CLIMATE GROUP
RE100



Unlocking corporate renewables investment in Sub-Saharan Africa

The opportunities and barriers

Policy Report

Energy

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Executive summary

This briefing examines whether corporate renewable electricity sourcing can play a meaningful role in accelerating industrial development in Sub-Saharan Africa.

This research is carried out in partnership with the Accelerated Partnership for Renewables in Africa (APRA) Implementation Office. APRA is an international alliance led by African countries committed to renewable energy transitions and green industrialisation. Current members[1] include Djibouti, Ethiopia, Ghana, Kenya, Mozambique, Namibia, Rwanda, Sierra Leone, Uganda, and Zimbabwe. Drawing on global experience, survey evidence from RE100 member companies, and a focused programme of interviews and workshops conducted across the region, the study tests a central hypothesis: that corporate demand for renewable electricity could help unlock investment, infrastructure, and industrial growth.

The evidence suggests a more nuanced picture. While corporate renewable sourcing has driven significant change in liberalised electricity markets elsewhere, the conditions for replicating traditional power purchase agreement (PPA) models are not yet present in many markets in Africa. Demand is fragmented, grid infrastructure is uneven, and corporate investment decisions are shaped more by operational and market fundamentals than by renewable electricity availability.

1 As of October 2026.

As a result, traditional PPA-led models are unlikely to scale on their own and require work to aggregate demand, and develop enabling ecosystems of finance, policy, contracting expertise, supply and demand. More promising pathways such as the Anchor-Business-Community (ABC) framework emerge in the short term where corporate demand is linked to operational necessity, industrial anchor loads, and distributed or hybrid energy systems, often aligned with broader development objectives. This is reflected in our top 5 recommendations:

- Develop country-specific delivery platforms, bringing together corporates, developers, utilities, financiers, and regulators in regular, deal-focussed engagements
- Prioritise development of anchor-led and productive use pilot projects in the short term
- Develop practical mechanisms to aggregate corporate demand
- Improve market transparency through visible, standardised project pipelines
- Strengthen local financing ecosystems to enable scalable development

The briefing is structured in two parts. Part 1 sets out the hypothesis, context, and early signals from survey and desk research. Part 2 tests these assumptions against detailed interview evidence and practitioner experience, identifying where global models hold, where they break down, and where alternative, Africa-specific pathways offer greater credibility and impact.



Methodology

This briefing is designed to support APRA in identifying and mapping private sector demand for renewable energy across Sub-Saharan Africa. The research adopts a mixed-methods approach combining desk research, a structured survey of RE100 member companies, and in-depth qualitative interviews with corporates, developers, financiers, policymakers, and sector experts.

The survey captures corporate perspectives and stated investment preferences across African markets, while the interviews and stakeholder workshops are used to assess whether these preferences translate into feasible action under real-world market conditions. Initial results were tested with key African private and public sector stakeholders at a roundtable held at Kenya International Investment Conference 2026, Nairobi.

This design recognises that survey data alone may overstate the applicability of global corporate sourcing models in structurally constrained markets. Qualitative evidence therefore plays a critical role in validating, contextualising, and, where necessary, challenging the survey findings, ensuring that the conclusions reflect operational realities as well as stated corporate intentions.



1. Context

1.1 Background: Electrification and renewable electricity in Sub-Saharan Africa

Sub-Saharan Africa (SSA) possesses abundant renewable electricity resources. But while the region boasts some world-class examples of wind, solar, geothermal and hydro power generation, it remains fundamentally energy-constrained with almost half of the population without access to power. Electricity supply and demand levels are among the lowest globally, grid infrastructure is often weak or incomplete, and reliability challenges persist across many markets.

In this context, the principal driver for renewable energy is not displacing fossil generation on the grid for climate reasons. Instead, it is expanding access, filling supply gaps, reducing reliance on diesel self-generation, and enabling economic activity that would otherwise be impossible. The development question is therefore not whether Africa has renewable resources (it has plenty of sun, wind and water), but identifying the most effective ways of rapidly scaling up the utilisation of those resources within Africa's diverse and unique economies, energy market structures, and corporate demand profiles.

While Kenya[2] and Ethiopia[3] can boast near-to 100% renewable on-grid power due to geothermal and hydroelectric investments, Africa is starting from a baseline of extremely low electricity demand. Outside of South Africa and Nigeria, Sub-Saharan Africa's largest consumers (Ethiopia, Mozambique and Kenya) each consumed under 15TWh/yr[4] electricity in 2024, around half that consumed by Singapore[5].

Most mainstream projections (including IEA's "Current Policies Scenarios"), suggests that the gap between Africa and the rest of the world will grow with per-capita energy consumption remaining extremely low. We argue that these projections are by no means an inevitability, and that they underestimate the potential for increasingly cheap renewables and storage to stimulate much faster economic growth.

2 International Energy Agency, Energy System Overview, Kenya, 2024
3 International Energy Agency, Energy System Overview, Ethiopia, 2024
4 IEA 2025 Executive summary – Kenya 2024 – Analysis - IEA
5 EMA 2025 EMA | SES Chapter 3: Energy Consumption

1.2 RE100 and the corporate relationship with renewable electricity

The global corporate leadership initiative RE100 brings together over 400 businesses committed to sourcing 100% of their electricity from renewable sources. Collectively they consume over 500 TWh/yr of electricity globally, giving RE100 genuine leverage over energy markets and the governments that regulate them. RE100 has spent over a decade accelerating policy change in key markets where these corporates have significant operations and electricity demand. This has opened opportunities to source renewables via PPAs in Japan, Korea and Vietnam, which were once considered too difficult to crack.

Corporate interest in renewable electricity, initially driven by scope 2 accounting and voluntary environmental targets, is increasingly driven by the falling cost of renewables, energy security, and competitive advantage benefits, particularly for export-oriented manufacturing economies. The availability of renewable electricity even features in investment decisions. For example, Lego's decision to locate their new £1bn manufacturing plant in Vietnam was determined in part by the availability of Direct Power Purchase Agreements.[6]



Scope 2 accounting

Scope 2 accounting refers to the emissions associated with the electricity a company buys and uses, rather than what it generates itself (scope 1). It allows companies to report lower emissions if they source renewable electricity or purchase certificates that represent clean power.

Corporate sourcing of renewable electricity can bring win-win opportunities for businesses and governments. The companies involved typically bring guaranteed long-term demand (often 10 years) and strong credit ratings, reducing risk for project developers and financiers. This can, in the right circumstances, make projects bankable (i.e. more attractive and cheaper to finance) without relying on public subsidies or other instruments.

BloombergNEF estimates that companies have signed power purchase agreements for almost 200 GW of solar and wind capacity between 2008 and 2023,[7] with the Global Renewables Alliance reporting that corporate renewable energy procurement increased further to 62.2 GW in 2024.[8] Meanwhile, RE100's 442 member companies collectively consume around 583 TWh of electricity annually, equivalent to approximately 2% of global electricity demand, and are expected to require an additional 105 GW of renewable capacity by 2030 to meet their commitments.[9]

6 interestingengineering.com/culture/lego-opens-factory-run-on-clean-energy
7 BNEF 1H 2024 Corporate Energy Market Outlook.
8 Global Renewables Alliance (2025), Corporate Sourcing Policy in Action.
9 RE100 and CDP (2025), 2024 RE100 Annual Disclosure Report.

Against this backdrop of proven global impact, it's important to ascertain whether, and under what conditions, corporate sourcing of renewable electricity could contribute to industrial development in Sub-Saharan Africa. Rather than assuming transferability from mature markets, the analysis treats corporate renewable demand as a potential, but uncertain, lever whose effectiveness depends on market structure, regulatory environment, demand scale, and local delivery capacity.

1.3 Corporate sourcing options: an overview

Corporations typically source renewable electricity through four mechanisms: on-site self-generation, off-site PPAs, utility green tariffs, and unbundled energy attribute certificates. Each mechanism offers different levels of scale, additionality, and feasibility depending on market context. In Africa, the availability and practicality of these options vary widely, and their relevance is explored empirically in subsequent sections.



P-RECS and other specialist certificates

In cases where PPAs aren't possible in a given country, or are not an option for companies without the creditworthiness needed to support long-term contracts, corporate procurement of unbundled energy attribute certificates such as International Renewable Energy Certificates (I-RECs), including high-impact I-REC labels such as Peace Renewable Energy Credits (P-RECs), can provide catalytic financing for new renewable energy projects and longer-term annual support for operations and maintenance. P-RECs are designed to direct additional revenue to projects that deliver not only clean electricity but also broader social and economic benefits in underserved or conflict-affected communities. For example, P-REC revenues can help improve the financial viability of distributed solar installations serving refugee settlements, rural health facilities, schools, or communities with limited access to reliable electricity, helping unlock investment in projects that may otherwise struggle to secure financing. This creates a mechanism through which corporate renewable electricity procurement can contribute both to decarbonisation and to wider sustainable development outcomes.

