

# **POLICY BRIEF**

## **Eastern Africa Compact Commitments**



## INTRODUCTION

In January 2025, at the Mission 300 Africa Energy Summit in Dar es Salaam (Tanzania), leaders from across Africa shared official roadmaps aimed at achieving universal energy access. This event, backed by global financial institutions such as the African Development Bank (AfDB) and the World Bank, marked a coordinated push toward lasting infrastructure change. National strategies, referred to as Energy Compacts, have been formally submitted by 29 governments, setting out the specific commitments that each country intends to follow to expand affordable energy, strengthen power systems, and scale renewables.

The Mission 300 initiative encourages nations to set the necessary reforms and measurable targets in five key target areas, which form the structural pillars of this brief:

- 1) Expanding cost-efficient power generation;
- 2) Boosting regional power integration for cross-border trade;
- 3) Scaling up last-mile electrification with distributed renewable energy solutions;
- 4) Unlocking private investment through supportive regulatory frameworks; and
- 5) Strengthening utilities with transparent financial management and cost recovery.

The Mission 300 initiative stands as the largest organized attempt so far to respond to Africa's power shortages. East Africa is a region that is marked by rapid population growth and exceptional renewable potential, however the challenge to efficient energy connection is grounded in two key needs: to industrialize economies through reliable energy and to connect vast rural areas that remain isolated. The AfDB, as a co-host of Mission 300, has a portfolio of ongoing operations across the region that directly supports these priorities.

Figure 1: Energy Summit



This strategic brief provides a comparative analysis of the Energy Compacts presented by five key nations in East Africa: **Tanzania, Burundi, Comoros, Ethiopia, and Kenya**. The analysis

focuses on providing recommendations for ongoing investment roadmaps, based on a systematic review of the official National Compact documents (2025), compared against data from the World Bank and the Eastern Africa Power Pool (EAPP) data.

## KEY FINDINGS

The comparative review of the five national Energy Compacts reveals a common urgency and a distinct strategic focus throughout Eastern Africa. Whilst each of the countries have distinct starting electrification levels, system scales, and geographical characteristics, all of the countries demonstrate efforts to achieving universal access by 2030, significantly shifting towards renewable sources, and increasingly acknowledging that clean cooking and regional electricity trade are essential to sustained energy security.

- Universal access ambition. All countries aim for universal (100%) or near-universal access by 2030, requiring a doubling (or even tripling) of current electrification rates, particularly in Burundi.
- Shift to renewables. The region is reaffirming its green leadership, with targets for renewable energies (solar, hydropower and geothermal) to account for over 85-90% of energy mix, marking a clear break from fossil fuels, even for island grids such as the Comoros.
- Significance of clean cooking. Due to a significant dependence on biomass (>80%), national strategies are now, for the first time, including large, quantified targets for clean cooking; although it is also noted that funding still lags behind compared to electricity.
- Pivotal role of the private sector. Targets set across the compacts for private sector financing range from 27% to 70% of investment requirements, highlighting the urgency of regulatory reforms to attract independent power producers (IPPs) and mini-grid developers. Private investment is however dependent on concrete enabling conditions: bankable power purchase agreements (PPAs), transparent licensing and cost-reflective tariffs. Kenya's suspension of its IPP moratorium in 2023 is a significant example of a market-enabling policy action that materially improves the investment climate for new generation.
- Regional integration. The EAPP is emerging as a critical player in the strengthening of regional power stability, allowing Ethiopia (with its strong hydropower production) and Kenya (through its geothermal production) to supply deficit countries like Tanzania, and soon Burundi. The AfDB is a primary financier of EAPP infrastructure, including the commissioned Ethiopia-Kenya HVDC highway and the Kenya-Tanzania 400 kV interconnector under development.

## PILLAR 1: EXPANDING COST-EFFICIENT POWER GENERATION

Achieving cost-efficient power generation requires addressing both the performance of existing grids and the long-run structure of the generation mix. Grid reliability and loss reduction are the most immediate cost levers – energy lost in transmission or undelivered due to outages directly inflates the per-unit cost of supply – while a shift toward renewables reduces exposure to fuel

price volatility and lowers variable generation costs over time, making it the structural enabler of sustained affordability.

The countries analyzed currently have highly contrasting energy profiles, yet their targets demonstrate a converging interest in renewable energy dominance by 2030 in their energy mixes. The fragility of current grids (frequent load shedding and high technical losses) means that the challenge is not only to add capacity, but also to diversify sources to ensure climate resilience, especially in the face of droughts affecting hydropower.

### Analysis of National Strategies

Table 1 below provides a comparison of energy mix and grid performance indicators, while Table 2 summarizes the current installed capacity and 2030 generation targets for the five countries.

