

# Last Mile Distribution of Off-grid Solar Products: Support Needs, Concerns, and Opportunities

2-3 December 2013 • German Development Cooperation Office, Addis Ababa, Ethiopia

## Workshop Summary Report



Workshop organized by:

# PREFACE

The recent explosive growth of the off-grid solar lighting sector (280% per annum over the last six months) affirms the potential for this technology to substantially increase access to a basic modern energy service in underserved communities. Recognizing this opportunity, governments and philanthropic organizations are expected to accelerate efforts to increase the availability and market uptake of off-grid solar lighting products in 2014 and beyond. To ensure that market interventions support rather than impede market growth, donors and their development partners need to better understand the dynamics of this rapidly changing market. Only by acknowledging the support needs, concerns, and challenges of the companies in the industry that are directly driving the development of this sector can development organizations effectively achieve their objectives and support the industry's long-term success.

Toward this goal, the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the International Finance Corporation (IFC), and the U.S. Department of Energy (DOE) convened a workshop in Addis Ababa, Ethiopia, in December 2013. The workshop brought together organizations that fund and implement support programs and leading companies that are engaged in last mile distribution of off-grid lighting products. The objective was to build an accurate and up-to-date understanding of the state of last mile distribution efforts in the dynamic, off-grid lighting market as a means to inform and improve the effectiveness of support efforts.

Based exclusively on input gathered from the participants, this report presents a synthesis of the discussions to highlight insights provided at the workshop. It is not intended as a full accounting or summary of proceedings. Topics that participants emphasized during the workshop, including ideas identified as priorities (via “voting” segments), are summarized.

The workshop topics correspond to four key areas that pose challenges to the industry, limiting the market's long-term development:

1. Financing
2. Government policy
3. Retail channels
4. After sales

The meeting was structured into two distinct roundtables: a Stakeholders Roundtable, which included companies, development partners, and industry consultants; and a Development Partners Roundtable, which was limited to participants from development partner organizations. In the Stakeholders Roundtable, companies presented overviews of their business models and outlined their perspectives on important challenges and ideas for support. Through facilitated group discussions, the participants then identified and discussed their main challenges, support needs, and concerns about development partner support in each of the four topic areas. Participants from private sector companies were asked to prioritize support needs by voting for the ideas that would be the most beneficial in expanding deployment of off-grid lighting products, and, conversely, by identifying ideas that could be detrimental to the industry. In the Development Partners Roundtable, donors and their development partners discussed key findings from the stakeholders meeting, provided overviews of their ongoing and planned activities, and identified areas of potential collaboration. Please refer to the Appendices for additional details.

## **Workshop Co-chairs**

Bozhil Kondev, GIZ  
Caroline McGregor, DOE  
Russell Sturm, IFC

Cover photos credit: Lighting Africa, a joint program of IFC and World Bank

# EXECUTIVE SUMMARY

By addressing fundamental barriers to market development, donors and their development partners play a critical role in expanding the global market for clean, affordable, high-quality off-grid lighting. While these support programs help to lower transaction costs, reduce risk, and address market barriers—facilitating delivery of improved lighting services to millions of people at the bottom of the economic pyramid—care must be taken to avoid unintended market distortions that could inhibit long-term growth. Through workshop discussions, companies provided insights to inform and improve the effectiveness of current and forthcoming support efforts in the off-grid lighting market. Participants discussed current conditions on the ground, including specific challenges, support needs, and concerns. The most critical challenges identified include limited access to working capital for a rapidly growing industry; inadequate consumer information, and unfavorable government policies.

Well-conceived donor-funded support activities that respect and enhance competitive forces in the market can be vital in addressing these challenges, particularly the issues or market failures that cannot be addressed by industry alone. Company participants also expressed concerns and offered advice about aspects of existing or potential new support programs that could adversely affect the industry and long-term development of the off-grid lighting market (Table ES-1).

**Table ES-1. High priority needs and concerns regarding donor support programs**

(Each bullet in the table is linked to additional information provided in the report)