Case studies from Asia: Malaysia and Vietnam

The following case studies from Malaysia and Vietnam illustrate how more advanced developing economies are expanding corporate access to renewable electricity through direct contracting, third-party network access, and wheeling arrangements. In both cases, policymakers have sought to harness corporate demand to attract private investment in renewable generation and reduce reliance on traditional government-led procurement models.

The case studies below are not presented as directly transferable models. While countries such as South Africa and Egypt share some characteristics with markets like Malaysia and Vietnam, most Sub-Saharan African power systems are smaller, less industrialised, and constrained by weaker infrastructure, more fragmented demand, and less developed regulatory frameworks. Their value therefore lies not in replication, but in the broader lessons they offer on market structures, private-sector participation, and the role of corporate demand in driving renewable energy investment.



Malaysia: CRESS and the corporate investment response

Malaysia's Corporate Renewable Energy Supply Scheme (CRESS),[10] launched in September 2024, provides an example of a market that has rapidly expanded corporate access to renewables, starting from a low base. CRESS operates under a Third-Party Access model that allows corporate entities to enter into Power Purchase Agreements (PPAs) directly with renewable energy developers, with the utility, TNB, retaining its role as grid operator and charging a transparent system access fee. The Malaysian government projected that CRESS would attract over RM10 billion (£1.9bn) in direct investment into the renewable energy sector and create nearly 14,000 new jobs within the sustainable energy industry.

Various corporates successfully executed off-site PPAs under the CRESS scheme within months of its implementation. Most notably, in December 2025, TotalEnergies and Google finalised a 21-year agreement to supply 1 TWh of renewable power from a solar farm in Kedah, with construction scheduled to begin in 2026 to power Google's $2 billion data centre in Selangor. TNB remained central to grid operations and collected transmission charges, creating a revenue stream that supported its own grid investment plans.

10 www.cress.my



Vietnam: How Policy Unlocked Corporate Renewable Investment

For over a decade, large multinationals operating in Vietnam, including suppliers of RE100 members Nike, Apple, Samsung, and Adidas, sought ways to source renewable electricity but were blocked by a state monopoly that required all power to be purchased through the national utility, Vietnam Electricity (EVN).[11]

In July 2024, after five years of drafting and fifteen successive versions, the Vietnamese government enacted its Direct Power Purchase Agreement (DPPA) decree, permitting direct power purchase agreements between private renewable energy generators and large corporate consumers. A feature of the decree grants permission for entirely privately developed, owned, and operated transmission lines, potentially allowing large-scale solar or wind farms at remote sites to supply industrial consumers directly.

The market response was immediate. Within six months of the DPPA rules being released, private company interest in developing or buying renewable energy through the mechanism exceeded 5,600MW. The policy also helped Vietnam retain multinational manufacturers and service companies with corporate renewable energy mandates, and, combined with a new Telecommunications Law permitting 100% foreign ownership in data centre infrastructure, positioned the country to attract major data centre operators such as Google, Microsoft, and Amazon Web Services seeking facilities supplied with 100% green energy.[12]

11 RE100, Climate Group, IEEFA and IESR (2025). Accelerating renewables investment in Indonesia: Shared use of the transmission network. Available at: www.theclimategroup.org/re100/accelerating-renewables-investment-indonesia

12 www.wri.org/insights/vietnam-direct-power-purchase-agreement

1.4 Corporate sourcing in Sub-Saharan Africa – early signals from literature and surveys

Desk research indicates that corporate renewable electricity sourcing remains at an early stage across most of Sub-Saharan Africa. EY's Renewable Energy Country Attractiveness Index (RECAI) and its associated PPA Attractiveness Index provide a useful benchmark for assessing where corporate procurement is currently feasible.[13] The RECAI ranks countries according to their attractiveness for renewable energy investment and deployment. The index is particularly valuable because it goes beyond renewable resource potential alone to assess factors such as energy policy, market design and the investment environment, and evaluates whether investors are likely to be able to successfully develop and finance projects in a given market. As a rule of thumb, markets that do not appear in the PPA Index Top 30 can be assumed to lack either an enabling framework for corporate PPAs or evidence of active corporate participation. Countries ranked below the top 20 are generally regarded by RE100 members as "challenging markets".

The four key ways in which corporations source renewable energy

Self-generation: A company produces its own renewable electricity on-site or off-site, using assets it owns, e.g. rooftop solar, on-site wind, or biomass. Self-generation is considered a highly effective sourcing method as it directly adds new renewable capacity, although scale is usually limited to roof-top or sub-utility scale wind and solar developments.

Power Purchase Agreements (PPAs): Long-term contracts in which a company buys renewable electricity directly from a generator, either on-site or off-site via the grid. A contract with a guaranteed corporate off-taker can be critical in making a new renewable project 'bankable' and PPAs have been an important tool for enabling new renewable electricity projects to be developed, often extremely large, utility scale projects. PPAs often bundle physical electricity contracts with Energy Attribute Certificates (EACs) that verify the environmental attributes for off-takers.

Green tariffs: Renewable electricity supply contracts offered by utilities or electricity suppliers, where the supplier sources renewable electricity on behalf of the customer.

Unbundled Guarantees of Origin (GOs), or other unbundled Energy Attribute Certificates – EACs: Unbundled GOs are certificates purchased separately from the underlying electricity, allowing a company to claim renewable electricity use. Unbundled certificates are an acceptable procurement method in schemes like RE100 and are often cited as a critical income source enabling renewables projects to be financially viable, but are recognized as having lower direct impact (less additionality) than other sourcing methods. I-RECs are the main available type of EACs in Sub-Saharan Africa and P-RECs are the main impact label for qualifying I-REC projects.

13 EY RECAI PPA Index methodology internal presentation, shared with RE100 team for the purposes of this study

Since 2022, only three African countries (Morocco, Egypt, and South Africa) have appeared consistently in the lower tier of the PPA Index Top 30, reflecting growing but still limited corporate PPA activity. EY identifies South Africa in particular as having potential to emerge as a regional PPA hub, largely driven by corporate demand for energy security through independent supply. Across APRA countries, corporate PPA frameworks remain uneven. Kenya and Namibia[14] stand out for recent regulatory reforms. These have enabled mechanisms such as bilateral trading, and wheeling – the process of transporting electricity from a private generator (such as a solar or wind farm) to a consumer (like a factory or commercial building) across a third-party, usually public, transmission and distribution network.[15] However, contracted corporate PPAs remain limited and in some cases theoretical rather than operational. Other markets, including Ethiopia, Zimbabwe, Tanzania and Zambia, have introduced PPA and independent power producer (IPP) frameworks, but these remain relatively early-stage compared with more mature corporate procurement markets. In practice, most utility-scale renewable energy capacity continues to be procured by, or contracted to, state-owned utilities such as Ethiopian Electric Power (EEP), ZETDC/ZESA, TANESCO and ZESCO." [16, 17, 18, 19]

Overall, while regulatory reform may expand grid-based corporate procurement opportunities in selected markets over time, the EY evidence underscores that PPA availability remains limited to a small number of countries. Consistent with interview findings, this suggests that decentralised, anchor-led, and distributed models are likely to account for a substantial share of near- and medium-term corporate renewable uptake across the region, rather than utility-scale PPAs alone.

1.5 The role of renewable Industrial Development Zones (IDZs)

Industrial development zones (IDZs) have emerged globally as tools to concentrate infrastructure, aggregate demand, and attract investment. Some IDZs are starting to position renewable electricity as a competitive signal, to complement business fundamentals. In 2025, China stated their intention to develop a series of zero carbon industrial parks, and the Chinese authorities are working with Climate Group/RE100 to develop internationally recognised standards, seeing the competitive opportunity in demonstrating performance. Our hypothesis is that renewable supply could act as a similar incentive to locate in African IDZs.

14 Namibia market liberalisation for bilateral trading: media.afreximbank.com/afrexim/Africa-Insights-2021-Q1.pdf

15 Kenya corporate PPA and wheeling reforms: renewableenergynews.co.ke/offsite-solar-reshapes-how-african-corporations-access-clean-energy/

16 Ministry of Finance Ethiopia / ENA (2026), Aysha 1 Wind Power Project.

17 New Zimbabwe (2026), Zimbabwe Signs PPA for 30 MW Vungu Solar IPP Pilot.

18 EWURA Power Purchase Agreements information site EWURA | Electricity Power Purchase Agreements.

19 EWURA (2025), reported in Africa Press Tanzania, State Approves 27 New Power Purchase Agreements.



Naivasha industrial development zone in Kenya is Africa's flagship example of a 100% renewable IDZ. Harnessing 700+MW geothermal capacity, this is one of the few IDZs in the world that can offer 24/7 renewable power.[20] Other 'renewable' Sub-Saharan IDZ's include MozParks Solar Industrial Zones in Mozambique; Ignié Special Economic Zone in Republic of Congo; and Tema & Dawa Industrial Zones in Ghana. At 10-150MW, these developments are modest compared with Naivasha's 700MW capacity. For context 100 MW capacity can typically support the needs of 10–30 medium factories or a large data centre; 10MW would support one large user such as a factory, mine or small data centre.

