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INTEGRATED SAFEGUARDS DATA SHEET APPRAISAL STAGE

Report No.: ISDSA1115

Date ISDS Prepared/Updated: 21-Feb-2015

Date ISDS Approved/Disclosed: 22-Feb-2015

I. BASIC INFORMATION

1. Basic Project Data

Country:	Keny	a	Project ID:	P120014			
Project Name:	KE E	KE Electricity Modernization Project (P120014)					
Task Team	Kyraı	Kyran O'Sullivan,Clara Alvarez Rodriguez					
Leader(s):							
Estimated	20-Ja	n-2015	Estimated	31-Mar-20	015		
Appraisal Date:			Board Date:				
Managing Unit:	GEEI	OR	Lending	Investmen	nt Project Financing		
			Instrument:				
Sector(s):	Trans (10%	emission and Distribution)	of Electricity (90	%), Other I	Renewable Energy		
Theme(s):	comp	structure services for private tition policy (25%), Urbes and infrastructure (25%)	an services and h		1.		
		sed under OP 8.50 (En to Crises and Emerge	•	very) or O	P No		
Financing (In U	SD M	illion)					
Total Project Cos	st: 762.00 Total Bank Financing: 250.00						
Financing Gap:		300.00					
Financing Sou	rce			Amount			
BORROWER/F	ORROWER/RECIPIENT -						
International De	evelop	ment Association (IDA)			250.00		
IDA Guarantee					200.00		
Climate Investment Funds 7.5					7.50		
Total 462.0					462.00		
Environmental B - Partial Assessment							
Category:							
Is this a	No						
Repeater							
project?							

2. Project Development Objective(s)

The proposed project development objectives (PDOs) are: (a) to increase access to electricity; (b) to improve reliability of electricity service; and (c) to strengthen KPLC's financial situation.

3. Project Description

1. The Project is composed of three financing instruments through (i) IDA credit of US\$250 million; (ii) IDA Guarantee of US\$ 200 million; and (iii) SREP grant of US\$ 7.5 million.

Component A: Improvement in Service Delivery and Reliability (estimated cost \$50 million IDA Credit).

- 2. Sub- Component A1 (estimated cost US\$10 million). Upgrade of the Supervisory Control and Data Acquisition/Energy Management System (SCADA/EMS). This component will finance upgrades of the SCADA/EMS by incorporating key existing substations to the system and installing additional switchgear in medium voltage distribution networks to enhance flexibility in operations.
- 3. Sub- Component A2 (estimated cost US\$20 million). Distribution system enhanced flexibility. The component aims at achieving 90 percent automation of the networks in Nairobi by installing a total of 1,000 load break switches in assets operating at 11, 50 and 66 kV, with associated Remote Terminal Units and communications features enabling remote control and operations.
- 4. Sub-component A3 (estimated cost US\$20 million). Enhanced maintenance practices to improve quality in electricity supply. In order to further reduce interruptions in electricity service, the Kenya Power and Lighting Company (KPLC) will implement live-line maintenance. This requires specific equipment, tools and intensive training of staff in charge of the works.
- 5. Component B: Revenue Protection Program (RPP) (estimated cost US\$40 million). This component will finance implementation by KPLC of a revenue protection program, based on the application of advanced metering infrastructure (AMI), and the adoption of organizational arrangements.
- 6. Component C: Electrification Program (estimated cost US\$160 million). This component has peri-urban and off-grid electrification sub-components.
- 7. Sub-component C1. Peri-urban electrification (estimated cost US\$153.5 million). This Component will finance the design, materials and construction works required to electrify all households and businesses in some high density peri-urban areas (measured through the ratio number of prospective users/km2) located close to existing electricity networks.
- 8. Sub-Component C2: Off-grid electrification (estimated cost US\$11 million). This component will finance (i) renewable energy mini-grids by targeting and removing the principal constraints to engage the private sector to partner with the public sector to deliver electricity services powered by renewable energy sources to consumers in towns in remote areas. This will comprise the construction or extension of mini-grids and solar PV electrification (and wind turbines).
- 9. Component D: Technical Assistance and Capacity Building (estimated cost US\$7.5 million). This component will finance consultancy services, training actions and other activities to support, among others: Preparation of the National Electrification Strategy; national technical specifications and standardization; regulations for enforcing quality on electricity service delivery; consultancy services, training actions and other activities to support the implementation of the project.

