

KETRACO & PPP Directorate

Due Diligence Report on Africa 50 and PowerGrid Corporation of India

Projects: (1) 400/220kV Lessos substation, 400kV Lessos–Loosuk transmission line and associated substation works; (2) 220kV Kisumu (Kibos) – Kakamega – Musaga transmission line and associated substation works

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1 Introduction

KETRACO is leveraging on private sector participation in the development of transmission infrastructure to bridge the finance gap that currently stands at more than USD 4 billion over the next 20 years. These transmission lines are necessary for strengthening and extending the National Grid as per KETRACO's master plan and the Least Cost Power Development Plan.

In this regard and in accordance with PPP Act Cap 430, KETRACO received a privately initiated proposal from the joint venture of Africa50 and PowerGrid Corporation of India (collectively herein 'the Proponent') in 2022 for the development of the following projects:

	Project	Objective
1.	73km 220kV Kisumu -Kakamega – Musaga TL and associated substation works	Extend high voltage to Kakamega and improve system reliability for the western region.
2.	179km 400kV Lessos -Loosuk TL, 400/220kV Lessos Substation and associated substation works	Improve security of supply by providing alternative evacuation path for Renewable Energy/Geothermal resources in North Kenya.

The proposal was evaluated and approval to proceed to the Project Development Phase was granted by the PPP Committee on 21 February 2023. Thereafter the Proponent submitted the Project Development Report (PDR) on 14 August 2023. Following rigorous evaluation and consideration of the PPP Committee's recommendations, approval to proceed to negotiation phase was granted on 9 May 2024. Negotiations are ongoing and are about to conclude.

2 Objective

Pursuant to Section 27 of the PPP Act Cap 430, the Contracting Authority is obligated to confirm that the private party has the following before it enters into a project agreement:

- (a) the financial capacity to undertake the project;
- (b) the relevant experience in undertaking projects of a similar nature;
- (c) the relevant expertise to undertake the project; and
- (d) satisfied the legal, social and environmental due diligence parameters prescribed by the Directorate.

It is on this basis, that a due diligence exercise was conducted in the manner described below to ensure compliance with the law.

3 Methodology

Due diligence was conducted on the Proponent in two phases elaborated further below.

Section 41 further requires the Contracting Authority and the PPP Directorate to undertake preliminary due diligence before commencing evaluation of a privately initiated proposal. This was classified as Phase 1 and its findings were reported in the proposal evaluation report.

Phase 2 of the due diligence which forms the subject matter of this report entailed verification of the items in Section 27. The exercise was conducted through review of documents, interviews with the Proponent's staff and site visits.

Team comprised of:

S/n	Participant's name	Organisation
1	Eng. Anthony Musyoka	KETRACO
2	Eng. Lorena Simba	KETRACO
3	David Moindi	KETRACO
4	Irene Naserian	KETRACO
5	Davis Nato	KETRACO
6	Leah Muithui	KETRACO
7	Edel Loko	KETRACO
8	Denis Yegon	PPPD
9	Gideon Magara	PPPD

4 Findings

Below are the findings of the due diligence exercise.

4.1 Financial Due Diligence

Section 27 of the PPP Act 2021 requires that a contracting authority intending to enter into a project agreement with a private party shall before the execution of the project agreement; confirm that the private party has the financial capacity to undertake the project. Consequently, the financial due diligence was conducted to meet the following objectives:

- i. To assess the private party's capability to raise the requisite project cost through equity contribution and capacity to achieve financial close (raise debt).
- ii. To confirm that the private party is solvent and determine that it is a going concern hence able to continue meeting its contractual obligations

The equity contribution for the transmission project is to be provided by both Africa50 and PowerGrid of India Company Limited at the ratio of 60:40 respectively. Consequently, financial due diligence was therefore done against both Africa50 and PowerGrid of India Limited

In order to meet the indicated objectives, certified copies of the following documents were reviewed:

- i. Audited financial statements for the last 3 financial years for both Africa50 and PowerGrid¹
- ii. Indicative term sheets by the senior lenders for the project.
- iii. Project costs of similar projects undertaken under project finance in the past 15 years and the equity contribution provided.

Further, interviews were conducted with the relevant parties to understand the current financial position of each of the sponsors.

¹ Financial statements available via the link provided in the Reference section.

4.1.1 Africa50

Africa50 has two permanent vehicles, i.e. Africa50 Project Finance (PF) and Africa50 Project Development (PD) division. For the purposes of financial due diligence, reliance was made on Africa50-PF financials since the KETRACO PPP project was confirmed to be within the projects pipeline for Africa50-PF division.

For each of the financial statements reviewed, the independent external auditor provided an unqualified opinion. This indicates compliance to Internationally Accepted Accounting Standards (IAAS) and accurate reporting by the Proponent.

4.1.1.1 The financial capability of the Proponent to deliver the projects

The anticipated project cost as at November 2024 as submitted by the Proponent is USD 341 million. As per the provided indicative term sheets, the debt-to-equity ratio is 77:23. Consequently, the equity contribution for each of the sponsors is as tabulated below:

Table 4-1: Equity contribution for each sponsor

Proponent	Equity Contribution (%)	Equity Amount (USD million)
Africa50	60%	47.06
PowerGrid of India Limited	40%	31.37
Total Equity Contribution		78.43

Therefore, Africa50 has to demonstrate that it can raise an equity amount of USD 47.06 million. To determine this, the financial statements of Africa50 was assessed to confirm whether:

- The net asset value for each of the past three financial years exceeds the amount required to be raised by the private party, that is USD 47.06million.
- The net asset value of the private party for each of the last 3 financial years is more than a third (1/3) of the project costs i.e. USD 114 million.
- The total assets of the private party for each of the last 3 financial years exceed the project cost of USD 341 million

The findings for Africa50 as per the audited financial statements are as tabulated below:

Table 4-2: Asset values of Africa50

Particulars	Year 2021 (USD million)	Year 2022 (USD million)	Year 2023 (USD million)
Africa50-PF net asset value	408.8	437.6	461
Africa50-PF total assets	442	476	477

**Values extracted from the financial statements*

Based on the above, the following observations are made:

- Africa50-PF's net asset value of USD 461 million for the last financial year amounting exceeds both the required equity contribution of USD 47.06 million and the globally accepted threshold of one third of the project cost which is approximated to be USD 114 million.
- Africa50-PF's total assets of USD 477 million for the last financial year exceeds the project cost of USD 341 million.

- iii. Africa50-PF's net asset value has demonstrated a year-on-year increase for the past 3 years.

Consequently, the above observations indicate that Africa50 has the financial capacity to raise the required equity amount.

