



Appraisal Environmental and Social Review Summary

Appraisal Stage

(ESRS Appraisal Stage)

Date Prepared/Updated: 11/13/2023 | Report No: ERSRA03133



I. BASIC INFORMATION

A. Basic Operation Data

Operation ID	Product	Operation Acronym	Approval Fiscal Year
P180465	Investment Project Financing (IPF)	Kenya GREEN MPA Phase 2	2024
Operation Name	Kenya Green and Resilient Expansion of Energy (GREEN) Program Phase 2		
Country/Region Code	Beneficiary country/countries (borrower, recipient)	Region	Practice Area (Lead)
Kenya	Kenya	EASTERN AND SOUTHERN AFRICA	Energy & Extractives
Borrower(s)	Implementing Agency(ies)	Estimated Appraisal Date	Estimated Board Date
The National Treasury	Kenya Electricity Transmission Company Limited (KETRACO), Kenya Electricity Generating Company PLC, Ministry of Energy & Petroleum	21-Nov-2023	15-Dec-2023
Estimated Decision Review Date	Total Project Cost		
02-Nov-2023	202,000,000.00		

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Proposed Development Objective

To enhance the capacity of the Kenya power system to increase energy trade and integrate renewable energy.

B. Is the operation being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

No

C. Summary Description of Proposed Project Activities

[Description imported from the PAD Data Sheet in the Portal providing information about the key aspects and components/sub-components of the project]

1. Some priority investments in the transmission network are needed urgently to increase integration of regional hydropower resources, strengthen capacity for transfer of renewable energy from generation sources to consumption load centers, and improve voltage stability towards meeting Kenya’s goal of 100 percent clean energy, reduction in the



cost of supply, and improvement in supply quality and reliability. Import of hydropower from Ethiopia is projected to increase from the current 200MW to 400MW in the next three years as per the Power Purchase Agreement (PPA) signed in July 2022 between Ethiopia and Kenya (through their respective utilities-Ethiopia Electric Power (EEP) and KPLC). However, large injection of power beyond the current 200MW through the interconnector poses a significant risk of instability and outages to the Kenya network in case of disturbances along the interconnector or on the Ethiopia network. The proposed investments will allow for increased import through the Ethiopia-Kenya interconnector by supporting system reinforcements comprising of fast acting reactive power and voltage control devices (STATCOMs) at key substations in Kenya (Suswa and Rabai) as well as a substation in Kimuka. The proposed investment will also support a pilot battery energy storage systems (BESS). 2. The first phase of the Kenya Green and Resilient Expansion of Energy (GREEN) Multiphase Programmatic Approach (MPA) program (P176698) was approved by the World Bank Board on June 15, 2023 for a total financing envelope of IDA US\$1.05 billion. The proposed second phase of the MPA will be implemented by Kenya Electricity Transmission Company Limited (KETRACO), Kenya Electricity Generation Company (KenGen) and Ministry of Energy (MOE) as an Investment Project Financing (IPF), to support the investments needed in grid stability equipment (STATCOM and battery storage) and a substation to increase system resilience in Kenya, which will facilitate increasing imports of cleaner and cheaper energy from Ethiopia, absorption of a larger share of intermittent renewable energy (solar and wind) in the Kenya system, and energy trade between Tanzania and Ethiopia through the Kenya system. The financing envelope for the proposed second phase of the MPA is expected to include US\$153.5 million of IDA and US\$48.5 million from the Green Climate Fund (GCF) as per the original MPA framework. The World Bank serves as the GCF Accredited Entity. 3. The second phase comprise the following four components: Component A : Installation of STATCOMS (IDA US\$ 83 million): This component is proposed to finance installation of reactive power and voltage control equipment (STATCOM) at Suswa and Rabai substations to improve the fault levels, increase voltage stability, allow for greater import of renewable energy from Ethiopia and transfer of more geothermal energy from Olkaria to the coastal region of Kenya. The component will also finance project management and supervision consultants. Component B: Construction of a 400kV substation at Kimuka (IDA US\$30 million): The proposed 400kV substation at Kimuka will enable integration of the Kenya- Tanzania interconnection and Ethiopia-Kenya interconnector enabling Tanzania to access hydropower resources of Ethiopia. The substation will also increase transmission capacity of more renewable energy (geothermal, wind and imports) from supply sources at Olkaria and Suswa to major load centers of Nairobi and the Coast regions of Kenya. The proposed substation site is on a land owned by KETRACO. The component will also finance project management and supervision consultants. Component C: Utility-Scale Solar and Battery Energy Storage Systems (US\$33.5M IDA and US\$48.5M GCF): This will support implementation of a pilot battery energy storage system (BESS) and prefeasibility studies and preparatory work for competitive auctions for solar with funding support from Green Climate Fund (GCF). Kenya is one of seven countries benefiting from GCF funding under the Sustainable Renewable Risk Mitigation Initiative (SMRI) with the objective of supporting Kenya to shift to low-emission sustainable development pathways and increase access to affordable, reliable, sustainable, modern energy to its populations. Grid-scale BESS are needed to bridge peaking capacity gaps as well as primary reserves for frequency regulation while reducing the need to vent geothermal steam during hours of low demand. The BESS are likely to be installed in existing substation locations belonging to KPLC and KETRACO and need for additional land is expected to be minimal. Preparatory activities for the solar auctions activities for a total capacity of about 100MW located in two or three sites will include: (i) sector diagnostic study and assessment and preliminary project identification, selection and prioritization; and (ii) project prefeasibility studies. The determination of the project structure and actual auctions are expected to be supported with IDA funding (co-financed with GCF) under the third phase of the MPA. Component D: Technical Assistance and Capacity Building (US\$7 million): The Component will support sector studies, capacity building, and training activities for sector development and to help sustain and enhance



