





Discussion Paper

The Role of China's Investment Strategies and Funding Models in Financing Africa's Green Development

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DEVELOPMENT REIMAGINED

Contents

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Executive Summary

Africa stands at a critical juncture in its green development trajectory. While the continent possesses abundant renewable energy resources and growing political commitment to climate action, it continues to face a substantial financing gap for green infrastructure, energy transition, and climate-resilient development. China has emerged as one of Africa's most significant development partners over the past two decades, playing a pivotal role in financing large-scale infrastructure and energy projects. As Africa's development priorities evolve—and as China's overseas financing model undergoes recalibration—the next phase of China–Africa cooperation on green development will depend not only on the volume of finance mobilised, but increasingly on its quality, structure, and alignment with long-term development objectives.

This discussion paper examines the role of China's investment strategies and funding models in financing Africa's green development, with a particular focus on how African governments, public utilities, development finance institutions, and project developers can more effectively engage Chinese financial and corporate actors. Drawing on desk research and practitioner interviews, the paper analyses the evolving landscape of Chinese policy bank lending, state-owned and private sector engagement, as well as other emerging innovative financial models.

The analysis finds that Chinese policy banks remain central to financing Africa's power and infrastructure sectors, particularly through sovereign-backed lending for large-scale projects. While China's overseas lending has moderated in recent years, demand for reliable and affordable electricity across Africa remains acute. Rather than signalling a retreat from large loans, this shift underscores the importance of more sustainable lending approaches. From an African perspective, early confirmation of sovereign participation, fiscal inclusion, and regional coordination—especially for cross-border energy infrastructure—can significantly improve project bankability and access to Chinese finance.

Chinese state-owned enterprises (SOEs) are also undergoing a structural transition in Africa, moving beyond traditional EPC-driven models toward roles as project developers, investors, and long-term partners. This evolution reflects both Africa's changing procurement environment and China's emphasis on commercially viable and sustainable overseas engagement. The paper highlights opportunities for African stakeholders to engage SOEs earlier in the project lifecycle, encourage co-investment and joint development models, and align project pipelines with national and regional industrial priorities.

Chinese private sector is playing an increasingly vital role in Africa's green development. Its flexibility and initiative offer a unique opportunity to support greenfield development, joint ventures, public-private partnerships, and project financing. Concurrently, innovative financing instruments—such as panda bonds and blended finance—are progressively broadening capital channels for green investment in Africa. The paper indicates that to fully unlock the potential of these participations, it is necessary for African countries to develop better-prepared project pipeline systems and more predictable regulatory and contractual frameworks. It is also important to establish early engagement mechanisms between African project sponsors and Chinese investors to reduce risk and better align projects with host-country development priorities.

Overall, the paper argues that enhancing China–Africa green finance collaboration requires a shift from transaction-driven engagement toward more strategic, coordinated, and project-ready approaches. For African actors, this means focusing on early-stage project preparation, policy clarity, regional integration, and structured engagement with Chinese financiers and enterprises. For China–Africa cooperation as a whole, success in the next phase will be measured not only by megawatts installed or capital deployed, but by the extent to which financing supports long-term value creation, industrial development, and a just and resilient green transition across the continent.

Chapter 1
Introduction

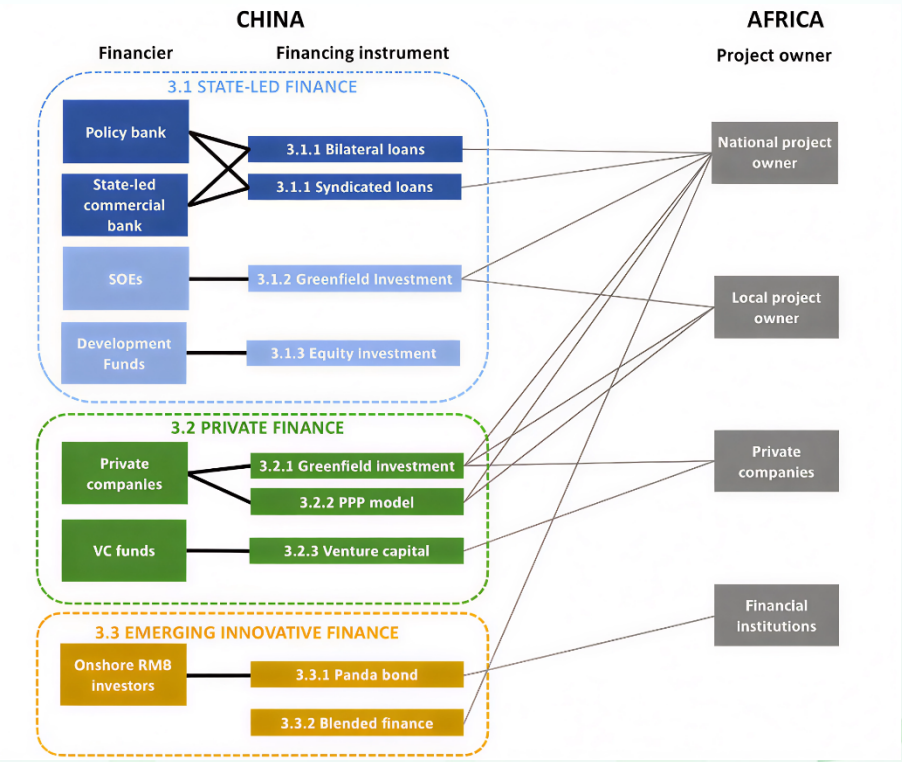
Africa stands at a pivotal moment in its development journey, with a growing demand to transition to green and sustainable energy systems. The continent is endowed with abundant renewable resources, but it faces an urgent need for increased investment to accelerate its green transformation. China, as a major global investor and key partner in Africa's development, plays a pivotal role in supporting the continent's green transition through its financial mechanisms, including loans, investments, and climate financing initiatives.

This paper explores the multifaceted role of China's investment strategies and funding models in financing Africa's green development. By examining the dynamics of China's financing landscape, the paper highlights mechanisms driving China's engagement, with a particular focus on state-led financing, private sector contributions, and innovative financial models.

The objective is to understand how these investments are shaping Africa's energy future and to identify opportunities for further collaboration and growth in green finance. This paper aims to provide support African policymakers, public utilities, and project developers seeking to better understand how Chinese green finance operates in practice. Rather than providing prescriptive guidance, it translates existing evidence and case studies into decision-relevant insights, highlighting which financing channels tend to be associated with different project types, scales, and institutional arrangements.

To enhance readability and help readers quickly grasp the report's structure, the diagram (Figure 1) below visualizes the financing ecosystem the Report includes. It maps the types and nature of Chinese financiers, the financing instruments available, and the African project owners involved, as well as showing how they interact. The goal is to enable African stakeholders to identify which financing tools can be leveraged and which financiers can be approached for a given project owner.

Figure 1: China-Africa Green Development Finance Map



Note: numbers in the diagram correspond to the relevant section numbers in the report.

Chapter 2
Africa's Climate Finance Landscape and China's Emerging Roles

Africa faces an urgent need to increase its investment scale to transition to green energy. In particular, according to the International Energy Agency (IEA), Africa will need to more than double the current plan for annual energy investment, bringing it to an estimated US$190 billion per year from 2026 – 2030, with two-thirds going to clean energy.[1]

However, the reality has remains far from this ambition. Current climate finance flows to Africa haven fallen significantly short, with only US$43.7 billion having been received between 2021 and 2022, or around 23% of estimated annual requirement.[2] While public and multilateral institutions—such as development banks and bilateral donors—continue to dominate these flows, private sector participation remains limited due to persistent barriers including high perceived risks, weak regulatory frameworks, and limited access to local-currency financing.

Nevertheless, it is still encouraging that climate finance flows to the African continent have shown an upward trend over the past decade, with the most significant bump in 2022 of nearly 48%.[3] To sustain such growth, innovative partnerships and diversified financial instruments are urgently required to mobilise both public and private capital. Against this backdrop, China's evolving financing models – ranging from concessional loans and equity investments to multilateral and market-based mechanisms – are increasingly playing a pivotal role in bridging Africa's green finance gap. The following sections map the key Chinese institutions and mechanisms driving these engagements.

Overview of Key Chinese Financing Actors in Africa

Over the past decade, China's financial footprint in Africa has diversified, gradually shifting from traditional infrastructure financing towards green, low-carbon and sustainable investments. This transition adheres to the Belt and Road Initiative and its Green Investment Principles, building upon the latest commitments made during Forum on China-Africa Cooperation (FOCAC) 8 and 9 to expand cooperation in renewable energy and green industries.

