



**The African Development Bank and
Energy Access Finance in Sub-Saharan Africa:
Trends and Insights from Recent Data**



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Cover Image: Solar panel providing power to a rural area in Africa, Shutterstock photo ID: 38442460.

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Oil Change International is a research, communications, and advocacy organization focused on exposing the true costs of fossil fuels and facilitating the coming transition towards clean energy.



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Executive Summary

Context

As of 2016, 590 million people in sub-Saharan Africa lacked access to electricity, and 850 million lacked access to modern energy for cooking.¹ The number of people without access has declined in recent years, but population growth is quickly outpacing this progress. Under a business as usual scenario, an estimated 600 million people in sub-Saharan Africa will lack access to electricity in 2030, mainly in rural areas.²

Most international public finance for electricity has supported large-scale, grid infrastructure. However, a growing body of evidence demonstrates off-grid and mini-grid solutions are a faster and often cheaper way to deliver electricity services to rural areas in the short-to-medium term. The International Energy Agency's (IEA) "Energy for All" scenario finds that for a least-cost pathway to universal access in sub-Saharan Africa by 2030, 67 percent of electricity investment will be in off-grid and mini-grid solutions.

The African Development Bank (AfDB) launched the New Deal on Energy for Africa in 2016, which lays out AfDB's strategy to help the continent achieve universal electricity access by 2025—a more ambitious timeline than the UN Sustainable Development Goal of universal energy access by 2030.

The New Deal includes aspirational targets of providing 75 million new off-grid connections and providing 150 million households with clean energy solutions for cooking. This report looks at the role of the AfDB and some of its peer development finance institutions in contributing to energy access in sub-Saharan Africa in light of these goals.

Findings

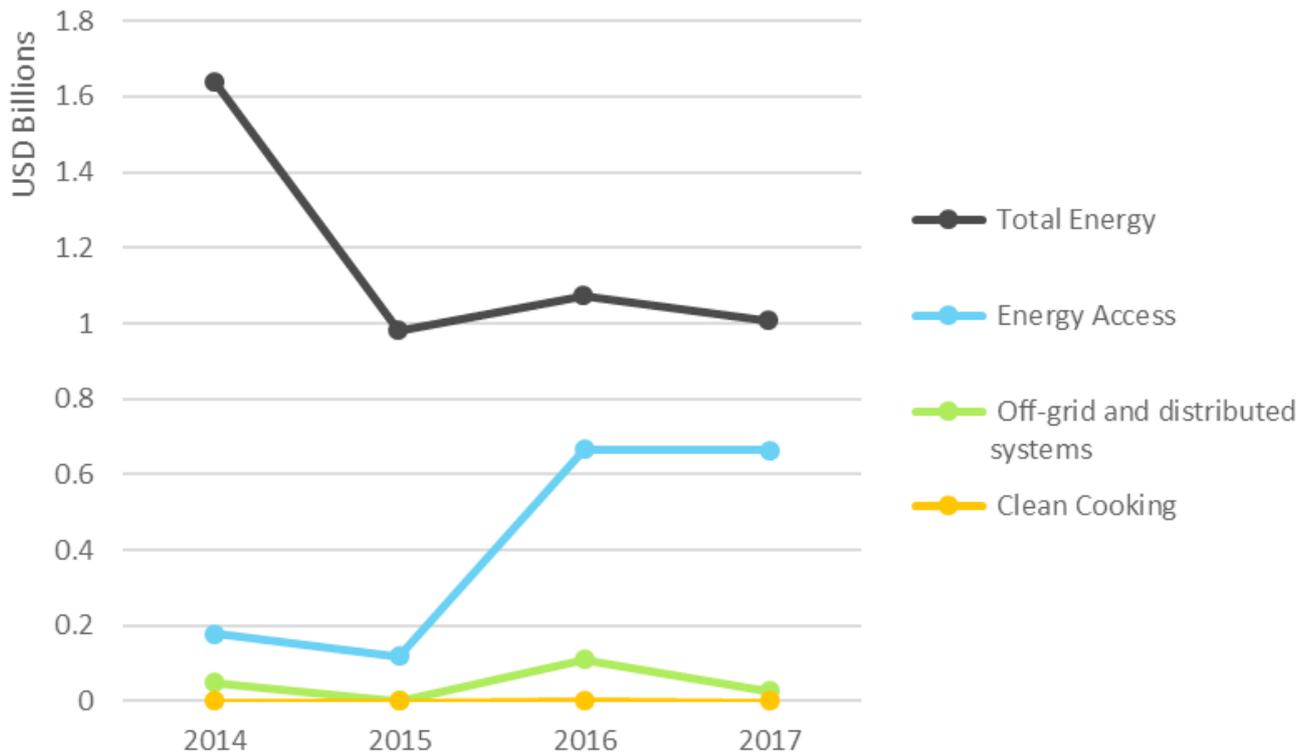
The report finds that from 2014 through 2017:

