



DEVELOPING A SUSTAINABLE COOKSTOVE SECTOR (DSCS) PROGRAM

COOPERATIVE AGREEMENT NUMBER: AID-OAA-LA-12-00005

Associate Cooperative Agreement Under:
Energy Efficiency and Renewable Energy Program (EEREP), Increasing Adoption of
Renewable Energy Leader with Associates AID-OAA-L-11-00002

**FINAL REPORT
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List of Acronyms

AOR:	Agreement Officer's Representative
DSOS:	Developing a Sustainable Cookstove Sector Project
EEREP:	Energy Efficiency and Renewable Energy Program
FI:	Financial Institution
FY:	Fiscal Year
GHG:	Greenhouse Gas
KUSCCO	Kenya Union of Savings and Credit Cooperatives
M&E:	Monitoring and Evaluation
MESPT:	Micro Enterprise Support Programme Trust
MFI:	Microfinance Institution
PMEP:	Performance Monitoring and Evaluation Plan
POS:	Point of Sale
Q1-4:	Quarters 1-4
RELWA:	Renewable Energy Leader with Associates Award
SACCO:	Savings and Credit Cooperative
VAT:	Value Added Taxes (Local Kenyan Taxes)
USAID:	United States Agency for International Development

I. Introduction and Program Overview

On September 28, 2012, The United States Agency for International Development (USAID) awarded Winrock International, a four-year associate cooperative agreement (from September 2012 – September 2016) to implement the Developing a Sustainable Cookstove Sector (DSCS) Program, under the Energy Efficiency and Renewable Energy Program (EEREP), Increasing Adoption of Renewable Energy Leader with Associates Program (RELWA). The program’s goal is to mitigate negative climate, health and other development impacts caused by the inefficient use of biomass fuels for cooking through the development of sustainable cookstove markets that will lead to widespread adoption of clean, efficient cooking solutions. The project was later extended to September 2017.

The activities in the DSCS Program were designed to contribute to Activity Areas 4 and 6 of the USAID Renewable Energy Leader with Associates (RELWA) Program (2011 – 2016), which aim to: support healthy, low-carbon solutions for household energy needs; and increase access to renewable energy financing respectively. DSCS activities also supported the “100 million homes by 2020” goal of the Global Alliance for Clean Cookstoves (the Global Alliance) and its strategic priorities for achieving sector transformation: (1) enhancing demand, (2) strengthening supply, and (3) fostering an enabling environment for a thriving market for clean cookstoves and sustainable fuels. To accomplish these goals, the DSCS program worked on two distinct, but interrelated components listed below:

- **Component 1: Coordinate, design, market and manage a “Last Mile”¹ grant competition** that reduces distribution and financing barriers to widespread adoption of improved cookstoves in Kenya.
- **Component 2: Extend the distribution pilot lessons** through implementing strategic activities that can transform the demand, supply, and enabling environment for cookstoves markets.



Partnerships between stove manufacturers, distributors and financial institutions expand stove access in Kenya

This Final Report covers all 5 years of the project, from September 28, 2012 to September 27, 2017 and summarizes activities and results achieved during the project period.

¹ The last mile is defined as the last transaction in a business-to-consumer delivery service at a point when a product is delivered to the final recipient.

II. Summary of activities and achievements

A brief summary of activities and results is included below by category of activity – the full details of the program are included in the report that follows.

Key DSCS Project Result Highlights

- Two long-term ‘green’ credit facilities established through Kenyan financial institutions to provide credit to SACCOs, MFIs and distribution enterprises for cookstove purchases.
- Nearly \$500,000 in lending by local financial institutions to provide working capital and/or consumer financing for cookstoves (KUSCCO, Equity Bank, MESPT).
- 30,000 advanced biomass cookstoves sold through DSCS financial institution (FI) partner distribution channels in Kenya.
- Over 60 trainers certified in 9 countries to deliver business, empowerment and leadership training to energy entrepreneurs and sales staff.
- Training provided by certified trainers to 668 entrepreneurs and sales staff (including 568 women) globally leading to increased sales, sales strategies and retention.
- A suite of post-training support tools developed for continued learning through remote mentorship and peer-to-peer learning.
- Three innovative consumer finance offerings piloted for stoves in Kenya (over 1500 stoves financed during pilot).
- Global study of advanced biomass cookstove distribution challenges, best practices and trends completed and disseminated.
- Cookstove Toolkit for USAID Energy Toolbox developed.

A. Kenya-based fuel-efficient cookstove distribution and financing grants (Component 1)

In 2012 the DSCS project released a call for applications from organizations to develop innovative partnerships to address two major challenges that had been identified in a 2011 market assessment conducted by Winrock for USAID in Kenya – last mile distribution and financing for enterprises and consumers. Two financial institutions, the Kenya Union of Savings

and Credit Cooperatives (KUSCCO) and Micro Enterprise Support Programme Trust (MESPT), answered that call, partnering with local manufacturers and distributors of advanced biomass cookstoves to create credit facilities that can be accessed by savings and credit cooperatives (SACCOs) and microfinance institutions (MFIs) among others to on-lend to their networks of clients for purchase of cookstoves. From 2013 – 2017, Winrock worked very closely with KUSCCO and MESPT (taking input from and coordinating with their distribution and manufacturing partners) to fine tune and expand these facilities, the details of which are included in the body of this final report below. Together with a third financial institution DSCS partner - Equity Bank, who the project supported through a grant to BURN Manufacturing in scaling up its consumer-facing "Eco Moto" solar and stove loan program - they have *lent nearly \$500,000 USD for cookstove purchases* during the project period.

All three of these facilities are continuing beyond the project period. More about the future plans for all three are included below. The KUSCCO partnership with cookstove distributor Sola Yetu caught the attention of UK-based Climate Care who acquired Sola Yetu - now Pamoja Life - and has committed an additional \$250k in financing for savings and credit cooperatives in Kenya to purchase stoves.

The three FIs have *cumulatively facilitated the sale of roughly 30,000 advanced biomass stoves* in Kenya during the project period. Generally, about a third of these sales were made with loans through these credit facilities. The financial institutions' existing aggregated customer networks led to a much higher number of stoves sold on cash than we had anticipated, although in many cases the cash sales by SACCOs and MFIs were then turned into consumer loans (so even 'cash' sales were likely financed for the end user). What was surprising to see was the high value and results that distributors and manufactures saw in the FI networks even more so than their ability to provide financing. The trust and reputation that comes with partnering with these FIs became incredibly valuable in making sales. Other lessons learned from these financing grants are included in the "profiles" of each that are available at <https://www.winrock.org/document/lessons-learned-in-cookstove-financing-and-distribution-through-formal-financial-institution-channels/>.

B. Empowered Entrepreneur Trainer Certification Program (Component 2)

Winrock also supported the training of hundreds of energy entrepreneurs by training and certifying trainers in nine countries through the empowered entrepreneur training program (EETP). Winrock developed this global certification program to train trainers at cookstove-focused companies and organizations in East Africa and South Asia, to roll out the Empowered Entrepreneur Training Handbook, which was developed by Johns Hopkins University (JHU), and the Visionaria Network with inputs from Energy4Impact and funding from the Global Alliance for Clean Cookstoves. This unique [curriculum](#) – more details on this below - builds business and leadership skills and focuses on agency-based empowerment of energy

entrepreneurs.

The DSCS project certified more than 60 trainers in nine countries to deliver this curriculum and conducted extensive monitoring and evaluation (M&E) to determine impacts on the entrepreneurs they trained looking at business and personal impacts, which are detailed below. Winrock also commissioned a Return on Investment (ROI study) for one of the training groups from Energy4Impact's US Department of State funded WIRE program, results included below. Overall this training was found to increase both sales and retention rates for cookstove entrepreneurs and sales staff, in addition to personal well-being improvements. This work will be carried forward through a partnership with the Visionaria Network and Strathmore University in Kenya, whose trainers have been certified to conduct the training for additional cookstove businesses throughout East Africa in the coming months.

Winrock, JHU and Visionaria Network also developed a suite of tools for post-training follow up support and peer-to-peer networking and learning for trainers and entrepreneurs across countries, using various open source online communication platforms. These include the Voto platform [interactive voice response tool](#), various Whats App groups and a Google Trainer Forum, connecting trainers to each other to share resources, lessons and achievements.



*Empowered cookstove sales agent
from LivelyHoods*

C. Informal financing grants (Component 2)

In addition to these two larger components of the project, over the final year of the project, Winrock realized there was still a group of consumers that we weren't reaching through formal financing channels, so the DSCS project released a call for innovative ways of reaching unbanked consumers who don't have access to formal sources of financing but who would need financing to purchase an advanced biomass stove. The resulting grants piloted in-house financing strategies, and partnerships with technology providers, women's collectives, and a microfinance institution that incorporated out-of-the box thinking to reach these populations, with over 1500 stoves financed during the short 6-month pilot period. More information on the activities of each and lessons from those pilots are detailed below.

D. Cross-cutting knowledge sharing activities (Component 2)

Through the above-mentioned activities, trends and challenges in distributing advanced biomass stoves emerged and we wanted to delve further into exactly what it takes to efficiently and effectively reach target customers at scale. To do this, Winrock conducted a distribution study

interviewing more than twenty cookstove manufacturers, distributors and financial institutions globally to discover best practices, challenges and key trends in distribution of advanced biomass stoves. That study is available at <https://www.winrock.org/document/advanced-biomass-cookstove-distribution/>.

Winrock developed content for a cookstove toolkit that will be accessible through USAID's website in the coming months – the pdf version of that toolkit is available on Winrock's website at: <https://www.winrock.org/document/clean-and-efficient-cooking-technologies-and-fuels/>. The toolkit is primarily aimed at bringing USG staff and external project developers and implementers up-to-speed on significant developments in the cookstove sector in recent years. The goal is to showcase, through accurate and up-to-date information and links, the way cookstove projects can achieve impacts across a range of sectors, from forestry, energy and environment to livelihoods and income generation, not to mention health, school feeding, and women's empowerment. The toolkit provides an overview of how the cookstove sector is evolving, best practices, and key challenges.