Table 1. Energy mix and power grid performance

Country	Current energy mix	Details / Main capacities	Grid reliability / Technical issues	Grid losses	Other key information
Tanzania	Hydro 59.1%, Natural gas 35.2%, HFO/Diesel 3%, Solar PV 0.1%, Biomass/Cogeneration ≈2.6%	Mix still heavily dependent on hydro and gas	Degraded grid: overloaded transformers, feeders too long, insufficient maintenance	Not specified	Significant operational constraints on the grid
Kenya	Predominantly renewable mix	Geothermal 943.7 MW, Hydro 872.3 MW, Wind 436.1 MW, Solar PV 442.9 MW, Biomass 163.8 MW	Relatively stable grid but expanding rapidly	Not specified	2030 target: 5,952 MW of renewables and 100% clean energy (vs. 83% currently)
Comoros	Thermal 94%, Renewables 6%	Installed capacity ≈53 MW, but only 22 MW available	Frequent load shedding due to unavailable capacity	≈37% (technical + commercial)	Strong dependence on fossil fuels
Burundi	Hydro 79%, Thermal 17%, Solar 4%	Strong dependence on hydropower	Limited access and low quality of service	≈32% (REGID ESO)	Only 20% of households electrified for more than 23h/day, 37% for less than 8h/day
Ethiopia	>95% renewable	Installed capacity 9,761 MW	Grid expanding but with technical constraints	>25%	Target: share of non-hydro renewables from 5.6% to ≥15% by 2030; reduction of transmission losses from 6% to 5.5%, distribution losses from 22% to 13%, and commercial losses from 10% to 4.5%

Source: National Energy Compact (Mission 300), country documents 2025; World Bank.

Table 2. 2030 targets and current situation

Country	Current capacity (MW) – 2025	2030 target (MW)	Current renewables share	Renewables share target 2030	Target dominant source
Ethiopia	9,761	14,000	>95%	>99%	Hydropower
Kenya	3,404.20	5,952	>83%	100%	Geothermal / Solar
Tanzania	1,900	~5,000	61.8%	75%	Hydro / Gas / Solar
Burundi	204	410	83%	99%	Hydro / Solar
Comoros	~25	~60	9%	45%	Thermal / Solar / Geothermal

Source: National Energy Compact (Mission 300), country documents 2025; World Bank.

## The Transition Pathways

Three broad transition pathways emerge across the five countries.

- **Kenya and Ethiopia** can be seen as the region’s “green champions,” with both aiming to build predominantly renewable power systems. Kenya is drawing on its global leadership in geothermal energy to provide reliable baseload generation, complemented by major wind resources such as Lake Turkana. Ethiopia, meanwhile, is positioning itself around the GERD megaproject, with the ambition of becoming a regional renewable power hub and, in effect, a “battery” for neighboring countries.
- **Tanzania** reflects a more gradual hybrid transition model. Natural gas continues to play an important stabilizing role in the power system, even as the country invests heavily in hydropower through projects such as the Julius Nyerere Dam. Their transition plan does not aim to replace one source overnight, but instead aims to manage a more complex balance between energy security, affordability, and decarbonization.
- **Burundi and the Comoros** face a distinct challenge: system stabilization and rehabilitation must come before ambitious generation expansion. Burundi’s plan to double installed capacity within five years represents an enormous challenge for a small and financially constrained economy – but without parallel investment in grid rehabilitation and REGIDESO performance improvement, new capacity risks being absorbed into a technically degraded system with limited impact on end users. In the Comoros, the gap between installed capacity (~53 MW) and effectively available capacity (~22 MW) means that poor maintenance and system inefficiency have already effectively neutralized existing assets. With technical and commercial losses running at approximately 37% and diesel generation representing 91% of the energy mix in 2024, system stabilization is the strategic priority.

### Key Issue: Sequencing in Comoros and Burundi

In the Comoros, the core challenge is a failing system: technical and commercial losses at approximately 37%, near-total dependence on imported diesel (91% of the energy mix in 2024), and installed capacity that is more than twice the effectively available capacity due to poor

asset maintenance. Electricity costs exceed USD 0.30/kWh. System stabilization – through loss reduction, asset rehabilitation, and SONELEC’s commercial performance improvement – must be the first order of priority. Scaling renewable generation into a system with 37% losses and inadequate grid management capacity risks delivering limited returns and deterring private investors.

In Burundi, the binding constraint is grid infrastructure that has not been adequately rehabilitated since pre-independence, combined with REGIDESO’s chronic under-performance (technical and commercial losses of approximately 30%, unaudited financial reports for extended periods, and a low credit rating that limits both public and private investment flows). Only 20% of households receive electricity for more than 23 hours per day, and 37% for fewer than 8 hours per day. The 2025 National Energy Compact’s targets for access expansion are not credible without first fixing the network constraints and improving REGIDESO’s operational and financial performance. Grid rehabilitation and loss reduction are thus preconditions, not parallel workstreams, to the wider access agenda.

### Enabling Market and Regulatory Conditions

The generation targets outlined in the compacts will only be achieved if the underlying market and regulatory conditions are in place to attract private investment. A key development is Kenya’s lifting of its power purchase agreement (PPA) moratorium, first approved by Cabinet in February 2023 and subsequently endorsed by the National Assembly in November 2024 after a freeze that dated back to 2019. The moratorium’s lifting, coupled with Parliament’s conditions on ownership transparency, enhanced Attorney General oversight, and a shift toward competitive auction-based procurement, reopens the door for new IPPs and is a key structural enabler for reaching Kenya’s 5,952 MW target by 2030.

This example illustrates that generation targets are not simply engineering challenges but are contingent on institutional credibility: the willingness of private developers to commit capital depends on the perceived reliability of PPAs, tariff enforcement, and off-taker solvency. For Tanzania, continued use of gas reflects a practical response to system stability needs, since gas-fired plants still provide services that intermittent renewables cannot yet fully replace. For Burundi and the Comoros, the sequencing imperative is clear: regulatory reform, utility creditworthiness, and credible incentives for private investment are preconditions for infrastructure development, not outcomes that can be postponed until later.

