safety Code-		Electric Power Act, No 11 of 1997; Factories Act, 1962 (Rev.1972)
Rural Electrification and Renewable Energy Authority Energy and Petroleum Regulatory Authority (EPRA)	The proponent will apply for EPRA concurrence and power distribution permit before implementation of the project.	The Energy Act 2019
National Environmental Tribunal	Any disputes arising from issuance or denial of the project license will be addressed initially addressed by NET.	Section 125 of the Environmental Management and Coordination Act (EMCA) of 1999.
County Government	The project proponent should present the project designs and plans to the physical planning department for approval prior to the project implementation. The county department of environment will also oversee the implementation of the EMP for the project.	
Legislative Framework		
Constitution of Kenya, 2010	The project should observe these conditions in as far as environmental protection is concerned throughout the project cycle.	Part II (Environment and Natural Resources),
The Environment Management and Coordination (Amendment) Act, 2015	The proponent is required to submit the EIA and EA reports to NEMA for review and necessary action. This report has been compiled in compliance to EMCA. County Environmental Committees Public Complaints Committee National Environmental Council Standards and Enforcement Review Committee National Environment Tribunal Land Control Boards Protect water catchment areas, prevent soil erosion and regulate of human settlement in such areas conservation of biological diversity	Section 58 & section 68 of the Act section 29 section 31 section 4 section 70 (1) section 125 Act cap. 302 (Revised Edition 2012) Sections 44 to 48
EMCA (Conservation of Biodiversity, Access to Genetic Resources and Benefit Sharing) Regulations 2006: Environmental Management and Co-ordination (Water Quality) Regulations, 2006	management of discharge of any effluent from sewage treatment works, industry or other point sources into the environment. right to clean and safe water in adequate quantities and to reasonable standards of sanitation.	Section 50 Sections 5-9 Section 63 Article 43 of the Constitution

Institutional and Regulatory Framework		
Laws	Relevance	Applicable Sections / Articles
EMCA (Wetlands, River Banks, Lake Shores and Sea Shore Management) Regulation, 2009	waste minimization or reduction at source through clean production mechanisms, re-use and re-cycling of wastes	regulation 3 (1) Regulation 14 (3) Section 102 Cap 394
Environmental Management and Co-ordination (Waste Management) Regulations, 2006	make or cause any loud, unreasonable, unnecessary or unusual noise which annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment	First Schedule Fourth Schedule
Environmental Management and Coordination Act (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009	acceptable maximum permissible noise levels a license to emit noise or vibrations in excess of the permissible levels	
Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2016	This project falls under the second schedule of the Environment Management and Coordination (Amended) Act, 2015 and therefore requires an EIA project report prior to its implementation.	Part III of Regulation 3 Part IV, Part V and the Second Schedule of the Act
Environmental Management and Co-ordination (Water Quality) Regulations, 2006	During implementation of the project the contractor's activities and during the operational phase, waste water from the building will require proper disposal to avoid environmental pollution.	Under Regulation 12 (1)
Environmental Management and Co-ordination (Waste Management) Regulations, 2006	The proposed project, during construction, operational and decommissioning phases will generate wastes which will need to be disposed as per the guidelines in the regulations.	Regulation No. 4 (1) Regulation 5 (1) Regulation 6 Regulation 15 Regulation 17 (1)
Environmental Management and Coordination Act (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009	The contractor and project proponent will be required to ensure compliance with these regulations in order to promote a healthy and safe working environment throughout the project cycle. This shall include regular inspection and maintenance of equipment and prohibition of unnecessary hooting of vehicles as well as scheduling work between 8.00am and 5.00pm	regulation 3 (1), Regulation 14 (3) Regulation 15
Public Health Act (Cap. 242), 2012	prohibits causing nuisance or other condition liable to be injurious or dangerous to health any noxious matter, or waste water, flowing or discharged from any premises, wherever situated, into any public street, or into the gutter or side channel of any watercourse, irrigation channel or bed thereof not approved for the reception of such discharge that every owner or occupier of every workshop, workplace or other premises where persons are employed shall provide proper and sufficient latrines for use by employees provide in an approved position sufficient and convenient temporary latrine for use by such workmen that no person shall construct a latrine in connection with a building other than a water closet or a urinal, where any part of the site of such building is within 200 feet of a sewer belonging to the local authority which is at a suitable level, and where there is sufficient water supply.	Section 115 Section 118 Rule 85 Rule 87 Rule 91
Penal Code (Cap 63)	Under section 191 stipulates that if any person or institution who/which voluntarily corrupts or foils water for public	Section 191/ 192

Institutional and Regulatory Framework		
Laws	Relevance	Applicable Sections / Articles
	springs or reservoirs, rendering it less fit for its ordinary use is guilty of an offence.	