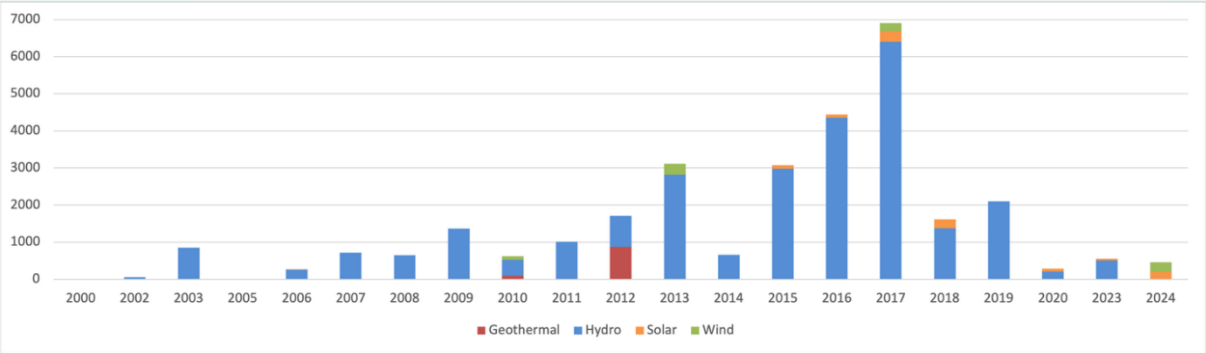
China’s renewable energy financing in Africa remains heavily dominated by hydropower. Based on available data, total Chinese financing for renewable energy projects across the continent amounts to approximately US$30.4 billion, with hydropower accounting for more than 91% of this total (US$27.6 billion and 62 projects). Since 2010, as shown in Figure 2, China’s engagement with Africa in the renewable energy sector began to diversify beyond hydropower, expanding into solar (3.3% of total renewable energy financing across 18 projects), wind (3.1% across 7 projects), and geothermal energy (2.8% across 3 projects). This diversification reflects both China's policy shift towards promoting a “Green BRI” and the expansion of Chinese enterprises into non-hydroelectric projects in Africa. It also demonstrates the growing interest of African governments in distributed renewable energy systems. Although these projects remain relatively small in scale, they signal the emergence of new cooperative models increasingly reliant on private capital investment, particularly evident in solar projects.

[1] Cozzi Laura et al. (2023). Africa Energy Outlook 2022. International Energy Agency (IEA). https://www.iea.org/reports/africa-energy-outlook-2022/key-findings

[2] Meattle, Chavi et al. (2024). Landscape of Climate Finance in Africa 2024. Climate Policy Initiative. https://www.climatepolicyinitiative.org/publication/landscape-of-climate-finance-in-africa-2024/

[3] Meattle, Chavi et al. (2024). Landscape of Climate Finance in Africa 2024. Climate Policy Initiative.

Figure 2: China's Renewable Energy Financing in Africa between 2000-2024[4] [5]



Analysis of project-level data indicates that China's renewable energy financing in Africa remains predominantly state-led, particularly within the hydropower sector. Such projects are typically financed through state-to-state loans and constructed by Chinese engineering enterprises, including both state-owned and private firms. Of all projects reviewed, 81 secured financing through state-led mechanisms, including China's two policy banks—the Export-Import Bank of China (CHEXIM) and the China Development Bank (CDB)—alongside state-owned commercial banks and state-owned enterprises (SOEs). CHEXIM alone financed 64 projects, leading the role of providing loans for China's renewable energy engagement in Africa.

However, state-led loans for large-scale project have experienced a pullback since 2017. In parallel, more direct investment from private businesses have begun to emerge. These shifts indicate a transition from traditional state-to-state lending toward more market-oriented and partnership-based approaches. This is driven by China's domestic policy tightening on overseas leading and a broader recalibration toward higher-quality, lower-risk investment.

China's engagement operates through a multi-tiered architecture involving policy banks, state-backed funds, state-owned enterprises, commercial banks, private investment and multilateral platforms (see Annex 1 for key players tracked by Development Reimagined's China Africa Climate Action Tracker). Each entity plays a distinct role in shaping pathways for Africa to access long-term, diversified green finance. The following chapter explores this landscape in greater depth through case studies of financing actors in selected African countries.

[4] Graph was generated by the author. Data was used from World Resources Institute's China Overseas Finance Inventory Database, American Enterprises Institute's China Global Investment Tracker, and Development Reimagined's China-Africa Climate Action Tracker.

[5] Note: We acknowledge there has a data limitation on capturing all transactions. Only those projects financed by China have been kept in this analysis, projects with only Chinese engineering, procurement, and construction (EPC) contracts involved are not included.

Chapter 3
China's Green Investment in Africa
Strategic Approaches

This chapter examines the main channels through which Chinese green finance is mobilised in Africa, with a focus on how financing structures are shaped by institutional arrangements and project characteristics. It is organised around three broad categories: state-led finance, private sector–led finance, and emerging innovative financial models. Within each category, the chapter draws on selected case studies[6] to illustrate how different financing instruments have been applied across sectors and countries.

3.1 State-led Finance

China's state-led financing model plays a vital role in shaping its overseas development and green investment strategy, including in Africa. The Chinese model is characterised by strong state coordination mechanisms, whereby policy banks, state-owned enterprises and sovereign wealth funds operate within a broader strategic framework aligned with national development and foreign policy objectives. This enables China to rapidly mobilise substantial resources for targeted deployment in strategic sectors, while seamlessly integrating overseas investments with strategic initiatives such as the Belt and Road Initiative and platforms like the Forum on China-Africa Cooperation in Africa.

Although the current proportions of African and global BRI funding dedicated to hydropower and other renewable energy projects represent minority shares of overall funding, China's overall infrastructure finance focus is showing an upward trend towards clean or climate-friendly projects.[7] Additionally, there is a rising preference for co-financing mechanisms, with distribution of funding provision by multiple creditors, pooling of risk for these creditors through co-financing, while projects with high social and environmental merits are also increasing in appeal.[8]

Analysis of existing projects indicates that China's state-led financing for renewable energy in Africa can be grouped into four main mechanisms: 1) bilateral loans from policy banks, 2) syndicated loans involving policy banks and state-led commercial banks[9], 3) loans from state-led commercial banks, and 3) SOEs led investments, including both greenfield investment and mergers and acquisitions (M&A).

The following subsections examine these state-led financing mechanisms through selected country and project case studies. The cases are used to unpack the conditions under which state-led instruments have supported renewable energy deployment and green infrastructure in Africa, as well as the constraints that emerge around governance capacity and project execution. Together, they highlight implications for African project proponents and Chinese financial actors engaging in the green transition.

[6] Disclaimer on case studies and applicability: The case studies in this paper draw on publicly available sources and are intended to provide indicative insights into how Chinese green finance has been structured in practice. Financing terms and institutional arrangements described reflect project-specific conditions and should not be assumed to apply uniformly across countries or sectors.

[7] Chen, Y and Emery, T., (2025). Greener on the other side? Mapping China's overseas co-financing and financial innovation. https://odi.org/en/publications/greener-on-the-other-side-mapping-chinas-overseas-co-financing-and-financial-innovation/

[8] Ibid.

[9] This refers to China's "Big Four" state-owned banks: Industrial and Commercial Bank of China (ICBC), China Construction Bank (CCB), Agricultural Bank of China (ABC) and the Bank of China (BOC).

3.1.1 Bilateral Development Finance via Policy Banks and State-led Commercial Banks: The Case of Angola

Angola stands out as one of Africa's largest recipients of Chinese bilateral and private sector loans. Given the central role of Angola's fossil fuel industry in its economic development, the country offers a valuable case for assessing how Chinese state-led financing can support a transition toward cleaner energy and contribute to broader economic transformation Similarly, for other African countries with underlying risks of low economic diversification, the Angola case study below presents lessons in project structuring and governance as key considerations in balancing multiple stakeholder interests.

Between 2002 and 2023, Angola secured approximately US$41.1 billion in loans from Chinese lenders. Of this total, about 56.2% (US$25.8 billion) was allocated to the energy sector, with 21.9% (US$18.5 billion) directed toward hydropower, the only renewable energy type funded. CHEXIM was the largest lender within the clean energy subset, providing US$3.8 billion in loans, while other state-led commercial banks also played a significant role.

The following three flagship hydropower projects illustrate the range of state-led financing instruments deployed in Angola, financed respectively by a policy bank, a state-led commercial bank, and a syndicated arrangement involving both.

Flagship Project 1 – Bilateral Loans from China's Policy Bank

Project Name: Chiumbe-Dala Hydroelectric Power Plant, Transmission Lines and Substations Project[10]	
Project type	Run-of-River Hydropower Plant (small-scale)
Location	Dala Municipality, Lunda Sul Province
Energy source	Hydropower
Capacity	12.42 MW
Financing instrument	Bilateral loan
Total financing amount	US$112 million
Financing terms	Undisclosed
Financiers	CHEXIM
Contractor	Sinohydro
Timeline	Began in 2014; Hydropower plant completed April 7, 2017; Transmission line and substation completed May 20, 2018
Status	Completed

[10] Aiddata. Database. https://china.aiddata.org/projects/43787/.

Flagship Project 2 – Bilateral Loans from State-led Commercial Banks

Project Name: Rehabilitation of Luachimo Hydroelectric Power Plant Construction Project[11]	
Project type	Rehabilitation and upgrade of existing hydropower facility
Location	Luachimo Municipality, Lunda-Norte Province
Energy source	Hydropower
Capacity	36 MW
Financing instrument	Bilateral loan
Total financing amount	US$180 million[12]
Financing terms	Undisclosed
Financiers	Industrial and Commercial Bank of China (ICBC)
Contractor	China Gezhouba Group Corporation (CGGC)
Timeline	Loan agreement signed in 2013; groundbreaking in 2016; completed in 2024[13]
Status	Completed

Flagship Project 3 – Syndicated Loan from both China's Policy Banks and State-led Commercial Banks

Project Name: Caculo Cabaça Dam Project[14]	
Project type	Large-scale hydropower dam and hydroelectric complex
Location	Kwanza Norte Province, 195 kilometres southeast of Luanda
Energy source	Hydropower
Capacity	2.1 GW
Financing instrument	Syndicated loan
Total financing amount	US$4.1 billion
Financing terms	Grace period: 6 years Maturity: 15 years Interest rate: LIBOR + 3.6%
Financiers	ICBC ($1.239 billion), CHEXIM ($909 million), BoC ($619.8 million), China Construction Bank ($619.8 million), China Minsheng Bank ($371.88 million), and China Ping An Bank ($371.88 million)
Contractor	China Gezhouba Group Corporation (CGGC)

[11] Aiddata. Database. https://china.aiddata.org/projects/73464
[12] Note: it is approximately 85% of the cost of a $210 commercial contract between Angola's Ministry of Energy and Water and China Gezhouba Group Company ltd. (CGGC).
[13] Africa Energy Portal. (2024, May 31). Energy China relaunches the Luachimo hydroelectric power station in Angola. https://africa-energy-portal.org/news/energy-china-relaunches-luachimo-hydroelectric-power-station-angola
[14] Aiddata. Database. https://china.aiddata.org/projects/67108/.

