



ACE TAF Stand-Alone Solar Knowledge Hub

Catalogue

Introduction

The Africa Clean Energy Technical Assistance Facility (ACE TAF) is a 4-year programme which started in November 2018 and aims to catalyse a market-based approach for private sector delivery of renewable energy electrification technologies, with a focus on high-quality stand-alone solar (SAS) systems. The programme is funded by the UK Government Foreign Commonwealth and Development Office (FCDO), and implemented by Tetra Tech International Development, in partnership with Open Capital Advisors (OCA), GOGILA, the World Resource Institute (WRI), and Solar Sisters. ACE TAF worked in 14 African Countries and is committed to improving access to energy for all, especially vulnerable communities.

Studies have shown that SAS is the most cost-effective way of electrifying the remote and rural populations in Africa. As such, an equitable transition to clean energy will not be possible without stand-alone solutions. Over the last two years ACE TAF conducted studies and developed resources that will move the continent closer to a more equitable energy transition. The intention of many of these studies and tools is to provide governments with evidence to make informed policies and regulations that do not negatively impact the off-grid sector. In addition, the analysis attempts to ensure that we provide insights and recommendations that consider the perspective of all stakeholders – governments, private sector and donors alike.

This catalogue provides links to and provides an overview of the resources developed that provide information in response to gaps found in the SAS sector. The reports address the themes of **Affordability**, **Consumer Protection** and **Energy as an Enabler**. In addition, ACE TAF developed **Foundational Evidence** that provides insights on political, social and private market conditions in all countries.



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Knowledge Management

THEMES

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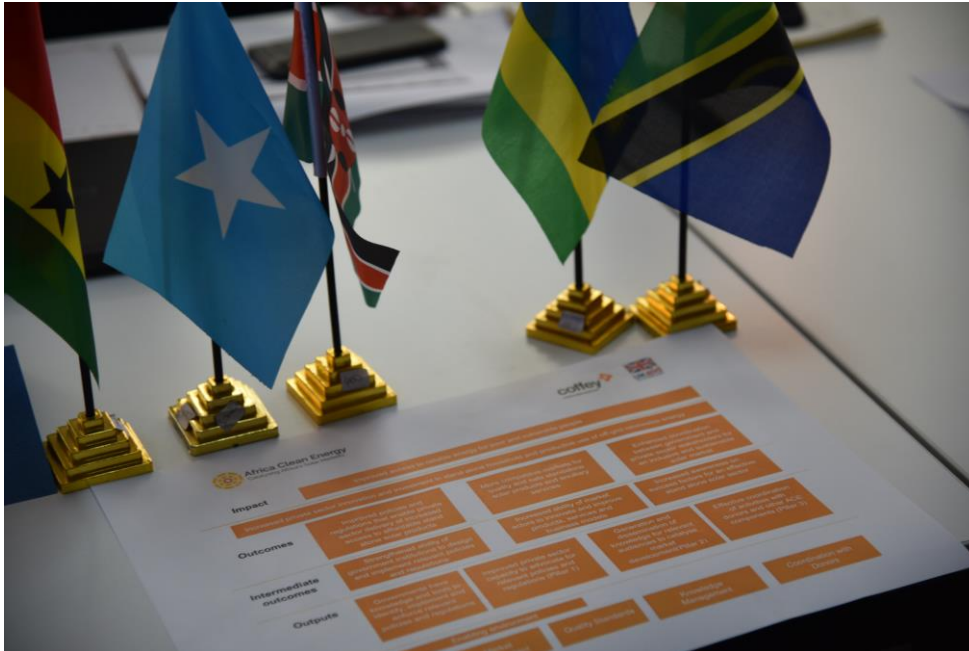
Energy as an enabler

[Agriculture-Energy nexus](#)

Health- Energy Nexus*

* Coming soon

Foundational Evidence



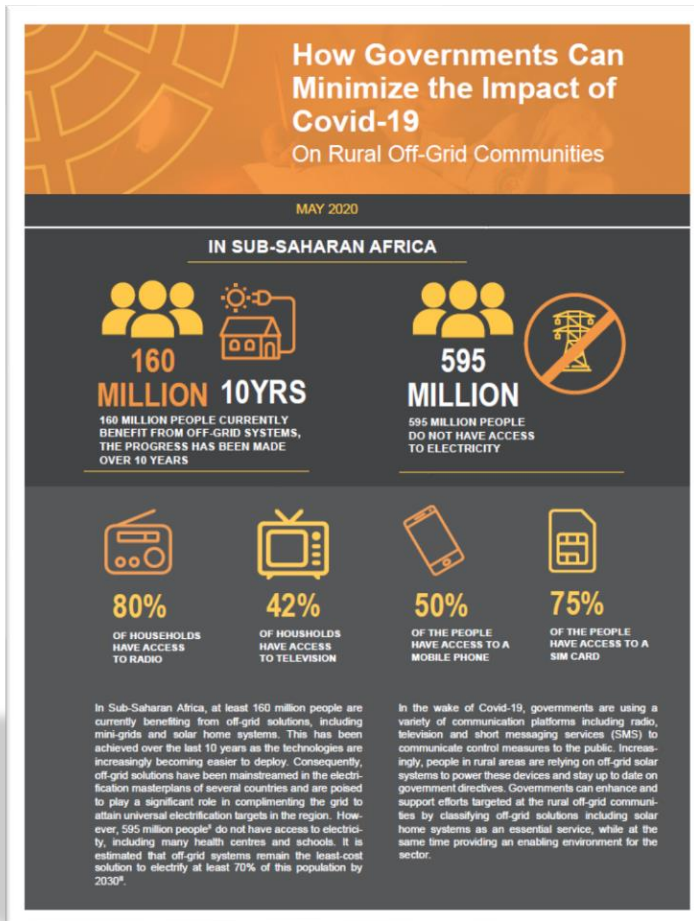
At the beginning of the programme, ACE TAF noted that there was a significant amount of data available about the off-grid sector, however, it became apparent that some information was outdated, and much of it was focused on private sector challenges and initiatives. In this section of the catalogue we provide resources that were developed that aim to **fill the knowledge gaps that were identified and provide analysis and recommendations from the perspective of all stakeholders - governments, private sector, donors, and investors.** These reports and tools are meant to provide evidence to all off-grid stakeholders and **assist in developing responsible policies and regulations**, identify **opportunities for investors and the private sector**, and provide **recommendation on how to overcome the challenges in order to reach universal energy access for all.**

- At the core of this Foundational Evidence are 2019 Market Assessments Country Fact Sheets and updates to these Market Assessments completed in 2021, as well as Opportunity and Trend Briefs from all 14 countries.
- We have also addressed the challenges that the off-grid sector encountered in response to the COVID 19 pandemic restrictions, and issues regarding financial access including forex limitations in Ethiopia, and investment maps in Ethiopia, Nigeria and Sierra Leone.
- Our research in Nigeria and development of Energy Access Explorer maps in Zambia, Ethiopia, Nigeria and Sierra Leone provide insights on the gaps in electrification and opportunities for both government and the private sector.
- Finally, we have included topics such as potential economic impact of local manufacturing, limitations on the awareness of the benefits of off-grid solar has on electrification, and recommendations to demonstrate how off-grid energy programs can be more inclusive to ensure we leave no one behind.



Foundational Evidence: Policy and Regulations

> Covid-19 Briefs



The Covid-19 pandemic continues to threaten to erode the gains that had been made on energy access, especially through SAS. ACE TAF developed two resources in May 2020 which present the findings of a survey conducted among energy Ministries in SSA, and how government can minimize the impact of the pandemic on the off-grid sector.