Physical Planning Act, 1996	The proponent will adhere to any conditions from County Government's Physical Planning.	Section 30(1) Section 36
Employment Act, 2007	The project proponent and the contractor will need to understand the requirements of the Act during employment at construction stage and operation phases of the project such as ensuring that employees are of the right age, entitlement to leave, protection from discrimination and sexual harassment among others. fixes minimum standards of employment <i>Wages and Condition of employment</i>	53. (1) 56. (1) & (2)
Traffic Act, 2018	The contractor should ensure that all vehicles used throughout the project construction phase for transportation comply with this Act. This will include having valid insurance, properly maintained vehicles, and ensure only licensed drivers operate the machines.	
Water Act, 2016 Water Resource Authority (WRA)	The proponent is required to dispose waste water in accordance to the stipulated quality standards. Proponent may be required to keep records and provide them to WRA provides for public participation in managing the water resources within each catchment area permit requirement for use of water from a water resource permit application procedure which shall be subject of public consultation and, where applicable, of an environmental impact assessment no person shall discharge any trade effluent from any trade premises into the sewers of a licensee without the consent of the licensee prohibits any person, without authority under this Act, to willfully obstruct, interfere with, divert or obstruct water from any watercourse, or take actions to cause, or be likely to cause, pollution of the water resource	Section 63 Article 43 of the Constitution. Section 18 Section 15 Section 25 Section 29 Section 76 Section 94
Work Injury Benefits Act (WIBA) 2007	The contractor will need to abide by all the provisions of WIBA in managing hazardous environment and accord injured persons their dues in terms of shouldering the medical expenses or compensation of the families should there be loss of life.	
Occupational Safety and Health Act, 2007 (OSHA 2007)	The Contractor will be required to comply with all the provisions of the Act throughout the project cycle including: ensuring registration of construction site as a workplace with DOSHS; management of safety hazards, forming health and safety committees and reporting all the accidents and near misses. the safety, health and welfare of persons at work will be prioritized by the Proponent throughout the project life cycle	Kenya Gazette Supplement No. 111 (Acts No.15) dated October 26, 2007 revokes the Factories and Other Places of Work Cap.514. section 3(1) and (2)

Institutional and Regulatory Framework		
Laws	Relevance	Applicable Sections / Articles
	<p>sufficient and suitable sanitary conveniences must be available for employees, and these must be kept clean and well-lit</p> <p>general provisions regarding safety: it is mandatory to fence dangerous parts of machinery; and fire extinguishers must be maintained and readily accessible, and persons trained in their correct use shall be present during all working periods. The act further provides for the training and supervision of inexperienced workers.</p> <p>The welfare requirements include the supply of sufficient and wholesome drinking water, maintenance of suitable washing facilities, and access to a first aid box. Combined with Legal Notice Number 31 of 2004, the act provides a framework for the creation and operations of workplace Occupational Health and Safety Committees.</p>	<p>Sections 16 and 18</p> <p>Part V</p> <p>Part VI</p>
<p>The Land Act, 2012</p> <p>Valuers' Act, Chapter 532, 2000</p> <p>Way leave Act 292, 2010</p>	<p>The proponent has consent from the donor of the land on which the development is proposed.</p> <p>Land and Environment- provide constitutional basis for land ownership, expropriation and protection of rights to land & Market value of the property.</p> <p>Compensation awards will be made by the National Land Commission based on land valuation determined by registered Valuers.</p> <p>may carry any works through, over or under any land whatsoever, provided it shall not interfere with any existing buildings or structures of an on-going activity.</p> <p>notice will be given to community members before carrying out works and it shall provide a full description of the intended works and targeted place for inspection. Any damages caused by the works would then be compensated to the owner as per the section.</p> <p>first offer compensation shall be paid promptly. Where such amount is not paid on or before the taking of the land, interest payable on the awarded amount at the market rate yearly, calculated from the date of taking possession until the date of the payment.</p>	<p>Part II Section 8 & 8b</p> <p>Chapter 4 & 5 Part III of the Land Act 2012, section 113 (2a)</p> <p>Section 3</p> <p>Section 4</p> <p>Section 120</p>