<b>Market challenge</b>	<b>Support needs identified by companies</b>	<b>Concerns about support from donors</b>
<b>Finance</b>	<p><i>It would be helpful for development partners to:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Facilitate access to capital for small-scale and early-stage investments, as well as for working capital debt to support rapid market development</a></li> <li>- <a href="#">Provide information and endorsement services to inform lenders about this sector</a></li> <li>- <a href="#">Provide advisory services for preparation of funding proposals</a></li> <li>- <a href="#">Offer funding for innovation, both technology and business model</a></li> </ul>	<p><i>Development partners should avoid:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Picking specific business models to support</a></li> <li>- <a href="#">Supporting programs without clear exit strategies</a></li> <li>- <a href="#">Providing consumer or reseller subsidies that distort competition among products or that affect product price and foster expectations of unrealistically low prices</a></li> <li>- <a href="#">Supporting programs that seek to reduce transportation and tax costs</a></li> </ul>
<b>Government policy</b>	<p><i>It would be helpful for development partners to:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Promote global quality standards with governments</a></li> <li>- <a href="#">Ensure a level playing field, e.g., encourage governments to stop subsidizing kerosene and/or waive import tariffs for solar lanterns</a></li> <li>- <a href="#">Clarify the roles of public actors</a></li> </ul>	<p><i>Development partners should avoid:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Encouraging local government procurement focused on a specific product</a></li> <li>- <a href="#">Moving quickly to enact policy without conducting full analyses</a></li> </ul>
<b>Retail and distribution channels</b>	<p><i>It would be helpful for development partners to:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Provide market intelligence</a></li> <li>- <a href="#">Facilitate match-making and partnership development</a></li> <li>- <a href="#">Promote general awareness and consumer education</a></li> </ul>	<p><i>Development partners should avoid:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Intervening in proprietary supply chains and individual business operations</a></li> </ul>
<b>After sales services</b>	<p><i>It would be helpful for development partners to:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Support recycling and establish a framework for disposal of obsolete and unusable products</a></li> <li>- <a href="#">Support end-of-life programs that focus on repair and refurbishment of obsolete products</a></li> <li>- <a href="#">Gather data and raise awareness about warranties</a></li> </ul>	<p><i>Development partners should avoid:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Establishing systems for retailer accreditation</a></li> </ul>
<b>General /Cross-cutting</b>	<p><i>It would be helpful for development partners to:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Develop common metrics for documenting impacts</a></li> </ul>	<p><i>Development partners should avoid:</i></p> <ul style="list-style-type: none"> <li>- <a href="#">Announcing support without timely delivery or without an accurate timeline for implementation</a></li> </ul>

In a session with only development partners present, participants considered the industry input and identified the following key takeaways regarding ways to improve coordination:

- Before entering a new region or market, work together to establish agreement or best practices on how to execute programs in the same region without interfering with each other.
- When engaging governments, speak with a unified voice representing development partners.
- Hold regular dialogues with stakeholders to ensure open communication of planned activities and thorough understanding of market conditions—so that programs can be revised as needed.
- When exploring options for end-user financial support, consider the perspectives of companies and other partners working in the market and the lessons learned from others.

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# PRESSING CHALLENGES IDENTIFIED BY OFF-GRID LIGHTING COMPANIES

Distribution of solar lighting products to communities at the bottom of the economic pyramid (BOP) in Africa and other developing regions entails numerous challenges for manufacturers and distributors seeking to develop new markets. These challenges include high distribution costs, low initial sales volumes, immature distribution channels, limited consumer and supply chain information, and low retailer and consumer awareness, among others. Many of the challenges represent issues that may be best addressed by the private sector and are simply part of the long-term competitive landscape. Other challenges represent market failures that can effectively block the market from reaching maturity, and for which government or development agency intervention is needed to catalyze market development. While many of the challenges companies face are not unique to the portable solar lighting industry, industry-specific circumstances provide insight into the current market and help indicate whether support intervention is needed and how much is appropriate. The subsequent section presents perspectives on whether and how best to address challenges through support programs. The most critical issues that companies currently face are discussed briefly below:

## LIMITED ACCESS TO FINANCE AND HIGH COSTS OF PRODUCT DISTRIBUTION

**Limited access to commercial working capital for suppliers, importers, and distributors inhibits scale-up and innovation.** Companies lack adequate funds to re-invest in their businesses as needed to rapidly increase production capacity or build inventory to meet growing demand. Financial constraints also impede efforts by companies to deploy innovations and roll out novel grassroots distribution models in response to the multiple needs of the regions they serve. Cash flow constraints inhibit the ability of companies to scale-up operations. Non-commercial funds require an extended decision process for financial awards (upwards of 3-6 months) so that by the time companies receive the funds, their needs have changed. Commercial finance is fast but major investors are typically unaware of the sector's existence/potential or are not interested or able to downscale to small investments (less than \$3 million). Investing in small enterprises can be administratively costly and complex for financiers. In addition, most companies do not have the expertise or resources to navigate the complicated process of applying for financing.