the policy, institutional, regulatory arrangements and reforms as well as gender and citizen engagement and will support. The component will be implemented by the MOE, KETRACO and KenGen.

D. Environmental and Social Overview

D.1 Overview of Environmental and Social Project Settings

[Description of key features relevant to the operation's environmental and social risks and opportunities (e.g., whether the project is nationwide or regional in scope, urban/rural, in an FCV context, presence of Indigenous Peoples or other minorities, involves associated facilities, high-biodiversity settings, etc.) – Max. character limit 10,000]

The GREEN MPA phase II is limited in its geographic scope and its subprojects will be located in specific geographic areas of Kenya comprising urban and rural settings. For example, one STATCOM is located at Rabai 220 kV/132 kV substation in Mombasa County), which is an urban setting in the coastal region of Kenya. The site has Diesel storage tanks, control room, staff quarters and staff offices. On the other hand, the other STATCOM will be located in Narok County at the Suswa that hosts 220kV Suswa substation, the 500kV DC convertor station, the 400kV Ac substation, staff quarters, staff offices, control rooms and a warehouse. The Kimuka substation will be located on a 27.3 acre piece of land in rural settings of Kajiado county, characterized by acacia trees, thickets and patches of grass. The exact location of the BESS is not known at appraisal except for the fact that wherever the feasibility study will prioritize its location, it will be on land that is owned by any of the three energy sector agencies, KETRACO, KenGen or KPLC. To this end, it may be located in Embakasi, which is an urban setting within Nairobi County, or at Kipevu, which is also an urban setting in Mombasa County, in the coastal region of Kenya (Nairobi and Mombasa are the two urban counties out of Kenya's 47 counties). The BESS may also be located in rural settings including potential location at the Olkaria geothermal complex in Nakuru county, in the rift valley, or in Muhoroni, also a rural setting in Kisumu County, Western Kenya. None of the proposed sites for all subprojects are in an FCV context.

The Suswa STACOM and the Kimuka substation subprojects will be located in Narok and Kajiado counties, both of which are inhabited overwhelmingly by the Maasai pastoralist VMGs. Similarly, should the feasibility study to be undertaken during implementation locate the BESS in the Olkaria geothermal complex in Nakuru county, then this too will be in an area overwhelmingly occupied by the Maasai pastoralist VMGs despite the county being cosmopolitan in nature.