- AfDB finance for energy access³ appears to have increased dramatically, from approximately 11 percent of AfDB's total energy approvals in 2014 to 66 percent in 2017 (see Figure ES-1).
- On average, the AfDB approved about USD 407 million per year for energy access in sub-Saharan Africa.
- The share of AfDB finance for off-grid and mini-grid solutions increased after the launch of the New Deal on Energy for Africa, from 3 percent of energy approvals in 2014 and 2015, to 6.6 percent in 2016 and 2017. This finance is expected to deliver energy access to over three million people. The AfDB's 2025 target is to deliver 75 million off-grid connections.
- The AfDB's support for clean cooking remains extremely low, at less than one percent of its energy finance.

Photo: ESILALEI, TANZANIA -
FEBRUARY 2, 2014:
Teresia Oloitai cooking over fire
in her hut inside her Maasai boma.
Photo by Morgana Wingard

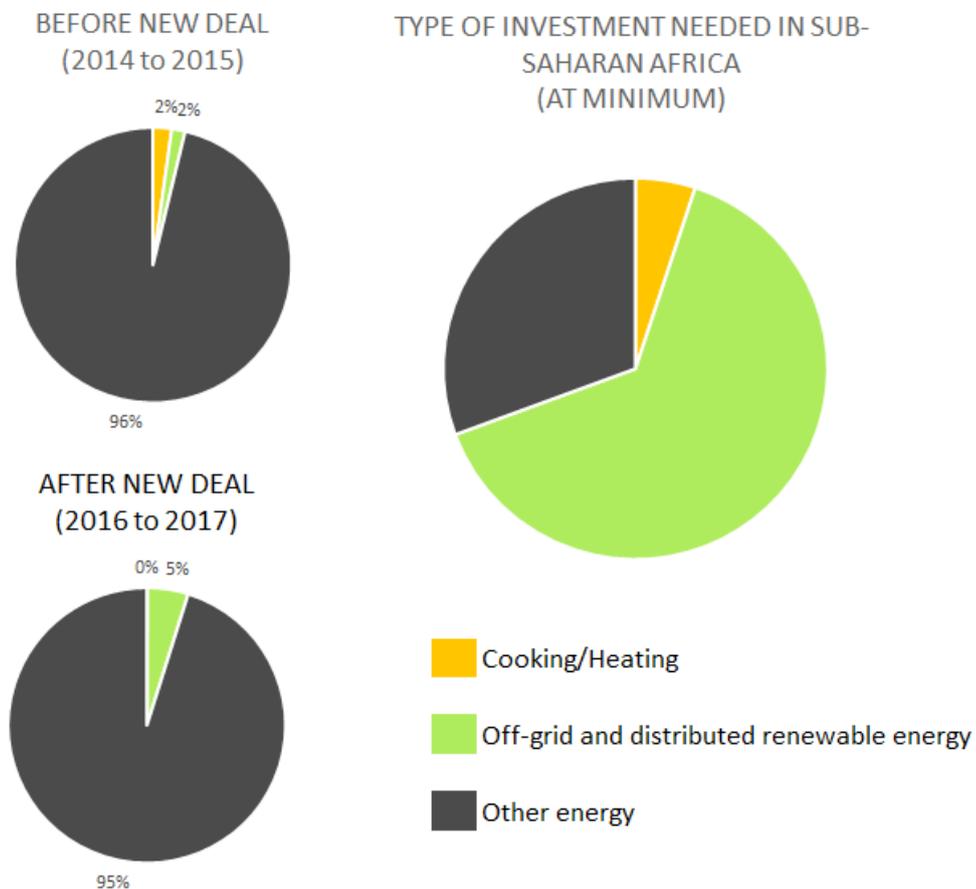


Figure ES-1: AfDB Energy Finance in Sub-Saharan Africa, 2014 through 2017



Source: Oil Change International's Shift the Subsidies Database

Figure ES-2: Comparison of AfDB's Energy Finance in Sub-Saharan Africa with the Type of Investment Needed for Universal Energy Access



Source: Oil Change International's Shift the Subsidies Database; IEA Energy Access Outlook 2017

Top Five Recommendations for AfDB

To achieve its 2025 energy access targets, the AfDB should:

	<p>Increase resources for distributed renewable energy and clean cooking to reflect their importance in achieving development outcomes.</p>
	<p>Mandate meaningful civil society participation, which is critical to enhance outcomes, including in country strategy development processes.</p>
	<p>Ensure energy access resources flow to countries with lower levels of energy access, and to poorer communities within countries that have relatively higher levels of access. It is notable, for example, that Kenya has received significantly more energy access finance from the AfDB than other countries--nearly twice as much as Côte d'Ivoire, the next largest recipient. Development assistance should target contexts with large access deficits where other finance is unlikely to flow.</p>
	<p>Use all the financial tools at its disposal to support scaled-up finance for energy access. This includes guarantees and risk mitigation instruments.</p>
	<p>Build capacity of local and regional financial institutions to finance energy access solutions. In recent years, the AfDB appears to have increased its provision of general credit lines to regional and local banks. The AfDB could leverage its relationships with local banks to build capacity to extend local currency finance to small and medium enterprises operating in the distributed renewables sector, and to build institutional familiarity with renewable technologies and models of energy service provision.</p>



Photo: ESILALEI, TANZANIA - FEBRUARY 4, 2014: Through the creation of solar powered micro-grids, Maasai of the Moduli district in northern Tanzania are receiving power in their mud huts inside their bomas (corralled community). Credit: Morgana Wingard. CC BY-NC 2.0 via USAID Flickr

1. Introduction

This report aims to answer the following questions:

1. What is the potential for public finance institutions to help achieve sustainable universal energy access in Sub-Saharan Africa by 2030?
2. What role has AfDB played in financing energy access in Sub-Saharan Africa from 2014 to 2017?
3. Going forward, what are the implications for AfDB's Transformative Partnerships agenda and New Deal aspirational targets?

1.1 Energy Access: Status in Sub-Saharan Africa

As of 2016, Sub-Saharan Africa accounted for about **half** (590 million) of the global population who lack access to electricity and nearly a **third** (850 million) of the global population who lack access to clean energy for cooking.⁴

While electrification progress is accelerating, gains will be quickly outpaced by population growth. In 2014, electrification progress outpaced population growth for the first time in Sub-Saharan Africa, leading to a reduction in the number of people without access.⁵ The fastest progress occurred in urban areas.

Meanwhile, access to clean energy for cooking has fallen far behind. The number of people in Sub-Saharan Africa without access to clean cooking rose from 200 million to 780 million since 2000, and the rural/urban divide is far larger than that for electricity.⁶

Existing energy policies and investment plans are insufficient to achieve universal electricity access by 2030. Under current and planned policies, approximately 600 million people in Sub-Saharan Africa will still lack electricity access by 2030, the majority in rural areas, and around 900 million will lack access to clean cooking.⁷

Public finance plays an outsized role in the energy sector in Africa compared to other infrastructure investment on the continent. MDBs and DFIs provided about half of total energy investment in 2014 — an estimated USD 12.5 billion (56 percent of total energy investment).⁸ The private sector's role has been increasing, though remains small. AfDB estimates the continent received about USD 4.8 billion in energy finance from the private sector in 2014.⁹ The large share of public finance in energy investment contrasts with trends in infrastructure finance more generally in Africa. For example, for infrastructure, private investment has come to represent over half of external financing in recent years.¹⁰

Most international public finance for energy access has focused on grid electricity infrastructure. Of the USD 19 billion annual average electricity finance commitments over 2013 to 2014 for 20 “high-impact” countries¹¹ (13 of which were in Sub-Saharan Africa), only about one percent or USD 200 million went to support off-grid and mini-grid systems.¹²

Without a major change in the status quo, it is very unlikely that Sub-Saharan Africa will achieve universal energy access by 2030. The nature of the access gap suggests that the volume of finance, type of finance, and approach to energy infrastructure from public finance institutions need to change dramatically.

More energy investment is needed, and the bulk of additional investment needs to support decentralized energy solutions. Estimates of volume of finance needed vary widely. AfDB estimates an **additional USD 42 to 67 billion of energy investment per year** is needed to achieve universal access in Africa by 2025.¹³ Different assumptions on energy efficiency improvements and level of service yield substantially lower estimates, around USD 14 billion per year on average.¹⁴ However, all analyses point to the need for more finance from all sources, and more investment in decentralized solutions.

For example, to achieve universal electricity access for all by 2030 as enshrined in the U.N. Sustainable Development Goals, the IEA's 2017 Energy for All scenario indicates that more than 78 percent of new connections must come from renewable energy sources.¹⁵ In addition, 67 percent of investment for electricity access in Sub-Saharan Africa would have to be in off-grid and mini-grid solutions (about USD 22 billion per year on average), and investments in clean cooking would need to triple.



In 2014-2017, finance for decentralized systems made up less than one percent of electricity finance to countries with large energy access deficits. Yet the IEA's 2017 Energy for All scenario indicates that about 67 percent of electricity finance in Sub-Saharan Africa would need to go to distributed solutions to achieve universal access by 2030.