- [Covid-19 Response: Energy ministries and the off-grid sector](#)
- [How governments can minimize the impact of Covid-19 on rural off-grid communities.](#)

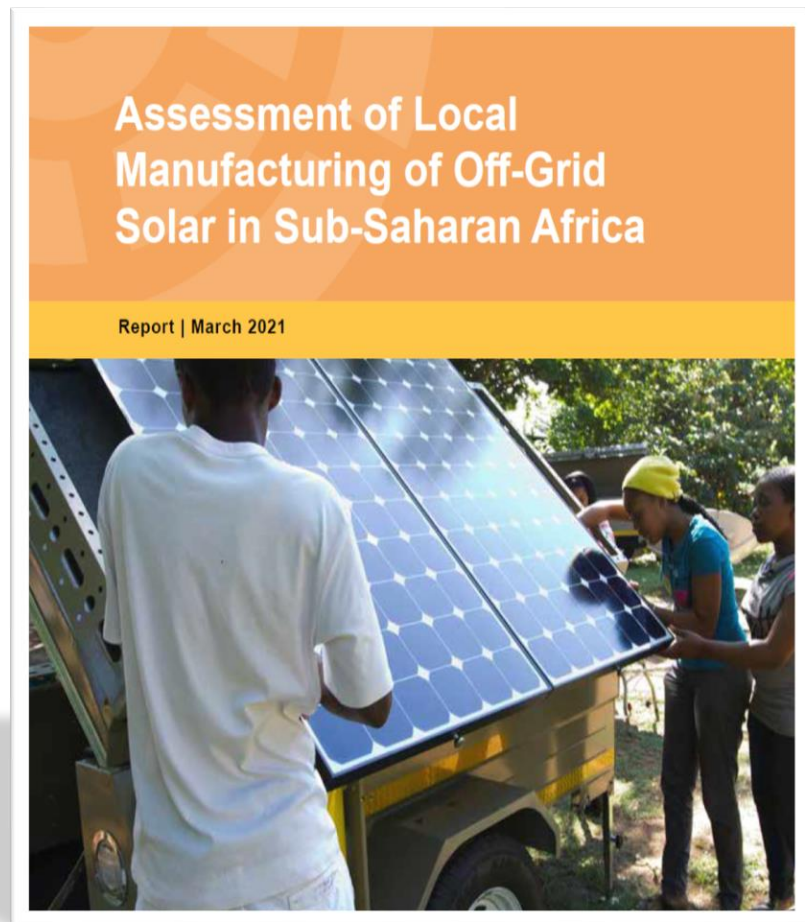
About 26-39 million people are projected to fall into extreme poverty in sub-Saharan Africa due to Covid-19. Low-income households that derive income from labour intensive low-skill jobs will be the hardest hit by the crisis and are likely to slip back into poverty. Moreover, off-grid solar solutions are a critical component of post Covid-19 economic recovery for the continent.

This brief provides consumer relief interventions that governments can implement with support from donors and implementation partners.

[Covid-19 Briefing: Urgent need for consumer relief to sustain energy access](#)

Foundational Evidence: Policy and Regulations

> Local Manufacturing



Governments in sub-Saharan Africa (SSA) have been keen to expand local manufacturing as a strategy to address unemployment and promote economic development. The impact of Covid-19 on global supply chains has further heightened the importance of how to improve and local supply chains. However, local solutions are not always the most viable.

These policy brief and report outline the current state of private sector participation in solar assembly and manufacturing and provide recommendations on if and how governments in SSA can stimulate local manufacturing of off-grid solar including designing comprehensive policies.

Assessment of local manufacturing of off-grid solar in sub-Saharan Africa - [Policy Brief](#) | [Report](#) | [Article](#)



Africa Clean Energy
Catalysing Africa's Solar Markets

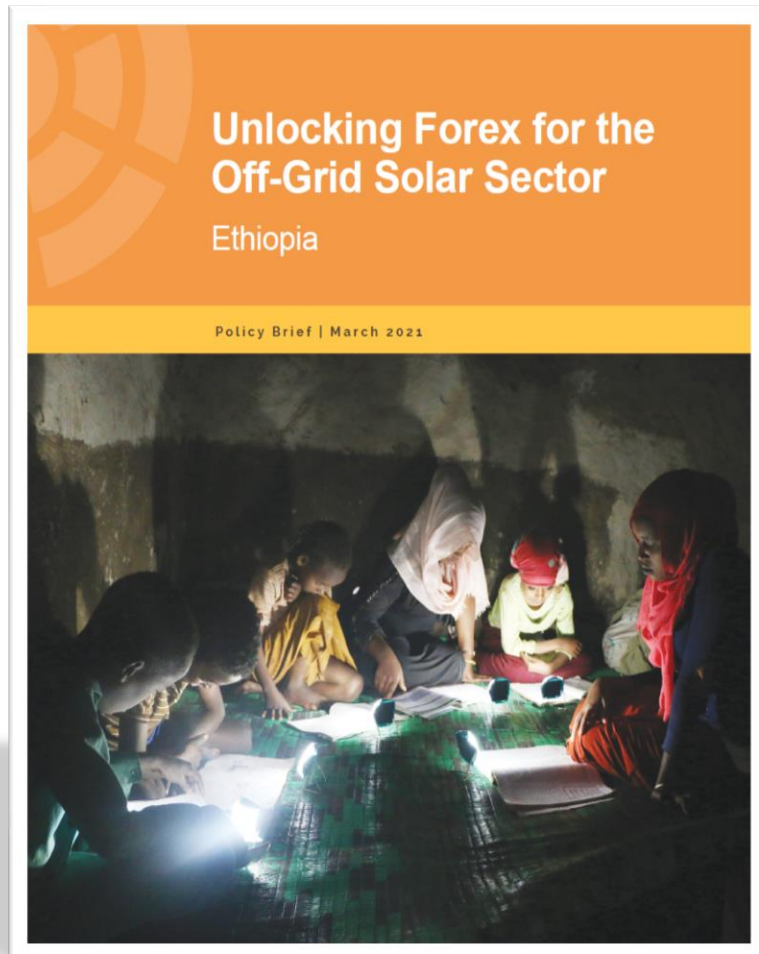


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International Development



Foundational Evidence: Policy and Regulations

> Unlocking forex for the off-grid solar sector - Ethiopia



Ethiopia has set a target of creating access to electricity for 9 million households through the standalone solar (SAS) systems by 2025. It is an ambitious but achievable target if existing constraints can be tackled. The main challenge affecting private businesses and households' access to off-grid solar in Ethiopia is lack of access to forex by solar companies.

The policy brief presents solutions that the Government of Ethiopia and donors can implement to address the forex constraints.

[Unlocking forex for the off-grid solar sector - Ethiopia](#)



Africa Clean Energy
Catalysing Africa's Solar Markets

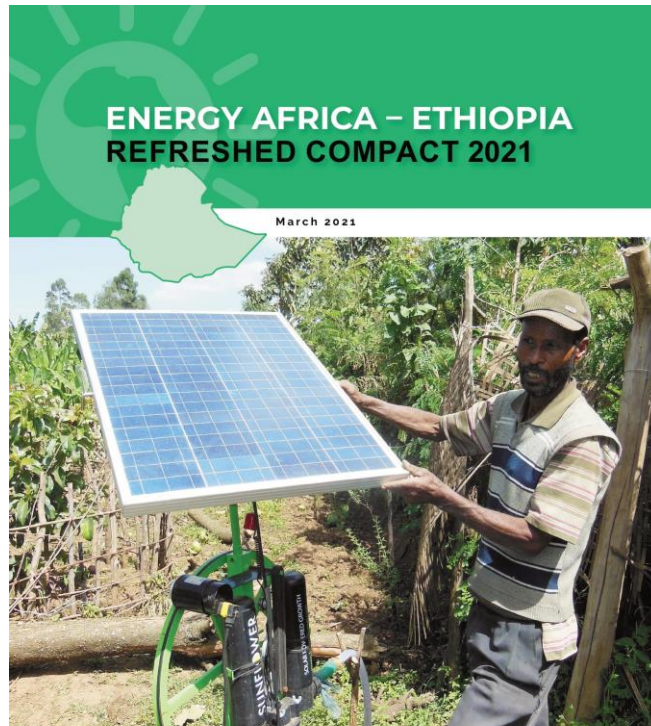


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Foundational Evidence: Policy and Regulations

