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The World Bank

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Report No: 124589-KE

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GUARANTEE

IN THE AMOUNT OF UP TO US$180 MILLION

IN SUPPORT OF THE

REPUBLIC OF KENYA

FOR A

KENGEN GUARANTEE PROJECT

April 5, 2018

Energy and Extractives Global Practice
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2018)

Currency Unit =	Kenya Shillings (KES)
KES 102.22 =	US$1
US$ 1.46 =	SDR 1

FISCAL YEAR
July 1 – June 30

ACRONYMS

BAU	Business-as-Usual
CAGR	Compound Average Growth Rate
CAPEX	Capital Expenditure
CDM	Clean Development Mechanism
CFO	Cash Flow from Operations
CGA	Corporate Governance Assessment
CO_2	Carbon Dioxide
DFI	Development Finance Institution
DRM	Disaster Risk Management
DSCR	Debt Service Coverage Ratio
EBITDA	Earnings Before Interest, Tax, Depreciation, and Amortization
EIRR	Economic Internal Rate of Return
EMS	Environmental Management System
ERC	Electricity Regulatory Commission
ESIA	Environmental and Social Impact Assessment
FCF	Free Cash Flow
FOCF	Free Operating Cash Flow
G2G	Good-to-Great
GDC	Geothermal Development Company
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GRS	Grievance Redress Service
GoK	Government of Kenya
HFO	Heavy Fuel Oil
ICT	Information and Communication Technology
IDA	International Development Association
IPF	Investment Project Financing
IPP	Independent Power Producer
KEEP	Kenya Electricity Expansion Project

KEMP	Kenya Electricity Modernization Project
KenGen	Kenya Electricity Generating Company Limited
KETRACO	Kenya Electricity Transmission Company Limited
KPLC	Kenya Power and Lighting Company
LCPDP	Least Cost Power Development Plan
LMCP	Last Mile Connectivity Program
MFD	Maximizing Finance for Development
MLA	Mandated Lead Arranger
NPV	Net Present Value
OPEX	Operating Expenses
O&M	Operation and Maintenance
PDO	Project Development Objective
PPA	Power Purchase Agreement
PPIAF	Public-Private Infrastructure Advisory Facility
PPP	Public-Private Partnership
QMS	Quality Management System
RAP	Resettlement Action Plan
REA	Rural Electrification Authority
RFP	Request for Proposals
ROA	Return on Total Assets
ROE	Return on Equity
SDR	Special Drawing Rights
SRM	Social Risk Management
TA	Technical Assistance
TWh	Tera Watt hour

Regional Vice President:	Makhtar Diop
Country Director:	Diarietou Gaye
Senior Global Practice Director:	Riccardo Puliti
Practice Managers:	Sudeshna Banerjee, Richard MacGeorge (acting)
Task Team Leaders:	Mariano Salto, Teuta Kaçaniku

BASIC INFORMATION

Is this a regionally tagged project?	Country (ies)	Lending Instrument
No	Kenya	Investment Project Financing

[ ] Situations of Urgent Need or Assistance/or Capacity Constraints

[ ] Financial Intermediaries

[ ] Series of Projects

Approval Date	Closing Date	Guarantee Expected Expiry Date	Environmental Assessment Category
04/26/2018	04/30/2021	06/30/2033	C

Bank/IFC Collaboration
No

Proposed Development Objective(s)

The proposed Project development objective is to enhance KenGen's ability to attract long-term private capital for the sustainable development of renewable energy.

Components

Component Name	Cost (US$, millions)
KenGen IDA Guarantee	180

Organizations

Borrower:	Republic of Kenya The National Treasury, Dr. Kamau Thugge *ps@treasury.go.ke*
Implementing Agency:	Kenya Electricity Generating Company (KenGen) Mrs. Rebecca Miano *rmiano@kengen.co.ke*

[ ] Counterpart Funding	[ ] IBRD	[ ] IDA Credit [X] IDA Guarantee [ ] Crisis Response Window [ ] Regional Projects Window	[ ] IDA Grant [ ] Crisis Response Window [ ] Regional Projects Window	[ ] Trust Funds	[X] Parallel Financing

Total Project Cost: US$300 million	Total Financing: Of Which Bank Financing (IBRD/IDA): US$ 180 million	Financing Gap:

Financing (in US$, millions)

Financing Source	**Amount (million)**
Commercial Financing	**US$300**
Total	**US$300**
IDA Guarantee	**US$180**

Expected Disbursements (in US$, millions)

INSTITUTIONAL DATA

Practice Area (Lead)

Energy and Extractives

Contributing Practice Areas

Gender Tag

Does the project plan to undertake any of the following?

a. Analysis to identify Project-relevant gaps between males and females, especially in light of country gaps identified through SCD and CPF

No

b. Specific action(s) to address the gender gaps identified in (a) and/or to improve women or men's empowerment

No

c. Include Indicators in results framework to monitor outcomes from actions identified in (b)

No

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
Political and Governance	Moderate
Macroeconomic	Moderate
Sector Strategies and Policies	Moderate
Technical Design of Project or Program	Low
Institutional Capacity for Implementation and Sustainability	Moderate
Fiduciary	Low
Environment and Social	Low
Stakeholders	Low
Overall	Moderate

COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [X] No

Does the project require any waivers of Bank policies?

[ ] Yes [X] No

Have these been approved by Bank management?
[ ] Yes [ ] No

Is approval for any policy waiver sought from the Board?
[ ] Yes [ ] No

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01		X
Natural Habitats OP/BP 4.04		X
Forests OP/BP 4.36		X
Pest Management OP 4.09		X
Physical Cultural Resources OP/BP 4.11		X
Indigenous Peoples OP/BP 4.10		X
Involuntary Resettlement OP/BP 4.12		X
Safety of Dams OP/BP 4.37		X
Projects on International Waterways OP/BP 7.50		X

Legal Covenants and Conditions

Standard conditions of effectiveness, covenants, and representations and warranties for a guarantee operation of this type will be included in the legal documentation. Please refer to Annex 4.
In addition, the Project Agreement will include:

- financial covenants requiring KenGen to maintain certain debt service coverage and current ratios, and to provide regular reports to the World Bank in connection with the said ratios;
- covenants relating to use of the proceeds of the commercial loan, maintenance by KenGen of appropriate institutional arrangements, and compliance by KenGen with its obligations under the commercial loan agreement; and
- covenants with respect to KenGen's achievement of the intermediate indicators set forth in the Results Framework and Monitoring section of this PAD, and the provision of regular reports to the World Bank in connection with the said indicators.

PROJECT TEAM

Bank Staff

Name	Role	Specialization	Unit
Mariano Salto	Team Leader (ADM Responsible)	Energy Economist	GEE01
Teuta Kaçaniku	Team Leader (Guarantee Specialist)	Senior Infrastructure Finance Specialist	GTPFS

Laurencia Karimi Njagi	Team Member	Senior Energy Specialist	GEE01
Almudena Mateos Merino	Team Member	Senior Energy Specialist	GEEES
Prajakta Chitre	Team Member	Infrastructure Finance Specialist	GEEFS
Kimberly Vilar	Safeguard specialist	Senior Social Development Specialist	GSU07
Margaret Auma Ombai	Safeguard specialist	Senior Social Consultant	GSU07
Shingira Samantha Masanzu	Legal	Counsel	LEGSG
Edward Felix Dwumfour	Safeguard specialist	Senior Environmental Specialist	GEN01
Ben Okindo Ayako Miranga	Safeguard Specialist	Environmental Specialist	GGO31
Henry Amena Amuguni	Financial Management Specialist	Senior Financial Management Specialist	GGO31
Tesfaye Ayele	Procurement specialist	Senior Procurement Specialist	GGO01
Yves Andre Prevost	Consultant	Environmental Specialist	GEN07
Alessandra Di Renzo	Consultant	Financial Specialist	GEE01
Kenta Usui	Team Member	Energy Specialist	GEE01
Gladys Akurut Alupo	Team Member	Program Assistant	AFCE2
China Chhun	Team Member	Program Assistant	GEE08
Zubair Sadeque	Team Member	Senior Energy Specialist	GEE01

Extended Team

Name	Title	Organization	Location

REPUBLIC OF KENYA
KENGEN GUARANTEE PROJECT

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I. STRATEGIC CONTEXT

The proposed project is an application of the World Bank Group's Maximizing Finance for Development (MFD) approach. It is classified as both an 'MFD-implementing' and 'MFD-enabling' project as it will use scarce International Development Association (IDA) resources to mobilize private sector financing to strengthen the financial position of Kenya's main power generation utility Kenya Electricity Generation Company Limited (KenGen) and set it on the path of financial sustainability. This is key for Kenya to create the enabling environment to attract long-term private investments for the sustainable development of renewable energy. Through this IDA Guarantee, the proposed project will support a financial transaction for KenGen—refinancing existing commercial loans of shorter tenor and higher interest rates with a new commercial loan of longer tenor and lower interest rates—thus generating savings for the company. This is a corporate debt restructuring operation.

A. Country Context

1. **Kenya aims to achieve middle-income country status by 2030.** Kenya, a country of 48 million people located across the equator in Africa's east coast, is one of the largest and most vibrant economies in Sub-Saharan Africa. In stark contrast to the slump in economic growth observed across the region, growth in Kenya was projected to reach 4.9 percent in 2017, placing Kenya as one of the fastest growing economies in the area. Kenya's robust growth performance was supported by a stable macroeconomic environment, lower oil prices, and improvements in the steady easing of certain supply-side constraints due to earlier public investments. The gross national income per capita reached US$1,380 in 2016, rapidly converging toward the regional average of US$1,505 and on the right path to achieve upper-middle-income status in accordance with the aspirations of Kenya's Vision 2030.[1]

2. **With headwinds subsiding, economic growth is projected to rebound over the medium term.** The Kenyan economy faced multiple challenges in 2017. A drought in the earlier half of the year, the ongoing slowdown in private sector credit growth, and a prolonged election cycle weakened private sector demand. Nonetheless, reflecting the relatively diverse economic structure, these headwinds were partially mitigated by the recovery in tourism, better rains in the second half of the year, and still low global oil prices. Economic growth is projected to rebound over the medium term, reaching about 5.8 percent in 2019.[2]

3. **Fiscal consolidation remains a challenge.** The fiscal deficit is projected to rise in 2017 primarily because of an increase in development spending, in the backdrop of slower revenue growth. This rise in the fiscal deficit reflects the difficulty the Government of Kenya (GoK) faces in creating the necessary fiscal space through reductions in the share of recurrent spending, and expansion of the revenue base to carry out its ambitious public investment drive without straining public finances. There is a need, thus, to consolidate Kenya's fiscal stance in order not to jeopardize its hard-earned macroeconomic stability.

[1] Kenya Vision 2030 is the country's development program from 2008 to 2030 based on three pillars: Economic, Social, and Political and is being implemented in successive five-year plans. The objective is to help transform Kenya into a newly industrializing, middle-income country providing a high quality of life to all its citizens in a clean and secure environment.
[2] *Source:* World Bank. Kenya Economic Update No. 16 (December 2017).

4. **The Government elected in 2017 presented a medium-term plan (2018–2022) underpinned by provision of adequate, affordable, and reliable electricity supply.** The medium-term plan is centered on four pillars—universal health care, affordable housing, food security, and manufacturing—all of which are dependent on the provision of adequate, affordable, and reliable electricity supply. In particular, the GoK targets to lower the cost of construction, improve accessibility to affordable mortgages, encourage large-scale agriculture, and create an enabling environment for manufacturing to create jobs particularly for the young population. To increase competitiveness in Kenya's manufacturing, a 50 percent reduction in the electricity tariff during off-peak hours was introduced in December 2017 for large consumers, taking advantage of the surplus capacity of power generation that the country currently enjoys.

B. Sectoral and Institutional Context

Kenya's power sector has benefited from successive rounds of dynamic reforms

5. **Kenya's vibrant power sector has emerged from successive waves of sector reforms since the early 1990s.** The GoK has successfully separated policy and regulatory functions from commercial activities, unbundled generation from transmission and distribution activities, introduced cost-reflective tariffs, and attracted private capital through the liberalization of generation activities while retaining majority ownership of the largest power utilities in the country—the Kenya Power Lighting Company (KPLC) and KenGen.[3] The sector is regulated by a single sector regulator, the Energy Regulatory Commission (ERC), with a mandate for technical and economic regulation of petroleum, electricity, and renewable energy, and an Energy Tribunal is in charge of solving sector disputes.

6. **The sector operates under a single-buyer model and key parastatals operate on commercial principles.** The KPLC preserves the role of transmission and distribution system operator as well as the role of market operator. The KPLC signs standard Power Purchase Agreements (PPAs) with all the generation companies, including KenGen, which are further approved by the ERC to govern their relationship. KenGen is the largest generation company in Kenya with 70 percent of the market share, in terms of installed capacity. Both the KPLC and KenGen have reasonable governance structures, instruments, and practices.[4] The two companies trade their shares in the Nairobi Securities Exchange and comply with information disclosure requirements—ensuring public availability of audited financial statements. The two companies have private sector representation on their board of directors. Generally, both companies are managed on a commercial basis and are able to raise funds directly from Development Finance Institutions (DFIs) and, to some extent, commercial banks and capital markets. The other agencies in the supply value chain which are wholly owned by the GoK are the Kenya Electricity Transmission Company Limited (KETRACO), which develops new transmission assets; the Geothermal Development Company Limited (GDC), whose mandate is to de-risk geothermal development by undertaking up-front steam-field development works; and the Rural Electrification Authority (REA) that implements rural electrification activities.

Kenya has successfully created a business environment capable of attracting affordable commercial financing and maximizing its use for energy sector development

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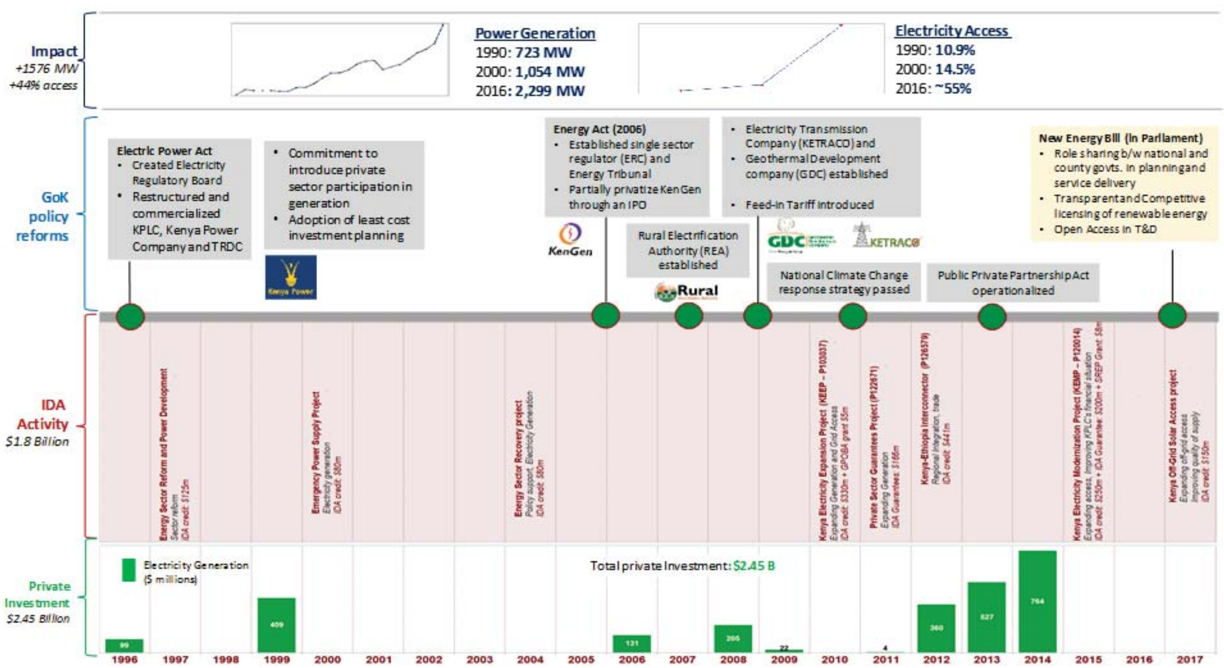
[3] The GoK retains 51 percent and 70 percent of the shares in the KPLC and KenGen, respectively.

[4] KenGen and the KPLC have in the past won various awards in corporate governance reporting in the annual financial report among the listed companies in Kenya.

7. **Over the last two decades, Kenya has continuously been striving to improve efficiency of its utilities with the objective of opening the energy sector to increased private capital and optimizing the use of scarce public resources.** Realizing huge investment needs in the sector and inability to meet all the financing needs through public sector funding, the GoK, with World Bank support, has been pioneering the approach to increased commercial financing participation, which is today referred to as MFD. Starting with the World Bank supported Energy Sector Reform and Power Development Project (P001344), approved in 1997, with the aim was to create an enabling environment for private investments, followed by Kenya Private Sector Power Generation Support Project (P122671) approved in 2012, where an US$166 million[5] of IDA Guarantee was able to help mobilize US$623 million of total investments, out of which US$357 million was from private investments and commercial lenders; and more recently, Kenya Electricity Modernization Project (KEMP) (P120014) approved in 2015, which was able to help attract US$500 million of long-term commercial debt financing (through an IDA Guarantee support of US$200 million) used to restructure the KPLC's existing debt, thus generating significant savings—the first such example in Sub-Saharan Africa. Key results of this approach have been (a) substantial amount of private sector investment in the generation segment (30 percent of the total installed generation capacity) and (b) two well-managed and leading publicly listed companies.

Figure 1. Implementation of the MFD ('Cascade') Approach in Kenya's Power Sector



Source: World Bank. *Note:* IPO = Initial Public Offering; TRDC = transmission development company.

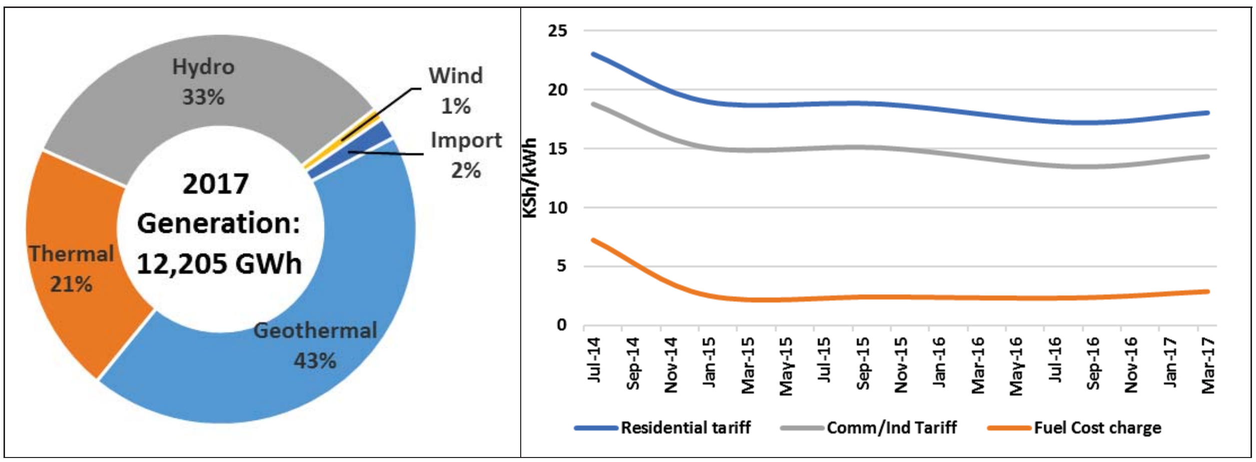
[5] The project consisted of four subprojects. At the closing of the project, the amount of IDA Guarantee utilized was US$135 million, to support US$431 million on private investment, as one of the subprojects decided to forgo the option to use IDA Guarantee and rely solely on the KPLC's strength. This decision was justified on the basis of the existing and long-term relationship with the KPLC. As such, it established a good precedent for other investors.

Kenya has achieved a low-carbon and diverse energy mix and electrified millions of households and businesses

8. **Kenya boasts of a continuously evolving low-carbon, affordable, and diverse energy mix.** Traditionally, Kenya relied on thermal and hydropower energy to meet its electricity demand. However, strong dependence on hydropower left the country exposed to hydrology risks that significantly affected the sector during drought periods.