1.2 Off-Grid and Mini-Grid Sector Developments

The global off-grid sector continues its rapid growth, attracting more finance and participation from a broader spectrum of manufacturers and distributors. Since 2010, the sector has realized about a 60 percent compound annual growth rate, driven by sales with an estimated USD 3.9 billion value. In 2017, the global off-grid sector provided about 73 million households (about 360 million people) with improved electricity access. In the past two years, the sector has raised over USD 500 million from investors.¹⁶

Within the off-grid sector, pay-as-you-go (paygo) solar systems have demonstrated the most rapid growth. Globally, the sector has had an average annual growth rate of 140 percent from 2013 to 2016, and paygo companies raised nearly 85 percent of total off-grid investment — equating to about USD 773 million in investment from 2012 to 2017. However, the paygo sector is highly concentrated. For example, according to Dalberg Advisors, four companies accounted for 67 percent of total paygo investments.¹⁷ In Sub-Saharan Africa, most of the established paygo companies are foreign-owned and managed, and the bulk of investment to date has been from international investors.¹⁸ In contrast, the mini-grid sector in Sub-Saharan Africa is still nascent and demonstrates significant diversity in terms of types of players, business models, and generation technologies.¹⁹

These trends signal both the promise and challenges of distributed solutions. While the sector growth is promising, it is important to ensure that low-income or marginalized communities who are less attractive to commercial players also receive services. In this respect, public finance has an important role to play.

2. AfDB and Energy Access

The AfDB has already underscored that “‘a business as usual’ attitude will not change the energy outlook for Africa.”²⁰ To begin to address this reality, the AfDB launched the New Deal on Energy for Africa (2016-2025) with the ambitious aim to achieve “universal access to energy across the continent by 2025” — five years earlier than the goal of global universal access under SDG 7.

AfDB defines universal access as “100 percent access in urban areas, 95 percent access in rural areas, and sufficient uninterrupted energy supply to cover demand needs for those who are grid-connected.” Through effective partnerships, the AfDB’s New Deal on Energy aims to achieve the following by 2025:

- 160 GW new capacity of on-grid generation
- 130 million new connections via on-grid transmission and grid connections
- 75 million new connections via off-grid generation (isolated mini-grids and stand-alone systems)
- 150 million households get access to clean cooking energy (stoves and fuels)
- Efficiency technologies along the energy value chain, to end use sectors²¹

Photo: ESILALEI, TANZANIA - FEBRUARY 2, 2014: Teresia Oloitai collects water. Photo by Morgana Wingard





Photo: ESILALEI, TANZANIA - FEBRUARY 2, 2014: Teresia Oloitai herds donkeys to collect water. Photo by Morgana Wingard

The AfDB has developed a series of tools that aim to remove barriers to investing in distributed renewables. For example, one hindrance is that current processes and structures are designed for large centralized power projects and are not easily adaptable to distributed renewable energy (DRE) systems. Therefore, the AfDB supports DRE business plan preparation through a mini-grid help desk.²² By partnering with and using the experience of the United States Agency for International Development (USAID), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and other institutions that have worked in the region, the AfDB provides technical assistance for planning and developing new business models. Most of this work is supported via the Sustainable Energy Fund for Africa (SEFA), a multi-donor trust fund anchored by the governments of Denmark and the U.S. and managed by AfDB. Additionally, the AfDB is working with the Global Alliance for Clean Cookstoves to develop a social impact fund to encourage innovation and resources for solutions in the clean cooking sector.²³

The following section explores AfDB's energy access finance from 2014 through 2017.

2.1 Data and Methodology

The data is from Oil Change International's Shift the Subsidies database. This report focuses on AfDB energy approvals in the Sub-Saharan Africa region from 2014 through 2017 for AfDB's own resources (AfDB and African Development Fund, ADF). Special funds and trust funds managed by AfDB, such as SEFA, are excluded.²⁴ Project information is sourced from AfDB's online data portal, online project portfolio, publicly available project documents, news releases and annual reports.

For this analysis, finance for energy access is determined based on whether project documents at the time of approval note the intention to provide energy services specifically to rural or low-income communities, or for services important to these communities (e.g., schools, health clinics, productive use). The MDBs do not have a harmonized framework to define and track finance for energy access. It is important to note that this analysis does not reflect where finance is ultimately delivered, how it is used, or the outcomes or ex-post impact associated with that finance. **We categorize finance as energy access if project documents at approval contain one or more of the following criteria:**