## PILLAR 2: BOOSTING REGIONAL POWER INTEGRATION FOR CROSS-BORDER TRADE

Regional power integration offers Eastern Africa a powerful lever to optimize resource use, reduce per-unit generation costs, and improve system resilience across member states. The Eastern Africa Power Pool (EAPP), established in 2005, provides the institutional framework for this integration, coordinating cross-border power trade and grid interconnection among 13 member countries. For Mission 300, the justification for regional trade relies on changes in national power sectors. The potential to bring in cheaper electricity from nearby systems can lessen the generation capacity each country must develop, but this is contingent on utilities securing reliable contracts, regulators implementing clear rules, and transmission operators handling cross-border transactions consistently.

Regional integration and domestic system reform are mutually reinforcing. In deficit countries like Burundi, enhancing utility performance and market governance may allow import capacity to

effectively replace certain domestic generation investments, thus reallocating limited public resources towards improving distribution, access, and service quality. At the same time, the value of regional interconnectors depends heavily on the financial and technical capacity of off-taker utilities on both sides of each corridor.

### EAPP Architecture and the Day-Ahead Market

The EAPP has been working toward a centralized regional power market since 2011, when it launched a 15-year Roadmap for market development. Following a 2014 shadow market operation simulating day-ahead trading along the Kenya-Uganda and Ethiopia-Sudan corridors, the EAPP spent the ensuing decade developing comprehensive market rules, establishing a Market Committee, and preparing the technical infrastructure for a centralized trading platform.

In December 2024, EAPP member nations announced plans to launch a centralized Day Ahead Market (DAM) in early 2025, a milestone representing the shift from bilateral power trade to a competitive, price-transparent regional market. The DAM allows participants across 13 member countries to buy and sell electricity at financially binding day-ahead prices, serving more than 620 million people. The market is designed for adaptability, accommodating national differences while aligning with international standards and paving the way for future integration with other power pools, including the Southern African Power Pool (SAPP) via the Tanzania-Zambia interconnector.

### AfDB Operations and the Regional Infrastructure Push

The AfDB is backing the regional integration agenda through both infrastructure funding and institutional strengthening, with activities closely tied to the five compact countries.

The Eastern Electricity Highway Project (EEHP), commissioned in December 2021 and co-financed by the AfDB alongside the World Bank and the *Agence Française de Développement* (AFD), created the first high-voltage direct current (HVDC) link between Ethiopia and Kenya (641 km, 2,000 MW capacity). This project demonstrated that large-scale cross-border transmission is technically and commercially feasible in the region and established the institutional precedents – joint operating agreements, wheeling charge frameworks – that subsequent interconnections are building upon.

The AfDB is also a key financier of the Kenya-Tanzania Interconnector (400 kV, 510 km), currently under development, which will extend the EAPP footprint southward and enable power trade between Kenya Power and Tanzania Electricity Supply Company Limited (TANESCO).

Beyond physical infrastructure, the AfDB has supported the EAPP Secretariat’s institutional development and the design of the EAPP regional electricity market, including the Day-Ahead Market framework.

Table 3. Interconnection infrastructure

Interconnection Project	Countries involved	Technical specifications	Length	Capacity / Exchange volume	Status	Operators / Managers	Financing	Companies / Contractors
Eastern Electricity Highway (EEHP)	Ethiopia – Kenya	500 kV HVDC line	~641 km (Kenya section)	2,000 MW	Commissioned in December 2021	Ethiopia Electric Power (EEP); Kenya Electricity	African Development Bank (AfDB); World Bank;	Siemens / Isolux; KEC International; Larsen &

Interconnection Project	Countries involved	Technical specifications	Length	Capacity / Exchange volume	Status	Operators / Managers	Financing	Companies / Contractors
						Transmission Company (KETRACO)	Government of Kenya; Agence Française de Développement (AFD)	Toubro; Kalpataru Power Transmission
Kenya–Tanzania Interconnector	Kenya – Tanzania	400 kV line	~510 km	Initial PPA of 100 MW (planned extension to 200 MW within 3 years)	Under development / synchronization in progress	KETRACO; Tanzania Electric Supply Company (TANESCO); Kenya Power	Multilateral financing and regional cooperation (EAPP)	Not publicly specified
TAZA Interconnector	Tanzania – Zambia	High-voltage transmission line (southern EAPP corridor)	~620 km (according to project route)	Planned regional power exchanges between SAPP and EAPP	Under construction	TANESCO; ZESCO	World Bank	Not specified
TAZA Substations	Tanzania – Zambia	Associated electrical substations	—	—	Line: 61% completed, commissioning expected in October 2025; Substations: 21%, commissioning expected in May 2026	TANESCO; ZESCO	World Bank	—

## Remaining Integration Gaps and the Road to a Functioning Regional Market

Despite physical infrastructure progress, several barriers continue to limit the volume and reliability of regional power trade.

First, harmonized grid codes (the technical standards governing interconnection and system operation) have not been fully aligned across EAPP member states, creating interoperability risks and increasing transaction costs for bilateral trades.

Second, wheeling charges (the tariff for transmitting power across a third country's grid) remain undefined or disputed in several corridors, discouraging the multi-country transit arrangements that would unlock the pool's full capacity.

Third, asymmetric creditworthiness among off-takers (Kenya Power's relatively stronger balance sheet compared to TANESCO or REGIDESO) creates unequal risk profiles that complicate long-term bilateral PPAs.

Finally, energy security concerns and concerns about supply reliability have led some governments to pursue domestic generation investments even where imports would be economically superior, reflecting a political economy of energy nationalism that integration advocates must address.