9. Renewable energy accounted for 65 percent of total installed capacity (approximately, 1,500 MW) and 78 percent of total electricity generation (approximately, 7.9 Terawatt-hour [TWh]) as of June 2017. Geothermal became the largest electricity source in Kenya with 43 percent of the electricity generated and is rapidly matching thermal and hydropower sources in terms of installed capacity (see Figure 2). The reduction in overall electricity generation costs, as a result of the prominent role of geothermal, has been transferred to the consumers through a reduction in end-user tariffs, with average reductions of 22 percent for domestic consumers and 25 percent for commercial and industrial consumers.[6]

Figure 2. Power Sector Generation (GWh) in FY17 and Electricity Tariff Evolution



Source: World Bank, based on the KPLC and KenGen annual reports 2017.

10. **Kenya is a leader in geothermal generation.** Development of geothermal resources since early-1970s has propelled Kenya as a leader in the geothermal sector. At the end of 2016, Kenya, with 640 MW of installed capacity in geothermal, occupied the ninth place worldwide in total geothermal installed capacity.[7] KenGen, with 534 MW of installed capacity, is the largest developer of geothermal power in Africa. The World Bank (through the Kenya Electricity Expansion Project [KEEP] [P103037]), along with other donors, supported the installation of 280 MW of geothermal capacity in Olkaria I and IV, which were commissioned between September 2014 and January 2015.

11. **Electricity access is one of the key priorities in Kenya's power sector.** The KPLC is driving one of the most successful electrification programs in Sub-Saharan Africa that connected about 1.1 million new consumers annually in the last three years on an average, and presently, has about 6.2 million consumers.

[6] Calculated as the simple average between the domestic and commercial/industrial unit tariff between July 2014 and March 2017 in Kenyan shillings, using the KPLC data.
[7] REN21 - Renewables 2017. Global Status Report.

The GoK has adopted the Last Mile Connectivity Program (LMCP) to densify the existing electricity network and, so far, has mobilized close to US$700 million in donor resources (including the World Bank-financed KEMP [P120014]) to support the program. Under the flagship slum electrification program (supported by the recently closed KEEP and Global Partnership for Output Based Aid), the GoK has been able to address the affordability barriers of people living in high-density informal settlements by providing targeted subsidies for connections through an innovative output-based mechanism. Under the Kenya Off-Grid Solar Access Project [P160009], the World Bank is supporting off-grid electricity services, via mini-grids and standalone home systems, in fourteen underserved counties of Kenya.

12. Kenya's emerging successes in the power sector in the past decade compares favorably with the Sub-Saharan African average (Table 1) and against a selected group of countries.

Table 1. Selected Performance Indicators

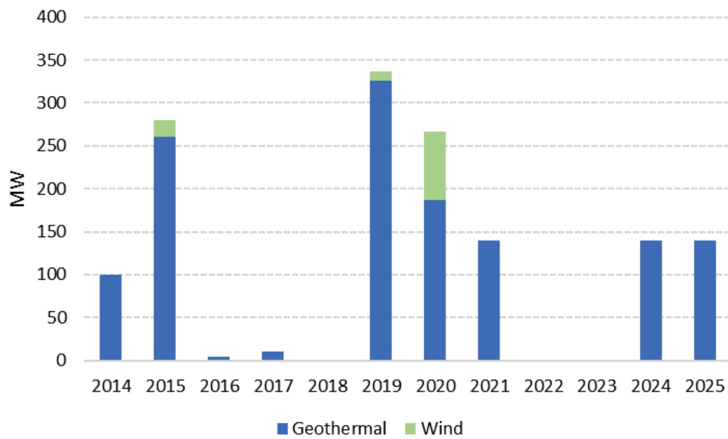
	% RES**	Electricity Access	Collection Rate	T&D Losses
Kenya	55%	55%	99%	18%
Cote d'Ivoire	40%	33%	82%	21%
Ethiopia	98%	30%	87%	25%
Nigeria	28%	58%	66%	39%
Uganda	86%	20%	99%	21%
SSA Median	***48%***	***37%***	***93%***	***23%****

Note: Access data (2016), rest (2014).
RES = Renew Energy Sources (incl. hydro) as % of installed capacity; *Excluding South Africa.

KenGen remains a cornerstone of Kenya's ambitious sector aspirations

13. **KenGen manages 70 percent of Kenya's generation capacity.** KenGen is the largest electricity generation company in Kenya and one of the largest in East Africa managing generation assets totaling 1,631 MW. With 84 percent of its installed capacity based on renewable energy sources (50 percent hydro, 32 percent geothermal, and 2 percent wind), the company is also at the forefront of sustainability. Going forward, KenGen has a pipeline of over 1,000 MW in new projects in the midterm in the greater Olkaria geothermal field. Between 2020 and 2025, wind energy and more exploration of the Olkaria field is projected, with the commissioning of around 550 MW new installed capacity, part of it through piloting public-private partnership (PPP) to crowd in private capital into the geothermal sector. Figure 3 shows the historical and projected capacity expansion for KenGen's installed power capacity. Wells for steam supply for most of these projects have already been drilled and steam is secured; in addition, so far, over 300 MW additional geothermal at Olkaria and 90 MW of wind power generation have secured financing.

Figure 3. KenGen Historical and Midterm Expansion Plan



Source: World Bank, based on KenGen data.

14. **KenGen has a corporate strategy to promote sustainability and value creation for its shareholders.** KenGen's investment development plan has been the result of the progressive implementation of the company's transformation strategy known as 'Good-to-Great' (G2G). Defined in 2007 as the GoK and Corporate Management's response to the market for KenGen's status as a publicly listed company, the G2G Strategy is built on the idea of constructing a sustainable and lasting institution that creates value for its stakeholders. Since the commencement of the G2G Strategy, KenGen has developed 710 MW new generation capacity, drilled 150 geothermal wells, and advanced more than 1 GW of projects past feasibility stage. On the corporate side - KenGen is fully compliant with the provision of regular financial information; has reasonable corporate governance instruments; and the Board composition reports a mix according to the best international practices.[8]

15. **Environmental and social safeguard practices have been an integral component of business planning in KenGen for decades.** Environmental management in KenGen has been certified by the ISO 14001:2004 standards (and is currently transitioning to ISO 14001:2015), and is guided by KenGen's Environmental Policy Statement, which is also aligned with its vision and mission statements. KenGen's Environmental Policy Statement commits the organization to compliance with applicable laws and regulations, prevention of pollution, and continuous improvement and accountability to the internal and external stakeholders and the public at large. In compliance with local legislation, annual environmental audits are submitted to the National Environmental Management Authority and the ERC. KenGen also has an Occupational Safety and Health Policy that focusses on achieving a positive safety culture and maintaining safe work conditions, equipment, and systems at work. The company has in place a Corporate Social Responsibility Policy that, for specific projects, is complemented with Stakeholders Coordination Committees to handle community and other stakeholders' issues. More recently, KenGen has drafted a

[8] KenGen Board comprises one non-executive and independent Chairman, seven non-executive and independent board members and the Managing Director & Chief Executive Officer who is an executive member of the Board, Cabinet Secretary - National Treasury and Principal Secretary – Ministry of Energy. Seven directors are from the private sector and independent as defined in the Code of Corporate Governance Practices for Issuers of Securities to the Public, 2015.

community engagement framework and is in the process of developing a community engagement strategy.

16. **The safeguards unit in KenGen consists of three major departments** - Environment and Clean Development Mechanism, Corporate Affairs, and Quality and Safety under the division of Regulatory and Corporate Affairs. During the life cycle of a project involving environmental or social impacts, each department is in charge of determining the management measures required to minimize the environmental and social impact of a project. KenGen has a team of about 80 multidisciplinary staff handling safety, environment, and social safeguards comprising environmentalists and liaison officers, safety engineers, and technicians.

17. **The G2G Strategy was revamped in 2016 as a response to new market challenges and growth opportunities.** The updated strategy, supported by Power Africa, envisions KenGen as a company with the ability to attract more private capital for the development of generation assets to complement concessional funding. This change in KenGen's funding strategy toward an increased opening to private capital is considered necessary to allow the company to scale up its investment plan over the medium and long term.

18. **The development of new generation capacity is underpinned by the Least Cost Power Development Plan (LCPDP).** The LCPDP prepared by the GoK for the period of 2015 through 2035[9] (and approved in October 2016) confirmed that geothermal power generation is the least cost alternative to supply Kenya's base load power component. According to the LCPDP, electricity consumption is forecasted to grow in the long term by 7.3 percent or 9.6 percent per year under the reference growth scenario and vision scenario, respectively. Peak demand is expected to increase to 10,200 MW under the vision scenario and 6,700 MW under the reference growth scenario by 2035, of which the share of geothermal is expected to be 3,600 MW and 2,850 MW, respectively.

19. **The National Geothermal Strategy recommends a central role for KenGen and a stronger role for the private sector as financier and partner in geothermal development.** The GoK, with support from the World Bank (Energy Sector Management Assistance Program), is finalizing the preparation of a National Geothermal Strategy. This draft strategy has identified the means to develop nearly 2,200 MW of new geothermal capacity by 2035 and meet the vision scenario target of the LCPDP. The draft strategy confirms the central role that KenGen and the GDC have in the future expansion of geothermal capacity in Kenya. In addition, it strengthens the KenGen's role to create partnerships with the private sector to crowd in private capital into ring fenced projects on a competitive basis. Furthermore, the draft strategy addresses a number of weaknesses in social safeguards, providing an accurate analysis of these issues, and defining a specific action plan to overcome them.

20. **The financial sustainability of the sector depends on the KPLC's financial strength.** Being the single buyer of the system, the KPLC sits at the center of the financial flows in the Kenyan power sector. Supporting the KPLC with cost-reflective tariffs is key to maintaining the economic-financial equilibrium of the sector. Since the first wave of reforms, the retail electricity tariff included surcharges in electricity bills to reflect variations in fuel costs and in exchange rates, a mechanism that is still being implemented. Power purchase costs resulting from PPAs approved by the ERC are transferred to and recovered from

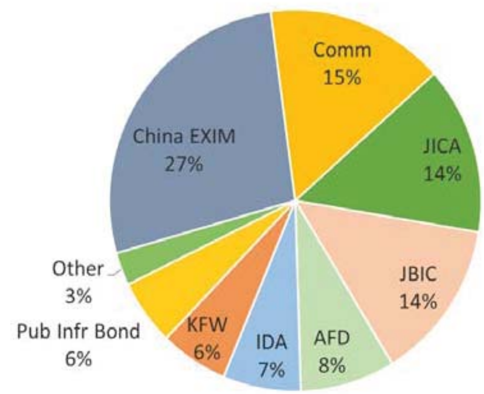
[9] https://www.erc.go.ke/index.php?option=com_content&view=article&id=167&Itemid=680

electricity tariffs; and specific charges are applied to adjust tariffs to recover variations in generation costs. However, the consistent application of tariff reviews has experienced delays in some cases, creating some risks to the financial sustainability of the system. Currently, the ERC, with World Bank support under KEMP (P120014), is developing the sixth Cost of Service Study which will provide the baseline for the next tariff cycle, expected in FY19.

The business-as-usual scenario of 'no refinancing' is detrimental to Kenya's renewable energy future

21. **Despite predominantly concessional borrowing, KenGen's financial performance has been under pressure due to short-term obligations.** Commercial borrowing increased from US$38.8 million in June 2013 to US$205.8 million on June 2017. Furthermore, as of June 2017, KenGen's debt portfolio of US$1.37 billion consists of the following: (a) US$449 million of GoK-guaranteed loans, (b) US$623 million of GoK on-lent loans, and (c) around US$300 million in direct borrowings. Despite the concessional nature of its debt, almost half of KenGen's debt (44 percent) has a maturity period of five years or less, a clear sign of the financial difficulties the company will face in the near future to service its short-term debt obligations. This situation will pose challenges for the implementation of its investment plan as well as the G2G Strategy, which, among others, aim to put the company on a commercial footing and establish itself as a trusted and creditworthy partner for private investors.

Figure 4. Debt Portfolio of KenGen (June 2017)



Source: World Bank

22. **KenGen's rights issue in 2016 de-levered the company's balance sheet, but the market signaled that additional measures are required to strengthen the company's financial sustainability.** The efforts made by KenGen over the past years to diversify its generation mix have taken a toll on its financial performance. During the past years, as the cash flows from operations (CFOs) were not large enough to cover the investment requirements, external financing has always been required to bridge the financial gap. Increasing debt levels have affected KenGen's financial performance, and the company has had challenges meeting certain financial covenants with lenders, including IDA (Annex 5). As a consequence, in May 2016, KenGen launched a rights issue with the objective of raising equity, which the GoK considered as an opportunity to convert KES 20 billion (about US$200 million) of on-lent loans into equity, contributing to de-lever the company. While it was successful in helping improve some of the financial indicators, the rights issue achieved 92 percent absorption by the market at subscription deadline, temporarily increasing the GoK's ownership to 74 percent.[10]

23. **Under a business-as-usual (BAU) (no refinancing) scenario, KenGen would report a deteriorating financial performance.** In case additional measures are not undertaken in the future to restructure and

[10] Later in February 2017, KenGen was able to sell the untaken part of the right issue shares, thus reducing GoK's shareholding to the original 70 percent.

support the company's balance sheet (BAU scenario), the temporary financial relief provided by the rights issue would not be enough to ensure financial sustainability for KenGen and to meet short-term obligations to its lenders. Therefore, assuming the geothermal investment plan is realized across FY18 and FY19, with no refinancing of the commercial debt, the most critical financial ratios would fall well below the covenant level: debt service coverage ratio (DSCR) to 0.15x, current ratio to 0.68x, and self-financing ratio to 9 percent. KenGen could experience significant worsening of the financial position in FY18 and FY19 due to high debt service obligations. This could put KenGen's pipeline of renewable energy development projects at high risk, hamper the company's reputation as a reliable counterpart, and jeopardize the possibility of developing PPP projects as scheduled.

Table 2. KenGen Financial Indicators for 'BAU Scenario' (No Refinancing)

	Sustainability Threshold	FY14	FY15	FY16	FY17	FY18 (f)	FY19 (f)	FY20 (f)	FY21 (f)	FY22 (f)
Current Ratio	1.1	1.10	0.95	1.20	1.48	0.98	0.68	0.75	1.02	1.26
DSCR	1.3	0.99	1.16	2.59	2.57	1.27	0.15	1.41	1.86	1.79
Self-Financing Ratio (%)	≥25	17	41	61	70	24	9	34	178	282
Gearing (Net Debt / Equity) (%)	—	165	101	75	72	81	123	119	105	91

Source: KenGen annual reports and World Bank financial projections.
Note: (f) = Forecasted. Underlined values (for forecasts) are below sustainability threshold level.

24. **The KenGen debt restructuring option emerged from an Investment and Financing Strategy.** In September 2017, KenGen, with World Bank support, completed the development of an Investment and Financing Strategy[11] (funded by Public-Private Investment Advisory Facility [PPIAF]) as well as a comprehensive Corporate Governance Assessment (CGA) of its governance structure, procedures, and processes. The Investment and Financing Strategy confirmed that, to date, some projects had lower-than-expected rates of return, and also that existing short-term obligation would have a negative impact on KenGen's financial position going forward. The strategy, thus, indicated the need to improve KenGen's evaluation process for new power generation projects, as well as improve its cash flow by refinancing a portion of KenGen's commercial debt.

25. The CGA confirmed that KenGen has a good governance structure, procedures and processes and that KenGen is fully compliant with the public disclosure of audited financial statements and corporate information. Nonetheless, the CGA identified three areas for improvement which will help the company to further enhance its Corporate Governance practices: i) update of internal documentation in line with current legislation and best practices – for example, align the legal compliance strategy and anti-corruption policy to the Bribery Act 2016; ii) enhance transparency and disclosure, including complying with the disclosure requirements of the Capital Market Authority (CMA) Code of Corporate Governance which requires the disclosure of specific policies on the company's website and financial statements; and iii) define corporate sustainability goals as required by the Code of Corporate Governance for State Corporation (Mwongozo).

[11] Capacity building activities to further support KenGen as part of this technical assistance are ongoing.

26. **KenGen's debt restructuring would significantly reduce its overall financing costs, with consequent benefits on its financial liquidity and solvency level.** The 'refinancing' scenario assumes a US$300 million debt refinancing during FY18. As shown in Table 3, current ratio is expected to always remain above the sustainability threshold level, while the DSCR is expected to drop below its covenant, to 1.1x, only in FY19, toward the end of the geothermal investment plan. However, with a DSCR above 1x, KenGen would still be able to produce enough cash flows to entirely cover its annual debt payments. Also, the Self-Financing Ratio is seen to be declining to much below the threshold levels in FY18 and FY19, due to the amount of capacity investments planned; after FY20, the slowdown of the investment pace and the lower expected capital expenditure (CAPEX) push the ratio again up to triple-digit levels.

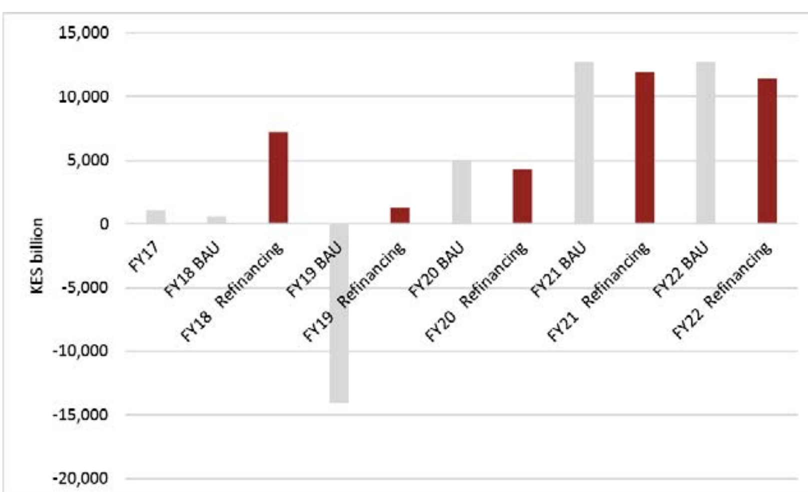
Table 3. KenGen Financial Indicators for 'Refinancing' Scenario

	Sustainability Threshold	FY18 (f)	FY19 (f)	FY20 (f)	FY21 (f)	FY22 (f)
Current Ratio	1.1	1.36	1.21	1.34	1.52	1.66
DSCR	1.3	1.38	1.09	1.25	1.66	1.55
Self-Financing Ratio (%)	≥25	1	9	32	167	249
Gearing (Net Debt/Equity) (%)	—	82	124	120	108	94

Source: KenGen Annual Reports and consultant's financial projections.
Note: (f) = Forecasted.

27. **The comparison between the BAU and refinancing scenarios reveals a strain on G2G strategy implementation.** Under a BAU scenario, KenGen's financial sustainability would be severely hit by negative free cash flow (FCF) in FY19, leading to a negative net cash position of KES 14 billion, which compares to a positive FCF of KES 1.2 billion in the refinancing scenario (see Figure 5). This implies that without the refinancing, KenGen would face challenges to close the financing of its renewable energy project pipeline in the coming years. Furthermore, KenGen's reliability as counterpart on PPP transactions could be damaged and, therefore, affect its ability to crowd in strong private sector partners in upcoming projects.

Figure 5. KenGen's FCF, 'BAU' Versus 'Refinancing' Scenarios



28. **The debt restructuring will put KenGen on the path to financial sustainability.** While this support is expected to significantly improve KenGen's financial position, and enable it to implement its investment plan and overall G2G strategy, it is very important that KenGen maintain this level of performance. IDA's support, combined with TA provided through PPIAF, helped in capacity building of KenGen's finance and planning teams, and this is expected to further strengthen internal coordination. KenGen now has a new financial model that will be used as a tool to guide investments and financing decisions. Further, the new loan envisaged under this project, will enhance financial sustainability of KenGen by continuously ensuring compliance with financial covenants through the monitoring of KenGen's financial statements. This monitoring of financial discipline reinforces KenGen's existent fiduciary responsibility to its private shareholders, including to maintain its financial performance in line with sound practices and adherence to the requirements of the loan agreement.

29. **The proposed IDA Guarantee in support of KenGen's refinancing, is key to promoting an enabling environment for the sustainable development of renewable energy in Kenya.** With the proposed IDA Guarantee, KenGen would be able to refinance its short-term commercial loans and strengthen its balance sheet, which is critical to support its renewable energy expansion program. The project therefore supports KenGen's debt restructuring by providing an IDA Guarantee of up to US$180 million for debt payments by KenGen, thereby enhancing KenGen's credit quality and enabling it to raise up to US$300 million of new commercial debt with lower interest rates and longer tenors than those currently available to it.