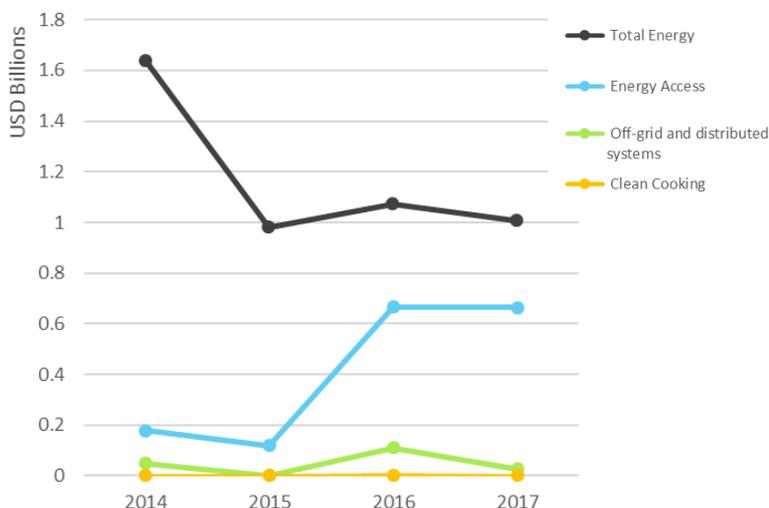
- Targeted number of new electricity connections or energy services — such as clean cookstoves — to low-income households
- Electricity for services important to the poor, such as health clinics, schools, or telecommunications
- Focus on improving the reliability of electricity services specifically targeting low-income households and/or electricity services important to the poor that currently have problems with intermittency or unreliability
- Provisions to make energy affordable for the poor
- Productive energy uses in energy-poor communities, such as providing energy to small-unit farmers, small and medium enterprises, and labor-intensive industries
- Power grid extension to new and unserved peri-urban or rural areas
- Off-grid or mini-grid solutions to provide energy services in rural or low-income areas

2.2 AfDB Energy Finance: 2014 to 2017

Energy access appears to be a rising priority in AfDB's energy operations. The AfDB increased its finance for energy access between 2014 and 2017, from about 11 percent of total energy approvals in Sub-Saharan

Africa to 66 percent (Figure 1). On average, the AfDB approved about USD 407 million per year for energy access in Sub-Saharan Africa.

Figure 1: AfDB Energy Finance in Sub-Saharan Africa, 2014 through 2017

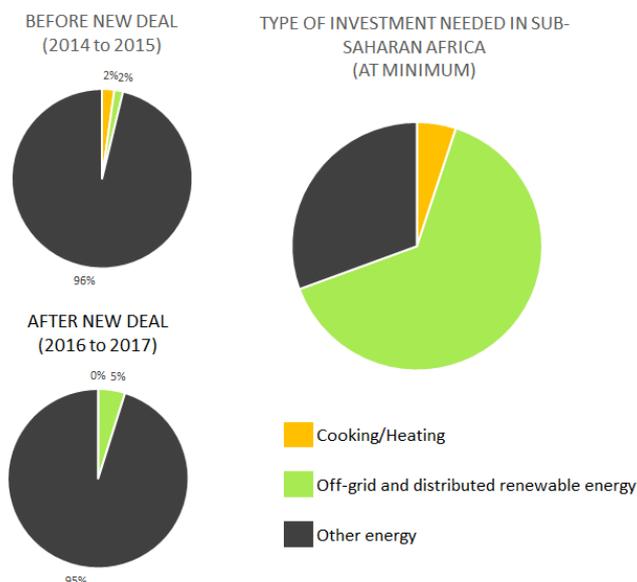


Source: Oil Change International's Shift the Subsidies Database

However, distributed renewable solutions remain a marginal part of AfDB's energy portfolio. In 2014 and 2015, AfDB channeled less than three percent of its energy finance to distributed energy solutions. For the most part, AfDB has continued to prioritize large-scale grid infrastructure, although the AfDB has taken promising steps to incorporate more lending to off-grid and mini-grid solutions as part of its strategic direction under the New Deal on Energy. 2016 showed an uptick in AfDB finance for

distributed renewable energy, driven by the flagship initiative for the Facility for Energy Inclusion (FEI) (see "Facility for Energy Inclusion" box below). The FEI accounted for 54 percent of AfDB's distributed renewable energy finance over 2014 to 2017. As a result, AfDB finance for distributed renewable energy increased from USD 48.5 million before the New Deal (2014 to 2015), to USD 137 million after (2016 to 2017) (Figure 2).

Figure 2: Comparison of AfDB's Energy Finance in Sub-Saharan Africa with the Type of Investment Needed for Universal Energy Access



Source: Oil Change International's Shift the Subsidies Database; IEA Energy Access Outlook 2017

Facility for Energy Inclusion: The AfDB's Flagship Initiative on Distributed Renewable Energy

The Facility for Energy Inclusion (FEI) is one of the AfDB's flagship initiatives to support renewable energy access for the bottom of the pyramid. The FEI, while a promising development, is only expected to reach three million people against AfDB's target of 75 million new off-grid connections.