Without changes to entrenched operational and policy challenges, the Day-Ahead Market may deliver only modest near-term gains. The full value of regional integration – including leveraging Ethiopia's hydropower surplus and Kenya's geothermal baseload to supply deficit systems – will depend on resolving these outstanding regulatory and institutional constraints in parallel with the build-out of physical infrastructure.

## PILLAR 3: SCALING UP LAST-MILE ELECTRIFICATION WITH DISTRIBUTED RENEWABLE ENERGY SOLUTIONS

### Rural Electrification: Targets and Strategies

Extending the national grid alone will not be sufficient to reach isolated rural areas by 2030. For the first time at this scale, the compacts explicitly recognize the critical role of mini-grids and solar home systems (SHS) as durable solutions rather than merely transitional ones. The same brief also incorporates the closely related agenda of clean cooking, which the compacts now address with quantified targets for the first time – a recognition that universal energy access must encompass not only electricity but also access to modern, safe, and affordable cooking solutions.

Table 4. Rural electrification targets and off-grid strategies

Country	Current access (national)	2030 target	Off-grid strategy
Kenya	75%	100%	KOSAP program: mini-grids for the North/North-East + SHS
Tanzania	46%	75%	Rural densification + aggressive private mini-grid rollout
Ethiopia	44%	75% (100% long term)	35% of the population served via off-grid (ELEAP program)

Country	Current access (national)	2030 target	Off-grid strategy
Burundi	25.9%	70%	Target of 20% access via decentralized solar (300 mini-grid sites)
Comoros	~60% (variable)	100%	Hybridization of isolated island grids

Source: National Energy Compact (Mission 300), country documents 2025; World Bank.

## Enabling Regulatory Frameworks

Kenya and Tanzania have the most mature frameworks for mini-grids, with deregulated or cost-reflective tariffs. Burundi commits in its compact to radically streamline licensing and to offer tax incentives (VAT/customs exemptions on solar equipment). However, Burundi's access targets are not credible without first fixing the network constraints that undermine service quality: the combination of below-cost-recovery tariffs, weak utility balance sheets, and unclear licensing procedures creates investment risk that makes private capital prohibitively expensive. Regulatory reform and utility rehabilitation must therefore proceed as parallel tracks.

This regulatory maturity gap has important investment implications. In Kenya, IPPs can sign PPAs with Kenya Power with a degree of confidence in tariff enforcement and dispute resolution. In contrast, for Burundi, the combination of below-cost-recovery tariffs, weak utility balance sheets, and unclear licensing procedures creates a risk that makes private capital prohibitively expensive. The compacts signal awareness of this challenge, with several countries explicitly committing to independent regulation, transparent tariff review mechanisms, and licensing one-stop-shops which can act as institutional levels that make private investment possible.

## Hybridization Strategies

Regarding hybridization strategies, the four typologies outlined below represent a progression of sophistication in how national systems are combining different inputs to achieve reliability and affordability.

- Technical hybridization (diesel, solar, and storage) is typically the entry point for isolated systems and is most prevalent in island contexts like the Comoros, where the imported fuel costs exceed \$0.30/kWh and even modest solar penetration delivers immediate payback.
- Contractual hybridization – where a private operator takes on operational responsibility under a performance-based service agreement – is the dominant model being promoted in Tanzania as a way to bring private management expertise to state-owned infrastructure without full privatization.
- Financial hybridization, which combines public grants with private equity and results-based subsidy triggers, is the architecture underpinning most off-grid programs across the region.
- Finally, grid hybridization – building mini-grids that are technically designed to interconnect with the national grid upon its eventual arrival – is the most forward-looking approach, protecting investor capital and avoiding stranded assets.

## Results-Based Financing (RBF)

RBF is emerging as a preferred instrument to accelerate off-grid electrification across the selected countries. Its appeal lies in its ability to link financial disbursements to verified outputs or outcomes, thereby encouraging private sector participation, improving accountability, and reducing investment risk in underserved markets.

Across the countries analyzed, RBF is often combined with complementary de-risking measures such as guarantees, blended finance structures, tax exemptions, and dedicated electrification funds, reflecting a broader effort to mobilize capital and expand access to energy services in a sustainable manner.

- Comoros: plans an RBF scheme of US\$16 million for access technologies (mini-grids, off-grid solar, electrification) by 2027, along with risk mitigation instruments (payment guarantees, mitigation funds).
- Tanzania: results-based financing facility for improved cookstoves will be scaled up in 2025 plus tax/duty reductions for clean cooking appliances by 2026.
- Kenya: the compact explicitly cites “results-based financing” among innovative financing and de-risking approaches.
- Ethiopia: support needs include RBF plus MIGA/IDA guarantees, as well as the reinstatement of a Rural Electrification Fund.
- Burundi: describes a blended finance scheme (grants/loans/equity), plus the FESEC fund (SOLEIL-Nyakiriza) and VAT/customs exemptions for certified solar equipment.

## Access to clean cooking

Clean cooking is increasingly moving to the forefront of the energy access agenda, no longer treated as a secondary issue to electrification. In many of the countries under review, more than 80% of the population still relies on firewood or charcoal for daily cooking, with major consequences for public health, household air pollution, forest degradation, and climate resilience. In this context, Mission 300 compacts are beginning to incorporate ambitious and measurable clean cooking targets, reflecting a growing recognition that universal energy access must include not only electricity, but also access to modern, safe, and affordable cooking solutions.