**Reaching remote areas is costly.** With limited infrastructure and roads to access isolated and rural areas, distribution chains serving such large yet remote customer bases can be long, complex, and expensive. As a result, product prices are higher in remote areas, profitability declines, and retailers tend to focus on urban areas instead.

## EDUCATION AND AWARENESS

**Consumer awareness of solar lighting products is low in target markets.** Consumer education and awareness-building campaigns can demonstrate the value of high-quality modern lighting to consumers unfamiliar with the technology and can educate consumers on how to properly operate the products once they are purchased. Potential buyers are generally unaware of the availability and affordability of quality

modern lighting systems and do not know how to differentiate between products of high and low quality. A credible third-party source of unbiased information is particularly important for consumers in immature markets, where product brands are not yet widely recognized.

***With limited market data and research available for this emerging sector, identifying and responding to market dynamics is difficult.*** Gathering market data is time-consuming and expensive, particularly for small companies, yet it is vital for developing effective plans for growth. Companies face challenges in obtaining up-to-date information on local markets. Such information is critically important for identifying credible partners and establishing trust with existing actors.

## **GOVERNMENT POLICIES AND OTHER CHALLENGES**

***Government policies are not consistent, import regulations are inconsistently enforced, and tax laws impact profits.*** Companies find it difficult to navigate various government bureaucracies, customs laws, and changing regulations. Tariff barriers and the costs involved in clearing customs increase product prices for end-users. Individual companies generally lack the connections or power to influence government policy, and the lack of communication between public and private sectors makes it difficult to respond to policy changes. Governments often lack the capacity to implement import rules supporting renewable energy products. In some instances, a clear disconnect exists between the energy ministries that back such support for renewable energy products and the finance ministries that direct their customs officers to collect duties on them.

***Products are not designed to accommodate end-of-life uses.*** Neither companies nor governments have infrastructure in place for the proper disposal, recycling, or refurbishing of products, nor is there an understanding of what to do with obsolete technology. Local regulations are either non-existent or not enforced. No standards are in place to address end-of-life issues. These issues are exacerbated by the highly dispersed nature of the rural off-grid market. Establishing a mechanism to dispose of outdated technologies is difficult and involves managing reverse distribution logistics.

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# SUPPORT NEEDS IDENTIFIED BY OFF-GRID LIGHTING COMPANIES

Support programs can play a vital role in increasing access to solar lighting. Donor agencies have been instrumental in bringing the market to its current state in numerous areas. More specifically, they have helped to develop product quality assurance, economic instruments and finance, market intelligence, consumer education, and supportive national policies. However, as the market evolves in each area, the amount and type of support needed from these agencies is expected to change. Each market and region is unique; one region may require a completely different set of solutions than another. Quality assurance frameworks meanwhile serve to build confidence for both customers and investors. The support needs and concerns presented in this report reflect perspectives gathered from a cross-section of companies that face common issues, even though some operate in different areas. Their high-priority support needs are summarized below:

## FINANCING

**Facilitate access to capital for small-scale and early-stage investments.** Companies wishing to scale up operations or innovate with new technologies and business models are significantly constrained by limited access to funds, including equity and debt financing. Companies need capital quickly, which is something that financial institutions could provide. Donors could facilitate company access to working capital from the financial industry by supplying loan guarantees and other risk-sharing tools. Given that banks and investors lack experience in working with the off-grid lighting industry and its emerging distribution chains and business models, such instruments could help reduce the risk that financial institutions perceive in lending/investing in the unproven, early stage companies that characterize this immature industry.

**Provide information and endorsement services to inform lenders about this sector.** Commercial financial institutions possess limited historical data on the industry, which creates greater uncertainty and leaves the industry with limited access to capital and/or higher borrowing rates. Donor efforts to collect, assemble, and disseminate better information on the off-grid solar industry could be instrumental in increasing interest among investors and financial institutions, ultimately improving the industry's access to capital. Specifically, a support program that works with the financial industry to identify and define risk parameters could remove some hurdles for investment.

**Provide advisory services for the preparation of funding proposals.** Companies providing off-grid solar lighting solutions to BOP communities maintain a range of in-house expertise in management, technology, business, and marketing; however, these companies generally recognize their lack of specialized expertise in institutional finance. A core support need, particularly for new market entrants, is assistance in improving this financial literacy in general to enable the development of bankable business plans. Specific support needs include advisory and technical services to help companies improve their value proposition to financial institutions and make successful applications for loans from commercial bank investors.

