Africa Unleashed: Powering Prosperity Through Energy Access

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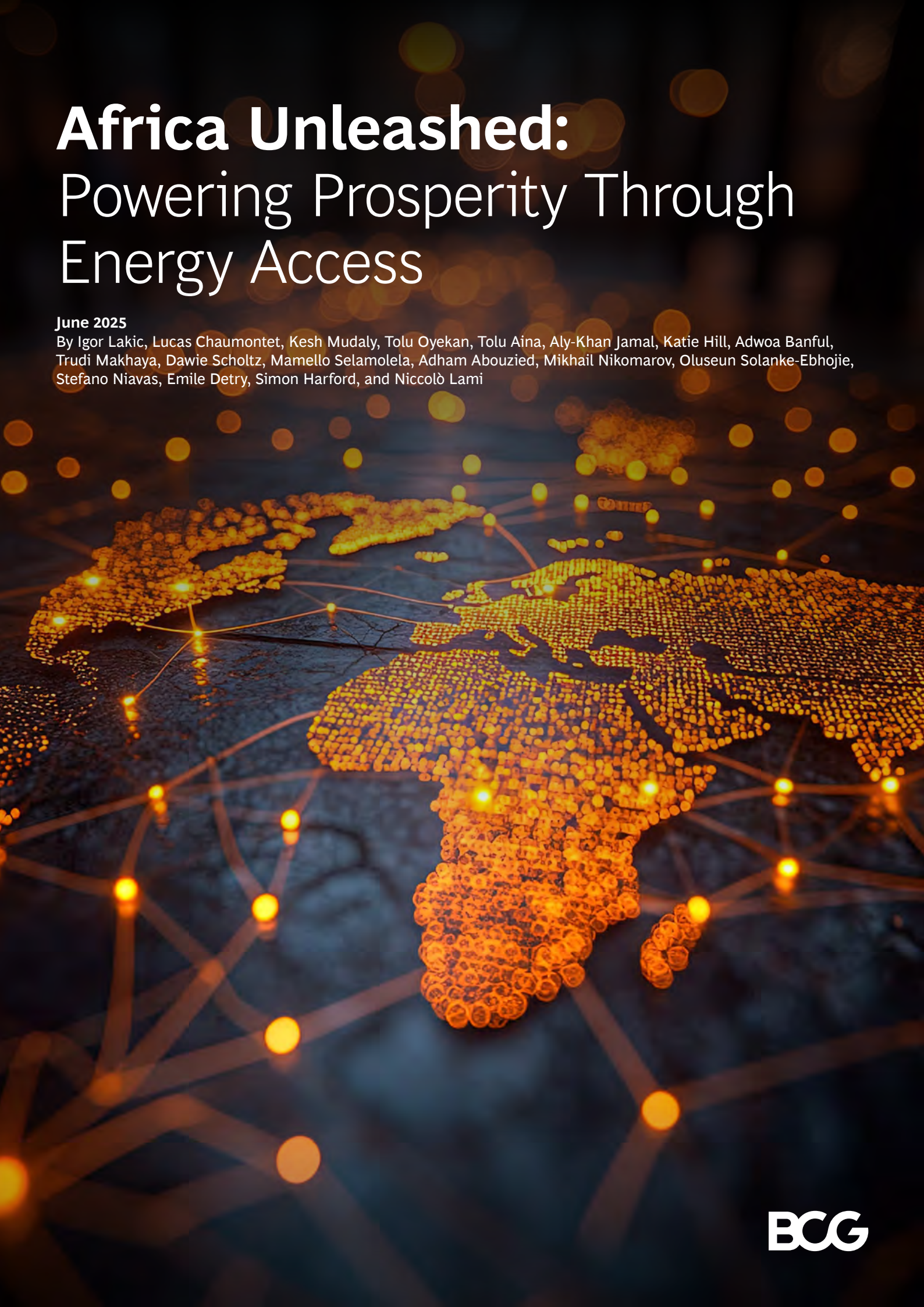
By Igor Lakic, Lucas Chaumontet, Kesh Mudaly, Tolu Oyekan, Tolu Aina, Aly-Khan Jamal, Katie Hill, Adwoa Banful, Trudi Makhaya, Dawie Scholtz, Mamello Selamolela, Adham Abouzied, Mikhail Nikomarov, Oluseun Solanke-Ebhojie, Stefano Niavas, Emile Detry, Simon Harford, and Niccolò Lami



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Key Takeaways

1 There are no income-rich, energy-poor countries in the world. Energy access is the foundation of human and economic development.

2 Africa faces a major energy access gap. 600 million people in Africa still lack electricity— 83% of the global total. While global energy poverty has dropped by ~80% since 2010, progress in Africa has stalled.

3 Africa needs to achieve universal energy access. Striving towards SDG7, African leaders and international partners have set out to connect over 300 million people by 2030 as a key milestone towards universal energy access.

4 The benefits could be immense. Reaching this target could yield cumulative GDP gains of $500+ billion by 2040, create millions of jobs, increase school graduation rates, reduce infant mortality, and avoid 350+ million tons of CO_2.

5 Renewable costs are falling fast. Solar prices are down ~80% over the past decade, enabling faster, cheaper deployment of mini-grids and home systems in remote areas.

6 >50% of new connections will come from decentralized renewables. These are essential for rural "last-mile" areas where grid extension is slow and expensive.

7 Catalytic funding is critical. While ~$50 billion has been pledged, total needs reach $90 billion by 2030 and reach $180-200 billion to achieve universal energy access.

8 Government reforms are key. Policies like utility and tariff reforms, streamlined regulation, and stronger institutions are needed to attract investment and scale efforts.

9 Private sector involvement is vital. African IPP champions and investors must partner with governments and use tools like guarantees and blended finance to unlock viable projects.