> Energy Africa - Ethiopia Refreshed Compact 2021

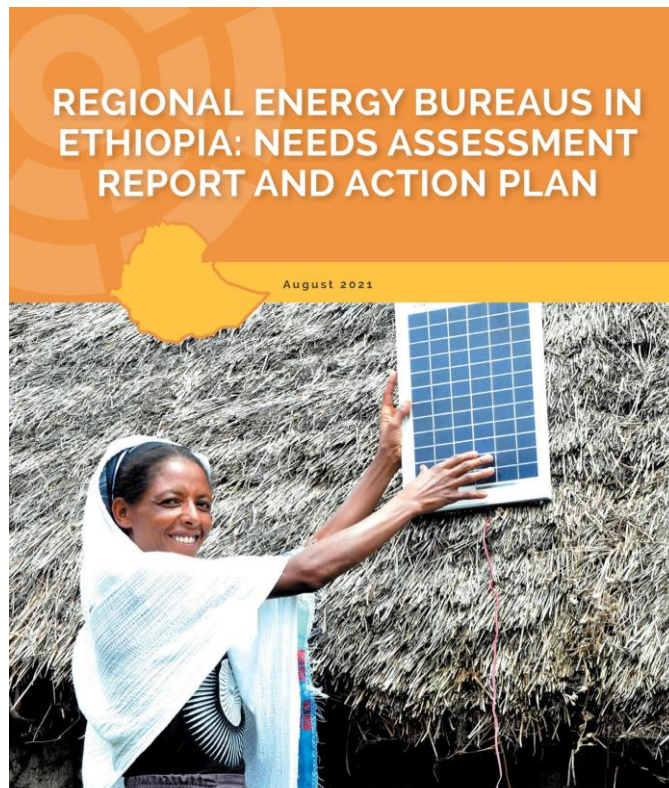


The **Energy Africa – Ethiopia Refreshed Compact 2021** seeks to accelerate the expansion of the household solar market and to help achieve universal energy access by 2030. It will achieve this by aligning supportive policies with coordinated development partner support to improve market conditions and increase off-grid investment. It Though not legally binding, the Compact shows commitment by development partners to support market development for off-grid solar.

[Compact](#)

Foundational Evidence: Policy and Regulations

> Strengthening sub-national energy institutions



In Ethiopia, Regional Energy Bureaus (REBs) promote off-grid energy services, mainly in the deep rural areas. Even though they do not influence energy policies and regulations, during implementation they align such laws to their local context. The report **Regional Energy Bureaus in Ethiopia: Needs Assessment Report and Action Plan** provides steps to improve the enabling environment for stand-alone solar (SAS) at the regional level in Ethiopia by strengthening regional institutions.

[Report](#)

This report **Improving the Enabling Environment for Off-Grid Solar in Nigerian States** highlights barriers and provides recommendations to improve off-grid electrification in the states. This includes the development of a state OGS strategy, policy and/or action plan to guide public and private sector investment, and the need for technical assistance to improve the capacity of state governments on off-grid electrification.

[Report](#)

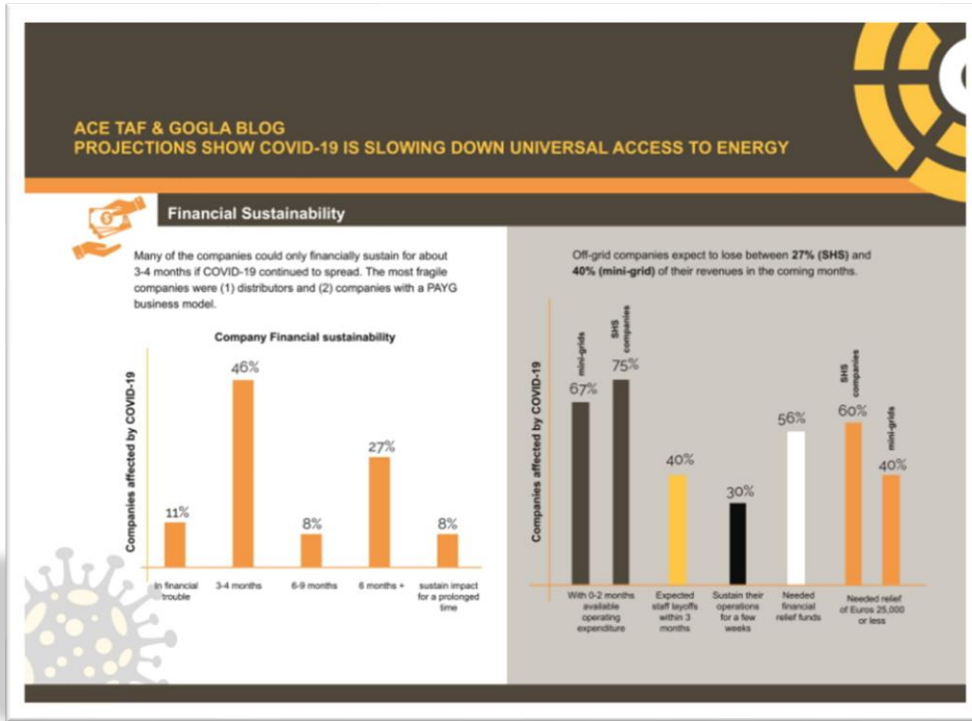


Foundational Evidence: Market Intelligence

> Projections show Covid-19 is slowing down universal access to energy

According to the 2020 Market Trends Report, solar home systems and mini-grids were serving 420 million people by the end of 2019 and off-Grid Solar companies were moving to locations to electrify underserved populations. If the trend continues the sector could serve 823 million users by 2030. However, this momentum is threatened by the Covid-19 pandemic. Industry associations, financiers and support organisations conducted surveys to find out how the global pandemic was affecting OGS companies and consumers. This article presents a summary of the main surveys findings carried out between March and August 2020 and a brief analysis of the implications.

[Projections show Covid-19 is slowing down universal access to energy](#)





Africa Clean Energy
Catalysing Africa's Solar Markets



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Foundational Evidence > Market Intelligence > Energy Access Explorer

The Energy Access Explorer (EAE) tool provides geospatial data and analysis necessary to create a future where all people and institutions have access to affordable, reliable and modern energy while ensuring socio-economic development. EAE maps are available for Nigeria, Ethiopia, Sierra Leone and Zambia and enable:

1. Strategic Integrated Energy Planning
2. Expansion of clean energy markets
3. Prioritization of energy access investments
4. Estimation of energy needs for development services

Zambia: [EAE Map](#)

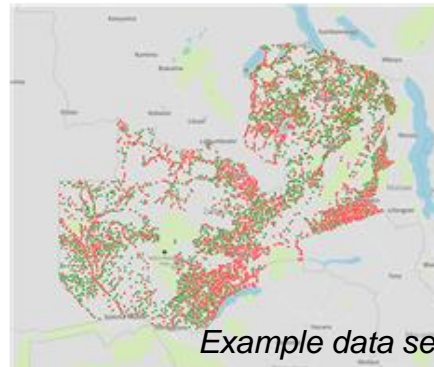
Ethiopia:

Nigeria:

Demographics



Socio-economic activities



Energy Resources



Infrastructure



Example data sets for Zambia

Foundational Evidence > Market Intelligence > SAS Market Updates (March 2021)

The SAS Market Updates are a set of 14 country reports giving stakeholders a snapshot of developments in the stand-alone solar sector as of the beginning of 2021, including those arising from the COVID-19 pandemic.

[Ethiopia](#)

[Sierra Leone](#)

[Ghana](#)

[Somalia](#)

[Kenya](#)

[Tanzania](#)

[Malawi](#)

[Uganda](#)

Mozambique – [English](#)
[Portuguese](#)

[Rwanda](#)

[Nigeria](#)

[Zambia](#)

Senegal – [English](#)
[French](#)

[Zimbabwe](#)



Foundational Evidence > Market Intelligence > SAS Opportunities and Trends Briefs

The Opportunities and Trends Briefs are 2-page documents that distill key market intelligence from the SAS Market Updates (2021). The aim is to give all stakeholders a quick overview of the off-grid markets in the 14 ACE TAF countries.



[Ethiopia](#)

[Sierra Leone](#)

[Ghana](#)

[Somalia](#)

[Kenya](#)

[Tanzania](#)

[Malawi](#)

[Uganda](#)

[Mozambique](#)

[Rwanda](#)

[Nigeria](#)

[Zambia](#)

Senegal – [English](#),
[French](#)

[Zimbabwe](#)



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Foundational Evidence > Market Intelligence > Nigeria Market Research



With about 77 million people without access to electricity in Nigeria, the country presents one of the largest markets for SAS globally. The market study for Nigeria looks at national SAS penetration, quality product availability, consumer solar use and preferences, after-sales service offering and available financing – to inform all stakeholders on the potential avenues for future growth and support.