As designed, the project does not have linkages to any associated facility and there are no high biodiversity settings around any of the proposed subproject locations. The closest site with biodiversity, but which would not be affected by the project should the feasibility study decide to locate BESS there, is the Olkaria geothermal complex which neighbors the Hell's Gate National Park. Also, the fact that subprojects are site-specific, and within specific areas of each county in which they will be located, and the fact that all proposed sites are on a brown or green fields owned by sector agencies, mean that they pose minimal E&S risks or impacts. The limited potential risks include road safety risks to neighboring community, health and safety risks posed by construction activities to the workers and community, and risk of electrocution during the operation and maintenance phase of the project, fire risks during operation and maintenance. It is anticipated that any environmental risks and impacts associated with the civil works or operation of the STATCOMs will be limited within the existing and fenced off substations.

There have been no environmental liabilities of the selected sites to date. In addition, as the project's main objective is to strengthen and enhance the national grid stability, transmission enforcement, and to facilitate enhanced trading in electricity among some of the Eastern Africa countries, exclusion of VMGs from accessing project benefits is not anticipated under this project.



D.2 Overview of Borrower’s Institutional Capacity for Managing Environmental and Social Risks and Impacts

[Description of Borrower’s capacity (i.e., prior performance under the Safeguard Policies or ESF, experience applying E&S policies of IFIs, Environmental and social unit/staff already in place) and willingness to manage risks and impacts and of provisions planned or required to have capabilities in place, along with the needs for enhanced support to the Borrower – Max. character limit 10,000]

The MPA phase 2 of the will be implemented by three implementing agencies: Ministry of Energy and Petroleum (MOEP), KETRACO and KenGen. KETRACO will implement Component A (installation of system stabilization equipment (STATCOMs), Component B (construction of 400kV Kimuka substation) and Component D2 (technical assistance to KETRACO). KenGen will implement Component C1 (battery energy storage systems), and Component D3 (technical assistance to KenGen). MOEP will implement Component C2 (solar auction studies and BESS regulatory framework), and Component D1 (sector technical assistance and capacity building).

KETRACO developed capacity to manage environmental and social risks and impacts associated with civil works operations under the safeguards policies, but this is the first time they will be implementing a project under the ESF. A recent assessment of the E&S capacity of KETRACO, undertaken as part of the Environmental and Social System Assessment (ESSA) for phase one of the GREEN Project MPA, found that KETRACO has a Wayleaves Acquisition Department that ensures compliance with national and international environmental regulations and with lender E&S requirements. The department has a total of 13 social and 9 environmental staff. Although there have been challenges in implementing safeguards in previous Bank projects the is a positive trend in capacity building and institutionalisation of E&S policies within the organisation to the extent that it can thus effectively manage the E&S risks of this phase II project, including the acquisition of land for the 1.5Km wayleave. Although this is the first time that they will be implementing a project under the ESF, KETRACO has experience and capacity in the preparation, implementation and monitoring of Environmental and Social Impact Assessments (ESIAs), Construction Environmental and Social Management Plans (CESMPs), and RAPs that was acquired while implementing World Bank and other externally funded projects. The Company implemented the Kenya Electricity Expansion Project (KEEP, P103037) and the Eastern Electricity Highway Project (EEHP, P126579) that were of substantial risk rating with E&S risks adequately managed. In response to the E&S challenges identified in the National Energy Policy (2018) and from the implementation of KEEP and the EEHP, KETRACO underwent an organizational restructuring in 2020/2021, with the aim of mainstreaming E&S risk management in its organizational structure. As a result of the restructuring, KETRACO’s Directorate of Project Development Services now has two key departments, with one – the Wayleaves Acquisition Department - dedicated to E&S risk management. As committed in the ESCP, KETRACO has established and maintain a Project Implementation Team dedicated to the phase II Project with qualified staff and resources to support management of ESHS risks and impacts of the Project, including an Environmental Expert, Social Safeguard /Community Relations Officer, Health & Safety Officer and Engineer. The ESHS team will be part of the Project Implementation Team (PIT). which at least one dedicated social specialist and one environmental specialist responsible for managing all the E&S issues. This will be sufficient considering that E&S consultants may be also recruited to support internal capacity of the PIT should need arise.