Timeline	2016: Loan agreement 2017: Construction began 2021: 100% disbursement Connection of the first generator to the power grid was scheduled for completion by 2026 (originally planned 2024)
Status	Implementation

Note: Financing terms shown reflect publicly disclosed information for this project and may not apply to other projects or contexts.

Effectiveness and Limitations

The three above projects - each representing large-, medium- and small-scale hydropower projects - together reflect a multi-leveled structure and a coordinated approach of China's state-led finance supporting the clean energy development and green transition of African countries.

The effectiveness of these projects is clearly shown in the electricity generation capacity addition, job creation and general social benefits created on the local, regional and national level. For example, the Luachimo project now provides electricity to over 10,000 households. The Chiumbe-Dala power plant has expanded grid connectivity to the Luena city and the Dala municipality, creating around 300 local jobs. The Caculo Cabaça Dam project is generating an average of 8,566 GWh of electricity annually - sufficient to power an estimated 5.7–8.6 million households or support a wide range of industrial activity, including dozens of medium-scale factories, depending on the industrial mix.

From the financing perspective, the combination of policy bank loans, commercial bank financing, and co-financing structures has enabled Angola to pursue large-scale hydropower development as a strategic complement to its oil-based economy. *Policy bank lending*, primarily through CHEXIM, has been effective in initiating socially oriented and high-impact renewable projects such as the Chiumbe-Dala plant, which expanded rural electrification and fostered local economic inclusion. *Commercial bank financing*, as seen in the Luachimo project, has proven effective in strengthening financial discipline and supporting commercially viable infrastructure that contributes to diversification beyond the oil economy. Most notably, *co-financing mechanisms* among policy banks and commercial banks, exemplified by the Caculo Cabaça project, have maximized financial mobilization for long-term and large-volume development projects. These allow Angola to implement one of its largest hydropower plants to enhance national energy security and boost national economic development. Together, these cases demonstrate the flexibility and adaptability of China's state-led finance in tailoring instruments to project scale and priorities.

Despite these achievements, these projects have faced multiple governance and implementation challenges, especially for the larger-scale ones. For example, the Caculo Cabaça project experienced significant delays linked to contractual disputes and corruption investigations, with dam construction progress reaching only 3.47% by 2020. Also, Low wages and poor treatment caused subsequent labour unrest. These highlight the need for stronger transparency, institutional oversight, and inclusive stakeholder engagement as important complementary components to the financing structure in large-scale development projects.

Implications for project proponents: This case suggests that while China's state-led financing can mobilise substantial resources across project scales, successful outcomes depend not only on financing availability but also on governance capacity, labour standards, and institutional

coordination—especially for large-scale infrastructure projects.

Lessons and Replicability

The integrated analysis of the three hydropower projects financed by China in Angola shows that China's state-led development finance can be effectively tailored to projects of different scales, offering valuable guidance for other African countries seeking to finance their renewable energy infrastructure. In line with standard Chinese development finance practice, the financing packages covered approximately 85% of total project costs, with the remaining 15% contributed by the Angolan government. This helps ensure a degree of government ownership and political buy-in of Angolan government, which can be critical for project implementation, coordination, and long-term operational stability.

The loans were typically structured with 15-year repayment tenors, providing medium- to long-term fiscal predictability for the borrower. However, the use of variable interest rates introduces an additional layer of financial risk, particularly in periods of global monetary tightening. For African governments, this highlights the importance of robust debt management frameworks and contingency planning to manage potential fluctuations in debt servicing costs over the project lifecycle.

It is widely recognised that the China's state-led development financing, comprising policy banks and commercial banks, has consistently delivered significant results in financing large-scale infrastructure projects in Africa. These financial activities are often accompanied by the participation of the China Export & Credit Insurance Corporation (Sinosure), the only policy insurance company in China, to mitigate risks (see Box 1 below). Furthermore, it is noteworthy that China's state-led development financing is increasingly demonstrating greater flexibility. For instance, although not covered in the Angolan case studies, CHEIXM has participated in small hydropower projects in other African nations – with installed capacities reaching 10MW and project values amounting to US$30 million.

Box 1: The Role of Sinosure in China's Financing Mechanism in Africa

The China Export & Credit Insurance Corporation (Sinosure), established in 2001, is China's state-funded and policy-oriented insurance company. Its primary mandate is to promote China's foreign trade and investment cooperation. Sinosure provides insurance coverage for both sovereign projects and commercial projects, offering a range of services including edium- and long-term export credit insurance, overseas investment insurance, short-term credit insurance, bond guarantee, financial guarantee, non-financial guarantee, among others.[15] In 2020, Sinosure opened its first Representative Office in Africa in Johannesburg, South Africa, and is operating a working team in Egypt.

The full data on Sinosure's scale of involvement in China's financing activities in Africa is not publicly available, but it is reported that from 2000-2020, Sinosure covered $8.4 billion of government loans in Zambia, Ethiopia and Ghana.[16] By July 2018, it had provided insurance

[15] China Export & Credit Insurance Corporation. Corporate Profile. https://www.sinosure.com.cn/en/Sinosure/Profile/index.shtml.

[16] Moses, Oyintarelado and Kevin P. Gallagher. (2023). "Another $4 Billion on the Table? The Role of China's Sinosure in Africa's Debt Negotiations." *Boston University's Global Development Policy Center*. https://www.bu.edu/gdp/2023/02/16/another-4-billion-on-the-table-the-role-of-chinas-sinosure-in-africas-debt-negotiations/

services of over $ 200 billion to Chinese businesses in Africa.[17]

Within China's financing and investment activities in Africa, Sinosure – working in collaboration with Chinese policy banks – supports large-scale infrastructure, energy, and resource development projects, and plays a crucial role in risk mitigation and credit enhancement rather than direct financing. Its medium- and long-term export credit insurance is particularly relevant for sovereign-backed projects, where repayment depends on commitments by African governments. In such cases, the host government must be a formal participating party and confirm that the project has been incorporated into the national fiscal budget or supported through other sovereign mechanisms before insurance coverage can be considered. [18]

The insurance is typically taken out by banks[19] or enterprises—rather than African governments—and serves as a last-resort risk safeguard, ranking after the host country's sovereign commitment rather than substituting for it. Coverage is generally capped at around 95%, ensuring risk-sharing between insurers and lenders and preventing full risk transfer. While African governments may engage in preliminary discussions related to specific projects, the underwriting and documentation process is primarily managed on the Chinese side, based on confirmation of sovereign participation and fiscal backing.[20] For African governments and utilities, early confirmation of sovereign participation and budgetary inclusion is therefore a critical prerequisite for mobilising Sinosure-supported financing.

3.1.2 Greenfield Investment from SOEs: The Case of South Africa

Financing from SOEs play an active role in greenfield investment in Africa, particularly in the development of clean energy projects. As the continent's most industrialised economy, South Africa faces the dual challenge of sustaining energy security while reducing dependence on coal, which accounts for over 80% of its electricity generation. Between 2013 and 2024, the country secured approximately US$2 billion in BRI-related investments and construction funding, including several projects aligned with the country's energy diversification and decarbonisation goals.

A prominent example of China-South Africa cooperation in clean energy is the partnership with Longyuan Electric Power, a subsidiary of the state-owned China Guodian Corporation, which led to the development of the De Aar Wind Power Project (see Box 2 below). This project is China's first Greenfield wind farm investment in Africa, making South Africa an ideal case study to explore how Chinese SOEs are contributing to Africa's clean energy transition.

[17] Qiang, Meijuan. (2018). "Sinosure provides insurance services worth over $ 200 billion to Chinese business in Africa." *People's Daily*. https://en.people.cn/n3/2018/0830/c90000-9495605.html
[18] Interview with the expert at Sinosure.
[19] Note: All banks participating in the project are qualified, including both Chinese domestic and foreign commercial banks.
[20] Interview with the expert at Sinosure.

Box 2: De Aar Wind Project[21]

Project Overview	
Company	Longyuan South Africa Renewables
Partnership	Longyuan Electric Power (subsidiary of China Guodian Corporaiton) South Africa's Eskom
Capacity	244.5 MW for Phase I and II
Investment size	US$492.9 million as the lead shareholder
Financing terms	Undisclosed
Agreement	20-year clean energy procurement agreement with ESKOM in 2013
Completion	Completed in 2018 after successfully met ESKOM assessment standards[22]

Effectiveness and Limitations

South Africa is highly dependent on fossil fuels for its national energy needs. Early efforts to lock-in long-term clean energy procurement through a 2009 feed-in tariff system proved to be unviable due to low price competitiveness.[23] However, South Africa initiated a revised and more sustainable clean energy procurement mechanism in 2011 in the form of the Renewable Energy Independent Power Producer Procurement Program (REIPPPP).[24] Therefore, implementation of Longyuan's De Aar project was among the first clean energy ventures to benefit from the more price-competitive REIPPP. As a result of this revised national clean energy procurement mechanism, Longyuan's wind power project was more economically feasible due to a competitive off-take and reduced structural risks, building a complementary success case for future renewable energy developers in South Africa.