Our research found only one RE100 member, Microsoft, considering locating in a renewable IDZ in the region, proposing a $1bn data centre in Naivasha IDZ and citing renewables access as a driver[21]. The project has been paused at the time of writing.[22] However, it is notable that the proposed 1GW development would represent a significant addition to the country's existing 3GW generation capacity, raising concerns about the proportion of national energy demand that would be associated with a single project.

Use of renewables is certainly not mainstreamed in African IDZs. Bishoftu International Airport (BIA), outside Addis Ababa, is one of the largest IDZ-type developments in the region and includes substantial urban-economic infrastructure. While Architects ZHA point to on-site PV generation, remarkably little is made of the fact that the IDZ could easily be powered by 100% renewable electricity simply due to its location in Ethiopia.

As such, the existence of renewable-powered industrial zones should not be assumed to translate directly into additional corporate investment. Many zones remain small relative to corporate energy needs, recently established, or constrained by grid and transmission limits. Whether such zones act as genuine investment attractors, or primarily as enabling infrastructure once firms have already committed to a location, remains a question explored further through interviews in Part 2.

20 nation.africa/kenya/brand-book/kengen-unveils-africa-s-first-geothermal-powered-industrial-city-5296316

21 Microsoft and G42 to build geothermal-powered data center in Kenya - DCD

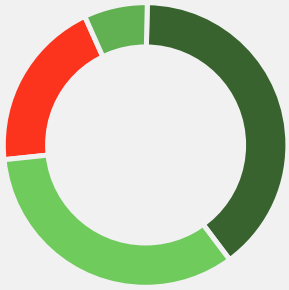
22 Kenya suspends plans for Microsoft's geothermal-powered data centre

2 Findings and analysis

Part I of this briefing set out an initial hypothesis: that corporate renewable electricity sourcing could play a meaningful role in accelerating renewably powered industrial development in sub-Saharan Africa. This hypothesis was grounded in desk research, survey evidence, and international precedent. Part 2 tests that hypothesis against on-the-ground market realities through surveys, in-depth interviews and stakeholder workshops. In doing so, it reveals where global models hold, where they break down, and where alternative pathways emerge as more credible drivers of scale and impact. Comments and survey results are illustrative of RE100 member positions, and may not be representative of overall corporate demand in the region.

2.1 RE100 Survey Findings: Corporate Renewable Energy in Sub-Saharan Africa

15 RE100 member companies, out of 101 approached, responded to the survey: Ingka Group, Reckitt (×2), HOYA Corporation, WNC Corporation, Decathlon, ASM, Inditex, LG Energy Solution, Fujikura, Siemens, Givaudan, Company C, Jinko Solar, Envision Group, and one company which replied anonymously. The findings below reflect their answers.



Expansion plans in Africa in the next 5 years

No Plans ■ Named Region(s)
Plans (Confidential) ■ Franchise Only

Survey context and company engagement

The 15 survey respondents represent companies at varied stages of engagement with Africa. Six report no plans to expand operations in the continent, five identify North Africa, Southern Africa and South Africa as specific regions of interest, three have confidential expansion plans, and one operates via a franchise model that precludes direct electricity procurement. As a result, a substantial share of responses reflects hypothetical positions rather than operational procurement experience. The most analytically relevant signals come from the nine companies with current or planned African operations.

Current sourcing options

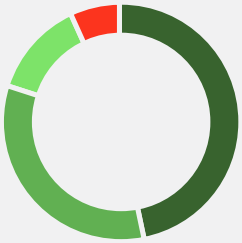
Among the six respondents with a defined renewable sourcing strategy for Africa, approaches are highly uniform. Most rely on on-site rooftop solar with battery storage, supplemented by EACs or I-RECs where available. Off-site PPAs are largely excluded due to insufficient demand volumes, although one respondent reported exploring regional PPAs to aggregate demand across locations. On-site options are constrained by building suitability, while certificate availability varies significantly across markets, with access reported in Egypt, Morocco, and South Africa but not in Algeria, Tunisia, Côte d'Ivoire, or Senegal. These patterns align closely with interview findings, which indicate that off-site PPAs remain scarce outside South Africa and Northern Africa.

Barriers to corporate procurement

Respondents identified a consistent set of structural barriers:

- Policy and regulatory uncertainty (9 of 15)
- Grid reliability constraints (8 of 15)
- Absence of viable PPA structures (7 of 15)
- Limited availability of compliant certificates (6 of 15)

Together, these indicate that enabling frameworks for corporate renewable procurement remain insufficient in most African markets.

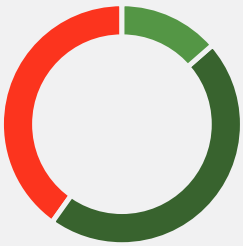


How important is RE access for investment decisions?

Low (1-2) Neutral (3)
Important (4) Very Important (5)

Renewables and investment decisions

Most respondents ranked renewable energy access as a low priority in African investment decisions, diverging from global survey patterns. However, when asked whether competitively priced renewable electricity would improve Africa's relative attractiveness, 10 of 15 respondents indicated a positive effect ("somewhat" or "significantly"). This suggests that while renewables do not currently drive location decisions, affordable and reliable renewable power could strengthen Africa's competitive proposition.

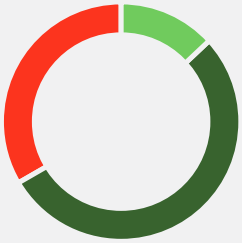


Would renewable-powered industrial hubs increase investment appeal?

Yes Maybe No

Views on renewable-powered industrial hubs or IDZs

Interest in renewable-powered industrial hubs is cautious. Only two respondents indicated that such hubs would clearly increase investment appeal, seven responded "maybe", and six said no. Conditional responses emphasised the need for cost competitiveness and grid stability, indicating that hubs are viewed as a positive signal rather than a decisive factor. Consistent with this, existing renewable-powered industrial zones have yet to attract RE100 members, potentially reflecting both their recent emergence and scale constraints.



Would competitive RE pricing make Africa a more attractive investment vs other regions?

Significantly Somewhat Not at all

Key findings

Three findings stand out:

1. Competitive renewable electricity pricing would improve Africa's investment attractiveness for most respondents.
2. Companies express willingness to procure renewables but are constrained by limited demand scale and absent enabling frameworks.
3. Several respondents report being caught between constrained on-site options and unavailable off-site PPAs, leaving certificates as the only, often inadequate, alternative.

In-depth interviews were conducted with the following stakeholders:

RE100 members	Think-tanks, NGOs, advisors	Service providers
• PepsiCo, Nicholas Jenks • Nestlé, Lautaro Cintolesi • [Accountancy company, anonymised] • EY, Phil Dominy • IWG, Luke Rowson • Continental Tyres, Georg Schwarz • Fosters & Partners, Peter Sharratt	• Energy Peace Partners, (Doug Miller, Director of Market Development; Linda Wamune, Program Director) • RES4Africa Foundation, Martina Serao and Mariana Petrosillo • Clarendon Global Partners, Marlon W Brown • REN21, Rana Adib and Frank Odhiambo Okoth-Menya, • I-TRACK Foundation, Khadijatou Johanna Toure • AfCFTA Secretariat, Roslyn C. Ng'eno	• Africa Minigrid Developers Association (AMDA), John Ouko • TalusAg, Hiro Iwagana • Global Wind Energy Council, Wangari Muchiri

2.2 Interview and workshop findings: The renewable Electricity Landscape in Sub-Saharan Africa

One message resonates through virtually every interview conducted for this research: that Sub-Saharan Africa is not a single market, and any analysis that treats it as one will generate flawed conclusions. The continent's renewable electricity landscape is, as Company F described it, "highly uneven, fragmented, and context-specific." Understanding this heterogeneity is the essential starting point for understanding the potential for corporate renewable electricity sourcing to drive change across the region.

This is not to say that there are no commonalities across the region. A common theme in the interviews identified Sub-Saharan Africa as fundamentally energy-constrained rather than an energy-transition market. Renewables are not replacing centralised fossil generation for climate reasons, they are providing additional energy growth and energy security.

As Elizabeth Press, Director, APRA Implementation Office, emphasises: "In Sub-Saharan Africa, energy is a tool of economic development and resilience first. Renewables win because they're the cheapest reliable power; the climate benefit comes with the growth."