KenGen too has experience in E&S risks management gained from its implementation of the KEEP project which for the KenGen implemented component 1 on geothermal generation and component 4 on Sector Institutional Development and Operational Support. However, like KETRACO, this is the first time that KenGen will be implementing a project



under ESF. Following the KEEP inspection Panel case, KenGen established a Commercial Sustainability Division headed by a Sustainability Manager who is an environmental expert and who is the Focal Point for the BESS project. KenGen also established a Community Relations Division headed by a Community Relations Manager who is supported by 5 Community Liaison Officers) some of whom have worked on Bank financed projects. Between them, the Sustainability Manager and the Community Relations Manager will be responsible for the BESS project. In addition, KenGen has a resettlement and compensation policy, a community engagement strategy, grievance and complaint handling mechanism, CSR policy, and HR/Admin policy including GBV policy. The GBV policy however is not adequate to handle SEA cases. KenGen also has Environmental Assessment procedures and policies for environmental sustainability, occupational health and safety risks, biodiversity issues, community health and safety – and management of hazardous waste/materials.

For its part, despite its coordination role for World bank financed projects such as KEEP, KOSAP and KEMP, MoEP has little hands-on experience and capacity for the management of E&S risks of projects.

Being the first time, all the three agencies will be implementing a project under ESF, capacity building will be required to enable them implements the E&S commitments included in the ESCP as well and the SEP and the LMP.

II. SUMMARY OF ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)

Moderate

A.1 Environmental Risk Rating

Moderate

[Summary of key factors contributing to risk rating, in accordance with the ES Directive and the Technical Note on Screening and Risk Classification under the ESF – Max. character limit 4,000]

The overall environmental risk rating for the phase II project is considered Moderate. All the four sites are known and the pre-feasibility study to be undertaken by the MoEP is not expected to generate any environmental Impacts. Environmental and Social Impact Assessment (ESIA) of three out of the four sites (Suswa, Kimuka and Rabai sites) have been undertaken and the first drafts reviewed and commented on by the Bank. Consequently, the potential construction and operational E&S impacts of the three sites are known and expected to be site specific, and ones that KETRACO and KENGEN is known to satisfactorily manage by strict enforcement of ESMPs and C-ESMPs. These will include noise, air, water and soil pollution from effluents, general, electronic, and hazardous waste, including machines and equipment usage on sites; potential for work related accidents and ill health from safety hazards related to normal civil, mechanical, structural, and electrical works; Operational and maintenance impacts such as risk of electrocution, leakages of transformer oil, and management of general, solid and electronic wastes. Moreover, the fourth site for the BESS which is yet to be firmed up, is expected to be sited in one of the four identified brownfields with operational substations: (expected to be either in Kipevu, Olkaria, Embakasi or Muhoroni Substations). It’s ESIA will be procured by KETRACO following the approval of it’s ESIA ToR by the Bank.

A.2 Social Risk Rating

Moderate

[Summary of key factors contributing to risk rating, in accordance with the ES Directive and the Technical Note on Screening and Risk Classification under the ESF – Max. character limit 4,000]

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The social risk rating for the phase II project is considered Moderate. This is the location of all subprojects under each component is known (except the prefeasibility studies)), and implementation of all project components will not lead to adverse risks and impacts associated with involuntary resettlement or risks and impacts on VMGs lands, livelihoods or culture. The anticipated risks are minimal and can easily be mitigated. They include: (i) unknown locations of prefeasibility studies for solar auction sites which may be in areas with overwhelming or minority VMGs who may be excluded from the prefeasibility studies consultations; (ii) exclusion of vulnerable individuals and groups such as People with Disabilities (PWDs), minority clans, women, and youth from consultations from accessing project benefits, especially employment; (iii) location of prefeasibility studies in conflict-prone areas; (iv) exclusion of VMGs from un/semi skilled employment opportunities presented by the various subprojects especially the construction of the substation and the intalation of the STATCOMs and the BESS facilities; (v) SEA-SH due to in-flow of local/international contracted workers into the project areas; and, (vi) potential child labor, e.g. in relation to food vending at construction sites. KETRACO and KenGen will disclose the ESCP, and as applicable, the LMP, and SEP in their respective websites prior to appraisal.