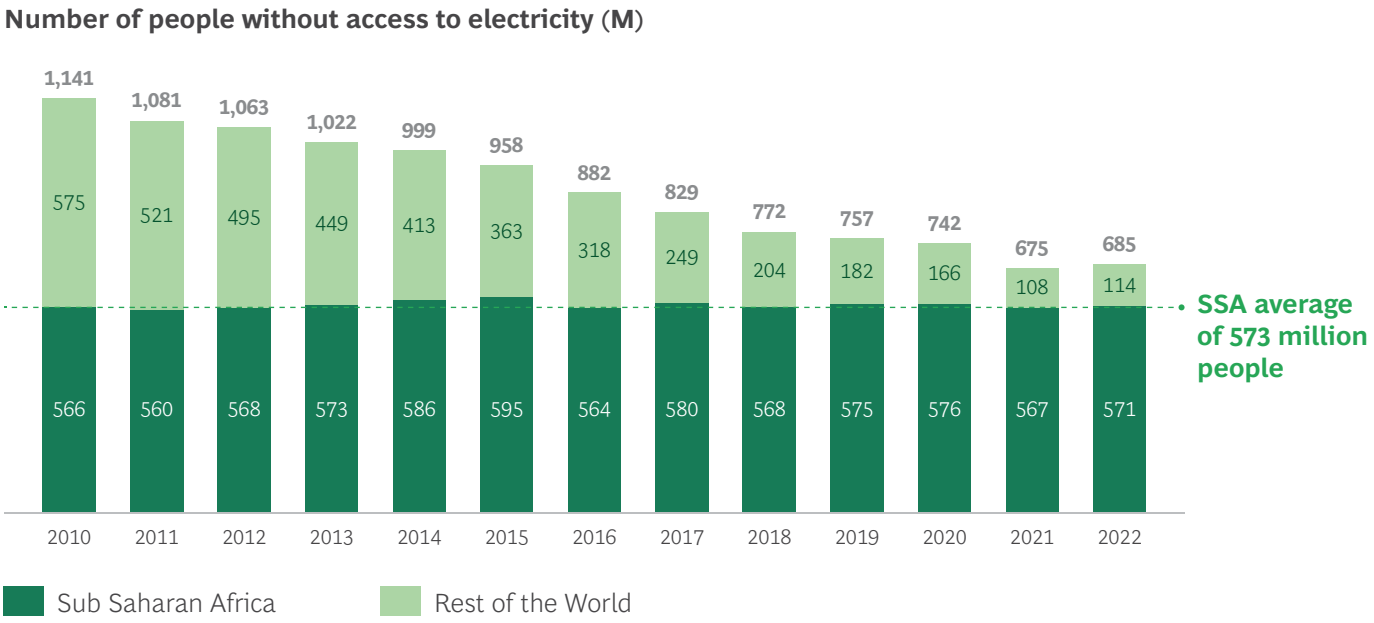
10 The time to act is now. Moving from pledges to on-the-ground projects is crucial to unlock Africa's energy potential.

Current Landscape

Africa faces an urgent electrification challenge of vast scale and intricacy. Over 600 million Africans live without electricity (~570 million of them in Sub-Saharan Africa), representing about 40% of the continent's population and nearly 85% of the world's people lacking access (see exhibit 1). At current trajectories, the number of unconnected people may stay stubbornly high (around 650–660 million) by 2030, as population growth outpaces new connections. This energy gap is most acute in rural areas and fragile states, but, even in electrified urban centres, supply is often unreliable and costly, forcing reliance on backup generators and expensive fuels. In Nigeria, for example, inadequate grid supply compels businesses and households to spend an estimated $14 billion annually on diesel generators, and power outages cause about $25 billion in economic losses (over 6% of GDP). Such realities underscore that Africa's electricity problem is not only about connecting households, but also about ensuring power is affordable, dependable, and sustainable.

EXHIBIT 1

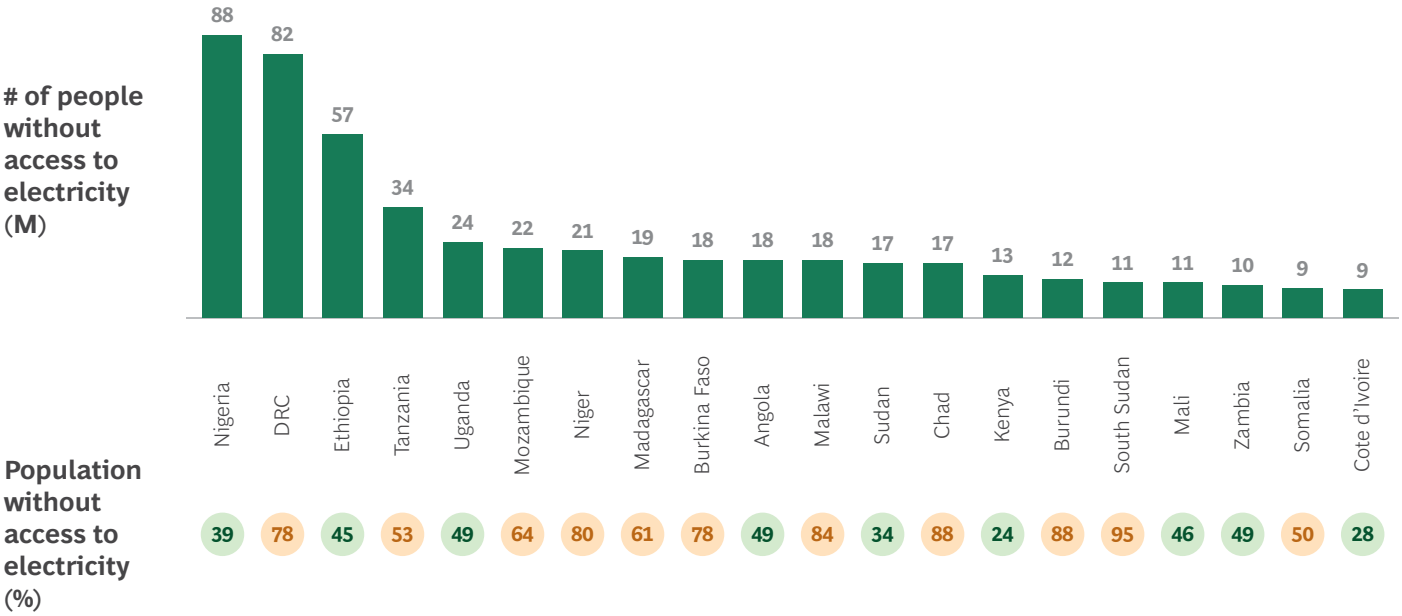
While the rest of the world has reduced energy poverty by ~80% since 2010, progress in SSA has stagnated - ~570 million people in SSA remain unelectrified