**Offer funding for innovation—both technology innovation and business model innovation.** Companies hold limited working capital, and the capital that is available is largely devoted to expanding business operations to meet rapidly increasing demand. If funding were to be available as “start-up” capital

for innovative distribution models, it would encourage companies to try new approaches to reaching underserved market segments and accelerate advancements in technologies and products. Such start-up capital would include funding for technology and business models at all levels, from entry-level to solar-as-service research and development. Funding would also support or broaden basic R&D on potential technology breakthroughs and novel applications for the future. Leveraging knowledge gained from research in technologies analogous to portable solar lighting may be a cost-effective approach. Other leveraging opportunities include engaging with the private sector and cost-sharing R&D efforts.

## GOVERNMENT POLICY

**Promote global quality standards with national governments.** An influential voice is needed to promote global standards and provide a level of consistency among national governments. Development partners might encourage national governments to enforce standards or offer incentives for products that pass minimum standards. Development partners can also support government capacity building by providing information about customs and standards issues. This effort could be strengthened by working with organizations that have some clout when holding discussions with governments. The impact of implementing global quality standards vary by country. For example, Ethiopia’s adoption of Lighting Africa minimum performance standards has greatly reduced “spoilage” in the market (substantial import duties are in place in Ethiopia for products that do not meet the standard) while other countries do not recognize or enforce the standards.

**Ensure a level playing field between solar lighting products and kerosene.** Several national and local governments have policies in place that subsidize kerosene. While these legacy policies may have been originally conceived by well-intending policymakers seeking to reduce costs for a basic household need, the subsidies are now inhibiting far safer and cleaner solar lighting alternatives. The support of development partners is needed to work with governments to remove kerosene subsidies and other anti-competitive policies. This may be particularly challenging in some locations since kerosene has a long history as the primary off-grid lighting fuel, and governments may be influenced by a well-entrenched kerosene industry. In addition, support is needed to encourage governments to waive import tariffs for solar lanterns.

**Provide clear and transparent information about the roles of development partners and various public actors.** Companies would benefit from better understanding the roles, plans, and scope and scale of operations of local institutions and authorities as well as global and local development partners. This information, along with regular channels for disseminating it, would facilitate better coordination among companies, authorities, and development partners. For example, industry players who know the specific plans and activities of public actors will be better able to adapt their business plans to existing conditions, address the needs of their customers, and tackle evolving issues and dynamics in the market.

## RETAIL AND DISTRIBUTION CHAINS

**Provide market intelligence to identify new markets and reduce entry costs.** Timely market intelligence can be instrumental in helping a company design a successful market strategy, but gathering such intelligence can be cost-prohibitive for any single company. A program that generates and widely distributes regular and up-to-date information would need to be pre-competitive (not favoring any single company) and would help to attract interest and facilitate growth in the market. Market intelligence should focus on retail dynamics and be country-specific.

**Facilitate match-making and partnership development.** Gathering, assembling, and disseminating a catalogue of potential distributor and retail partners would facilitate match-making among complementary

market actors. Resulting partnerships would help companies expand their operations and improve last mile distribution efficiencies. The catalogue would need to be location-specific and require regular updates.

**Promote general awareness and consumer education.** Public awareness campaigns using television, radio, and print media can stimulate demand and alert consumers to the benefits of solar products. Campaigns should be structured to create trust and generate demand for the products.

## AFTER SALES

**Support recycling and framework for disposal of obsolete products.** What to do with a product at the end of its useful life often poses an environmental concern, particularly for products that cannot be repaired – i.e., they have built-in obsolescence. Donor support would greatly facilitate development of a transparent framework and standard industry procedures for recycling and disposal of obsolete and unusable products. The framework could incorporate information on recycling services provided by manufacturers. In addition, support programs could motivate progress by establishing awards to recognize exceptional recycling efforts.

**Support end-of-life programs that focus on repair and refurbishment of used products, not just recycling.** There is a need for end-of-life programs that focus on reuse, repair, and refurbishment – not just battery recycling. Recycling programs can have a positive impact, but they are not a sufficient solution alone. Products that can be dismantled and refurbished could have an extended lifetime, and the parts that reach the end of life can be fed into recycling streams.

**Provide market education, warranty awareness, and data gathering.** Support for warranty education, including training and awareness, would help build customer relationships and trust. Donor support programs could conduct structured surveys of consumer expectations on after-sales support and consumer protection. They could also facilitate development of standard definitions for data gathering.