Finally, Winrock organized and participated in various events to share lessons from the DSCS project throughout the project period as well, including organizing a best practices event around supporting women micro-entrepreneurs in the energy sector in November 2016, two lessons-sharing events in Nairobi and DC in July and September 2017, and presenting and moderating (respectively) at the 2016 ETHOS conference and Global Alliance for Clean Cookstoves' 2015 Ghana Forum. We also supported KUSCCO's participation in a 2015 energy finance event organized by Arc Finance's USAID-funded REMMP program to share their lessons and experience from the DSCS program. See tweet included here (right) from our partner KUSCCO after participating in the Sept 2017 DC event.

What follows is a more detailed description of each of these activities and their results.



Winrock staff and partners at Nairobi event July 2017



7:37 AM - 13 Sep 2017

Component 1:

A. Kenya Cookstove Distribution and Finance Grants

The central focus of the DSCS team throughout the course of the project was on the Kenya cookstove and distribution financing grants that were awarded in late 2013 after a nearly year-long process of ground-truthing the request for applications (through an expression of interest and information gathering process), releasing the solicitation, reviewing applications and conducting due diligence of potential grantees. The overall goal of the competition was to reduce levels of greenhouse gas (“GHG”) emissions through the increased dissemination of fuel-efficient biomass cookstoves and to promote the commercialization of the fuel-efficient cookstove sector in Kenya. To achieve this goal, the following program outcomes were anticipated:

- Significant new private sector investment mobilized for cookstove distributors and retailers;
- Increased access to enterprise finance for cookstove distributors and retailers;
- Strengthened business development and financial management capacity of cookstove enterprises;
- Increased number of stoves sold through expansion of distribution and retail network; and
- Measurable reductions in GHG emissions.

One purpose of these grants was to encourage non-traditional entrants into the sector to increase collaboration and partnership between cookstove designers/enterprises and entities with expertise in retail, distribution, logistics, and financing. This call for partnership and creative solutions to overcome distribution and financing bottlenecks in the Kenyan cookstove sector produced, initially, three grantees out of over 40 applicants. Those grantees are:

- **Kenya Union of Savings & Credit Co-operatives (KUSCCO) Ltd.** was awarded a grant to develop a cookstove-specific credit facility to be accessed by Savings and Credit Cooperative (SACCO) societies to on-lend to individual members seeking to purchase cookstoves.
- **Boma Safi Ltd.**, a Kenyan woman-owned business, was awarded a grant to expand and strengthen its distribution network, which included KUSCCO member SACCOs, as well as other sales agents.
- **BURN Manufacturing Co. and the Micro Enterprises Support Programme Trust (MESPT)** partnered to create a Revolving Fund to provide financing to cookstove distributors in Kenya to alleviate the capital constraints experienced by many cookstove enterprises.

More details on the activities results of each grantee are below. Throughout the duration of the grants, Winrock offered support and guidance in the development and review of activities and deliverables, through in-person meetings, telephone and Skype calls, and email communication, providing feedback on various activities. Winrock's US-based Project Manager, Nairobi-based Project Assistant, Nairobi-based Finance Management Consultant, Nairobi-based Grants Management Consultant and internationally-based Finance and Enterprise Development Consultant provided ongoing technical assistance to grantees as needed over the course of the four years of grant activities. Winrock also monitored grantee activities through quarterly reporting, regular progress update phone calls, attending trainings and grantee events, and meeting with grantee beneficiaries as applicable. Winrock provided inputs into training and marketing materials, as well as partnership arrangements, and stepped in to help troubleshoot challenges as needed (e.g., when loan uptake was lower than expected for both KUSCCO and MESPT funds initially). In the case of KUSCCO's grant, Winrock helped KUSCCO vet new partners when the program expanded to bring on multiple new distributors. Winrock often played a mediator role when there was disagreement between partners or confusion amongst grant collaborators. Winrock helped grantees improve methods of communication to minimize the confusion or misunderstandings as well.

When deliverables fell behind, as can often occur in grants of this size and complexity, Winrock worked with each grantee to revise schedules and extend the timeframe in many cases, to ensure that expectations were high and aspirational but not impossible to achieve.

Below are details and results from each of the grants.

Kenya Union of Savings & Credit Co-operatives (KUSCCO) Ltd.

In partnership with Winrock and USAID under the Developing a Sustainable Cookstove Sector (DSCS) project, KUSCCO launched the Jiko Safi Fund (Swahili for Clean Cookstove Fund) in April 2014 to lend to SACCOs for cookstove purchases. KUSCCO pairs its staff of over 70 marketing officers with cookstove distributors selected through the program. The KUSCCO marketers work with SACCOs to help them apply for loans from the Jiko Safi Fund, while the distributor provides cookstove marketing, sales and servicing. In exchange for their support in connecting distributors with SACCOs, distributors pay a commission to the KUSCCO marketers for cookstoves sold through the program. Cookstoves from international manufacturers BURN, EcoZoom and Envirofit are marketed through the program.

*Under the DSCS grant, the **KUSCCO network has sold nearly 15,000 improved cookstoves to its SACCO members, providing more than \$170,000USD in credit and mobilizing US \$55,000 in SACCO savings for cookstove purchases with no loan defaults during the project period.***

The Jiko Safi Fund began in partnership with a single distributor – Boma Safi (see below) - with presence in the Nairobi, Rift Valley and Western regions of Kenya. KUSCCO originally set the loan tenor at six months and six percent interest, with a capped on-lending interest rate of ten percent to individuals purchasing cookstoves through the SACCOs on credit. The SACCO earns interest on cookstove loans, as well as a margin on products sold, while the KUSCCO marketers are paid a commission on all stove sales. As the program grew, new distributors and cookstove products were added to increase geographical diversity as well as to offer a broader product mix to better meet SACCOs’ needs (phase II, 2015-2016). The five new distributors brought on during this phase were Sola Yetu (recently acquired by Pamoja Life), iSmart Kenya, EcoZoom, Envirofit, and Golden Services Organization. Each was then offered a separate marketing grant from Winrock to support their incorporation into the program, although only Sola Yetu, iSmart and EcoZoom took advantage of this offer. Marketing grants were used primarily for marketing materials, logistics of attending KUSCCO marketing events, providing demo stoves for KUSCCO marketing staff, and providing training for KUSCCO staff on specific stove/product features.

There was significantly greater need for marketing and awareness activities by KUSCCO marketing staff and distribution partners than original anticipated, and KUSCCO put a great deal of energy into marketing the program. To facilitate program sales, KUSCCO marketers invited qualified distributors to all-member general meetings at SACCOs, where the distributor could



Sola Yetu sales agent presents to KUSCCO regional marketing teams

demonstrate the product and SACCO members could express interest in purchasing cookstoves. KUSCCO also developed several marketing materials over the course of the grant, including various flyers (see below) and a product catalogue, as well as FAQs and marketer ‘cheat sheets’ that were used internally to remind the KUSCCO marketing team of the main loan and product features.

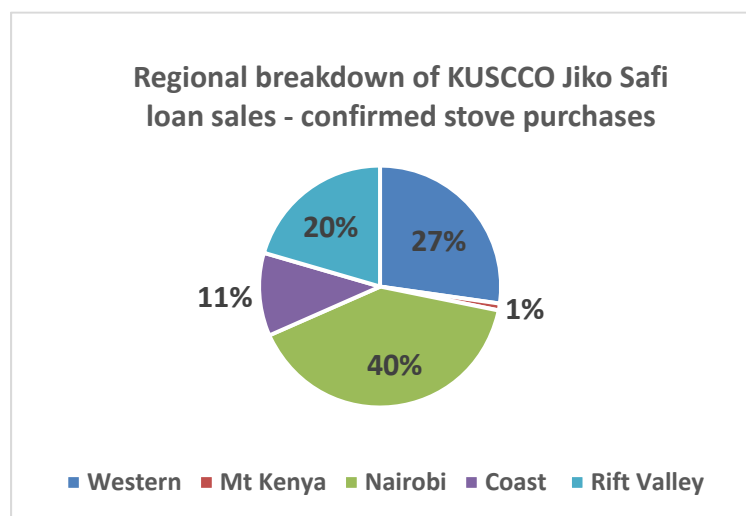
During Phase II KUSCCO partnered with two radio stations which aired [Jiko Safi fund ads](#) asking interested consumers to text the name of their SACCO to a specific number that KUSCCO could track on a daily basis (as the ads were airing) for follow up. The ads included both an acted script recording as well as a talk-up spot by the radio announcers during key listening times. Nearly 1000 SMS messages were received during the one week radio campaign.

KUSCCO engaged its internal communications team to include information and news about the Jiko Safi Fund on its social media pages. An example of social media outreach from KUSCCO is included here (right). KUSCCO also started an internal newsletter to incentivize and motivate marketers to increase loan and stove sales by highlighting top marketers quarterly. It also provided spotlights of distribution partners and news on the program progress.

One of the biggest surprises in this project was the large number of stove sales mobilized by cash basis rather than through loans. The assumption had been that creating a fund with a lower-than-market interest rate would attract large numbers of applications from SACCOs. However, many SACCOs still chose to purchase products with cash rather than take loans. Part of the reason was the low price of the products vs. requirements and time involvement in taking the loan. For SACCOs with cash on hand they preferred to satisfy member demand using existing resources rather than go through the loan process. KUSCCO adjusted lending procedures to create a more

streamlined process but even with this, the percent of stoves purchased on cash through KUSCCO's network of SACCOs fluctuated between 20 and 30%. Of the 14,658 stoves confirmed purchased by SACCOs through this project, 21% (3,142) were purchased by SACCOs with loan funds from KUSCCO. However, an important note to include here is that, although the majority of SACCOs are buying stoves with cash, many are on-lending to their members to purchase the stoves. From a consumer finance perspective, the KUSCCO distribution network greatly increased the number of stoves being purchased by SACCOs and thereby increased the available credit for stoves for end users. Some SACCOs may sell stoves on cash, but that's not the primary function of SACCOs and we can assume conservatively that ~50% of these 15,000 stoves are being sold to members on credit from their SACCO.

For the loan sales, the largest amount of confirmed stove purchases through KUSCCO loans was in Nairobi region. However, there was also good demand for the loans in Rift Valley, Coast and Western regions. One challenge was that, at the beginning primarily, there was some confusion about what the loan funds could be used for and where stoves should be purchased from. For that reason, we are only counting stoves sold through 'loans from KUSCCO' if we were able to confirm the stove purchases through records and reporting at the SACCO that took the loan.