2.3 A continent of contrasts: Regional differentiation

Interviewees from all three categories agreed that East Africa, Southern Africa and West Africa are "on completely different trajectories." However, there are differences in opinion over specifics, which appear to reflect the variability in information availability and transparency highlighted in our 'Barriers' section, rather than substantive disagreement. It should also be noted that this section is based on comments by a small number of interviewees.

East Africa

Kenya stands out as one of the more promising markets, although access to corporate-scale solutions remains uneven and grid-constrained. The country has historically relied on renewables due to the absence of significant domestic fossil fuel resources, and its policy environment is correspondingly supportive. Kenya is not without its challenges, with transmission bottlenecks and high electricity costs constraining its potential.

Ethiopia combines a near-100% renewable grid with low and subsidised, albeit rising, electricity tariffs plus improving logistics infrastructure, creating credible conditions for industrial growth. However, private corporate participation remains constrained by centralised governance and limited market liberalisation.

Southern Africa

South Africa occupies a distinctive position in the regional picture. Chronic load-shedding has driven a private-sector response that has, in some respects, outpaced policy. Rooftop solar plus battery storage has become widespread, and the country is the only market in which RE100 members consistently report viable off-site Power Purchase Agreements.

Company B, Company D, Company E and Company A confirmed South Africa as their sole African market where grid-scale corporate PPAs are currently executable.

This is reflected in the data, with only **South Africa** appearing consistently in the top 30 countries in EY's "Renewable Energy Country Attractiveness Index: Corporate Power Purchase Agreements" (EY2024) although RES4 Africa research suggests markets in West and East Africa, including Senegal, Kenya and Ghana show growing but more limited pathways.[23]

One interviewee suggested that South Africa is the only African market where PPAs currently make sense at scale.

Namibia was flagged across our interviewees as an emerging green hydrogen export route, albeit with questions over long term commercial sustainability.

Botswana, along with Gambia in West Africa, was cited as showing potential linked to mining loads, and integration into the regional grid, although certificate availability remains an issue.

Zambia faces a specific vulnerability: drought is affecting the hydropower base that has historically provided relatively clean electricity although diversification of renewable supply is starting to be addressed for example through the 100MW Chisamba solar plant.

23 Electricity Regulatory Index for Africa 2024 (AfDB);Private Sector Participation in African Grid Development (RES4Africa, 2021)

West Africa

West African nations represent, in Company C's assessment, a market that is "pre-even-nascent" for corporate renewable procurement, although there are exceptions. Heavy dependency on diesel generators, highly unreliable grids, and the near-total absence of PPA or VPPA frameworks define the landscape. Company B's representatives confirmed that off-site PPAs are simply not available in Central and West Africa, and that their Nigerian operations considered gas-based self-generation to be their only option for maintaining 24/7 factory operation.

The complexity of **Nigeria's** governance structure was raised by multiple interviewees as a distinct barrier.

Sierra Leone was noted by Company C as facing particularly severe infrastructure and societal challenges that place it at the far end of the readiness spectrum for corporate participation in the electricity market.

As notable exceptions, GWEC and RES4Africa point to **Ghana, Côte d'Ivoire** and **Senegal**, where precursor steps towards a liberalised PPA market are being taken; for example, Independent Power Producers (IPPs; privately owned generation companies) accounted for 75% of electricity production in Senegal in 2023 (Ministère de l'Énergie et des Mines, 2025)[24]

2.4 Current corporate sourcing options and RE100 members' sourcing in practice

Against this backdrop, how are RE100 member companies actually sourcing renewables in Sub-Saharan Africa? The picture that emerges is one of pragmatic adaptation. Companies are using whatever mechanisms are available in each country, and, in many markets, they simply struggle to find workable pathways at all.

We note that while RE100 companies do have a strong track record of innovation and tenacity to overcome challenges in meeting their targets, small loads in extremely difficult markets are often considered last. This is a pragmatic approach by companies, first focussing on large loads in more commercially viable markets, then working through the trickier regions, often requiring policy interventions that can take years. As such, it is not surprising that smaller loads in more difficult markets in Africa receive the least attention.

A recurring and important finding across RE100 member interviews is that the primary motivation for renewable energy purchasing in Sub-Saharan Africa is frequently not decarbonisation, but operational necessity. A senior representative from Company C framed it most directly:

> "The discussion isn't renewables. The discussion is electricity, and it happens to be renewable.

Individual 4, Company C

There is also a widely noted "catch-22": renewable energy costs remain high due to limited demand, while demand is constrained by high costs and unreliable supply.

24 Ministère de l'Énergie et des Mines (2025) Lettre de Politique de Développement du Secteur de l'Énergie et des Mines (LPDSEM) 2025-2029. Dakar: République du Sénégal.

On-site Solar: the default fallback

Where grid-connected options are unavailable, RE100 members default to on-site rooftop solar, often with battery storage, as the primary mechanism for physical renewable access.

A senior representative described Company C's experience. Operating across eleven African markets, their combined electricity demand of ~11,000 MWh is too small to attract developers for grid-scale solutions, leaving on-site installations as the only realistic option.

On-site solar plus storage has distinct advantages as a low cost, rapidly installed solution providing the company with direct control over energy security and cost. As such, it has proven immensely popular in Africa.

Nonetheless on-site solar has limitations, which Company B describes. Land near factories is often insufficient for meaningful solar volumes, and building rooftops are frequently too small or not fully under the company's control.

Certificate-based procurement: accessible, but is it additional?

Companies reported using Renewable Energy Certificates (RECs) where other options are not available; some using these as a 'top up', while others use RECs to cover 100% of their load.

REC availability and cost varies across the region, with uncertainty over certificate standards. Nigeria has cheap iRECs, with one interviewee citing purchases at $2/MWh, while Company C questioned that RE100-compliant certificates may not be available in Ghana at all.

Several interviewees view RECs as a substitute for real impact rather than a complement to it. Company D described them as "a box-ticking exercise" and is actively seeking more impactful solutions. In Company F's candid assessment: In Company F's candid assessment, "buying certificates is easier than doing real projects in Africa." This tension between compliance and impact runs through much of the discussion.

A further dimension, highlighted in discussions with the iTRACK Foundation, is that certificate demand in Africa is not inherently weak, but often constrained by market structure and visibility. International corporates operating in sectors such as mining and telecoms are already familiar with Energy Attribute Certificates and are actively seeking to replicate these models in African markets, particularly for Scope 2 reporting and energy security reasons. But certificate supply remains patchy and fragmented, with certificates unavailable or difficult to access in many countries. This creates a paradox where demand exists but is not translated into transactions, pointing to a need for more robust tracking systems, clearer market frameworks, and improved visibility of available supply.

However, higher impact RECs such as Peace RECs, which directly link funds raised from sale of unbundled RECs to funding of new projects, do exist in Africa and can provide a viable route to increased installation and social benefit. P-RECs are an impact label affixed to qualifying I-REC projects and enable companies to directly support new mini-grids that expand electricity access in fragile, under-electrified regions across SSA. Recently, EPP (the global P-REC labelling authority) secured approvals for the P-REC Aggregation Facility (PAF), which will deliver catalytic finance to new mini-grids by providing upfront commitments to pre-purchase P-RECs from not-yet-financed projects and bridge the bankability gap.

What are P-RECS?

The non-profit Energy Peace Partners developed the P-REC in order to unlock investment in renewable energy projects in fragile, conflictaffected, and underserved countries that are largely being left behind by the global clean energy transition.

A P-REC is a certificate that proves renewable electricity was generated, but unlike standard certificates, it specifically comes from projects in these higher-risk markets and is designed to show both climate impact and tangible social benefits. The idea is to channel funding into places where energy access is limited and investment is scarce, helping bring electricity to communities that need it most while supporting broader development.

In practice, renewable energy projects in these regions earn P-RECs for the electricity they produce, which are then bought by companies or organisations looking to support clean energy with real-world impact. The revenue from those purchases helps make projects financially viable and can also fund community benefits like reliable power for health services, schools, or local businesses.

Motivations for renewable energy purchasing: beyond decarbonisation

Across interviews, environmental credential was seen as a secondary benefit, rather than the primary driver. As a Company C representative put it:

> “It’s not renewables, it’s electricity, and it just happens to be renewable.

Companies see solar plus storage primarily as a means of ensuring operational continuity at lower cost than diesel generators. This framing is important – corporate buyers seek solutions that solve real operational problems, even when they are not motivated by climate objectives.

Given this, A REN21 representative argues that African SMEs and regional supply-chain actors may offer a more realistic source of renewable demand than large multinationals. These firms are embedded in local economies, face immediate energy-cost pressures, and are more directly exposed to the reliability constraints that are driving renewables investment.