Additionally, Africa50 provided a list of projects undertaken in the past 15 years through project finance with similar or higher project costs as the KETRACO Transmission PPP (*Approx. USD 341 million*) as tabulated below:

Table 4-3: Africa50 Project Finance experience

No.	Project Name	Project Location	Project Cost (USD Million)	Financial Close and/or COD	Equity Contribution
1.	Example: Nachtigal Hydropower	Cameroon	1,268.56	Dec 2018 – FC [Jan 2025] - COD	D/E ratio: 73:27 Equity participation: 15% Equity participation amt: USD 15.38 million
2.	Azura Gas Fired Power Plant	Nigeria	794	Dec 2015 – FC Dec 2017 - COD	D/E ratio: 73:27 Equity participation: 11% Equity participation amt (incl. premium): USD 50 million
3.	Benban Solar	Egypt	450	Oct 2017 – FC Apr 2019 - COD	D/E ratio: 75:25 Equity participation: 25% Equity participation amt: USD 15.38 million

** The above information was extracted from verified project documents received.*

The above indicates demonstrated capability by Africa50 to raise the requisite project cost for KETRACO's transmission PPP projects.

4.1.1.2 Solvency and Going Concern of the sponsor

Africa50 confirmed that there is no ongoing solvency, bankruptcy or receivership action against the company as discussed under the legal due diligence section of this report. With regards to determining the going concern the following was undertaken:

- i. Review of the revenue sources and performance over the past 3 years.
- ii. Computation of key liquidity ratios based on the audited financial statements.

Africa50 key revenue sources as per the annual reports are:

- i. Portfolio gains from assets under management
- ii. Shareholder gains

The revenue sources for Africa 50 are sustainable as they indicate an upward increase over the past 3 years as illustrated below:

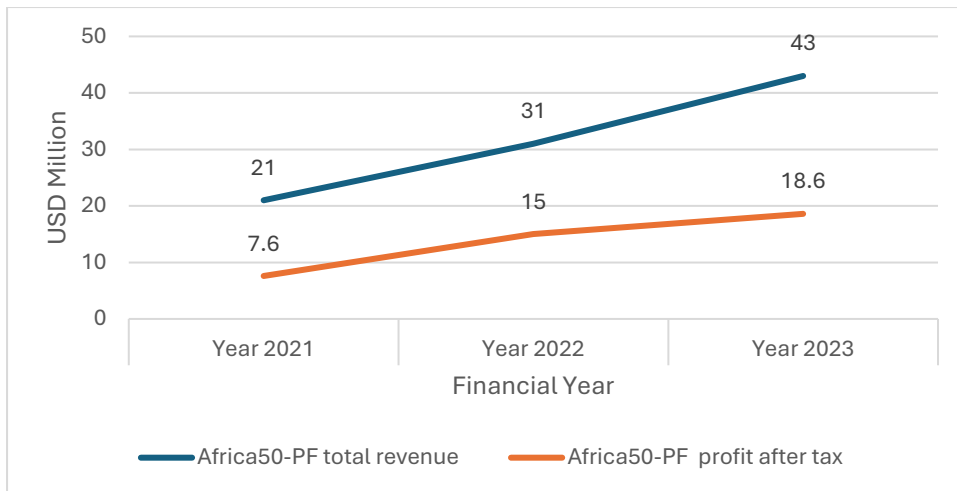


Figure 4-1: Trend analysis for revenue

Capital Structure: As at 31 December 2023, the authorized share capital according to Africa50-PF statutes is USD 3,000 million. The subscribed capital is USD 785.8 million and the called capital is USD 599 million, while the paid-in capital is USD 422 million. Africa50 has 33 shareholders comprising of 32 countries and AfDB with Kenya being a shareholder holding 9,000 shares with a paid-up capital of USD 25.6 million.

Ratio Analysis: Africa50-PF's cash and cash equivalents for FY 2023 amounted to USD 101 million and the current ratio for FY 2023 is 9.0X. This is significantly higher than the recommended threshold of 1.0X which indicates that the firm is sufficiently liquid to meet its current liabilities as and when they fall due. It was noted that Africa50-PF is liquid given its nature as a fund thus its performance was also assessed through the ratio of Net Asset Value (NAV) to Paid-In-Capital as illustrated below:

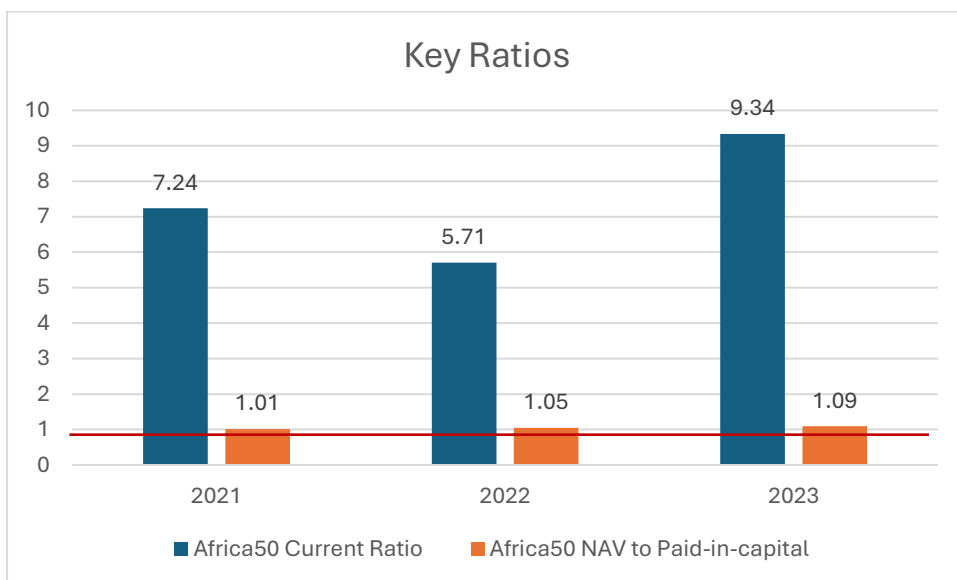


Figure 4-2: Ratio analysis

The key ratios for the 3-year period have consistently exceeded the required threshold of 1.0X as indicated above thus alluding to the going concern of Africa50-PF.

4.1.2 PowerGrid Corporation of India

For each of the financial statements reviewed, the independent external auditor provided an unqualified opinion. This indicates compliance to Internationally Accepted Accounting Standards (IAAS) and accurate reporting by the Proponent.

PowerGrid reports both standalone financial statements and consolidated financial statements comprising the financials of its SPVs. For purposes of assessing its financial capability the standalone financial statements were relied upon due to the ring-fenced nature of the SPVs.

4.1.2.1 The financial capability of the Proponent to deliver the transmission line projects

The findings for PowerGrid as per the audited financial statements are as tabulated below:

Table 4-4: Asset values for PowerGrid

Particulars	Year 2021 (USD million)	Year 2022 (USD million)	Year 2023 (USD million)
PowerGrid net worth	9,604.6	10,085.73	10,418.21
PowerGrid total assets	35,099.6	30,218.67	29,434.09

Based on the above, the following observations are made:

- PowerGrid's net asset value of USD 10,418.21 million for FY 2023 exceeds both the required equity contribution of USD 31.37 million as per Table 4-1 and the globally accepted threshold of one third of the project cost which is approximated to be USD 114 million.
- PowerGrid's total assets of USD 29,434.09 million for FY 2023 exceeds the project cost of USD 341 million.
- PowerGrid's net asset value has demonstrated a year-on-year increase for the past 3 years.