In Phase III of the program (2017 -), KUSCCO recognized a need for larger loan sizes (an effort to attract more loan vs. cash applicants) and a more diverse offering of products to SACCOs. To this end, KUSCCO added solar products and changed the borrowing limit to five times SACCO savings (up from 3x). To make the loan more sustainable they increased the interest rate from 6% to 10% and removed the 10% on-lending cap. They've also introduced a line of credit whereby a SACCO can take multiple loans up to a maximum credit limit without the need for additional due diligence or loan processing. KUSCCO believes that adding new products, increasing the borrowing limit, and allowing SACCOs to meet member demand on a rolling basis will offset any potential loss of demand from the increased interest rate. The other major change was a switch to what they call a "stocking loan" in which SACCOs no longer receive a check from KUSCCO (as they did in phases I and II) but now receive products in the amount of the loan directly from the distributor. This change was put in place to keep tighter control over what products were being purchased with the KUSCCO loan funds.

Also in phase III, KUSCCO is switching back to working with one primary distribution partner – Pamoja Life, based on performance during phase II and in agreement with local manufacturers. Pamoja Life originally started with KUSCCO as Sola Yetu – a small distributor with just three sales staff at the time of signing on to the KUSCCO partnership. Sola Yetu created an approach to KUSCCO’s network that catalyzed its stove sales, growing to an average 1,200 cookstoves a quarter. This growth led to its purchase by Pamoja Life, a UK-based Climate Care company. Now the sales team exceeds 100. Sola Yetu’s success is due, to a large extent, to its commitment to the KUSCCO network, its guarantee to deliver products anywhere in the country within 48 hours, and its assigning a dedicated sales force to work with the KUSCCO marketers, as well as its timely payment of incentives.

In May 2017, an MOU was signed by KUSCCO and Pamoja Life to work together promoting cookstoves and other green energy household products, with Pamoja providing \$250,000 USD additional funds to support lending to SACCOs. This ensures sustainability of Winrock’s work with the Jiko Safi Program going forward. This was first announced publicly in the Kenyan Daily Nation, which specifically mentioned the initial program supported by USAID through Winrock <http://www.businessdailyafrica.com/markets/Kuscco-in-deal-to-give-members-solar-lighting/539552-3834876-ofu0ml/index.html>.



SACCO members with their new cookstoves

Results of the KUSCCO Jiko Safi Loan program:

- ~15,000 charcoal and wood stoves sold through KUSCCO network (21% through loans to SACCOs)
- Over 170,000 USD (17M Kenyan shillings) in loans disbursed to SACCOs
- ~\$55,000 USD in savings mobilized from SACCOs
- 0% default
- Direct marketing and outreach to over 30,000 individuals

- 7 stove varieties (mix of wood and charcoal from three manufacturers) and 10-solar products being offered. Over 90% of the stoves sold were charcoal stoves.
- \$250,000 in new funding committed by Pamoja Life (through UK-based Climate Care)

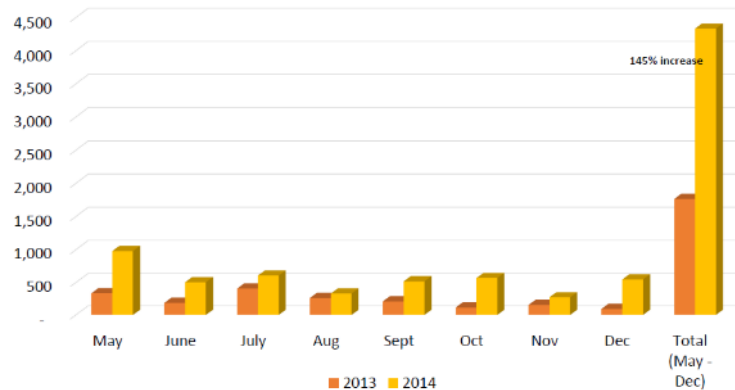
Winrock and KUSCCO created [a video](#) that explains more about the Jiko Safi Fund. More lessons from the KUSCCO Jiko Safi fund grant are included in the KUSCCO Profile available at: <https://www.winrock.org/wp-content/uploads/2017/09/KUSCCOProfile.pdf>

Boma Safi Ltd.

Boma Safi was the original distribution arm of the KUSCCO Jiko Safi Fund. Boma Safi received a grant from Winrock to strengthen internal processes and capacity through training and home office/logistics support. Boma Safi's grant lasted from October 2013 – December 2014. This was ended earlier than originally intended due to unanticipated staff turnover and limitations in organizational capacity. However, during that 15-month grant period, the following results were achieved. Boma Safi:

- ***Effectively doubled its average stove sales***. From the launch of the Jiko Safi Fund in April 2014, Boma Safi averaged 1433 stoves per quarter (through the end of the grant), compared to approx. 750 stoves sold per quarter in 2013. Purchase of stock through the grant ensured more consistent supply and reduced outages.

Boma Safi – increase in sales 2014 vs. 2013
(data only for post-JSF launch, May - Dec 2014)



- ***Reached nearly 12,000 people through marketing activities***, through meetings at SACCOs and other potential client gatherings, distributing new marketing materials (over 1,000 posters and 5,500 brochures) highlighting the KUSCCO partnership.

- *Increased its sales promoter roster from 120 at the start of the grant to 214 by September 30, 2014 across five counties.*
- Signed point of sale (POS) agreements with dozens of new SACCOs.
- Head office staff were trained in inventory management and sales staff were trained on marketing and sales strategies by Integral Advisory.
- Worked with Winrock's Finance and Enterprise Development Specialist on sales targets, POS recruitment targets, staffing plans, and developing internal systems for forward planning, and sales and recruitment incentives.
- Supported training of the KUSCCO marketing agents for the Jiko Safi program and participated in early marketing and sensitization events for SACCOs.
- Developed a plan for stove consignment at non-SACCO points of sale.
- Purchased inventory management software for Boma Safi head office.



Boma Safi sales tent on market day

BURN Manufacturing Co.

BURN's originally-awarded grant ended up dividing into two separate grants – one that was managed by BURN and included establishing the credit facility for distributors with MESPT, and also supported the scale up of a consumer financing program (Eco Moto) through Equity Bank together with Micro Energy Credits (MEC). Through the course of the grant it was mutually determined with BURN that, after the initial credit facility with MESPT was established, the remaining grant funds for the credit facility would be transitioned over to a second, direct grant with MESPT to continue managing the facility with direct support from Winrock. After BURN's grant ended in December 2015, through August 2017, Winrock supported and worked with MESPT directly on that credit facility. This section will highlight the activities and results of those two activities separately. In addition to the activities and results listed below, grant funds were used to support marketing efforts aimed at both the Eco Moto and MESPT loan programs.

Eco Moto Loan Program (with Equity Bank and Micro Energy Credits)

The Eco Moto Loan began as a partnership between Equity Group Foundation, Micro Energy Credits and BURN Manufacturing. In the initial program design, MEC energy officers worked directly with Equity Bank branches to promote the products. Equity created a simplified one-page loan application form, allowing qualified customers to get a loan within 24 hours. Flexible loan terms were offered for up to 12 months, with customers taking an average of three to six months to repay. With support from DSCS through its grant to BURN, the program scaled to more than 100 Equity branches across Kenya, at which point the model of using MEC energy officers to market and manage product sales at branches proved costly and ineffective due to the limited sales generated through branches, which tended to have low foot traffic.



Equity loan officer with Eco Moto application

In response, Winrock supported Equity to shift its sales focus from branch offices to its network of 30,000 Equity Agents, small retail shops authorized to sell Equity products and services. Under this expanded model, MEC energy officers train and offer sales support to onboard new Equity Agents who are then responsible for direct sales to customers. Loan forms were taken to Equity branch officers for processing and approved loan recipients received a voucher for the stove, which they could redeem at the Equity Agent shop.

During the project period, roughly 30% of the total sales through the Eco Moto program were on credit and the others were purchased in cash. A 100-shilling per stove sale incentive program was piloted with 134 Equity Staff (loan officers and others) from spring 2015 through the end of the grant in December. 134 Equity Staff (loan officers and others) participated in the 100-shilling incentive program. However, from September – December 2015, 61% of participating staff sold fewer than 10 products each, including 27% that only sold 1 or 2. Only 14% of participating sold more than 20 products each during those months. When participating staff were surveyed, 50% of staff had no complaints about the program and 30% requested larger commissions. 75% said diminishing sales were a result of customer demand for the products.

At the end of the project period, the Eco Moto loan was set up to be accessible through Equity Bank's mobile 'Equitel' platform, which would allow customers to apply for and receive a loan anywhere in the country on their smart phone. This was officially launched in June 2017 and

includes a reach of 2.5 million subscribers on the Equitel network. This is expected to drastically reduce the transaction costs of taking out a cookstove loan for the customer and the bank staff.



Equity Eco Moto Loan branded flyer

Results of the Eco Moto loan program grant to BURN in partnership with MEC and Equity Bank:

- 8,026 BURN Jikokoa stoves were sold through Equity Bank during the grant period. However, since the end of the grant Equity Bank is now reporting **11,500 stoves sold through the Eco Moto loan program including post-grant sales, with more than \$100,000 USD in credit provided to cookstove purchasers.**
- At the end of the grant period, the program was active in 117 branches out of 170 total.
- The repayment rate for customers purchasing on credit was 100%. There were no customers in default as part of the Eco Moto Loan program as of the end of the grant.
- By the end of the grant, 89 Equity Agents were onboarded to the program.
- MEC secured a Carbon Purchase Agreement with the Swedish Government specifically for the Equity Bank program. The proof of concept that was supported through the Winrock/USAID grant allowed the program to grow to the point where it could attract this kind of attention.

More lessons from the Equity Bank Eco Moto Loan program are included in the Equity Bank Profile available: <https://www.winrock.org/wp-content/uploads/2017/09/EquityBankProfile.pdf>

Grant funds to BURN also supported the development of its Echo Mobile SMS system for tracking warranties and communicating with customers through surveys. At the end of the grant the total warranty registration was 35,916 clients – a cumulative registration rate of 29% for sales during that time, with a 33% registration rate in the final quarter of the grant. This grew from an initial rate of 10% when the system was launched. This database can be used to evaluate any number of variables, including region, date of purchase, distribution channel, gender, etc. This data is useful for market intelligence. Surveys are administered through the platform for market research on new products, marketing and impact surveys.