Source: World Bank Energy Sector Management Assistance Program (ESMAP) SDG 7.1.1 Electrification Dataset

EXHIBIT 2

20 countries in SSA account for >85% (>500M) of all people without access to electricity in the region



Source: Africa Energy Portal

Despite this daunting challenge, global experience demonstrates rapid electrification is achievable. Between 2000 and 2023, the number of people worldwide with electricity access increased by 2.6 billion, reaching a global electrification rate of 92%. This achievement was driven by breakthroughs in technology, innovative financing models, and effective policy implementation (see exhibit 3). Specific country successes underline this potential: India electrified over 400 million people within just nine years, reaching near-universal access by 2019 through an aggressive mix of grid extension, off-grid solar solutions, targeted subsidy schemes, and clear regulatory frameworks. Similarly, Bangladesh connected approximately 90 million people over ten years (2010–2020) through an extensive rural electrification program that heavily utilized decentralized solar home systems alongside grid expansion, supported by innovative microfinance programs and strong government backing. These examples highlight that solutions exist. Africa now faces the task of adapting proven strategies and mobilizing sufficient resources to replicate these successes at scale.

EXHIBIT 3

2.6 billion people gained energy access globally since 2000, increasing energy access to 92%

Number (B) and share (%) of global population with energy access

Three key drivers of global progress

More investment & innovative financing models

- Annual off-grid solar funding jumped **20x** from $20M to $400M (2012-23)
- Results-Based Financing climbed **10x** from $30M to $300M (2017-24)

Integrated national electrification plans

- Countries rated low-medium in electrification governance & planning fell: **55 to 23** (2010-23)
- Rural connection subsidies cover **30-95%,** greatly reducing costs

Advancements in key off-grid technologies

- **Solar PV costs ↓ 90%** (2010-23) making solar the cheapest new power source
- **Battery storage costs ↓ 89%** (2010–23) unlocking mini-grid scale-up

Source: IRENA Renewable Power Generation Costs in 2023; GOGLA Investment Data 2025; ESMAP Investment and Funding Trends; ESMAP Regulatory Indicators for Sustainable Energy; SEforAll

Africa's vision is to achieve universal energy access by 2030, in line with Sustainable Development Goal 7. This is an ambitious target – reaching the remaining unconnected population (much of it in hard-to-reach rural areas) in less than half a decade requires unprecedented efforts. To that end, African leaders and international partners have launched major initiatives to supercharge progress. A notable example is Mission 300, a coalition-driven effort aiming to connect 300 million Africans to electricity by 2030. Jointly spearheaded by African governments, the World Bank Group, the African Development Bank, and philanthropic partners, Mission 300 is mobilizing financing and technical support at scale. It represents a comprehensive push to halve the number of people without power in Africa within the next five years. On the back of this, the World Bank has pledged to double its annual financing for African energy access from $3 billion to $6 billion by 2030, and the African Development

Bank's Desert-to-Power initiative is investing in utility-scale renewables across the Sahel. Such commitments of capital and collaboration signal a new level of resolve to tackle the continent's energy deficit.

The vision also recognizes that energy access is a means to broader ends: energy access is the foundation of human and economic development (see exhibit 4). Energy access unlocks economic opportunity, healthcare outcomes, gender equality, climate resilience, and improved public services. There is a growing focus on "productive use" of electricity – ensuring that new connections are accompanied by appliances, machinery, and skills that enable households and businesses to increase incomes. There is optimism that, with the right investments, Africa can leapfrog to a modern energy system that powers inclusive growth. For instance, increased access coupled with digital technologies could unlock innovations in fintech, agriculture, and education. As one analysis suggests, even a 1% rise in energy access could correlate with a ~0.7% increase in industrial output and millions of new jobs. The success stories to date and the ambitious initiatives on the horizon together paint a picture of possibility: if Africa navigates the complexity, it can unleash unprecedented opportunity, fulfilling the vision of an empowered, electrified continent by 2030.

EXHIBIT 4

High-Income Low-Energy Countries Don't Exist

By Energy for Growth Hub, Todd Moss and Hamna Tariq, using Ember/Our World in Data

1. International-$ in 2021 prices
Source: Energy for Growth Hub, Ember/Our World in Data

Key Challenges

Numerous factors contribute to the complexity of expanding energy access in Africa. These include:

Vast geography and dispersed populations: this makes last-mile connections logistically challenging and capital-intensive.

Sparse grid infrastructure: extending transmission lines to remote communities can be slow and costly. At the same time, off-grid solutions (like solar home systems and mini-grids) have emerged as vital for remote areas, raising a new need to co-ordinate with traditional utilities.

Policy and institutional hurdles: many countries have legacy power sectors with monopoly utilities in poor financial health, subsidies that strain government budgets, and regulatory frameworks still maturing to support private investment.

Political and economic risks: currency instability and conflict, for example, have historically made investors wary, driving up the cost of capital and slowing project development.

High cost of capital: interest rates for energy projects in Africa can be 2-3 times higher on average than in advanced economies (see section 3.2).