Additionally, PowerGrid provided a list of projects undertaken through project finance with equity participation by PowerGrid as tabulated below:

Table 4-5: Project Finance experience

No.	Project Name	Project Location	Project Cost (USD Million)	Financial Close and/or COD	Equity Contribution
1.	CPTC Muzaffarpur-Sursand section of 400 KV D/C Muzaffarpur-Dhalkebar Indo-Nepal Cross-Border Transmission line	India	28.28	Line is under commercial operation since 19-Feb-2016	Debt: Equity Ratio: 80:20

2.	Powergrid Himachal Transmission Limited (PHTL) Earlier Jaypee Powergrid Limited	India	114	<p>1. LILO of both circuit of Baspa-Nathpa Jhakri 400 kV DC line (Triple Snowbird) at Karcham Wangtoo HEP : 4 km. (hereinafter referred to as "Asset-I): 01.06.2011</p> <p>2.Karcham Wangtoo HEP- Abdullapur 400 kV DC T/L (Quad Conductor) along with associated bays at Abdullapur Sub-station: 230 km (Snow Portion 165 km and non-snow portion 65km) (hereinafter referred to as "Asset-II") commissioned on 01.04.2012</p>	Debt Equity Ratio: 70:30
3.	North East Transmission Company Ltd.(NETC)	India	263	<p>1. 400 KV Palatana- Silchar :01.09.2012</p> <p>2.400KV Silchar -ByrniHat - 01.03.2013</p> <p>3.400 kv Byrnihat -Bogaigon - 22.02.2015</p> <p>4.400KV Silchar-Azara- 27.07.2014</p> <p>5.400KV D/C Azara -Bongaigon- 16.01.2015</p>	Debt Equity Ratio: 80:20

** The above information was extracted from verified project documents received.*

The above indicates demonstrated capability by PowerGrid to raise the requisite project cost through debt and equity for KETRACO's transmission PPP project.

Indicative term sheets for the project were also provided. The term sheets indicate negotiated positions with following senior lenders:

- i. African Development Bank (AfDB)
- ii. FMO Entrepreneurial Bank
- iii. Trade & Development Bank (TDB)

This demonstrates confidence by the senior lenders on the proponents and indicates intent to provide the debt component thus achieve financial close.

4.1.2.2 Solvency and Going Concern of the private party

PowerGrid of India Company Limited confirmed that there is no ongoing solvency, bankruptcy or receivership action against it as discussed under the legal due diligence section of this report. With regards, to determining the going concern the following was undertaken:

- i. Review of the revenue sources and performance over the past 3 years.
- ii. Computation of key liquidity ratios based on the audited financial statements.

PowerGrid's key revenue sources as per the annual reports are:

- i. Transmission assets revenue
- ii. Consultancy services revenue
- iii. Telecom business revenue

The revenue sources for PowerGrid are sustainable as they indicate an upward increase over the past 3 years as illustrated below:

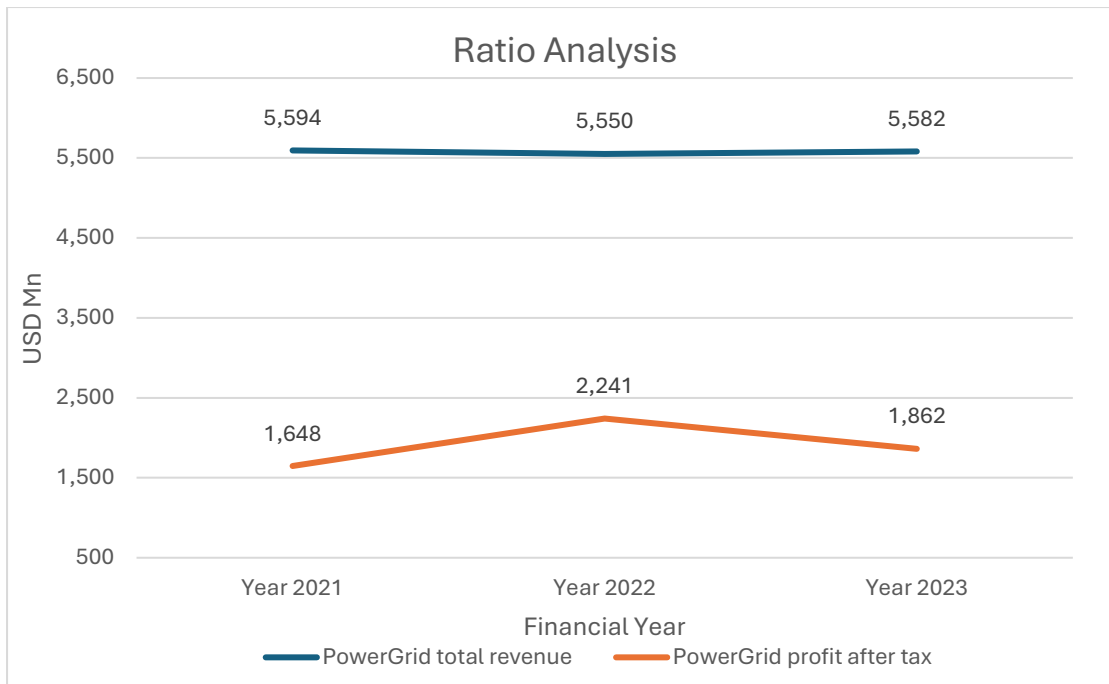


Table 4-6: Trend analysis on revenue

**The significant increase in PAT for year 2022 was noted to be as a result of recognition of revenue from sale of an asset thus reversion to a lower amount in 2023 is to be expected.*

Capital structure: PowerGrid is a listed company, with the Government of India holding 51.34% and the balance being held by institutional investors and public. PowerGrid as a listed entity is rated as stable by various credit rating agencies rating as follows: Standard & Poor's - BBB- (Outlook-Positive), Fitch - BBB- (Outlook-Stable), Moody's - Baa3 - (Outlook-Stable).

Ratio Analysis: PowerGrid's cash and cash equivalents for FY 2023 amounted to USD 4,146.24 million and the current ratio for FY 2023 is 0.9X. Despite the current ratio being lower than recommended ratio of 1.0X, it is noted that the entity is listed and its cash amounts for the year exceed the project costs. Additionally, PowerGrid's performance was assessed by reviewing its Debt Service Coverage Ratio for the 3 years as illustrated below:

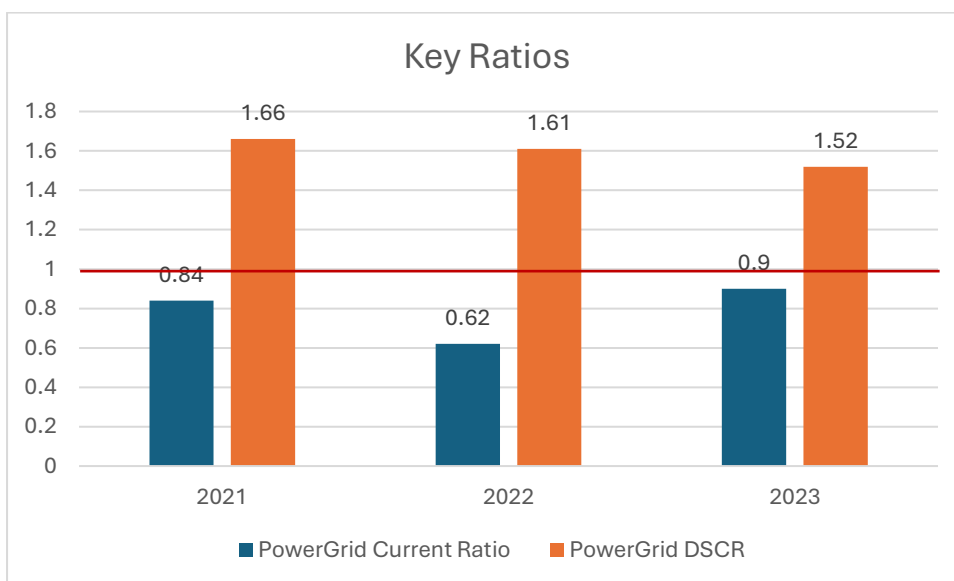


Figure 4-3: Ratio analysis

The DSCR for the 3-year period has consistently exceeded the required threshold of 1.20X as indicated above thus alluding to the going concern of PowerGrid and ability to meet its debt obligations.

4.2 Relevant experience in undertaking projects of a similar nature

The goal of this criterion was to establish the Proponent's capacity and ability in undertaking projects of similar complexity by reviewing the documents prescribed in Annex 1 and visiting one project of similar nature to also establish the performance history. Similarity in this context was based on technical scope and procurement method. The findings are elaborated below.

4.2.1 Africa50

A50 has undertaken 27 projects across 29 African countries under PPP method in diverse sectors although none were physically visited. Of the 27 projects, 12 were in operation, 11 in development phase, 1 in construction phase and they had exited 3 projects.

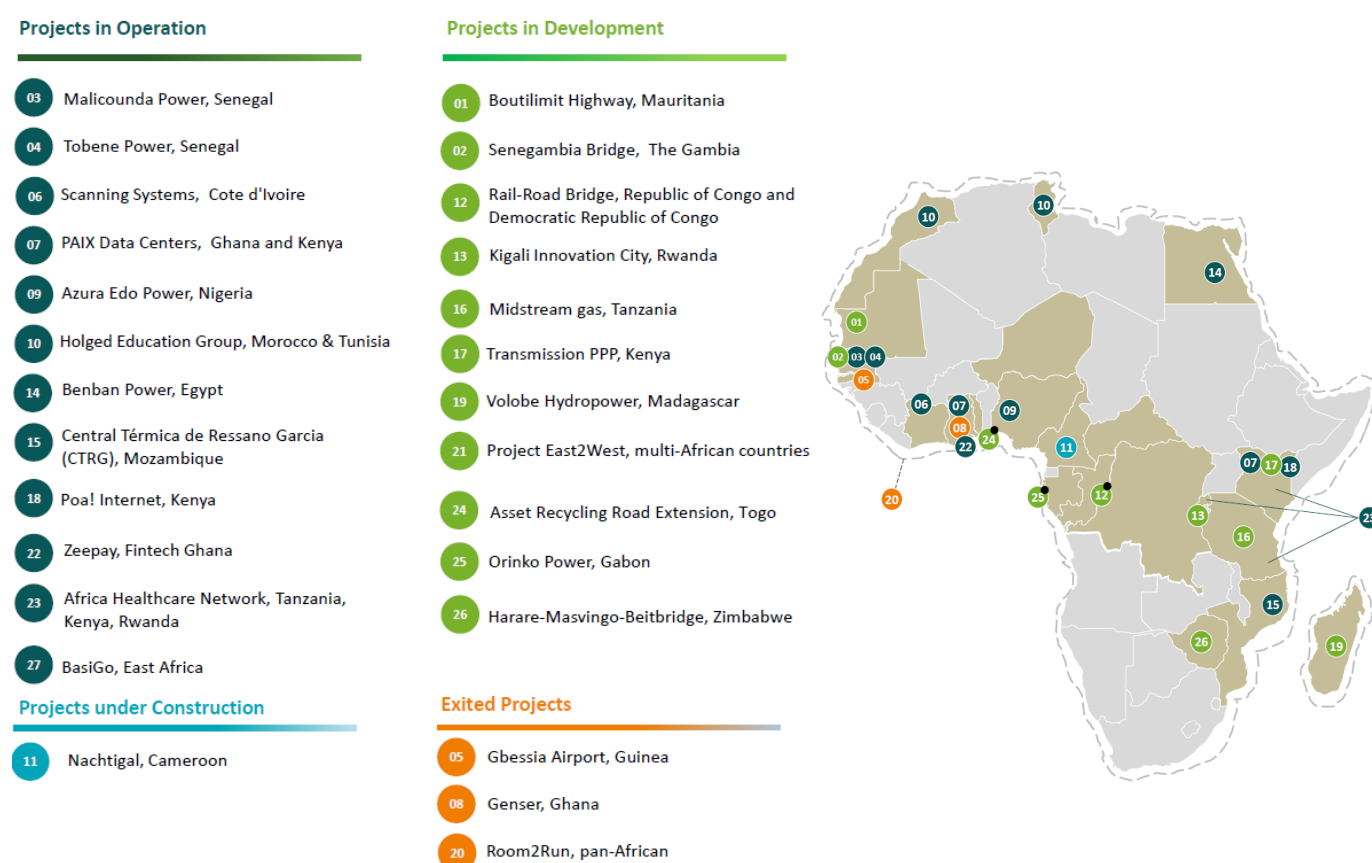


Figure 4-4: Africa50 portfolio

The most notable projects in the energy sector include the following:

- 400MW Benban Solar PV Plant in Egypt
 - ~ The project has been in commercial operation since 2019 under a 25-year PPA with Egyptian Electricity Transmission Co. with a take-or-pay payment mechanism.
 - ~ The project sponsors are Scatec Solar, Norfund and Africa50.

- ~ The project produces 870 GWh per year of clean energy which is expected to reduce 500,000 tons of CO₂ emissions, enabling Egypt to meet its climate commitments.
 - ~ The total project cost of USD 440 million was originally financed with a Debt/Equity structure of 75:25. Project debt was provided on a non-recourse basis from European Bank for Reconstruction & Development, IsDB and ICD. Project debt has been successfully refinanced with a 19-year USD 334.5 million non-recourse green project bond, which is the first green project bond ever issued for non-recourse infrastructure financing in Africa.
 - ~ The Ministry of Finance has provided a sovereign guarantee to backstop Egyptian Electricity Transmission Co.'s payment obligations.
2. 420MW Nachtigal Hydropower Plant in Cameroon
- ~ The project is under construction. It includes a 50km transmission line and will contribute approximately 15% of power to the Cameroonian grid.
 - ~ The project sponsors are EDF, IFC, Stoa, Government of Cameroon and Africa50.
 - ~ The total project cost is EUR 1.2 billion with a Debt/Equity structure of 73:27.
 - ~ Project debt was provided on a non-recourse basis from DFIs and local banks. Key DFIs included IFC, Proparco, AFD, CDC, DEG, EIB, FMO and OFID.
 - ~ The project will have a 35-year PPA with Eneo, the local utility company with a take-or-pay payment mechanism.
 - ~ The guarantees undertaken in the project include:
 - i. Bank guarantee from PPA counterparty
 - ii. Sovereign guarantee backstopping the PPA payments
 - iii. Letter of Credit from Societe Generale
 - iv. World Bank Partial Risk Guarantee
3. 461MW Azura Power Platform in Nigeria
- ~ The project has been in commercial operation since 2018 under a 20-year PPA with Nigerian Bulk Energy Trader with a take-or-pay payment mechanism.
 - ~ The project sponsors are Actis, Amaya Capital, Government of Nigeria and Africa50.
 - ~ The total project cost of USD 890 million was financed with a Debt/Equity structure of 73:27. Project debt was provided on a nonrecourse basis from fifteen international and local lenders including but not limited to Standard Chartered Bank, Rand Merchant Bank, IFC, FMO and First City Monument Bank.
 - ~ The project has a Political Risk Insurance from the World Bank.

