



SNV

CALL TO ACTION: Igniting Solar Energy Markets

5 years, 5 countries, 5 million households



‘GOGLA wholly supports this call to action from SNV. Every year millions of entry-level off-grid lighting products are being sold in Africa. These products deliver huge social benefits directly, as well as lay the foundations for higher-level electrification services on offer further down the line. However, continued success is not guaranteed: most sales remain concentrated in just a few countries; many distributors still struggle to grow and succeed; a growing number of sub-standard products on the market threaten consumer confidence in the technology and government policies are often unpredictable.’

Koen Peters, Executive Director, Global Off-Grid Lighting Association (GOGLA)

The Challenge

Around 1.1 billion people globally do not have access to electricity, and the hardest hit communities are in sub-Saharan Africa. Vulnerable people spend a high proportion of their limited income on energy – kerosene, candles, diesel, cooking fuels, disposable batteries, and suffer from health problems due to related household air pollution and burns. In recent years, the solar market has seen exponential growth in several sub-Saharan countries, particularly in East Africa, with currently an emphasis on small Solar Home Systems and Pay-As-You-Go (PAYGo)

models.¹ Many countries are still excluded or are seriously lagging behind. National policy and tax regulations are unclear in many cases, while quality standards are not being adopted. Consumer awareness on the benefits of solar energy is often lacking, while sub-standard products are flooding some markets. In other countries, quality products are not available, or come at a high cost, while access to finance is difficult for both companies and customers.

This Call to Action aims to address these challenges.

¹ Off-grid solar Market Trends Report 2016, Bloomberg New Energy Finance, Lighting Global, WB, GOGLA

The Opportunity

The impact of entry-level solar solutions cannot be underestimated. Research shows that replacing kerosene lamps with solar lights offers returns of 15-45 times the cost of the solar light.² Benefits include reduced air pollution in the home, reduced burns and poisoning, access to light which enables students to study improving education scores, access to mobile phones, improving communication and information sharing, and ultimately additional income generation.³ In addition, as experience in more developed solar markets has shown (e.g. Kenya and Tanzania), the introduction of solar lanterns can be considered an important first step to increase awareness of the benefits of solar energy, and for gradual market development towards larger systems with an even bigger impact.



Our Ambition – A market based approach to reach 5 million households in less developed markets

This ambitious Call to Action: *Igniting Solar Energy Markets* is a call to engage partners to join forces to fast track universal energy access. Through a market based collaborative programme approach, the aim is to disseminate 5 million *Lighting Global* certified entry-level solar products to the Bottom of the Pyramid (BoP). SNV and its partners will build on extensive experience in accelerating local market development and last-mile distribution of solar products, which has resulted in 1.5 million people in 12 African countries gaining access to solar PV electricity. SNV’s experience of being well rooted in local networks, provides in-depth understanding of local contexts and consumers’ needs, and an opportunity to support companies in creating new, innovative routes for distribution. SNV will play a catalyzing role, bringing actors together, to achieve the targets set.

This Call to Action focuses on the distribution of quality, entry-level solar products for lighting and electrification in less developed markets in Sub-Saharan Africa, as a first step in building the market for sustainable off-grid electrification. The initiative is centred on Lighting Global approved pico-solar products below 10W⁴. Those products are broadly characterized into the following main product groups:

Basic Task Lights:	<div>Typical Cost €14 (Price Range €7- €20)</div> <div>Generally produce less than 2 watts of electricity sufficient for 4-6 hours of light with 25-90 lumen output that generally (on a single full day charge) exceeds a kerosene lantern.</div> <div></div>
Lights with Charging Service:	<div>Typical Cost €35 (Price Range €20- €50)</div> <div>Produce around 5 watts of energy with enough light for 5-7 hours of lighting at 100-200 lumens per day with enough energy remaining to fully charge 1-2 cell phones per day.</div> <div></div>
Small/ Multi-Room Light Kits:	<div>Typical Cost €100 (Price Range €50-€200)</div> <div>Generally produce less than 10 watts of electricity with light of +200 lumens sufficient for a minimum of 2 rooms for 6-8 hours on a single day’s charge along with small electronic and charging.</div> <div></div>
Small Solar Home Systems (Plug & Play):	<div>Typical Cost €500 (Price Range €200-€800)</div> <div>In addition to appliances (Fans, radios, TVs) they typically provide 8-16 hours of daily lighting at 300-500 lumens. The use of pay-as-you-go (PAYGO) technology enables consumers to pay for a product in small increments over time via mobile phone has made these systems increasingly affordable.</div> <div></div>

Focus of this Call to Action

The Call to Action targets countries with low electrification rates and readiness to engage in entry-level solar solutions. It gives priority to less developed solar markets with favorable conditions in terms of an enabling environment and demand or supply considerations. Countries that have seen some growth in the availability of entry-level solar solutions, but with significant parts of the country still not reached, can also be included in this five-year programme. Based on consultation with key partners and depending on particular donor interest, a final selection of countries will be defined.