Land and Environment court Act, no. 19 of 2011	Any land or/and environmental cases arising from the project will be handled in accordance with the provisions of this act.	Article 162(2) (b) of the Constitution; Section 13 (2) (b)
Building Code 1997	<p>approve building plans.</p> <p>sewer exists</p> <p>The code also prohibits construction of structures or buildings on sewer lines and under power lines.</p>	Section 194 of County Government Building By-Laws
County Governments Act 2012	The proponent will be required to always consult with the public during the project implementation phase in order to harmonize the existence of the project with its	<p>section 134 subsection (1)</p> <p>section 134, subsection (2)</p> <p>Part VIII of the act on Citizen Participation (87) (b)</p>

Institutional and Regulatory Framework		
Laws	Relevance	Applicable Sections / Articles
	neighborhood and to ensure environmental status of the neighbors are not compromised by the project.	access to public information (Part IX)
The Wildlife Conservation and Management Act, Cap 376	protection and conservation of wildlife in the project areas.	Section 9
The Energy Act, 2019 ENERGY AND PETROLEUM REGULATORY AUTHORITY (EPRA) THE ENERGY AND PETROLEUM TRIBUNAL (EPT) RURAL ELECTRIFICATION AND RENEWABLE ENERGY CORPORATION (REREC)/RENEWABLE ENERGY RESOURCE ADVISORY COMMITTEE (RERAC) Net-Metering The Renewable Energy Feed-in-Tariff-System (FiT)	Regulatory control over the energy sector. Quasi-judicial body whose mandate was to hear appeals. An inter-ministerial committee intended to advise the responsible cabinet secretary on matters concerning the allocation of renewable energy resources, the licensing of renewable energy resource areas, the management of water towers and catchment areas, the development of multi-purpose projects such as dams and reservoirs and the management and development of renewable energy resources.	section 162 (2) FIT Policy)-2008
Policy Framework		
Environmental policy framework, 2013	All environmental matters of the project shall adhere to the stipulation of the environment policy.	
Kenya's Vision 2030	Being a project to promote better value addition techniques to agriculture produce, the project helps attain vision 2030 as per the GoK interests.	
The National Land Policy no. 3, 2009	The initiative is showing the country that there are greater methods of land utilization to produce cheap clean energy and minimal costs.	Sessional Paper No. 3 of 2009, section 129
Relevant International Conventions and Treaties		
<ul style="list-style-type: none"> • Ratified 43 ILO conventions <ul style="list-style-type: none"> o Safety and Health in Construction Recommendation, 1988 o Recruiting of Indigenous Workers Convention, 1936 (No.50) o Contracts of Employment (Indigenous Workers) Convention, 1939 (No. 64) o Minimum Age Convention, 1973 (No. 138) Minimum age specified: 16 years o Migrant Workers (Supplementary Provisions) Convention, 1975 (No. 143) • Convention on Wetlands or the Ramsar Convention • Convention on Biodiversity • The Convention on International Trade in Endangered Species (CITES) 		

Institutional and Regulatory Framework		
Laws	Relevance	Applicable Sections / Articles
<ul style="list-style-type: none"> • Convention on the Conservation of Migratory Species • United Nations Framework Convention on Climate Change • United Nations Convention to Combat Desertification • Important Bird Areas • The World Heritage Convention • UNESCOs Man and Biosphere • New Partnership for Africa Development (NEPAD) • East African Community. 		
Applicable World Bank Policies- Performance standards established by the Multilateral Investment Guarantee Agency (MIGA).		