## GENERAL/CROSS-CUTTING

**Develop common metrics for documenting impacts.** Limited data are available to prove the benefits of off-grid lighting or the impacts of specific policies in a given country or region. This lack of data makes it more difficult to produce compelling materials for general marketing and education campaigns. Robust metrics and the supporting data could influence government decision-makers to promote off-grid lighting through policymaking. Establishment of common metrics for measuring impacts would help to develop more rigorous evidence of benefits and policy impacts (rather than theory or anecdotes). For example, data and metrics would enable a comparison between the impacts of investments in off-grid or on-grid technologies in terms of jobs, education, health, economy, and environment.

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# SUPPORT CONCERNS

As with any market intervention, care must be taken to avoid unintended market distortions that could inhibit long term growth. Along with the most impactful support needs—as determined by ‘votes’ from companies during the workshop—associated concerns or advice were offered. The concerns are based on support options that could result in detrimental impacts to the nascent industry’s business operations or detrimental to the broad goals of accelerating deployment and uptake of solar lighting products. The highest priority concerns with donor support programs can be summarized with the following recommendations:

## FINANCING

**Avoid efforts to address general market challenges by choosing to support individual business models.** Supporting individual business models in a competitive market could lead to market distortions and create conflicts between market actors. Companies are best equipped to determine which sales models work best with their unique market and customer dynamics. Outside intervention that supports individual companies operating in a competitive environment can eventually alter markets, customers’ price expectations, and purchasing decisions and create advantages for individual companies without solving market barriers.

**Avoid support programs without clear exit strategies.** Programs that temporarily influence the market can have lasting impacts. In an industry without a long track record, any program, even if short term, can generate consumer expectations and introduce products that affect the market long after the program ends. A clear exit strategy should coordinate with companies and other players operating in the area. For example, if a program intervention bypasses the local financial services industry, an exit strategy that works with this industry should be developed.

**Avoid consumer or reseller subsidies and end-user financing.** Subsidies to the consumer or reseller can interfere with competition and be harmful to the market, impacting unique market customer relationships and dynamics. Short-term price subsidies that introduce unrealistic consumer expectations can be particularly detrimental to the medium term health of the market. This includes support for a given product, product category, or business model. End-user finance is seen as an issue for companies to address as part of their sales model rather than a market failure that would be appropriate for aid agency intervention. Depending on the structure of the subsidy program, they can disrupt pricing models that aim to advance customers up the product portfolio, create unrealistic customer expectations for prices, lock-in selected technologies, and create an unbalanced competitive landscape among some companies and markets resulting in fewer choices for consumers.

“Reports and analysis consistently underestimate purchasing power of BOP communities”

- Company workshop participant

**Avoid programs that seek to reduce transportation and tax costs.** Support programs that focus on altering product costs, even if specifically targeting certain logistics expenses and taxes, should be avoided. Similar to the concerns associated with consumer subsidies or end-user financing, such programs can inadvertently harm existing market relationships and dynamics. The temporary cost reductions only make

sense if they can bridge the market to a long-term sustainable reduction in costs. It can also introduce administrative complexity in location-specific pricing that could be burdensome to companies.

## GOVERNMENT POLICY

**Do not support government procurement of products that are focused on a specific product.**

General purchases of solar lighting products by government is not seen as harmful, but targeted bulk purchases of specific companies' products could negatively impact the demand for equally performing products that are not included in the procurement program and thus be detrimental to their market position.

**Avoid moving too quickly on government policy actions before doing full analyses.** It could be counterproductive or harmful if industry representatives approached governments about policies and investments without having supporting data and studies and without engaging the industry to fully understand the impacts of such policies.

## RETAIL AND DISTRIBUTION CHAINS

**Stay out of proprietary supply chains and individual business operations.** The public sector should not try to tackle business, operational, and value challenges. Each product distribution channel is different and this should not be the development partner's niche. This includes training for proprietary supply chain distributors, although providing funding to companies for training can be helpful. Establishing standardized training manual/program for distributors is not seen as a beneficial support effort.

## AFTER SALES

**Do not establish systems for retailer accreditation.** Programs that certify or endorse retailers for after sales services could be harmful to specific companies' supply chains or business operations. Accreditation could set standards that unfairly harms (or favors) certain companies' operations or business models. Manufacturers and distributors view their distribution partners as a matter of competitive advantage and do not want donors/development partners interfering with this dynamic.

## GENERAL/CROSS-CUTTING

**Do not announce support without timely delivery or without providing an accurate timeline for implementation.** Lengthy periods between the time an application for support (e.g., financing, technical assistance) is submitted and when the support is granted is harmful to business operations. Once the application approval has been announced, companies adjust their plans and operations to accommodate or adapt to the forthcoming support. If there is an unexpected delay in the provision of support or the implementation of the support program, short to medium term difficulties for business operations may occur.