30. **The proposed IDA Guarantee would enable KenGen to significantly leverage IDA resources.** The application of an up to US$180 million IDA Guarantee to mobilize up to US$300 million of commercial debt results in a leverage ratio of 1.6 times which is not only substantial but also fully reflective of IDA's and the World Bank Group's strategies for optimization of resources and mobilization of private capital. The project has benefited from the lessons learned from a similar support provided to the KPLC in 2016, where it helped refinance US$500 million of its existing commercial debt, with much better terms, resulting in significant savings and improvement in the KPLC's financial position. The market appetite to respond to such IDA-supported project was very strong, resulting in oversubscription by the commercial banks.

31. **The proposed IDA guarantee represents World Bank's long-term and consistent partnership towards sector development by deploying a multitude of instruments with a total portfolio of US$1.3 billion**. The recently closed Kenya Electricity Expansion Project [P103037] supported the installation of 280 MW of geothermal capacity in Olkaria I and IV, the extension of transmission and distribution lines, and an innovative output-based slum electrification program. Kenya Electricity Modernization Project [P120014] supports KPLC and REA to expand electricity service and enhance service delivery across Kenya with both grid and mini-grid supply options. The Kenya Off-grid Solar Access Project [KOSAP – P160009] supports the provision of off-grid electricity services in 14 underserved counties and the Eastern Electricity Highway Project [EEHP – P126576] supports an interconnection between Kenya and Ethiopia.

C. Higher Level Objectives to which the Project Contributes

32. The proposed project is aligned with the Country Partnership Strategy (FY14–20) [Report 88940], whose overarching goal is sustainable reduction in poverty and increased shared prosperity. Aligned both with Kenya Vision 2030 and its Medium-Term Plan, the strategy highlights three areas of engagement:

(a) Competitiveness and sustainability—growth to eradicate poverty

(b) Protection and potential—human resource development for shared prosperity

(c) Building consistency and equity—delivering a devolution dividend

33. The project will directly contribute to the first area by supporting an enabling environment to scale up least cost renewable generation capacity—a necessary condition to the provision of affordable electricity services to all consumers that translates into lowering operating costs of industries and enhancing the productive incomes of all households, including the bottom 40 percent of the population.

34. The proposed project also adheres to the objectives set in World Bank's Energy Sector Directions Paper[12]—specifically 'create an enabling environment'. The World Bank is dedicated to helping countries promote market solutions and leverage financial resources. This support can be in the form of strengthening regulatory and contractual frameworks; enhancing the financial sustainability and creditworthiness of utilities; and using guarantees where appropriate, to improve credit standing and mitigate risks for private sector.

35. By building from the long-term experience in the development of innovative products to optimize the use of concessional resources, promote the judicious use of scarce public funds, and crowd in commercial capital across the power sector in Kenya, the proposed project supports the implementation of the MFD, the 'cascade' approach laid out in the World Bank's Development Committee Paper[13] (see paragraph 7 above showcasing Kenya as an early example of MFD). The objective of the MFD approach is to mobilize commercial finance, enabled by upstream reforms where necessary to address market failures and other constraints to private sector investment at the country and sector level, including the provision of guarantees and risk-sharing instruments to mitigate sectoral risks.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

36. The proposed Project Development Objective (PDO) is to enhance KenGen's ability to attract long-term private capital for the sustainable development of renewable energy.

B. Project Beneficiaries

37. The project will contribute to an enabling environment required to strengthen Kenya's ability to successfully attract private capital investment in the renewable energy sector. Furthermore, Kenya will benefit from sound financial management in its two largest electricity utilities (the KPLC benefited from similar support as part of KEMP [P120014]) which will support more prudent financial management, enhancing the incentives for efficiency in the development of business and commercial operations.

38. KenGen will be the direct beneficiary of the project through the restructuring of its commercial debt, even though the beneficiary of the IDA Guarantee itself will be the selected commercial lender(s)

[12] *Toward a Sustainable Energy Future for All: Directions for the World Bank Group's Energy Sector*, World Bank, July 2013.
[13] *Forward Look - A Vision for the World Bank Group in 2030 - Progress and Challenges*, World Bank, March 2017.

that provides the loan for the refinancing process. This will allow the company to access long-term commercial financing, in line with the nature of its strategy and investment program, thereby creating the space to meet its financial obligations to lenders, shareholders, and suppliers.

39. The final beneficiaries are the existing and potential electricity consumers of Kenya, whom KenGen serves to provide lower cost and diverse energy sources. In fact, as Kenya extends its electricity coverage to poorer and rural consumers, an affordable energy mix becomes all the more important.

40. The broad experiences gained by Kenya through the independent power producers (IPPs), the KPLC and KenGen on the development of innovative solutions to attract affordable commercial sources for funding and consolidating a path toward financial sustainability, are very valuable and can be used by KETRACO and the GDC in the future as they build their capacity and growing asset base. These lessons learned will be important also as KETRACO and the GDC seek alternative business models to scale up their infrastructure expansion through funding sources beyond the Government budget.

C. PDO-Level Results Indicators

41. The achievement of the development objectives will be measured using the following indicators:

- Amount of Private Capital Mobilized – measures the financing from private entities other than the WBG that becomes available to a Client at legal commitment of the financing as a result of the WBG's active and direct involvement in raising resources

- KenGen Debt Service Coverage Ratio (DSCR) - measures the ability of the Borrower to make payment of the existing debt obligations

- KenGen Current Ratio - measures the ability of the company to make payment of its short-term obligations through its current assets

42. Obligations to maintain certain target DSCR and Current Ratio levels and to report on these ratios will be included as covenants in the Loan Agreement to be signed between KenGen and the Mandated Lead Arranger (MLA) as well as the Project Agreement between KenGen and the World Bank.

43. Intermediate indicators encompass corporate governance, environmental and social practices—vital for KenGen to manage its business in a sustainable manner. These include:

- Disclosure of Anti-bribery and Corruption Policy – measures the disclosure on KenGen's webpage of its anti-bribery and corruption policy.

- Disclosure of Board Charter and Policies on KenGen's webpage and in its Annual Reports - measures the disclosure on KenGen's webpage and annual reports of the following: i) Board Charter; ii) Code of Ethics and Conduct; iii) Environmental, Social and Governance Policy; iv) Whistleblowing Policy; v) Procurement Policy; vi) top ten contracts in terms of value; vii) the number of legal challenges to procurement decisions; and viii) major sources of revenues and expenditures.

- Disclosure of Sustainability Goals and Strategy - measures the disclosure on KenGen's webpage of its Sustainability Goals and Strategy.

- Disclosure of a Community Engagement Policy – measures the disclosure of a Community Engagement Policy consistent with international best practice (including provisions for enhanced engagement with vulnerable and marginalized groups such as indigenous people, and dispute resolution).

- Disclosure of Environmental and Social Management System - measures disclosure of an Environmental and Social Management System consistent with international best practice (including: (i) policy on environmental and social assessment and management; (ii) procedure on identification of risks and impacts; (iii) management programs; (iv) organizational structure; (v) emergency preparedness and response plans; (vi) stakeholder engagement procedures; (vii) monitoring and review procedures; and (viii) land acquisition and resettlement policy and procedures).

44. The Project Agreement to be signed between IDA and KenGen will also include certain covenants relating to KenGen's undertakings to meet and provide regular reporting on these indicators. KenGen will be required to satisfactorily achieve these indicators on or before the proposed project's closing date (April 30, 2021).

III. PROJECT DESCRIPTION

A. Project Component

45. **The proposed project has one component, which consists of an IDA Loan Guarantee of up to US$180 million**, that will support KenGen in raising up to US$300 million in long-term commercial financing. This new commercial financing will be used to restructure/refinance a portion of KenGen's existing commercial loans.

46. The proposed IDA Guarantee will accomplish this by enhancing KenGen's credit quality and enabling the company to raise new commercial debt with lower interest rates and longer tenors than what is currently available to it. KenGen's existing commercial debt has interest rates ranging between 7 percent and 8 percent for tenors of 6 to 8 years[14]. The latter tenor, however, was enabled through a DFI on-lending facility to a local bank and, as such, does not represent the actual market terms available to KenGen. The IDA-guaranteed new commercial debt is expected to have lower interest rates and an extended tenor of up to 15 years, thus generating direct financial savings that will support enhancing KenGen's short-term cash flows.

47. The proposed IDA Guarantee is designed to further strengthen financial discipline on KenGen's part. Commercial lenders typically require more financial discipline in companies as the latter have to adhere to strictly enforced financial covenants and increased reporting obligations (provision of quarterly, semiannual, and annual financial statements) to demonstrate sound financial management. The proposed

[14] KenGen was able to reach longer tenor (12 years) on a direct borrowing through a Public Infrastructure Bond.

project will help KenGen further expand its financial discipline and make sound financing decisions with respect to future investments and efficient operations.

B. Project Cost and Financing

Financing Instrument

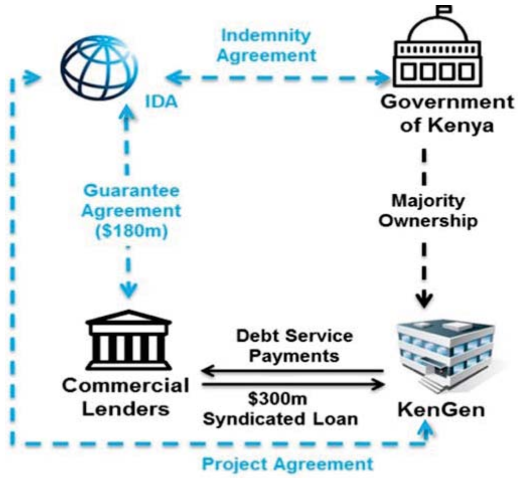
48. The proposed project is an Investment Project Financing (IPF) utilizing an IDA Guarantee of up to US$180 million to raise commercial financing worth up to US$300 million. The use of this commercial financing will be contractually limited to restructuring/refinancing a portion of KenGen's existing commercial debt. The proposed project will close in three years (anticipated closing date of April 30, 2021), after which it will remain part of the corporate monitoring until the guarantee expiries.

49. The proposed project benefits from the TA provided as part of the Financial Advisory Services for Kenyan Energy Utilities (P161773, funded by the PPIAF) to hire a financial adviser for KenGen. The financial advisor has developed a new financial model showing a five-year forecast which includes KenGen's investment and financing plan. With this, the company can assess the impact of various projects on its financial position allowing it to make more prudent financial decisions going forward. The financial adviser is also responsible for training the KenGen finance team on better financial planning, including how to use and update the model so that the company can use it as a decision-making tool in the future.

Proposed IDA Guarantee Structure

50. The proposed IDA Guarantee in support of KenGen funding needs would be structured as a credit enhancement tool to improve the credit profile of KenGen to obtain competitive interest rates and longer tenors. The credit enhancement may take the form of first loss guarantee (similar to the structure used in KEMP [P120014], i.e. use of an IDA Guarantee in support of the KPLC's debt restructuring). The contractual arrangements for the commercial loan and the IDA guarantee will include: (i) a Loan Agreement between KenGen and the selected commercial lender acting as MLA; (ii) a Guarantee Agreement between IDA and the said MLA, as beneficiary of the IDA guarantee; (iii) Project Agreement between IDA and KenGen; and (iv) an Indemnity Agreement between Kenya and IDA (see figure below). It is likely that the terms of the Guarantee Agreement will be incorporated within the Loan Agreement to be signed between KenGen and the selected commercial lender, thus making Loan Agreement a tripartite agreement between IDA, the commercial bank, and KenGen.

Figure 6. Proposed IDA Guarantee Structure



51. The proposed IDA Guarantee will be applied to guarantee payments of debt service (principal and/or interest) by KenGen to the commercial lenders. In the event that KenGen fails to make a payment under the commercial loans, subject to the cure periods provided under the Loan Agreement(s), the lender(s) will have recourse to the IDA Guarantee for an amount of up to US$180 million. IDA will be obliged to pay to the claimant the amounts due and not paid by KenGen within the period stipulated in the Guarantee Agreement.

52. According to the terms of the Indemnity Agreement to be signed between IDA and Kenya, a payment by IDA to a lender under the IDA Guarantee will trigger the obligation of Kenya to repay IDA the amount of such payment. Repayment shall be made upon demand by IDA or as IDA may otherwise direct.

53. The proposed IDA Guarantee would be issued for a maximum term equal to the tenor of the guaranteed loans. In accordance with the pricing policy for IDA Guarantees, there is a Guarantee Fee of 75 basis points per year calculated over the amount of the guarantee for the given year and payable from the date of and as a condition of effectiveness of the IDA Guarantee. Annex 4 includes a Term Sheet setting forth a summary description of the terms and conditions of the IDA Guarantee.

Table 4. KenGen IDA Guarantee Project Costs

Project Component	Project Cost	IDA Guarantee	Commercial Funding
IDA Guarantee	US$300 million	US$180 million	US$300 million
Total Costs	**US$300 million**	**US$180 million**	**US$300 million**

C. Lessons Learned and Reflected in the Project Design

54. The proposed project has benefited from the lessons learned and implementation—as part of KEMP (P120014)—of an IDA Loan Guarantee that helped the KPLC, the electricity distribution utility in Kenya, in a successful debt restructuring that resulted in significant savings and strengthening of its balance sheet.

55. The KPLC was facing a difficult financial situation, where the company accumulated unsustainable levels of short-term commercial debt to fund an aggressive investment program in 2013 and 2014. The short-term and commercial nature of the debt did not match the long-term revenue potential of the specific investments, thereby, putting into question the KPLC's financial sustainability. As such, the utility was in dire need of debt restructuring. However, one of the main challenges at that time was the weakening market appetite for corporate finance in emerging markets. To address this challenge, the World Bank provided the guarantee instrument, to provide the level of comfort to the private lenders, and in turn enable the KPLC to restructure the existing commercial debt. Through an IDA Guarantee of US$200 million, the KPLC was successful in mobilizing US$500 million long-term commercial loan, at a much lower cost and longer tenors, which was used to refinance the existing short-term and expensive debt on the books of the KPLC. The loan facility consisted of two tranches, a U.S. dollar tranche of US$350 million and local Kenya shilling tranche equivalent to US$150 million. This resulted in US$180 million in savings for the KPLC in just the first two years and improvement in its ability to pay on its power purchase obligations and debt service.

56. The benefit of the World Bank Guarantee was demonstrated by the fact that the loan facility was oversubscribed by some 70 percent. The commitments by lenders for both tranches, U.S. dollar and Kenya shilling, were much higher than what was required for the project. The success of the guarantee transaction and the oversubscription by the commercial lenders, at a lower price and longer tenor, was a clear indication of the market's confidence in Kenya's power sector, as well as the positive involvement of the World Bank in ensuring the long-term sustainability of the utility and the sector.

57. The project drew lessons from a similar recent IDA Guarantee supports in mobilizing commercial debt financing for the Pakistan Water and Power Development Authority (WAPDA) Utility Project (P121507), where a US$350 million Loan Facility was raised with the support of an IDA loan guarantee. The proceeds will be used to partly finance the first phase (2,160 MW) of the Dasu Hydropower Project (P150756). The tenor extension and long grace period achieved with the support of the guarantee was critical in matching the cash flow profile of the Dasu Hydropower project. This was the first of a series of IDA-guaranteed loan financings for the project. In total, it is expected that US$800–1,000 million will be mobilized by IDA Guarantees for the project.

58. Furthermore, the project design has benefited from the earlier IDA guarantee projects implemented in Kenya, in support of the private sector implemented projects, in the form of IPPs that increased peak load power generation capacity. A total of US$135 million of IDA guarantee as part of the Kenya Private Sector Power Generation project (P122671), supported development of 250 MW of new thermal capacity by three power plants at an investment of about US$431 million.

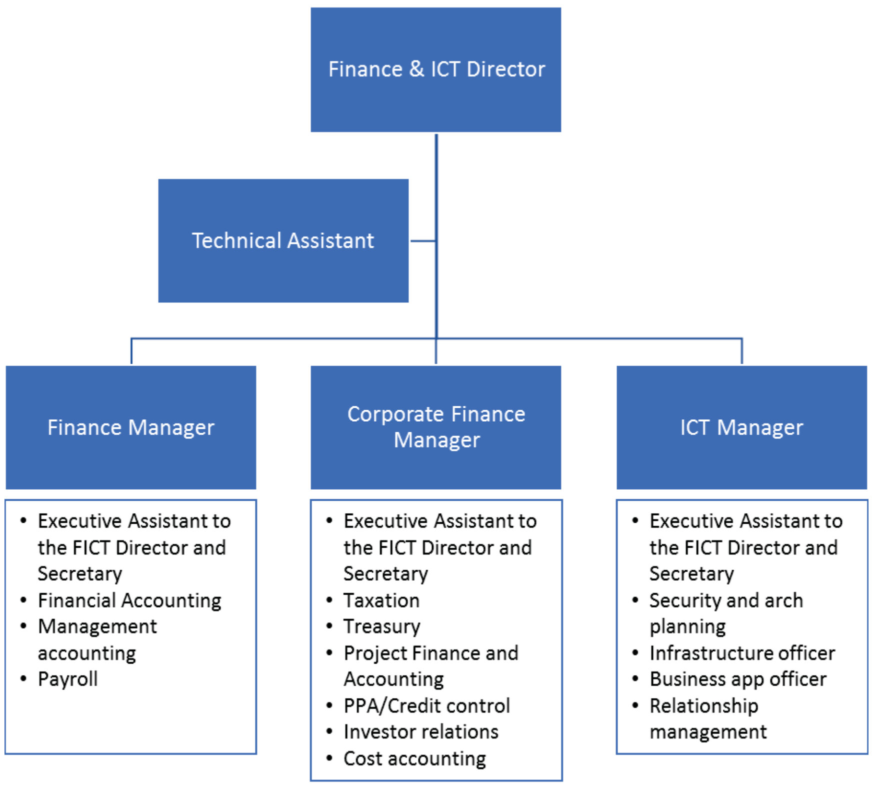
59. These experiences were used as a reference in designing the proposed IDA guarantee structure. Realizing the positive market response in case of the KPLC and the most recent case in Pakistan, as well as prior experience of the IDA guarantee in Kenya, the proposed IDA guarantee in support of KenGen's debt restructuring focuses on the extension of loan tenor, in addition lowering the cost of debt. While the commercial loan obtained for KPLC was limited to 10 years (for U.S. dollar tranche), the loan facility to be obtained for KenGen is expected to be up to 15 years. This would be the first time such a tenor is offered by commercial lenders in the region.

IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

60. KenGen's Finance and Information and Communication Technology (ICT) Division will be responsible for the overall implementation, coordination, and monitoring of the project. The Finance and ICT Division is headed by the Finance & ICT Director supported by three managers—the Finance Manager, Corporate Finance Manager, and ICT Manager, each one of them with their subsequent reports. Figure 7 presents the organogram of the Division.

Figure 7. Organogram of KenGen Finance and ICT Division



61. To select the commercial bank that will act as mandated lead arranger (MLA) and facilitate the origination of the new loan facility (of up to US$300 million that will be used to refinance a portion of KenGen's existing commercial loans), KenGen issued a Request for Proposal (RFP) and invited local and international commercial banks to bid. KenGen's evaluation team has completed the evaluation process of the bids received from short-listed banks and the evaluation report was approved by KenGen's Board. The notification to the selected bank has been issued and KenGen is anticipating fruitful negotiations and contract sign-off with the MLA.

62. KenGen is also in the process of procuring external legal counsel to support the company in negotiating the final Loan Agreement. This is a critical component as this agreement will be the single

largest commercial Loan Agreement the company will sign and this sets a precedent for future agreements.

63. The contractual arrangements (as presented in Figure 6 above) for the commercial loan and the IDA guarantee will include: (i) a Loan Agreement between KenGen and the selected commercial lender acting as MLA; (ii) a Guarantee Agreement between IDA and the said MLA, as beneficiary of the IDA guarantee; (iii) Project Agreement between IDA and KenGen; and (iv) an Indemnity Agreement between Kenya and IDA. Annex 4 provides a summary of the key terms and conditions of these agreements. It is likely that the terms of the Guarantee Agreement will be incorporated within the Loan Agreement to be signed between KenGen and the selected commercial lender, thus making the Loan Agreement a tripartite agreement between IDA, the commercial bank, and KenGen.