Table 5. Access to clean cooking

Country	Current access	2030 target	Priority technologies
Kenya	34.4%	100%	Mixed: LPG, bioethanol, e-cooking (electric cooking)
Tanzania	6.9%	75% (80% in 2034)	National Clean Cooking Strategy, focus on LPG and improved stoves
Ethiopia	8%	57.7%	Biogas, electricity (enabled by hydropower surplus), efficient biomass stoves
Burundi	<5%	40%	Improved stoves, eco-briquettes
Comoros	0.5%	30%	LPG, electricity (if tariffs are affordable)

Source: National Energy Compact (Mission 300), country documents 2025; World Bank.

## Technologies and National Pathways

A range of clean cooking technologies are being promoted across the selected countries, each with distinct infrastructure, regulatory, and financing requirements.

- **LPG (Liquefied Petroleum Gas):** LPG remains one of the most scalable clean cooking solutions, particularly in urban and peri-urban areas, but its expansion depends on adequate logistics systems, including storage facilities, cylinder availability, safety standards, price regulation, and last-mile distribution networks. Tanzania, for example, has adopted a Clean Cooking Strategy 2024-2034 and plans to reduce taxes and duties to improve the affordability of clean cooking equipment and fuels.
- **Improved Cookstoves (ICS):** Improved cookstoves continue to play an important role, especially in rural contexts where biomass is likely to remain part of the cooking mix in the short to medium term. However, their effectiveness depends heavily on the existence of quality standards, certification systems, and testing capacity. Burundi, for instance, plans to establish a national testing laboratory, which could help improve product quality, consumer confidence, and market oversight.
- **E-cooking:** Electric cooking has strong long-term potential, particularly where electrification rates are rising, but it requires a reliable power supply, affordable electricity tariffs, and appliances adapted to local cooking practices. Its viability therefore depends not only on access to electricity, but also on grid stability and appropriate pricing incentives. Kenya provides a useful benchmark by defining clean cooking in line with WHO standards, including Tier 5 for CO and Tier 4 for PM2.5, thereby linking cooking access to measurable health outcomes.
- **Biogas, bioethanol, and briquettes:** These alternatives can diversify the clean cooking market and are often well suited to local resource availability, but they require the development of reliable value chains, consistent product quality, standardization, and, in many cases, consumer financing mechanisms to support uptake. Ethiopia explicitly includes these options in its 2025-2035 roadmap, highlighting the importance of a diversified technology approach adapted to different local contexts.

Overall, expanding access to clean cooking will require more than the promotion of individual technologies. It will depend on the development of enabling ecosystems that combine policy support, standards and certification, supply chain development, consumer awareness, affordability measures, and targeted financing instruments.

### Distinct National Pathways for Clean Cooking

For the first time, countries such as Kenya and Ethiopia, which are benefiting from abundant renewable electricity, are positioning electric cooking as a strategic pillar for clean cooking, turning an energy challenge into a demand opportunity for utilities.

The deployment of each clean cooking technology category requires a distinct enabling ecosystem, and this is where national strategies begin to diverge significantly. LPG scale-up (the most common pathway in urban and peri-urban contexts) requires a functioning distribution infrastructure of storage facilities, bottling plants, and last-mile retail networks. Countries pursuing LPG, such as Tanzania and Kenya, must also navigate price regulation carefully: subsidies that make LPG affordable for poor households can distort markets and discourage private investment in distribution infrastructure. Tanzania's Clean Cooking Strategy

2024-2034 attempts to resolve this tension by using tax reductions rather than consumer subsidies, a model that several compacts reference explicitly.

Improved cookstoves (ICS) represent the most immediately scalable option for rural populations, but their impact depends critically on quality. Low-quality stoves that do not consistently meet emissions standards undermine health benefits and erode consumer trust in the technology. Several compacts, notably Burundi's, acknowledge this by committing to the establishment of national testing laboratories – a recognition that standards enforcement, not just distribution, is the rate-limiting step. In Ethiopia, where biomass will remain the dominant cooking fuel for many years even under ambitious targets, improving stove efficiency has significant climate and public health co-benefits beyond energy access alone.

The long-term integration of clean cooking into broader energy policy is a vital step forwards that forms part of the features of the Mission 300 compacts.

## PILLAR 4: UNLOCKING PRIVATE INVESTMENT THROUGH SUPPORTIVE REGULATORY FRAMEWORKS

Private investment is necessary to deliver the compact targets: public finances can only cover a fraction of the over USD 45 billion in identified investment needs. Still, investor engagement in power systems depends heavily on prerequisites absent across several of these regions – agreements that attract financing, guarantees allowing currency conversion, clear permitting procedures, alongside consistent adherence to contractual terms.

### National Regulatory Frameworks

**Kenya** presents the most advanced and comprehensive private sector strategy. Its compact combines regulatory reform, competitive procurement, standardized PPAs, open access rules, mini-grid regulation updates, tax incentives, geothermal risk mitigation, green bonds, results-based financing, carbon market development, and local capital mobilization. The lifting of the PPA moratorium in November 2024 is a major enabling reform, allowing Kenya Power to procure 1,112 MW from IPPs through more transparent competitive processes. Kenya targets **USD 5.1 billion in private financing** out of USD 19.1 billion in total investment needs.

**Tanzania** focuses on building a structured procurement and PPP framework. Key actions include establishing a Renewable Energy IPP Procurement Programme, developing a competitive procurement framework, revising small power producer tariffs, updating net-metering rules, and strengthening PPP capacity. Tanzania also plans a pilot independent transmission project and improved quality standards for off-grid equipment. Its private sector target is **USD 4.04 billion** out of USD 12.9 billion.