Similarly, 2011 was the same year South Africa's Department of Energy launched an ambitious goal of expanding domestic installed energy generation capacity by 86.5GW until the year 2030; alongside coal energy use reductions from a high of 93% down to 46%.[25] Accordingly, the Longyuan project made early contributions to both national energy goals, creating traction for future clean energy investments in the country.

A defining feature of the project lies in its integrated investment-construction-operation model. Unlike many cases where Chinese SOEs participate solely as EPC contractors, the De Aar project was the first wind power project developed by a Chinese SOE in Africa that combined investment, construction, and long-term operation.[26] The project also incorporated a 30%

[21] Nedopil Wang, Christoph. (2019). "The Resources and Potential of Green Energy in South Africa." *Green Finance & Development Center*. https://greenfdc.org/bri-cooperation-and-financing-on-renewable-energy-taking-china-and-south-africa-as-an-example/

[22] Engineering News. (2015). "Construction Kick-Off for Longyuan Mulilo De Aar Wind Projects." https://www.engineeringnews.co.za/article/financial-close-achieved-for-longyuan-mulilo-de-aar-wind-projects-2015-03-19

[23] Eberhard, Anton. (2013). "Feed-In Tariffs or Auctions?" *The World Bank Financial and Private Sector Development Vice Presidency Note Number 338*. https://www.gsb.uct.ac.za/files/feedintariffsorauctions.pdf

[24] NDC Partnership, (n.d). "South Africa's Renewable Energy Independent Power Producer Procurement Programme". Available here

[25] Nedopil Wang, Christoph. (2019). "The Resources and Potential of Green Energy in South Africa.".

[26] Ibid.

local ownership stake through a South African Community Education Trust via Longyuan Engineering South Africa.[27] This partnership facilited local participation, including the recruitment of South African consultants and contractors and the procurement of locally supplied materials.[28]

The project is projected to supply electricity to 85,000 households annually and to reduce carbon emissions by up to 619,900 tonnes per year.[29] However, the wind turbine generators used were imported from China, highlighting a missed opportunity for South Africa that may have been due to absence of locally produced, price competitive alternatives.

Implications for project proponents: This case illustrates that Chinese SOE-led greenfield investment can deliver both energy and social benefits when aligned with transparent, competitive national procurement frameworks. However, local industrial participation beyond ownership—particularly in manufacturing and supply chains—remains contingent on host-country capacity and policy incentives.

Lessons and replicability

The De Aar Wind Power Project offers a valuable model for future renewable energy investment in other African countries. First, it demonstrates that China's state-led greenfield investment models combining capital, technology, and operational expertise can deliver measurable benefits when aligned with national procurement frameworks like REIPPPP. Second, although Longyuan had a controlling stake in the De Aar project, it complied with local ownership requirements and uplifted the Community Education Trust it partnered with. It is noteworthy that South African laws mandated inclusion of local co-ownership. However, such partnerships should be replicated in environments without similar enforcement mechanisms due to the net social and economic gains this produces, as well as the risk management aspect brought on by local community participation. Finally, the project shows the important of building local industrial capacity alongside foreign investment. Future renewable energy projects should incorporate local manufacturing, training, and technology transfer mechanisms to create long-term economic value and reduce reliance on imported components.

3.1.3 China-Africa Development Fund

The China–Africa Development Fund (CADFund), a subsidiary of the China Development Bank (CDB), also plays a key role in financing Chinese businesses activities across Africa. It was established in 2007 following the FOCAC 2006 commitments with an initial capital at US$5 billion and later increased to US$10 billion in 2015. As of 2024, CADFund has committed $8.2 billion in 39 African countries, which could mobilize $32.8 billion of Chinese investments to Africa.[30] It is also the first Africa-focused equity investment fund launched by China.

While comprehensive data on CADFund's portfolio in renewable energy remains scarce, it is known that the fund primarily invests in Chinese companies, with holdings typically below 50%. Notably, CADfund now has no investment thresholds on projects[31] and shifted its focus to sectors such as digital infrastructure, green development, the China-Africa supply chain,

[27] Engineering News, (2015). "Construction Kick-Off for Longyuan Mulilo De Aar Wind Projects."
[28] Ibid.
[29] Nedopil Wang, Christoph. (2019). "The Resources and Potential of Green Energy in South Africa."
[30] China Development Bank. (2024) Annual Report. Available here.
[31] Interviews with the contact at CADFund.

and panda bonds.[32] Table 1 below highlights some examples of CADFund investment projects.

Table 1: Examples of CADFund Investment Cases

Country	Industry	Case	Year	CADFund Investment	Equity share
Multiple countries	Automobile	FAW Africa Investment Co., Ltd.[33]	2010	45 million USD	45%
Multiple countries	Agriculture	Halcyon Agri Corporation Limited[34]	2016	90 million USD	10%
Tanzania	Chemicals	Huaxin Hong Kong (Tanzania) Investment Co., Ltd.[35]	2021	19.25 million USD	38.89%

One notable example of this shift is the establishment of the Special Fund for China-Africa Green Industrial Chain, one of the major outcomes of the FOCAC 9. The fund prioritises support for projects that strengthen the green industrial chain of China-Africa cooperation, particularly in clean energy, green transport and green mining in Africa. Under this initiative, CADFund, together with CGN Energy International (CGNEI), Sinosteel and South Africa's Kona Holdings, launched the first phase of the 60MW TFC photovoltaic (PV) power plant project in South Africa. This project is the first project invested by the Special Fund for China-Africa Green Industrial Chain after its official establishment in October 2024.[36] Now the Special Fund has approved seven projects, with the total investment of RMB6.2 billion (US$871 million).[37] These all show that CADFund's growing role in advancing Africa's green development and sustainable energy transition.

Implications for project proponents: This case highlights the relevance of equity-based and hybrid investment vehicles in China–Africa green cooperation, particularly for projects that align with industrial development objectives and long-term value creation. While CADFund primarily invests in Chinese enterprises and typically takes minority equity positions, this does not preclude meaningful participation by African businesses. In practice, African firms can access CADFund-supported financing through partnerships or joint ventures with Chinese companies, particularly where projects align with both sides' development objectives. Effective cooperation between Chinese and African enterprises is therefore critical to identifying and structuring projects that meet CADFund's investment criteria—combining commercial viability with strategic

[32] ChinAfrica. (2024). Investing in Future: China's equity fund promotes high-quality development of China-Africa economic and trade cooperation. Available here.
[33] China-Africa Friendly Economic and Trade Development Foundation. (2010, April 28). 一汽与中非发展基金携手启动中国在非洲最大汽车产业投资项目. Available here
[34] Shanghai Stock Exchange. (2016, August 11). 中化国际(控股)股份有限公司关于全资子公司转让股权的公告. Available here
[35] Shanghai Stock Exchange. (2021, May 19). 华新水泥股份有限公司关于为华新香港(坦桑尼亚)投资有限公司提供担保的公告. Available here
[36] Belt and Road Portal. (2024). "中非绿色产业专项资金首个项目落地开工." https://www.yidaiyilu.gov.cn/p/08QRJK8I.html
[37] Ministry of Foreign Affairs of People's Republic of China. (2025). "中非合作论坛北京峰会成果落实清单." https://www.fmprc.gov.cn/gjhdq_676201/gjhdqzz_681964/zfhzlt_682902/zywj_682914/202506/t20250611_11646035.shtml

relevance to China–Africa cooperation and host-country development priorities.

3.1.4 Other Chinese State-led financing to African Development Financial Institutions through Syndicated Loans

Major Chinese financial institutions—such as the Industrial and Commercial Bank of China (ICBC) and the China Development Bank (CDB)—have increasingly participated in syndicated loans to African development finance institutions (DFIs) and commercial banks (see Table 2 below). This form of lending differs from traditional project-based financing in that it channels capital to African financial institutions directly, enabling them to determine their own investment priorities. It thus represents an emerging model of partnership financing, aligning Chinese capital with Africa's domestically defined development and green transition agendas.

Table 2: Examples of Chinese State-led Banks loans to African DFIs and Banks

Borrower	Year	Tenor & Amount	Lenders
AFC[38]	2023	$625 million, three-year term	**Mandated Lead Arrangers and Bookrunners**: First Abu Dhabi Bank PJSC FirstRand Bank Limited (London) ICBC (London) Mashreqbank PSC (acted as agent) MUFG Bank Standard Chartered SMBC Bank International **Participants**: Gulf Bank National Bank of Ras Al-Khaimah CITIC Qatar National Bank Doha Bank Industrial Bank of Korea Limited
Standard Bank[39]	2023	$400 million sustainability-linked loan	ICBC (syndication agent) ICBC (London) **Sustainability coordinators**: Mizuho Bank (facility agent) Standard Chartered (documentation agent)
Afrieximbank[40]	2024	$500 million	**Global Coordinators, Initial Mandated Lead Arrangers and Bookrunners**: ICBC (London) Standard Chartered **Mandated Lead Arrangers**: Bank of Communications Bank of Communications (London)

[38] African Business. (2023, May 29). Africa Finance Corporation (AFC) secures US$625 million Syndicated Loan with New Lenders from Middle East and Asia. Available here.
[39] Koigi, B. (2023, December 13). Standard Bank closes $400 million sustainability-linked syndicated term loan facility. Africa Business Communities. Available here.
[40] The African Export-Import Bank. (2024, June 12). African Export-Import Bank US$500 Million Dual Tranche Syndicated Term Loan Facility. Available here.