[Summary of key factors contributing to risk rating. This attribute is only for the internal version of the download document and not a part of the disclosable version – Max. character limit 8,000]

B. Environment and Social Standards (ESS) that Apply to the Activities Being Considered

B.1 Relevance of Environmental and Social Standards

ESS1 - Assessment and Management of Environmental and Social Risks and Impacts

Relevant

[Explanation - Max. character limit 10,000]

Environmental risk on this project relate to civil, mechanical and structural works associated with the construction of two STATCOMs, one substation and one BESS, which could result to environmental impacts during construction such as vegetation clearance, noise, air, water and soil pollution from discharged effluents and storm water runoff, handling, storage and transportation of both hazardous and non-hazardous waste, and workers and machine interface and usage on sites, OHS incidences related hazards such as hot works, working at heights, lifting operations and working under suspended loads, traffic accidents. During operation and maintenance, impacts such as substation fire and electrocution during testing and commissioning. With regards to the BESS component, construction risks to the Statcom and substation are expected to be similar, however, the risk of pollution from electronic waste (e-waste) from dead batteries is anticipated. On the social spectrum, risks may include use of child labor, the exclusion of VMGs and vulnerable individuals, insecurity risk, GBV/SEA/SH risks. All these may potentially lead to various kinds of project related grievances. To manage the above risks, an Environmental and Social Commitment Plan (ESCP) as well as a SEP and an LMP have been prepared and agreed on with KETRACO and KenGen during appraisal. Since all the sites for the project are known, there will be no need for an ESMF. The three ESIA for Rabai, Suswa and Kimuka have been updated or prepared in line with the WB ESF and WB EHSGs and first drafts reviewed and commented on by the Bank. The ESIA for Suswa Substation which was financed by the Bank under EEHP P126579 is active and has been updated to include the STATCOM. The client will re-submit it to the Bank for re-review and clearance before re-submitting it to NEMA and seek variation of the current ESIA license and re-disclose the updated version. A detailed Environmental and Social Audit has been undertaken for the Rabai substation and preparation of an ESMP for the Statcom installation. This has been compiled as an ESIA, while for Kimuka, prior to project conceptualization, KETRACO

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prepared a full ESIA study for Kimika Substation following WB safeguards policies, gotten it approved and disclosed by NEMA. It has now been updated to align with the ESF and ESS standards given that the project is following the ESF. The report will be reviewed and cleared by the Bank before being re-submitted to NEMA and re-disclosed. The fourth site for the BESS which is yet to be firmed up, is expected to be sited in one of the four identified brownfields with operational substations: (either in Kipevu, Olkaria, Embakasi or Muhoroni Substations). It's ESIA will be procured by KETRACO following the approval of it's ESIA ToR by the Bank. The two developed sites have no onsite or proximal sensitive environmental receptors while Kimuka (the green field) is approximately 20km and 15km away from Ngong Forest and Ngong river respectively and unlikely to be impacted in any way given the distance and the restriction of activities within the site. The Rabai and Suswa substation are brownfield operational substation sites and have been undertaking the statutory annual environmental and social audits. The projects were completed without any major noncompliance. From the statutory annual environmental and social audits, there are no known environmental, social or EHS liabilities on the operational sites, which continue to adhere to initial project ESIA done in 2008 and 2017 respectively by KETRACO. The ESIA's for the 3 known sites are at an advanced stage and have been submitted to the Bank for the initial review. It's unknown if the pre-feasibility study to be undertaken by MoEP will be carried out in a specific location or countrywide, therefore, the countrywide position is assumed even though only one site is expected to be identified for further investigations. The outcome of the pre-feasibility study will be subjected to a preliminary environmental and social assessment to assess the viability of the options being considered for further investigations.

ESS10 - Stakeholder Engagement and Information Disclosure

Relevant

[Explanation - Max. character limit 10,000]

A SEP has been prepared by KETRACO and Kengen to guide the stakeholder consultations in line with the requirements of ESS 10. Stakeholders who will be consulted in the course of project implementation will include relevant government departments, agencies, and ministries; development partners, NGOs, CSOs, and other organizations, including the and representatives of VMGs, and the traditionally excluded groups. Where applicable, the SEP will include differentiated stakeholder engagement and consultation measures to allow the equal and effective participation of those identified as VMGs, disadvantaged/vulnerable groups or traditionally excluded groups. KETRACO and KenGen will ensure that all stakeholder consultations are done in a culturally appropriate manner, using the free, prior, and informed consent principles as outlined in ESS 7. The KETRACO and KenGen SEPs include Grievance Redress Mechanisms (GRM) and disclosure plans in line with the requirements of ESS 10. The functioning and efficiency of the GRMs will be tested during implementation and updated in case of a need to do so.