Nonetheless, environmental concerns do feature, with Company D exploring sourcing options that bundle environmental and community benefits, including P-RECs. Company A's Individual 1 noted that the company's aspiration is for PPAs wherever possible, driven by additionality considerations.

Company C's representative also noted the emerging importance of the EU Carbon Border Adjustment Mechanism (CBAM) as a market signal creating new pressure to decarbonise electricity, particularly for companies with export-facing manufacturing operations.

One significant finding is that renewable energy availability does not currently drive plant location or investment decisions in the region. Company B's Individual 3 noted that energy represents only approximately 7% of the company's global GHG footprint. Company A similarly noted that expansion decisions in Africa are driven by logistics and cost-to-serve, not by access to renewables.

This is a critical framing for the broader project: the argument for creating enabling conditions for corporate renewable energy in Africa can and must be made on grounds other than Scope 2 compliance.



2.5 Will Africa follow a utility scale PPA pathway?

A key argument that emerged in the solution-provider interviews is that Africa is unlikely to replicate the US/European model of utility-scale, PPA-led corporate renewables pathway as the dominant model, at least in the short to medium-term. It's not seen as a matter of lag or underdevelopment, but as a structural difference. Company F explains the core logic of this position:

> "The primary benefit of renewables isn't decarbonisation, it's the ability to distribute power.
>
> Company F

Putting it another way – why invest in transmission lines when you can have modular, distributed power?

A realistic growth pathway for corporate renewables in SSA involves engaging corporates as "anchor tenants" – energy users with predictable demand and positive credit ratings to provide dependable income – for micro- and meso-grids, rooftop and behind-the-meter systems, and distributed assets aggregated over time to reach meaningful scale.

Several system-level stakeholders reinforced this view, emphasising that commercial and industrial demand outside the mining sector remains structurally limited in most SSA markets. Large, stable anchor loads are relatively rare, and where they exist, they are often constrained by grid access, wheeling frameworks, and the absence of mature wholesale markets. This reinforces the conclusion that expectations of a rapid, corporate-led expansion of off-site PPAs across the region should be tempered by current demand realities, particularly beyond mining-linked contexts.

This is not to say that PPAs will not play a role, indeed outside the APRA region, the experience of PPA growth in Morocco, Egypt and South Africa suggests that they may inevitably have some role in SSA – rather, interviewees suggested that to use the European or Asian utility-scale model as the sole reference point might be misleading due to the structural challenges in establishing PPAs, plus the wide range of alternative options described by stakeholders in this research.

Taken together, the evidence suggests that early demand for renewable electricity in Africa is emerging from a mix of international and African companies responding primarily to operational pressures rather than climate leadership narratives. Telecommunications operators (many of them African-headquartered) illustrate this dynamic clearly: they manage large, distributed energy loads, face high and volatile diesel costs, and have already demonstrated a willingness to invest in solar and hybrid solutions to secure reliable power.

However, interviewees also emphasised that such demand, while real, cannot on its own unlock system-level change. In many markets, constrained project pipelines, limited delivery capacity, and grid weaknesses mean that even motivated buyers struggle to procure viable solutions, reinforcing a persistent chicken-and-egg dynamic in which corporate demand and supply-side development must evolve together rather than sequentially.

2.6 Increasing corporate renewables investment: Opportunities and barriers

The third and perhaps most forward-looking area of inquiry in the interviews concerns what it would take to significantly increase the volume of renewable energy purchased by corporates in sub-Saharan Africa, and what economic benefits might flow from such an increase. The interviews generated rich material across both dimensions, with notable convergence on key themes and some important divergences in emphasis between interviewee categories.

2.6.1 Opportunities

Aggregation and cross-border solutions

Individual corporate footprints across most of Sub-Saharan Africa are simply too small and dispersed to attract renewable energy developers. This is a fundamental challenge cited across our research. Company C's eleven-country African operation totals only approximately 11,000 MWh per year, a volume that makes grid-scale solutions economically unviable.

iTRACK Foundation highlights that this fragmentation masks a deeper, aggregated demand signal. Across multiple countries and sectors, corporates, particularly multinationals, are actively seeking renewable electricity solutions, including certificates. But they lack mechanisms to pool this demand into sufficient volume to enable investment. This reinforces the case for aggregation platforms and cross-border procurement models, which can combine smaller loads into a credible market signal for developers and governments.

Several aggregation-based opportunities were suggested to mitigate this issue:

- **Flexible, multi-off-taker PPAs**: Shorter-term, aggregated demand structures, enabling multiple off-takers to engage in a PPA with larger renewable projects.
- **Forward unbundled EAC commitments**: Multiyear commitments to procure I-RECs and P-RECs through innovative models like the PAF can deliver catalytic finance that makes new renewable energy projects bankable and truly additional.
- **Regional power markets and cross border trade**, leveraging existing initiatives such as the Southern African Power Pool (SAPP) or West African Power Pool (WAPP) to scale beyond national demand, plus potential upcoming recognition by the Greenhouse Gas Protocol of African power pools as single markets for voluntary clean energy procurement.
- **Industrial hubs and green zones**, aggregating supply and demand in concentrated areas, e.g. Kenya's Naivasha geothermal-powered industrial zone. Simplified renewable electricity contracting options with the industrial hub authority were cited as potentially attractive.

One comparison, offered by a Company C representative, was made with Bill Gates' vaccine aggregation model, with a GAVI-like industrial-scale solution (see box) that pools demand to create viable markets. The practical implication is that RE100 or similar bodies could play a convening and matchmaking role, bringing together companies with complementary demand profiles across African markets.

Pooling demand to create viable markets: lessons from the vaccines aggregation model

Bill Gates' vaccine aggregation model works by pooling demand and funding across many lowerincome countries so vaccines can be bought in large volumes, making them cheaper and more reliably supplied. GAVI, a public-private consortium, is the mechanism that makes this system work: it brings together countries, donors, and manufacturers, guarantees funding, and coordinates largescale purchasing so suppliers have a predictable market. By committing to buy vaccines in advance, negotiating longterm deals, and managing delivery, GAVI reduces risk for manufacturers and ensures vaccines are produced, priced affordably, and distributed efficiently to the countries that need them most. While vaccines are clearly not directly analogous to energy markets, the GAVI concept demonstrates the potential in demand aggregation.

RES4Africa's experience from Southern Africa suggests that energy aggregators may represent one of the few near-term mechanisms capable of materially shifting scale, by acting as anchor off-takers, pooling supply and demand, and redistributing electricity across borders. However, this opportunity appears to be structurally contingent on the existence of a functioning power pool and active wholesale trading, conditions that currently apply primarily in Southern Africa. In regions where power pools remain nascent or non-operational, similar aggregation models are unlikely to be replicable in the short term.

> "The only thing that could really shift the needle are aggregators, but only where you have a functioning power pool.
>
> a RES4Africa representative

Regional aggregation of demand, however, requires credible cross border trade in renewable electricity. This means ensuring sufficient physical deliverability, regulatory alignment and avoidance of double counting, as defined in the emerging CBET standard.[25] While this may seem to be an accounting detail, it is a critical requirement for genuinely impactful cross-border aggregation to become a reality.

What is a CrossBorder Electricity Trade?

iTRACK Foundation's CBET (CrossBorder Electricity Trade) standard is a set of rules that makes it possible to reliably track and verify renewable electricity as it moves between countries. Right now, even when clean power physically flows across borders, the "green attributes" (the certificates that prove it's renewable) often don't move with it in a way companies and regulators can recognise. The CBET standard fixes that by standardising how electricity flows are tracked, how renewable energy certificates are issued and transferred across borders, and how claims are accounted for, so everyone can trust that a unit of renewable power is only counted once.

In doing so, it removes a major barrier to crossborder renewable energy trade, giving governments, investors, and corporate buyers the confidence to finance and buy clean power from other countries, which opens up new markets and investment opportunities for renewable energy projects.

25 www.trackingstandard.org/cross-border-electricity-trade/



Market structure

Interviewees from across sectors cited the need for institutional and policy reform, but also noted the need for capacity building with government, local government, financiers, developers and buyers to ensure effective system design and implementation. (Capacity building is dealt with in more detail in the barriers section below.)

While it is not the intention of this report to provide detailed policy recommendations, an EY representative highlighted the structural role of market liberalisation in enabling corporate PPA markets. Corporate demand for PPAs increases sharply once markets open up and price volatility becomes an issue for buyers, suggesting that electricity market reform in African countries could unlock significant demand. As he noted in the context of China's recent market liberalisation:

> "As soon as that happens, the attraction for corporates becomes high because they want to get rid of volatility.

Mini-grid and anchor models

While PPAs are unavailable, or ill-suited, in many African contexts, due to the underlying structural issues of small corporate loads and investment challenges in getting larger projects off the ground, innovative models are emerging to meet corporate demand while supporting broader socioeconomic goals.