			BCOM (Prague) CCB (Johannesburg) **Lead Arrangers**: BoC (London) CITIC (London) **Arranger**: Mega Bank (Offshore Banking) **Participants**: Chang Hwa Commercial Bank (London) Taiwan Cooperative Bank (Offshore Banking) Shanghai Commercial & Savings Bank (Offshore Banking)

These transactions illustrate how Chinese banks are becoming increasingly integrated into international financing networks, while African institutions gain access to larger and more diversified sources of capital. For African DFIs, syndicated loans offer medium-term financing to support renewable energy and sustainable development projects; for Chinese banks, participant in syndicated structure allows risk sharing, partnership building with international lenders, and deeper engagement in global sustainable finance.

Implications for project proponents: For Chinese's banks, syndicated lending to African DFIs can expand access to capital indirectly by strengthening local financial intermediaries. However, the availability of such financing depends on the capacity of Africa's domestic institutions to originate, structure, and manage bankable green projects, as well as their ability to align project pipelines with the sustainability frameworks increasingly adopted by both Chinese and international lenders.

At a broader level, state-led financing continues to play an important role in Africa' large-scale energy and infrastructure projects. However, in recent years, there is an increasing recognition of the need for more flexible, diversified, and sustainable investment models. This shifted is reflected in the "small but beautiful" concept proposed at the Third Belt and Road Forum for International Cooperation in 2023[41], which signals a strategic move away from resource-intensive mega-projects toward smaller, high-impact initiatives that emphasize financial viability, local development benefits, and environmental sustainability. Within this context, private enterprises, are also becoming increasingly active in Africa's green development. Their participation complements traditional state-led finance by introducing innovation, efficiency, and market-based approaches, representing another key model in China-Africa cooperation on green development.

[41] Keynote Speech by President Xi Jingping at the Third Belt and Road Forum for International Cooperation. (2023). "Building an Open, Inclusive and Interconnected World for Common Development." http://www.beltandroadforum.org/english/n101/2023/1018/c124-1175.html

3.2 Private sector led Finance

China's private sector finance is playing a significant role in supporting Africa's green development. A growing number of private entities—including equity investors, project developers and green technology firms—are participating in Africa's renewable energy and sustainable infrastructure projects. Their involvement typically follows commercial logic: delivering viable investment returns while contributing to green growth objectives. Their participation reflects both commercial incentives and a gradual policy shift encouraging market-oriented cooperation to complement traditional, state-led financing.

Chinese private finance involves a wide and dynamic range of participants and financial instruments. In addition to large private enterprises with substantial capital reserves for self-investment, many private firms rely on various financing channels, such as owner equity, commercial loans, venture capital, and bond markets. These financial mechanisms support private sector engagement in Africa on renewable energy and infrastructure projects, enabling activities like equity investment, greenfield investment, joint ventures, public-private partnerships (PPPs), and project financing.

While comprehensive data on Chinese private finance in Africa remains fragmented, evidence from project analysis in Chapter 2 suggests that private participation is expanding. This section focuses on illustrative case studies to explore how private actors mobilize capital, structure investments, allocate risks, and design revenue models in green projects in Africa. Through these examples, the analysis highlights both the opportunities and challenges of market-based engagement and considers how private sector participation can complement policy-led initiatives to advance Africa's energy transition and sustainable development.

3.2.1 Greenfield Investment

Greenfield investment has become a key mechanism for Chinese private enterprises to engage in Africa's renewable energy sector. According to China's Ministry of Commerce, China's foreign direct investment (FDI) in Africa reached $3.37 billion in 2024, accounting for 1.8% of its total outward direct investment.[42] While overall investment volumes remain moderate, the sectoral focus of China's investment has shifted increasingly toward renewable energy.[43] Specifically, solar energy projects have long been a primary focus of greenfield investment from Chinese private-owned companies such as CHINT – the leading solar PV company. The scope of investments has now expanded into the electric vehicle (EV) sector in the recent three years, including both battery manufacturing and vehicle assembly.

At the policy level, the Forum on China-Africa Cooperation (FOCAC) 9 reaffirmed China's commitment to advancing investment-led cooperation, announcing that Chinese enterprises would inject at least an additional RMB70 billion (US$9.86 billion) into Africa in the next three years.[44] Within this context, greenfield investment can serve as a flexible and adaptive model to deploy renewable energy projects in Africa.

[42] Ministry of Commerce of People's Republic of China. (2024). "2024 Statistical Bulletin on China's Outward Direct Investment. Available here.

[43] United Nations Conference on Trade and Development. (2025). 2025 World Investment Report. Available here.

[44] Xinhua News. (2024). "(FOCAC) Full text: Keynote address by Chinese President Xi Jinping at opening ceremony of 2024 FOCAC summit." Available here.

Country Case Study – Ghana[45]

Ghana is endowed with abundant renewable energy resources, particularly in hydropower, solar, and wind. However, much of this potential remains underutilized. To accelerate the development of renewable energy, the government enacted the Renewable Energy Act[46] in 2011, introducing a Feed-in-Tariff (FiT) mechanism to support renewable energy integration. The FiT rates, approved by the Public Utilities Regulatory Commission, have applied to power purchase agreements (PPAs) signed since October 2014.[47] The BXC solar project (see Box 3 below), then the largest solar power installation in the country – invested and owned by a Chinese private-owned company operating in the gold mining sector - stands as a notable example of how Ghana's policy mix and opportunities for business synergies together could motivate Chinese companies in Africa's renewable energy development through greenfield investment.

Box 3: BXC solar project in Ghana

Project Overview	
Location	Gomoa Onyandze, Gomoa West District, Central Region, Ghana
Area	100 acres (approximately 40.5 hectares)
Capacity	20 MW
Technology	Photovoltaic (PV) solar panels
Owner & Operator	Beijing Xiaocheng Company (BXC) through its subsidiary, BXC Ghana
Investment size	Approximately US$30 million
Revenue model	IPP+PPA
Commissioned	April 2016
Grid Connection	The plant feeds electricity into the national grid via a high-voltage transmission line to a substation at Winneba Roundabout

The project is fully owned by Xiaocheng through its subsidiary in Ghana. The project was built as a part of its business expansion strategy, aiming to fulfill the energy demand in its own business operation, while generating profits and helping to solve the power shortage problem in the country.[48] The project has been in stable operation for almost 10 years, and the company now has expanded its portfolio, including seven projects for Vodafone, at least 5 distributed solar power stations for local factories, and two 6.5MW solar power projects in Tanzania, for which the company received the first PPA payment from TENESCO in July 2025.[49][50]

The BXC project demonstrates how favourable policy and regulatory environments can attract credible private investors to Africa's renewable energy sector. Its success shows that

[45] Note: can be a good case study because it represents the first case of greenfield investment by private enterprises recorded in the project data in Chapter Two.
[46] Ghana Public Utilities Regulatory Commission. Renewable Energy Act, 2011. Available here.
[47] Ghana Public Utilities Regulatory Commission. (2014). "Publication of Feed-in-Tariffs and Capacity Cap for Electricity Generated from Renewable Sources." Available here.
[48] BXC Company Ghana Ltd. https://energycom.gov.gh/refair/files/BXC.pdf
[49] Beijing Xiaocheng Technology Stock Co., Ltd. (2024). "2023 Annual Report." Available here.
[50] Beijing Xiaocheng Technology Stock Co., Ltd. (2025). "2025 Half-Year Report." Available here.

transparent and enforceable PPAs, stable electricity pricing frameworks, and predictable investment conditions are crucial for mitigating risks to private capital participation. Concurrently, operational challenges—including payment delays by the off-taker, currency fluctuations, and logistical dependence on imported equipment—highlight the persistent risks faced by private investors.

Despite these challenges, this project remains a replicable "solar+mining" model for other African countries with similar industrial demand profiles. As a high-tech enterprise listed in China, Beijing Xiaocheng possesses operational strengths in circuit design, electronic power systems, and energy management alongside mining investment and operations. The company also has substantial capital reserves that support its international expansion on renewable energy sector in Ghana. It is worth noting that although Xiaocheng initially established the photovoltaic (PV) power station to address electricity shortages for its gold mining facility in Ghana, the project has also provided significant co-benefits to the local community to deliver reliable clean energy. Additionally, the company's prior expertise in energy management and PV power station development has paved the way for future collaborations on local solar PV projects in Ghana.

Implications for project proponents: For African governments and project sponsors, private greenfield investment is more likely to materialise where renewable energy projects can be anchored in strong commercial fundamentals—such as reliable PPAs, identifiable demand sources, and synergies with existing industrial operations—while being supported by a stable regulatory environment. For Chinese private investors and developers, greenfield investment offers opportunities to deploy renewable energy projects where commercial viability can be reinforced through synergies with existing industrial operations or captive demand. However, exposure to off-taker risk, foreign exchange volatility, and supply-chain dependencies remains a key consideration for private investors operating without sovereign guarantees.

3.2.2 Private-Public Partnership (PPP) Model

An increasing number of Chinese enterprises are participating in Africa's renewable energy sector through public-private partnership (PPP) models. These partnerships aim to balance risks between the public and private sectors while addressing debt sustainability issues in African nations. In sectors such as energy and transport—where infrastructure investment delivers both commercial returns and public goods—PPPs have emerged as an important mechanism to advance green development objectives while maintaining fiscal sustainability.