Environmental Assessment OP/BP 4.01	Environment Assessment (EA) and mitigation plans to significant adverse impacts on the natural environment (physical and biological) and human health. analysis of alternative designs and sites, including the “no project option” and require public participation and information disclosure	World Bank Policy OP/BP 4.01
Natural Habitats OP/BP 4.04		World Bank Policy OP/BP 4.04
Forests OP/BP 4.36	to significant adverse impacts on forestry environment	World Bank Policy OP/BP 4.36
Pest Management OP 4.09		World Bank Policy OP/BP 4.09
Physical Cultural Resources OP/BP 4.11	impacts on physical cultural resources- movable or immovable objects, sites, structures, groups of structures, natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance	World Bank Policy OP/BP 4.11
Indigenous Peoples OP/BP 4.10	fully respect the dignity, human rights, economies, and cultures of Indigenous Peoples (IPs).	World Bank Policy OP/BP 4.10
Involuntary Resettlement OP/BP 4.12	Physical displacement through involuntary land taking leading to loss of private properties such as land, houses, structures and commercial places or disruption of formal /informal sources of income and livelihoods happens due to project interventions.	World Bank Policy OP/BP 4.12
Safety of Dams OP/BP 4.37		World Bank Policy OP/BP 4.37
Projects on International Waters OP/BP 7.50		World Bank Policy OP/BP 7.50
Projects in Disputed Areas OP/BP 7.60		World Bank Policy OP/BP 7.60
Public Disclosure	The Public Consultation and Participation (PCP) Process that Public Involvement should be integrated with resettlement, compensation and indigenous peoples’ studies. Monitoring and grievances address mechanism should also be incorporated in the project plan. Public involvement is a fundamental principle of the EIA process	World Bank Policy OP/BP 17.50
IFC PSs and Environmental Health and Safety Guidelines	<ul style="list-style-type: none"> • IFC PS1 – Assessment and Management of Environmental and Social Risks and Impacts. • IFC PS2 – Labor and working conditions. 	

Institutional and Regulatory Framework		
Laws	Relevance	Applicable Sections / Articles
	<ul style="list-style-type: none"> • IFC P53 – Resource Efficiency and Pollution Prevention. • IFC P54 – Community Health, Safety, and Security. • IFC P55 – Land acquisition and involuntary resettlement. • IFC P56 – Biodiversity Conservation and Sustainable Management of Living Natural Resources. • IFC P57 – Indigenous peoples. • IFC P58 – Cultural heritage. 	
The Equator Principles	<p>requires the Project to undertake a process of consultation with affected communities in a manner that provides them with opportunities to express their views on Project risks, impacts, and mitigation measures, and allows the Sponsor to consider and respond to them. The consultation process should be undertaken in a manner that is inclusive, culturally appropriate, free from intimidation, timely and informed.</p> <p>requires that a grievance mechanism must be developed which allows Project affected parties to raise grievances to either the Sponsor or a third party who will seek to resolve the grievance as appropriate.</p>	<p>Equator Principle 5 (Consultation and Disclosure)</p> <p>Equator Principle 6 (Grievance Mechanism)</p>
Licenses and Permits		
The ESIA Regulations 2003(Legal Notice No. 101) Regulation 24	EIA license	Nema
Regulation 40	Annual Environmental Audit	
	Monitoring changes after project implementation	Nema
	Registration of the workplace with DOSHS	Directorate of Occupational safety and Health Services
	Water abstraction permit	WRMA
	Energy generation license	EPRA
	Business Permit	County government
	Plant Inspection Certificates	Directorate of Occupational safety and Health Services
Sexual Offences Act (2006)	Makes provision about sexual offences, their definition, prevention and the protection of all persons from harm and unlawful sexual acts, and for connected purposes.	Section 33,22
Prohibition of Female Genital Mutilation Act 2011	The law bans the practice of FGM and bars medical care givers from carrying out the practice.	Section 25
Children Act 2012	The address provision for parental responsibility, fostering, adoption, custody, maintenance, guardianship, care and protection of children.	Section 13, 15,
HIV & AIDS Prevention and Control Act, no 14 2012	To positively address and seek to eradicate conditions the aggravate the spread of HIV infection.	Section 24
Gender Policy, 2019	To address all gender inequalities at all levels by all stakeholders. Provide levels of mainstreaming in projects to generate efficiency.	Section 1.2