Through BURN Manufacturing's Echo Mobile Platform, the Equity Bank Eco Moto loan program was able to survey more than 400 customers on their mobile phones (who had purchased either a BURN Jikokoa stove or a solar lantern) to gather key customer feedback that helped inform future marketing and distribution efforts. Through this survey, they determined:

- Average cost savings from using the stove or solar light:
 - ~\$10 USD per month = return on investment (ROI) of 334% in the first year per family
- What customers are using savings for:
 - school fees, repaying existing loans, expanding businesses, food, other
- What they like best about their clean energy product:
 - saves money #1 – 59% of respondents
- Impact of available financing on decision to purchase/opinion of FI
 - 66% said yes, the loan helped them decide to purchase the product
 - 96% said it improved their opinion of Equity Bank

MESPT Cookstove Credit Facility

The MESPT cookstove facility was officially launched in 2014, with prep work developing the terms and conditions of the loan and ensuring agreement from all partners leading up to that in the early months of the project (2013).

MESPT was selected by BURN to partner on this grant to create and manage a loan fund targeted to BURN distributors in need of credit for larger stock purchases and to facilitate extended payment terms for distributors. In addition to the distributor lending component, MESPT began offering credit for cookstove purchases to its MFI clients to on-lend to their clients. A revolving credit facility was created offering financing at 13% interest for



MESPT visits BURN stove factory

both BURN distribution companies and MESPT financial institution clients for loans ranging from \$2,500 to \$50,000 USD.

After moving the grant to a direct agreement with MESPT in late 2015, the program now supports distribution of both wood and charcoal cookstoves ranging from around \$25 to \$70 USD from BURN Manufacturing, EcoZoom, Envirofit and BioLite. Under the DSCS project, **MESPT disbursed \$222,400 USD in loans** resulting in the purchase of roughly 4,000 cookstoves as of the project end date, with additional sales ongoing. In addition to these cookstove sales through its financing facility, MESPT's introduction of manufacturers to MFIs throughout Kenya has meant additional cash-based cookstove sales, for those financial institutions with available resources to purchase stoves without a loan from MESPT. Unfortunately, those cash sales were not captured in MESPT's reporting, but given what we know about the percentage of sales through KUSCCO at ~20-30% as loans (of 15,000 sold), the impact of introducing stoves through these new financial institution networks can have a large impact on cash purchases as well.

Distributor interest in the fund was lower than anticipated for various reasons. Many distribution companies expressed an aversion to paying interest on a loan, instead choosing to purchase small quantities of cookstoves directly from manufacturers more frequently. Another was the availability of "free" credit within the Kenyan market. The MESPT program initially targeted cookstove distributors, offering them access to credit at 13 percent. When engaging these distributors, MESPT found low levels of interest in the loan due to existing access to interest-free capital from grant funders and Kiva, a lending platform that offers credit at zero percent interest. Moreover, MESPT's lending requirements were not well suited for most distribution companies sourced in the initial pilot with BURN, many of whom were relatively new distributors who could not meet MESPT's requirements for multi-year audited financials and strong collateral.

MESPT modified its lending requirements as a result of feedback from early applicants and clients, primarily an effort to improve speed and efficiency in processing loans. As a result, they were able to change a two-month appraisal and disbursement process to just around two weeks on average. The biggest change at MESPT was packaging the cookstove loan as a top-up to larger green financing and general lending loans. This saw a significant



The flyer is for the MESPT Revolving Fund for Improved Cook Stove Financing. It features the MESPT logo at the top, followed by the title. The main text describes the fund's purpose: to facilitate the expansion of market opportunities for improved cook stoves in Kenya, promoting environmental conservation, health safety, and income levels. It specifies the target group as Micro Finance Organisations, Small and Medium Distributors, Not for Profit Organisations, and Community Based Organisations. A key highlights section at the bottom lists: 5M Maximum Loan amount, 12 MONTHS Maximum loan tenor, and 13% Interest rate on reducing balance.

MESPT
MICRO ENTERPRISES SUPPORT
PROGRAMME TRUST

**Revolving Fund for
Improved Cook Stove Financing**

Micro Enterprises Support Programme Trust (MESPT) has a strategic focus on **green growth** through **enterprise development**. For this reason, we have set a **revolving fund** to facilitate the **expansion** of market opportunities of **improved cook stoves** in Kenya. This will promote the sustained accessibility of this new technology which has been proven to contribute positively towards **environmental conservation**, reduction of **health hazards** from traditional sources of fuel and enhancement of **income levels** of communities through **savings** and business opportunity from trade.

Target Group
The revolving fund is designed to be utilised by Micro Finance Organisations, Small and Medium Distributors, Not for Profit Organisation and Community Based Organisations willing to distribute various brands of Improved cook stoves within Kenya.

KEY HIGHLIGHTS

5M Maximum Loan amount	12 MONTHS Maximum loan tenor	13% Interest rate on reducing balance
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MESPT cookstove fund marketing flyer

increase in interest and disbursements in the late stages of the grant. This approach allows for synergies between the extensive diligence process MESPT undertakes for a larger loan and the ability to add lower cost items such as cookstoves to the loan, thereby reducing transaction costs.

Results from the MESPT cookstove financing facility:

- ~4,000 stoves financed through loans (during the project period) with additional disbursements made in late 2017 anticipating another 4,000+ stoves to be purchased in the coming months.
- \$222,400 disbursed in loans to MFIs and cookstove distributors for the purchase of cookstoves
- 16% default (due to unforeseen changes in the MFI's ability to move products because of VAT and product price changes).
- 4 cookstove manufacturing partners
- 16 sensitization events and various client visitations as well as various newspaper and other advertisements.

More lessons from the MESPT cookstove credit facility program are included in the MESPT Profile available at: <https://www.winrock.org/wp-content/uploads/2017/09/MESPTProfile.pdf>

Component 2: Strategic activities to transform demand, supply, and enabling environment for cookstove markets.

This component included five strategic activity areas, within which specific activities were identified, prioritized, and developed in coordination with USAID during program implementation. The five strategic activity areas are:

1. Assessments, studies and evaluations
2. Technical assistance
3. Pilot projects and innovative approaches
4. Production and dissemination of best practices and lessons learned
5. Gender and women's empowerment activities

B. Empowered Entrepreneur Training Program (EETP)

In selecting activities for inclusion in the DSCS project under Component 2, Winrock was most interested in activities that would support the scale up of proven approaches in distribution and financing for cookstoves. One particular training curriculum caught our attention because it had achieved positive results through a previous randomized control trial, had the potential for scale

through Winrock's networks of cookstove distributors in Kenya and elsewhere, and it specifically addressed activity area five above – gender and women's empowerment activities. This training curriculum – the Empowered Entrepreneur Training Handbook – became the basis for Winrock's Empowered Entrepreneur Training Program.

In 2014, DSCS partner Johns Hopkins University (JHU) conducted a [randomized-control trial](#) in Kenya, not associated with the project, which found that agency-based empowerment can increase cookstove entrepreneur sales and customer satisfaction. These findings corroborated positive agency-based empowerment impacts on health, development and well-being found in other sectors². Based on these findings and with support from the Global Alliance for Clean Cookstoves (Alliance), JHU and the Visionaria Network (Visionaria) developed the Empowered Entrepreneur Training Handbook (EETH) in 2015, which was made publicly available on the Alliance's website. Although developed for use in the cookstove sector, the curriculum is also applicable to entrepreneurs selling other technologies.

Recognizing that the handbook was a valuable resource unlikely to be utilized without professional support to roll it out, Winrock developed a series of Empowered Entrepreneur Training Programs (EETPs) in partnership with JHU and Visionaria to help strengthen entrepreneur capacity throughout the clean energy value chain, focusing on key business, empowerment and leadership skills.

These programs use the EETH curriculum, centered on agency-based empowerment, which enhances an individual's capacity to create and focus on goals, and take advantage of opportunities when they arise. EETPs aim to enhance the agency and abilities of local entrepreneurs and sales agents, especially female entrepreneurs, so that they can create viable businesses and scale clean cooking and energy solutions globally. The trainings build in-house expertise at local businesses involved in the cookstove value chain so that they can create empowered entrepreneurs and sales agents with strong business and leadership skills.



Entrepreneur participates in Tree of Life activity as part of EETP roll out

The DSCS EETPs included three phases, each with specific objectives:

(1) Empowered Entrepreneur Trainer Certification Program:

- Develop in-house expertise at local enterprises to train sales staff and entrepreneur partners on key business, empowerment and leadership skills; and

² Including on urban and disenfranchised women in Kenya; women living in Mathare slums in Kenya; HIV positive pregnant and lactating women in India; and women engaged in sex work in India.

- Provide trainers with gender-sensitive tools and facilitation techniques.
- (2) Training for entrepreneur/sales networks:
- Roll out training to hundreds of male and female entrepreneurs and sales agents.
- (3) Monitoring of business, personal growth and well-being impacts of the training:
- Collect gender-disaggregated data on the impacts and share results with the sector.

The team chose a cascade (or training of trainers) training model to build capacity within clean energy organizations to train both women and men entrepreneurs and sales agents on the EETH methodology, in the hopes that the same positive results from the randomized control trial could be achieved with an additional level of training.

To select organizations to be trained, Winrock released public call for relevant organizations in the region to participate, and launched a formal application process which included required participation in a webinar detailing the program and participation requirements. Winrock selected organizations based on the following criteria: 1) there were sufficient trainers with previous training experience, 2) there was a network of relevant sales agents or entrepreneurs to train; 3) there was willingness and ability to roll out the training post certification by the organizational leadership.

Each selected organization nominated two to three trainers, and those trainers were required to 1) complete the Trainer Workshop preparation by reviewing EETH sections and complete pre-workshop questionnaires, 2) participate in a five-day in person training of trainers (ToT) workshop including training, facilitation practice, and action planning, 3) complete an on-line competency quiz and field practicum as well as five weeks of post-training homework on topics related to empowerment and leadership content before receiving their certification.