The reliability and quality of electricity service is another critical issue. It is estimated that <50% of African grid-connected customers have reliable power. Frequent outages and voltage fluctuations mean that simply being connected does not guarantee productive electricity use. Hospitals, schools, and businesses often cannot count on electricity when needed, undermining development impact. This low reliability is linked to under-investment in maintenance, generation capacity, and transmission. Aging infrastructure struggles to meet growing demand. Without robust grids, even new generation assets or solar mini-grids operate below potential due to bottlenecks in delivery. The challenge is multi-dimensional – it involves expanding access to millions currently in the dark, stabilizing and upgrading supply for those already connected, and navigating the financial, regulatory, and technical complexities that have impeded progress.

Despite these hurdles, there is broad recognition that electrification is foundational to socioeconomic advancement. Access to power fuels improvements in health, education, and livelihoods: for instance, electricity allows refrigeration of vaccines, lighting for schools, pumping for clean water, and mechanization in agriculture. However, realizing these benefits requires co-ordinated action across sectors and stakeholders. Governments, private companies, development partners, and communities each play a role. The complexity of Africa's energy access challenge is therefore matched by the complexity of orchestrating a response – aligning policies, capital, technology, and on-the-ground execution. The following chapters examine how Africa can navigate this complexity and unlock the opportunities that widespread energy access will bring.

DEEP DIVE 1

Unleashing Local Champions

While Africa is home to ~18% of the world's population, it accounts for <1% of companies with a market capitalization above $1 billion. In the energy sector, this scale gap matters. While entrepreneurial activity is vibrant, many players remain small and fragmented, lacking the scale to execute large capital projects (more on this to follow) or replicate models across borders. To meet electrification targets, Africa will need to scale up a new generation of local independent power producers and energy infrastructure firms capable of delivering complex projects efficiently, attracting long-term capital, and building resilient regional operations. Without these local champions, the sector will remain overly dependent on external actors and exposed to delivery risk.

Independent Power Producers (IPPs) have become significant players in generation in countries like Kenya, Nigeria, South Africa, and Ghana, often through renewable energy projects. Competitive renewable energy auctions have resulted in private-led developments that added substantial capacity. There is also momentum in off-grid and distributed energy ventures. Dozens of African and international start-ups (for example, Sun King, d.light, Bboxx) have raised commercial investments to deploy solar home systems, mini-grids, and battery solutions, reaching customers that the grid doesn't. Scaling this generation of African energy champions is a fundamental building block to creating resilient local economies and achieving sustainable, widespread energy access across the continent.

DEEP DIVE 2

Mobilising the Capital Required

Achieving Africa's electrification goals will require a massive scaling up of investment – far beyond current levels – and a pivotal role for private capital. Analyses by the International Energy Agency (IEA) indicate that to reach universal access will require $180-200 billion. That implies annual investment in energy access in Africa needs to reach between $10 billion and $12 billion per year to reach universal access by 2040 – three times or more than the roughly $3 billion to $4 billion being invested today. In other words, the finance gap is enormous: current spending is only about 12% of what is needed. Closing this gap cannot be achieved from public funding alone, given fiscal constraints and competing development needs. Many African governments are fiscally stretched – some with debt levels that make large public infrastructure investments difficult. Private sector and innovative financing models must step up to supply the bulk of the capital for electrification.

Historically, energy projects in Africa have struggled to attract sufficient private capital due to perceived high risks and lower commercial returns. We see four key barriers to mobilizing capital at scale:

1. Regulatory uncertainty: fear that tariffs won't be cost-reflective or contracts may not be honoured.
2. Off-taker risk: state-owned utilities with strained balance sheets might default on payments.
3. Currency risk: volatile exchange rates drive up debt servicing risk if project debt is EUR/USD denominated but tariffs are in local currency.
4. Limited exit opportunities for investors: secondary markets are underdeveloped, IPO or equity market exits are scarce, and few strategic buyers are consistently making acquisitions.

These factors drive up the cost of capital. Interest rates for energy projects in Africa are 2–3 times higher than in advanced economies on average, which in turn can make projects economically unviable or electricity tariffs too high for consumers. In short, the private sector sees too many "unbankable" projects in this space. As a result, much of the investment to date has come from development finance institutions and donor-funded programs, rather than purely commercial finance.

To unlock much larger volumes of private capital, stakeholders are employing innovative financing mechanisms and partnerships. Examples include:

- Blended finance – the strategic use of philanthropic or public funds to de-risk projects for private investors – is increasingly common.
- Guarantees and insurance products (from agencies like MIGA and ATI) are being used to backstop risk and improve bankability.
- Results-based financing and subsidies are applied to make rural electrification projects (which may not be profitable on pure market terms) attractive enough to proceed. For example, subsidies to reduce upfront connection fees or to support solar kit distribution can expand the market to poorer households who otherwise couldn't afford access.
- Aggregated investment platforms are also emerging: the International Finance Corporation (IFC) and partners are in the process of launching a $300 million Distributed Renewable Energy blended equity fund, which will inject patient capital into mini-grid and off-grid companies across Sub-Saharan Africa.

DEEP DIVE 3

Delivering Large-Scale Capital Projects

Africa faces a critical test in delivering its growing pipeline of large-scale energy infrastructure. Across the continent, more than 60 energy megaprojects—spanning transmission, renewables, and hydrogen—worth over $250 billion are slated to begin construction within the next three years. Yet global volatility is making execution riskier: rising equipment costs, tightening supply chains, and geopolitical shocks are eroding margins and delaying timelines. A one-year delay typically adds 10%+ to capital costs, jeopardizing project viability. If Africa is to realize the benefits of this investment wave, stakeholders must sharpen delivery discipline. This means strengthening project governance, securing supply chains early, and building local execution capability to ensure capital projects are completed on time and on budget.