Country Case Study - Nigeria

Nigeria has been heavily reliant on fossil fuels for electricity generation, with fossil fuels accounting for 77% of the country's power output, while hydropower contributes 22%. Although Nigeria is one of the largest oil producers in Africa, the nation is the largest importer of refined petroleum in Africa.[51] In this context, the country's push for electric vehicles (EVs) is not only an important step toward green development, but also holds significant symbolic value as an emerging clean technology. The move toward EVs is driven by Nigeria's desire to address pressing economic challenges, including rising fuel costs and its dependence on

[51] Ohalezim, Anurika, and Paul N. Ngang. (n.d.). "Accessing the Impact of Imported Refined Crude Oil from the EU on Nigeria's Economic Growth and Development." *Regional Studies Association*. Available here.

imported petroleum.[52] Lagos State, home to 27 million people (around 12% of national population) and accounting for 27% of Nigeria's GDP, offers a strategic starting point for piloting the green transformation of public transport. The introduction of green and smart mobility solutions can both address the mobility challenges of its rapidly growing urban population and drive the state's broader green development agenda. The case study below (see Box 4) provides a good example of how Chinese private companies and the Lagos State government leveraged the PPP model to drive the green transition of the transport sector.

Box 4: Lagride Nigeria project

Project Overview[53]	
Country	Nigeria
Area	Lagos, Nigeria
Partners	Lagos State Government, CIG Motors (China), IBILE Holdings
Technology	Electric vehicles (EVs) and smart mobility technologies
Investment size	Over $200 million in 5 years to procure 5,000 four-wheel vehicles, including 1,000 EVs
Revenue model	Vehicle-leasing to local drivers/car-hailing service providers
Launched	Jul 2024

Within the PPP framework, IBILE Holdings provides strategic oversight and ensures alignment with the government's interests, while CIG Motors contributes technical expertise, vehicle supply, and operational support. The project operates under the state-backed ride-hailing platform LAGRIDE, which utilizes digital technologies for fleet management, driver allocation, and payment systems. The effectiveness of this model is strengthened by the Lagos State government's ownership stake, which ensures policy continuity and supports the alignment of broader urban mobility and green development goals.

Beyond reducing carbon emissions and alleviating traffic congestion, the joint venture is designed to create at least 10,000 job opportunities for local drivers and stimulate local value chains.[54] However, the project faces challenges. High upfront costs create barriers for local drivers to fully benefit from the program, despite financing support, and limited charging infrastructure restricts the scalability of the EV fleet. Additionally, the need for specialized maintenance and trained personnel for EVs presents operational hurdles.

Despite these challenges, the LAGRIDE project provides important lessons for promoting green development in African countries through innovative PPP models with Chinese partners. It highlights the important role of both government and private sector. One the one hand, government involvement ensures policy continuity and adds credibility to local communities and investors. One the other hand, the engagement of dedicated private sector partners with localized solutions brings innovative financing schemes that make electric vehicles more accessible. The project can be a replicable model for other African countries seeking to advance sustainable and low-carbon mobility solutions.

[52] Bulls Capital. (2025). "The Truth about Electric Vehicle Manufacturing in Nigeria." Available here.
[53] Adelowo, R. (2024). "Sanwo-Olu sets PPP model." *Lagostoday*. Available here.
[54] Blessing, Olusola. (2025). "LagRide Unveils Bank-Backed Vehicle Scheme to Create 10,000 Driving Opportunities in Lagos." *MSME Africa*. Available here.

Implications for project proponents: For African governments and project sponsors, this case suggests that PPP-based green mobility projects are more likely to succeed where public authorities provide clear policy backing and institutional participation, while private partners deliver commercially viable business models adapted to local conditions. Effective implementation also depends on the availability of supportive regulatory and financing ecosystems that allow projects to scale beyond pilot phases. For Chinese private enterprises and technology providers, PPP models offer opportunities to deploy projects by combining commercial business models with public-sector support. However, scaling such projects requires adaptation to local market conditions, engagement with local partners, and the development of innovative financing mechanisms that address high upfront costs and operational risks.

3.2.3 Venture Capital Investment

With its vast market and untapped green development potential, Africa has also become a destination of interest for venture capital. From 2007-2022, the number of green ventures in Africa grew by 300%, mainly focused on clean energy, green agriculture, nature-based solutions and green technologies such as carbon sequestration and carbon removal. These ventures have been successful in deploying much needed solutions in the market. For example, clean energy startups have provided access to clean energy for over 300 million Africans and are expected to account for over 50% of new energy connection by 2050.

However, despite this growth, these green startups are facing structural barriers, including limited access to early-stage and scale-up capital, policy uncertainty, and underdeveloped innovation ecosystems.[55] Within this landscape, Chinese corporate and venture investors have begun to engage more actively, although their investments to date have largely focused on digital and fintech sectors rather than climate and energy technologies. A notable recent development is Tencent's launch of its Global CarbonX Program 2.0 in December 2024 to accelerate global climate technological innovation. Through a partnership with Africa Climate Ventures, the programme seeks to support green startups in Africa.[56] While still at an early stage, such initiatives indicate a potential expansion of Chinese venture capital engagement into Africa's green innovation ecosystem, complementing more established forms of project-based and state-led finance.

Implications for project proponents: For African governments and ecosystem actors, venture capital offers an important pathway for early-stage green innovation, particularly for scalable and technology-driven solutions. Its effectiveness depends on the availability of patient capital, supportive policy environments, and mechanisms to bridge the gap between pilot projects and commercial deployment. For Chinese investors, venture capital engagement provides opportunities to access emerging markets and support local innovation ecosystems. However, returns are often contingent on long time horizons and uncertain exit pathways. This means it requires careful alignment with local market conditions and complementary financing instruments to support scale-up beyond early-stage deployment.

[55] Hill, Katie et al. (2022). "Strategies for Scaling Africa's Green Ventures." *Boston Consulting Group*. https://www.bcg.com/publications/2022/scaling-green-ventures-in-africa

[56] Tencent. (2024). "Tencent Launches Global CarbonX Program 2.0 to Accelerate Climate Tech Innovation." https://www.tencent.com/en-us/articles/2201985.html

3.3 Emerging Innovative Financial Models

The evolving landscape of China–Africa cooperation is increasingly characterized by innovative financial models that blend elements of state-led and private-sector financing. While state-backed institutions continue to provide the long-term capital and policy support essential for large-scale infrastructure, private investors bring market agility, technology, and diversified funding sources. Instruments such as panda bonds and blended finance mechanisms exemplify this convergence—leveraging public institutions' credibility to attract private capital toward Africa's green and sustainable development. These emerging models not only diversify Africa's access to finance but also align with the broader shift in China's overseas engagement toward smaller, more targeted, and financially viable projects.

3.3.1 Panda Bonds

Panda bonds—RMB-denominated bonds issued by foreign entities in China's domestic bond market—have emerged as an innovative instrument for mobilizing private-sector finance toward development and sustainability goals in Africa. By enabling African governments and financial institutions to raise funds directly from Chinese capital markets, panda bonds create new channels for private investors, commercial banks, and institutional funds in China to participate in Africa's green growth agenda. To date, only Egypt and African Export-Import Bank (Afrieximbank) have tapped the Chinese capital market via panda bonds (see Table 3 below). These transactions serve as important proofs of concept, demonstrating the feasibility of this financing model and laying the groundwork for future participation by other African sovereigns.

Table 3: Panda Bonds issued by African entities

Issuer	Size	Coupon rate	Supporting parties	Use of proceeds
Egypt[57]	3-year RMB 3.5 billion	3.5%	Partial credit guarantees provided by AfDB and AIIB, and BoC and HSBC as the underwriter and bookrunner	Clean transportation, renewable energy, energy efficiency, sustainable water and wastewatermanagement, financing for micro, small, and medium-sized enterprises, and essential health services initiatives
Afreximbank[58]	3-year RMB 2.2 billion	2.99%	BoC as lead underwriter and bookrunner, China Eximbank and ICBC as joint lead underwriters	Bank ordinary operations; Africa-China trade facilitation[59]

[57] African Development Bank Group. (2023). "Egypt issues Africa's first Sustainable Panda Bond worth 3.5 billion RMB backed by African Development Bank and Asian Infrastructure Investment Bank." Available here.
[58] The African Export-Import Bank. (2025). "Afreximbank issues first Panda bond in China Interbank Market with RMB 2.2 billion issuance." Available here.
[59] The African Export-Import Bank 2025 Renminbi Bonds (Series 1) (Bond Connect) Supplemental Offering Circular. Available here.

Building on this early progress, momentum is expected to grow as more African governments explore panda bond issuance to diversify their financing sources and strengthen links with Chinese capital markets. Such development not only expands Africa's access to onshore RMB financing but also contributes to the internationalization of the renminbi. Reflecting this policy priority, FOCAC 9 announced that "China will encourage and support Africa in issuing panda bonds in China to enhance our results-oriented cooperation in all areas."[60] In line with this initiative, Kenya has announced plans to issue a US$2.77 billion panda bond by the end of 2025 to fund its Standard Gauge Railway (SGR) project.[61]

Looking ahead, the expansion of the panda bond market presents a promising pathway for African governments and development finance institutions to access China's growing pool of private-sector capital.

Implications for project proponents: Panda bonds provide African governments with an innovative tool for tapping into Chinese capital markets, but successful issuance requires a stable regulatory environment, creditworthiness, and alignment with long-term policy objectives.

3.3.2 Blended Finance

Between 2022-2024, Africa was the most targeted region of blended finance from the world, attracting 48% of deployed capital each year. In 2024, Africa saw 123 blended finance deals totaling US$18 billion, with climate deals accounting for 49% of the total.[62] This demonstrates the growing recognition of blended finance as an effective financial mechanism for addressing climate change and achieving green development in Africa.

Data on Chinese participation in blended finance projects is limited. Evidence from AidData shows that Chinese financial institutions – particularly ICBC – have participated as a lender in deals led by international development institutions. In these projects, ICBC often contributes to the commercial loans portion alongside other banks. This pattern reflects China's cautious but strategic engagement in multi-stakeholder financing, allowing Chinese banks to gain experience with complex financing structures, risk mitigation mechanisms, and international governance practices, while avoiding direct equity stakes or lead roles.