**Ethiopia** emphasizes broad private sector participation across generation, transmission, distribution, off-grid electrification, and clean cooking. Its strategy relies on project preparation, blended finance, guarantees, climate finance, and reforms under the Renewable Energy IPP Procurement Framework and PRIME program. However, Ethiopia still faces major institutional and procedural barriers, including unclear roles among sector institutions, complicated permitting weak procurement systems, and limited private participation to date. It targets **USD 3.06 billion** in private investment by 2030.

**Burundi** is at an earlier stage and focuses on foundational reforms. Its compact prioritizes updating the investment code, allowing free transfer of capital and dividends, providing tax

exemptions for electricity equipment, strengthening PPP legal capacity, and simplifying energy project approvals. The main private sector anchor is the PPP arrangement with Anzana Electric Group/Weza Power, targeting electrification of 9 million people over seven years. Burundi seeks **USD 1.54 billion** in private financing, equal to 44% of its USD 3.49 billion total need, but success depends heavily on regulatory and utility reforms.

**Comoros** has the smallest market and the most challenging private investment target. Its strategy centers on a USD 16 million results-based financing scheme for access technologies, payment guarantees, mitigation funds, and the creation of ANREE as an independent regulator. However, SONELEC's poor performance, high diesel dependence, large system losses, and constrained available capacity remain major barriers. The compact assumes the private sector will provide 70% of the **USD 0.39 billion** investment need, which appears ambitious given the country's limited market maturity and economic capacity.

### Results-Based Financing as a De-risking Tool

Across the compact countries, regulatory frameworks alone are insufficient: investors require concrete de-risking instruments to bridge the gap between policy commitment and bankable transactions. Results-based financing (RBF), payment guarantees, blended finance structures, and first-loss instruments are emerging as the core toolkit. The compacts increasingly favor these mechanisms over traditional sovereign borrowing, as they use limited public resources to crowd in private capital.

Ethiopia's explicit reference to MIGA and IDA guarantees to address foreign exchange and payment risks reflects this approach clearly. Kenya's carbon market provisions and Consolidated Energy Fund add further innovation to the toolkit. The AfDB's private sector arm and the Sustainable Energy Fund for Africa (SEFA) have a direct role in de-risking early-stage transactions and demonstrating commercial viability to crowd in mainstream capital, particularly for distributed renewable energy (DRE).

### The DRE Financing Gap

The financing gap for distributed renewable energy is particularly acute. While mini-grid and solar home system developers can mobilize commercial capital, they require supportive regulatory environments – including grid interconnection provisions, cost-effective tariffs, and protection from grid encroachment – that several compacts have committed to but not yet operationalized. Closing this gap requires not just capital but institutional reform: licensing procedures, tariff frameworks, and off-grid market rules that are transparent, predictable, and enforceable.

## PILLAR 5: STRENGTHENING UTILITIES WITH TRANSPARENT FINANCIAL MANAGEMENT AND COST RECOVERY

The utilities in the compact countries span a wide spectrum of financial and operational performance, reflecting very different institutional histories and levels of reform:

- **Kenya Power:** the most commercially mature utility in the group, with a track record of IPP contracting, a relatively stronger balance sheet, and ongoing tariff reform processes. Kenya Power's ability to enforce PPAs and manage and increasingly complex and variable generation portfolio provides a benchmark for the region. However, the utility

faces challenges associated with rapid demand growth, the integration of variable renewables, and the need to maintain system reliability while managing tariff affordability.

- **TANESCO (Tanzania):** faces persistent difficulties including high technical losses, below-cost-recovery tariffs, and weak financial positions that constrain its ability to function as a credible counterpart for private investors. Distribution rehabilitation and the densification of rural networks are capital-intensive and require both improved utility management and sustained external financing.
- **Ethiopian Electric Power:** operates at larger scale, with Ethiopia's 2030 compact committing to reduce transmission losses from 6% to 5.5% and distribution losses from 22% to 13%, alongside a reduction in commercial losses from 10% to 4.5%. These targets reflect a structured performance improvement program, though they require significant investment in metering, billing systems, and network rehabilitation.
- **REGIDESO (Burundi):** is the most constrained utility in the group. Total system losses (technical and non-technical) have been running at approximately 30%, on a rising trend that had previously reached higher levels before partial stabilization. Unaudited financial reports for extended periods, accounting losses that eroded equity in 2017-19, and a low credit rating all limit both public and private investment flows. The 2015 Electricity Law granted REGIDESO a 25-year monopoly on transmission, distribution, and supply; the 2024 legal reforms aim to create the conditions for private sector participation, but REGIDESO's own creditworthiness must improve for these provisions to be realized in practice. The World Bank's 2024 USD 50 million additional financing for the Jiji-Mulembwe hydropower project explicitly includes a performance improvement program for REGIDESO, reflecting international partners' recognition that utility reform is on the critical path.
- **SONELEC (Comoros):** was created through the merger of MAMWE and EDA in an institutional restructuring supported by the World Bank. As of 2024, the utility's performance remains weak: diesel generation represented 91% of the energy mix in 2024, total losses stand at approximately 37%, and effectively available capacity is only around 22 MW against an installed capacity of approximately 53 MW – a gap that reflects years of under-maintenance and insufficient asset rehabilitation. In 2024, demand reached 254 GWh/year while effective available generation covered only 150 GWh, meaning the country faces a structural supply deficit on top of its loss and inefficiency problems. The fiscal position is further complicated by a high debt-to-GDP ratio (35.8% in 2024), placing the country at high risk of debt distress and limiting the government's ability to finance system rehabilitation from public resources.