IDA Guarantee

10. IDA Guarantee (US\$200 million IDA Guarantee). The project will provide a \$200 million IDA Guarantee to enhance KPLC's credit quality in order to raise new commercial debt. This new debt will be used to restructure/replace KPLC's existing commercial loans and thus reduce the company's financing costs, create savings that will provide the company with liquidity it currently does not have, and enable KPLC to continue investing in the quality and coverage of its services and the development of the power system in the country.

4. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

- 11. Minimal adverse social risks are anticipated under this project and no resettlement is expected under any component of this project. All new infrastructure investments in Component A (Improvement in Service Delivery and Reliability) and Component B (Revenue Protection) will be at existing electricity network infrastructure (i.e., at existing KPLC substations and lines). There will be no land acquisition for these components. In Sub-Component A3 (live-line maintenance), the project will provide special safety training for maintenance teams, and the provision of specialized tools and equipment to ensure safety of maintenance teams and bystanders during live maintenance works.
- 12. Sub-Component C1 Peri-Urban Electrification. This sub-component will be implemented by KPLC in up to 50 locations across the country targeting 125,000 households. The majority of low and medium voltage lines will mainly be constructed along road reserves and existing rights of ways. Anticipated social impacts will be minimal and mostly involve KPLC compensation for crops and or trees which could be damaged during contruction.
- 13. Sub-Component C2 (off-grid electrification through construction of mini-grids). This sub-component will be implemented by REA and will support the implementation of off-grid electrification solutions in areas whose connection to the national grid is financially not viable in the short and medium term. Electrification of those areas will be implemented through mini grids supplied to hybrid generation systems, combining renewable resources (solar or wind) and thermal units running on diesel. This sub-component will use a PPP approach. The selection of project areas is based on the number of potential users and their demand, supported by an ongoing market sounding, a demand survey and pre-feasibility studies being carried out by REA. Typically the schemes will be implemented in villages of 150-400 prospective users and approximate demand of 250-500kVA.
- 14. The mini-grid infrastructure in sub-component C2 will have low to moderate negative impacts on the environment, depending on locations and the nature of the investments. These impacts would result from the installation of solar panels (requiring a plan for disposal of batteries), and small wind turbines (which may have an impact on avifauna). A screening process will be followed to ensure that potential negative impacts can be appropriately mitigated, and that sub-projects are not located in critical natural habitats including National Parks and Protected Areas. The impacts and relevant mitigation measures will be described in the Environmental and Social Management Framework (ESMF) for component C2 that has been prepared by the KPLC and that will be disclosed prior to appraisal.
- 15. Although the sub-projects are not expected to traverse areas of cultural or historical importance, Operational Policy (OP) 4.11 (Physical Cultural Resources) is triggered as a precaution. Chance find procedures will be included in contracts and in the environmental documents.

- 16. These sub-project investments may require the acquisition of land for the mini grids, however the proposed mini-grid generation facilities (turbines, solar panels) will have a relatively small footprint and siting of such facilities can be located in places that avoid the need for resettlement. In this regard, the project will trigger OP 4.12 (Involuntary Resettlement) in the case of sub-component C2 as this component will require land acquisition for the hybrid generation facilities.
- 17. Since not all sub-project sites in Component C2 can be identified in advance, a Resettlement Policy Framework (RPF) has been prepared that will be disclosed prior to project appraisal. Based on the RPF guidance, each subproject will be screened, and if RAPs are found to be necessary, these will be prepared, cleared, disclosed and implemented prior to the commencement of civil works, in accordance with World Bank OP 4.12. Should such a need materialize requiring land acquisition and necessitating the movement of persons and /or structures then a RAP will be developed to be guided by the RPF. REA has a good track record with regard to implementation of the social safeguards including under the Kenya Electricity Expansion Project.
- 18. The project will trigger Operational Policy OP 4.10 (Indigenous Peoples) for Sub-component C2 and a VMGF has been prepared. The OP 4.10 is triggered when it is likely that groups that meet criteria of OP 4.10 "are present in, or have collective attachment to, the project area1." The VMGF, ESMF and RPF for Component C2 will include: (i) screening to determine presence of Vulnerable and Marginalized Groups (Indigenous Peoples per OP 4.10 criteria) in the project areas and, if present, (ii) measures to ensure they benefit from the project activities through the preparation of a Vulnerable and Marginalized Group Plan (VMGP). In sub-component C1, the sub-projects will be located in urban and peri-urban areas, and so it is unlikely that groups meeting criteria of indigenous groups will be affected.