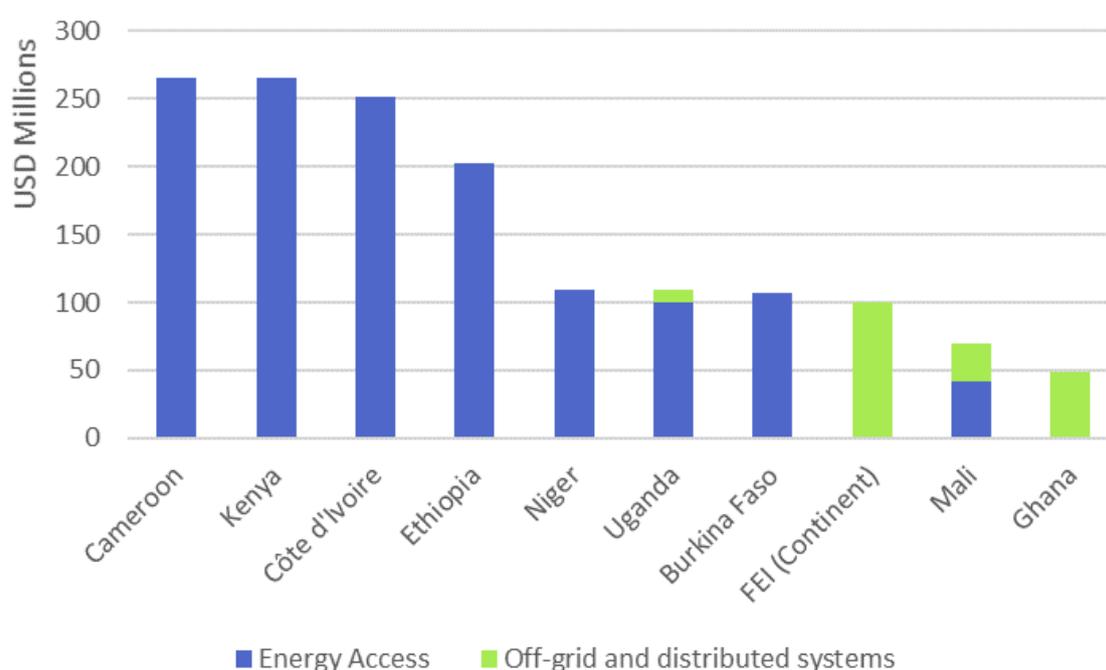
The FEI was designed to provide senior and mezzanine debt to off-grid, mini-grid, and small-scale independent power producers (aiming for ticket sizes between USD 1 and 15 million, USD 30 million at maximum).²⁵ In December 2016, the AfDB approved USD 50 million in equity and USD 50 million in convertible loans to seed the USD 500 million fund.²⁶

The Facility for Energy Inclusion Off-Grid Energy Access Fund (FEI OGEF) is the off-grid financing window of the FEI. It is a USD 100 million blended finance facility that aims to scale up renewable electricity for off-grid households and crowd in local financial institutions as co-lenders. The Fund will provide local and hard currency (e.g., U.S. dollar or Euro) debt to off-grid energy companies. In December 2017, the AfDB approved a USD 30 million investment in FEI OGEF, following more than USD 25 million in additional outside investments. These investments are also supported by a EUR 0.5 million grant from the Nordic Development Fund to support deal structuring and capacity development,²⁷ which are important components for long-term sustainability. The Fund will initially focus on East Africa, Côte d'Ivoire, Ghana and Nigeria.²⁸ The FEI OGEF launched in August 2018.²⁹

FEI addresses several constraints in energy access finance by:

- Aggregating capital under a fund dedicated to energy access;³⁰
- Using financial intermediaries to bridge an MDB "wholesale capital" approach with a "retail capital" approach for rapid deployment of finance for off-grid and small-scale projects;³¹
- Providing debt financing in local currencies, in addition to hard currency;³² and
- Involving local financial institutions in lending to the sector.³³

Figure 3: Top Recipients of AfDB Energy Access and Distributed Renewable Approvals (2014 to 2017)



Source: Oil Change International's Shift the Subsidies Database

AfDB directed its energy access support to 16 countries, representing a range of access rates and income levels. Cameroon and Kenya were the top recipients of energy access finance (USD 266 million and USD 265 million, respectively), followed by Côte D'Ivoire and Ethiopia. Of these recipients, six are “high access-deficit” countries in which rapid progress is needed to meet the universal access goal.³⁴ These countries received about 49 percent of AfDB’s energy access finance — about USD 793 million. In comparison, over this same period, Angola and South Africa collectively received USD 1.48 billion from AfDB for energy projects that were not explicitly focused on improving access for rural or low-income communities.