64. All negotiations between KenGen, the commercial lender, the World Bank and National Treasury (on behalf of Kenya) will take place in parallel. The negotiations of the above-mentioned agreements will be based on the terms and conditions provided in Annex 4.[15]

65. Under the Loan Agreement, key undertakings by KenGen will include the making of timely debt service payments, and the maintenance of the financial health of the company by ensuring that certain financial ratios, including the DSCR and Current Ratio captured as PDO-level indicators for the project, are kept at satisfactory levels. The Loan Agreement will also specify the use of proceeds i.e., solely for the refinancing of existing loans. Accordingly, funds will be disbursed directly from the MLA bank to the lenders whose loans are being refinanced. A confirmation by the MLA bank will be delivered to both IDA and KenGen on the repayment of these loans.

66. Under the Project Agreement, KenGen will provide certain undertakings in connection with the implementation of the project. These will include undertakings relating to compliance with all its obligations under the Loan Agreement, including use of proceeds as per the Loan Agreement, financial reporting and provision of information to the World Bank. It will also provide its commitment to the achievement, within a period of 3 years, of the intermediate indicators noted in paragraph 43 above.

67. As with any Loan Agreement, a failure by KenGen to comply with its obligations under the Loan Agreement can trigger an event of default and cause the lenders to exercise their remedies under the Loan Agreement. Similarly, failure by KenGen to comply with its obligations under the Project Agreement can lead IDA to exercise its remedies under the Indemnity Agreement.

B. Results Monitoring and Evaluation

68. There will be periodical reporting requirements, including quarterly reports (key financial ratios), semiannual reports (unaudited Balance Sheet, Profit and Loss, and Cash Flow Statements), and the annual audited financial statements that will be prepared by KenGen's Finance and ICT Division[16]. Through this reporting, the World Bank will be able to monitor KenGen's compliance with the financial covenants (the

[15] As is customary with guarantee operations, the negotiation of the agreements is an ongoing process, rather than discrete and sequential steps. Negotiations can begin after concept review and continue throughout appraisal, and do not have to be finalized before the project is presented to the Board.
[16] Annual and semi-annual reports are already prepared by KenGen and made publicly available.

financial ratios included as PDO-level indicators) and ensure that the company uses a stricter financial discipline and proper financial planning, which are key for the financial sustainability path.

69. In addition, as part of the implementation of the TA on Financial Advisory Services for Kenyan Energy Utilities (P161773, funded by the PPIAF), the capacity within the finance team has been further strengthened through training on financial modeling preparation and financial ratios monitoring. The new financial model, together with the training events, have strengthened the finance team's capacity and ensured that they are well equipped to monitor the results and ensure that any decision-making process is supported by sound financial analysis.

70. Furthermore, there will be periodical reporting requirements on the implementation of intermediate results indicators, captured in the Project Agreement. The reporting on these indicators will be prepared by KenGen's Company Secretary.

C. Sustainability

71. **KenGen's management and GoK are committed to ensuring that KenGen becomes a financially sustainable and commercially driven company.** KenGen's G2G Strategy is a strong indication of the commitment that both KenGen's management and GoK have to ensure sustainability. The long-term commercial financing that will be facilitated by the proposed IDA Guarantee will help in this pursuit as there will be a stricter financial discipline imposed that will send strong signals to the market and give more comfort to the investors on KenGen's performance as an independent and commercially oriented utility. The proposed IDA Guarantee is expected to have a tenor of up to 15 years, which is the expected maturity of the refinanced facility. The World Bank will be monitoring the project and KenGen's financial position throughout that period to ensure that the company makes payments to the lenders on time and meets financial covenants.

72. **The further strengthening of KenGen's corporate governance is key to ensuring better operational performance.** The TA provided to KenGen for the preparation of the Investment and Financing Strategy showed the financial implications of enhancing operational performance and project preparation going forward. This outcome was further reinforced by the CGA, which highlighted the need to further strengthen several areas of corporate governance. While the support provided through the PPIAF-funded activity (P161773) will contribute to a better understanding of the corporate financial implications of developing individual investment projects, the general improvement in KenGen's operational performance will be monitored as part of the overall policy dialogue between the World Bank and the GoK.

73. **The robustness of the regulatory regime and, in particular, the predictability of the tariff setting mechanism to set electricity prices at cost recovery levels is essential to the sustainability of the proposed project.** KenGen is the major supplier of electricity, which it sells to the KPLC through long-term PPAs. The ability of the KPLC to reflect the cost of the PPAs in the tariff application and its approval by the ERC is very critical to ensure KenGen's financial viability. The sustainability and the future development of the energy sector are anchored in the stability, transparency, and objectivity of the regulation, regulator, and tariff regime. The reliability and objectivity of the tariff review process encountered some political interference in 2012–2013 during the general election period (the 2011 tariff adjustment was postponed and only effected in November 2013). Similar interference was observed in 2017, when the election year

and tariff review coincided. There was no tariff review in 2017, which is already straining KPLC's financial position. However, the necessity to maintain the tariff review process as defined in the regulatory regime has never been challenged to the extent that the process would be dispensed with, and this gives confidence that the commitment to cost recovery tariffs will be sustained.

D. Role of Partners

74. Kenya features an active donor community with multilateral and bilateral financiers who have contributed consistently to the development of the power sector, particularly in the generation space, where geothermal resources are a key contributor to the environmental and financial sustainability of the sector, mirroring the heightened momentum driven by the GoK.

75. Power Africa supported KenGen in the design and implementation of the G2G. This strategy promotes the transition from the existing KenGen structure, traditionally financed by the donor community toward a structure in which KenGen is able to attract private capital for the development of generation assets and to support its financial sustainability. Also, KenGen is receiving support from Power Africa as part of the 'Community Engagement Program'—an exchange program with New Zealand to learn from the harmonious relationship between geothermal development and the indigenous Maori community. The main objective of the KenGen-New Zealand Exchange program under the Power Africa Initiative is to create mutually beneficial relationships and partnerships with stakeholders with a view to building sustainable business in line with KenGen's G2G Strategy. It is aimed at learning and adapting best practice in community engagement and establishing internal partnerships based on the lessons learned from New Zealand geothermal companies that work in areas occupied by the indigenous Maori community. Also, Power Africa recently published a 'Guide to Community Engagement for Power Projects in Kenya' with the objective of guidance to developers on country-specific laws, customs, and institutions related to power projects in the country.

76. The donor community is committed to support KenGen in its path toward full commercial viability; while KenGen's investment pipeline shows that most of the projects are expected to be financed by public capital, development partners are also supporting KenGen in its efforts to attract private capital. This activity is complemented by the TA for financial advisory work to support development of KenGen's Investment and Financing Strategy, supported by the World Bank, with PPIAF funds (P161773). In addition, KenGen is receiving World Bank support from the Kenya Infrastructure Finance PPP Project (P121019), the objective of which is to increase private investment in the Kenya infrastructure market across sectors.

V. KEY RISKS

A. Overall Risk Rating and Explanation of Key Risks

77. The overall risk rating for the proposed project is Moderate. Selected risks and mitigation measures are discussed in the following paragraphs.

78. **Sector strategies and policies risks (Moderate).** While the power sector runs under sound commercial principles, the lack of an approved tariff methodology generates some concerns on the financial sustainability of the sector in the long run, particularly during electoral years, when the electricity tariff can potentially be used as a political token. An aggressive connection campaign in the last few years

has already resulted in cashflow constraints in KPLC contributing to delays in payments to KenGen and other suppliers. Factors that mitigate this risk include (a) Kenya has been adopting cost-recovery tariffs, and ERC (regulator) has successfully implemented an automatic tariff mechanism for certain cost components; (b) the ERC, with World Bank support under KEMP (P120014), is developing the sixth Cost of Service Study which will provide the baseline for the next tariff adjustment, the study is expected to be concluded during the first half of 2018; and (c) the financial health of the power sector is a key component of the overall policy dialogue with GoK and discussions are already underway for addressing the financial situation of KPLC. Analytical support is provided to develop financial models and business plans for the sector companies.

79. **Environmental and Social risks (Low).** KenGen has a relatively robust and effective environmental management system and occupational safety and health management system which is able to meet its business requirements in accordance with Kenyan laws and procedures and, in many respects, meets good international practice. However, KenGen's social risk management system is in the early stages of development. Given that this debt refinancing operation contains no social risks in and of itself, and given the priority KenGen is affording the development of a robust social risk management system and their currently adequate environmental risk management system, this transaction is considered to have low environmental and social risk. While the refinancing operation itself contains no discernable social risks, it will incentivize the development of a robust social risk management system and hence have a lasting impact on the social sustainability of KenGen's operations. This commitment is contained in the project results indicators.

VI. APPRAISAL SUMMARY

A. Economic and Financial Analysis

80. **Rationale for public sector provision/finance.** The proposed project leverages scarce public resources to gather private capital to support KenGen's business. Therefore, the project would utilize IDA support in the form of a guarantee to attract a large amount of private financing (in the form of commercial debt) at lower rates and longer tenor than KenGen can achieve on its own, to refinance a portion of KenGen's existing commercial debt. Following the successful experience with the IDA Guarantee for the KPLC, where there was excess demand from international and local commercial banks, it is anticipated that KenGen will be able to meet its debt restructuring objectives.

81. **Value added of the World Bank's support.** Successful World Bank experience with debt restructuring processes across Sub-Saharan Africa and beyond has signaled to the international and regional financial markets that an IDA Guarantee helps a financial transaction to indirectly benefit from IDA's strong sector dialogue and long-term partnership with its public-sector clients. The strength of IDA's involvement in the country and underlying sector is ultimately benefiting the implementation of the project, thereby giving commercial lenders sufficient comfort to support new commercial financing at competitive terms and on an only partially IDA-covered basis.

Economic Analysis

82. The economic viability of the project was assessed through the determination of the economic costs and benefits to be derived from the implementation of the proposed IDA Guarantee. However, the

measurement of net benefits for this type of project is more nuanced, mainly due to the difficulties in quantifying the effective economic benefits of an improved enabling environment for the private sector as a consequence of the IDA Guarantee. While three sources of economic benefits have been identified for this project (the opportunity cost in the use of public funds, the effective implementation of the G2G Strategy, and new geothermal capacity development), due to the difficulty in quantifying the net economic impact on the first two sources, the economic analysis focuses on quantifying the economic impact of preventing delays in the development of new geothermal capacity.

83. The economic analysis shows that the IDA Guarantee project is economically robust. Assuming the cost of the IDA Guarantee is represented by its face value (US$180 million plus fees), the net present value (NPV) for the proposed IDA Guarantee Project is US$78 million (at 6 percent discount rate), with an economic internal rate of return (EIRR) of 15 percent. Table 5 summarizes the results of the economic analysis. Annex 5 presents the details of the economic analysis of the project.

Table 5. Summary of the Economic Analysis

Discount rate	%	6
EIRR		
EIRR excluding environmental benefits	%	15
EIRR including environmental benefits	%	20
NPV		
NPV excluding environmental benefits	US$ million	78
NPV including environmental benefits	US$ million	130

Climate Co-Benefits

84. Climate co-benefits are estimated to be 100 percent. Through the implementation of the proposed project, aimed at creating the enabling environment for the sustainable development of renewable energy in Kenya, the project will contribute to climate co-benefits. The contribution of the proposed project has been estimated at 100 percent because the investment pipeline in KenGen only comprises the development of renewable energy technologies (mostly geothermal and wind) and because the proposed project supports the objectives developed in the National Geothermal Options Analysis.

Financial Analysis

85. Over the past five years, KenGen has significantly invested in diversifying its generation mix, seeking a higher contribution from renewable sources. Therefore, the installed power capacity has increased by nearly 500 MW and the power output across KenGen's portfolio of power plants rose by almost 40 percent between FY13 and FY17, mostly driven by the additions in geothermal capacity. This increase in power output was combined with an increase in the weighted average tariff earned by KenGen over the same period. These trends explain the doubling of KenGen revenues from KES 17 billion (US$198 million) in FY13 up to KES 35 billion (US$342 million) in FY17, +20 percent as annual compound average growth rate (CAGR) during the past five years. Table 6 summarizes the main figures for KenGen financial statements from FY13 to FY17.

Table 6. KenGen Historical Financial Highlights, FY13–FY17

KES, Millions	FY13	FY14	% Change	FY15	% Change.	FY16	% Change	FY17	% Ch.
Total sales (power, steam, drilling)	17,051	18,334	8	29,957	63	38,610	29	35,440	−8
EBITDA	10,930	11,057	1	17,821	61	26,494	49	22,954	−13
EBITDA margin (%)	64	60	—	59	—	69	—	65	—
Net income	**5,225**	**2,826**	**−46**	**11,518**	**nm**	**6,743**	**−41**	**9,057**	**−41**
Net income margin (%)	31	15	—	38	—	17	—	26	—
Total assets	188,673	250,206	33	342,520	37	367,249	7	377,197	3
Total equity	73,959	76,710	4	141,594	85	172,743	22	183,163	6
Total debt	80,935	136,115	68	146,619	8	136,906	−7	138,714	1
Net financial position	76,938	126,866	65	143,326	13	130,150	−9	130,883	−9
Gearing (%)	104	165	—	101	—	75	—	71	—
CAPEX	37,396	61,084	63	27,686	−55	27,545	−1	12,820	−53
CFO	22,963	12,107	−47	12,526	3	29,256	nm	9,299	nm
Free operating cash flow (FOCF)	3,561	632	—	−1,336	—	3,464	—	1,075	—

Source: KenGen Financial Statements.
Note: nm = not meaningful; EBITDA = Earnings before Interest, Tax, Depreciation, and Amortization; Net Financial Position = short-term financial debt + long-term financial debt − cash; Gearing = Net Financial Position/Net Equity.

86. The EBITDA margin was very erratic during this period, varying from 64 percent in FY13 down to 59 percent in FY15, and recovered to 65 percent in FY17. In absolute terms, the doubling of EBITDA over the past five years reflects the expansion in the revenue base, as a consequence of new generation capacity commissioning. In FY17, EBITDA dropped by 13 percent to KES 23 billion (US$221 million) versus the previous year, due to the decline in electricity revenues and larger fixed cost base as a result of the ongoing investment activities. The operating expenses (OPEX) cost base for KenGen has more than doubled over the past five years and now constitutes around 35 percent of total sales. The key drivers of costs are staffing costs, up by over 20 percent on an annual basis, and power plant operation and maintenance expenses, on the back of the significant capacity investment plan implemented.

87. As of June 2017, KenGen's debt portfolio of US$1.37 billion consisted of the following: (a) US$449 million of GoK-guaranteed loans; (b) US$623 million of GoK on-lent loans; and (c) around US$300 million in direct borrowings, of which only US$200 million is commercial debt and the remaining part is a public infrastructure bond. However, the portion of commercial debt has been increasing, as KenGen continues to use short-term borrowing to fund part of its investment plan. In spite of the predominantly concessional borrowing, during the past few years, KenGen's financial performance has been under

pressure, with liquidity levels below the required threshold. This deterioration, if continued, could potentially limit KenGen's ability to meet its financial obligations to lenders, shareholders, and suppliers.

88. KenGen's ability to generate cash to repay its debt as due, while implementing a new investment expansion program, could also be at risk as a consequence of the company's operating efficiency being under pressure in the medium-term and of power sales not being adequate enough to cover the increasing cost base as: (a) KenGen's power revenues through the PPAs do not fully factor in expansion in the company's cost base at the corporate level, as the PPAs only appear to consider expenses specifically related to each specific new power generation project; and (b) KenGen PPAs have limitations to fully contain the effects of local inflation and of Kenyan Shillings devaluation.

89. The historical financial analysis demonstrated that KenGen's financial performance changed significantly in accordance with the investment program implemented. Table 7 summarizes all the key financial ratios for KenGen during the past five fiscal years. For example, the increase in KenGen's total debt, to finance long-term investments and the size of the investment program in relation to the company's cash generation capacity, is reflected in the relatively high Net Debt on EBITDA ratio, standing at 5.7x in FY17. Nevertheless, its recent evolution was positive, declining from a very high level in FY14 (from 11.5x to 4.9x in FY16), owing to the right issue during FY16 that improved the company's cash position, in parallel with the slowdown of the company's investment plan during FY17 (see Table 7).

Table 7. KenGen Financial Indicators, FY13–FY17

	FY13	FY14	FY15	FY16	FY17
Total debt/total assets (%)	43	54	43	37	37
Total debt/equity (%)	109	177	104	79	76
Net debt/EBITDA	7.0	11.5	8.0	4.9	5.7
Net profit margin (%)	30.6	15.4	38.4	17.5	25.6
Return on Equity (ROE) (%)	7.1	3.7	8.1	3.9	4.9
Return on Total Assets (ROA) (%)	3.2	3.4	3.5	4.4	2.4

Source: KenGen Financial Statements.

Financial Projections

90. KenGen's financial projections for the period between July 1, 2018, and June 30, 2022, were elaborated by the company's financial adviser. Two scenarios were developed to assess KenGen's financial performance and operating efficiency under different conditions:

- **BAU scenario.** The BAU scenario assumes that KenGen makes an effort to finalize its renewable energy investment plan, without refinancing its short-term commercial loans.

- **Refinancing scenario.** This scenario assumes that the proposed project is implemented and that US$300 million of short-term commercial loans are refinanced, to support the company's cash flow generation during the implementation of the investment plan and to better guarantee its financial sustainability and solvability to lenders.

91. The analysis of financial projections for the two scenarios shows how much KenGen is currently in need of improving the financial sustainability of its expansion strategy while not compromising the growth targets in the power sector in Kenya through renewable energy development. Without the refinancing (BAU scenario), KenGen would be in breach of its major financial covenants with lenders, due to a drop in FCF generation and negative net cash position for the next couple of years (please refer to Annex 5 for further details).

92. Under the BAU scenario, KenGen's investment plan is expected to worsen key financial ratios. The two main financial ratios, current ratio and DSCR, are expected to strongly decline over the FY18 level, much below the covenants, which would significantly increase KenGen's risk of default in the short term i.e., for not being able to pay off its obligations toward lenders. This situation in the short term might seriously threaten the bankability of KenGen's current investment pipeline for renewable energy project, especially PPPs, which usually require stable financial conditions to attract credible private sector partners. The ratios are expected to be back to acceptable levels only after FY20/FY21, in conjunction with the slowdown of the investment pace and no new borrowings, as by that time the cash needed for debt repayment and interest expenses could be financed through working capital and new power sales injections.

93. Under the refinancing scenario, the analysis of KenGen's key financing ratios shows a much healthier financial situation for KenGen for the next couple of years when compared to the BAU scenario, with the current ratio and DSCR always above 1: this demonstrates that through the balance sheet restructuring, the company would be able to pay its short-term obligations with its current assets and meet annual payment requirements from lenders. The ROE is still low for both sets of forecasts, although growing from around 2.7 percent in FY18 to over 5 percent at the end of FY23.

B. Technical

94. The proposed project consists of an IDA Guarantee that will support KenGen in originating long-term commercial financing that will be used to restructure/refinance an expensive portion of KenGen's existing commercial loans.

95. Because the project will support a financial transaction with no underlying physical investments, it does not present any of the usual construction or operational challenges. The proposed project will be implemented by KenGen's Finance Department which has good experience with local commercial financing and the necessary structure to successfully manage the implementation, monitoring, reporting, and repayment of the commercial loan. The project also benefits from the lessons learned from previous World Bank guarantee projects; particularly, the IDA Guarantee provided to the KPLC as part of KEMP (P120014).

C. Financial Management

96. The use of proceeds from the commercial loan supported by the IDA Guarantee is to prepay existing commercial lenders. This process is managed by the MLA, which will act as the agent bank. The financial management of the underlying refinancing will include a flow of funds from the agent bank directly to the commercial banks to be prepaid and will not pass through KenGen. The commercial banks will provide KenGen and the World Bank with confirmations of prepayment.

D. Procurement

97. Procurement in IPF and other operational procurement matters and the Procurement Regulations for IPF Borrowers do not apply for this guarantee operation. However, the World Bank team has been kept appraised of the selection process KenGen has implemented for the procurement of the MLA for the debt facility. This selection has followed the Public Procurement and Asset Disposal Act (2015). The RFP was issued to the list of banks selected by KenGen on September 8, 2017. Proposal responses were received on October 6, 2017. KenGen's evaluation team has completed the evaluation process of the bids received from short-listed banks and the evaluation report has been approved by KenGen's board. The notification letter to the selected bank has been issued.