5. Environmental and Social Safeguards Specialists

Gibwa A. Kajubi (GSURR) Noreen Beg (GENDR)

6. Safeguard Policies Triggered?		Explanation (Optional)		
Environmental Assessment OP/BP 4.01	Yes	The Project is proposed as category B Partial Assessment - assigned to projects that are likely to have limited and reversible environmental impacts, that can be readily mitigated. There are no significant and/or irreversible adverse environmental issues anticipated from the investment sub-components to be financed under the Project, as the nature of civil works is limited in the most part to the construction of medium voltage and low voltage lines to connect new customers; the installation of switchgear in existing substations (Sub-Component A1); and the construction of mini-grids in remote areas (Sub-Component C2).		
		The proposed mini-grid extensions/creations in rural areas using renewable energy, will have a positive impact on the environment overall, by improving the		

supply of electricity in the rural locations where the Project is implemented hence potentially reducing the use of fossil fuels for lighting by households. The increase in electricity access in thee locations is expected to have important health benefits and educational benefits (through the provision of electricity to clinics and schools). However, the physical interventions resulting from the implementation of investments in rural areas could have low to moderate negative impacts on the environment, depending on locations and the nature of the investments. These impacts would result from the installation of solar panels (requiring a plan for disposal of batteries), and small wind turbines (which may have an impact on avifauna). A screening process will be followed to ensure that potential negative impacts can be appropriately mitigated, and that sub-projects are not located in critical natural habitats, and -if it is unavoidable that they traverse National Parks and Protected Areas - that appropriate mitigation actions be taken. The impacts and relevant mitigation measures will be described in the Environmental and Social Management Framework (ESMF) for Component C2.

A standard EMP has been prepared by KPLC for the equipment work at substations under sub-component A1. This EMP primarily addresses safety measures and waste disposal measures for construction materials and obsolete equipment.

ESMFs have been prepared, consulted upon and disclosed for Components C1 and C2. The ESMFs contain an environmental social screening process, and includes environmental guidelines for contractors. If it is determined thorough the screening process that any sub-projects would require a full environmental assessment, NEMA approval will be sought before commencement of detailed design to ensure that good practices are included in the technical design. The ESMFs will serve as the environmental safeguards document in cases where a full environmental assessment is not deemed necessary based on the findings of the screening. The ESMFs also requires that all construction materials (in particular wooden poles treated with creosote) are sourced from firms that

		have undergone a satisfactory environmental impact assessment/audit and have received NEMA approval. Consultations with stakeholders has been undertaken during the preparation of environmental documents. Minutes of stakeholder meetings, including measures proposed to address grievances have been included as an Annex to the ESMFs.
Natural Habitats OP/BP 4.04	Yes	Given the urban and peri-urban locations of the C1 sub-component peri-urban electrification, impacts to natural habitats will be minimal. For the sub-projects in Component C2 located in rural areas, REA will liaise with KWS to assess if the installations are in the vicinity of important wildlife habitats or wildlife corridors, and to propose mitigation measures if so. Should KWS indicate an impact on critical habitats, REA will avoid these areas or provide some natural barriers to enable wildlife to freely and safely bypass the construction area. Bird collisions will be avoided by reducing height of turbines as feasible, (should any small wind-power projects be adopted under the off-grid electrification component) and not placing them in the migration routes of important bird species or in Important Bird Areas (IBAs). Nature Kenya, the Ornithology Department of the Museums of Kenya and KWS could provide guidance in this area.
Forests OP/BP 4.36	No	Although there will be a need for replacement of some trees that may be removed along existing Rights of Way in Components C1 and C2, no natural forest will be affected in urban areas and the scale of deforestation/reforestation will be moderate. In rural areas in Component C2, sub-projects will be screened to ensure that projects are not in or traverse natural forests.
Pest Management OP 4.09	No	The project does not include purchase or use of pesticides. Any clearing of vegetation will be undertaken manually.