African Successes amid the Challenges

Amid the daunting statistics, success stories in Africa demonstrate that rapid progress is achievable. Several countries have significantly increased electricity access in the past decade, offering models to learn from.

Ghana's National Electrification Scheme (NES), launched in the 1990s, is a stand-out example of sustained commitment yielding results. In the early 1990s, only about 1% of rural Ghanaians had electricity access. The government implemented an aggressive grid extension and subsidized connection program, investing over $1 billion in rural electrification. By 2014, rural access had surged to 63%, representing a 62 percentage-point increase. This expansion drove tangible socioeconomic gains: average real incomes in connected rural households rose by ~64%, and communities saw higher rates of non-farm entrepreneurship. Ghana's electrification drive not only connected millions of people, but also contributed to broader economic growth (the country sustained ~6–8% GDP growth in the 2010s), illustrating how energy access can catalyze development when paired with supportive measures.

Kenya provides another striking example. Through an aggressive mix of grid expansion, policy reforms, and off-grid electrification, Kenya's national electricity access rate climbed from around 32% in 2013 to roughly 75% by 2022. The Kenyan government invested heavily in distribution networks (including last-mile connectivity programs) and embraced innovations like prepaid metering and pay-as-you-go solar home systems for remote areas. Kenya also fostered a robust regulatory environment. It ranked second in Africa (just behind Uganda) in the African Development Bank's Electricity Regulatory Index for its strong framework encouraging nationwide connectivity. These efforts have put Kenya on a path toward its goal of universal access by 2030. Kenya's push for renewables (over 90% of its electricity comes from renewables like geothermal and hydro) also shows that scaling access can align with a transition to clean energy.

Beyond these two leaders, other African nations have laid the groundwork for accelerated electrification. Rwanda, for example, has rapidly expanded energy access through a combination of grid and off-grid solutions, growing connections by focusing on both large power projects and community-based solar mini-grids. Ethiopia and Tanzania have also substantially increased access in the past decade, supported by national electrification programs. These successes share common themes:

- Long-term national electrification roadmaps to guide resource allocation and project implementation.
- Strong government commitment, demonstrated by public investments and decisive regulatory actions.
- Transparent regulatory frameworks and targeted incentives to attract investment and accelerate projects.
- A mix of grid and off-grid approaches to ensure affordable access in remote areas.

They prove that, with the right strategy, countries can make dramatic inroads into energy poverty in years, not decades.

Key Opportunities: Five Levers for the Next 5 Years

Strengthen Government Planning and Reforms

Upgrade and Expand Grid Infrastructure

Scale Distributed Renewable Energy and Innovation

Unlock Capital through Innovative Financing and Partnerships

Drive Productive Usage and Inclusion for Impact

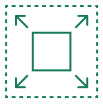
To navigate complexity and seize opportunities, stakeholders must focus on a handful of critical levers that will drive progress in the near term. The following five levers, pursued in concert, form a pragmatic agenda for the next five years to significantly accelerate energy access in Africa:

1 Strengthen Government Planning and Reforms

Strong national leadership and sound policies lay the foundation for electrification. Governments need to set clear electrification targets, backed by detailed roadmaps identifying least-cost solutions (grid, mini-grid, off-grid) for every community. This includes integrated energy planning (often using geospatial data) to co-ordinate efforts across ministries and donors.

Policy and regulatory reforms are essential to create an environment where projects can succeed – for example, simplifying licensing, ensuring tariffs allow cost recovery (with subsidies well-targeted), and improving utility performance. Dozens of countries have already made commitments through energy compacts and strategies – for instance, 12 African nations launched National Energy Compacts under the UN's Energy Access initiative (with at least 15 more in preparation), signalling political will at the highest level. In practice, this lever means continuing to professionalize and depoliticize power sector governance. Successful cases like Uganda (ranked #1 in power-sector regulatory frameworks in Africa) and Kenya show that, when regulators enforce technical standards and transparent pricing, it encourages investment.

Over the next five years, leveraging technical assistance and peer learning (for example via the African Union or regional power pools) can help more countries to implement the tough reforms – such as utility turnaround plans or IPP framework laws – that are needed to unlock electrification projects. In short, capable institutions and policies will pave the way for everything else.



2 Upgrade and Expand Grid Infrastructure

Even as decentralized solutions arise, national grids remain the backbone of Africa's energy future. Expanding transmission and distribution networks is imperative to connect population centres and industrial zones, and to transmit power from new generation projects (renewables, gas, hydropower) to demand hubs. A key focus is on building more resilient and smarter grids that reduce outages and integrate diverse energy sources.

Investments in transmission can yield outsized gains: improving regional interconnections and domestic grid reach will enable countries to import cheaper power from neighbours and integrate large-scale renewables, cutting costs for consumers. In the next five years, PPPs can be a powerful tool (under the right circumstances) to accelerate grid build-out. With careful design to ensure that national utilities and governments are not forced to provide sovereign guarantees when their balance sheets are already stretched, PPPs can be a game changer, given that nearly all transmission lines today are funded by governments with limited budgets. For example, the Kenya Transmission PPP, co-developed by Africa50 and Power Grid Corporation of India, is a pioneering model where a private concession will finance, build, and operate power lines. If replicated, such models can tap pension funds and engineering firms to fund grid expansion, supplementing public funds. Regional power pool projects (like the West African Power Pool and others) should be fast-tracked, as they allow countries to share surplus power and improve reliability across borders.

By 2030, the goal is that no major generation asset will be stranded for lack of lines, and that millions more people in currently off-grid towns will be reached by an extended national grid. Upgrading infrastructure also means reducing losses (technical and commercial losses in many African utilities exceed 20%) through better maintenance, metering, and grid management technologies. This lever addresses the core of reliability: with stronger grids, fewer Africans will suffer blackouts, and the electricity delivered will be more stable and efficient, encouraging productive use.