Enthusiastic and active participation at India training of trainers workshop

The first EETP included a five-day in-person training of trainers (ToT) in Nairobi, Kenya (August 2015), led by the Empowered Entrepreneur Training Handbook authors, Dr. Anita Shankar and Genevieve Smith, with participants from Kenya, Nigeria, Senegal, Tanzania, and Uganda. The second EETP included an in-person ToT in Bangalore, India (March 2016) with participants from India, Bangladesh, Nepal and Indonesia. Trainees who completed the full certification received up to \$1,000 USD in reimbursed training expenses to roll out the training to their networks, and also tracked and collected M&E data on business indicators, and personal growth of the entrepreneurs and sales agents who were trained.

Observing that most of those trained under the first two EETPs rolled out the training within their own organizations, Winrock identified a need for independent trainers who could be hired by interested organizations going forward, who might not have trainers on staff to provide this type of training. Winrock developed a third ToT focused on independent trainers, to build capacity for continued EETP training in Kenya and elsewhere in the East Africa region. This third ToT took place again in Nairobi, Kenya (February 2017), focusing on training professional trainers from Strathmore University and a local training consulting group called GetResources.

In total, 10 of the 11 participating groups that attended the Kenya 2015 training rolled out their full training to entrepreneurs or sales staff. The numbers of entrepreneurs trained by Kenya 2015 ToT certified trainers are:



Trainer leading a leadership exercise at Kenya training of trainers workshop

	Country	Number of training days	# of Male Participants	# of Female Participants	Total Participants
SNV	Kenya	3	10	13	23
AEST	Uganda	6	9	14	23
	Uganda	5	0	33	33
LivelyHoods (iSmart)	Kenya (Kawangware)	3	20	4	24
	Kenya (Makadara)	3	11	8	19

CARE TZ (with local partner Praxis)	Tanzania	5	9	16	25
Sola Yetu	Kenya	4	5	5	10
Envirofit	Kenya	4	0	Unconfirmed (internal reporting issues)	Unconfirmed (internal reporting issues)
Practical Action / SCODE	Kenya	~3 (integrated into existing curriculum)	0	280	280
Solar Sister	UG, TZ, NG	1	4	36	40
Energy4Impact	Kenya	3	6	43	49
Total			74 (confirmed)	452 (confirmed)	526 (confirmed)

With the exception of Solar Sister (which specifically reported a 7-hour training day), we are assuming an 8-hour day for each training (based on the agendas provided by each group during pre-training discussions). Based on this, we estimate that the Kenya 2015 ToT training roll-out has resulted in **2108 person-hours of training for men and 11,396 person hours for women entrepreneurs and sales staff.**

In total 142 entrepreneurs (26 men and 116 women) have been trained by 7 groups who attended the India 2016 ToT:

	Country	Number of training days	# of Male Participants	# of Female Participants	Total Participants
CRT/N	Nepal	5	0	20	20
CRT/N	Nepal	5	1	19	20
Kopernik	Indonesia (eastern)	2 empowerment only	0	6	6
	Indonesia (western)	3 days (21 hours) empowerment & leadership	0	4	4
SSP	India	3.5 (26 hours)	0	17	17*
CLEAN	India	3.5	11	2	13
Pollinate Energy	India	3.5 (Kolkata)	2	8	10
		3.5 (Bangalore)	4	10	14
		3.5 (Hyderabad)	8	2	10

Envirofit	India	3	0	8	8
VERC	Bangladesh	6	0	20	20
Total			26	116	142

**Includes entrepreneurs only – also trained 8 staff and other trainers*

Assuming an 8-hour day for each training (which is reasonable based on the agendas provided by each group during pre-training discussions), we estimate that the India roll-out has resulted in **740 person-hours of training for men and 3950 person hours for women entrepreneurs and sales staff.**

Through these three EETPs, 67 trainers were trained from over 20 organizations in 9 countries (Kenya, Tanzania, Uganda, Senegal, Nigeria, India, Bangladesh, Nepal, and Indonesia). These certified trainers in turn have trained 668 entrepreneurs/sales agents. These **668 entrepreneurs and sales staff received cumulatively 18,194 person hours of training** (15,346 person-hours of training for female entrepreneurs/sales agents as a result of USAID assistance, and 2,848 person-hours of training for male entrepreneurs/sales agents).

Because we had heard anecdotally that these certified trainers were training others both within and outside their organizations in the empowered entrepreneur curriculum, we sent a survey out to our trainer network to try and capture these additional trainings. Trainers responded that ***they have cumulatively trained more than 1000+ additional people in these concepts*** at NGOs and enterprises (both energy and non-energy related), church groups, orphanages, schools, family and friends. Some actually started their own training consultancy companies specifically to deliver this training content.



Kenya 2015 ToT certified trainer

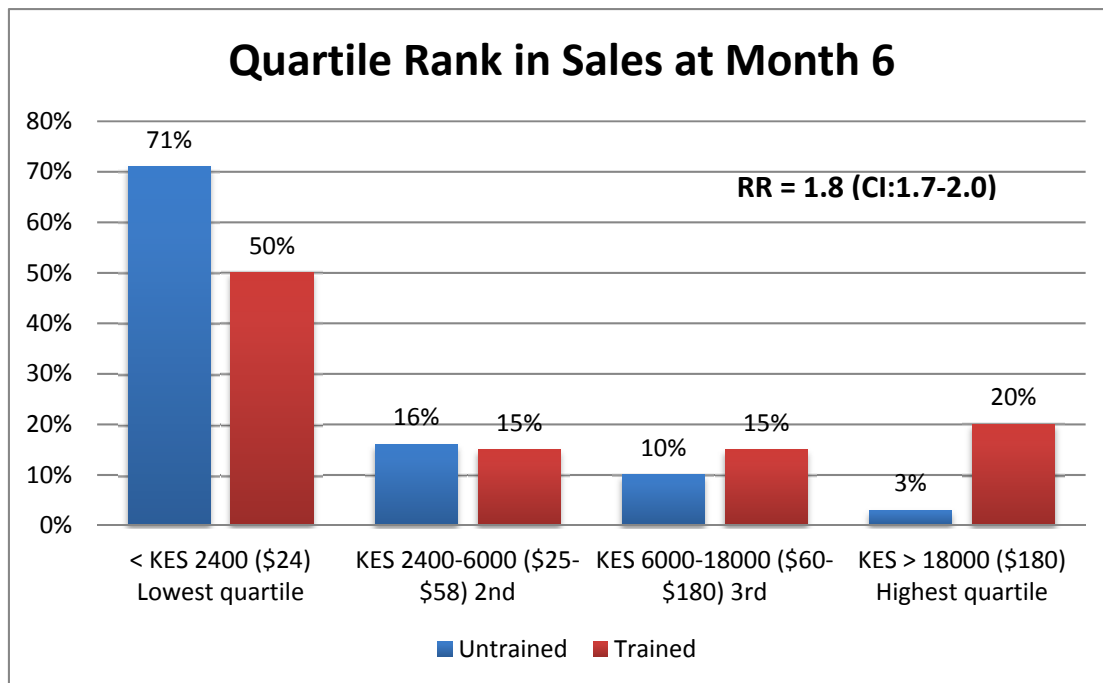
The monitoring and evaluation component of the roll out of the first two EETPs included a baseline and 6-month endline survey that examined social, contextual and behavioral data from sales staff and entrepreneurs that participated in the training conducted by those certified under the program. In addition and as feasible, we collected monthly sales data from these same participants. In those cases where prior data was available for these entrepreneurs, we examined historical sales data to follow trends in sales over time. Where prior sales data were not available, we attempted to collect sales data from similar groups of entrepreneurs who did not receive the EETH training.

Overall, our research found organizational benefits of increased sales and sales strategies, increased retention rates and increased promotion rates for most participating organizations. See chart below.

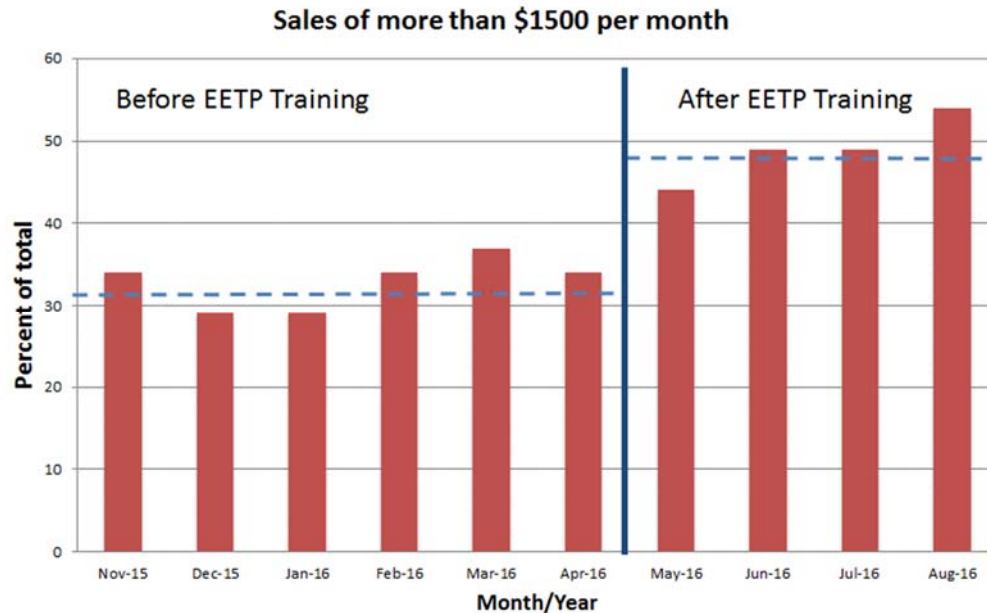
ORGANIZATION	DEPLOYMENT	ENTREPRENEURS (#)	IMPROVED RETENTION	IMPROVED SALES
EAST AFRICA				
AEST	5 days of training	24	Positive trend	Positive trend
Energy4Impact	3.5 days empowerment/ leadership	49	Stayed high	Positive trend
LivelyHoods	4 days over 2 weekends	17	Positive trend	Variable
Practical Action/SCODE	5 days of training	175	Positive trend	Positive trend
Solar Sisters	1 day of empowerment with existing monthly meetings	38	No change	No change
Pamoja Life	5 days of training	10	Positive trend	No data
ASIA				
CRT/Nepal	3.5 days empowerment/ leadership	20	Positive trend	Positive trend
ENVIROFIT, India	2 days training	10	Positive trend	Variable
Kopernik, Indonesia	2-3 days empowerment/ leadership	11	Positive trend	Positive trend
Pollinate Energy, India	3.5 days empowerment/ leadership	34	Variable	Variable

Sales benefits from trained entrepreneurs included increases in: sales volume, numbers of high sellers, numbers of sales strategies used, numbers of active sellers, and sales for active sellers. We've included the deployment information in the analysis, because the way in which organizations rolled out the training likely had an impact on their results. For example, for Solar Sister, which saw no change in retention or sales, they chose to roll out the training only as a 1-day empowerment training, whereas most other organizations rolled out the training over 3-5 days.