Physical Cultural Resources OP/BP 4.11	Yes	OP 4.11 (Physical Cultural Resources) is triggered as a precaution, although the sub-projects are not expected to traverse areas of cultural or historical importance. Chance find procedures are explained in the ESMF and will be included in construction contracts and EMPs.
Indigenous Peoples OP/BP 4.10	Yes	The project will trigger Operational Policy OP 4.10 (Indigenous Peoples) for Sub-component C 2: Offgrid electrification. The O.P. 4.10 is being triggered for the Off-Grid component which will be implemented in up to six communities/villages that are not so remote in rural areas (mostly islands) at Siaya, Homa Bay, Kwale, Tana River, and Kilifi. An initial screening indicates that there may be groups that meet the O.P. 4.10 criteria in the Coast (Boni, Watta, Banjul, Sanye, and Mjikende). The sub project investments under KEMP Component C2 (Off-Grid) might impact on these communities of VMGs. A Vulnerable and Marginalized Framework (VMGF) has been prepared, consulted upon and disclosed to guide the preparation of plans to mitigate any negative effects and to enhance benefits of the KEMP sub projects investments that may affect Vulnerable and Marginalised Groups (VMGs) in the sub project areas.
Involuntary Resettlement OP/BP 4.12	Yes	The investments proposed under sub component C1 will focus on the upgrading of existing infrastructure within existing rights of ways. No new high voltage (HV) lines or sub-stations will be constructed. Only short lengths of medium voltage lines and low voltage (LV) lines will be constructed to connect households. The LV lines do not require land acquisition and/or involuntary resettlement of households as would HV transmission lines. Component C1 Peri- Urban Electrification will be implemented in up to 50 locations across the country targeting 125,000 households. No resettlement is envisaged under this sub-component. The anticipated social impacts will be minimal and might involve KPLC compensation for crops and or/trees which could be damaged during way leave acquisition. Since not all sub-project sites in Component and C2 can be identified in advance, a Resettlement Policy Framework has been prepared that will be disclosed prior to project appraisal. Based on the RPF guidance, each sub-project in Component C2 will be

		screened, and if RAPs are found to be necessary, these will be prepared, cleared, disclosed and implemented prior to the commencement of civil works, in accordance with World Bank OP 4.12 (Involuntary Resettlement).
Safety of Dams OP/BP 4.37	No	N/A
Projects on International Waterways OP/BP 7.50	No	N/A
Projects in Disputed Areas OP/BP 7.60	No	N/A

II. Key Safeguard Policy Issues and Their Management

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

Given the urban and peri-urban locations of the sub-projects in Components A, B and C1, impact on natural habitats is expected to be minimal. Although there may be a need for replacement of trees that may be removed along Rights of Ways (roads) no natural forest will be affected. Any trees removed from Rights of Way will be replaced. In Component C2, the physical interventions resulting from the implementation of investments in rural areas could have low to moderate negative impacts on the environment, depending on locations and the nature of the investments. These impacts would result from the installation of solar panels (requiring a plan for disposal of batteries), and small wind turbines (which may have an impact on avifauna). A screening process will be followed to ensure that potential negative impacts can be appropriately mitigated, and that sub-projects are not located in critical natural habitats, and -if it is unavoidable that they traverse National Parks and Protected Areas- that appropriate mitigation actions be taken. The impacts and relevant mitigation measures are described in the project's Environmental and Social Management Frameworks (ESMFs) for Components C1 and C2 that will be disclosed prior to appraisal.

The investments under Component C1 no new high voltage (HV) lines will be required. Medium voltage (MV) and low voltage (LV) lines will be constructed in peri-urban areas. The MV and LV lines do not require land acquisition and/or involuntary resettlement of households as would HV transmission lines. The construction of lines will take place along existing Rights of way (RoW) i. e., along existing roads.

The off grid electrification component C2 will however require acquisition of land for the hybrid generation facilities. Although resettlement will be minimized to the extent possible, Resettlement Action Plans (RAPs) may be required. Should such a need materialize requiring land acquisition and necessitating the movement of persons and /or structures then RAPs will be developed to be guided by the RPF for Component C2.

Since not all sub-project sites can be identified in advance in Component C2, a Resettlement Policy Framework has been prepared that will be disclosed prior to project appraisal. Based on the RPF guidance, each subproject in Component C2 will be screened, and if RAPs are found to be necessary, these will be prepared, cleared, disclosed and implemented prior to the commencement

of civil works, in accordance with World Bank OP 4.12 (Involuntary Resettlement).

Component C2 which will be implemented in rural areas in three regions of the country (Western, Coast and Central). The project will be implemented nationally. At the time of preparation of this VMGF (a) the locations of where the off-grid electrification subcomponents will be implemented and the site where the infrastructure will be constructed at these locations have not been finalized (further pre-feasibility work is required in order to confirm the locations and sites). Six locations have been proposed. These locations include those where vulnerable and marginalised groups that meet the criteria of OP 4.10 may be found. These are Siaya County (Mageta Island); Homa Bay County (Ngodhe Island); Homa Bay County (Takawiri Island); Kwale County (Shimoni); Tana River Island County (Chardende); and Kilifi County (Kadaina Island).