E. Social (including Safeguards)

98. Given the nature of the project in the form of a purely debt refinancing transaction with no underlying physical infrastructure investments, the proposed project is not expected to have any direct social impact.

99. As part of appraisal, an assessment of KenGen's social safeguards system has been conducted. The assessment confirmed that KenGen has adequate systems to handle occupational health and safety risks in project operations. However, the assessment revealed that KenGen has no formal social risk management system currently in place. KenGen has recognized this deficiency and is in the process of developing a system capable of managing its social risks. Moreover, given its engagements in the Kenya Electricity Expansion Project (KEEP - P103037) which was subject to an Inspection Panel request related to the financing of the 140 MW Olkaria IV (Geothermal) sub-project, KenGen has developed a sound understanding of the need for and the principles of social risk management (SRM) which has led to the development of an SRM system as a corporate priority. As such, KenGen is committed to: i) creating a Community Relations Department that will handle social safeguards and community relations the structure of which will be determined by KenGen's Board in May 2018; and ii) developing a robust SRM system including a system for assessing the social impacts of a project in addition to the environmental impacts already assessed; a Community Engagement Policy, (addressing grievance redress and focusing on engaging indigenous communities) and a land acquisition and resettlement policy.

F. Environment (including Safeguards)

100. Given the nature of the project in the form of a solely financial refinancing transaction with no underlying physical infrastructure investments, the proposed project is not expected to have any direct environmental impact.

101. As part of appraisal, an assessment of KenGen's environmental safeguards system has been conducted. The assessment confirmed that KenGen has adequate systems to handle environmental risks in project operations and implementation, and has a track record of complying with national environmental regulations, as well as meeting lender requirements as needed. KenGen's Environmental Management Systems are currently certified on ISO 14001:2004 and ISO 9001:2008[17], and KenGen has informed that it is in the process of transiting to ISO 14001:2015 and ISO 9001:2015 standards; this

[17] ISO 9001:2008 on Quality Management Systems

certification applies to all of its generation projects. In addition, KenGen has adequate qualified staff and procedures in place to effectively manage and monitor the implementation of legal environmental standards.

G. Other Safeguard Policies (if applicable)

102. Not applicable.

H. World Bank Grievance Redress

103. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service.

104. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org

VII. RESULTS FRAMEWORK AND MONITORING

Results Framework
Republic of Kenya
KenGen Guarantee Project

Project Development Objectives

The proposed development objective is to enhance KenGen's ability to attract long-term private capital for the sustainable development of renewable energy.

Project Development Objective Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Private Capital Mobilized		USD Million	$0	$300	Semi-annually	KenGen Semi-Annual Financial Statements	KenGen
Debt Service Coverage Ratio		Ratio	2.6[18]	1.3	Semi-annually	KenGen Semi-Annual Financial Statements	KenGen
Current Ratio		Ratio	1.5	1.1	Semi-annually	KenGen Semi-Annual Financial Statements	KenGen

[18] The baseline level of both, DSCR and Current Ratio represent the ratios as of end of FY17 (i.e. June 2017), the ratios are higher compared to the target due to one-time effect from the rights-issuance in 2016. In the absence of the IDA guarantee support, the DSCR is expected to fall to 0.2 and the Current Ratio is expected to fall to 0.7 in FY19.

Intermediate Results Indicators

Indicator Name	Core	Unit of Measure	Baseline	End Target	Frequency	Data Source / Methodology	Responsibility for Data Collection
Disclosure of Anti-bribery and Corruption Policy		Yes/No	No	Yes	Annual	KenGen	KenGen Company Secretary
Description: measures the disclosure on KenGen’s webpage of its anti-bribery and corruption policy.							
Disclosure of Board Charter and Policies on KenGen’s webpage and in its Annual Reports		Yes/No	No	Yes	Annual	KenGen	KenGen Company Secretary
Description: measures the disclosure on KenGen’s webpage and annual reports of the following: i) Board Charter; ii) Code of Ethics and Conduct; iii) Environmental, Social and Governance Policy; iv) Whistleblowing Policy; v) Procurement Policy; vi) Top ten contracts in terms of value; vii) the number of legal challenges to procurement decisions; and viii) major sources of revenues and expenditures.							
Disclosure of Sustainability Goals and Strategy		Yes/No	No	Yes	Annual	KenGen	KenGen Company Secretary
Description: measures the disclosure on KenGen’s webpage of its Sustainability Goals and Strategy.							
Disclosure of Community Engagement Policy		Yes/No	No	Yes	Annual	KenGen	KenGen Company Secretary
Description: measures the disclosure of a Community Engagement Policy consistent with international best practice (including provisions for enhanced engagement with vulnerable and marginalized groups such as indigenous people, and dispute resolution)							
Disclosure of Environmental and Social Management System		Yes/No	No	Yes	Annual	KenGen	KenGen Company Secretary
Description: measures disclosure of an Environmental and Social Management System consistent with international best practice (including: (i) policy on environmental and social assessment and management; (ii) procedure on identification of risks and impacts; (iii) management programs; (iv) organizational structure; (v) emergency preparedness and response plans; (vi) stakeholder engagement procedures; (vii) monitoring and review procedures; and (viii) land acquisition and resettlement policy and procedures).							

Target Values

Project Development Objective Indicators

Indicator Name	Baseline	End Target
Private Capital Mobilized	$0	$300
Debt Service Coverage Ratio	2.6[19]	1.3
Current Ratio	1.5	1.1

Intermediate Results Indicators

Indicator Name	Baseline	End Target
Disclosure of Anti-bribery and Corruption Policy	No	Yes
Disclosure of Board Charter and Policies on KenGen's webpage and in its Annual Reports	No	Yes
Disclosure of Sustainability Goals and Strategy	No	Yes
Disclosure of Community Engagement Policy	No	Yes
Disclosure of Environmental and Social Management System	No	Yes

[19] The baseline level of both, DSCR and Current Ratio represent the ratios as of end of FY17 (i.e. June 2017), The ratios are higher compared to the target due to one-time effect from the rights-issuance in 2016. In the absence of the IDA guarantee support, the DSCR is expected to fall to 0.2 and the Current Ratio is expected to fall to 0.7 in FY19.

ANNEX 1: DETAILED PROJECT DESCRIPTION

Republic of Kenya
KenGen Guarantee Project

Project Development Objective and Components

1. The proposed development objective is to enhance KenGen's ability to attract long-term private capital for the sustainable development of renewable energy.

2. The proposed project is composed of an IDA Guarantee of up to US$180 million, that will support KenGen in raising up to US$300 million in long-term commercial financing. This new commercial financing will be used to restructure/refinance an expensive portion of KenGen's existing commercial loans.

3. The proposed IDA Guarantee will accomplish this by enhancing KenGen's credit quality and enable the company to raise new commercial debt with lower interest rates and longer tenors than what is currently available to it. KenGen's existing commercial debt has interest rates ranging between 7 percent and 8 percent for tenors of 6 to 8 years[20]. IDA guaranteed new commercial debt is expected to reduce these rates and increase tenors.

4. Initial assessments indicate that the result of this operation would be a significant reduction of KenGen's financing costs while improving KenGen's ability to continue investing in low-cost supply of electricity. The operation aims to support KenGen to continue on the path to long-term financial sustainability by further strengthening its financial discipline on the part of the company and future investments that are prudent and affordable.

5. The preparation of the IDA Guarantee is underpinned by a comprehensive assessment of the financial situation and prospects of KenGen. Through the TA on Financial Advisory Services for Kenya Energy Utilities (P161773 funded by PPIAF), the World Bank has supported KenGen in the development of an investment and financing strategy, a new financial model, incorporating KenGen's investment plan and financing commitments. As part of this activity, KenGen's finance and planning teams have been conducting detailed financial projections under various scenarios of capital investments and financing costs, as well as an assessment of the financing options available to KenGen in the commercial market.

6. The assessment confirmed the urgent need and the benefits of a refinancing of a portion of KenGen's commercial debt, especially in the next few years. It also provided a clear indication of the annual investment that KenGen can afford in the medium term and of the negative financial impact that additional investment would have for the company and for the sector.

[20] KenGen was able to reach longer tenor (12 years) on a direct borrowing through a Public Infrastructure Bond.

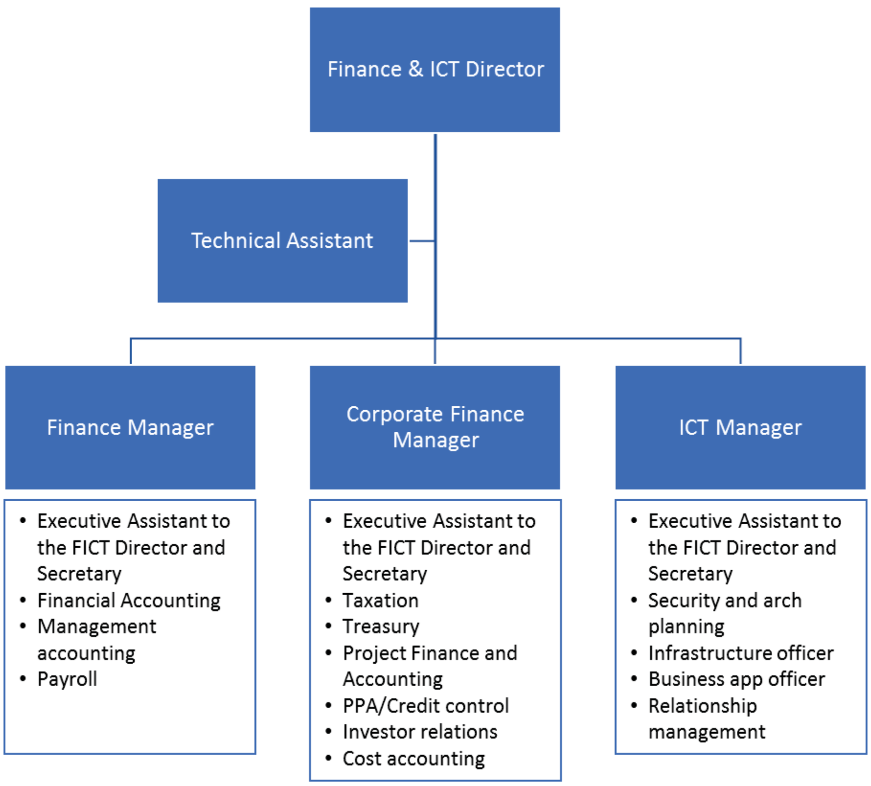
ANNEX 2: IMPLEMENTATION ARRANGEMENTS

Republic of Kenya
KenGen Guarantee Project (P162422)

Project Institutional and Implementation Arrangements

1. KenGen's Finance and ICT Division will be responsible for the overall implementation, coordination, and monitoring of the project. The Finance and ICT Division is managed by the Finance and ICT Director supported by three managers—Finance Manager, Corporate Finance Manager, and ICT Manager, each one of them with their subsequent reports. Figure 2.1 presents the organogram of the Division.

Figure 2.1. Organogram of KenGen Finance and ICT Division



2. To select the commercial bank that will act as the MLA and facilitate the origination of the new loan facility (of up to US$300 million that will be used to refinance a portion of KenGen's existing commercial loans), KenGen issued an RFP and invited local and international commercial banks to bid. KenGen's evaluation team has completed the evaluation process; the evaluation report has already been approved by KenGen's board approval and the selected commercial bank has been notified. KenGen is anticipating a fruitful negotiation and contract sign off with the MLA.

3. KenGen is also in the process of procuring external legal counsel to support the company in negotiating the final Loan Agreement. This is a critical component as this agreement will be the single

largest commercial Loan Agreement the company will sign and this sets a precedent for future agreements.

4. The contractual arrangements (as presented in Figure 6 above) for the commercial loan and the IDA guarantee will include: (i) a Loan Agreement between KenGen and the selected commercial lender acting as MLA; (ii) a Guarantee Agreement between IDA and the said MLA, as beneficiary of the IDA guarantee; (iii) Project Agreement between IDA and KenGen; and (iv) an Indemnity Agreement between Kenya and IDA. Annex 4 provides a summary of the key terms and conditions of these agreements. It is likely that the terms of the Guarantee Agreement will be incorporated within the Loan Agreement to be signed between KenGen and the selected commercial lender, thus making the Loan Agreement a tripartite agreement between IDA, the commercial bank, and KenGen.

Financial Management

5. The use of proceeds from the commercial loan supported by the IDA Guarantee is to prepay existing commercial lenders. This process is managed by the MLA, which will act as the agent bank. The financial management of the underlying refinancing will include a flow of funds from the agent bank directly to the commercial banks to be prepaid and will not pass through KenGen. The commercial banks will provide KenGen and the World Bank with confirmations of prepayment.

Disbursements

6. Not applicable.

Procurement

7. Procurement in IPF and other operational procurement matters and the Procurement Regulations for IPF Borrowers do not apply for this guarantee operation. However, the World Bank team has been kept appraised of the selection process KenGen has implemented for the procurement of the MLA for the debt facility. This selection has followed the Public Procurement and Asset Disposal Act (2015). The RFP was issued to the list of banks selected by KenGen on September 8, 2017. Proposal responses were received on October 6, 2017. KenGen's evaluation team has completed the evaluation process of the bids received from short-listed banks and the evaluation report has been approved by KenGen's board. The notification letter to the selected bank has been issued.

Environmental and Social (including safeguards)

8. As part of appraisal, an assessment of KenGen's social safeguards system has been conducted. The assessment confirmed that KenGen has adequate systems to handle occupational health and safety risks in project operations. However, the assessment revealed that KenGen has no formal social risk management system currently in place. KenGen has recognized this deficiency and is in the process of developing a system capable of managing its social risks. Moreover, given its engagements in the Kenya Electricity Expansion Project (KEEP - P103037) which was subject to an Inspection Panel request related to the financing of the 140 MW Olkaria IV (Geothermal) sub-project, KenGen has developed a sound understanding of the need for and the principles of social risk management (SRM) which has led to the development of an SRM system as a corporate priority. As such, KenGen is committed to: i) creating a

Community Relations Department that will handle social safeguards and community relations the structure of which will be determined by KenGen's board in May 2018; and ii) developing a robust SRM system including a system for assessing the social impacts of a project in addition to the environmental impacts already assessed; a Community Engagement Policy (addressing grievance redress and focusing on engaging indigenous communities) and a land acquisition and resettlement policy.

9. Given the nature of the project in the form of a solely financial refinancing transaction with no underlying physical infrastructure investments, the proposed project is not expected to have any direct environmental impact.

10. As part of appraisal, an assessment of KenGen's environmental safeguards system has been conducted. The assessment confirmed that KenGen has adequate systems to handle environmental risks in project operations and implementations, and has a track record of complying with national environmental regulations, as well as meeting lender requirements as needed. KenGen's Environmental Management Systems are currently certified on ISO 14001:2004 and ISO 9001:2008[21] and KenGen has informed that it is in the process of transiting to ISO 14001:2015 and ISO 9001:2015 standards; this certification applies to all of its generation projects. In addition, KenGen has adequate qualified staff and procedures in place to effectively manage and monitor the implementation of legal environmental standards.

Monitoring and Evaluation

11. There will be periodical reporting requirements, including quarterly reports (key financial ratios), semiannual reports (unaudited Balance Sheet, Profit and Loss and Cash Flow Statements), and the annual audited financial statements that will be prepared by KenGen's Finance and ICT Division. Through this reporting, the World Bank will be able to monitor KenGen's compliance with the financial covenants and ensure that the company uses a stricter financial discipline and proper financial planning, which are key for the financial sustainability path.

12. In addition, as part of the implementation of the TA on financial advisory services for Kenyan Energy Utilities (P161773, funded by the PPIAF), the capacity within the finance team is further strengthened through training on financial modeling preparation, financial ratios monitoring. The new financial model that has been developed through this activity, together with the training provided, have strengthened the finance team's capacity and ensure that they are well equipped to monitor the results and ensure that any decision-making process is supported by sound financial analysis.

13. Furthermore, there will be periodical reporting requirements on the implementation of intermediate results indicators, captured in the Project Agreement. The reporting on these indicators will be prepared by KenGen's Company Secretary.

[21] ISO 9001:2008 on Quality Management Systems

ANNEX 3: IMPLEMENTATION SUPPORT PLAN

REPUBLIC OF KENYA
KenGen Guarantee Project

Strategy and Approach for Implementation Support

1. The Implementation Support Plan explains how the World Bank will support the implementation of the IDA Guarantee as well as the risk mitigation measures which have been identified as part of this appraisal. The objective is to ensure that KenGen successfully implements the project to achieve the PDO through the indicators included in the Results Framework annex. The implementation support will be carried out in conjunction with other Bank-supported activities in the energy sector in Kenya to ensure complementarities and maximize synergies.

Implementation Support Plan and Resource Requirements

2. **Implementation Support Plan.** The level of technical support needed includes staff with energy sector knowledge and expertise, specialized commercial partial risk guarantee expertise including commercial legal counsel and financial experts, social and environmental specialists, and monitoring and evaluation expertise. The main focus in terms of support during implementation is summarized in Tables 3.1 and 3.2.

Table 3.1. KenGen IDA Guarantee Project Costs

Time	Focus	Skills Needed	Resource Estimate
First 12 months	Effectiveness, selection of banks, loan signature, political developments	Energy sector, financial, social, economist, legal	See below
12–36 months	Review of sector and KenGen's financial performance, Review of policy and regulatory environment	Energy sector, social, financial, economist	See below

Table 3.2. Matrix of Skill Mix Required

Skills Needed	Number of Staff Weeks (indicative, will be adjusted based on needs)	Number of Trips per Year (indicative, will be adjusted based on needs, and location of staff)
Team Leader	5	2
Infrastructure Finance Specialist (co-Task Team Leader)	5	2
Energy Sector Specialist	4	0
Financial Analyst	5	2
Energy Economist	4	1
Environmental Specialist	1	0
Social Specialist	1	0
Lawyer	4	1

ANNEX 4: INDICATIVE TERMS AND CONDITIONS OF THE GUARANTEE

REPUBLIC OF KENYA
KenGen Guarantee Project

KENYA: KenGen Guarantee Program Project
Preliminary Summary of Indicative Terms and Conditions
of the Proposed IDA Loan Guarantee

This term sheet contains a preliminary general summary of indicative terms and conditions of a potential IDA Loan Guarantee (the Guarantee) for a private-sector financing to be contracted by Kenya Electricity Generating Company (KenGen). These terms would be subject to further development based on KenGen's choice regarding the financing structure and the mix of financing sources to be used for refinancing of existing debt.

This term sheet does not constitute an offer from IDA to provide a Guarantee. The provision of the Guarantee is subject, inter alia*, to satisfactory appraisal by IDA of the operation, further consideration, selection, review and acceptance of the underlying financing structure and transaction documentation, and the approval of Management and the Board of Executive Directors of IDA in their sole discretion.*

IDA Guaranteed Loan (the Financing)	
IDA Guaranteed Loan Agreement	Agreement among the Borrower, the Agent on behalf of and/or the Lenders, subject to negotiations, setting out terms and conditions of the Financing, mechanism for payment on the Financing and containing the Guarantee.[22]
Borrower:	Kenya Electricity Generating Company (KenGen)
Guaranteed Lender:	Commercial bank lenders, or the Agent on their behalf, each to be identified, and subject to final negotiations
Currency:	USD
Principal Amount:	up to USD 300 million
Term:	up to 15 years
Repayment of the Financing:	semi-annual, subject to final negotiations
Loan Interest Rate:	Spread above LIBOR acceptable to IDA
Use of Proceeds:	Refinancing as required for commercial debt to improve financial viability of KenGen (up to USD 300 million)
Drawdown:	semi-annual, subject to final negotiations
IDA Guarantee Agreement	
Guarantor	International Development Association (IDA)
Guaranteed Beneficiaries	The Guaranteed Lender under the IDA Guaranteed Loan
Guarantee Face Value	Up to USD 180 Million

[22] The Guarantee could be contained in the IDA Guaranteed Loan Agreement or separately in an IDA Guarantee Agreement between IDA and the Agent on behalf of the Lenders.