The findings and insights from the study are presented in:

- Reports: [Stand-alone off-grid solar market research](#) | [Summary](#)
- Case Studies:
 - [Seizing the opportunity in Nigeria's USD 9.2 billion solar market](#)
 - [Consumer awareness and financing options required for stand-alone solar to reach more rural people](#)
 - [Enforcing quality standards will protect stand-alone solar consumers in Nigeria](#)
- Stakeholder reports: [Government](#) | [Private sector & Investors](#)

Foundational Evidence > Market Intelligence > SAS Investment Maps



The investment maps in Ethiopia, Nigeria and Sierra Leone were developed to highlight the existing off-grid sector (OGS) energy investment landscape and to identify investment opportunities for both public and private sector to leverage which will enable companies to scale distribution, and to design interventions to attract additional investment to meet the country's energy access deficit. The investment challenges in each country are unique and hence the opportunities to increase investment into the sector are specific. The findings can be found in the country reports.

- [Ethiopia](#)
- [Nigeria](#)
- [Sierra Leone](#)



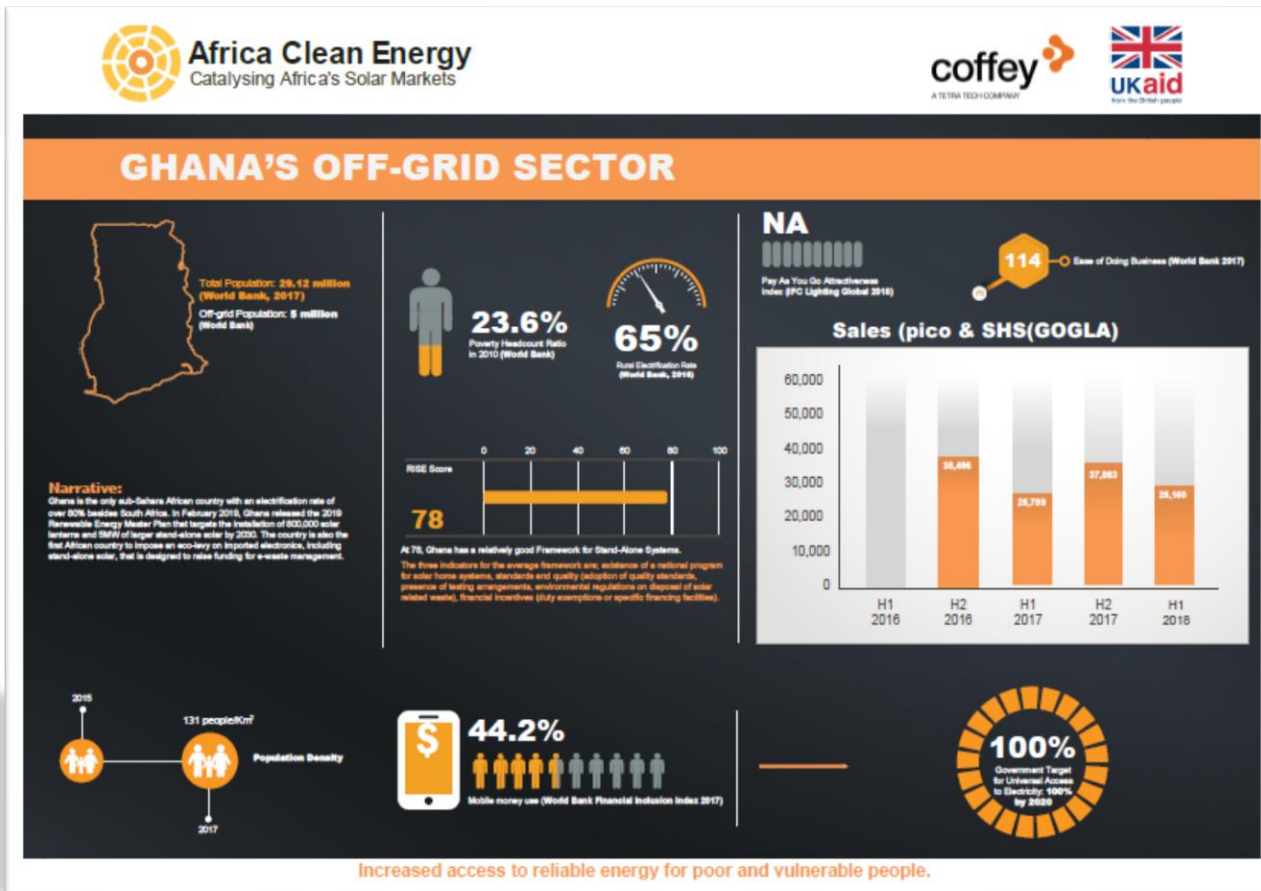
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Foundational Evidence > Market Intelligence > Country Fact Sheets (2019)



The Country Fact Sheets are 1-pagers with a compilation of key off-grid market information for each country. They provide stakeholders a quick and precise snapshot of the sector prior to COVID 19.

[Ethiopia](#)

[Sierra Leone](#)

[Ghana](#)

[Somalia](#)

[Kenya](#)

[Tanzania](#)

[Malawi](#)

[Uganda](#)

[Mozambique](#)

[Rwanda](#)

[Nigeria](#)

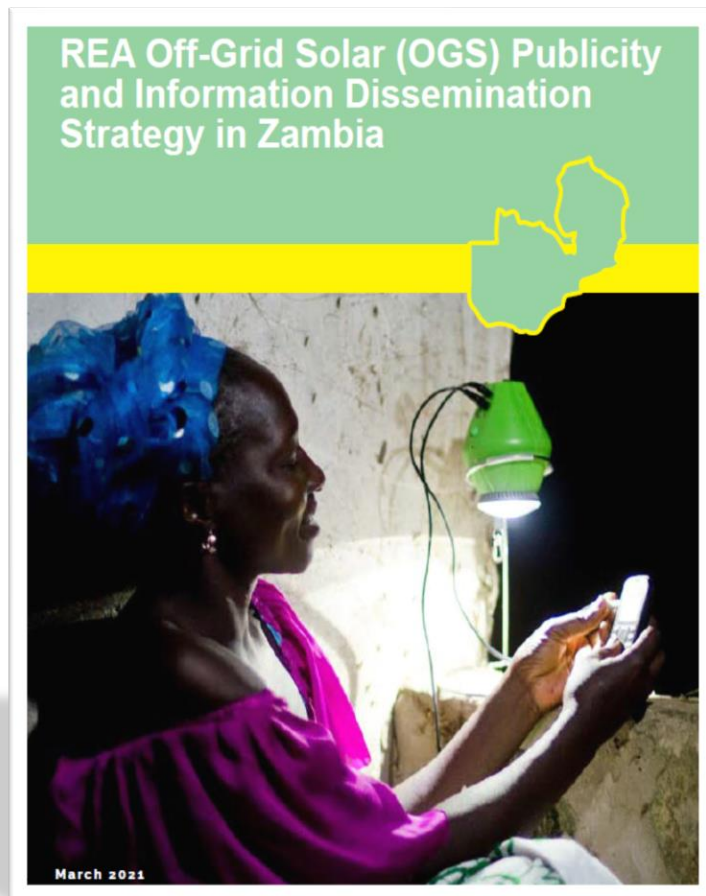
[Zambia](#)

[Senegal](#)

[Zimbabwe](#)

Foundational Evidence: Awareness

> REA off-grid solar publicity and information dissemination strategy in Zambia



In Zambia there is consensus that off-grid solar (OGS) should be considered as part of the universal electrification solution. However, a recent assessment found an inferior perception of solar energy as a source of electricity among some communities, a lack of knowledge on quality solar products, and a general misapplication or misuse of solar energy systems.

The Rural Electrification Authority (REA) with the support of ACE TAF developed a publicity and information dissemination strategy to raise awareness on solar particularly among rural households.

[REA OGS publicity and information dissemination strategy in Zambia](#)

Foundational Evidence: Inclusion

> Gender equity and social inclusion in off-grid solar sector Africa

Gender equity and social inclusion (GESI) refers to special consideration and inclusion of the varied energy-specific interests of individuals and groups particularly women, youth, persons living with disabilities, internally displaced persons, refugees, nomadic communities, and marginalized households, regarding access to off-grid solar.

A **GESI handbook** was developed to guide policy makers, development partners, non-governmental organizations and private companies on integrating a GESI lens in designing and implementing energy policies and programmes.