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# CONCLUSION

Company perspectives and donor insights offer a means to inform and improve the effectiveness of current and forthcoming support efforts in the off-grid lighting market. Workshop participants broadly agreed on core areas in which support from donors would be beneficial and also identified specific activities that support programs should clearly avoid. Specific challenges, support needs, and concerns articulated by companies include the following:

- Before entering a new region or market, development partners should work together to assess the market and set up an ongoing dialogue among themselves and with companies working in that market. Partners should come to an agreement or establish best practices on how to execute programs in same region without interfering with each other. There is an urgent need to better coordinate or even leverage same-market efforts among entities.
- Development partners should examine government policies to identify areas in need of improvement and work together to address them, speaking with one influential voice. Coordination among partners can help to develop a better understanding of related activities in the region, which will help in conveying a unified voice to governments.
- Successful implementation of deployment strategies and support requires effective stewardship through regular and frequent dialogue with all stakeholders to ensure open communication of planned activities and a thorough understanding of the dynamic market conditions in target markets. Programs should be updated as appropriate, based on the latest conditions.
- When exploring new support activities for end-users, development partners should consider the perspectives of companies working in the market and lessons learned from similar experiences. Although end users face financing challenges, companies believe it is their responsibility to address this challenge in their sales and marketing plans rather than the responsibility of donor support programs.

## OPPORTUNITIES FOR DONOR COORDINATION

Several opportunities for increased cooperation among members of the development partner community were discussed. Next steps for collaboration could include the following:

- Cooperative studies to address key support needs raised by companies (i.e., common metrics for documenting development impacts).
  - These studies could include analysis of the extent to which government policies and tariffs affect markets and market intelligence studies for specific regions
  - It would be useful to have a clearinghouse for market reports.
- Facilitate development of a framework for recycling and end-of-life use.
  - UNEP may be able to coordinate with an ongoing IFC/ Global Off-Grid Lighting Association (GOGLA) effort.
- Work with ad hoc donor coordination groups formed among donor missions in developing country capitals to build Energy Access Working Groups among staff specifically focused on energy access.
  - These working groups could jointly engage governments, industry, and other stakeholders to advance cooperation at the local level.

# APPENDIX A: WORKSHOP PARTICIPANTS

Note: The full list of participants shown here attended the Stakeholders Roundtable. Participants listed below the dashed line also attended the Development Partners Roundtable.

<u>First name</u>	<u>Last name</u>	<u>Workshop Representation</u>	<u>Company/ Organization</u>
Simon	Bransfield-Garth	Company	Azuri Technologies
Allan	Demello	Company	Mobisol
Eliza	Hogan	Company	Barefoot Power
Güngör	Kara	Company	Prosonergy
Thomas	Köpke	Company	fosera
Thomas	Kyonze	Company	d.light
Charlie	Miller	Company	Solar Aid/ Sunny Money
Gladys	Okach	Company	Barefoot Power
Merron	Pillart	Company	Solarkiosk
Radhika	Thakkar	Company	Greenlight Planet
Peter	Adelmann	Independent	Private Consultant
Rodd	Eddy	Independent	Private Consultant
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Samson	Atsbha	Development Partner	GIZ
Patrick	Balla	Development Partner	World Bank
Amy	Beeler	Development Partner	USAID / Power Africa
Agnes	Dasewicz	Development Partner	USAID / Power Africa
Ben	Good	Development Partner	GVEP
Carsten	Hellpap	Development Partner	GIZ
Jechoniah	Kitala	Development Partner	SNV
Bozhil	Kondev	Co-chair/Development Partner	GIZ
Caroline	McGregor	Co-chair/Development Partner	US Dept of Energy/ Global LEAP
Itotia	Njagi	Development Partner	IFC / Lighting Africa
Aneri	Patel	Development Partner	UNF
Graham	Pugh	Development Partner	US Dept of Energy / Global LEAP
Chris	Saunders	Development Partner	World Bank
Russell	Sturm	Co-chair/Development Partner	IFC
Olola	Vieyra	Development Partner	UNEP
Tameezan	wa Gathui	Development Partner	Practical Action
Matt	Antes	Meeting Facilitator	Energetics