4.2.2 PowerGrid Corporation of India

PowerGrid (PGCIL) presented three projects procured under similar method, details of which are presented below.

1. 87km 400kV Muzaffarpur - Sursand section and associated substation works implemented by Cross Border Power Transmission Company Limited (CPTC) in India
 - ~ The project entails the portion of the D/C Muzaffarpur - Dhalkebar Indo-Nepal Cross Border transmission line located in India.
 - ~ The project was conceptualised through discussions between Government of India and Nepal and has been in commercial operation since 2012.
 - ~ The project operates under an Implementation and Transmission Service Agreement (ITSA) between CPTC and Nepal Electricity Authority (NEA) signed in 2011 for a period of 25 years.

- ~ PGCIL owns 26% shares in Cross Border Power Transmission Company Limited (CPTC) created in 2012 for the purpose of delivering this project. Other shareholders include Satluj Jal Vidyut Nigam Limited (26%), IL&FS Energy Development Company Limited (38%) & Nepal Electricity Authority (NEA) (10%).
 - ~ CPTC was issued a transmission license by the Central Electricity Regulatory Commission in 2010 with a validity of 25 years.
 - ~ PGCIL reported that they were responsible for providing project management consultancy during construction and is currently responsible for operations and maintenance through a written agreement.
 - ~ Availability requirement under the ITSA is 95% reviewed after 3 years or when more transmission lines are connected to the grid.
 - ~ PGCIL presented availability certificates for the months of April to August 2024 issued by the Eastern Regional Power Committee (ERPC) demonstrating achievement of 100% availability. ERPC has a central role in coordination of the power system utilities in Eastern Region in India.
 - ~ Operation & Maintenance records are stored online via a Service and Asset Management System connected to the plant maintenance module in SAP.
 - ~ The total project cost of USD 28 million was financed with a Debt/Equity structure of 80:20. Project debt was provided by Power Finance Corporation Ltd.
 - ~ The EPC contractor was KEC International sourced through competitive bidding and EPC works were concluded in 16 months.
2. 650km 400kV D/C Palatana – Silchar – Bongaigaon transmission line and associated substation works implemented by North East Transmission Company Limited (NETC) in India
- ~ The project was initiated by ONGC Tripura Power Co. Ltd. (OTPC) for the purpose of evacuating power from its generation projects in Palatana.
 - ~ The project has been in commercial operation since 2012 and operates under an Implementation and Transmission Service Agreement (ITSA) between North East Transmission Company Limited (NETC), OTPC and the beneficiaries of North East Region signed in 2009 for a period of 25 years.
 - ~ PGCIL owns 26% shares in NETC created in 2008 for the purpose of delivering this project. Other shareholders include Tripura Govt (10%), OTPC (26%) and beneficiaries (38%)
 - ~ NETC was issued a transmission license by the Central Electricity Regulatory Commission in June 2009 with a validity of 25 years.
 - ~ Availability requirement under the ITSA is as per the Central Electricity Regulatory Commission (CERC) norms. CERC regulations stipulates 98% as the normative availability and the transmission utility is entitled to incentives or liable for disincentives if actual availability is higher or lower than the normative availability.
 - ~ PGCIL presented availability certificates for the months of April 2023 to February 2024 issued by the North Eastern Regional Power Committee (NERPC) demonstrating achievement of the normative availability. NERPC has a central role in coordination of the power system utilities in Northeastern Region in India.
 - ~ PGCIL reported that they were responsible for Operation & Maintenance until 7 years post-commissioning when the project company (NETC) had built enough capacity to take over the function.

- ~ The total project cost of USD 263 million was financed with a Debt/Equity structure of 80:20. Project debt was provided by Power Finance Corporation Ltd.
- 3. Dedicated transmission system associated with 1000MW Karcham Wangtoo HEP implemented by Powergrid Himachal Transmission Ltd. (formerly Jaypee Powergrid Ltd.) (PHTL) in India
 - ~ The project was initiated by Jaiprakash Hydro Power Ltd. (JHPL) for the purpose of evacuating power from 1000MW Karcham Wangtoo HEP developed by Jaypee Karcham Hydro Corporation Ltd. to the grid connection point.
 - ~ The project entails (i) 20km 400kV D/C LILO of Baspa-Nathpa Jhakri line at Karcham Wangtoo (ii) 225km 400kV D/C Karcham Wangtoo-Abdullapur line and (iii) associated substation works.
 - ~ The project has been in commercial operation since 2012 and operates under a Transmission Service Agreement (TSA) between Jaypee Karcham Hydro Corporation Ltd. and PHTL signed in 2007 for a period of 25 years.
 - ~ PGCIL owns 26% shares in PHTL (formerly Jaypee Powergrid Ltd.) created in 2006 for the purpose of delivering this project. Other shareholders include Jaiprakash Power Ventures Ltd. (74%).
 - ~ The project company was issued a transmission license by the Central Electricity Regulatory Commission in June 2007 with a validity of 25 years.
 - ~ Availability requirement under the TSA is 98% (normative availability) or any such availability prescribed by CERC.
 - ~ PGCIL presented availability certificates for the months of April to June 2024 issued by the Northern Regional Power Committee (NRPC) demonstrating achievement of the normative availability. NRPC has a central role in coordination of the power system utilities in Northern Region in India.
 - ~ PGCIL reported that they were responsible for providing project management consultancy during construction and is currently responsible for operations and maintenance through a written agreement.
 - ~ The total project cost of USD 114 million was financed with a Debt/Equity structure of 70:30. Project debt was provided by State Bank of India, Punjab National Bank, Central Bank of India and The Jammu & Kashmir Bank.

The due diligence team visited 400/225kV Muzaffarpur substation which forms part of the project being undertaken by Cross Border Power Transmission Company Limited. The team inspected their operation and maintenance documents which were stored online. The team observed that the following:

- i) The operation and maintenance activities were undertaken by PGCIL.
- ii) The project company had an office within the substation and at least one staff present at the time of the visit. The team was informed that the project company staff's responsibility was to provide oversight and report back to the headquarters.
- iii) PGCIL had a robust Service and Asset Management System that enabled tracking of maintenance activities, inventory and diagnosis of test results.

Notably, it was reported that the construction of the above projects were all completed within the scheduled completion date.