## Cost Recovery and Tariff Reform

Across the five countries, tariff structures remain a key challenge. Below-cost-recovery tariffs are common and create a structural disconnect: without revenues that reflect the actual cost of providing electricity, utilities cannot maintain assets, repay debt, or attract private capital. The result is a vicious cycle in which poor financial performance leads to under-investment, which leads to higher losses and lower service quality, which erodes the customer base and revenues further.

The compacts address this challenge with varying degrees of specificity. Tanzania's commitment to a cost-of-service study by June 2026 and annual tariff adjustments from 2027 is the most structured and time-bound. Ethiopia's target of full cost recovery by 2028 with a PSO to protect vulnerable households is the most ambitious. Kenya's compact embeds cost-reflective tariff setting as a recurring principle. Burundi's compact acknowledges the need for tariffs to reflect

costs while guaranteeing affordability, without specifying a timeline for closing the gap. In the Comoros, the path to cost recovery is complicated by the structural dependence on diesel, where generation costs exceeding USD 0.30/kWh render cost-reflective tariffs acutely regressive without complementary solar hybridization to reduce unit costs.

### Transparent Financial Management

Across several compact countries, the opacity of utility finances remains a significant obstacle to reform. REGIDESO in Burundi has been operating for extended periods without audited financial reports – the compact’s explicit commitment to publish audited statements for 2020 and 2021, years after the fact, underscores the severity of this gap. Without verifiable financial data, it is impossible to design evidence-based tariff reform, measure progress against improvement targets, or provide investors with the certainty they need to commit capital. Tanzania’s compact introduces the strongest public accountability mechanism: annual publication of TANESCO’s and ZECO’s performance improvement plan progress by the regulator from 2027.

The AfDB and partner institutions have a direct role in supporting transparent financial management through technical assistance, performance improvement plans, and conditions attached to sector lending. Utility reform is therefore a core dimension of the international partnership framework underpinning Mission 300. The World Bank’s USD 50 million additional financing for Burundi’s Jiji-Mulembwe hydropower project explicitly includes REGIDESO’s performance improvement as a core component, while the ASCENT program provides a broader regional framework for coordinated utility reform support.

## COMPARATIVE ANALYSIS OF FINANCING NEEDS

The total amount of investment needs identified for these five countries exceeds USD 45 billion. The public-private financing mix varies significantly by country, from 27% private in Kenya to 70% in the Comoros, reflecting both different market conditions and different levels of reform ambition. The specific instruments through which countries plan to mobilize private capital are addressed under Pillar 4 above. This section focuses on the structural pattern of financing needs and the systemic gaps that cut across individual country strategies.

Table 6. Investment amounts

Country	Total investment	Public / donors share	Private sector share	Most capital-intensive segment
Kenya	USD 19.1 bn	73%	27%	Generation & transmission
Tanzania	USD 12.9 bn	~69%	~31%	Distribution & rural access
Ethiopia	USD 9.6 bn	Majority	Growing (IPPs)	Generation (hydro)
Burundi	USD 3.49 bn	56%	44%	Distribution
Comoros	USD 0.39 bn	30%	70%	Solar generation

Source: National Energy Compact (Mission 300), country documents 2025; World Bank.

Comparing investment needs relative to market size highlights important structural asymmetries. Kenya’s USD 19.1 billion investment target, while the largest in absolute terms, is directed toward an economy with a GDP of over USD 110 billion and a relatively mature financial sector. By contrast, the Comoros’ USD 0.39 billion requirement, which is modest in comparative terms, must

be mobilized against a GDP of USD 1.3 billion, making it one of the most demanding financing challenges relative to national economic capacity. Tanzania and Burundi face a structurally different challenge: their largest financing needs are in distribution rehabilitation and rural densification – segments that require smaller-scale, locally grounded financing models rather than large project finance structures.

The most capital-intensive segment in each country reflects its main system bottleneck. In Kenya and Ethiopia, large-scale generation and transmission infrastructure require long-term project finance with strong institutional counterparts. In Tanzania and Burundi, the distribution and last-mile access agenda is the primary constraint, requiring a different set of instruments (e.g., results-based facilities, PPP distribution models, and connection subsidies) rather than the sovereign or commercial project finance more suited to generation. In the Comoros, the entire investment program is modest in absolute size but highly dependent on private solar developers, whose willingness to invest is contingent on the SONELEC and ANREE reform trajectory discussed under Pillars 4 and 5.

## STRUCTURAL GAPS AND IMPLEMENTATION CHALLENGES

The five national Energy Compacts analyzed in this brief represent a watershed moment for Eastern Africa. Together, they represent one of the most ambitious and quantified regional energy transformations seen on the continent in recent years – a structural redesign of entire energy systems within a single decade, backed by over USD 45 billion in identified investment needs.

The analysis across the five pillars points to a number of structural challenges that will influence how far these ambitions are realized in practice.

**The financing challenge is substantial and central to success.** The compacts assume that the private sector will cover between 27% and 70% of total investment needs. This is a wide range that reflects very different starting conditions across the five countries. In the Comoros, where private investment in the energy sector is still at an early stage and utility balance sheets are under pressure, meeting these targets will likely require robust risk-mitigation instruments. The pipeline of bankable transactions depends in turn on utility reform and regulatory credibility.