ESS2 - Labor and Working Conditions

Relevant

[Explanation - Max. character limit 10,000]

It is expected the construction works for the substations and the STATCOM will create health and safety risks to employees. is anticipated during the construction and operation phases of the substation, BESS and the STATCOMs, the workers will be exposed to OHS hazards such as electrocution, falls from height, open and deep excavations, exposure to land transport risks, exposure to hot works and confined space entry, manual handling among others. Other potential labor related risks include SEA/SH, disputes over salaries/wages, child labor, forced labor and engagement of national and migrant labor as well as the risk of exclusion of locals. Risks associated with future phases of the MPA, including full feasibility studies, will be addressed in the environmental and social instruments such as the

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LMP, ESCP and SEP. KETRACO and KenGen have assessed potentially anticipated labor-related risks and impacts of phase II project activities and have outlined mitigation measures in their respective Labor Management Plans (LMPs) in line with ESS 2. These measures are also included in the ESCP in line with ESS2 and ESS1, including the workers grievance redress mechanism which are outlined in the KETRACO and KenGen LMPs.

ESS3 - Resource Efficiency and Pollution Prevention and Management

Relevant

[Explanation - Max. character limit 10,000]

It is anticipated that the construction phase will require water for the civil works though to a little extent. If the water resource is poorly managed, it might cause strife with other water users. Other resources expected to be utilized by the project include energy sources such as petrol and diesel which is not expected to be in short supply. However, excessive use of it would lead to air pollution. Wastewater from the site will also need to be well managed to avoid underground and surface water pollution. This can be done by ensuring the water is channeled into the septic tanks and or collected for disposal in waste management sites. Solid waste is expected to be generated during all the phases of the project. Poor waste management on site would lead to pollution of soils and water sources and create a conducive environment for pests and vermin. The project will generate potentially solid, hazardous and non-hazardous waste and potentially use hazardous materials, some of which will include but not be limited to Styrofoam, polythene bags, used oil filters, damaged solar panels and batteries among others. The anticipated liquid waste such as used oils and Polychlorinated Biphenyls (PCBs) may be present in transformer and backup generator equipment. The BESS facility will be a source of hazardous battery waste that may be recycled as one of the options to minimize pollution. The other anticipated impacts will be addressed in a manner that is materially consistent with ESS 3 and through the subproject ESIA's, ESMPs and C-ESMPs where contractor's hazardous waste management plan, water use management plan and effluent management plan will be developed to minimize resource wastage and reduce pollution. Risk reduction and mitigation measures have been included in the ESCP as agreed with KEGEN and KETRACO

ESS4 - Community Health and Safety

Relevant

[Explanation - Max. character limit 10,000]

Grid connection to the substation of high voltage overhead cables is a potential risk of electrocution to residents and workers should the masts collapse due to poor workmanship or vandalism. During the construction stages, the trucks delivering material and workers to site will be a potential risk of accidents. It will be necessary to ensure adequate controls are included in the ESMP and C-ESMPs to manage traffic risks. Inappropriate solid and liquid disposal has the potential to threaten the health and safety of the community through pollution of ground and underground water resources. Other community OHS risks will be managed by strict enforcement of ESMPs and C-ESMPs to be prepared on timelines agreed by KenGEN and KETRACO during appraisal stage and in line with the ESF. Other plans that will be prepared for the management of social risks under this standard include Labor Management Plans and SEA/SH Prevention and Response Plans for managing risks associated with labor influx, and potentially, a Security management Plan (SMP), if the area to be visited presents security risks. This should be prior to deployment of workers or consultant undertaking the pre-feasibility. During the operational phase, the proximity of the sites to communities poses a risk of electrocution and fires should there be a fault in the substations. Risk of pollution of water sources from the wet transformer oil could contaminate surface and ground water if the spills are not contained.