4.3 Relevant expertise to undertake the project

The goal of this criterion was to assess the Proponent's personnel capacity, experience and staff organization and their supply chain capability, especially in procuring major contractors.

4.3.1 Africa50

A50 presented CVs of key management personnel and project team. The CVs demonstrated the capacity of the personnel to undertake the project.

The Proponent also presented the indicative organogram for the project company and informed that the staff count per function will be determined based on:

- The Project Company's business plan, which will be determined by the Board and senior management, based on the Company's obligations under the Project Agreement.
- The need to complement the EPC, O&M and Project Management Consultant (PMC) contracts to be finalized by the Project Company.
- The level of support required at the local community level following finalization of the RAP and the activities associated with acquisition of land and Right of Way.
- The need to complement the skillset of newly recruited employees.

4.3.2 PowerGrid Corporation of India

PGCIL presented CVs of key project team members. The CVs demonstrated the capacity of the personnel to undertake the project.

PGCIL presented their Works and Procurement Policy which outlines the procedure applicable when procuring works and services. The policy detailed procedures for preparation of bidding documents, various procurement methods and their applicability, contract and project management procedures post award, among others. The policy also considers local content in procurement, it encourages development of local, domestic contracting and manufacturing industries/agencies with regards to award and execution of contracts.

The team visited three projects which demonstrate technical expertise of PGCIL in designing, operating and maintaining transmission infrastructure. The key highlights of the projects visited are provided below.

1. 400/225kV Muzaffarpur substation
 - ~ The key technical features include: 2No. 500MVA 400/220kV transformers, 2No. 315MVA 400/220kV transformers, MOOSE conductor in transmission line with 1000MW capacity.
 - ~ PGCIL reported that they developed the outline design for this project and supervised EPC work. They are currently undertaking operation and maintenance.
 - ~ PGCIL further reported that the substation has been in operation since 2012 with an availability of 100% for between April to August 2024.
2. 800kV NorthEast - Agra UHVDC multiterminal transmission system
 - ~ The key technical features include: 8,000MW converter capacity including 2,000MW overload capacity, four terminals in three converter stations i.e. two rectifier stations (BNC & APD) and one inverter station (AGR in the normal direction).
 - ~ PGCIL reported that they developed the outline design for this project and supervised EPC work. They are currently undertaking operation and maintenance.
 - ~ PGCIL further reported that the system has been in operation since 2015 and has achieved 99% availability since commissioning.
 - ~ Operation and maintenance is managed through the Service and Asset Management System.

- ~ Contractors engaged in this project are Hitachi (formerly ABB) and Bharat Heavy Electricals Ltd. procured through competitive bidding.
- 3. 400/220kV Biharshariff substation
 - ~ The key technical features include: 3No. 315MVA 400/220kV transformers, 1No. 500MVA 400/220kV transformer, 45No. 400kV bays, 2No. 220kV bays, 16No. transmission lines for power transmission.
 - ~ PGCIL reported that they developed the outline design for this project and supervised EPC work. They are currently undertaking operation and maintenance.
 - ~ PGCIL further reported that the substation has been in operation since 1991 with the same transformers commissioned then still in operation.
 - ~ At the time of the visit, PGCIL was undertaking retrofitting of the electromechanical relays to digital relays.
 - ~ Operation and maintenance is managed through the Service and Asset Management System.

PGCIL provided a list and profile of potential EPC contractors to be engaged in the project, they include:

Table 4-7: List of potential EPC contractors

	Name of Potential EPC Contractors	Website
1	Kalpataru Projects International Limited	https://kalpataruprojects.com
2	Transrail Lighting Limited	https://transrail.in
3	KEC International Ltd	https://www.kecrpg.com
4	L&T	https://www.larsentoubro.com
5	Tata projects limited	https://tataprojects.com
6	BHEL	https://www.bhel.com
7	Bajel Projects Limited (BPL)	https://bajelprojects.com/power-transmission.html

4.4 Legal due diligence parameters prescribed by the Directorate

The purpose of the legal due diligence was to evaluate the Proponent's compliance with relevant laws, regulations, and governance standards. The assessment also sought to provide insights into the Proponent's commitment to tax obligations, ethical practices and its strategies for mitigating legal risks in its operations. This due diligence was carried out across two entities, as the Proponent is a consortium.

4.4.1 Africa50

Africa 50 is an international organization and a special status financial company that is made of two vehicles: Africa 50 – Project Development and Africa 50 – Project Finance. It is governed by its own rules, Articles of Association, the Headquarters Agreement between Africa 50-Project Development and the Kingdom of Morocco, and the general principles governing international organizations.

Its governance framework generally follows the private sector practices although the entity enjoys the privileges and immunities that is granted to international organization. The governing bodies include the following:

- i) General Shareholders meeting which convenes at least annually to guide the Board with respect of the Africa 50 operations
- ii) Board of Directors meeting which convenes Quarterly to determine the strategic direction of business and ensure its implementation
- iii) Management which is responsible for the general management and day today business of Africa50.

The submitted documents confirmed Africa 50 property, assets, income, operations and transactions are exempt from all taxation and custom duties.

The Corporate Secretary confirmed that Africa 50-PD has not been debarred by any country or international organization from participating in public-private partnerships or similar arrangements. Additionally, neither Africa 50-PD nor any individuals acting on its behalf have engaged in corruption. The company's directors have not been convicted of any criminal offenses related to professional conduct in the past five years, and there are no ongoing administrative proceedings or litigations against Africa 50-PD. The declaration is attached to this report in Annex II.

4.4.2 PowerGrid Corporation of India

Power Grid Corporation of India Limited (PowerGrid) is a Maharatna public sector enterprise, incorporated on October 23, 1989, under the Indian Companies Act, 1956. The Government of India holds a 51.34% stake in the company, with the remainder owned by institutional investors and the public.

PowerGrid's operations are guided by a strong governance structure, supported by regulations, policies, and procedures. The Board of Directors plays a central role in overseeing the company's vision, offering insights on key matters, and safeguarding stakeholder interests.

The company has implemented two codes of conduct for its Board Members and senior management. It also has a Whistleblower and Fraud Prevention Policy to address fraud and ensure the protection of employees who report misconduct.

Additionally, PowerGrid has established a "Related Party Transaction Policy" to manage conflicts of interest, and its Enterprise Risk Management (ERM) framework helps identify, assess, and mitigate risks across various operational domains.

A declaration dated 12th December 2024 from PowerGrid confirms its compliance with Section 41 of the PPP Act. The declaration is attached to this report as Annex II. This declaration also confirmed compliance with tax obligations which was supported by submitted tax compliance certificate (Annex III).

4.5 Environmental and Social Due Diligence

The social and environmental due diligence was conducted to meet the following objectives:

- i. To assess the proponent's environmental and social safeguard framework/policies
- ii. To determine the proponent's compliance with international and national environmental and social safeguards,
- iii. To assess the proponent's commitment to and implementation of local content in previous projects
- iv. To confirm gender equity and inclusion of human rights in previously implemented projects.

The environmental and social due diligence was conducted for both Africa50 and PowerGrid of India Limited with the findings presented as follows.