Practical Action/SCODE saw a 15% increase in cookstoves sales, and entrepreneurs who were trained were twice as likely to be high sellers (earning in the highest quartile). The chart below compares the 169 Practical Action/SCODE entrepreneurs trained in the EETP roll-out compared with 147 untrained Practical Action/SCODE entrepreneurs. Twenty percent of trained entrepreneurs were selling more than \$180 per month as compared to only 3% of untrained entrepreneurs.



The chart below compares sales of more than \$1500 per month for 41 Energy4Impact entrepreneurs before and after the training. After the training the entrepreneurs were more likely to be high sellers.



Part of the increase in sales and high sellers could be a result of changes in sales strategies captured in our baseline/endline analysis. As an aggregated group (not matched), for the entrepreneurs/sales staff for whom we have baseline/endline data, the following changes in sales strategies were observed:

	Baseline	Endline
No sales strategy (% of respondents)	40%	1%
1 sales strategy (% of respondents)	22%	25%
2 or more sales strategies (% of respondents)	38%	75%

With the matched analysis (comparing each entrepreneur/sales agent to his/her previous answers), we find that: 69% of those with 0 strategies at baseline jumped to 2 or more at endline, 62% of those with 1 strategy moved to 2 or more strategies, 62% of those that were already using 2 or more strategies at baseline added at least 1 more strategy. Overall **65% of entrepreneurs increased their number of sales strategies after the training**, 8% reduced the number of strategies and 27% stayed the same. For other business indicators, we saw the following improvements:

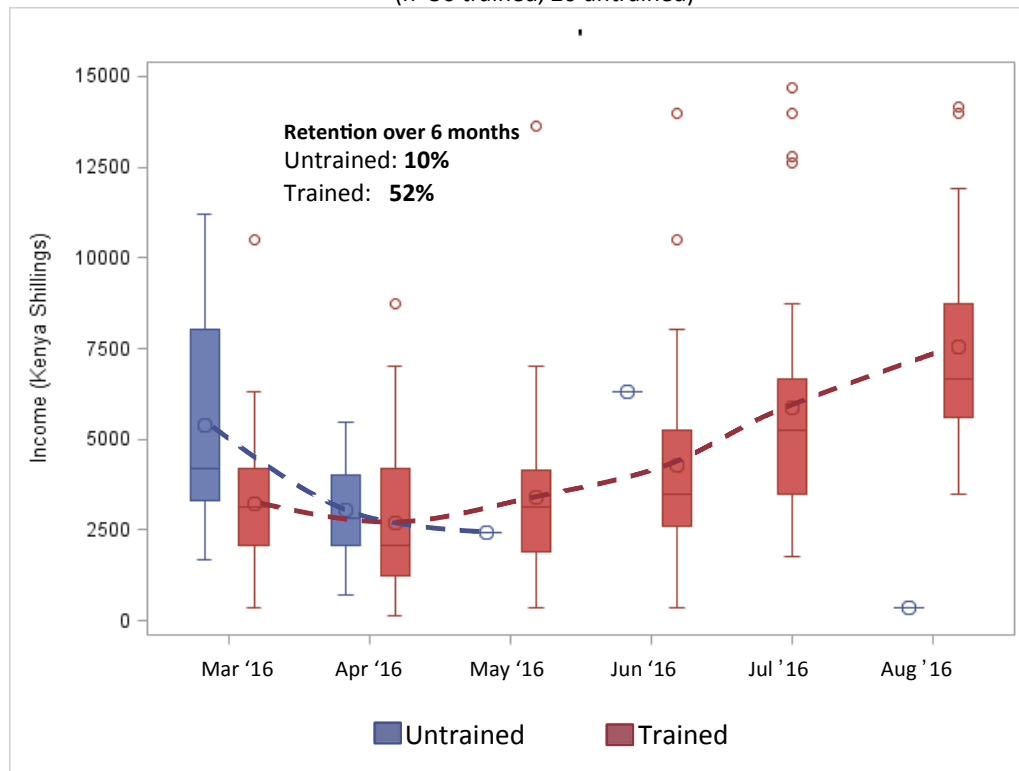
Business growth indicator	% <u>improvement</u> at endline
Keeping business records	20%
Developing a business plan	19%
Providing after-sales services	24%
Financial planning	9%

45% of entrepreneurs and sales staff for whom we have data showed improvement in at least one of these four business growth indicator categories. Combining these with the sales strategies increases reported above, we find that **75% of entrepreneurs saw improvement in at least one business growth indicator** after the training.

Many organizations also saw increased retention rates for their trained entrepreneurs. At Kopernik retention rates went from 30% to 80% following the training, and trained LivelyHoods entrepreneurs had a doubling of tenure at the organization. At Practical Action/SCODE, there was an increase of 42% in retention of trained entrepreneurs selling briquettes (as shown in the chart below) and a 23% increase in retention for those selling cookstoves.

Patterns of Briquette Sales Over Time

Practical Action /SCODE entrepreneurs
(n=56 trained, 20 untrained)



In addition to organizational benefits, we tracked changes in personal capacity for the trained entrepreneurs. Some 70% of participants report being better off in at least one category related to economic well-being (ability to feed the family, pay school fees, and/or pay rent), and 79% of participants report being better off in at least one category related to leadership qualities; as detailed in the table below.

Ability	Percent reporting being better off
Feed family	36
Pay school fees	41
Pay rent	46
Solve problems	41
Communicate with mentors	38
Support other entrepreneurs	28
Set and meet sales goals	43
Feel like a leader in my community	43

Over the course of the EETP roll-out and tracking, Winrock observed some important criteria for success. At the organizational level, we found that organizational buy-in and investment is critical since the ToT process and training roll-out are both time intensive, and training requires ongoing organizational support. In addition, retention of trainers is needed to achieve longer-term integration into existing core activities. Previous training experience for those attending ToT matters; many organizations in the household energy sector don't provide significant training beyond technical training on the products themselves. High turnover of sales staff and entrepreneurs increases costs and causes delays, as the full training can be expensive and time intensive.

In terms of scheduling and rolling out the training, Winrock found that flexibility is important, as a full 6-day (in a row) training program is often unrealistic for organizations and participants. Translating concepts into different languages was also a challenge. Trainers needed and wanted contextualization support, and the option to modularize and present the training in a menu of options.



Cookstove entrepreneurs in Indonesia participating in EETH training exercise

Winrock also identified multiple ongoing support needs beyond the training period. For trainers, it is essential to keep them engaged in topics, e.g., through post ToT homework, and other training follow-up support tools highlighted in the next section. Entrepreneurs need ongoing reflection on the material post-training (e.g., through mentorship or peer buddies).

EETP training follow up support for trainers and entrepreneurs

Over the course of the EEPT roll-out, Winrock identified opportunities to keep trainers and entrepreneurs engaged and motivated, and to refresh their skills through various low-cost information communication technology mechanisms.

WhatsApp: At the completion of each ToT, the DSCS team established a group on the popular WhatsApp mobile application to allow trainers to keep in touch with each other, ask questions, and share successes. All 3 WhatsApp groups have been widely used for these purposes (see example right).



Whats app message from certified trainer

Voto: Winrock then looked for a way to provide cost-effective refresher training of key concepts from the Empowered Entrepreneur Training Handbook after the training period. Winrock identified Interactive Voice Response (IVR) as a promising mechanism to send out refresher tips and messages, and in 2016 ran [an IVR pilot](#) with EETP trainers who had undergone the ToT to reinforce Business, Empowerment, and Leadership concepts and training methods. The pilot used the self-service Voto Mobile (<https://www.votomobile.org>) platform, which operates in all of the EETP trainer countries. Because of user-costs associated with SMS responses, tips and questions for trainers were delivered using IVR, allowing the recipient to respond to questions using their key pad at no cost.

We asked trainers what messages and tips they wanted to hear and worked with trainers and managers to develop and record the audio content. The initial pilot targeted 34 certified trainers from the 2015-2016 Kenya and India ToTs. Based on the success and positive feedback from the Voto pilot, subsequent Voto campaigns were rolled out with 23 certified trainers from the 2017 Kenya ToT; 15 entrepreneurs trained by Appropriate Energy Saving Technologies (AEST, Uganda), and 19 entrepreneurs trained by Green Bio Energy (GBE, Uganda). For the entrepreneur-focused Voto campaigns, we worked with each organization to record their own messages so that the voice the entrepreneur heard when they answered the phone was familiar.

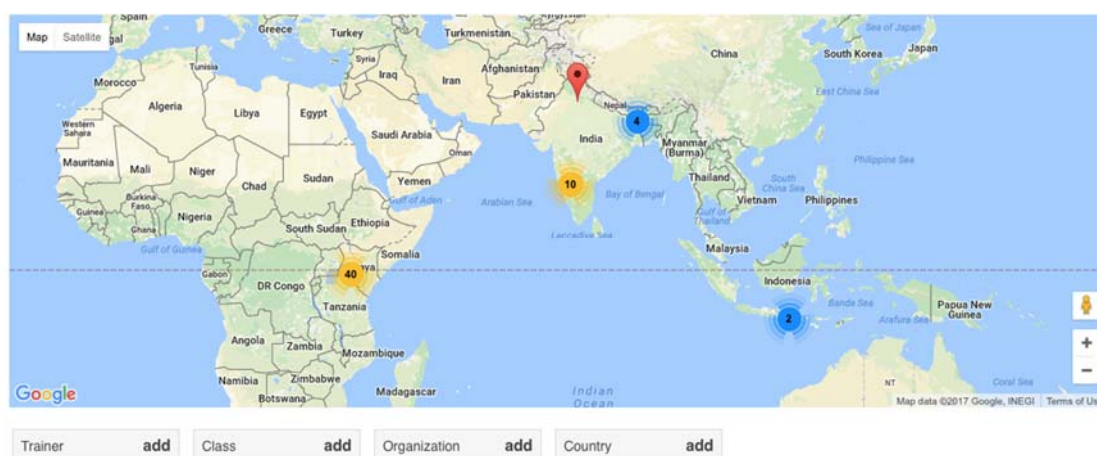
*“...Recall from the empowered entrepreneur training that your thoughts about **what you believe you’re capable of** can affect your actual abilities...**remember to stay positive and don’t underestimate yourself and your abilities to improve your business.**”*
– AEST Trainer in Voto message to entrepreneurs

Trainers receiving the calls could set their time-of-day preference (morning, afternoon, or evening), and Winrock sent SMS messages ahead of calls as a reminder, and repeated calls the next day for those that missed scheduled call time. Winrock also saved tips to a Dropbox folder (www.bit.ly/eeth-tips) so trainers could download and listen to them at will. Trainers were able to personalize this automated mentorship by choosing the messages they most wanted to hear (or could select them all, as many did!), and were given the option to record feedback and/or stories on the call.