VMGs that may be present in these counties include, Mjikenda/Watha, Sanye, Watha, Boni, Bajuni, and Watha.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

The VMGF will outline the processes and principles of: (a) screening to determine if a proposed sub-project investment will be undertaken in the vicinity of vulnerable and marginalized communities; and the (b) the preparation of a VMGP including the social assessment process, consultation and stakeholder engagement, disclosure procedures, communication and grievances redress mechanism. A detailed VMGP will be prepared for each sub project once project location is identified and screening conducted and determination via screening is made that VMGs are present in the project investment area. The VMGF will provide for the screening and review of component C2 investments in a manner consistent with this policy and the VMGF recommendations will be integrated into the project design of each sub project investment.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

N/A

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

A review was undertaken of Environmental Impact Assessments (EIA) prepared for sub-stations and an underground distribution cable financed under the Kenya Energy Sector Recovery Project. These EIAs were prepared as per Kenyan environmental regulations and the Environmental and Social Management Framework (ESMF) documentation prepared by the Bank to be used as a guideline in assessing environmental compliance and screening of sub-projects. The EIAs were generally of good quality, though it should be noted that, going forward as a standard practice, timely and informed consultation with stakeholders will be undertaken early in the project preparation process, and adequately documented. Any grievances from stakeholders will be recorded and responded to in a timely manner.

In 2014, an independently commissioned review was undertaken of KPLC's Safety, Health and Environment (SHE) Department's performance in preparing environmental documentation and RAPs, and monitoring EMPs and RAPs for World Bank funded projects. The review recommended capacity enhancement measures.

These measures will be put into place prior to the start of civil works on the Project.

- Additional qualified and experienced staff has already been brought on board to assist with the department's heavy workload (two environmentalists and one socio-economist).
- The purchase of equipment for baseline environmental data capture (water quality, air quality, noise) and analysis has commenced.
- The adoption of the suggested stakeholder involvement and public engagement procedures, and harmonization with the Property Department of KPLC on land take activities, to promote prior consultation on RAPs and compensation matters, (is underway).
- The PIUs of REA and KPLC for KEMP will include both environmental and social specialists.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Consultations with local stakeholders were undertaken prior to finalization and publication of the environmental documents. Minutes of the stakeholder meetings, including grievance redress mechanisms, are included as Annexes in the safeguard instrument documents.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other				
Date of receipt by the Bank 02-Jan-2015				
Date of submission to InfoShop 09-Jan-2015				
For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors	////			
"In country" Disclosure				
Kenya	02-Jan-2015			
Comments:	·			
Resettlement Action Plan/Framework/Policy Process				
Date of receipt by the Bank	02-Feb-2015			
Date of submission to InfoShop	03-Feb-2015			
"In country" Disclosure				
Kenya	02-Feb-2015			
Comments:				
Indigenous Peoples Development Plan/Framework				
Date of receipt by the Bank 02-Feb-2015				
Date of submission to InfoShop	03-Feb-2015			
"In country" Disclosure				
Kenya 02-Feb-2015				
Comments:				

If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level

OP/BP/GP 4.01 - Environment Assessment				
Does the project require a stand-alone EA (including EMP) report?	Yes [×]	No []	NA[]
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?	Yes [×]	No []	NA []
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?	Yes []	No []	NA [×]
OP/BP 4.04 - Natural Habitats				
Would the project result in any significant conversion or degradation of critical natural habitats?	Yes []	No [×]	NA []
If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?	Yes []	No []	NA [×]
OP/BP 4.11 - Physical Cultural Resources				
Does the EA include adequate measures related to cultural property?	Yes [×]	No []	NA[]
Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?	Yes [×]	No []	NA []
OP/BP 4.10 - Indigenous Peoples				
Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?	Yes [×]	No []	NA[]
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes [×]	No []	NA []
If the whole project is designed to benefit IP, has the design been reviewed and approved by the Regional Social Development Unit or Practice Manager?	Yes [×]	No []	NA []
OP/BP 4.12 - Involuntary Resettlement				
Has a resettlement plan/abbreviated plan/policy framework/ process framework (as appropriate) been prepared?	Yes [×]	No []	NA[]
If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?	Yes [×]	No []	NA []
The World Bank Policy on Disclosure of Information				
Have relevant safeguard policies documents been sent to the World Bank's Infoshop?	Yes [×]	No []	NA[]
Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?	Yes [×]	No []	NA[]
All Safeguard Policies				

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?	Yes [×]	No []	NA []
Have costs related to safeguard policy measures been included in the project cost?	Yes [×]	No []	NA []
Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?	Yes [×]	No []	NA []
Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?	Yes [×]	No []	NA []

III. APPROVALS

Task Team Leader(s):	Name: Kyran O'Sullivan,Clara Alvarez Rodriguez				
Approved By					
Practice Manager/ Manager:	Name: Lucio Monari (PMGR)	Date: 22-Feb-2015			