4.5.1 Africa50

In response to the need for inclusion of environmental and social considerations in infrastructure development, the firm has developed and published an Environmental, Social and Governance (ESG) Policy with the following provisions: -

- Applicable ESG principles, standards and guidelines underpinning the policy
- Corporate governance
- ESG management systems including modalities for integration into the firm's processes and decision making, building and driving an ESG culture across the firm
- Stakeholder engagement
- Training and capacity building
- Monitoring and reporting on ESG performance
- Execution and implementation

ESG considerations are integrated into the firm's investment strategy as a key driver in maximising value for investors. The firm commits itself to ensuring consideration of ESG factors plays an influential role in determining whether Africa50 makes an investment or not and they retain the right to exercise a put-back option in cases of ESG breaches. The firm's Environmental Social Health and Safety practice is largely embedded in projects evidenced by provision of copies of Environmental Impact Assessment (EIA) licenses for projects implemented in Rwanda, Democratic Republic of Congo (DRC), Egypt and Madagascar.

Currently, the firm has developed an Integrated Management System (IMS) and is ISO 9001 certified. The firm also intends to acquire certification under ISO 14001 (Environmental Management Systems) and ISO 45001:2018 (Occupational Health and Safety Management Systems) standards.

During project implementation, the firm aligns its operations regarding E&S concerns with the host country's policy, institutional and legal environment (national regulations) and international best practice with their main reference being IFC performance standards on Environmental and Social Sustainability. In addition, the firm aligns with African Development Bank safeguards and Sustainability Policies.

The firm indicated that in implementation of projects, local content considerations are taken care of in accordance with relevant provisions in host countries. Evidence of local content considerations was provided for the years 2019-2023.

The firm has summarized protocols on stakeholder engagement in its ESG and Development Impact policies including information disclosure procedures as an integral part of its ESG management system. As part of stakeholder engagement, grievance redress mechanisms during project implementation are put in place at project level in consultation with the affected communities.

The firm indicated that treatment of vulnerable and indigenous persons is project-specific and targeted to the needs of the specific affected persons which is included in the social studies for individual projects. However, this is done in compliance with human rights, gender and inclusion of vulnerable people in accordance with IFC and AfDB E&S Safeguard standards.

In addition, the firm does not have a stand-alone resettlement policy but implements projects as per IFC and AfDB E&S safeguard standards ensuring that all implemented projects add value to

the community leaving them better than they were in alignment with host country laws and regulations.

The firm reported that it has a CSR program financed within the corporate budget and not as part of project costs. The firm indicated having rolled out a Power to Change CSR project in the Azura Edo Project in Nigeria.

4.5.2 PowerGrid Corporation of India

The firm has developed and published a comprehensive Environmental and Social Policy and Procedures (ESPP) to address the environment and socio-economic issues arising from its activities based on the basic principles of Avoidance, Minimization and Mitigation.

The key provisions of the ESPP include the following: -

- a) Environment and Social Management procedures
- b) Policy, legal and regulatory framework underpinning the policy
- c) Social and resettlement policy framework
- d) Compliance with national and international E&S practice
- e) Environmental and social risk management
- f) Stakeholder engagement
- g) Institutional framework and implementation
- h) Monitoring and evaluation

The firm has a robust structure for implementation of the E&S component. The firm has further developed a detailed organogram with E&S roles and responsibilities clearly outlined at every level.

The firm follows best practice and has systematically enhanced its internal infrastructure, management structure systems and processes and has adopted a comprehensive Integrated Management System (IMS) comprising the following:

- ISO: 14001 for Environment Management,
- ISO: 9001 for Quality Management
- OHSAS: 18001 for Occupational Health & Safety
- SA 8000:2001: Social Accountability System

The firm has extensive experience in transmission line projects and operates within the pertinent E&S policy, institutional and legal environment in India and host countries as detailed in the ESPP. In addition, the firm's management system aligns with IFC Performance Standards on Environmental and Social Sustainability.

The firm has detailed protocols on stakeholder engagement as indicated in the ESPP. The firm has further developed a stakeholder engagement matrix showing project activities, environmental and social management processes, key indicators to monitor progress, roles, and responsibilities of various stakeholders at different levels and involvement of external agencies. In addition, the firm has developed internal and external communication systems with roles and responsibilities of all stakeholders specified as detailed in the ESPP.

The firm has local content considerations in their Works and Procurement policy and detailed guidelines outlined in the ESPP. The firm further enhances employment opportunities for marginalized groups through the Resettlement Action Plan (RAP) and Tribal People's Development Plan (TPDP).


The firm implements projects in compliance with human rights, gender and inclusion of vulnerable people in accordance with IFC E&S Safeguard standards. The firm further develops relevant plans to address the interests of marginalized and/or indigenous people for instance, the Tribal People's Development Plan.

The firm has developed a Corporate Social Responsibility and Sustainability (CSR&S) Policy and has a dedicated budget for CSR and reports on CSR projects undertaken in its areas of operation on an annual basis as indicated on the firm's website².

5 Conclusion

The due diligence on the Proponent has been completed based on information available as of 14 December 2025. The Proponent has demonstrated that it has met the requirements under Section 27 of the PPP Act having illustrated financial capacity, relevant experience, relevant expertise and satisfaction of legal, social and environmental parameters.

Prepared by:

S/n	Participant's name	Organisation	Signature
1	Eng. Anthony Musyoka	KETRACO	
2	Eng. Lorena Simba	KETRACO	
3	David Moindi	KETRACO	
4	Irene Naserian	KETRACO	
5	Davis Nato	KETRACO	
6	Leah Muithui	KETRACO	
7	Edel Loko	KETRACO	
8	Denis Yegon	PPPD	
9	Gideon Magara	PPPD	

6 References

1. Africa50 financial statement available in: <https://www.africa50.com/news-insights/documents-reports/>
2. PowerGrid financial statement available in: <https://www.powergrid.in/en/annual-results>
3. PowerGrid CSR list available in: <https://www.powergrid.in/en/about-us-csr>

² Link to website provided in the Reference section.

Annex I – Due diligence checklist

	Item as per Section 27 of PPP Act Cap 430	Objective	Items to verify	Documentation to be availed by the Proponent	Consortium member / other relevant parties to be assessed / interviewed	Provided (Yes/No)	
						Africa 50	PowerGrid
1	Financial capacity to undertake the project	<p>Assess the financial and logistical capability of the Proponent to deliver the transmission line projects.</p> <p>Assessing firms tax obligation and compliance</p> <p>Access firm's ability in meeting the contractual requirements</p>	<p>Liquidity of the firm and available credit lines</p> <p>Capital and revenue sources</p> <p>Liabilities</p> <p>Financial solvency of the project company; that the company is solvent and expected to be a going concern in the near future</p> <p>Accounting standards</p>	Audited Financial Statements with management response for the last 3 financial years	Africa 50 and PowerGrid *Management team of consortium members to be interviewed.	Provided	Provided
			Tax payment reputation and compliance	Tax compliance certificate for the last 3 financial years		Provided	Provided
			Indicative or final term sheets promising the investment in the project	Signed term sheets from senior lenders	Africa 50	Provided	
2	Relevant experience in undertaking projects of a similar nature	<p>Assess firms' capacity and ability in undertaking projects of similar complexities.</p> <p>Assess firm's maintenance history, expected performance regimes, reliability and maintenance requirements and long-term durability of the visited transmission lines.</p>	Experience in PPPs.	1. List of similar projects (in terms of procurement method and technical scope) financed indicating duration of construction, concession period, geographical region	PowerGrid *Operation & maintenance teams to be interviewed	N/A	Provided
			Evidence of successfully financed projects of similar quantum and nature by the Proponent or any of its affiliates.	2. Signature page of the contracts referenced in the list			
			Lenders and equity contributors in previous projects/assignments.	3. Testimonials / Letters of confirmation from the respective Contracting Authorities			
			Confirmation of proponent's ability to meet performance targets in similar projects (in terms of construction delivery and availability targets).	4. Capital structure of the referenced projects			
				5. Letters of confirmation from the lenders, equity contributors			
				6. Tariff of the referenced projects			
				7. Completion certificates of referenced projects and			