Guarantee Support:	IDA would guarantee the payment, following occurrence of a Guaranteed Event, of principal and possibly interest amounts of the pre-agreed debt service payments, subject to final negotiations, due on scheduled payment dates up to the Maximum Guaranteed Amount.
Guaranteed Events:	Failure by the Borrower to make certain payments of principal and interest on, *or* repay at scheduled maturity the principal amount of the IDA Guaranteed Loan. The final guaranteed event will be agreed during negotiations with Guaranteed Lender.
Guarantee Period:	To be determined
Provisional Payments:	If required by Guaranteed Lender and subject to standard terms and conditions for these payments, IDA could make provisional payments to the Guaranteed Lender.
Maximum Guaranteed Amount:	A partial amount of financing, not to exceed the Guarantee Face Value.
Exclusions, Limitation/Suspension & Termination Events:	Standard exclusion, limitation/suspension and termination events for transactions of this nature.
Non-Accelerability of Guarantee:	The Guarantee cannot be accelerated and become payable prior to the scheduled debt service payment dates under any circumstances, including if the underlying Loan is accelerated as a result of a Guaranteed Event. In such instances, the Guarantee will cover payment of debt service up to the Maximum Guaranteed Amount in accordance with the original payment schedule.
Subrogation:	If and to the extent IDA makes any payment under the Guarantee, IDA will be subrogated immediately to the extent of such unreimbursed payment to the Guaranteed Lender's rights, provided IDA will not exercise such rights to the extent IDA is reimbursed for such payment by Republic of Kenya under the Indemnity Agreement.
Right to Offer to Purchase:	Upon payment default by Borrower, IDA will have the right to offer to purchase all rights, title and interests of the Beneficiaries in the Financing at par plus accrued and unpaid interest.
Guarantee Fee:	75 basis points per annum. The IDA guarantee fee is charged on that portion of the guaranteed amount that IDA has contractually committed and for which IDA has financial exposure under the guarantee. Payment of this fee is the obligation of KenGen and must be paid in either advance semi-annually payments, or in a one-time lump sum. Where the Guarantee Fee is payable in installments, The Guarantee will terminate in the event of nonpayment of any installment of the relevant Guarantee Fee.
Conditions Precedent to IDA Guarantee:	Usual and customary conditions for financing of this type including but not limited to the following: a) Provision of relevant legal opinions satisfactory to IDA (including a legal opinion from the appropriate official of Republic of Kenya relating to the Indemnity Agreement); b) Payment in full of the first installment of the Guarantee Fee (if invoiced); c) Conclusion of an Indemnity Agreement between IDA and Republic of Kenya, and any other applicable documentation, acceptable to IDA; and d) Satisfaction of any other conditions precedent under the financing documents.

Governing law:	English law or New York Law.
Indemnity Agreement	
Parties:	IDA and Republic of Kenya (the "Member Country")
Indemnity:	The Member Country will reimburse and indemnify IDA on demand, or as IDA may otherwise direct, for all payments under the Guarantee and all losses, damages, costs, and expenses incurred by IDA relating to or arising from the Guarantee.
Covenants:	Usual and customary covenants included in agreements between member countries and IDA.
Remedies:	If the Member Country breaches any of its obligations under the Indemnity Agreement, IDA may suspend or cancel, in whole or in part, the rights of the Member Country to make withdrawals under any other loan or credit agreement with IDA, or any IDA loan to a third party guaranteed by the Member Country, and may declare the outstanding principal and interest of any such loan or credit to be due and payable immediately. A breach by the Member Country under the Indemnity Agreement will not, however, forgive any guarantee obligations of the IDA under the Guarantee.
Governing Law:	The Indemnity Agreement will follow the usual legal regime and include dispute settlement provisions customary for agreements between member countries and IDA.
Project Agreement	
Parties:	IDA and the Borrower
Terms:	Agreement between Borrower and IDA with respect to implementation of the project setting out the requirements on institutional arrangements, use of proceeds, commitment to achievement of the intermediate results indicators, etc.

ANNEX 5: ECONOMIC AND FINANCIAL ANALYSIS

REPUBLIC OF KENYA
KenGen Guarantee Project

Project Development Impact

1. The proposed project aims to promote an enabling environment for attracting private capital to the renewable energy sector in Kenya by helping raise up to US$300 million in long-term commercial funding to refinance a portion of KenGen's existing commercial debt, thus improving KenGen's financial situation, enhancing FCF generation, and reducing financial interest charges with the extension of the tenor up to 15 years. The proposed IDA Guarantee will be structured as a credit enhancement tool to improve the company's credit profile to obtain competitive interest rates and longer tenors. The credit enhancement may take the form of direct debt service payment support, principal repayment guarantee at the end of the extended tenor, and/or first loss guarantee.

2. This project represents a direct implementation of the World Bank's MFD or 'cascade' approach, that aims at prioritizing the use of private sector finance whenever possible. To maximize the impact of scarce public resources, the 'cascade' first seeks to mobilize commercial finance, enabled by upstream reforms where necessary to address market failures and other constraints to private sector investment at the country and sector levels. This approach prescribes that first private investments and commercial financing for projects need to be considered, together with risk instruments to try to encourage private investments, then PPPs, and if the first two are not available then, only then, consider public and concessional financing.

3. The proposed project has multidimensional benefits across many stakeholders: (a) enhancing the financial performance of KenGen through the reduction of its financial costs and improvement of its liquidity and cash flows to face short-term commitments; (b) better and safer access to new borrowing opportunities for the private financial sector; and (c) minimizing the GoK's financial risks and use of public funding, owing to the greater involvement of private lenders in the project.

Rationale for Public Sector Provision/Financing

4. The project aims to promote the enabling environment to attract private capital for the sustainable development of renewable energy in Kenya. The project would utilize IDA support in the form of a guarantee to attract a large amount of private financing (in the form of commercial debt) at lower rates and longer tenor than KenGen can achieve on its own. Following the successful experience with the IDA Guarantee for the KPLC, where there was excess demand from international and local commercial banks, it is anticipated that KenGen will be able to meet its debt restructuring objectives. An IDA Guarantee will be backed by an Indemnity Agreement to be signed between IDA and the GoK, thus reducing the risk of the Government's action or non-action that would impact the project.

Value Added of the World Bank's Support

5. Successful World Bank experience with debt restructuring processes across Sub-Saharan Africa and beyond has signaled to the financial market that an IDA Guarantee used as part of a comprehensive sector dialogue is able to provide private lenders with enough comfort to support a refinancing

mechanism. Also, the World Bank is at the forefront in supporting Kenya's efforts to reform its power sector and establish efficient commercial operations; thus, it is uniquely positioned to provide TA on institutional, organizational, and regulatory aspects. Kenya needs to attract private capital to support its aspirations to scale up infrastructure development, particularly in the energy sector. However, key power sector players have limited relationships with commercial banks and risks of lending to power sector entities remain high. The use of targeted IDA Guarantees for sectoral risk mitigation represents an efficient use of the available IDA allocation to leverage substantial amounts of private capital at competitive rates. Increasing the share of commercial debt along with World Bank support not only shows private lenders and investors that the company is determined to be more commercially oriented but also that the World Bank is a strategic partner in this effort.

Economic Analysis

6. The economic viability of the project was assessed through the determination of the economic costs and benefits for Kenyan power sector coming from refinancing a portion of KenGen's commercial debt and the implementation of the proposed IDA Guarantee. However, the measurement of net benefits for this type of project is more nuanced, mainly due to the difficulties in quantifying the effective economic benefits of an improved and more enabling environment for the private sector as a consequence of the IDA Guarantee implementation. Three sources of economic benefits have been identified as part of this project:

(a) **Opportunity cost in the use of public funds.** These are represented by the economic benefits derived from avoiding the need for the GoK to provide direct public support to KenGen. Because KenGen's financial needs would be now covered with private sector capital, the GoK could use those funds in other sectors where the use of public funds is required due to the limited appetite of the private sector.

(b) **Effective implementation of the G2G Strategy.** Through the promotion of stronger financial discipline and an enhanced corporate governance structure, the project will contribute to promoting the enabling environment for sustainable development of renewable energy in Kenya and, consequently, the development objectives of the GoK, enshrined in Kenya Vision 2030.

(c) **New geothermal capacity development.** The debt restructuring process is crucial for the successful implementation of the company's investments pipeline; should the project not be implemented, the new renewable energy investments risk being delayed by at least one or two years, with the potential of creating additional costs for the system.

7. The determination of the economic benefits derived from the opportunity cost in the use of public fund could be potentially qualitative, conducted by highlighting the difference in costs and returns between, on the one side, the implementation of the proposed IDA Guarantee and, on the other, the need for the shareholders (including the GoK) to inject additional capital to refinance KenGen's potential shortfall. However, such approach would require making assumptions on the ownership structure of the company, something that is considered highly difficult. In addition, due to the difficulties in measuring the economic benefits derived from a better corporate structure, no quantitative analysis is provided for the economic benefits of supporting the effective implementation of the G2G Strategy.

8. Therefore, the economic analysis focuses on determining the economic benefits from preventing a delay in the development of new geothermal capacity in Kenya.

Methodology and Assumptions

9. The net economic benefits for the project were calculated by comparing the incremental generation costs for the scenarios 'with project' and 'without project', under the same steady power demand growth outlook. Basically, the model assumes that if geothermal power plants without secured financing (for instance, Olkaria VI, Olkaria VII or Olkaria VIII) are delayed due to financial difficulties, then additional generation will be required to serve the load. This additional generation at the margin is assumed to be provided by existing thermal capacity running on heavy fuel oil (HFO).

10. The net economic benefit of the project is determined following a conservative approach using an avoided cost methodology and calculated as the difference in the cost base between the two scenarios: 'with project' (geothermal investment plan fulfilled, commercial debt and IDA Guarantee issued) and 'without project'. Under the 'without project' scenario, it has been assumed that (a) no commercial debt is disbursed to KenGen and no IDA Guarantee implemented; (b) therefore, the commissioning of the new geothermal capacity without secured financing (for simplicity, we only assume the Olkaria VI project [140 MW]) would be delayed with respect to KenGen's investment plan, due to the company's financial shortfall; and (c) existing thermal power plants would be needed to compensate for the power not served by the delay in commissioning geothermal.

11. Table 5.1 summarizes the estimated production output (GWh denominated) and generation costs (expressed in US$ millions) for the new geothermal capacity and the existing thermal IPPs for both scenarios, with and without the IDA Guarantee project.

12. On the generation output and cost side, the following elements have been considered for the analysis of the power generation capacity and the estimate of its cost base for the two scenarios (see Table 5.1):

(a) **Fuel cost.** This represents the HFO consumed in generating power by the three thermal IPPs. In this case, where historical information was available, it was used; for the projections, the HFO prices have been correlated to the average annual crude oil price forecasted by the World Bank Group.

(b) **Fixed and variable operations and maintenance (O&M) expenses.** For the new geothermal capacity, the estimated costs used for the analysis were elaborated by KenGen (through the PPIAF-funded TA support). With regard to the three thermal IPPs, the main reference for O&M cost base forecasts is the World Bank's Implementation and Completion and Results Report for the Private Sector Power Generation Support Project (Report No. ICR120543).

(c) **Capacity factor.** It is assumed that the new geothermal power plants will start to generate at full capacity the year after the station's commissioning. The load factors used for the scenario 'with project' in 2019–2025 are the following:

(i) An average 12 percent for the thermal IPPs.

(ii) For the geothermal plants, an 80 percent capacity factor has been assumed once the power plants are full—on-stream full capacity from FY22 (54 percent and 74 percent during the first years of commissioning).

The scenario 'without project' considers the following: the geothermal capacity on Olkaria VI project (140 MW), expected to be commissioned in FY21 is delayed until FY24[23]; and the lower generation output from this geothermal plant is compensated by increased production by thermal IPPs.

Table 5.1. Economic Analysis: Impact of New Geothermal Capacity Delay

With IDA Guarantee project (no geothermal delay)							
Fiscal Year	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Period	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**
Production output (GWh)							
Thermal IPPs	309	309	286	286	263	263	263
New geothermal	0	2,437	3,324	3,571	3,571	3,571	3,571
Load factor (%)							
Thermal IPPs	14	14	13	13	12	12	12
New geothermal	0	54	74	80	80	80	80
Generation costs (US$, millions)							
Thermal IPPs	39	39	37	37	34	35	35
New geothermal	0	41	56	62	63	64	66
Total	**39**	**81**	**93**	**99**	**98**	**99**	**101**
Without IDA Guarantee project (Olkaria VI delay)							
Fiscal Year	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Period	**2018/19**	**2019/20**	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**
Production output (GWh)							
Thermal IPPs	309	309	1,020	1,267	1,244	582	337
New geothermal	0	2,437	2,590	2,590	2,590	3,252	3,498
Load factor (%)							
Thermal IPPs	14	14	46	58	57	26	15
New geothermal	0	0	54	74	80	80	80
Generation costs (US$, millions)							
Thermal IPPs	39	39	131	164	163	77	45
New geothermal	0	41	43	50	54	61	65
Total	**39**	**81**	**174**	**214**	**217**	**138**	**110**

Greenhouse Gas (GHG) Estimation and Climate Co-benefits

13. The delay in the commissioning of geothermal plants will affect the generation mix between 2021 and 2025, as thermal plants may be needed to cover the electricity demand. The expected GWh to be

[23] Financial projections under the BAU scenario show that KenGen financial indicators would return to sustainable levels within three years.

replaced each year between 2021 and 2025 is 3,088 GWh. Based on the emission factors from geothermal and HFO generation and the greenhouse gas (GHG) emission trajectory of the project scenario (with project) and baseline scenario (without project), the result is that the project will abate GHG emission of about 1.67 million tCO_2.[24]

14. Through the implementation of the proposed project, aimed at creating the enabling environment for the sustainable development of renewable energy in Kenya, the project will contribute to climate co-benefits. The contribution of the proposed project has been estimated at 100 percent because the investment pipeline in KenGen only comprises the development of renewable energy technology (mostly geothermal and wind) and because the proposed project supports the objectives developed in the National Geothermal Strategy.

Results

15. The net economic benefits in Kenya's electricity generation derived from the implementation of the project and the total generation costs for the power capacity used in both scenarios are shown in Table 5.2. Assuming the cost of the IDA Guarantee is represented by its face value (US$180 million plus fees), the baseline NPV (excluding environmental impacts) for the proposed IDA Guarantee is estimated at US$78 million (at 6 percent) discount rate, with an EIRR of 15 percent. If the impact of the net emissions reductions is included, the NPV of the project is US$130 million with an EIRR of 20 percent.

Table 5.2. Main Highlights for the Economic Analysis Results (US$, millions)

Fiscal Year	Period	With Project		Without Project	Net Economic Benefit	Net Emissions Reductions	Net Economic Benefit (including environmental)
		World Bank Guarantee (including fees)	Generation Costs	Generation Costs			
FY18	2017/18	−199	0	0	−199	0	−199
FY19	2018/19	—	39	39	0	0	0
FY20	2019/20	—	81	81	0	0	0
FY21	2020/21	—	93	174	81	16	97
FY22	2021/22	—	99	214	115	22	138
FY23	2022/23	—	98	217	119	23	142
FY24	2023/24	—	99	138	39	8	47
FY25	2024/25	—	101	110	9	2	17
				Discount Rate	**6%**		**6%**
				NPV	**$78**		**$130**
				EIRR	**15%**		**20%**

Sensitivity Analysis

16. A sensitivity analysis was run to test the robustness of the economic viability of the project to changes in the opportunity cost scenario. An analysis was performed with a scenario of a delay in the

[24] Carbon prices extracted from the 2017 Shadow Price of Carbon Guidance Note, low price scenario.

commissioning of Olkaria VI. Under the analysis, a two year delay in the commissioning of Olkaria VI project would still provide a positive NPV (considering environmental benefits).

Table 5.3. Sensitivity Analysis Results

	Base (3 yrs delay)		Sensitivity Scenario: 2 yrs delay	
	excl. environ. benefits	incl. environ. benefits	excl. environ. benefits	incl. environ. benefits
NPV (US$ million)	78	130	-5	31
EIRR (%)	15	20	5	10

Financial Analysis

17. The following financial analysis was performed on the basis of KenGen's audited financial statements for the fiscal year ended on June 30 of 2013, 2014, 2015, 2016, and 2017. Financial projections were prepared by KenGen's transaction adviser.

Historical Financial Performance: Power Output and Revenues

18. Table 5.4 analyzes KenGen's main revenue-generating activities both in terms of its core underlying business and diversification into new revenue streams.

Table 5.4. KenGen Key Revenue Indicators

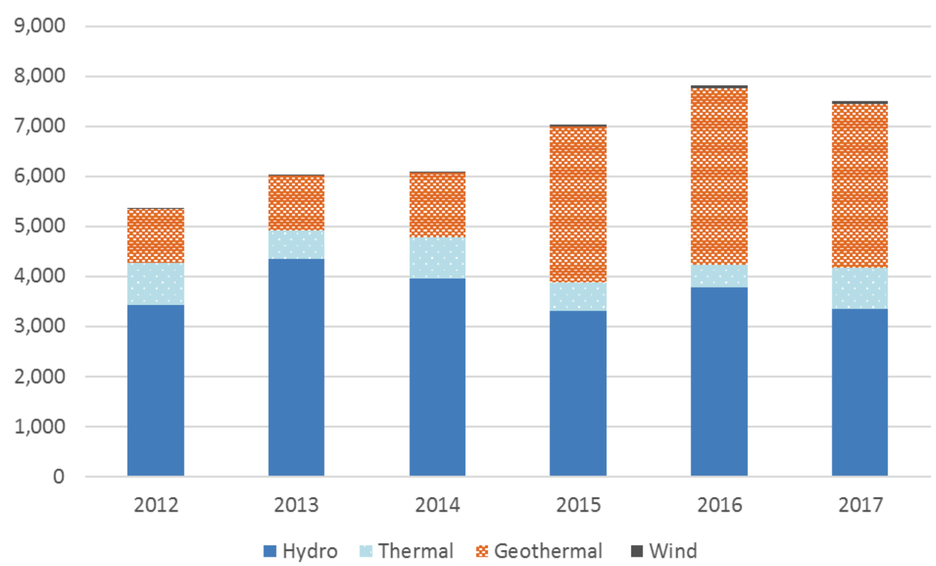
		FY13	FY14	% Change	FY15	% Change	FY16	% Change	FY17	% Change
Power output	GWh	6,104	6,173	1	7,195	17	7,993	11	7,556	−5
Total revenues	KES, millions	17,051	18,334	8	29,957	63	38,610	29	35,440	−8
Electricity revenues by payment	Capacity	12,621	13,241	5	19,102	44	21,262	11	21,714	2
	Energy	3,276	3,655	12	6,206	70	7,671	24	7,293	−5
	Forex	555	527	−5	294	−44	610	nm	362	nm
Revenues by technology	Hydro	8,529	8,870	4	9,044	2	9,188	2	8,621	−6
	Geothermal	4,005	4,157	4	12,190	nm	15,486	27	16,102	4
	Thermal	3,828	4,279	12	3,767	−12	3,799	1	3,764	−1
	Wind	90	117	30	603	nm	460	−24	520	13
Revenues by activity	Electricity	16,451	17,424	6	25,602	47	29,543	15	29,369	−1
	Steam	58	193	nm	3,689	nm	6,856	nm	5,189	nm
	Drilling						1,078		882	

Source: KenGen Financial Statements.
Note: nm = not meaningful.

19. The key power plants in KenGen's portfolio are hydro, geothermal, thermal, and wind, with some solar on-grid projects expected to be developed over the next few years' term. Output and revenues derived from hydro and thermal plants have remained reasonably constant over the last five years, while geothermal power output and revenues have dramatically increased. Wind revenues and electricity production, while a small contributor to the total, have also grown over the period as Ngong I and II have been commissioned. In addition to revenues from electricity output, KenGen has been able to increase income from other business activities, such as steam sales and drilling services.

20. The electricity output is determined by the installed capacity of KenGen's portfolio of power plants at any given time and the capacity utilization of each plant. Over the past five years, KenGen has significantly invested in diversifying its generation mix seeking a higher contribution from renewable sources. Since 2011, the installed power capacity has increased by nearly 500 MW overall; consequently, the power output across KenGen's portfolio of power plants increased by 30 percent in total during 2012–2017 (see Figure 5.1)[25], driven by the additions in geothermal capacity in 2015 and 2016. This increase in output was combined with an increase in the weighted average tariff earned by KenGen over the period. The tariff increase was significant, +36.5 percent for the average price earned by the geothermal capacity from 2014–2016, which reflects the larger output sold under energy contracts for the period. These factors explain the doubling of KenGen revenues from KES 17 billion in FY13 (US$198 million in FY13) to KES 35 billion up to FY17 (US$342 million in FY17), +20 percent as CAGR during the past five years.