Of the 57 participants tracked for the two trainer Voto campaigns ***an average of 52% of trainers received their call each week, and 87% of trainers successfully received at least one call*** during the campaign. Of the 28 participants who participated in the entrepreneur Voto campaign, ***an average of 71% received their call each week, and 93% of entrepreneurs successfully received at least 1 call.***

Empowered Entrepreneur Training Forum: In response to expressed interest from certified trainers to have a common place to post questions to other certified trainers, post announcements about individual and organizational achievements or news, and share resources and tips about Handbook topics, the Winrock team developed an EE Training Forum using a Google group set up. The Forum functions like a mailing list, where posts and replies are sent to each member's email, as well as posted on the Google group website, and it's searchable and free. 70% of certified EETP trainers have opted into the group so far.

A [separate EETP training portal](#) was also developed and linked to the Google training group forum. In addition to the Forum, the training portal houses [resources developed during the DSCS project's EETPs](#) (baseline/endline surveys, agendas, presentations, audio clips etc.), and includes a Certified Trainer Map (with contact information for those trainers who wish to have it listed), and related reports and findings. The portal also includes a contact form that will alert Winrock's partner Visionaria Network to any future interest in the EETP so they can link interested organizations to local certified trainers who can be hired to conduct trainings.



Map of certified trainers from the EETP training portal

EETP Impact Research: In the final year of the project, Winrock commissioned a third-party research team from ICRW implement EETP impact research assignment to gain insight on challenges and lessons learned from organizations, trainers and entrepreneurs related to implementing and understanding the Empowered Entrepreneur Training. The team engaged eight EETP organizations directly through a mix of key informant interviews (KIIs) with members of the leadership team at five different organizations, in-depth interviews (IDIs) with trainers who participated in the trainer certification program, and focus group discussions (FGDs) with entrepreneurs from three different organizations. Additional EETP organizations were contacted through an online survey. The list of organizations and interviews is below:

Enterprise	Country	Number and type of data collection activity	Location
Energy4Impact	Kenya	1 IDI with a trainer	In-person
		2 FGDs with entrepreneurs	
LivelyHoods	Kenya	1 KII with organizational leadership	In-person
AEST	Uganda	1 KII with organizational leadership	In-person
		1 IDI with a trainer	
		1 FGD with entrepreneurs	
Centre for Rural Technology/ Nepal (CRT/N)	Nepal	1 KII with organizational leadership	Skype
		1 IDI with a trainer	
Practical Action/SCODE	Kenya	1 IDI with a trainer	In-person
Solar Sister	Tanzania/ Nigeria	1 KII with organizational leadership	Skype
Village Education Resource Centre (VERC)	Bangladesh	1 KII with organizational leadership	Skype
		1 IDI with a trainer	
Pollinate Energy	India	1 IDI with a trainer	In-person
		1 FGD with entrepreneurs	In-person
ENTERPRISES (N = 10) Respondents include: Appropriate Energy saving Technologies (AEST) LTD, Centre for Rural Technology – Nepal (CRT/N), Energy4Impact, Envirofit Kenya, Greenway, Kopernik, LivelyHoods, Solar Sister, Swayam Shikshan Prayog, and USAID’s Catalyzing Clean Energy in Bangladesh Program	Global	Google Form Survey with organizational leadership	Online

While the respondents were positive about the training overall, some of the challenges mentioned centered around length of the training, financial constraints, trainer ability to deliver the training for those with less experience going into the trainer certification program (especially the more challenging empowerment sections), adapting the training to local contexts, and cultural challenges. Recommendations for future training programs of this kind included:

- Lengthening the ToT since much of the training content is complex, nuanced, and completely new for trainers.
- Including an intensive session on how trainers should handle sensitive issues or remembrance of traumatic experiences if they arise, and that trainers must have referral services on hand.

“This batch of 20 [that were trained] has also motivated other women in the area and led to an expansion of skills. They are also leading the way for other development partners and even the municipality. This is the value of the training, not just for the 20 women but for the wider community as well.”

-EETP evaluation respondent

- Requesting that organizational leadership provide time within the trainers work day to complete homework assignments and practice trainings.
- Spending additional time working with each organization to develop a training schedule and budget that maximizes learning with limited time and resources.
- Emphasizing to trainers which exercises may need additional time during the training.
- Providing trainers with digital training materials.
- Developing specific skills and experience criteria for trainers.
- Emphasizing to organizations the importance of setting aside funds to either provide childcare or provide participants with a childcare stipend.
- Sharing results widely with all organizations that participated in the training program.

Return on Investment (ROI) study:

As demonstrated in the above M&E results for the Empowered Entrepreneur Training Program, positive impacts were measured for participants, providing evidence of entrepreneurs' personal growth and sales performance. However, because of the time and costs associated with implementing these trainings, we wanted to contribute further to making the business case for this training so that organizations and companies continue valuing and conducting these trainings beyond the life of the project. To do this, we commissioned a Return on Investment (ROI) study with Energy4Impact Tanzania and Kenya staff to answer the research question of whether the Empowered Entrepreneur Training has a positive ROI for organizations and companies in the clean cooking sector. The Winrock team worked with Energy4Impact in Tanzania/Kenya to develop metrics and research tools to measure: participants' reaction to and satisfaction with the training program; skills and knowledge gained; changes in on-the-job application, behavior change, and implementation; business impact (according to business metrics and indicators prioritized by each organization; e.g. productivity/sales, retention rates, customer satisfaction index); and the monetary value of the business outcomes of the training program. The tools include pre and post-training surveys, competency tests, and business metrics tracking. The ROI is calculated based on tracking of business metrics and tracking of fully-loaded costs or trainings ($\% \text{ ROI} = (\text{Net Program Benefits} / \text{Total program costs}) \times 100$).

Participants had a positive reaction to the training, as measured through an immediate post survey given to participants. Eighty-six percent of participants strongly agreed that the training was worth their time, and 82 percent of participants strong agreed that they learned new things relevant and important to the success of their business, as well as their personal life. Eighty-one percent of participants would recommend the training to women like themselves.

Results indicate that the training had a positive impact in knowledge, skills and attitudes that E4I sought to impact:

- The average measure of psychological grit increased by 8.5 percent, with the percent of participants confident in problem solving increasing from 65.1 percent to 81.6 percent.
- Before the training 60.2 percent of participants strongly agreed that they were motivated in work, and after the training this increased 94.2 percent.
- Prior to the training 63.1 percent of participants had a high or very high score of self-esteem, and after the training, 91.3 participants had a high or very high score.
- There was an observed increase in the percent of participants who feel that gender is a not limiting their success (52 percent prior to the training, 70.6 percent following).

Overall, we determined ***an ROI of 115.9% for the training activities*** included in Energy4Impact's WIRE project, based on reduction of mentorship time required for trained participants. Multiple program mentors reported that an additional 10 to 15-minutes³ is required to address psychological challenges (state of mind, emotional distress, etc.) for those who did not receive the empowerment and leadership training, compared to those who did. There was also a ***10.3% increase in sales*** for those trained. Before training, average monthly sales were 243,579 TSH per month and 269,628 TSH per month after training, a difference of 26,049 TSH, or a 10.6% increase (p=0.0071). In US Dollars (USD) this equates to \$107.18 USD average monthly sales prior to the training versus \$118.64 USD average monthly sales following the training, a *significant* increase of \$11.46 per month. However, given that Energy4Impact is a nonprofit and does not make a profit from increased sales, we did not include that increase in the ROI calculation. Our research indicates that the training was effective in creating other intangible benefits prioritized by the WIRE program, even though these are not readily described in monetary terms, including for example: increases in grit, confidence in problem solving, self-esteem and work motivation.

Looking forward – EETP: Based on Winrock's experience, some recommendations for future work with the empowered entrepreneur training, that we hope can be supported through others with interest in this training area include:

- Modularize the EETH and present it as a menu of options (potentially through an online tool builder)
- Integrate additional training in ToT on handling emotions from participants and identifying counseling / mental health resources
- Develop a mentorship guide on EETH topics for trainers to use with participants post training
- Continue to build out the networking component among trainers and maintain the EETP Portal and Trainer Space
- Explore digitization of certain training topics and maintain Interactive Voice Response tool

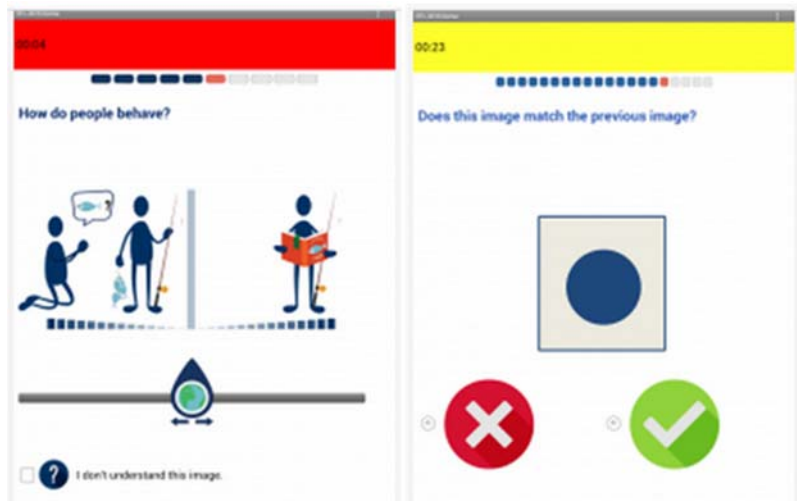
³ When reconfirming the 10-15 minute additional estimate, the WIRE program manager reiterated the fact that it was just an estimate, and that it "might also be longer than that".