				project completion reports			
				8. Operation & Maintenance records of referenced projects			
				9. Performance requirements / indicators of the referenced projects			
				Visit one (1) PPP projects in operation for at least 5-10 years (at least one of 400kV and one of 220kV)			
3	Relevant expertise to undertake the project	Assess firms' personnel capacity, experience and staff organization	Firms inhouse staff capability	CVs for Key management personnel and project team	Africa50 and PowerGrid	Provided	Provided
				Prospective organogram for the projects (SPV)		Provided	N/A
				Visit two (2) project of similar technical scope in operation at least 5-10 years (at least one of 400kV and one of 220kV)	PowerGrid *Operation & maintenance teams to be interviewed	N/A	Provided
		Access the firm's supply chain capability, especially in procuring major contractors	Procurement processes/procedures for Works, Goods and Services	Procurement policy/procedure/ process for Works, Goods and Services	PowerGrid *Management team also to be interviewed.	N/A	Provided
			Potential EPC contractors	List and profile of potential EPC contractors to be engaged in the project		N/A	Provided
			Local content procurement plan	Local content procurement policy/procedure/process for Works, Goods and Services		N/A	Provided
4	Legal due diligence parameters prescribed by the Directorate	Legality of firm's composition, the administration of the firm and regulatory compliance to the laws of the country where the firm is established and where it has operated.	Registration documents of the Proponent such as articles of association etc.		Africa 50 and PowerGrid *Management team of consortium members also to be interviewed.	The following have been provided: <ul style="list-style-type: none"> • PD Articles of Association (including the company's immunities & privileges e.g. for tax) • Africa50 Headquarters Agreement • PD Share Register 	The following have been provided: <ul style="list-style-type: none"> • Memorandum & Articles of Association • Certificate of Incorporation • Tax Compliance Certificates
			Legal standing of the firm/entity.	A declaration confirming that the Proponent:		Provided a declaration by the Company Secretary dated 13 Jan 2025 (attached in Annex II)	Provided a declaration by the Company Secretary dated 12 Dec 2024 (attached in Annex II)
			Regulatory compliance, licenses and approvals to undertake its business.	1. Is in possession of all licenses and permits issued by authorized body for development of transmission lines projects		Not applicable. Project Documents reviewed containing licences and permits were specific to the projects undertaken by PowerGrid	Confirmed through a declaration by the Company Secretary dated 12 Dec 2024 (attached in Annex II).
			History of dispute/litigations and how it was handled/status in the history of the Proponent and how it impacts on KETRACO.	2.Is in possession of Tax compliance certificates/letter from income tax department for the last 3 financial years		Not applicable. Africa50 enjoys tax exemption.	Confirmed through a declaration by the Company Secretary dated 12 Dec 2024 (attached in Annex II).

				3.Has filed Annual Returns listing the directors and shareholders for the last 3 financial years		Provided in share register as at 30 Sep 2024.	Confirmed through a declaration by the Company Secretary dated 12 Dec 2024 (attached in Annex II).
				4. Evidence of legal and governance audit		Provided in 2023 Annual Report	Provided in 2024-25 Annual Report (Q2)
				5. A list certified by an advocate indicating all pending material disputes. The list shall indicate the following information:		Confirmed through a declaration by the Company Secretary dated 13 Jan 2025.	Confirmed through a declaration by the Company Secretary dated 12 Dec 2024 (attached in Annex II).
				o Contract identification			
				o Name of other party in dispute			
				o Contact details of other party in dispute			
				o Matter in dispute			
				o Dispute resolution forum			
				o Party who initiated the dispute			
				o Status of the dispute			
				o Total contract amount (value, currency, exchange rate and USD equivalent)			
				o Amount in dispute			
				o Year of dispute			
5	Social and environmental due diligence parameters prescribed by the Directorate	Assess the firm's Environmental and Social Safeguards framework/policies and procedures. Assess the Proponent's compliance with international and National Environmental and Social Safeguards policies/standards and procedures. Assess firm's commitment to Local Content Plan and implementation in previous projects. Assess firm's human rights practices, gender equality and	Firm's certification for undertaking transmission lines projects Proponent's Environment, Social, Health and Safety (ESHS) policy in place Proponent's organogram (staffing) in executing the ESHS function Compliance with national and international E&S policies/standards/Laws o Certification for ISO 14001: Environmental Management Systems o Certification for ISO 45001: Occupational Health and Safety Management Systems Firm's stakeholder	Environmental and Social Safeguards framework/policies and procedures	Africa 50 and PowerGrid *Management team of consortium members also to be interviewed.	Provided Environmental, Social and Governance (ESG) Policy	Provided within the Environmental and Social Policy and Procedures (ESPP)
				Proponent's ESHS policy		Provided Development Impact Policy	Provided
				Licences / permits / certifications		Provided copies of EIA licenses implemented in Madagascar, Rwanda, Egypt, and DRC.	Provided sample environmental clearances, Obtained: <ul style="list-style-type: none"> ISO: 14001 for Environment Management ISO: 9001 for Quality Management OHSAS: 18001 for Occupational Health & Safety SA 8000:2001: Social Accountability System
				Stakeholder engagement and management policy/procedures		Provided in the ESG and Development Impact Policies.	Provided
				Resettlement policies/procedures		Usually provided at project level	Provided within the ESPP
				Grievance redress mechanism		Usually provided at project level	Provided within the ESPP
				Information disclosure policy/procedures		Provided in the ESG policy	Embedded in the stakeholder engagement and management policy

		inclusion of vulnerable people in previous projects.	engagement and management procedures	Local content consideration in previously undertaken projects with evidence of the same.		Demonstrated compliance	Demonstrated compliance
			Firm's information disclosure policy/procedures	Human rights, gender equality and inclusion of vulnerable people policies / practices in previous projects.		Demonstrated compliance	Demonstrated compliance
			Firm's local content consideration in previously undertaken projects of similar nature.	Evidence of CSR projects undertaken		CSR projects outlined within the Sustainability Report 2023 provided.	CSR projects outlined in the CSR Annual Reports
			Firm's human rights practices, gender equality and inclusion of vulnerable people in previous projects.				

Annex II - Declarations

Annex III – Tax compliance certification