A good example of this approach is Cameroon's Nachtigal Hydropower project, where ICBC participating in the commercial loan tranche together with a consortium of DFIs and international banks (see Box 5 below).

Box 5: Cameroon Nachtigal Hydropower Plant

Project Overview[6364]	
Country	Cameroon

[60] Xinhua News. (2024). "(FOCAC) Full text: Keynote address by Chinese President Xi Jinping at opening ceremony of 2024 FOCAC summit." Available here.
[61] Financial Afrik. (2025). "Kenya prepares a $2.77 billion Panda Bond with China." Available here.
[62] Convergence. (2025). State of Blended Finance, Spring 2025. Available here.
[63] Adelowo, Remi. (2024). "Sanwo-Olu sets PPP model." *Lagostoday*. Available here.
[64] Aiddata. "ICBC contributes to EUR 172 million syndicated loan tranche for 420MW Nachtigal Hydroelectric Power Plant Construction Project." Available here.

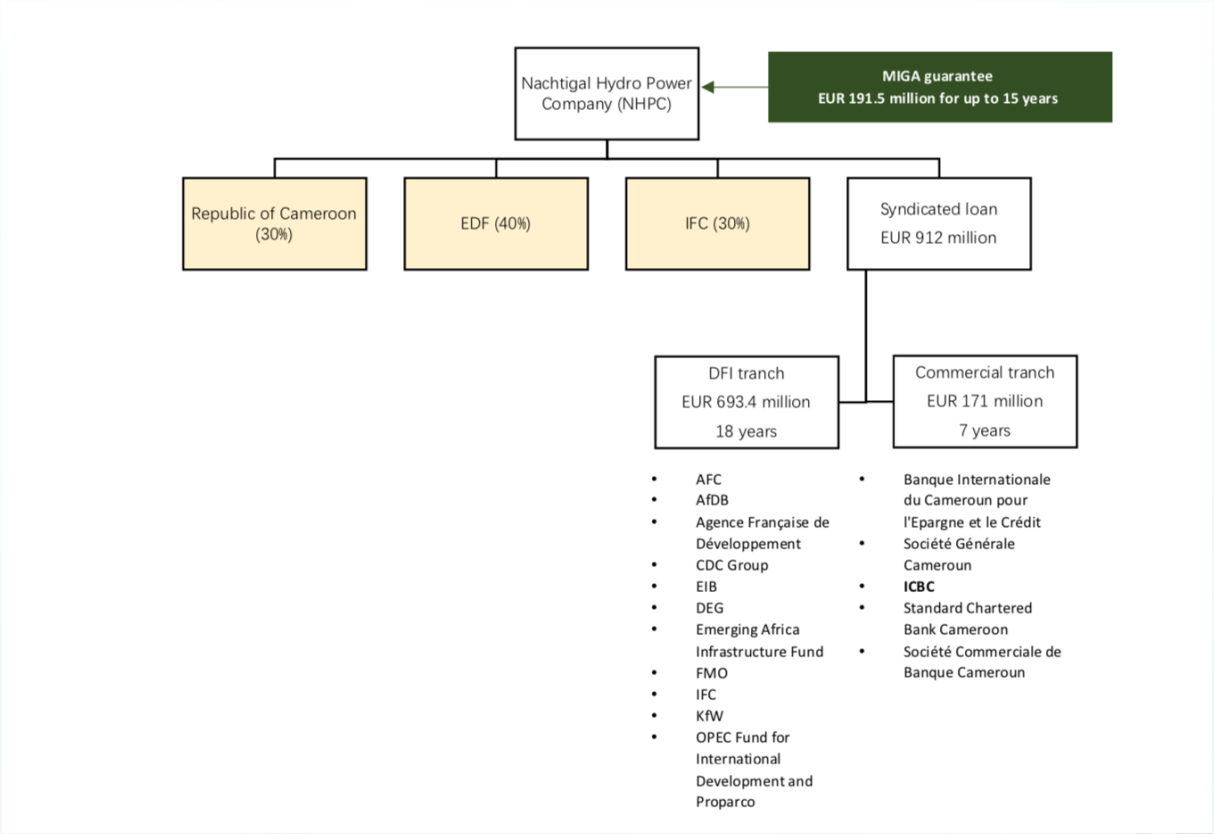
Location	Sanaga River, ~65 km northeast of Yaoundé, Cameroon
Technology	Hydropower
Capacity	420 MW (7 × 60 MW Francis units); expected to generate at ~2,900 GWh/year
Investment size	EUR 1.26 billion
Revenue model	35-year PPA signed with ENEO, Take-or-Pay model

Note: Financing terms shown reflect publicly disclosed information for this project and may not apply to other projects or contexts.

Cameroon holds approximately 3% of the world's hydropower resources, making it one of Africa's most water-rich countries. Its extensive river networks, including the Sanaga and Nyong, provide significant potential for large-scale hydropower development, both technically and economically. Supported by a clear policy framework under the National Electricity Development Plan (PDSE 2030), the government has actively promoted renewable energy projects.

The Nachtigal Hydropower Plant stands out as a flagship renewable energy initiative and a good example of blended finance, successfully combining public, private, and multilateral funding to ensure the project's feasibility and long-term sustainability. As a core component of PDSE 2030, the project aims to increase Cameroon's national power supply by 30% once completed. This collaborative effort involves Cameroon, France, and the IFC, with ICBC as the sole Chinese stakeholder, contributing to the commercial loan tranche. Figure 3 below shows a detailed financial structure of the project.

Figure 3: Nachtigal project blended finance structuring



Note: Financing terms shown reflect publicly disclosed information for this project and may not apply to other projects or contexts.

The blended finance model is particularly suitable for large ticket-size projects, mobilizing capital from both domestic and international, as well as public and private sources. In the case of the Nachtigal Hydropower Project, the 35-year PPA agreement also ensured long-term operation and commercial viability of the project. China's participation in blended finance projects in Africa, as exemplified by the Nachtigal project, has been effective in mitigating risk, gaining experience in complex financing structures, and accessing strategic renewable energy investments through commercial loan participation. However, its impact remains limited due to China's minimal governance influence, lack of equity exposure, and reliance on other stakeholders for project standards and oversight, which constrains long-term upside and slows the accumulation of comprehensive operational expertise.

While the scale and complexity of the Nachtigal project may limit full replicability, it offers valuable lessons for other African infrastructure projects. Governments can adapt its risk-sharing and governance mechanisms to suit local conditions, ensuring that the financing structure is both effective and sustainable. For Chinese stakeholders, the Nachtigal project provides an opportunity to gradually deepen its participation in blended finance projects by continuing to engage as a commercial lender while gradually exploring leading roles.

Implications for project proponents: For African governments and project sponsors, blended finance offers an effective approach for delivering large infrastructure projects, particularly when balancing public policy goals with private sector efficiencies. The success of such models depends on strong institutional coordination, including clear risk-sharing arrangements, bankable long-term offtake agreements, and governance frameworks that ensure accountability across multiple stakeholders. For Chinese participants, engaging as lenders rather than equity holders can be beneficial for risk management but may limit long-term project influence.

Taken together, the analysis of Chapter 3 suggests that engaging Chinese green finance is less a linear process than a context-specific negotiation shaped by project scale, institutional arrangements, and political economy considerations. While no single pathway applies universally, understanding these dynamics can help project proponents and policymakers better position projects and manage expectations when engaging Chinese financial actors.

As China's green finance engagement continues to evolve, both in Africa and globally, it is crucial to explore how these complex interactions can be harnessed to support more targeted, sustainable outcomes. In this context, the next chapter will focus on the key pathways for enhancing China–Africa green finance collaboration, highlighting actionable strategies and emerging opportunities that can help maximise the impact of China's growing financial involvement in Africa's green transition."

Chapter 4
Pathways for Enhancing China-Africa Green Finance Collaboration

China has been playing an important role in finance projects that are meaningful for Africa's green development. The next phase of China–Africa cooperation on green development will be defined not only by the scale of finance mobilized, but by the quality and inclusiveness of that finance. As climate risks intensify and the demand for clean energy surges, green finance has become a critical frontier of partnership between China and Africa. To bridge Africa's growing green investment gap, a more integrated, diversified, and innovation-oriented financial framework from China is required. The following pathways propose forward-looking directions to deepen this collaboration – particularly for African policymakers, public utilities, development finance institutions, and project proponents seeking to engage Chinese financial and corporate actors more effectively.

1. Engaging China's Policy Banks through Scaled, Diversified and More Sustainable Structures

For African governments and public utilities, China's Policy banks have historically provided the backbone of Chinese financing in Africa—particularly for large-scale power and infrastructure projects that underpin industrial development. While China's overseas lending has moderated in recent years, Africa's need for reliable and affordable electricity remains acute. In this context, continued engagement by China's policy banks in large, sovereign-backed loans projects remains both necessary and appropriate.

Rather than moving away from this model, African borrowers and project sponsors can help enhance its sustainability by encouraging Chinese policy banks greater diversification of risk across a larger number of projects, instead of concentrating exposure in a small number of very large loans. Spreading investments across multiple power generate and transmission projects – potentially across different countries and sub-regions – would reduce concentration risk while maintaining scale and development impact.

At the same time, greater attention should be given to loan terms and repayment structures. Moving away from market-following interest rate formulas toward lower, more stable interest rates, combined with longer maturities and more predictable repayment schedules, would improve debt sustainability and enable borrowing governments and utilities to plan manageable, consistent payments. In practice, such approaches can be more effective in safeguarding repayment over the long term than higher-interest structures that increase the risk of distress and non-payment.