# APPENDIX B: WORKSHOP AGENDA

## Last Mile Distribution of Off-grid Solar Products

2-3 December 2013

German Development Cooperation Office, Addis Ababa

### STAKEHOLDER ROUNDTABLE – Day I

Time	Activity	Monday, 2 December, 2013
11:30-12:00pm	Arrival	
12:00-1:00pm	Joint lunch	
1:00pm-3:15pm	<b>Opening Session</b> <ul style="list-style-type: none"> <li>Welcome, Introductions, Workshop purpose and objectives</li> <li>Presentation: State of Market Report for Africa, <i>Itotia Njagi, Lighting Africa</i></li> <li>Company Presentations: Azuri Technologies, Barefoot Power, d.light, fosera, Greenlight Planet, Mobisol, Prosonergy, Sunny Money</li> </ul>	
3:15pm-3:30pm	Break	
3:30-4:45pm	<b>Discussion Session 1</b> <ul style="list-style-type: none"> <li><b>Retail and Distribution Chains</b></li> </ul> <p><u>Focus questions:</u></p> <p><i>What are the main <b>challenges</b> faced in retail and distribution chains?</i></p> <p><i>What <b>support is needed</b> from development partners and governments to address the main challenges and why?</i></p> <p><i>What <b>concerns</b> do you have about support from development partners and governments and why?</i></p>	
4:45pm-5:00pm	Break	
5:00-6:00pm	<b>Discussion Session 2</b> <ul style="list-style-type: none"> <li><b>Customer Services and Consumer Protection (After Sales)</b></li> </ul> <p><u>Focus questions:</u></p> <p><i>What are the main <b>challenges</b> faced in after sales?</i></p> <p><i>What <b>support is needed</b> from development partners and governments to address the main challenges and why?</i></p> <p><i>What <b>concerns</b> do you have about support from development partners and governments and why?</i></p>	
6:00pm	Adjourn	
7:00pm	Joint Dinner	

## STAKEHOLDER ROUNDTABLE – Day 2

Time	Activity	Tuesday, 3 December, 2013
9:00am-9:15am	<b>Opening</b> <ul style="list-style-type: none"> <li>Welcome, review of Day 1, plan for Day 2</li> </ul>	
9:15am-10:15am	<b>Discussion Session 3</b> <ul style="list-style-type: none"> <li>Financing</li> </ul>	
10:15am-10:30am	<b>Break</b>	
10:30am-11:30am	<b>Discussion Session 4</b> <ul style="list-style-type: none"> <li>Other topics, including Government Policy and General Awareness</li> </ul>	
11:30am-12:00pm	<b>Closing Session</b> <ul style="list-style-type: none"> <li>Overarching reactions from group</li> <li>Next steps</li> </ul>	
12:00-1:00pm	<b>Joint Lunch</b>	