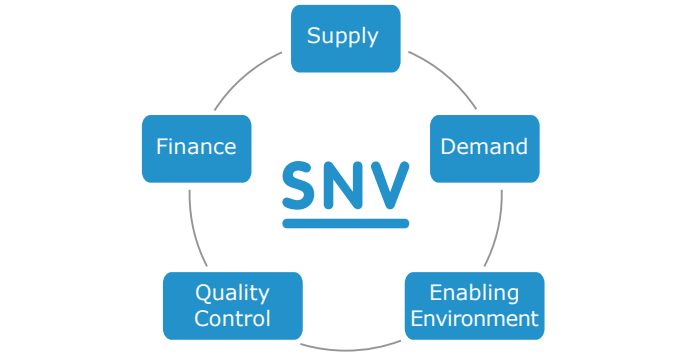
Considering the above-mentioned criteria, the following countries are potentially being considered for this Call to Action: Benin, Burkina Faso, DRC, Ethiopia, Mali, Niger, Uganda and Zambia.

The Solution – Accelerating market development

With the current levels of energy access in developing countries, and the slow pace of grid extension, off-grid solutions will be needed for many decades to come. Speeding up dissemination of entry-level solar products will pave the way for larger systems to come in, and boost impact on the ground. Building on the success shown in countries like Tanzania and Kenya, this Call to Action aims to scale successful approaches to other countries. The main objective is to support the development of sustainable and inclusive markets, ensuring that low-income people have access to affordable, reliable and economically viable energy technologies. The initiative will focus specifically on the distribution of entry-level solar products for lighting and electrification, helping to reduce distribution barriers (including high distribution costs) and creating new, innovative routes for distribution. In collaboration with partners, SNV aims to have an integrated approach which will include the following interventions:

1. Creating sustainable **demand** for energy products and services: consumer awareness raising campaigns; private sector led marketing (matching funds); innovation partnerships (incl. Telecom, MFIs, cooperatives, associations, education networks, etc).
2. Ensuring a sustainable **supply** of entry-level solar solutions: distribution chain development between manufacturers, suppliers and distributors/agents; business-to-business linkages for alternative distribution networks; Results-Based Financing (RBF) to de-risk private sector investment, Business Development Support services to local (distribution) enterprises/ agents; life skills & technical skills training for youth.
3. Improving the **enabling environment** in support of solar market development: lobbying and advocacy for conducive entry-level solar policies, including tax exemptions and enforcement of quality assurance frameworks; develop/strengthen representative bodies or associations for lobbying and advocacy; collaboration and exchange between partners and governments across countries.

4. Facilitating access to **finance** for suppliers, distributors and customers: Result Based Financing (RBF) incentives and blended finance to unlock investment barriers; innovative end-user financing (including PAYGo) and partnerships with micro-finance institutions (MFI).
5. Increasing the **quality** and reliability of solar technologies in the market: development/adoption of national level quality standards for entry-level solar products (according to Lighting Global framework); consider long-term consequences of battery replacement and disposal to extend the life of the product, as well as to protect the environment.



While the targeted countries have different market contexts and face different challenges, typically we expect the above-mentioned interventions to be applicable for all countries to trigger widespread dissemination of off-grid electrification solutions.

SNV firmly believes in contextualised solutions and tailored interventions based on the specific market context in a given geographic environment, and adjusting interventions while the market matures. Similarly, interventions will be tailored per country taking into consideration initiatives already in place and avoiding duplication of efforts. The programme aims to build on existing projects and focus its efforts where further assistance is needed.

Required Budget and Timeline

An estimated budget of €5-10 million would be required to facilitate the distribution of 5 million entry-level solar products in 5 countries, over a 5-year period. This amount excludes the performance based incentives for companies, which would involve a similar amount (an additional €5-10 million), pending the design of the final mechanism, detailed market analysis, and partner discussions.

How to get there

In order to reach 5 million households for *Fast Tracking Basic Off-Grid Electrification in Africa*, a variety of potential partners and funding organizations are expected to be engaged. Join us in this Call to Action!

For more information, please contact Sinead Crane: srane@snvworld.org

² ODI Accelerating access to electricity in Africa with off-grid solar: The impact of solar household solutions
³ IBID
⁴ <https://www.lightingglobal.org/products/>

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