AfDB’s energy access projects focused primarily on improvements to transmission and distribution infrastructure and grid expansion. Aside from the FEI, AfDB’s finance for distributed energy went to Mali, Uganda, and Ghana, often as components of projects with a broader focus (e.g., off-grid PV systems in addition to distribution network upgrades in Ghana). Rwanda was the only country that received support for improved cooking.

Loans were the favored financial instrument for energy access transactions. However, many countries need more grant and other concessional finance for DRE market development, including capacity building. As is the case with the FEI, AfDB needs to continue to work with partner institutions and other development finance providers to ensure that all necessary forms of assistance — i.e., early stage capital, not only loans — are available to support strategic approaches to scaling up energy access finance. For example, technical training and skill development for distributed renewable technologies and models were noted as a gap in West Africa.³⁵ The countries that have made the most progress on energy access in the past several years have received significant volumes of grant finance. For nascent and emerging off-grid and mini-grid markets, carefully targeted grant and concessional finance not only accelerates the development of these sectors, but also supports critical local skill development and institutional strengthening to make them inclusive and sustainable parts of domestic economies.

AfDB has a limited track record with guarantees and other risk mitigation instruments in the energy sector. AfDB only issued one guarantee in its energy operations from 2014 through 2017: for the Menengai Geothermal Development Project in Kenya. However, these instruments are also important tools to de-risk investment in distributed renewable energy.

It does not appear that the AfDB has provided capacity building support to financial institutions on energy access solutions. The AfDB has extended credit lines (many of which are not sector specific)³⁶ to regional and national banks and has relationships with these institutions. Access to local currency finance is important for the growth of the off-grid and distributed renewable sector,³⁷ and financial institutions operating on the continent must be familiar with renewable technologies and models of energy service provision. It is important to note that the AfDB must exercise caution with such financial intermediaries to ensure that they abide by environmental and social safeguards and other AfDB policies. Therefore, while financial intermediaries are often needed to reach SMEs, proper due diligence is required.

Energy access activities are beginning to reflect approvals to non-sovereign actors, as well as more support for smaller transaction sizes. AfDB has diversified from mainly sovereign operations to incorporate more non-sovereign clients in its energy access activities. In 2014 and 2015, all energy access finance went to government ministries or agencies. In 2016 and 2017, seven percent of access finance was channeled to a fund, and state-owned enterprises received about 13 percent, with the remainder going to governments. The AfDB did not finance any private companies for energy access for the poor. Companies that received other energy finance from AfDB were special purpose vehicles, developers, or large industrials, e.g., Dangote. AfDB also began participating in regional funds, with the ability to administer smaller transaction sizes targeting small to medium enterprises or projects. These included the Evolution II Fund and the Facility for Energy Inclusion. These developments, along with initiatives in other sectors (e.g., Boost Africa³⁸), signal a promising direction to increase resources — such as early stage capital, technical assistance, innovation, and partnership development — to a larger, more diverse pool of recipients.

While public finance for energy access is only a small portion of total its energy investment, the AfDB is one of the largest providers of energy access finance in Sub-Saharan Africa, and the only MDB with time-bound energy access targets. AfDB's influence should not be underestimated.

Notably, the Development Bank of Southern Africa (DBSA), a South African development finance institution, did not finance any access-focused or decentralized energy projects. Its nearly USD 550 million in energy finance from 2014 through 2017 focused on supporting large, grid-tied generation projects, three of which were powered by oil, gas or coal (representing nearly USD 200 million in DBSA loans).

Clean cooking solutions remain a major gap. Across these providers, finance to support access to clean cooking was nearly non-existent.

Table 1: Annual Average Energy Access Finance for Sub-Saharan Africa

Institution	Energy Access Finance (USD m)	Access as % of total energy finance	Off-grid and DRE Finance (USD m)	Notes
World Bank Group	689	24%	77	2014-2017
African Development Bank	407	35%	46	2014-2017
United Kingdom	118	30%	114	CDC, DFID, UKEF averaged over 2014-2016
France	99	21%	38	AFD, COFACE, Proparco averaged over 2014-2016
Sweden	37	24%	9	EKN, SEK, SIDA and Swedfund averaged over 2014-2016
Netherlands	29	17%	12	FMO averaged over 2014-2016

Source: Oil Change International's Shift the Subsidies Database

3. Implications and Recommendations

Of the major MDBs, AfDB has set the most aggressive targets for energy access. The New Deal on Energy signals AfDB's intentions to contribute to scaling up energy access on the continent. The AfDB's vision to achieve universal energy access on the continent by 2025 has a more ambitious timeline than the U.N. Sustainable Development Goals. However, AfDB's finance and operations must match this ambition.

