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Rwanda data centres: should an investor back a new Kigali colocation facility?

The $495 focused brief | One country, one industry, one decision | Illustrative case, 22 September 2026

INVESTMENT POSITION: ADVANCE A PRE-LEASED PHASE, SUBJECT TO A RETURN HURDLE

The decision signal: Explore a pre-leased Kigali facility; do not commit construction capital before contracted demand and power diligence. A transparent 10-year illustration gives 16.8% base-case nominal pre-tax project IRR. A 10,000-run Monte Carlo model yields a 7.1% to 17.9% P10-P90 range and 28% modeled probability of clearing a 15% hurdle. These figures are assumption-driven, not observed project returns or a quoted investor outcome.

Scope of this $495 brief: One decision, a consistently defined three-country comparison, identified competitors, a transparent illustrative project model, risks, and an Enter/Avoid recommendation. Contract-level underwriting, engineering diligence and a bespoke financing or exit model require a separately scoped follow-on engagement; the conclusions and calculations included here remain usable on their own.

01 Market Reality

Rwanda Energy Group reported 84.6% household electricity connectivity at July 2025, including 59.6% grid and 25.0% off-grid [2]. Household access is not a data-centre reliability metric. It does show a rapidly expanding electricity system, while a colocation investment still depends on site-level redundancy, contracted power and fibre routes. AOS says it operates Rwanda’s National Data Center [3]. Africa Data Centres announced a Kigali project, but this sample does not treat its announced capacity as operational without verification [4].

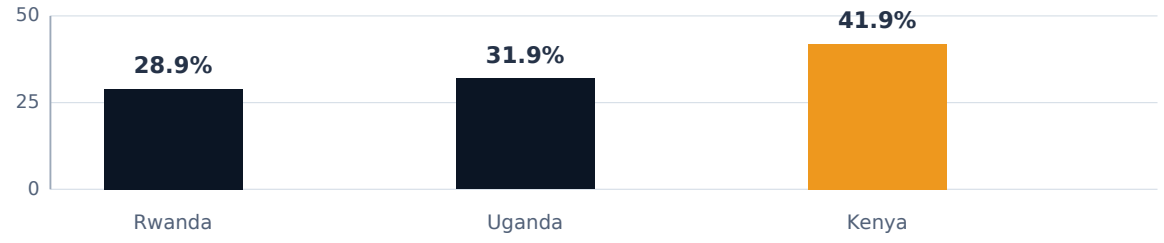
Kigali market overview | where demand could form

The 2022 census found internet use among 44.4% of Kigali residents, versus 23-28% in other provinces [8]. Kigali also sits on Rwanda’s national fibre backbone and metro ring, with cross-border connections through neighboring countries [8]. This concentrates digital activity and connectivity, making Kigali the logical first location to test enterprise colocation demand. Consumer internet use does not measure contracted IT load. Before funding a facility, obtain signed customer capacity, rack-price evidence, available utility power, backup design and diverse fibre-route quotes. The decision remains a pre-lease diligence mandate, not a claim that today’s Kigali data-centre market can absorb a specified MW of new supply.

Informal economy | route to demand, not rack revenue

Rwanda's 2024 business survey puts informality at at least 87% of enterprises [13]. That is an enterprise-count share, not a share of GDP, digital spending, or colocation demand. Most informal merchants will not lease data-centre capacity directly. They can create downstream transactions for payment firms, telecoms, banks and platforms that do. Underwrite those formal aggregators as potential anchor customers only when they document workload growth and sign capacity commitments. Do not multiply the enterprise count by an assumed rack spend.

Normalized regional digital adoption proxy, 2022

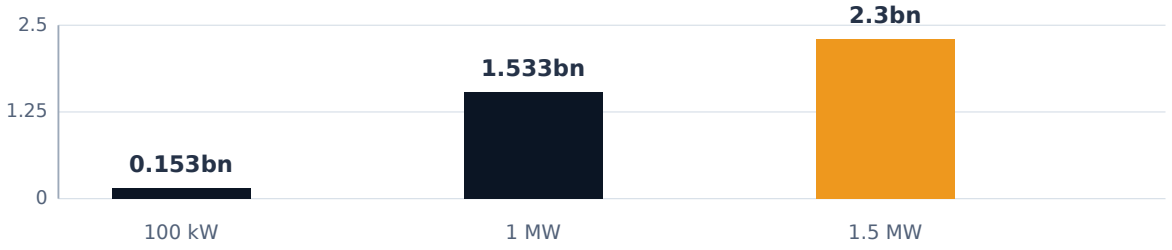


Share of population with mobile broadband capable connections, adjusted for SIMs per unique subscriber, using one GSMA-derived definition in the World Bank Rwanda CEM [8]. This is a consumer adoption signal, not data-centre occupancy or enterprise demand. Source period: 2022.