The ABC model

Company G represents developers operating across roughly 24 African countries, typically deploying 100–200 kW solar mini-grids in rural and peri-urban areas unlikely to see grid connection for decades. While mini-grids can often beat diesel on price, without a reliable baseload off-taker, these projects face variable demand. As a result, the sector has depended heavily on grants and results-based financing, which is constraining scale.

To address this, Company G promotes the ABC model: Anchor, Business, Community. A large, reliable consumer provides 30–40% of total demand, underwriting project economics and enabling electricity access for surrounding businesses and households.

What is an anchor tenant model?

A realworld example of an anchor tenant model is the Bboxx–Orange minigrid project in the Democratic Republic of Congo. Orange, the telecoms company, acts as the anchor customer by committing to buy power for its mobile tower infrastructure. This steady, predictable demand underpins the economics of the minigrid, giving developers the confidence to invest because a large share of revenue is effectively guaranteed from day one.

Once the system is built, the same solar minigrid extends beyond the telecom tower to supply electricity to the surrounding community, connecting hundreds of households and small businesses. The anchor tenant reduces financial risk and helps cover core costs, while the additional capacity is used to deliver affordable power to local users. This "anchorbusinesscommunity" model is widely used because it turns what would otherwise be a risky rural electrification project into a commercially viable one that can scale.[26]

Emerging industry experience cited in meetings with GSMA, suggests that the principal challenge for telecom-led ABC projects is often not energy technology or financing, but achieving sufficient alignment between commercial infrastructure deployment cycles and financing models, and community electrification development timelines and financing.[27]

> "As long as you sign a long-term agreement, you can negotiate a lower tariff.
>
> Individual 8, Company G

Crucially, this model avoids conventional PPAs by engaging corporate buyers through localised agreements with mini-grid operators, aligned to local regulatory realities.

Company G identified mining, manufacturing, cement, telecom towers, and data centres as strong anchor candidates. These consumers prioritise reliable, 24/7 power over the lowest absolute tariff, and mini-grids can often beat diesel on cost when structured over longer terms.

Nigeria was highlighted as the most advanced mini-grid market and the clearest blueprint, with Kenya, Zambia and the DRC emerging. The anchor-tenant model has also been successfully deployed in India for several years, demonstrating proof of concept.

The small-scale renewable ammonia model

Company F is a green fertiliser company powered by renewables. Its business model is based on distributed small-scale ammonia production plants, utilising low-cost electricity. Flexibility is key, which means producing ammonia when electricity is cheapest. This can, for example, use the output from a solar plant at midday, which would otherwise be curtailed.

26 Bboxx, Orange launch solar mini-grid project in the DRC under anchor business community model - PV Tech

27 Mugaine, K. and White, Z. (2026) Productive Use of Energy Across Energy Systems: A Review of Policy and Digital Enablement in India, Kenya, Uganda and Nigeria. GSMA.

The model is tailored to local conditions. In Ethiopia, Company F has negotiated a ten-year utility power rate, a quasi-PPA. In Kenya, it operates a fully solar off-grid system. While noting operational challenges of working off-grid, Company F noted the complementarity of this approach with the ABC model, and described hybrid models, operating ammonia production at partial capacity and ramping down when communities need power, enabling coexistence between industrial demand and local access.

Imported fertiliser in sub-Saharan Africa costs 2–6 times more than in OECD markets.[28] Local renewable-powered production can cut fertiliser costs by 20–60% today, improving farmer affordability and yields, reducing exposure to global commodity price shocks, and supporting local industrialisation.

> **"Book-and-claim removes cost and risk from farmers while enabling real additionality.**
>
> Individual 1, Company A

PepsiCo and TalusAg: Book-and-Claim in Action

PepsiCo's collaboration with TalusAg, announced in May 2026,[29] is an example of the "book-and-claim" model – and illustrates how corporate demand can support renewable-powered productive use without requiring physical delivery of the product. TalusAg produces green ammonia using distributed, modular renewable-powered systems. Rather than purchasing the ammonia itself, PepsiCo pays for the environmental attribute of producing it cleanly (the lower emissions associated with green ammonia manufacture) which it then counts in its own carbon accounting. The physical ammonia is sold locally, including to farmers in Sub-Saharan Africa, where it can be produced at significantly lower cost than imported alternatives.

The initial transaction covers approximately 30,000 metric tonnes of low-carbon ammonia across PepsiCo's Sub-Saharan Africa, Europe, and Asia Pacific operations. TalusAg already operates production systems in Kenya as well as the US and Spain, and its distributed model is explicitly designed to reduce dependence on global supply chains and lower fertiliser costs for local farmers.

Book-and-claim allows the arrangement to function even where physical supply chains are fragmented, removing cost and risk from local users while delivering real additionality. Other companies are taking a more direct approach by buying and using the ammonia themselves. Both approaches help get the same projects built: one by paying for the "greenness" of the product, and the other by buying the product outright. In both cases, the goal is to make these projects financially viable without pushing costs or risks onto local communities like farmers.

28 African Development Bank (2026), African governments need to take urgent action on fertiliser shortages, 28 April 2026.

28 PrNewsWire www.prnewswire.com/news-releases/pepsico-and-talusag-announce-low-carbon-ammonia-attribute-agreement-to-help-accelerate-fertilizer-decarbonization-302762543.html

Linking energy to productive use

Both Company G and Company F argue that the anchor model is most powerful when renewable power is tied to productive economic activity, such as fertiliser production, mining inputs, or food systems, rather than offices or light industrial loads.

> **"That's not a donation. That's how you scale a real business in Africa.**
>
> Company F

At the system level, Company G emphasised aggregation: while individual mini-grids are difficult to finance, portfolios of 50–100 projects become bankable. Individual 8 identified a clear role for initiatives like RE100 and the Climate Group in piloting partnerships between corporates and mini-grid developers in markets such as Kenya, Zambia and the DRC.

At the same time, practitioners cautioned that export-oriented green hydrogen strategies are unlikely to be investable in the absence of a robust, low-cost renewable electricity backbone and significant grid overcapacity. Without ultra-low or negative electricity prices and reliable transmission infrastructure, hydrogen production risks becoming a cost-intensive, externally driven exercise rather than a locally anchored development pathway.

System implications: grid viability, equity, and the 'and/and' model

Discussions at a multi-stakeholder roundtable – convened for this study during the Africa Green Industrialization Initiative Forum at KIICO in March 2026 – reinforced the potential of decentralised and anchor-led renewable energy models, while also highlighting important system-level implications that require careful management.

Representatives of Kenya Power and Lighting Company emphasised that large corporate consumers disconnecting from the grid to pursue self-generation or mini-grid solutions can unintentionally erode utility revenues, reducing the capacity of grid operators to maintain and modernise national infrastructure. This risk is particularly salient in renewables-heavy systems, which require ongoing investment in balancing, transmission, and the integration of multiple smaller generation assets.

A related concern is social equity. While large corporates and industrial users are often able to bear the upfront capital costs of decentralised energy solutions, smaller enterprises and residential consumers may remain dependent on ageing grids, potentially locking them into higher costs and lower reliability. These perspectives underline the need for an explicit "and / and" approach to decentralised and centralised power system development: decentralised, anchor-led solutions should be designed to complement rather than undermine centralised grid investment, with coordinated planning that allows utilities to evolve their business models while preserving system resilience and equitable access.

Workshop discussions also surfaced positive examples of how utilities can adapt to and benefit from the evolving renewable energy landscape. Kenya Electricity Generating Company (KenGen) was cited as an emerging model, repositioning itself from a traditional generator into an industrial 'landlord' and regional technical service provider. By leveraging geothermal baseload resources at Olkaria, Kenya to offer 100% renewable power to industrial customers, and by expanding into geothermal drilling and consultancy services across the region, KenGen is responding to the need for incumbents to play an enabling role in renewable-powered industrialisation rather than being displaced by it.

2.6.2 Barriers

This section highlights a set of interconnected structural barriers that are consistently holding back renewable energy investment across African markets. At the core is a fundamental mismatch between what corporate buyers need and what projects require to be viable, reinforced by weak grid infrastructure, limited financing capacity, and gaps in institutional readiness. These challenges are compounded by carbon/renewables accounting rules (which are helpful in developed markets but arguably less so in SSA), unclear incentives, and persistent misperceptions about risk – all of which make it harder for both developers and corporates to engage.

Taken together, these barriers create a selfreinforcing cycle where projects are difficult to finance, corporates struggle to participate, and viable opportunities remain invisible or unrealised. While the specific constraints vary by country, from subsidies and macroeconomic instability to permitting delays and skills gaps, the overall picture is one of fragmented markets with high transaction costs. Breaking this cycle will require coordinated solutions that improve market visibility, build local capacity, and align financial, regulatory, and corporate systems to enable scalable investment.