While AfDB's recent progress on energy access and distributed renewable energy finance is encouraging, far more is required to meet the scale of the energy access need.

This report finds:

- The AfDB's finance for energy access in Sub-Saharan Africa increased from approximately 11 percent of total energy approvals in 2014 to 66 percent in 2017. This reflects a greater prioritization of energy access in both approvals and operations. However, about four percent of AfDB's energy finance supported off-grid or mini-grid solutions. The majority of AfDB's energy access support went to transmission and distribution improvements and grid extension to new areas.
- The AfDB's support for distributed renewable energy increased after the New Deal. In 2016 and 2017, 6.6 percent of AfDB's energy finance went to distributed renewable energy as compared with 1.8 percent in 2014 and 2015. However, given that the majority of those without access reside in rural areas, AfDB's support for distributed renewable energy must grow much faster.
- The AfDB is beginning to diversify its client base and financial instruments. In the past, the AfDB's energy finance mainly took the form of sovereign loans for centralized grid infrastructure. The launch of AfDB's debt fund for off-grid, mini-grid, and small-scale renewable projects exemplifies a different approach to financing energy services.
- AfDB's support for clean cooking remains extremely low. AfDB financed one project to support improved cookstoves for Burundian refugees in Rwanda, which represented less than one percent of AfDB's energy finance from 2014 through 2017.

Recommendations for AfDB

1. Increase resources for distributed renewable energy and clean cooking to reflect their importance in achieving development outcomes. For example, the AfDB could commit at least a third of its own resources for distributed renewable solutions.
2. Work with its regional member countries to ensure that governments and key ministries understand the opportunities and the pace of change in energy technology and business model innovations, including the cost reductions for distributed renewable energy solutions.
3. Encourage and assist governments to pursue an integrated resource planning approach that considers the most viable and cost-effective ways to quickly deliver clean energy access to the poorest populations.
4. Engage civil society and create opportunities for meaningful participation throughout the project cycle – from energy planning to project design and implementation. Civil society is critical to enhance outcomes, including in country strategy development processes.
5. Ensure energy access resources flow to countries with lower levels of energy access, and to poorer communities within countries that have relatively higher levels of access.
6. Use all of the financial tools at its disposal to support scaled-up finance for energy access. This includes guarantees and other risk mitigation instruments.
7. Build capacity of local and regional financial institutions to finance clean energy access. The AfDB could draw on its relationships with regional banks to build their capacity to extend local currency finance to small and medium enterprises operating in the distributed renewables sector, and to familiarize them with renewable technologies and models of energy service provision.
8. Work with other multilateral development banks, development finance institutions, and governments to develop a consistent and meaningful framework for measuring energy access. This should include clear and transparent reporting on energy access at the project level and as a share of the energy portfolio, as well as operationalizing the definitions and indicators in the Multi-Tier Framework and Global Tracking Framework across project design, monitoring, and reporting.
9. Consider a project's contribution to access at the design stage, especially for support for policy and sector reform.
10. Ensure project completion reports are timely, comprehensive, and clearly feed learnings back into operations.
11. Evaluate its pipeline to ensure projects are in line with the New Deal and focused on improving access for marginalized communities.

Recommendations for donors

- Increase their support for energy access activities.
- Increase concessional finance for energy access. Concessional finance is important for technical training and skills development, knowledge sharing, capacity building, and planning. Most of these activities require grant financing.

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- 2 *Id.*
- 3 Finance figures reflect the amounts approved by the Board of Directors in the year the transaction was approved. Oil Change International categorizes finance as energy access if project documentation contains a specific focus on providing new connections, new or improved energy services to rural and/or low-income communities, or energy for services important to these communities (e.g. schools, health clinics, productive use). Refer to the “Data and Methodology” section for detailed methodology.
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- 14 Craine, Stewart, Evan Mills, and Justin Guay, Clean Energy Services for All: Financing Universal Electrification, June 2014, <https://bit.ly/2qxAsxl>.
- 15 This figure represents investment under the New Policies Scenario plus additional investment under the Energy for All scenario. IEA, Energy Access Outlook 2017: From Poverty to Prosperity, World Energy Outlook Special Report, 2017, <https://bit.ly/2leDDe7>. While estimates of finance needed to achieve universal modern energy access by 2030 vary widely depending in large part on the tier of energy service, in 2015, SE4All estimated about USD 45 billion of annual investments is needed a year through 2030 to reach universal electricity access, and an additional \$4.4 billion a year is needed to achieve universal access to modern energy services for cooking. SE4All, Scaling up Finance for Sustainable Energy Investments: Report of the SE4All Advisory Board’s Finance Committee - 2015, July 2015, <https://bit.ly/29W2vx0>.
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