3 Scale Distributed Renewable Energy and Innovation

Not all communities can be economically served by the national grid in the near term. This is where off-grid and mini-grid solutions play a pivotal role. Decentralized renewables (solar home systems, PV mini-grids, small wind, etc.) can be the quickest and most cost-effective way to bring first-time electricity access to remote and low-income households (see exhibit 5). Studies project that off-grid systems will provide roughly half of new connections in Africa by 2030, underscoring how crucial this lever is.

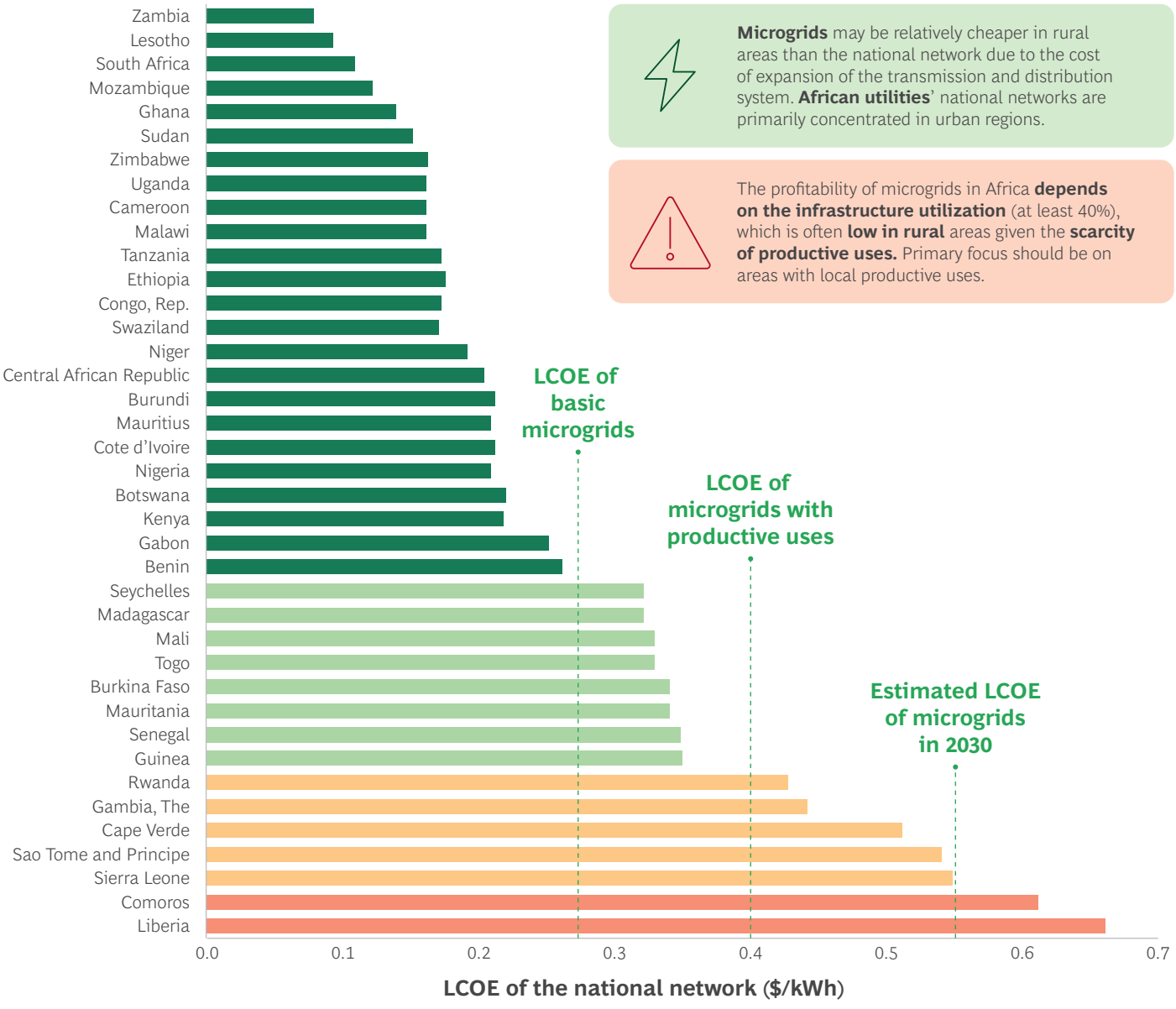
To scale these solutions, governments and partners should continue to support innovative business models, such as pay-as-you-go solar financing and community-based energy services. For example, companies like M-KOPA in East Africa have leveraged mobile payments and micro-loans to enable over one million low-income customers to afford solar home systems for lighting and phone charging. Similarly, Nigeria's government, with World Bank support, is implementing an off-grid electrification project that subsidizes private developers to deploy solar mini-grids to villages, aiming to reach 2.5 million people and 70,000 businesses in the next few years. These approaches blend entrepreneurial drive with smart subsidies to extend power to underserved areas.

Over the next five years, scaling this lever means: streamlining approvals for mini-grid projects (many countries now have simplified licensing regimes for <100 kW systems), encouraging public utilities to partner with off-grid providers (with the utility as "anchor customer" or co-investor in mini-grids), and protecting consumers with quality standards for solar products. Innovation will be key, whether it is new battery technologies to improve storage, or productive-use appliances (like solar water pumps or efficient mills) that increase the value of off-grid electricity. By nurturing the ecosystem of solar distributors, mini-grid operators, and financiers, Africa can accelerate energy access concurrently to grid expansion. Importantly, decentralized solutions also foster local enterprise and jobs and can be a testbed for technological leapfrogging (such as geo-analytics to pinpoint optimal locations for mini-grid projects).

It is important to note that off-grid solutions are a means to an end, not an end in themselves. Integration into the national grid and the avoidance of a two-tier energy system remain the ultimate goals to ensure that even the most isolated communities are not left behind in the electrification drive.