Figure 5.1. KenGen Sold Power Output by Technology (in GWh, FY12–FY17)



Source: KenGen and KPLC Financial Statements.

21. KenGen financial performance and debt-carrying capacity is largely determined by electricity sales, which are directly linked to the tariff formula included in the different PPAs. The tariff formulas remunerate the effective installed capacity as well as the sales volumes, with the exception of wind power plants, which receive a feed-in tariff exclusively for the amount of the energy generated. The tariff formula

[25] During FY17, KenGen's dispatch decreased due to: i) a severe drought which affected hydropower generation; ii) evacuation constrains affecting geothermal generation; and iii) decommissioning of Lamu and Garissa thermal power plants.

has components which are fully indexed and others that are partially indexed (does not allow 100 percent pass-through of inflation costs), creating some potential revenue risks for KenGen.

Historical Financial Performance: Income Statement

22. Table 5.5 summarizes KenGen's income statement highlights for the period from July 1, 2013, to June 30, 2017. KenGen's profitability is affected by the growing operating costs associated with the expansion of power generation business and revenues. The core operations associated with these costs are driven by the specific operating and maintenance requirements of each power plant and by the overheads allocated to those plants. At the corporate level, the increase in operational earnings (EBITDA) and in earnings before interests and taxes (EBIT) in absolute terms reflects the growing revenue base (+20 percent as CAGR between FY13 and FY17), as a consequence of new generation capacity commissioning.

23. However, the EBITDA margin fell from 64 percent in FY13 to 59 percent in FY15 and recovered to 65 percent in FY17. The OPEX cost base for KenGen has more than doubled over the last five years: in particular, the fast pace in the commissioning of new power plants during the first years of the analyzed period has pushed KenGen's OPEX upward as a percentage of total sales, from 35 percent in 2013 to 41 percent in 2015, after stabilizing around 30–35 percent together with the slowdown of the power generation investments. The key drivers of OPEX are staffing costs, which have increased over 20 percent annually and O&M costs, which have remained broadly stable during the past five years. The rise in personnel expenses is linked to the additional short-term workers hired at the corporate level by KenGen, to deal with the growing business structure.

Table 5.5. KenGen Historical Profit and Loss Highlights

Amounts in KES millions / %	FY13	FY14	% Change	FY15	% Change	FY16	% Change	FY17	% Change
Total sales (power, steam, drilling)	17,051	18,334	8	29,957	63	38,610	29	35,440	−8
Operating costs	−6,121	−7,277	19	−12,136	67	−12,116	0	−12,486	3
EBITDA	10,930	11,057	1	17,821	61	26,494	49	22,954	−13
EBITDA margin (%)	64	60		59		69		65	
EBIT	6,352	6,329	0	11,342	79	16,271	43	13,709	−16
EBIT margin (%)	37	35		38		42		39	
Financial interest	−2,325	−2,171	−7	−2,652	22	−2,576	−3	−2,175	−16
Compensating tax	0	0		0		−2,431		0	
Taxes	1,198	−1,332	nm	2,827	nm	−4,521	nm	−2,477	nm
Net income	5,225	2,826	−46	11,518	nm	6,743	−41	9,057	34
Net income margin (%)	31	15		38		17		26	

Source: KenGen Financial Statements.
Note: nm = not meaningful.

24. Finance costs (Interests on loans) have increased from KES 2.3 billion in FY13 to KES 2.6 billion in FY16, reflecting the financing efforts related to the investment plan, while in FY17, they dropped to KES

2.18 billion, due to the temporary slowdown in the investment process. Despite the greater asset base during the period, KenGen was capable of containing the group financial pressure, owing to the nature of the concessional borrowing mostly used by the company, which allows a grace period and low interest rates that maintained its financial expenditure at bay. In FY17, the company's net profit for the year increased by 34 percent to KES 9.1 billion (US$91 million) compared to FY16, owing to lower tax pressure and no compensating tax as in the previous year.

Historical Financial Performance: Balance Sheet and Cash Flows

25. Table 5.6 summarizes KenGen's balance sheet and cash flow statements' highlights for the period from July 1, 2013, to June 30, 2017. Due to an accelerated pace of investments in new geothermal capacity, KenGen's balance sheet has doubled over the past five years, with the asset base passing from KES 189 billion in FY13 (US$2,191 million) to KES 377 billion in FY17 (US$3,772 million). Net financial position doubled from KES 77 billion in FY13 (US$893 million) to KES 131 billion in FY17 (US$1,309 million), driven by an increase in KenGen's access to loans onlent by the GoK (additional KES 55 billion overall from FY13 to FY17) and through loans guaranteed by the GoK over the period (additional KES 15 billion). KenGen's hard currency borrowing is long tenor, averaging 15 years, reflecting the appetite of concessional lenders and the long-term financial requirements of the underlying projects that each loan supports. Currently, the proportion of borrowings by tenor over time stands at 44 percent of total debt maturing within the next five years, while the remaining 60 percent of the debt is due after five years.

Table 5.6. KenGen Historical Balance Sheet and Cash Flow Statement Highlights, FY13–FY17

KES, millions	FY13	FY14	% Change	FY15	% Change	FY16	% Change	FY17	% Change
Total assets	188,673	250,206	33	342,520	37	367,249	7	377,197	3
Total equity	73,959	76,710	4	141,594	85	172,743	22	183,163	6
Total debt	80,935	136,115	68	146,619	8	136,906	−7	138,714	1
Short-term borrowings	7,000	13,791	97	9,427	−32	10,757	14	10,830	1
Long-term borrowings	73,934	122,324	65	137,191	12	126,149	−8	127,884	1
Cash	3,996	9,249	nm	3,292	−64	6,756	105	7,831	16
Net debt (net financial position)	76,938	126,866	65	143,326	13	130,150	−9	130,883	1
CAPEX	37,396	61,084	63	27,686	−55	27,545	−1	12,820	−53
CFO	22,963	12,107	−47	12,526	3	29,256	nm	9,299	nm
FOCF	3,561	632		−1,336		3,464		1,075	

Source: KenGen Financial Statements.
Note: nm = not meaningful.

26. KenGen's revenues from power sales can almost only grow through additional investments to expand existing plants and bring new power plants online. As such, and in line with the broader strategic objective of increasing access to reliable energy for economic growth in Kenya, KenGen has high and growing CAPEX, which has tripled between FY11 and FY14 to finance mainly its geothermal assets. Since

FY12, the amount of CAPEX has always exceeded the company's EBITDA, meaning that CFOs have not been large enough to cover the rising investments in new infrastructure and that external financing has been essential to close the financial gap.

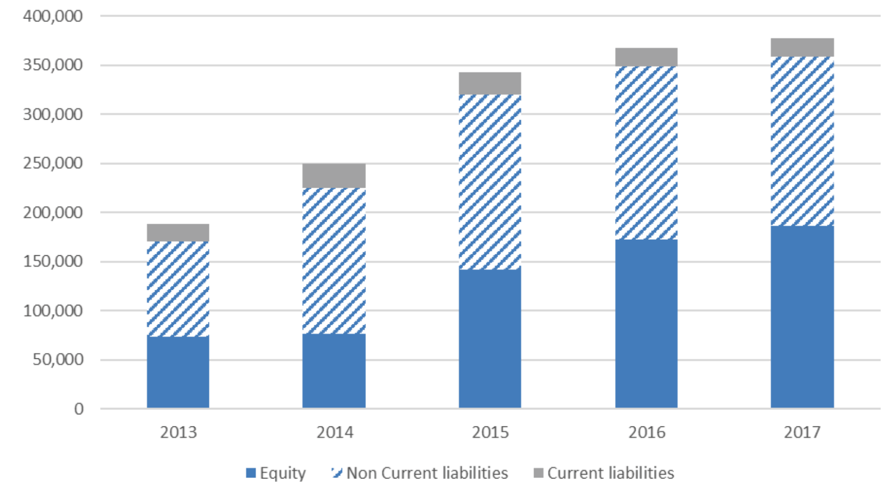
27. KenGen's current (FY17) debt portfolio of US$1.37 billion consists of the following: (a) US$449 million of GoK-guaranteed loans; (b) US$623 million of GoK on-lent loans; and (c) around US$300 million in direct borrowings, of which US$200 million is commercial debt[26] and the remaining part is a public infrastructure bond. It is evident from the above analysis how KenGen relies heavily on concessional financing, with only 22 percent of its debt portfolio comprising commercial borrowing (15 percent commercial lenders plus 6 percent public infrastructure loan). In spite of predominantly concessional borrowing, during the past three years, KenGen's financial performance has been under pressure as the company had liquidity levels below the required threshold.

28. During FY16, KenGen undertook some measures to restructure its balance sheet. In May 2016, KenGen launched a rights issue of KES 28.8 billion (US$291 million) in which the GoK opted to pay for its shares (KES 20.2 billion) by converting on-lent loans. This de-levered the company's balance sheet from a 60 percent ratio to 53 percent, thereby allowing KenGen to raise debt for new projects. While successful in helping with improvement on the leverage ratio, the rights issuance achieved only 92 percent uptake, which led to GoK temporarily increasing its shareholding in KenGen to 73.92 percent as of June 2016 (from previous 70 percent).[27]

29. Since FY13, the leverage has remained at an acceptable range of 50 percent as a proportion of all assets during the examined period (see Figure 5.2), while the net debt on EBITDA reached a critical level in FY14 (11.5x), suggesting that in that year such a level of CAPEX might not have been sustainable by the company's own cash flow generation. This ratio has decreased to 8x in FY15 and further down to 4.9x in FY16, owing to the coming online of the new power plants, the gradual investment cost recovery, and the reduction in the amount of new loans.

[26] As the company continues to acquire commercial debt in its normal course of business, the final figure of commercial debt to be refinanced is to be determined.
[27] Later in February 2017, KenGen was able to sell the remaining part of the rights issue shares, thus bringing the GoK's shareholding to the original 70 percent.

Figure 5.2. Composition of KenGen's Capital Structure (KES, millions), FY13–FY17



Source: KenGen Financial Statements.

Historical Financial Ratios of KenGen

30. Table 5.7 summarizes all the key financial ratios for KenGen for the past five fiscal years. The increase in KenGen's total debt, to finance long-term investments and the size of the investment program in relation to the company's cash generation capacity, is reflected in the relatively high Net Debt on EBITDA ratio, standing at 5.7x in FY17: nevertheless, its recent evolution was positive, declining from a very high level in FY14 (from 11.5x to 4.9x in FY16). Such a high Net Debt on EBITDA ratio can also be explained by KenGen's power revenues that are currently not expanding enough to generate adequate cash flows from operations to repay financial outflows and finance the investment program. For this reason, the refinancing of short-term commercial debt is necessary to meet KenGen's current need of fueling the operating cash flow and repaying the financial interests.

Table 5.7. KenGen Historical Financial Indicators, FY13–FY17

	FY13	FY14	FY15	FY16	FY17
Total Debt/Total Assets	43%	54%	43%	37%	37%
Total Debt/Equity	109%	177%	104%	79%	76%
Net Debt/(Net Debt + Equity)	52%	64%	51%	44%	43%
Gearing (Net Debt/Equity)	104%	165%	101%	75%	72%
Net Debt/EBITDA	**7.0**	**11.5**	**8.0**	**4.9**	**5.7**
EBITDA/Interest Expenses	**4.7**	**5.1**	**6.7**	**10.3**	**10.6**
Interests/Revenues	17.6%	14.1%	10.0%	8.1%	12.3%
CFO/Net Debt	29.8%	9.5%	8.7%	22.5%	7.1%
FOCF/Net Debt	4.6%	0.5%	-0.9%	2.7%	0.8%
CFO/CAPEX	61.4%	19.8%	45.2%	106.2%	72.5%
Profit margin	24.5%	23.9%	33.9%	38.1%	25.6%
ROE	7.1%	3.7%	8.1%	3.9%	4.9%
ROA	3.2%	3.4%	3.5%	4.4%	2.4%

Current ratio	**1.42**	**1.10**	**0.95**	**1.20**	**1.48**
DSCR	**1.24**	**0.99**	**1.16**	**2.59**	**2.57**
Self-Financing Ratio	**27%**	**17%**	**41%**	**61%**	**70%**

Source: Elaborations on KenGen Financial Statements.

31. KenGen can rely on a large cushion in terms of the ability of EBITDA to service the interest payments on its debt: EBITDA on Interest Expenses ratio stands at well over 10x, double the FY13 level. This is in large part because KenGen's cost of debt is highly concessional due to the GoK's explicit and implicit support and to the recent loan conversion into equity. Provided that KenGen is able to access debt on similar terms in the future, there is still room to increase borrowing.

32. KenGen's Current Ratio, DSCR, and Self-Financing Ratio are all in compliance with the covenant levels indicated in Table 5.8. The historical financial analysis demonstrated that KenGen's financial structure changed significantly over time in accordance with the investment program implemented. However, the fast investment pace does not reconcile with KenGen's moderate revenue growth.

33. Given the 'one-time' nature of the improvement in financial ratios in the past three years, the financial analysis of KenGen data indicates the need for the company to further strengthen financial discipline to access more favorable borrowing terms with commercial lenders to be able to meet its long-term obligations in a sustainable manner. KenGen's low cash flow available for debt service (Net Debt/EBITDA ratio) and relatively high debt service obligations have resulted in a DSCR for KenGen equal to 0.99x in FY14 and to 1.16x in FY15, both below the financial sustainability threshold set by the World Bank as the minimum level of debt service able to promote the company's financial health (1.3x). While the FY16 ratio at 2.59x is a significant improvement from the previous years, this is primarily attributable to KenGen's rights issues; for the same reason, the DSCR in FY17 was kept as high as 2.57x, still benefiting from the positive effects of the rights issue and of the slowdown in power generation investment plan.

Table 5.8. KenGen Financial Ratios and Covenants, FY13–FY17

	Sustainability Thresholds	FY13	FY14	FY15	FY16	FY17
Current Ratio	1.1	1.42	1.10	0.95	1.20	1.48
DSCR	1.3	1.24	0.99	1.16	2.59	2.57
Self-Financing Ratio (%)	≥25	27	17	41	61	70

Source: KenGen Financial Statements.

34. Although the rights issue created room for additional borrowing, it would be hard for KenGen to continue to raise external financing without further strengthening its balance sheet. So far, the heavy reliance on donor financing has limited the incentives for the company to move toward a more financially sustainable future. On the other hand, commercial lenders typically instill more financial discipline in companies, as they have to adhere to strict enforcement of financial covenants and increased reporting obligations to show lenders that the company is moving in a commercial direction.

Analysis of KenGen Financial Projections

35. KenGen's financial model and cash flow projections for the project for the period from July 1, 2018, to June 30, 2022, were elaborated by the company's financial adviser. Two scenarios were

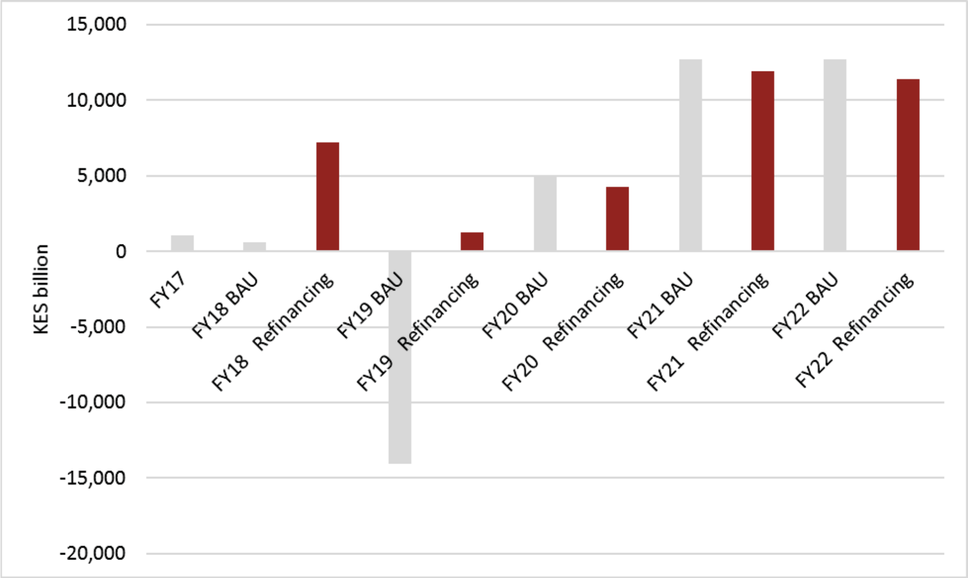
developed on the back of the financial forecasts to assess KenGen's financial performance and operating efficiency.

- **BAU scenario:** This scenario pushed KenGen to finalize its investment plan, without refinancing its expensive commercial loans.
- **Refinancing scenario:** This scenario assumes that the project is implemented and the US$300 million of short-term commercial loans are refinanced to enable better financial sustainability for the company during its important investment plan period (FY18 and FY19).

36. Financial cash flow projections and KenGen's business development sustainability highly depend on the refinancing of US$300 million of loans, to help the company strengthen its balance sheet and be able to meet its ongoing payment obligations for the medium term. Estimates elaborated for both scenarios show the same evolution in CAPEX, meaning that the new power generation investment plan remains unvaried. In particular, after a decline in capital invested between FY16 and FY17, from KES 27.5 billion (US$266 million) to KES12.8 billion (US$124 million), CAPEX is expected to go back to increase during the following two years and reach KES 47.6 billion in FY18 and KES 88.6 billion in FY19, respectively, when the bulk of the geothermal power investment plan is expected be implemented.

37. A comparison between 'with and without project' scenarios shows that cash flow projections in the BAU scenario would rapidly deteriorate and lead to a considerable cash deficit in FY19, with cash shortfall of KES 5 billion as well as negative FCF generation (KES 14 billion): potentially, this situation would not allow KenGen to meet its short-term financial obligations through internal resources. The deterioration of KenGen's financial position between FY17 and FY19 in the BAU scenario is related to the fact that KenGen aggressive investment plan may not be really bankable under the BAU scenario, leading to delay in the implementation of the pipeline of projects without secured financing.

Figure 5.3. KenGen's Free Cash FlowFCF, 'BAU' and 'Refinancing' Scenarios



38. Both BAU and refinancing scenarios show a similar evolution in the operating profitability for KenGen: EBIT is expected to drop by almost 19 percent overall to around KES 11 billion in FY19 (around US$98 million), due to the fast-growing operating cost base for the new power projects, the additional expenses at corporate level, and weak increase of power revenues. Similarly, in both scenarios, the net profit is expected to be slashed to around KES 4 billion in FY19, at the end of the investment process. The last year of projections (FY22) should see a rebound in KenGen operating performance, with the finalization of the geothermal capacity investment plan.

Profitability Ratios

39. KenGen's operating profitability and ratios, as projected for the BAU and refinancing scenarios, deliver similar results as the new financing does not affect above-EBIT line results, given that this does not include financial expenses.

40. KenGen's operating efficiency would be strongly under pressure during the next two years as part of the implementation of its investment plan. All profitability metrics are expected to further worsen from an already weak position in FY17 for both BAU and refinancing scenarios (Table 5.9). In particular, the nearly 10 percent points decline in EBIT margin between FY17 and FY19 is related to the following: (a) the insufficient sales growth coming from the existing power plants and (b) the additional operating cost burden and expenses at the centralized level, related to the power capacity building process. In FY20, with the slowdown in the investment process and no more long-term financing emissions to support the power capacity building strategy, KenGen should recover its operating performance: although in both scenarios net financial position is expected to remain sound (around KES 220 billion in FY20), with a gearing ratio around 120 percent and financial interest hiking to almost KES 5 billion, the support at the operating level would come from the additional power sales of the fully commissioned new geothermal plants.

41. KenGen's ROE is expected to deteriorate over the next couple of years and reach around 2.2 percent in FY19 in both the BAU and refinancing scenarios, before recovering after the expected commissioning of the new geothermal facilities. Similarly, the ROA would more than halve to 0.8–0.9 percent in FY19 from 2.4 percent in FY17. The analysis shows how slowly the company would go back to profit generation without needing as much external capital; in both scenarios, the ROE and the ROA are expected to reach 5.4 percent and 2 percent, respectively, at the end of the period, from the low levels reached in FY19.