02 Unit Economics

Colocation revenue comes from contracted rack or power capacity, cross-connects and managed services. Power, cooling, generators, maintenance, security, land and financing consume the margin. The tariff creates a measurable floor, not a profit forecast. At RWF 175/kWh, each continuously consumed 100 kW represents 876,000 kWh/year and RWF 153.3 million/year before taxes and fees [1]. A 1 MW IT load at an illustrative PUE of 1.5 would require 1.5 MW facility load and approximately RWF 2.30 billion/year in grid energy charges if continuous consumption held. PUE 1.5 is a scenario input, not an observed Kigali operating result.

Annual grid energy cost at the published RWF 175/kWh tariff



Y-axis: annual RWF billions. Calculation: facility kW × 8,760 hours × RWF 175/kWh. Excludes VAT, fees and backup fuel. These are sensitivities, not measured bills. [1]

03 Competitive Landscape

AOS operates Rwanda's National Data Center [3]. Africa Data Centres announced a Kigali project [4]. A new entrant should seek contracted demand for carrier choice, resilience or a service-level gap, not build speculative rack supply. Adjacent-market facilities offer scale proxies: Raxio reports 1.5 MW IT power in DR Congo and up to 400 racks in Uganda [5,6]. Africa Data Centres reports 5.5 MW in Cape Town [7]. These sites prove that comparable operators have built and financed facilities; they do not disclose a denominator of failed projects, realized occupancy or investment success rates.

Comparable operators disclose capacity using different definitions and phases: DR Congo reports 1.5 MW IT power [5], Uganda reports up to 400 racks [6], and Cape Town reports 5.5 MW facility power [7]. We keep these as labeled evidence of supply, rather than placing them on a misleading common MW axis. The competitive question is whether a pre-leased Kigali entrant can win a specific resilience, fibre or service requirement.

Local partnership route: Test a licensed local fibre or telecom partner for connectivity and distribution, a domestic cloud or payments integrator for aggregated SME workloads, and local engineering, security and operations firms for execution. Structure each relationship around measurable contracted capacity, route diversity, service levels and clear customer ownership. Rwanda Development Board states that foreign investors face no general foreign-ownership restriction [14]; a local equity partner can add commercial access, but should earn its economics through a defined contribution rather than an assumed legal requirement.

04 Time to Market

Use the first 60-90 days to secure anchor-customer demand, grid and backup-power terms, diverse fibre routes, site rights and local regulatory advice. Then fund design and quote a construction schedule. Comparable operating facilities show execution is possible across Africa [5-7], but their launch dates do not determine this site’s permits or grid-connection timetable. Avoid an unsupported opening-date promise.

Policy, country risk and exit route | decision triggers

Policy: Rwanda’s October 2025 commercial data-centre electricity tariff is RWF 175/kWh before VAT and regulatory fees [1]. The Data Protection Office clarified in July 2025 that cloud storage is permitted, while storing personal data outside Rwanda requires NCSA authorization [9]. A Kigali operator should verify controller/processor duties, cross-border data flows, tariff eligibility and contracted power before quoting customers. The clarification describes an existing law; it is not a new localization mandate.

Sociopolitical and FX exposure: The U.S. June 2026 Rwanda advisory rates the country Level 3 and the area within 10 km of the DRC border Level 4, citing unrest and spillover risk [10]. This does not establish the same risk level for a Kigali site, but it raises continuity, travel and insurance diligence. IMF data show reserves fell from USD 2.4bn at end-2024 to USD 2.1bn at end-2025, or 4.2 months of prospective imports [11]. Test RWF depreciation and hard-currency availability. A stress above 20% depreciation escalates the risk review; the base IRR has no FX adjustment.