[Handbook](#) | [Southern Africa Webinar](#) | [East Africa Webinar](#) |

Women in solar energy - Managerial, operational and artisanal: The off-grid solar (OGS) market in Africa has expanded rapidly over the last 10 years. However, only 17% of the potential market has been served. There is still room for significant growth that could also spur new job opportunities along the solar value chain for women and youth.

This **Ugandan** study provides findings on the level to which women, youth and persons living with disabilities (PLWD) within the OGS value chain are involved at managerial, operational and artisanal levels and recommendations for government, development partners, investors and companies on how to be more inclusive.

[Women in solar energy: Managerial, operational and artisanal](#)

Productive use potential and sales of off-grid solar to women and youth in Uganda: Women and youth make up 51% and 50% respectively of Uganda's population. Additionally, 44% of households in the country have a family member with disability. Exploring and addressing gender equity and social inclusion in productive use of off-grid solar will contribute to improving livelihoods, increasing incomes and overall poverty reduction, especially for women, youth and people living with disability (PLWD). This study establishes whether SAS productive use products are affordable and accessible, and what barriers exist that affect their uptake by women, youth and PLWD; and it makes recommendations for government and private sector.

[Productive use potential and sales of of-grid solar to women and youth in Uganda](#)



Foundational Evidence: Inclusion

> Gender equity and social inclusion in off-grid solar sector Africa



Elaboration de la
Stratégie Genre
et Inclusion
Sociale (GESI)
du PANGE

June 2021

Gender and Social Inclusion (GESI) Strategy to Implement the National Action Plan to Integrate Gender Issues in Energy Access (PANGE) in Senegal. The GESI Strategy contributes to better coordination of existing strategies with ministerial departments so that government can accelerate progress towards universal access to electricity especially for vulnerable groups. The strategy has recommendations for governments and development partners.

[French](#) | [English](#)



Foundational Evidence: Inclusion

> Coordination in Africa's off-grid sector is accelerating progress towards universal energy



Summary

Over the last decade, off-grid electrification technology has contributed to the achievement of Sustainable Development Goal (SDG) 7 especially for people living in rural off-grid areas. A decrease in costs and the increased distribution of more affordable stand-alone solar solutions is providing electricity access for at least 160 million people across sub-Saharan Africa (SSA). Governments, donors and the private sector have contributed to this success. Despite these efforts, some developing countries are struggling to reach universal access goals especially for the vulnerable communities. Market Assessments conducted

by the Africa Clean Energy Technical Assistance Facility (ACE TAF) in 14 African countries found that lack of adequate coordination has led to high levels of fragmentation between stakeholders and inconsistent enforcement of off-grid regulations. Subsequently, ACE TAF has been supporting coordination efforts in the 14 countries. This brief provides evidence of the benefits of an effective coordination mechanism and highlights case studies from Zambia and Sierra Leone.

ACE TAF approach to implementation has been to ensure effective coordination and efficient collaboration across all stakeholders. This approach has aided us in designing interventions that are representative of all stakeholders including vulnerable groups. For the off-grid sector to 'leave no one behind' the voice of all stakeholders must be represented in all the initiatives. ACE TAF has been leveraging existing coordination mechanisms or developing effective mechanisms and provides best practice guidance with examples from Zambia and Sierra Leone.

[Brief](#) | [Webinar](#) | [Blog](#) | [Case Study](#)

Affordability



A key barrier for vulnerable groups continues to be access to quality and affordable stand-alone solar (SAS) products. Approximately 112 million of 228 million people in Sub-Saharan Africa will not be able to afford Tier 1 electricity despite it being accessible by 2030*. The Covid-19 pandemic has affected national economies and limited the consumers' ability to pay even more.

To overcome this affordability challenge, government, private sector, donors and implementers must play a part in designing and implementing solutions. ACE TAF provides analysis and recommendations on alternative consumer financing models, how demand side subsidies can support consumers without distorting the markets, how government fiscal policies impact cost and access to stand alone solar solutions, and how the cost of distribution plays a part in the price of SAS.

* Lighting Global, Vivid Economics and Open Capital, 2020 Off-Grid Solar Market Trends Report (MTR)

Affordability > Financing alternatives to reach consumers



**Demand-Side Subsidies
in Off-Grid Solar:**
A tool for achieving universal energy
access and sustainable markets

Demand-side subsidies in off-grid solar One way of addressing the affordability gap for consumers for off-grid solar products is to design demand side subsidies which do not distort the market. Over the last ten years, efforts to improve the off-grid sector have focused on developing a robust enabling environment and implementing supply-side subsidies. These steps have improved affordability by helping companies to achieve economies of scale and operational efficiency. However, they do not adequately address the affordability gap for the poorest and most vulnerable consumers. This report shows why demand-side subsidies are an essential tool for governments to achieve SDG 7 and ensure 'no one is left behind' on the path to universal access. It includes recommendation on developing demand side subsidies with the involvement of government, private sector and donors.

[Report](#) | [Webinar](#) (Featuring Christine Eibs Singer –SE4All, Dr Kandeh Yumkella – Minister, Sierra Leone and Johanna Galan – World Bank)

[In the news](#)

Access to consumer finance for vulnerable groups: One size does not fit all : With the price of a household tier-one SAS product averaging USD 147 and approximately 40% of Sub-Saharan Africans living on less than USD 1.25 per day, they are prohibitively expensive for many. The most well-known consumer finance model in the sector is mobile money enabled pay-as-you-go (PAYG). Other ways of addressing the affordability gap are to increase the range of consumer financing options available to potential customers. This report describes other models that solar companies can use to increase consumer financing especially for marginalized and vulnerable groups such as women, refugees and religious minorities.

[Report](#) | [Webinar](#)



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Affordability > Understanding the impact of distribution costs on the uptake of off-grid solar products in select sub-Saharan Africa countries



Understanding the Impact
of Distribution Costs on
Uptake of OGS Products in
Select SSA Countries

Two key assumptions have lingered in the off-grid solar (OGS) sector, 1) that distribution costs have a significant impact on price, therefore limiting affordability for the vulnerable populations; and 2) that distribution barriers affect providers' ability to deliver necessary volumes of solar products directly to final consumers, therefore, limiting availability.

The study found that the final price of OGS products is not significantly elevated due to distribution costs. The report has recommendations on the roles that investors, companies and policy makers can play in improving the affordability and availability of solar products.

[Report](#) | [Webinar](#)



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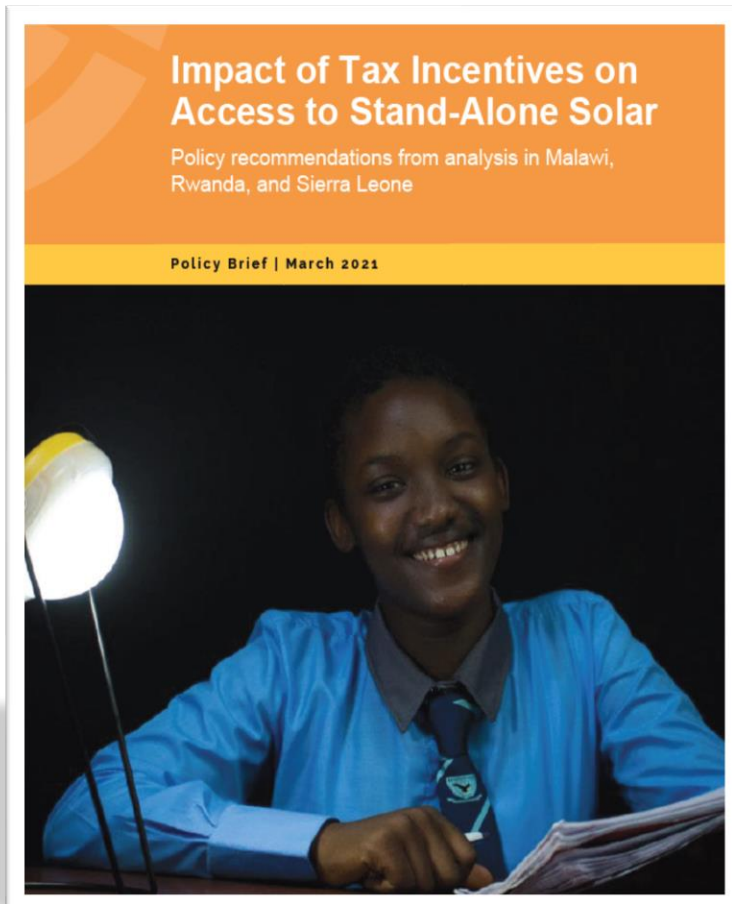
Affordability: Fiscal Incentives

> Impact of tax incentives on access to stand-alone solar: Policy recommendations from analysis in Malawi, Rwanda and Sierra Leone

Responsible taxation, evaluates the social economic benefits of access to solar against taxation and urges governments to make policy decisions based on evidence. While many African governments have implemented VAT and duty exemptions for SAS, not all countries provide tax exemptions, the policy is not clearly communicated, and these exemptions are not always enforced. This is in part because of the limited evidence available on the benefits of granting exemptions versus the impact on energy access, economic and social development.