EXHIBIT 5

DRE microgrids can be a cheaper alternative to the national grid in some countries

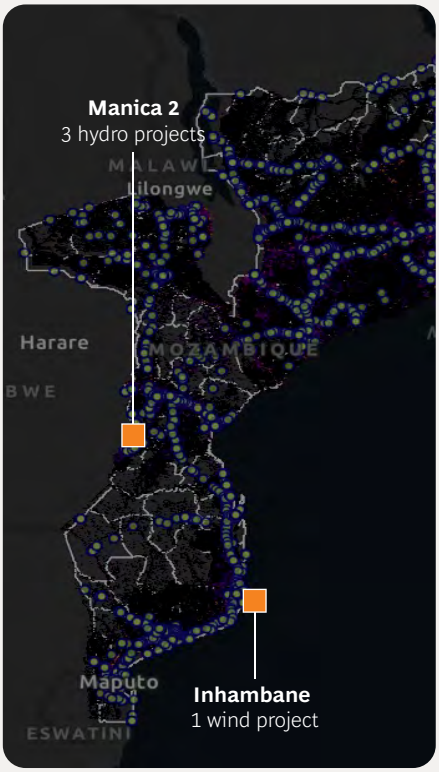


Source: The World Bank; ESMAP, 2020; IEA, 2020; BCG Analysis

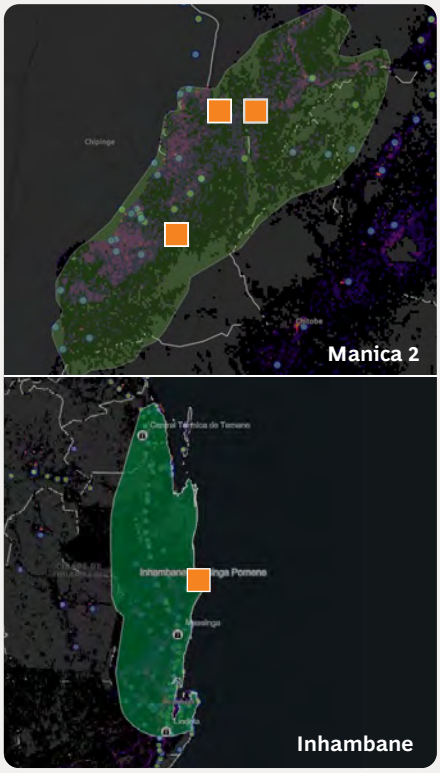
CASE STUDY: MOZAMBIQUE

Demand estimated via geo-analytics to evaluate financial & social impact

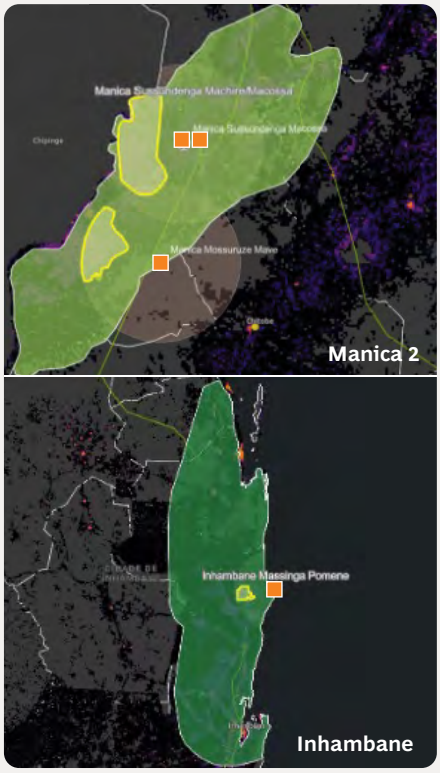
Define priority mini-grid projects



Identify total demand surrounding projects[1]



Define optimal demand to serve via mini-grids[2]



■ Mini-grid project ● Demand cluster ○ Optimal demand

1. Mini-grid demand "clusters" identified based on population & potential anchor client hot spots surrounding mini-grid projects
2. Optimal demand to serve via mini-grid defined as the demand that a) is cost advantageous to serve via mini-grid vs. main grid (cost-to-serve analysis) and b) is feasible to serve based on max mini-grid capacity & max distance from mini-grid

4 Unlock Capital through Innovative Financing and Partnerships

As discussed, funding is the linchpin of Africa's power ambitions. The next five years must see concerted efforts to mobilize vastly more capital, both domestic and international, by making investments more attractive and accessible.

A priority is expanding the use of blended finance facilities and guarantee instruments. Development partners and philanthropies can deploy concessional funds in ways that reduce risk for commercial investors, for example by providing first-loss equity or guarantee backstops in electrification projects. Mission 300 and related initiatives estimate that risk-tolerant capital from donors can help unlock about $50 billion in additional financing by enabling projects that would otherwise be too risky. Concretely, this might involve a dedicated Energy Access Guarantee Fund to insure against regulatory or off-taker default risk, which in turn lowers the cost of private debt.

Another tactic is aggregating projects into portfolios that diversify risk – for instance, bundling many mini-grid sites in different countries for investment by a single fund. The creation of regional investment platforms (like the previously-mentioned IFC distributed renewables fund) exemplifies this approach, as does the Beyond the Grid Fund for Africa, which pools donor funding to support off-grid companies in numerous countries.

Moreover, local currency financing solutions are crucial. We need to scale programs that provide long-term local-currency loans to renewable energy developers (some countries are piloting this via green banks or lines of credit to local banks). Engaging institutional investors (pension funds and sovereign wealth funds) in Africa's energy infrastructure is another lever – this will require investment-grade projects or guarantees, since these investors are conservative by mandate.