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ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Relevant

[Explanation - Max. character limit 10,000]

All subprojects involving civil works – the STATCOMs, Substation, and BESS - will be implemented in brown or greenfields on land that is owned by the sector agencies and for these, no involuntary resettlement risks and impacts are anticipated. All brownfield sites are (Suswa and rabai substations) have agency energy assets constructed on them, and are fenced off, and therefore have no encroachers, squatters or any livelihood activities by the surrounding communities. For the Kimuka substation, which is a greenfield and is yet to be fenced off, KETRACO undertook a screening exercise to determine if there are any encroachers or squatters using the site for livelihood or residential purposes. The screening report, which they shared with the Bank, indicates that the site is free from any squatters, encroachers, or other encumbrances. Likewise, the 1.5Km wayleave corridor for the LILO will be acquired on a willing seller-willing buyer basis. This is premised on the preliminary consultations that KETRACO has had with each of the 38 PAPs through which they have indicated their willingness to cooperate with KETRACO for purposes of wayleave acquisition. The wayleave acquisition will therefore not involve involuntary resettlement risks and impacts. Nevertheless, to guide the acquisition of the wayleave corridor, KETRACO has been advised to prepare a simple RAP.

ESS6 - Biodiversity Conservation and Sustainable Management of Living Natural Resources

Relevant

[Explanation - Max. character limit 10,000]

The two sites (12.4 hectares in Rabai and 80.9 hectares in Suswa) are on a brownfield site with existing operational sub-station with environments that are with no significant existing flora, fauna, water and are highly modified thus no impact on biodiversity. The Kimuka site is located in the peri-urban areas of Ngong town. Impact on biodiversity is expected to be limited to vegetation clearance within the area where the substation will be constructed. The proposed BESS site for the battery storage, which is yet to be identified, will be located in one of the four existing substations (either Kipevu, Olkaria, Embakasi or Mohorini Substation) that will help minimize impacts on biodiversity. Pre-feasibility study for potential solar sites will have no direct impact on biodiversity. The ESIA's conducted as part of the project design has identify no impact on the nearest natural or critical habitat. The ESIA for the BESS will equally assess the subproject impact on the biodiversity and propose mitigation measures to manage any risks should the impacts become eminent.

ESS7 - Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

Relevant

[Explanation - Max. character limit 10,000]

The locations of all subprojects under phase 2 of the GREEN MPA are known. All subprojects will be implemented on land that is owned by one or the other, of the three energy sector agencies (KETRACO, KenGN, and KPLC). For this reason, the projects will have no impacts on the VMGs' lands, livelihoods or culture. One STATCOM (at Suswa) and the substation at Kimuka are located in Narok and Kajiado counties respectively, both of which are inhabited overwhelmingly by the Masai pastoralist VMGs. At this stage, the exact location of the BESS facilities is unknown, except the fact that it will be located at one of the four sector agency owned sites (see section D, subcomponent C1), including the Olkaria geothermal complex which is located in Nakuru County, in areas where Maasai pastoralist VMGs

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are the overwhelming majority. While potential risks and impacts on the VMGs’ livelihoods, culture or lands are not anticipated, there are likely to be potential risks related to employment opportunities for VMGs under the civil works subprojects and their participation in the prefeasibility studies. The ESCP, SEP and the LMP that have been prepared by KETRACO and KenGen include material measures for mitigating these risks. The 1.5Km wayleave corridor at the Kimuka substation LILO will be acquired from the 38 VMGs on a willing seller-willing buyer basis since they all have title deeds to the affected land parcels, and KETRACO has affirmed their willingness to cooperate with it for the purpose of wayleave acquisition.

ESS8 - Cultural Heritage

Relevant

[Explanation - Max. character limit 10,000]

This ESS applies to the phase II activities, specifically the construction of the Kimuka substation, the pilot BESS, and the installation of the STATCOMs. Given the civil works will take place on brownfield sites, no impacts on tangible and intangible cultural heritage are expected, but ESS8 is relevant as such impacts will be assessed in the subproject ESAs/ESIAs and at least, chance find procedures will be included in the subproject ESIAs and/or ESMPs.

ESS9 - Financial Intermediaries

Not Currently Relevant

[Explanation - Max. character limit 10,000]

This standard is not relevant to this project as financial intermediaries will not be involved.

B.2 Legal Operational Policies that Apply

OP 7.50 Operations on International Waterways

No

OP 7.60 Operations in Disputed Areas

No

B.3 Other Salient Features

Use of Borrower Framework

No

[Explanation including areas where “Use of Borrower Framework” is being considered - Max. character limit 10,000]

The GCF with the World Bank serving as the Accredited Entity will fund the major share of Component C: Utility-Scale Solar and Battery Energy Storage costs.