The report and policy brief share findings on the impact of taxes foregone on SAS uptake as well as a range of socioeconomic benefits. The tax assessment tool provides the user with the ability to set variables such as size of the market, number of households, system pricing and capacity, historical sales, duty and VAT rates, sales forecast by location; and allows analysis based on different tax scenarios; and produces results in regard to foregone tax revenue, electrification rate, jobs created and CO2 emission.

[Report](#) | [Policy Brief](#) | Tax assessment tool



Affordability: Fiscal Incentives

> Analysis and impact of fiscal incentives in multiple countries

Impact of VAT and Import Duty on the Stand-Alone Solar Sector in Kenya

A policy position paper presented by:
The Kenya Renewable Energy Association (KEREa)
and GOGLA

March 2021



An analysis of the provisions of the proposed Finance Bill, 2020 and various sections that impact the off-grid sector in Kenya. Taxes imposed on solar products often increase their prices, making them unaffordable especially for the rural poor. ACE TAF analysed the proposed Tax (Amendment) Bill 2020 and subsequently the Finance Bill 2020. The sector was apprehensive about the proposed removal of the Value Added Tax (VAT) exemption on equipment for the development, generation and storage of solar equipment which would see the introduction of a value added tax of 14%. The report analyzes the impact of proposed inclusion of VAT to affordability, marginalized communities, loss of employment, health and health and environmental gains.

[Analysis](#) | [Business Daily](#) | [The Standard](#)

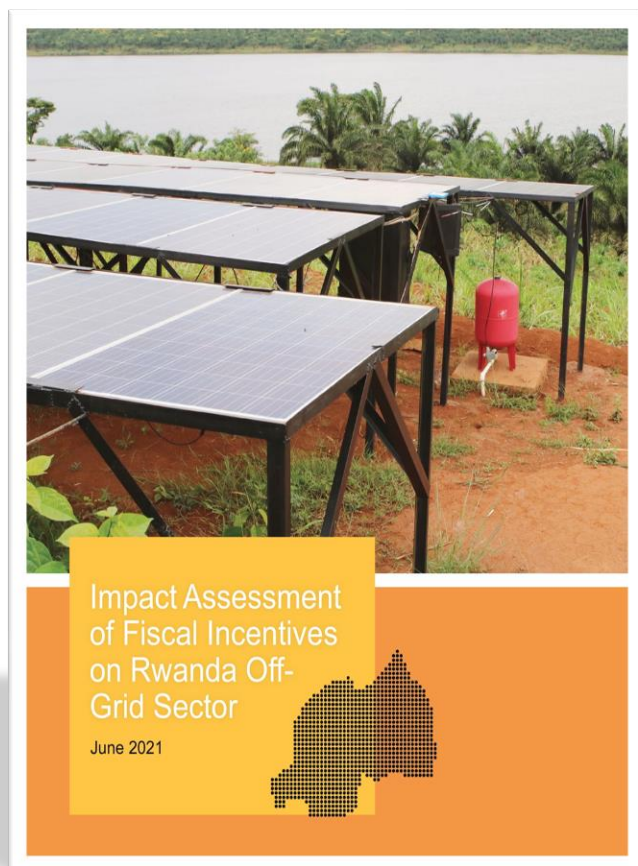
Impact of VAT and import duty on the stand-alone solar sector in Kenya Despite the evidence showing a negative impact on access to solar solutions if taxes are imposed, many governments came under pressure to increase revenue due to the negative impact that COVID-19 restrictions had on the economy. In 2020, the VAT exemptions for SAS products in Kenya were removed through amendments to the Value Added Tax Act, No. 35 of 2013 that were enacted through the Finance Act, 2020. In addition, the Legal Notice No. EACC/89/2020 removed import duty exemptions for SAS products through amendments to the East African Community Customs Management Act, 2004. The removal of tax exemptions on SAS products was done to comply with the national fiscal policy to raise revenue and gradually eliminate tax exemptions.

The technical report and policy position paper share findings from an economic impact assessment on the removal of the tax and the implication for energy access in the country.

[Technical report](#) | [Policy Position Paper](#) | [PV Magazine](#) | [Business Daily](#)

Affordability: Fiscal Incentives

> Analysis and impact of fiscal incentives in multiple countries



Sierra Leone: Impact assessment of goods and services tax and import duty exemption on stand-alone solar product provides evidence on how the goods and services tax and import duty exemptions have and will continue to support the reach of solar products. The report has recommendations on how to maximize benefits from the tax exemptions and improve affordability especially for vulnerable communities.

[Policy Brief](#) | [Report](#)

The **Impact assessment of fiscal incentives on the Rwanda off-grid sector** report evaluates the impact of VAT and import duty exemptions together with results-based financing and minimum quality standards on affordability and energy access in the country. The recommendations show actions that government, private sector and development partners can take to ensure that no one is left behind, especially the most vulnerable households.

[Report](#)

The **Impact assessment of VAT and import duty exemptions for stand-alone solar in Nigeria** provides evidence on the socioeconomic impact of the taxes on energy access through solar. The recommendations reveal how the Federal Government can make the best use of tax policy to reach 5 million households with solar connections by end of 2021.

[Report](#) | [Policy Brief](#)



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Consumer protection: Quality standards

> The burden of poor quality solar on the consumer



Vulnerable consumers facing affordability constraints need the assurance that the SAS products they purchase are of high-quality, feature truth-in-advertising and are safe to handle. Poor quality products place an additional burden on the most marginalized consumers wasting the limited income they have earned on purchases. In addition, solar e-waste is hazardous to the environment and human health if not disposed properly.

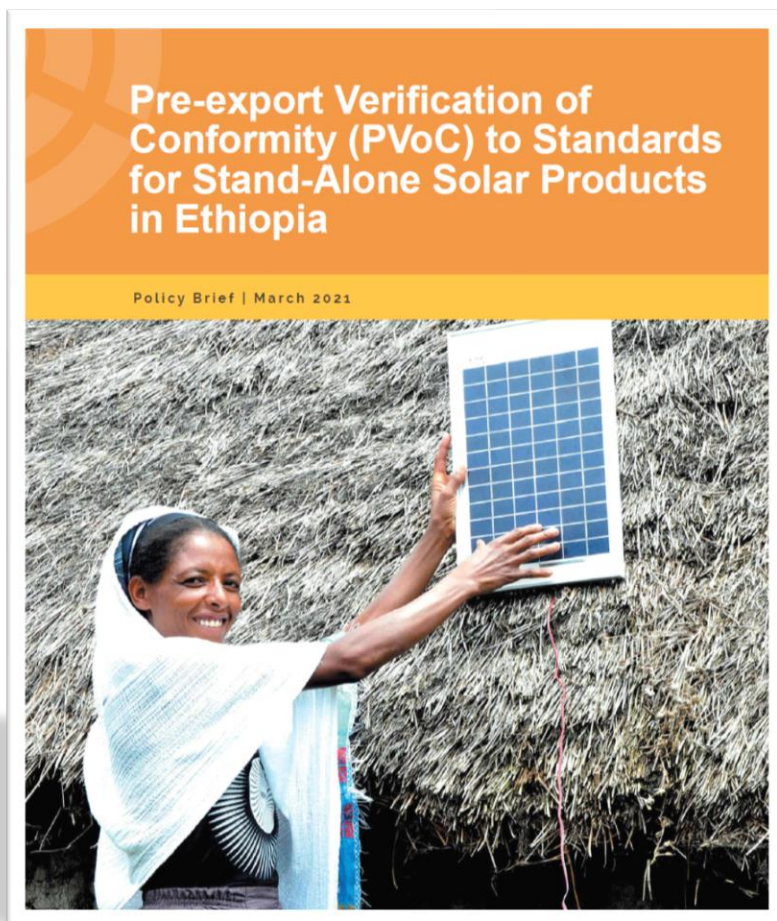
IFC and ACE TAF have been supporting governments in the adoption and implementation of the International Electrotechnical Commission (IEC) quality standards for SAS and advising governments on streamlining pre-export verification of conformity to standards processes to protect consumers. In addition, this section has e-waste management guidelines that help strengthen consumer protection.