On the partnership side, public-private collaboration can be deepened. Governments can co-create investment plans with the private sector (for example, by identifying priority projects and co-financing needs) and ensure transparent competitive procurement (so investors have confidence in bidding processes). South-South partnerships can also help. For example, African nations can work with experienced countries like India or Brazil to adapt successful financing models – Brazil's opening of transmission to private concessions in the 1990s quadrupled grid capacity and universal access.

By 2030, success for this lever would mean African energy projects would routinely achieve financial closure with a mix of public and private funds; African Energy "Unicorns" would emerge; new innovative funds (for example, green bonds, climate finance, and carbon credits) would be tapped to support clean energy access; and the overall cost of capital for projects would decline. If finance flows at the needed scale, it will catalyze all the other levers into action.

5 Drive Productive Usage and Inclusion for Impact

Simply delivering electrons to people's homes is not enough – the ultimate goal is to translate energy access into real socioeconomic development. A critical lever is to pair electrification efforts with initiatives that maximize productive use, empower communities, and ensure inclusive benefits.

This starts with investing in community infrastructure and appliances alongside connections. For example, electrifying a village should go hand-in-hand with programs to equip clinics with vaccine fridges, schools with computers and lighting, farmers with electric irrigation pumps or cold storage, and households with efficient cooking stoves and appliances. Such complementary investments amplify the impact of electricity on income and quality of life.

Training and capacity-building are also key: people need the skills to leverage power for new businesses or improved services. Programs that train local youth as electricians, solar technicians, or energy entrepreneurs can create jobs and sustain the energy ecosystem.

A focus on inclusion ensures that women, rural poor, and marginalized groups benefit equally. An inspiring model is Solar Sister in West and East Africa, which trains and supports women as entrepreneurs to distribute clean energy products in their communities. Solar Sister has empowered over 5,000 women entrepreneurs and reached ~1.8 million people with solar lights and clean cooking stoves to date.

Similarly, initiatives that encourage productive uses of energy (PUE), such as helping small businesses acquire electric equipment or facilitating micro-loans for agribusiness, can turn new electricity connections into higher incomes and employment. Without such efforts, there is a risk of "electrification without empowerment," which means households get a connection but see little change in their economic prospects.

At the same time, there is a tense and ongoing debate about what level of energy service constitutes meaningful access. Frameworks like the ESMAP Multi-Tier Framework define multiple tiers of access, from basic lighting and charging (Tier 1) to a Modern Energy Minimum, capable of powering substantial productive uses (Tier 3+). Determining the appropriate level of energy access to target involves complex trade-offs between reaching more people quickly with basic services and providing fewer people with higher tiers that drive stronger economic and social impacts. "There are no solutions, only trade-offs."

Over the next five years, development plans should explicitly incorporate PUE programs, and donors can fund challenge grants for innovations that drive demand for electricity in newly-electrified areas (for example, supporting micro-enterprises that use energy). It's also about improving reliability and affordability, so that people trust and utilize the grid rather than fall back on generators. When these pieces come together, the pay-off is substantial: studies indicate that effective utilization of electricity in Africa could spur millions of new jobs and enterprises by 2030, truly "unlocking" economic opportunity. In summary, this lever ensures that electrification is a catalyst for broader development – powering agriculture, industry, education, healthcare, and entrepreneurship in a virtuous cycle.

Conclusion

By focusing on these five levers – enabling governments, building grids, scaling decentralized solutions, mobilizing finance, and maximizing use and inclusion – Africa can navigate the complexity that has long stymied progress. Each lever reinforces the others. For example, better planning (Lever 1) attracts more investment (Lever 4); more funding enables grid and off-grid expansion (Levers 2 and 3); and all of that, combined with productive use (Lever 5), ensures sustainable outcomes. This holistic, multi-lever approach is precisely the kind of cross-sector, public-private collaboration that the theme "Unlocking Africa" envisions. It recognizes there is no single silver bullet: success will come from concurrently addressing the regulatory, financial, technical, and social facets of the electrification challenge. The experience of past projects and current initiatives makes one thing clear: when Africa's public and private sectors align efforts, backed by data-driven planning and community engagement, the lights come on – and lives change. With urgency and unity of purpose in the next five years, the continent can dramatically accelerate energy access and move toward a future where every African has the opportunity that electricity provides.

About the Authors

Igor Lakic
Managing Director and Partner
Lakic.Igor@bcg.com

Lucas Chaumontet
Managing Director and Senior Partner
Chaumontet.Lucas@bcg.com

Kesh Mudaly
Partner
Mudaly.Kesh@bcg.com

Tolu Oyekan
Managing Director and Partner
Oyekan.Tolu@bcg.com

Tolu Aina
Partner
Aina.Tolu@bcg.com

Aly-Khan Jamal
Managing Director and Partner
Jamal.AlyKhan@bcg.com

Katie Hill
Partner and Associate Director
Hill.Katie@bcg.com

Adwoa Banful
Partner
Banful.Adwoa@bcg.com

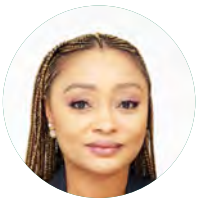
Trudi Makhaya
Partner
Makhaya.Trudi@bcg.com

Dawie Scholtz
Partner
Scholtz.Dawie@bcg.com

Mamello Selamolela
Partner
Selamolela.Mamello@bcg.com

Adham Abouzied
Managing Director and Partner
Abouzied.Adham@bcg.com

Mikhail Nikomarov
Partner and Associate Director
Nikomarov.Mikhail@bcg.com



Oluseun Solanke-Ebhojie
Partner and Associate Director
SolankeEbhojie.Oluseun@bcg.com

Stefano Niavas
Managing Director and Senior Partner
Niavas.Stefano@bcg.com

Emile Detry
Managing Director and Partner
Detry.Emile@bcg.com

Simon Harford
Partner and Director
Harford.Simon@bcg.com

Niccolò Lami
Project Leader
Lami.Niccolo@bcg.com

If you would like to discuss this report, please contact the authors.