Structural barriers

The most consistently cited barrier in our interviews was the mismatch between corporate demand volumes and the minimum scale required for renewable energy projects to be commercially viable. This structural market failure is a 'chicken-and-egg' problem: without sufficient demand, developers will not build; without available projects, corporates cannot buy.

Grid infrastructure weakness is equally universal. Many African grids are technologically outdated, lack transmission capacity, and in some cases weakened by years of underinvestment. RES4 Africa stressed that this affects the feasibility of PPAs, wheeling, aggregators, hydrogen/ammonia ambitions, and any project requiring grid connection.

In some regions, grid weakness is stimulating microgrids and self-generation; conversely in Nigeria, Company B reports that grid unreliability forces gas-based self-generation as land for solar farms near factories is unavailable and vendor interest requires aggregated demand that a single company cannot provide.

Company B's experience across Nigeria, Angola and Zimbabwe illustrates three distinct manifestations of the structural barrier. In Angola, the barrier is subsidy: grid electricity costs 1–2 US cents/kWh, making on-site solar economically irrational regardless of sustainability intent. In Zimbabwe, the barrier is macroeconomic instability and inflation, making long-term capital commitments unattractive.

Institutional readiness and technical capacity were highlighted as critical barriers. GWEC's representative pointed to grid connection delays of 8-10 years in Kenya, with transmission and distribution constraints limiting affordability. Company D pointed to challenges finding providers with deep regional expertise, and Company E pointed to the municipal permitting barriers. Company A's Individual 1 noted that in much of sub-Saharan Africa, franchise, subcontractor or bottler arrangements are common rather than directly owned facilities. This means that energy choices are taken by third parties who may not benefit from institutional expertise or support meeting RE100 requirements.

> **“There is little incentive to sign a 10 year energy deal if you can’t rely on economic or political stability**
>
> Individual 8, Company G

Finance ecosystem gaps

The institutional readiness gap also impacts project finance, which both GWEC’s representative and Company G’s Individual 8 identified as the primary constraint on renewables scaling.

Muchiri (GWEC) points to limited local financing capacity, including a lack of familiarity with renewable energy project finance among some financial institutions in the region. In his interview on Michael Liebreich’s Cleaning Up podcast, Clemens Calice of Sygnum Capital similarly argued that Africa needs a stronger specialist investment ecosystem to support renewable energy at scale.[30] From this perspective, limited local experience with renewable energy transactions can increase perceived risk and contribute to higher financing costs, particularly for newer business models such as corporate PPAs and anchor-load mini-grids.

However, Elizabeth Press of UNOPS emphasised that capacity and expertise are only part of the challenge. In her view, the more fundamental barriers are structural: the high cost and short tenor of capital, foreign exchange risk, utility and sovereign creditworthiness concerns, small project sizes, collateral requirements, and limited availability of guarantees and concessional finance. As a result, while strengthening local financial sector expertise may improve market readiness, it is unlikely on its own to unlock large-scale renewable energy investment without parallel measures to address these underlying financing constraints.

While the regulatory environment in most African countries permits direct contracts between mini-grid developers and anchor clients, the model is poorly understood by the local finance community, which drives up financing costs and limits options for replicable, scalable projects.

Accounting standards and incentives

Accounting standards and incentives for renewable electricity refer to the rules that determine how companies can prove, claim, and benefit from using clean energy, shaping what counts as “green”, where it can be counted, and whether those claims align with corporate reporting and financial incentives. Companies can only invest in renewable energy projects if the rules work in practice.

In many African countries, such rules and systems, like certificates, either aren’t in place yet or take a long time to get approved. And while there *is* real demand from companies, especially international ones, it is spread across different countries and projects, which means governments cannot always clearly see it.

The result is a disconnect. Companies are ready to spend money on clean energy, but the systems that would facilitate it aren’t being set up quickly enough, so that investment doesn’t materialise.

30 www.cleaningup.live/is-africa-poised-to-be-a-clean-energy-powerhouse-ep241-clemens-calice/

Company F raised a verification gap that is particularly acute for distributed and rural renewable projects. Under current standards, demonstrating that a mini-grid project is genuinely "green" in ways that satisfy corporate accounting requirements is difficult.

Others argue that standards should not be too strict. Market boundary rules require RECs to be purchased and cancelled within the market in which the energy is used, which prevents abuses such as counting European RECs towards African energy use. However, some argue that strict application of this rule *within* Africa is stifling investment. For example, Energy Peace Partners point out that P-RECs originate from projects in Africa's most vulnerable regions, where there are no corporate purchasers. Preventing cross border trade in P-RECs creates a "no spend" outcome even in situations where budgets exist and genuine renewable energy is available.

Some interviewees also argued that globally tightening standards around renewable energy accounting (in particular, proposals for hourly matching of generation and consumption) could structurally exclude African markets with weak data infrastructure. Energy Peace Partners raised the risk that corporates may deprioritise market-based procurement in Africa altogether if clarity isn't provided. They argue that companies need guidance on accounting for projects that deliver greater avoided emissions and enable procurement beyond their market boundary.

Perception barriers

The "confidence gap" was cited several times as a real investment barrier. Corporates frequently "paint the continent with one brush" and lack granular, current intelligence on where regulation is actually conducive. Positive counter-narratives – for instance, the example of Nuru's mini-grid in the eastern Democratic Republic of Congo being the only functioning power asset during a period of armed conflict – represent a genuine market-enablement tool. Correcting misperceptions about African market risk is an actionable opportunity.

> **"There's an assumption that African-based companies are not interested in clean energy, and I think that's misleading. We've seen African firms create dedicated clean-energy arms because there is demand on the continent, they wouldn't do that if the demand wasn't real.**
>
> Individual 7, CEO Company J

Market visibility and information barriers

Beyond regulatory and financial constraints, participants highlighted a persistent information and market-signalling gap, limiting corporate engagement in African renewable energy markets. Several international companies, including European manufacturers actively seeking renewable electricity in Kenya, reported an inability to identify viable project pipelines or understand how to engage with developers or public institutions. This lack of transparency was cited as a practical barrier.

The implication is that improving supply-side visibility may represent a high-impact, low-cost intervention. Clear, government-endorsed project pipelines, single points of contact for corporate buyers, and proactive investment promotion could significantly reduce transaction friction and accelerate deal-making, particularly for first movers unfamiliar with local market dynamics.

From an iTRACK Foundation perspective, the visibility challenge extends beyond project pipelines to include the availability and credibility of renewable energy certificates themselves. Corporates reported difficulty identifying where certificates exist, how they can be accessed, and whether they meet required standards. This lack of transparency reduces confidence and slows market development, even in cases where both supply and demand are present. Addressing this gap through clearer registries, standardised tracking, and accessible market information could unlock relatively immediate gains in corporate participation.

Global headwinds

An EY representative noted the global PPA slowdown and shift in corporate priorities from sustainability to price security as a headwind context. While this dynamic is primarily observable in more mature markets, African markets which lack the foundational infrastructure for PPAs, face a doubly challenging environment, and may also be squeezed by competing priorities closer to home.

Conclusion

Briefing conclusions

This briefing began with the hypothesis that corporate demand for renewable electricity could act as a catalytic force for investment, infrastructure development, and industrial growth in subSaharan Africa, drawing on successful models from more mature markets.

Through survey evidence, interviews, and real-world case analysis, the findings suggest a shift in emphasis. The question is no longer whether corporate sourcing can support renewable industrialisation, but how the enabling conditions can be put in place for it to do so at scale.

While corporate demand is real and growing, it does not translate directly into the largescale, PPAled market transformation we've seen in Asia, due to structural constraints including fragmented demand, weak grids, limited financing ecosystems, and incomplete market frameworks.

When the findings of this report were independently reinforced through a multistakeholder roundtable held during the Africa Green Industrialization Initiative Forum, which brought together utilities, financiers, policymakers, developers, and corporate actors, there was clear convergence on two points:

1) that corporate renewable demand in Africa will not scale through PPA-only models; and

2) that anchor-led, productivity-linked solutions (such as small-scale ammonia, ABC model, high impact RECs etc) supported by appropriate finance, policy coordination, and utility engagement, can offer a credible pathway for both energy system development and economic impact.

The conclusion of the report is therefore not that the original hypothesis was wrong, but that it requires reframing, from a direct replication of global models to a more tailored approach in which corporate renewable energy acts as a catalyst within broader, locally grounded development systems.

Developing a viable corporate PPA market will require coordinated work to build the enabling ecosystem, building on early progress in South Africa and nascent opportunities in markets such as Kenya. This includes regulatory clarity, access to long-term local and foreign capital, and credible risk-mitigation instruments, challenges addressed in the recommendations that follow.