Information about quality standards is available, however the impacts of not enforcing these standards are not clear to all stakeholders including government and consumers.

The video provides an overview on how poor-quality products affect vulnerable consumers and what governments, and private sector can do about it.

[Video](#)

Consumer protection: Standards for stand-alone solar – guidance for governments



Standards for stand-alone solar – guidance for governments For off-grid solar solutions to continue delivering great benefits to consumers they need to be of high-quality. An effective way of improving the quality of stand-alone solar products in the market is the adoption and implementation of standards. The guide highlights the importance of quality standards for solar products, the standards adoption process, challenges encountered during the adoption process market surveillance and recommendations for government.

[Guide](#)

Pre-export verification of conformity to standards for stand-alone solar products in Ethiopia The Ministry of Trade and Industry in Ethiopia has been implementing a conformity assessment programme to control the quality of imported SAS products. The main objective of Pre-verification of Conformity (PVoC) is to ensure that prior to shipment, all imports of regulated products comply with the Ethiopian quality standards for SAS products and the approved Ethiopian technical regulations, or other approved international standards. The brief explains the process of acquiring the COC, and the range of options available.

[Brief](#) | [Implementation plan](#)

Ethiopian stand-alone solar standards: Guidance for adoption and implementation provides the best practice approach to implementing a quality assurance framework for stand-alone solar. The framework describes the steps, principal elements and stakeholder engagement that will lead to a comprehensive national quality assurance framework, that also includes PVoC.

[Guidance document](#)

This guidance document provides an overview of the current quality assurance framework for off-grid solar products in Senegal and recommendations for the development and implementation of a Quality Assurance Framework. It also describes the personnel, financial resources and capacity building needs of the actors that will be involved in the implementation of the Framework.

[Guidance document \(French\)](#)



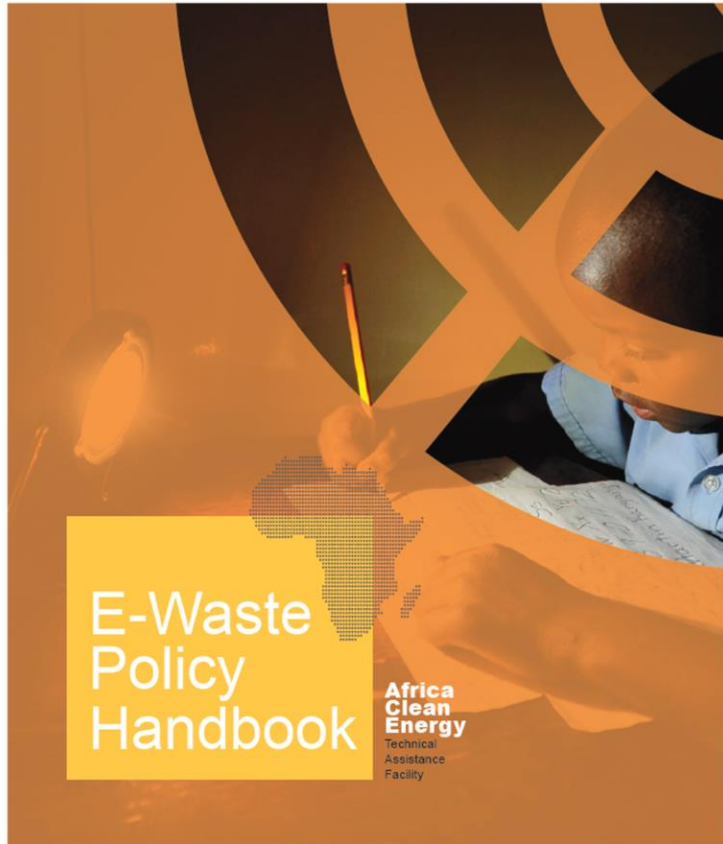
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Consumer protection: E-waste management >



E-waste policy handbook Between 2009 and 2019, approximately 40 million quality-verified products were sold across the world, of these 20 million were sold before 2016 and it is likely that the batteries in the products sold have reached their end-of life. It is timely for policymakers to start addressing solar e-waste management.

This handbook and a policy brief inform policy makers on the current landscape of solar e-waste management in Africa and globally provide policy options that can be considered.

[Handbook](#) | [Policy Brief](#)

E-waste guide for stand-alone solar in Nigeria Nigeria has no clear guidelines for the collection, management, and disposal of SAS e-waste. Several solar companies are taking some responsibility by setting up take-back schemes for damaged products under warranty but there is no consistent approach, and many companies are not focused on e-waste management given other more immediate concerns to scale their business.

The Government of Nigeria (GoN) through the Federal Ministry of Environment (FMEnv) and the National Environmental Standards and Regulations Enforcement Agency (NESREA) worked with ACE TAF to develop a guide for government and private sector on managing SAS e-waste.

[Guide](#) | [Webinar](#)

Best practices and challenges in implementation of e-waste policy and regulatory framework in Rwanda E-waste management has become a major challenge facing many African countries because of lack of awareness, lack of environmental legislation and limited financial resources. Currently, e-waste in Africa is predominately disposed through open dumping, burning and landfilling, but with heavy metals and other hazardous substances present in electronics, these methods have potentially serious implications for human health and the environment.

Given the advanced nature of the Rwandan e-waste policy and regulatory environment, and the challenges that other African countries are facing, ACE TAF published Rwanda's experience and highlighted best practices to follow.

[Best practices and challenges in implementation of e-waste policy and regulatory framework in Rwanda](#) | [Webinar](#)



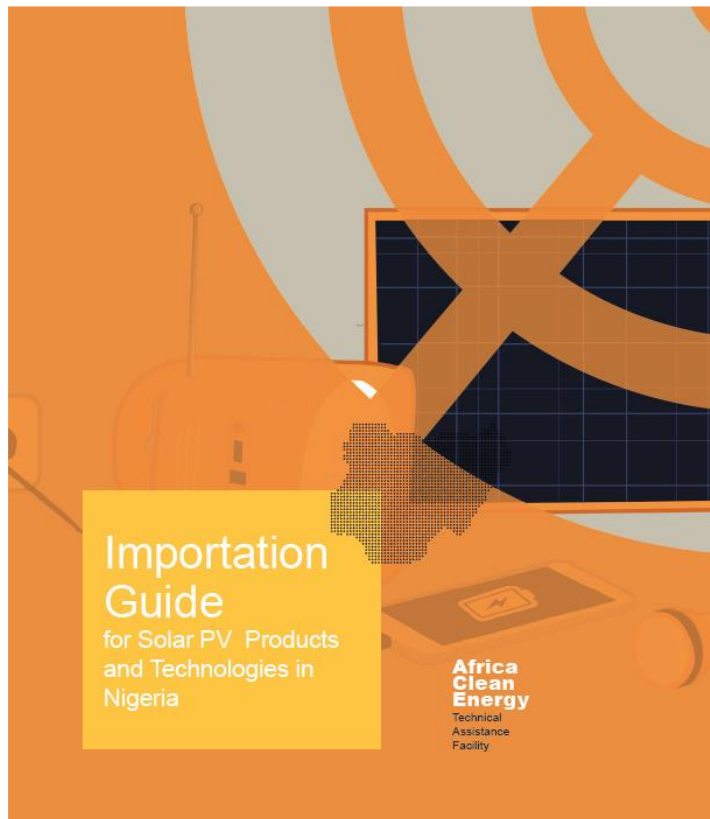
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Nigeria The Nigerian market for SAS products has grown geometrically over the past decade, but despite this progress, one of the key challenges affecting the sector is the ambiguity of the importation process for SAS. The ambiguity leads to proliferation of low-quality products in the market that eventually erode consumer confidence in solar products.