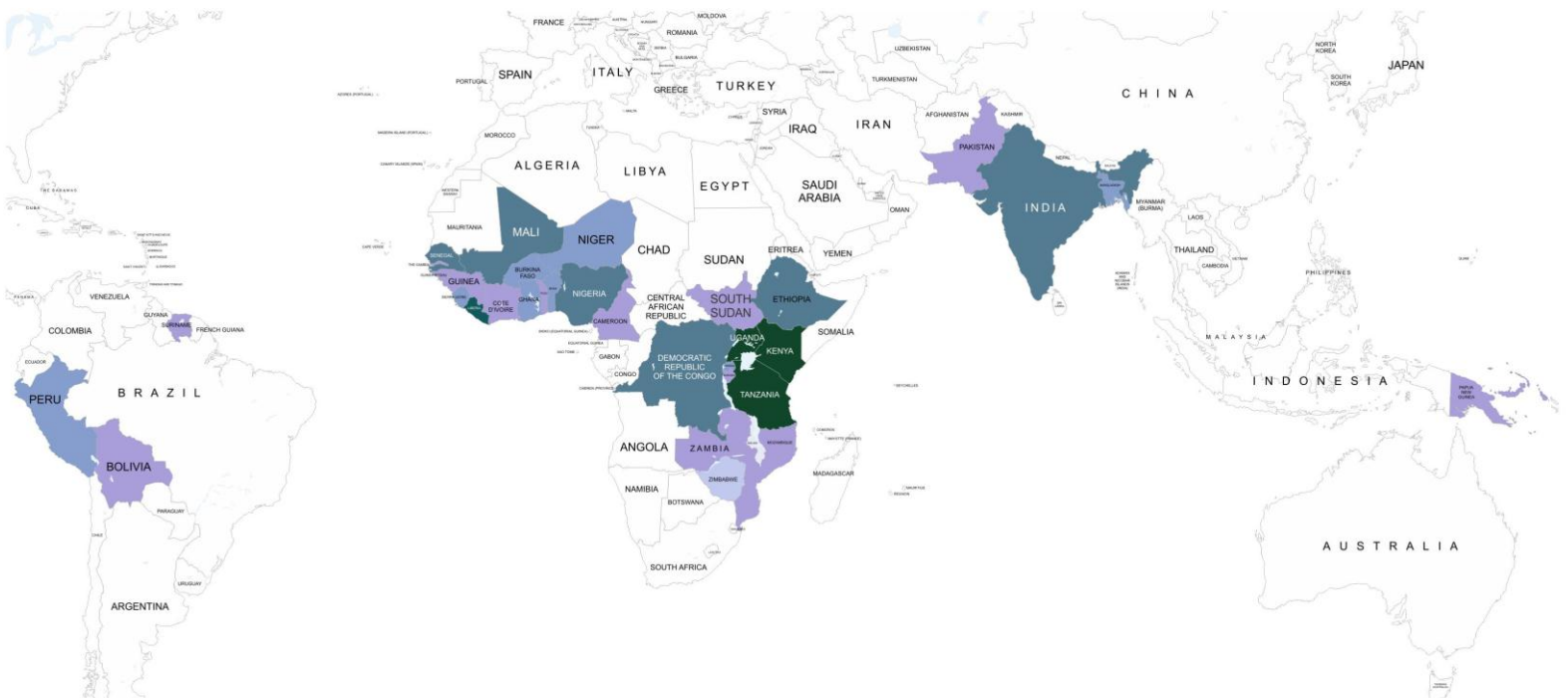
## DEVELOPMENT PARTNERS ROUNDTABLE

Time	Activity	Tuesday, 3 December, 2013
1:00pm-1:15pm	<b>Opening</b> <ul style="list-style-type: none"> <li>Purpose and objectives</li> </ul>	
1:15-3:00pm	<b>Discussion Session</b> <ul style="list-style-type: none"> <li>Key Takeaways from Stakeholder Roundtable</li> </ul> <p><u>Focus questions:</u>  <i>What are the key learnings from the topic area discussions?</i>  <i>How can donors and partners incorporate these learnings into the design and implementation of energy access programs?</i></p>	
3:00pm-3:15pm	<b>Break</b>	
3:15-4:15pm	<b>Development Partner Overviews</b> <ul style="list-style-type: none"> <li><b>Presentations:</b> Dept of Energy, DfID, Energy+, GIZ, GVEP, IFC, Practical Action, SNV, UNEP, UNF, USAID, World Bank</li> </ul> <p>Existing and planned programmes, countries of operation, budget, types of assistance, target groups</p>	
4:15-5:15pm	<b>Discussion Session</b> <ul style="list-style-type: none"> <li>Countries of Current or Planned Operation</li> <li>Areas of Potential Collaboration</li> </ul> <p>Specific opportunities for collaborative engagement</p>	
5:15pm-5:30pm	<b>Closing Session</b> <ul style="list-style-type: none"> <li>Final remarks and next steps</li> </ul>	
5:30pm	<b>Adjourn</b>	

# APPENDIX C: MAP OF DEVELOPMENT PARTNER ACTIVITIES IN OFF-GRID SOLAR LIGHTING

Note: This map shows activities underway or planned by development partners who were present at the workshop. It is meant to illustrate geographic opportunities for development partner coordination. It is not meant to be a comprehensive accounting of the locations of all ongoing activities.

Opportunities for donor coordination: Countries with current or planned development partner activities in offgrid solar lighting



Number of Development Partners with In-country Operations

- 1
- 2
- 3
- 4
- 5

GIZ	GVEP	IFC	Practical Action	SNV	UNEP	UNF	World Bank
Bangladesh	Barbados	Bangladesh	India	Burundi	Benin	Ghana	Burkina Faso
Benin	Kenya	Democratic Republic of the Congo	Kenya	Cameroon	Burkina Faso	India	Democratic Republic of the Congo
Bolivia	Rwanda	Ethiopia	Peru	Democratic Republic of the Congo	Cote D'Ivoire	Liberia	Ethiopia
Burundi	Senegal	India	Tanzania	Kenya	The Gambia	Malawi	Liberia
Ethiopia	Suriname	Kenya	Zambia	Mali	Guinea	Sierra Leone	Mali
Kenya	Tanzania	Nigeria	Zimbabwe	Niger	Guinea Bissau	Uganda	Nigeria
Liberia	Uganda	Pakistan		Tanzania	Ghana		Senegal
Mali		Papua New Guinea		Uganda	Liberia		South Sudan
Mozambique		Tanzania		Zimbabwe	Mali		Uganda
Peru					Niger		
Tanzania					Nigeria		
Uganda					Senegal		
					Sierra Leone		
					Togo		