Table 5.9. KenGen Projected Profitability Ratios, 'BAU' versus 'Refinancing' Scenarios

	FY17	FY18 (f)		FY19 (f)		FY20 (f)		FY21 (f)		FY22 (f)	
		BAU	Refin.	BAU	Refin.	BAU	Refin.	BAU	Refin.	BAU	Refin.
EBITDA margin (%)	64.8	65.6	65.5	64.5	64.5	68.3	68.3	73.6	73.6	74.2	74.2
EBIT margin (%)	38.7	32.6	32.6	29.1	29.1	31.6	31.6	36.3	36.3	36.9	36.9
Net margin (%)	25.6	13.9	13.1	10.7	10.2	12.6	12.4	16.3	16.1	18.1	17.8
ROE (%)	4.9	2.8	2.7	2.3	2.2	3.6	3.5	4.9	4.8	5.5	5.4
ROA (%)	2.4	1.3	1.2	0.9	0.8	1.3	1.3	1.8	1.7	2.1	2.0

Note: (f) = forecasted; Refin. = Refinancing.

Liquidity and Leverage Ratios

42. Table 5.10 summarizes the projected liquidity and leverage ratios for KenGen for the two scenarios, while Table 5.11 compares the three key financial indicators and the respective covenants according to KenGen's loan agreements with the World Bank.

43. While the past two years' liquidity benefited from the recent rights issue, under a BAU scenario, KenGen's cash flow generation is expected to be very poor in the future, hit by low power sales growth and larger corporate cost base. KenGen's capital structure (Total Debt on Equity) could further increase due to the increased debt to finance new generation investment expansion. Total indebtedness (Total Liabilities on Total Assets) is expected to grow from 37 percent in FY17 to 47 percent in FY20 as the account payables should rise steadily to finance working capital needs on the back of the progressive business expansion.[28] In parallel, the decline in Interest Coverage Ratio and the FOCF on net debt further confirmed the increased burden on KenGen to find other funding resources to cover financial expenses and debt obligations, given the poor expected cash flow generation during the period.

[28] A typical U.S. regulated power utility has a ratio below 50 percent, commonly between 35 percent and 40 percent.

Table 5.10. KenGen Projected Liquidity and Solvency Ratios

	FY17	FY18 (f)		FY19 (f)		FY20 (f)		FY21 (f)		FY22 (f)	
		BAU	Refin.	BAU	Refin.	BAU	Refin.	BAU	Refin.	BAU	Refin.
Current Ratio	1.48	0.98	1.36	0.68	1.21	0.75	1.34	1.02	1.52	1.26	1.66
DSCR	2.57	1.27	1.38	0.15	1.09	1.41	1.25	1.86	1.66	1.79	1.55
Self-Financing Ratio [a] (%)	70.0	24.0	0.6	8.9	9.4	34.0	31.8	178.0	168.0	282.0	249.3
Total Debt/Total Assets (%)	37	39	40	47	49	45	48	44	46	41	44
Total Debt/Equity (%)	76	87	91	121	134	119	132	113	126	105	117
Net Debt/(Net Debt + Equity) (%)	43	47	48	55	57	54	57	53	56	51	54
Gearing (Net Debt/Equity) (%)	71	81	82	123	124	119	120	105	108	91	94
Net Debt/EBITDA	5.70	6.39	6.69	8.84	9.80	6.25	6.93	5.22	5.81	4.79	5.35
EBITDA/Interest Expenses	10.55	6.16	4.94	5.87	4.38	7.93	5.54	9.53	6.59	10.65	7.26
Interest/Revenues (%)	12.3	10.6	13.3	11.0	14.7	8.6	12.3	7.7	11.2	7.0	10.2
Interest Coverage Ratio (EBIT/Interests)	6.3	4.1	3.4	2.9	2.6	3.5	3.3	5.0	4.5	7.5	6.4
CFO/CAPEX (%)	72.5	61.4	60.0	22.4	21.8	164.4	163.0	549.5	545.4	687.5	681.6
CFO/Net Debt (%)	7.1	20.0	19.5	8.9	8.6	13.4	13.0	17.7	17.1	21.7	20.7
FOCF/Net Debt (%)	0.8	0.4	4.9	−6.3	0.5	2.3	1.9	6.4	5.9	7.2	6.3

Source: KenGen Annual Reports, Financial Adviser's projections.
Note: (f) = forecasted; Refin. = Refinancing; (a) Calculated as (CFO / Average 3-year expected CAPEX).

Table 5.11. KenGen Financial Covenants Versus Projections

	Financial Threshold	FY17	FY18 (f)		FY19 (f)		FY20 (f)		FY21 (f)		FY22 (f)	
			BAU	Refin.	BAU	Refin.	BAU	Refin.	BAU	Refin.	BAU	Refin.
Current Ratio	1.1	1.48	0.98	1.36	0.68	1.21	0.75	1.34	1.02	1.52	1.26	1.66
DSCR	1.3	2.57	1.27	1.38	0.15	1.09	1.41	1.25	1.86	1.66	1.79	1.55
Self-Financing Ratio [a] (%)	≥25	70	24	1	9	9	34	32	178	168	282	249

Source: KenGen Annual Reports, financial adviser's projections.
Note: (f) = forecasted; Refin. = Refinancing; (a) Calculated as (CFO/Average 3-year expected CAPEX).

44. Looking at financial covenants in the BAU scenario, it is evident how KenGen is in strong need of improving its generation capacity expansion strategy's financial sustainability while not compromising its growth targets in renewable energy capacity. The Current Ratio and DSCR are foreseen to significantly decline within the next two years in the absence of debt refinancing and further exacerbated by the limited growth of power sales. In particular, the DSCR should drop to 0.15x in FY19, hit by the negative FCF generation during the year (–KES 14 billion in FY19). The refinancing of a portion of the company's commercial debt would then allow KenGen to strengthen its financial planning activities and develop a detailed and more efficient financial plan to identify the lowest cost and asset matching funding sources for future CAPEX, owing to an improvement in the cash flow generation ability of the company. Indeed, under the refinancing scenario, the DSCR would stand at 1.09x in FY19, versus 0.15x in the BAU scenario and only slightly down from 1.38x in FY18.

ANNEX 6 – SUMMARY OF KENGEN'S ENVIRONMENTAL AND SOCIAL (E&S) SYSTEMS ASSESSMENT

Environmental and Social Policies

1. KenGen adopted an Environmental Policy Statement in November 2017 that commits the company *to:*

    a) Provide resources to maintain and continually improve its Environmental Management System (EMS) based on the ISO 14001 (2015) and its supporting standards.
    b) Identify risks and opportunities, implement pollution control measures, mitigate negative environmental impacts while at the same time enhancing positive environmental impacts resulting from its activities, products and services.
    c) Endeavour to comply with and exceed the requirements of all applicable environmental laws, regulations, permit and licenses conditions and other requirements to which the organization subscribes to.
    d) Establish environmental objectives, targets and continually review environmental management programs.
    e) Strive to enhance the ecosystems through partnership and engagement with its stakeholders including the local community living around KenGen's installations.
    f) Purpose to train all employees on the environmental sustainability, significant environmental aspects and responsibilities associated with their jobs.
    g) Contribute to global sustainable development through mainstreaming of climate change mitigation and adaptation in the business process.
    h) Communicate its environmental policy and performance to employees and key stakeholders.
    i) Commits the organization to compliance with applicable laws and regulations, prevention of pollution, continuous improvement and accountability to the internal and external stakeholders and the public at large.

2. KenGen also adopted an Occupational Safety & Health Policy Statement in November 2011 that commits the company to:

    a) Create a safe working environment and uphold professional practices that stimulate positive and healthy impacts in the organization.
    b) Identify and eliminate any workplace hazards, which may result in personal injury and property loss/damage.
    c) Provide the resources and training required to ensure workers are aware of hazards and continually improve health and safety management,
    d) Ensure and inculcate a positive safety culture at the workplace with involvement of all employees and key stakeholders.
    e) Establish and monitor objectives and targets for prevention of ill health and injuries.
    f) Communicate and promote this policy to all key internal and external stakeholders.

3. KenGen has a Health Management System in place to: a) minimize risks to personnel and other interested parties who could be exposed to health and safety hazards associated with its activities;

b) ensure its conformity to the Safety and Health policy; and c) continually improve KenGen's performance.

4. KenGen also has a policy on Corporate Social Responsibility (July 2012) that focuses on environment, education, water supply, health, sports, peace building and infrastructure among others.

Identification and Management of Risks and Impacts

5. During the life cycle of a project, each department is in charge of determining the management measures required to minimize the environmental and social impact of a project. These measures include: the rehabilitation of disturbed areas affected by the project; mitigation of visual, noise and thermal effects; mitigation of biological impacts to the project area (avoidance of sensitive habitats, technical solutions to allow the free movement of wildlife); monitoring and mitigation for chemical impacts (reinjection of brine for disposal); implementation of waste management practices (3R and waste segregation); and stakeholder consultation to identify priorities in the affected communities.

6. KenGen evaluates safety risks based on its Risk Assessment & Monitoring of Workplace Hazards Procedure and Work Instructions for Evaluation of Safety Hazards. In addition, the company has in place procedures for the identification and evaluation of environmental aspects, and work instructions for evaluation of environmental aspects.

7. Environmental Management in KenGen has been certified through ISO 14001:2004 (Environment Management System) and ISO 9001:2008 (Quality Management System). The certification applies to all KenGen generation projects including thermal, geothermal, hydro and wind energy. The company has informed the World Bank that it is in the process of transiting to QMS 9001 (2015) and EMS 1400 (2015) certification.

8. KenGen has developed Environmental Management Plans relevant to its operations, and in compliance with national laws, submits annual environmental audits to the National Environmental Management Authority (NEMA) and Energy Regulatory Commission (ERC).

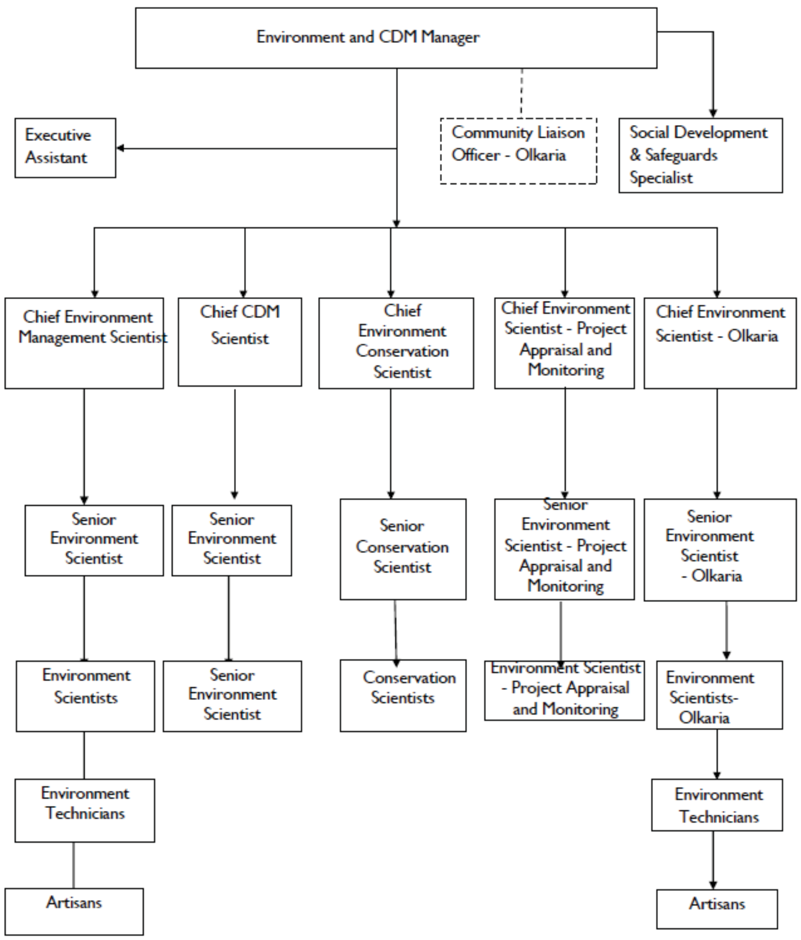
9. KenGen has in place a Safety and Health Management System to: a) minimize risks to personnel and other interested parties who could be exposed to health and safety hazards associated with its activities; b) ensure its conformity to the Safety and Health policy; and c) continually improve the KenGen's performance. KenGen keeps a log of Accidents/Incidents, their cause, defines remedies and assigns responsibility. KenGen is currently strengthening its system, including the: a) identification of risks that can lead to serious business disruptions; b) drafting of preparedness standards, response and continuity policies; c) employing consultant to improve skills through training; d) development of KenGen framework on Disaster Risk Management (DRM) and Business Continuity Planning, including protocols on preparedness, response, recovery and business continuity plans; e) implementation of developed policies and procedures.

Organizational Capacity and Competency

10. Environmental and social risks are managed by three KenGen departments: Environment & Clean Development Mechanism (CDM); Corporate Affairs; and Quality & Safety.

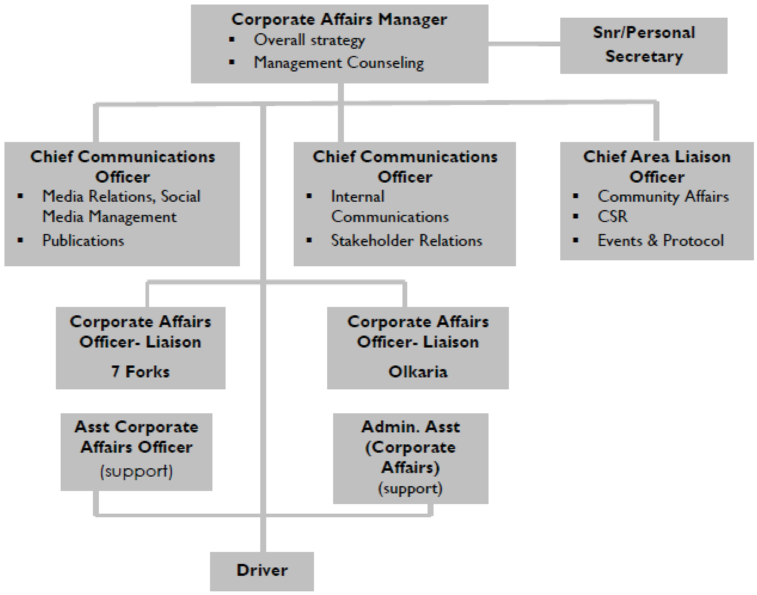
11. The Environment and CDM Department (Figure 6.1) handles the environmental and social risks of projects under implementation. It has 48 staff members spread out at Central Office (10), Olkaria (26), Eastern Hydros (8), Western Hydros (3) and Kipevu (1), including specialists in environmental science, natural resource management, environmental conservation (forestry, biology, wildlife), environmentally related physical sciences and environmental engineering.

Figure 6.8 – Organogram of the Environmental and CDM Department



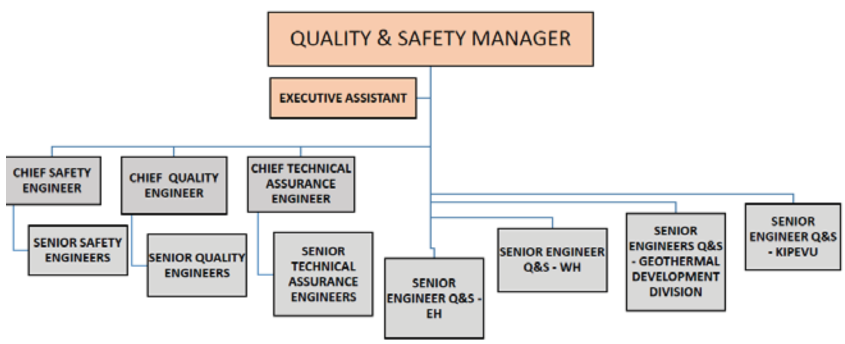
12. The Corporate Affairs Department (Figure 6.2) handles the environmental and social risks of projects under operation. It has 17 staff spread out at Central Office (8), Olkaria (5), Eastern Hydros (2), Western Hydros (1) and Kipevu (1).

Figure 6.9 – Organogram for the Corporate Affairs Department



13. The Quality and Safety Department (Figure 6.3) has 16 staff members spread out across the organization with qualification levels that ranges from diplomas to master degrees.

Figure 6.10 – Organogram of the Quality and Safety Department.



14. Under its current structure, KenGen does not retain expertise in social risk management in house, instead recruiting consultants for individual projects. As a consequence, KenGen currently only has only one employee with a role aligned with social risk management. Having recognized social risk management as a deficiency in the current system, KenGen management agreed in January 2018 to establish a Community Relations Department that will manage social risks on KenGen implemented projects. The new establishment is planned to be approved by the KenGen Board by May 2018. The mandate of the department will be to handle and coordinate all community engagement activities throughout the organization. In doing so, the department will work closely with other relevant departments of the Company. The staff numbers and levels of the department are still being discussed and will include the following positions: Community Engagement Manager;

Social Safeguards Officer(s), Social Research Analyst, Monitoring and Evaluation Officer(s) and Community Liaison Officers. The Department will have responsibility for developing and implementing policies on social assessment, community engagement (including vulnerable and marginalized groups such as indigenous peoples), land acquisition and resettlement, and grievance redress.

Emergency Preparedness and Response

15. KenGen has in place an emergency response plan that is guided by its Critical Incident Policy (September 2017) and implemented through its Emergency Management Procedure (September 2017).

Stakeholder Engagement

16. KenGen identifies vulnerable and minority groups during consultations with stakeholders as part of Environmental and Social Impact Assessment (ESIA) preparation. The company also ensures their representation in project decision making organs. During implementation of the Olkaria 280MW project, KenGen carried out a vulnerability assessment, and those found vulnerable were given enhanced support above the entitlements accorded to other Project Affected Person (PAP). KenGen also adheres to government guidelines on affirmative action for the employment of the marginalized and minority groups.

17. KenGen has identified, inter alia, the following key lessons learnt from the implementation of KEEP:

- The need for an all-inclusive stakeholder's engagement during the project cycle, from design to implementation and operation.
- In case the project has a resettlement component, census of PAPs should collect photographic evidence as much as possible and implementation of RAP should start immediately after the census to avoid delays.
- Grievance redress mechanisms should be robust and the process for initiating and resolving complaints should be clearly understood by the PAPs.
- There need for regular engagement with PAPs throughout the project.

Monitoring and Review

18. The company keeps a record of safety incidences that occur in all areas of the company's operations since 2013.

Social impacts

19. KenGen does not have its own policy requiring the assessment of the social impacts of a project. Instead, KenGen has developed a system that relies on the requirements of project's financiers and of Kenyan Law for both social and environmental risks and impacts.

20. Though KenGen has no specific social policy for managing the social impacts of their projects on indigenous peoples, it has gained considerable expertise through working with indigenous communities on the Kenya Electricity Expansion Project.

21. Recognizing the importance of meaningful engagement with indigenous communities for the continued operation of their Olkaria Geothermal assets, KenGen, with the support of Power Africa (USAID) and the United States Energy Association is developing a community engagement strategy. The strategy will be presented to the board in May 2018 at the same time the Community Relations Department is considered.

Land Acquisition and Involuntary Resettlement

22. KenGen currently does not have its own policy for the acquisition of land for projects. Instead, KenGen makes use of the policies of project financiers. Having recognized this deficiency, KenGen will develop a land acquisition and resettlement policy to govern land acquisition in accordance with good international practice.

Grievance Redress Mechanism

23. KenGen does not have a grievance redress mechanism, but is in the process of developing one. Nonetheless, the company has an operating procedure on resolution of customer complaints that deals with the process of receiving, responding to and closing all complaints (oral or written) made to the company.

Human Resources Policy

24. KenGen has comprehensive Human Resources Policies and Procedures (HR Policies and Procedures) that is harmonized with KenGen labor Policy. The policies cover among others recruitment, performance management, staff development and succession planning, reward and recognition, employee separation from employer including retrenchment, staff emoluments, welfare and benefits, disciplinary procedures, HIV/AIDS in workplace, sexual harassment, drugs and substance abuse, occupational safety and health, corruption prevention, gender, disability mainstreaming, mental health, change management, and internship.

25. KenGen's HR Policies and Procedures are consistent with international requirements. The Policies clearly outlines workers' rights and entitlements, set out equal opportunity and non-discrimination of staff as binding principles, provide modalities for implementing staff retrenchment, prohibit child labor, provide for grievance redress and occupational health and safety. The Company respects the workers right to join trade unions, has a recognition agreement with the trade union for electrical workers and complies with the collective bargaining agreements negotiated with the union from time to time.