To address the challenge, the Nigerian guide provides clarity on the importation process for solar energy technologies in the country.

[Nigeria Importation Guide](#)

In **Kenya** solar companies have faced challenges in clearing products at the port of entry. The main problem has been the lack of clarity on the importation process, requirements and qualifications for exemptions among solar importers and clearing and forwarding agents.

The importation guidelines show the correct processes, classification, tax and duty expectations of off-grid solar products. The aim of the guidelines is to provide predictability for solar companies on the tariffs they need to pay at the port, hopefully leading to reduced costs and delays.

[Kenya Importation Guidelines](#)

In **Zimbabwe**, solar power is one of the key resources to provide universal access to electricity, reduce GHG emissions and ease power shortages. The handbook provide practical interpretation of the Customs and Excise Act and relevant regulations in relation to solar products. Further, it provides guidance to importers, government and other stakeholders on the clearance process, tariff codes, rates of duty and product description for ease of reference.

[Zimbabwe Importation Guidelines](#)



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Le Guide d'Importation et d'Exonération de la TVA sur des Produits et Systèmes Solaires Hors Réseau au Sénégal. Les enjeux de ce guide sont à rechercher d'une part, dans l'application et le suivi de la réglementation établie afférant à cette exonération. En effet, il s'agira pour les différents acteurs intervenant dans les processus de production, d'importation, de certification, d'authentification et d'exonération de respecter les normes préétablies. D'autre part, les procédures d'importation seront passées en revue.

[Guide d'Importation et d'Exonération](#)



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Energy as an enabler



The COVID-19 pandemic highlighted the critical role that energy can play as an enabler in other sectors, in particular the impact of off-grid solutions where grid connectivity may not be achieved in the near- or medium- term. Majority of the sector stakeholders have taken a supply driven approach to introducing solar solutions in SSA. ACE TAF is taking a demand driven approach to support government agencies and stakeholders to facilitate the discussion on the intersection between energy and critical economic and social development issues, specifically targeting the benefits of energy for the healthcare sector and productive use of energy for improved agriculture productivity and food security.

Energy as an enabler > Agriculture-Energy Nexus

Covid-19 briefing: The potential for productive use solar technologies to address food security in East Africa

JUNE 2020

An emerging consensus has formed among donors, humanitarian agencies, and NGOs that the effects of the COVID-19 outbreak, locusts swarms, and flooding in parts of Kenya, Ethiopia and Rwanda could double the number of food insecure people in East Africa in 2020.¹ While providing emergency support will be critical in the short term, development organizations must also focus on supporting longer term solutions which strengthen local and regional

food systems. Productive use solar technologies have the potential to contribute by increasing access to energy for agricultural production and storage in areas without reliable grid access – this brief highlights some of the potential use cases in East Africa and provides recommendations for donors on how to help scale these technologies and integrate them into food security programming.

The Context

There are early indications that the direct and indirect effects of COVID-19 have already affected production and distribution in some key staple and cash crop value chains across the region. Limitations on supplies of imported inputs (e.g. seed, fertilizer and pesticides), extension services and farm labour due to movement restrictions is expected to affect farm productivity, while farmers producing cash crops for urban consumption could switch to producing food for their families amidst concerns about food security.² Disruptions to distribution due to movement restrictions (e.g. border testing and the requirements for "essential services" licensing), compounded by a lack of proper cold

storage for perishable produce in farms, collection centers and informal sale points, could lead to food losses which may worsen food shortages in some value chains (e.g., fruits, vegetables, meat and dairy). Finally, volatile consumer demand, closure of many "mama mbogas" (e.g. small informal retailers) in urban areas, and the effects of social distancing measures on large wholesale markets is expected to interfere with distribution of food. This has led to the World Food Program estimating that the number of people who are food insecure in East Africa could rise from 20 million to between 34 to 43 million in 2020, driven by an increase of food insecurity in urban areas.³

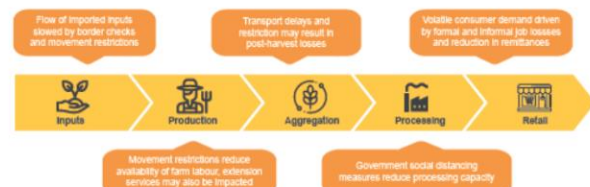


Figure 1: The potential effects of Covid-19 restrictions on agricultural value chains in East Africa

This is compounded by the fact that unusually wet conditions have produced a favourable environment for desert locust breeding. Although the combined efforts by aid agencies and governments to contain them have limited their impact to date, a second wave of locusts is expected in June and July 2020 during key harvesting periods for many farmers in East Africa. Furthermore, flooding in Kenya,

Rwanda and Somalia in May 2020 has washed away thousands of acres of crops.⁴ While short-term humanitarian responses to these crises will be critical in the worst-hit areas, funding longer-term solutions are equally important to build resilience in food systems against increasingly unpredictable climatic conditions and the potential for recurring government lockdowns.

Covid-19 briefing: Solar technologies address food insecurity The effects of Covid-19 pandemic, locust swarms and flooding in Kenya, Ethiopia and Rwanda in quarter 2 of 2020 could double the number of food insecure people in Eastern Africa in the coming years. Emergency support has been critical in providing short term solutions, but longer-term solutions are needed to strengthen regional food systems.

This brief provides recommendations on how donors can help scale solar technologies that boost agricultural production and storage in areas without reliable grid.

[Briefing](#) | [Webinar](#)

Uganda solar water pumping report In 2018, the Government of Uganda expressed interest in promoting the productive use of energy as one of their strategies for increasing energy access and promoting more holistic development in rural communities.

This report highlights effective business models for supporting solar irrigation, required government interventions, policies and regulations, and the investment required from public and private funders to accelerate the sector.

[Report](#)

Optimizing solar for socio-economic development in Kenya's counties While the initial solar photovoltaic products available in the market were for lighting and phone charging, they have since expanded to include radio, television and appliances like fans and refrigerators. The integration of appliances in solar homes systems has expanded the range of income generating activities that are enabled, both at household and community level.

This brief shows how counties and local governments can use solar to power social economic activities such as education, health, agriculture, trading centers, water access and enhance security.

[Brief](#) | [Webinar](#)



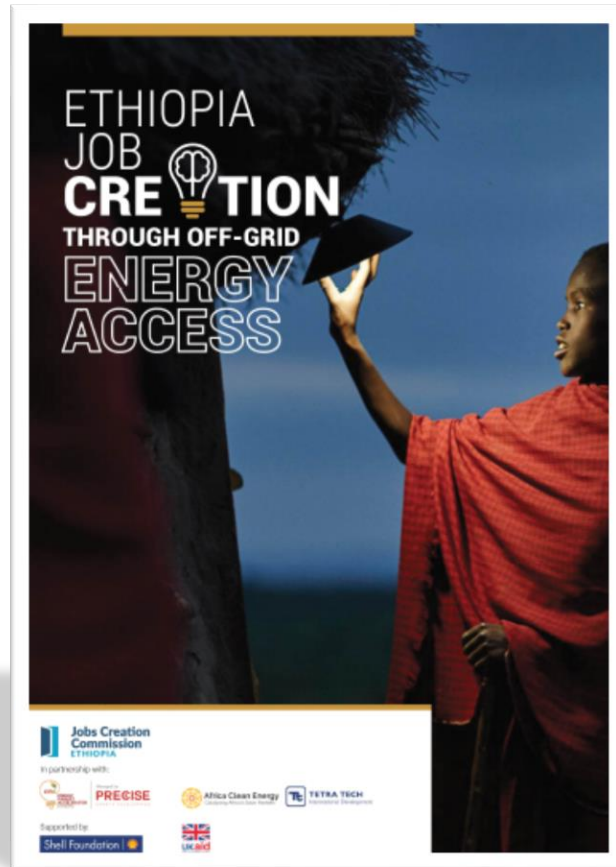
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The **Ethiopia: Job creation through off-grid energy access** report elaborates on the opportunities to mechanize and expand production along the high potential value chains of horticulture, wheat and milk. An estimated 190,000 can be created by deploying solar powered productive use of energy solutions. Key recommendations for government, development partners, private sector and investors need to be implemented for jobs to be realized.

[Report](#)



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