Finally, Chinese policy banks are well positioned to support cross-border and regional infrastructure projects in Africa, where African actors can play a catalytic role by developing pipelines that align with regional power pools and integration initiatives. By structuring projects with pooled risk mechanisms, African stakeholders can better leverage China's policy banks financing to strengthen energy security and support African Union priorities such as Agenda 2063 and the African Continental Free Trade Area (AfCFTA), while also reinforcing cooperation frameworks under FOCAC.

2. Positioning Projects to Engage Chinese SOEs as Development and Investment Partners

Chinese state-owned enterprises (SOEs) are taking on a more strategic role — moving beyond

implementation to co-developing projects and mobilizing finance in collaboration with African financial institutions and project partners. Interviews with SOEs engaged in Africa's energy projects indicate a notable trend: as China's financing focus shifts towards “small yet beautiful” projects, the era of large-scale, state-financed EPC contracts is waning—pushing SOEs to move up the value chain into project development and investment. As a result, SOEs are now also more directly engaging in competitive bidding to secure contracts for African projects. This shift reflects both Africa’s changing procurement landscape and China’s recalibration toward more commercially viable and sustainable initiatives.

SOEs now play a dual role—both as investors bringing in capital and technology, and as contractors competing in open markets. Their growing participation in greenfield renewable energy projects, such as wind and solar farms, demonstrates a transition from a construction-focused engagement to investment and operational partnerships. For African stakeholders, encouraging SOEs to co-invest alongside local and regional partners – including African DFIs and private firms – can strengthen local ownership, improve risk allocation, and support capacity building within host countries.

3. Accessing the China-Africa Development Fund through Strategic Project Structuring and Partnerships

For African firms and governments seeking equity-based financing, the China–Africa Development Fund (CADFund) represents a specialised—but selective—entry point into China’s green investment ecosystem. CADFund plays a critical role in supporting Chinese companies’ investments in Africa and has expanded its focus to include green development following the establishment of the Special Fund for the China–Africa Green Industrial Chain.

CADFund’s equity investment model provides opportunities to integrate Chinese technology, capital, and operational expertise with African development objectives. However, it is important for African stakeholders to understand that CADFund invests exclusively in Chinese enterprises and typically requires Chinese companies to hold controlling ownership stakes. As a result, African firms generally access CADFund-supported projects through partnerships or joint ventures with Chinese companies, rather than as direct recipients of funding.

Going forward, it is critical for both sides to identifying and structuring projects that meet CADFund’s investment criteria—combining commercial viability with strategic relevance to China–Africa cooperation and host-country development priorities. African governments and project sponsors can engage more effectively with CADFund by facilitating structured cooperation between Chinese and African enterprises. For example, both sides could convene regular investment promotion webinars or project matchmaking sessions to identify and showcase bankable opportunities that align commercial returns with bilateral strategic objectives. Moreover, African stakeholders could encourage CADFund to establish dedicated co-development platforms that support early-stage project preparation—such as pre-feasibility studies, partner matching, and risk assessment—thereby reducing development risks and improving project readiness before investment decisions are made.

4. Mobilising Co-financing and Risk-sharing to Attract Chinese Private Sector Involvement

From an African perspective, a sustainable green finance partnership with China requires innovation not only in financial instruments but also in institutional coordination and market participation. Future cooperation should focus on expanding co-financing and risk-sharing mechanisms that integrate Chinese policy banks, private investors, African financial institutions, and multilateral partners into a cohesive ecosystem for climate-aligned investment.

Interviews with Chinese enterprises indicate that both state-owned and private firms continue to face structural barriers in accessing finance for green projects in Africa. In many cases, financing channels from Western countries—such as those from the United States or certain European nations—apply "tied" funding models that prioritize suppliers from their own countries. As a result, even when Chinese firms offer cost-effective and technically competitive solutions, they are often excluded from these financing arrangements. In contrast, mainly African-led financial institutions, such as the African Development Bank (AfDB) provide more open opportunities for competitive participation.

For African stakeholders, strengthening domestic and regional financial capacity is therefore critical. Expanding the use of blended finance tools—such as guarantees, syndicated loans, and concessional-to-commercial transition instruments—can reduce perceived risks and improve project bankability. Instruments including green bonds, sustainability-linked loans, and PPP structures can mobilise larger pools of capital while diversifying financing sources for renewable energy and green infrastructure.

At the same time, collaboration between Chinese financial institutions and African DFIs, central banks, and commercial banks can help build expertise in green project appraisal, risk assessment, and capital mobilisation—supporting a more resilient and self-sustaining green finance ecosystem over the long term.

5. Aligning Green Finance with Africa's Industrial and Value-Chain Priorities

For African policymakers, maximising the development impact of China–Africa green finance requires expanding the focus beyond just scaling up renewable energy projects. While clean energy infrastructure is essential, long-term green transformation also depends on investments in green industrial sectors that promote economic diversification, job creation, and environmental sustainability.

Positioning green finance within broader industrial and value-chain strategies—such as green manufacturing, clean technology deployment, sustainable transport, circular economy initiatives, and climate-resilient agriculture—can help African countries leverage Chinese finance to support integrated and resilient growth. As China and Africa deepen cooperation on green finance, aligning investment pipelines with local value chains and industrial policy objectives will be critical to ensuring that green development translates into inclusive and durable economic outcomes.

Chapter 5
Conclusion

China's financial engagement in Africa has evolved into a crucial pillar for supporting the continent's transition to a green economy. The analysis throughout this paper has shown that Chinese investment strategies, whether state-led or private sector-driven, are instrumental in addressing Africa's energy investment gap. By leveraging a combination of concessional loans, equity investments, and innovative financial instruments like blended finance and panda bonds, China is fostering an environment conducive to sustainable development across Africa.

To enhance the effectiveness of China-Africa green finance cooperation, it is essential to strengthen the adaptability of financing mechanisms, ensuring they are responsive to the unique needs of different African countries. This can be achieved through greater emphasis on blended finance models, increased participation of African financial institutions, and the integration of local industries in renewable energy projects.

Looking forward, the future of China-Africa green finance will depend not only on the scale of investment but also on the inclusiveness and sustainability of these investments. As climate risks intensify globally and Africa's energy demand grows, it is crucial to build on the lessons learned from past projects, fostering innovation and strengthening institutional capacity for long-term green growth. Through continued collaboration, China and Africa can together unlock new pathways to a more sustainable, low-carbon future for the continent.

Annex 1： Key Chinese Financiers in Green Projects in Africa by Development Reimagined's China-Africa Climate-Action Tracker

Policy Banks			
Institution	**Finance Type**	**Investment Focus**	**Project Example in Africa**
China Development Bank (CDB)	Loan	Clean infrastructure, energy transition	Kenya: Menengai Geothermal Project
Export–Import Bank of China (CHEXIM)	Loan	Renewable energy, industrial infrastructure	Ethiopia: Adama II Wind Farm
Commercial Banks			
Institution	**Finance Type**	**Investment Focus**	**Project Example in Africa**
Industrial and Commercial Bank of China (ICBC)	Loan, co-finance	Renewable energy, transmission	South Africa: Redstone Solar Project
Bank of China	Loan	Green industrial parks, clean transport	Egypt: Suez Green Industrial Zone
Equity Funds			
Institution	**Finance Type**	**Investment Focus**	**Project Example in Africa**
China–Africa Development Fund (CAD-Fund)	Equity	Renewable energy, green industrialization	Ethiopia: Eastern Industrial Zone Solar Pilot
Silk Road Fund	Equity	Renewable energy, transmission	Egypt: Benban Solar Park stake acquisition
State-Owned Enterprise (SOE) Finance			
Institution	**Finance Type**	**Investment Focus**	**Project Example in Africa**
PowerChina	EPC + investment	Hydropower, solar, wind	Zambia: Kafue Gorge Lower Hydropower Project

Energy China	EPC + investment	Renewable energy, grid integration	Egypt: Hamrawein Clean Coal-to-Renewable Transition Project
China State Construction Engineering Corporation (CSCEC)	EPC + loan	Green buildings, infrastructure	Algeria: Solar-Integrated Housing Project
China National Electric Engineering Co. (CNEEC)	EPC	Wind and solar	Nigeria: Katsina Wind Power Project
SINOMACH	EPC + investment	Renewable manufacturing	Kenya: Solar component assembly project
China Geo-engineering Corporation (CGC)	EPC	Renewable infrastructure	Uganda: Rural Solar Lighting Program
China Harbour Engineering Company (CHEC)	EPC	Green port infrastructure	Nigeria: Lekki Deep Sea Port
China Jiangxi International Group	EPC	Energy & water infrastructure	Ethiopia: Tana-Beles Renewable Irrigation Project
China Civil Engineering Construction Corporation (CCECC)	EPC	Urban transport, electric mobility	Nigeria: Abuja Light Rail Electrification
China Power Engineering Consulting Group (CPECC)	EPC	Solar, hydro feasibility	Malawi: Solar Mini-Grid Feasibility Study
Private Company Finance			
Institution	**Finance Type**	**Investment Focus**	**Project Example in Africa**
Huawei Technologies	Direct investment	ICT for clean energy, smart grid	Rwanda: Smart Solar Microgrid Pilot
LONGi Green Energy	Direct investment	Solar module manufacturing	Egypt: PV module plant cooperation
Envision Energy	Equity + investment	Wind and EV battery	Kenya: Wind turbine local assembly
BYD Company Ltd.	Investment	Electric mobility	Morocco: EV bus manufacturing line