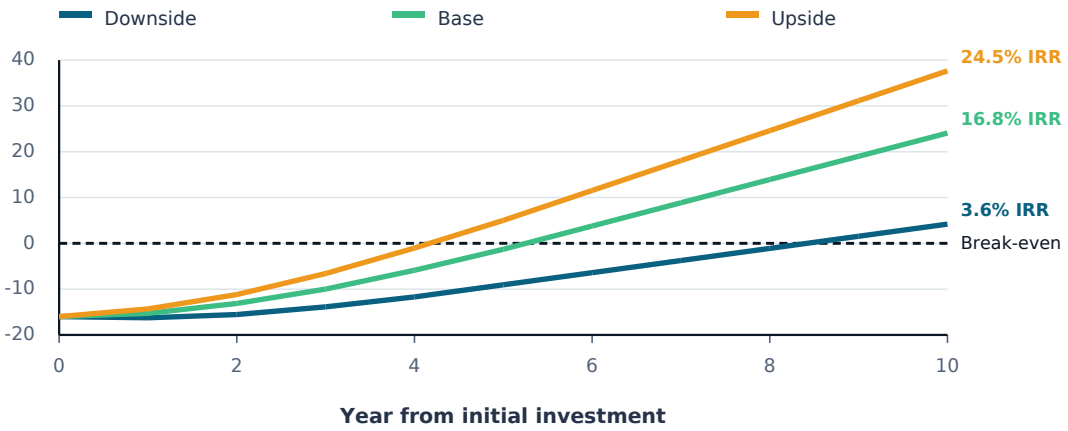
Exit feasibility: The 2021 investment law permits repatriation of capital, profits and liquidation proceeds after tax obligations [12]. That legal right does not guarantee immediate USD conversion, a buyer, or a sale price. Negotiate transfer and change-of-control rights, keep exportable financial records, and test a phased sale to a strategic operator. For personnel, maintain current travel documents and an evacuation plan that does not depend on consular assistance; avoid DRC-border routes [10]. Do not fund a full build until local counsel and a bank confirm practical transfer steps and a buyer universe.

05 Returns and Risk

This sample calculates IRR, rather than omitting it. The model assumes RWF 16 billion paid upfront; RWF 12 billion annual revenue at 100% contracted occupancy; RWF 2.30 billion annual grid power at full utilization, scaling with occupancy; RWF 1.8 billion fixed annual operating expense; and RWF 0.4 billion annual maintenance capex. It runs 10 years with no terminal proceeds, debt, tax or inflation. These are disclosed scenario inputs, not audited Rwanda benchmarks. The occupancy paths below produce 3.6% downside, 16.8% base and 24.5% upside nominal RWF project IRRs.

Capital recovery by occupancy scenario; terminal labels show 10-year IRR

Cumulative net cash flow (RWF bn)



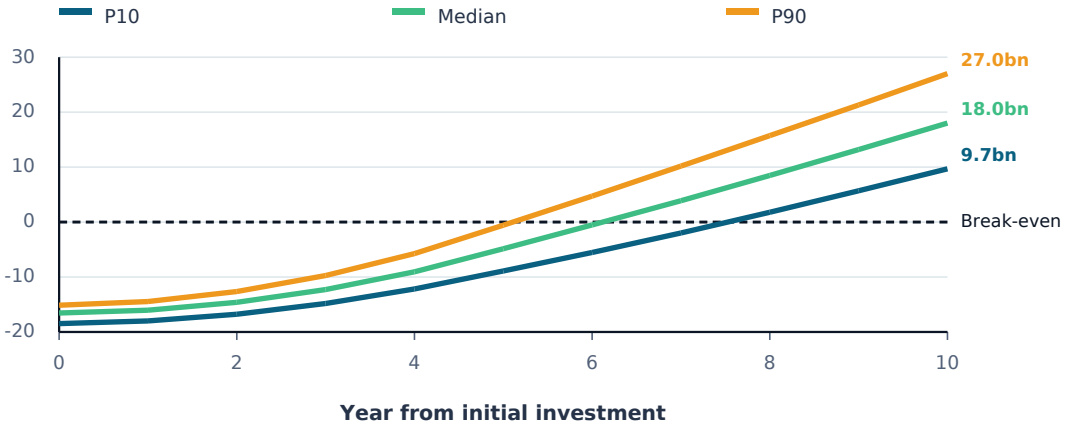
The lines show cumulative undiscounted net cash flow after RWF 16bn initial capex. Crossing zero marks simple capital recovery, not IRR realization. Downside: year 8.4; Base: year 5.3; Upside: year 4.2. Terminal labels show the 10-year nominal pre-tax unlevered IRR for each entire cash-flow path. Year 1 / 5 / 10 occupancy: downside 20 / 50 / 50%; base 30 / 70 / 75%; upside 40 / 85 / 90%. No sale proceeds.