Use of Common Approach

No

[Explanation including list of possible financing partners – Max. character limit 4,000]

The GCF with the World Bank serving as the Accredited Entity will fund the major share of Component C: Utility-Scale Solar and Battery Energy Storage costs.

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B.4 Summary of Assessment of Environmental and Social Risks and Impacts

[Description provided will not be disclosed but will flow as a one time flow to the Appraisal Stage PID and PAD – Max. character limit 10,000]

Phase II of the MPA will have 2 STATCOMs at Suswa and Rabai substations; a 400kV substation at Kimuka with a 1.5Km LILLO; a Battery Energy Storage System (BESS); a solar auction and BESS prefeasibility studies with Technical Assistance, and Capacity Building. With the exception of the BESS, and the prefeasibility studies, the exact location of the two STATCOMs and the one Substation are known. The STATCOMs sites at Suswa and Rabai are brownfields and minimal E&S impacts are expected. On the other hand, Kimuka substation site is a greenfield, but land for the substation is already acquired and no impacts related to involuntary resettlement is expected. Kimuka and Suswa sites are in Kajiado and Narok counties which are home to the Maasai pastoralists who are considered Vulnerable and Marginalized Groups (VMGs) under the ESF, but the project will have no impacts on their land or livelihoods. While the exact location of the BESS yet to be firmed up, is expected to be sited in one of the four identified brownfields with operational substations: (either in Kipevu, Olkaria, Embakasi or Muhoroni Substations), hence no involuntary resettlement or risks and impacts on VMGs are anticipated. Anticipated environmental and social risks and impact will be site specific within the fenced substation areas and within the 1.5km wayleave corridor areas. From the draft ESIA studies reviewed by the Bank, the impacts are typical and ones that KETRACO and KENGEN is known to satisfactorily manage by strict enforcement of ESIA, ESMPs and Contractor's C-ESMPs. They will include but not limited to: vegetation clearance, noise, air, water and soil pollution from discharged effluents, handling, storage and transportation of both solid and hazardous waste, safety hazards related to normal civil, mechanical, structural, and electrical works that may result into OHS incidences related to hot works, working at height, lifting operations and working under suspended loads, traffic accidents, substation fire and electrocution of workers during testing and commissioning among others. On the social spectrum, risks and impacts may include use of child labor, the exclusion of VMGs and vulnerable individuals, insecurity risk, GBV/SEA/SH risks. All these may potentially lead to various kinds of project related grievances. To manage the above risks, an Environmental and Social Commitment Plan (ESCP) as well as SEP and LMP have been prepared and have been agreed on with KETRACO and KenGen during appraisal. Existing ESIA and their ESMPs will be updated to be materially consistent with the ESF and WB EHSs, including the new ones to be prepared for BESS. All these have to be reviewed and cleared by the Bank, and disclosed before procurement documents are launched.

The overall environmental risk rating for the phase II project is considered Moderate. All the four sites are known and the pre-feasibility study to be undertaken by the MoEP is not expected to generate any environmental Impacts. Environmental and Social Impact Assessment (ESIA) of three out of the four sites (Suswa, Kimuka and Rabai sites) have been undertaken and the first drafts reviewed and commented on by the Bank. Consequently, the potential construction and operational E&S impacts of the three sites are known and expected to be site specific, and ones that KETRACO and KENGEN is known to satisfactorily manage by strict enforcement of ESMPs and C-ESMPs. These will include noise, air, water and soil pollution from effluents, general, electronic, and hazardous waste, including machines and equipment usage on sites; potential for work related accidents and ill health from safety hazards related to normal civil, mechanical, structural, and electrical works; Operational and maintenance impacts such as risk of electrocution, leakages of transformer oil, and management of general, solid and electronic wastes. Moreover, the fourth site for the BESS which is yet to be firmed up, is expected to be sited in one of the four identified brownfields with operational substations: (expected to be either in Kipevu, Olkaria, Embakasi or Muhoroni Substations). It's ESIA will be procured by KETRACO following the approval of it's ESIA ToR by the Bank.



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V. APPROVAL

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