**Utility reform is a central condition for progress.** Across Tanzania and Burundi, national utilities face persistent difficulties – including high technical losses, below-cost-recovery tariffs, and weak financial positions – that make it difficult for them to function as credible counterparts for private investors. Until this changes, the pipeline of bankable power purchase agreements will remain constrained, and regional power trade will be limited by asymmetric creditworthiness among off-takers.

**Clean cooking requires parity of attention and funding.** Its inclusion in these compacts marks a shift in how energy access is framed – no longer limited to electricity alone. Yet in most countries, funding allocations still fall well short of the scale of the problem. Where over 80% of the population relies on solid biomass for cooking, the health, environmental, and economic costs are considerable, and closing the gap will require both sustained public commitment and stronger financing instruments.

**Regional integration through the EAPP is progressing but can be further strengthened.** The physical infrastructure for cross-border trade is advancing, with the Day-Ahead Market now in development. But realizing the full potential of the power pool will require resolving outstanding

issues around harmonized grid codes, wheeling charges, and inter-state policy alignment – none of which can be addressed by a single government acting alone.

**Regulatory credibility and delivery capacity are underestimated bottlenecks.** The compacts are ambitious in their investment pipelines but largely silent on the institutional capacity required to deliver them. Effective procurement of large infrastructure projects requires competent and independent energy regulators, experienced transaction advisory teams, functioning procurement agencies, and legal systems that can enforce contracts. In several of the compact countries, these capacities are weak or nascent. Technical assistance and capacity-building support (including from AfDB's project preparation facilities) are therefore not supplementary activities but core enablers of the compact investment agenda.

**Private sector participation requires more than signals of intent.** The compacts consistently reference the private sector as the primary source of capital. Yet private investment in energy infrastructure is fundamentally contingent on conditions that many of these markets do not yet fully provide: bankable offtake agreements, foreign exchange convertibility assurances, transparent licensing, and a track record of contract enforcement. The financing gap for DRE is particularly acute: while mini-grid and solar home system developers can mobilize commercial capital, they require supportive regulatory environments (including grid interconnection provisions, cost-reflective tariffs, and protection from grid encroachment) that several compacts have committed to but not yet operationalized. Development finance institutions, including the AfDB's private sector arm and the Sustainable Energy Fund for Africa (SEFA), have a direct role in de-risking early-stage transactions and demonstrating commercial viability to crowds-in mainstream capital.

## CONCLUSION

Beyond the structural challenges outlined above, the five compacts reveal three converging trends that define the direction of Eastern Africa's energy transition.

First, there is a **clear convergence toward renewable energy**. Even countries with a long-standing dependence on hydropower, such as Ethiopia and Tanzania, are accelerating investment in solar PV as a way to diversify their generation mix and reduce exposure to drought-related risks. However, this shift does not imply a uniform transition pathway. In Ethiopia, solar expansion serves primarily as a hedge against climate vulnerability in a hydro-dominated system, whereas in the Comoros solar development is driven more directly by the need to reduce reliance on costly imported fuels. The common direction is toward more renewable-based systems, but the rationale, sequencing, and starting conditions differ significantly across countries. For the Comoros and Burundi, the transition to renewables must be preceded by system stabilization – loss reduction, asset rehabilitation, and utility performance improvement – without which new generation capacity will deliver limited benefits.

Second, the compacts reveal **major disparities in market maturity**. Kenya stands out as the most advanced market, with a longer track record of independent power producers (IPPs), more developed regulatory frameworks, and tariffs that are closer to cost-reflective levels. By contrast, countries such as Burundi and the Comoros remain at a much earlier stage of sector development and require more fundamental regulatory and institutional reforms. This gap is structural as well as financial. For example, Kenya benefits from decades of regulatory learning, a stronger credit environment, and a larger electricity market. For lower-income and more fragile systems, catching up will require capital investment, but also sustained support in regulatory design, contract

structuring, and utility management. In this respect, regional institutions such as the EAPP, together with development finance institutions, have an important role to play in facilitating knowledge transfer alongside financing.

Third, **utility reform emerges as a central condition for success** across all compacts. In countries such as Tanzania and Burundi, national utilities (including TANESCO and REGIDESO) continue to face persistent challenges related to high technical losses, below-cost-recovery tariffs, and payment arrears. Although the specific pathways to reform differ by context, the underlying issue is the same: without financially viable and creditworthy utilities, it is difficult to establish bankable PPAs, attract private investment at scale, or integrate credibly into regional power markets. Utility reform is therefore the foundation of the broader investment strategy set out in the compacts.

Taken together, these trends point to a region undergoing a genuine energy system transformation rather than a simple expansion of existing infrastructure. The shift toward solar, the uneven pace of market development, and the centrality of utility reform all suggest that the success of the compacts will depend not only on investment volumes, but also on the ability to adapt policy, institutions, and financing models to very different national contexts.

In this landscape, the African Development Bank has a distinct opportunity to act as a strategic support institution within the Mission 300 architecture. As co-convenor of the initiative alongside the World Bank, the AfDB can combine its convening power with an operational footprint that spans generation, transmission, last-mile access, clean cooking, and enabling-environment support. To move beyond the role of a single financier among many, the Bank should use its portfolio to anchor country-level energy transition strategies, link sovereign lending, private-sector operations, technical assistance, and regional coordination into coherent programs, and help each country turn its compact commitments into a sequenced, context-specific reform and investment pathway.

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