At the same time, interviewees consistently cautioned against assuming that European or US PPA-led models alone can solve Africa's energy challenges. Sub-Saharan Africa's electricity systems are structurally different, and relying exclusively on utility-scale PPAs risks overlooking more immediate, context-appropriate pathways. Significant opportunities lie in aggregating smaller demand centres and in linking renewable energy deployment directly to industrial growth, with corporates acting as anchor demand within broader economic and social strategies.

Taken together, the evidence points to a broader and more compelling framing of corporate renewable energy in Sub-Saharan Africa, not merely a compliance mechanism for Scope 2 targets, but as an anchor for community electrification and productive economic development. As Company F summarised:

> **"Corporate renewables in Sub-Saharan Africa scale when they solve real economic problems, not when treated as CSR.**

Recommended next steps

Corporate demand can help finance and scale renewable electricity in African markets, but it is neither a substitute for public power-system investment nor, by itself, a driver of industrialisation. Its greatest near-term value lies in supporting bankable anchor demand, aggregating smaller loads and linking reliable renewable supply to productive uses while preserving utility viability and investment in shared grid infrastructure.

Overcoming the barriers and seizing the opportunities identified in this report is not the task of any single actor or sector. Progress will not come from each stakeholder group expecting others to manage "their" part of the puzzle. Instead, it requires coordinated action across government, finance, renewable developers (both conventional and distributed), corporate off-takers, and incumbent utilities.

The solutions are complex and will take time. However, the most impactful near-term opportunity is clear: the development of well-structured, multistakeholder local and regional platforms that bring together buyers, developers, financiers, utilities, and governments to share information, identify gaps, and prioritise scalable interventions.

> **"The risks are so diverse and the opportunities are so diverse, that we need to get into the weeds. Keeping the discussion high-level will not be as fruitful as we expect.**
>
> REN21 representative

The following priorities translate the briefing's findings into implementation-focused actions.

1. Move from high-level dialogue to country-specific delivery platforms in priority markets.

Rather than relying on broad, pan-African discussions, progress will depend on establishing focused, country-level or sub-regional platforms in a small number of priority markets such as Kenya, Namibia, or Ghana. These platforms should be explicitly designed to move projects forward, bringing together corporates, developers, utilities, financiers, and regulators in regular, deal-focused engagements. This includes developing practical "market playbooks" that outline viable procurement routes, clarifying regulatory entry points, and identifying credible counterparties.

2. Prioritise the development of anchor-led and productive-use pilot projects.

The most credible near-term pathway to scale lies in demonstrating business models that link corporate demand directly to productive economic activity. This requires launching a series of pilot projects built around anchor clients (such as telecom operators, mining companies, agro-processors, or data centres) whose predictable demand can underpin investment. Models such as the Anchor–Business–Community (ABC) framework should be operationalised, with anchor demand underwriting system viability while enabling broader access for local businesses and communities. In parallel, energy deployment should be explicitly linked to productive uses such as fertiliser production, cold storage, or manufacturing, reflecting evidence that renewable energy investment is most viable when it solves real economic problems. Structuring these pilots as portfolios rather than standalone projects will be critical to achieving bankability and attracting finance.

3. Develop practical mechanisms to aggregate fragmented corporate demand.

A central structural barrier identified in the briefing is the insufficient scale of individual corporate electricity demand to support viable renewable large (50+Megawatt-scale) energy projects. Addressing this requires the creation of aggregation mechanisms that pool demand across multiple corporates, including both multinational and African firms, into investable volumes. This could include intermediaries acting as single off-takers, multi-buyer contractual structures including aggregated PPAs, or regionally aggregated models such as cross-border PPAs, where market conditions allow. In parallel, the establishment of a transparent registry of corporate energy demand across markets would enable more effective matching with project pipelines.

4. Improve market transparency through visible, standardised project pipelines.

One of the most immediate and tractable barriers is the lack of accessible information on viable renewable energy opportunities. Governments and partners should prioritise the development of publicly available, standardised project pipelines that clearly communicate key parameters such as project size, location, stage of development, grid connection status, and offtake requirements. This should be complemented by the establishment of clear institutional entry points (effectively "one-stop shops") for corporate buyers and developers seeking to engage in each market. Improving visibility should also involve actively documenting and disseminating case studies of successful models, including mini-grids, industrial zones, and corporate procurement structures, in order to reduce perceived risk and support market entry by new actors.

5. Strengthen local financing ecosystems to enable scalable deployment.

Financing constraints remain a cross-cutting barrier affecting all renewable energy models, from utility-scale projects to distributed systems. Addressing this requires targeted efforts to build local financial capacity and develop appropriate instruments. Blended finance structures should be expanded to support mini-grid portfolios, anchor-led industrial energy systems, and distributed commercial and industrial installations. At the same time, local banks and financial institutions require practical training in renewable energy project finance, particularly for less familiar models such as aggregation and mini-grids. The development of regional investment vehicles and expanded use of risk mitigation instruments (including currency and political risk guarantees) will be essential to enable long-term contracting and reduce the cost of capital.

6. Focus policy reform on targeted, implementable interventions rather than broad liberalisation.

While structural market reform remains important, immediate progress is more likely to come from pragmatic, targeted policy actions that enable specific investment models. These include clarifying and operationalising rules for wheeling and bilateral trading, standardising licensing processes for distributed and embedded generation, and reducing permitting timelines. The development of model contracts for anchor-led mini-grids, multi-buyer arrangements, and industrial energy supply can further reduce transaction complexity and accelerate deal-making. In parallel, governments (when possible also at subnational level) should consider piloting controlled PPA frameworks in selected sectors or geographies, allowing models to be tested and refined before wider rollout.

7. Integrate utilities as active partners in the energy transition.

Ensuring that decentralised and corporate-led renewable energy deployment complements rather than undermines national power systems is critical. This requires a deliberate strategy to involve utilities as central participants, supporting the evolution of their business models rather than bypassing them. Practical approaches include enabling utilities to co-invest in distributed energy systems, provide balancing and backup services, and develop new revenue streams linked to industrial energy supply or technical services. Regulatory and tariff frameworks should be designed to retain large customers within the system, even where hybrid or decentralised solutions are pursued, ensuring that grid viability and equitable access are maintained.

8. Deliver targeted, role-specific capacity building across stakeholder groups.

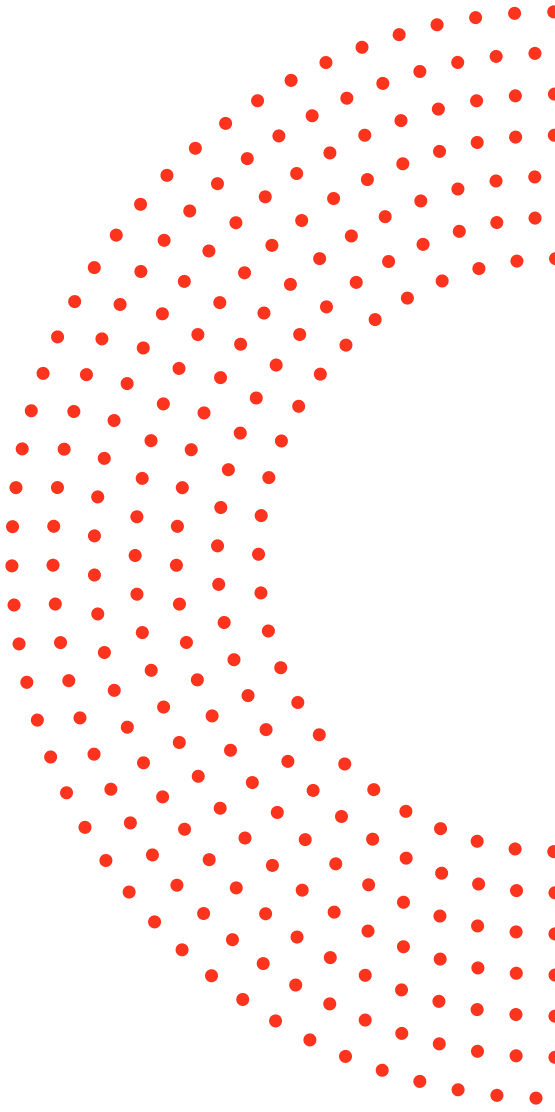
Capacity gaps remain a significant barrier to implementation, but these are often highly specific rather than generalised. Governments require support in structuring and regulating diverse procurement models, including mini-grids and aggregated demand frameworks. Corporates need clearer guidance on realistic procurement pathways in African markets, moving beyond global PPA-centric approaches. In addition, African SMEs should be actively supported to participate as off-takers within aggregated demand structures, reflecting their potential role as a major source of scalable demand.

9. Reframe corporate engagement towards operational and commercial drivers

Successful scaling of corporate renewable energy in Sub-Saharan Africa will depend on aligning interventions with the realities of corporate decision-making. The briefing consistently finds that demand is driven primarily by cost, reliability, and operational continuity rather than climate commitments alone.

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