A 25-point occupancy shortfall cuts annual contribution by roughly RWF 2.43 billion. Stress imported equipment and foreign-currency debt against more than 20% FX depreciation before clearing equity.

Monte Carlo | IRR upside and hurdle sensitivity

Monte Carlo capital recovery envelope: pointwise P10 / P50 / P90

Cumulative net cash flow (RWF bn)



Across 10,000 runs, the 10-year IRR distribution has P10 7.1%, median 12.4% and P90 17.9%; 28% clear an illustrative 15% hurdle. Lines show pointwise percentiles of cumulative undiscounted cash flow each year, not three individual project paths. Each run samples triangular ranges for capex RWF 14-20bn (mode 16), full-occupancy annual revenue RWF 10-14bn (mode 12), power RWF 2.07-2.88bn (mode 2.30), fixed opex RWF 1.5-2.4bn (mode 1.8), maintenance RWF 0.3-0.6bn (mode 0.4), and year 1/5/10 occupancy 20-40% / 50-85% / 60-90%. Interpolated lease-up; no terminal value, debt or tax; seed 495. Inputs are illustrative; these are not calibrated success probabilities.

SUBSAHARADATA | Client inputs needed to replace proxies

If the investor has internal data, include contracted rack / kW price, letters or signed agreements, occupancy or lease-up history, capex bids, PUE, diesel and backup-power cost, staffing, maintenance, taxes, financing terms, currency denomination and target exit. SubSaharaData will calculate the project-specific IRR and rerun downside cases using those inputs. When an item is unavailable, the report will identify it, use a labeled proxy range where supportable, and show sensitivity rather than imply certainty.

06 What This Means

Enter conditions: An anchor customer signs a binding capacity commitment; the site passes power, data-compliance and diverse-fibre diligence; and a project model clears the investor’s hurdle under delayed occupancy and FX stress.

Avoid conditions: Build begins without pre-lease, power redundancy or verified interconnection; foreign-currency debt lacks a revenue hedge; or the investor cannot confirm a workable dividend and sale-proceeds transfer route.

Optimal strategy: Underwrite a phased facility around signed demand from formal platforms serving Kigali firms and merchants. Negotiate fibre and distribution partnerships with local operators, obtain independent capex and operating-cost bids, and secure transfer rights before closing.

Final investment position: Authorize a bounded diligence budget, not construction capital. The modeled base IRR of 16.8% is only a screening signal. Commit equity only if signed demand and verified internal assumptions keep the downside case above the investor’s required hurdle.

Discuss this decision: info@subsaharadata.com | subsaharadata.com

Sources and limitations

[1] Rwanda Energy Group, tariffs effective October 2025, commercial data-centre tariff.

[2] Rwanda Energy Group, Electricity Access, July 2025.

[3] AOS Rwanda, National Data Center operator profile.

[4] Africa Data Centres, Kigali project announcement.

[5] Raxio, DR Congo data centre profile, 1.5 MW IT power.

[6] Raxio, Uganda data centre profile, up to 400 racks.

[7] Africa Data Centres, Cape Town facility profile, 5.5 MW power.

[8] World Bank, Rwanda Country Economic Memorandum 2024, Figure 2.22 and 2022 census.

[9] Rwanda Data Protection Office, cloud storage guidance, July 2025.

[10] U.S. State Department, Rwanda travel advisory, June 2026.

[11] IMF, Rwanda Country Report 26/139, May 2026, reserves and FX.

[12] Rwanda Development Board, 2021 Investment Law, article 12, repatriation after tax.

[13] NISR, Integrated Business Enterprise Survey 2024, at least 87% informality.

[14] Rwanda Development Board, Invest in Rwanda, foreign ownership and investor services.

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