C. Innovative, Informal Cookstove Consumer Financing Strategies Pilots

While implementing the financing and distribution grants with the three Kenyan formal financial institutions KUSCCO, MESPT and Equity Bank, the DSCS team noted the gap for customers interested in purchasing advanced cookstove options, but who can neither access these formal financing channels nor purchase the stove outright. For those customers, innovative informal financing strategies for household energy products are still needed, and could even be a way for this consumer group to start building credit history.

To address this gap, Winrock released a request for applications from Kenya-based cookstove manufacturers and distributors to develop innovative informal financing strategies to reach consumers that are not part of the formal banking/financing networks, and provide them with affordable financing options. We undertook three exciting 6-month pilots with the following partners.

BioLite and Juhudi Kilimo implemented a pilot designed around Entrepreneurial Finance Lab's (EFL) Psychometric Credit Scoring Tool, which evaluates the credit-worthiness of an individual's repayment potential without traditional credit information. The survey uses questions and interactive exercises to measure characteristics like business skills, intelligence, integrity and autonomy. BioLite and Juhudi piloted the use of this tool with rural borrowers interested in purchasing the BioLite HomeStove. Juhudi agents recruited clients, administered the psychometric survey, dispersed the loan, and tracked repayment, while BioLite agents provided marketing support (e.g., product demonstrations), customer training on the stoves, and aftersales service to all customers who purchased a HomeStove. BioLite also tracked customer demographics and past access to credit, their reported usage and satisfaction, and service requirements. The objective of the pilot was to demonstrate the viability of this tool for cookstove lending, thereby creating new channels for unbanked, rural smallholder farmers to access credit facilities for clean cookstoves.



Screen shots from Juhudi/BioLite psychometric credit scoring tool

Over the course of the grant, 543 clients received the BioLite HomeStove (at an average of \$75) through psychometric credit evaluation, exceeding the original target of 500. A total of 5,049 applicants were psychometrically evaluated from November 2016 through May 2017, as part of

the pilot. These were applicants for all loans (not just for HomeStoves) assessed at the 5 Juhudi branches using psychometric testing. The project exceeded its target of no more than 5% PAR, with a PAR of 4%.

During the course of the grant, Juhudi used its bulk SMS marketing platform to initiate a campaign that entailed sending SMS prompts to applicants within the catchment areas of the pilot branches, who were previously denied a loan for the HomeStove, encouraging them to apply through the new psychometric evaluation process. Juhudi conducted five radio campaigns at Kass FM, Chamgei FM, Inooro (twice), Muuga FM. Each of these stations has millions of viewers, and through the campaign Juhudi was able to record 5,000 new customer leads.

Despite trying to target previously unbanked customers, many of those who took loans did have previous experience with microfinance or Juhudi specifically, although about a third of respondents had never previously taken a loan through an MFI. That said, 95% of respondents said they would not have bought the BioLite stove without credit. To reach more unbanked customers, Juhudi expanded recruitment for that demographic segment and reduced the EFL cut-off score required for approval.

Even though the EFL testing was originally envisioned as a replacement for traditional appraisal tools, it ended up being used alongside traditional credit appraisal practices. According to the Juhudi representative responsible for this pilot project “By introducing this EFL project for the BioLite HomeStove and administering the EFL survey to clients, Juhudi has been able to more accurately understand which customers are safe and which are risky. By basing our lending decision on EFL scores, loan officers have been able to lend to people they would have otherwise rejected without impacting the quality of their portfolio. My key take away from this project is that EFL has the potential to increase the acceptance rate of loan applications, but not necessarily to reduce the turn-around time as we had previously hoped. Going forward, we will use the EFL tool as a complementary screening tool to traditional credit assessment but not as a replacement - the same way a good credit bureau score improves your chances of getting a loan but is not the sole consideration.”

One surprising discovery uncovered through the customer surveys was that the majority of customers were not using the BioLite HomeStove’s cell phone charging feature. BioLite is planning to further explore this finding, to identify any problems users might be experiencing with cell phone charging, and/or modify their marketing messages accordingly if cell phone charging isn’t a customer priority.

Based on their experiences and lessons learned through this grant, Juhudi is currently in the process of expanding the number of branches using the EFL tool as a complementary screening tool. They are also initiating a pilot SMS version of the tool, based on Equity Bank’s successful

experience to date with a similar EFL SMS pilot; achieving comparable assessment with reduced costs (via agents and tablets) and time.

LivelyHoods developed an installment payment system called LivelyHoods Installment Payment Arrangement, or LIPA. LIPA used an existing platform from a provider called Angaza Design to enable mobile money payments via M-Pesa, which were monitored and tracked. Customers made payments in the amount and frequency they wished within the 3-month repayment period, and received their product once they paid the full, retail price of the product. The goal of the pilot was to increase informal consumer financing for cookstoves to low-income consumers, thereby increasing affordability of and access to LivelyHoods products.



LivelyHoods sales agent with customer

LivelyHoods encountered their biggest implementation challenge early on, which was low initial uptake of LIPA by sales agents who were wary to try out a new system with a deferred incentive structure compared to cash sales. LivelyHoods responded by increasing trainings, and having agents who were early adopters of LIPA share their success stories with those who hadn't. As agents saw that they could increase their sales through LIPA (in addition to/beyond their cash sales), they began using it, and implementation quickly caught back up. LivelyHoods ended up registering 712 customers to the program during the project period (through May 1, 2017), significantly exceeding their target of 550.

LivelyHoods learned a number of key lessons through this pilot, including some surprises. For instance, when designing the project, LivelyHoods expected people to make weekly payments, on average, given [Pain of Paying](#) conventional thinking. As it turned out, very few customers used that approach, instead falling into one of two categories: those who paid KES 100 daily until the loan was paid off, or those who repaid the whole loan in just 2-3 payments (the tortoises and the hares). The result highlighted the importance of letting customers set their own flexible payment options. LivelyHoods also discovered that customers who took longer than 1 month to pay for the stove were less likely to do so at all.

Like BioLite/Juhudi, LivelyHoods discovered that they were reaching fewer unbanked customers than desired. Of those surveyed, 10% had no savings at all, and 36% saved through informal banking (table banking, mobile money savings accounts), while 54% already had savings

relationships with banks, SACCOs, MFIs or cooperatives. Some 12% of customers had never taken a loan, while 26% had never taken a loan from an official institution such as a bank, SACCO, MFI or cooperative, but may have taken a loan from an informal table banking group (or family or friends).

One aspect of the project that didn't work out as planned was the referral services. While LivelyHoods did incorporate referral promotions, and is confident that they did get new customers on referrals, the limits of the Angaza system, combined with how few of their customers owned smart phones, resulted in an inability to monitor and track those referrals.

Based on lessons learned through this grant, LivelyHoods is working to increase unbanked customers, will increase the numbers of products offered through LIPA, and will continue an incentives structure started under the program for early (by 1-month) pay-off of the loans. LivelyHoods also plans to expand LIPA to be a flexible sales system (rather than exclusive buying system) and incorporate more part-time agents.

Wisdom Innovations developed a flexible payment financing model that focused on engaging established women's groups in marginalized counties in Kenya. These groups practiced merry-go-round or table banking, but did not have access to formal finance. During the pilot 302 stoves were financed through these groups.

A Wisdom representative attended monthly meetings of the women's groups to demonstrate the stoves, answer questions, and collect loan forms from members who want to purchase the stove; the group savings served as the guarantee on the individual loans. At future meetings, technical advisors provided support on any stove usage, performance or maintenance issues, and the group leader collected installment payments in cash, and submitted them to Wisdom through M-Pesa. A local ambassador in each location continued demonstration and sales activities, earning commissions.



Wisdom stove owners with their new stoves

Early on in the grant, Wisdom discovered a challenge in reaching Masai women who were disinclined to accept visits or phone calls from the (then) all-male marketing team. Wisdom

quickly recruited and trained female marketers to overcome this challenge. Another challenge was the coordinating with groups, and specifically intermittent attendance at monthly meetings. Wisdom wanted to use the meetings as not only a payment collection point (when members missed meetings, they sent their payments with others, so this was not a problem) but also an opportunity to provide any trouble shooting on stove usage. Wisdom worked to increased collaboration with local ambassadors to work around this challenge.

The project had planned to incorporate piggy bank savings into the project, but discovered they were not able to source good quality piggy banks in Kenya. As it turned out, this aspect of the project was not needed given the option of group members giving their payments to group leaders in cash, who would then submit them to Wisdom through M-Pesa payments.

Based on their experiences and learnings through this grant, Wisdom plans to assess interest for incorporation of briquettes and solar products into offerings, scale to more communities, and expand to last mile women entrepreneur shop owners.

D. Knowledge Sharing Activities

Advanced Biomass Cookstoves Distribution Study

Trends and challenges in distributing stoves emerged throughout the course of the DSCS project work. Winrock wanted to delve further into exactly what it takes to efficiently and effectively reach target customers at scale. For these reasons, Winrock conducted a global study of advanced biomass stove distribution, beginning in late 2016 through 2017, through interviews with more than twenty manufacturers and distributors around the world. Primary distribution challenges raised in interviews and addressed in the report include:

- Product-specific challenges (stoves are heavy and bulky; they require more demonstration and behavior change than other household energy products)
- Sales volatility
- Working capital constraints
- Staff turnover
- Training needs and cost
- Low product or brand awareness
- Difficulty accessing end-user and working capital finance
- Time required to develop partnerships
- No one-size-fits-all distribution solutions
- Logistics challenges reaching the last mile in low-population density areas

The distribution channels analyzed in the report have, to varying degrees, successfully addressed these challenges. We categorized interview responses into five main distribution channels for advanced fuel-efficient biomass stoves.

- direct sales to customers (business-to-consumer or B2C)
- large retailers
- microentrepreneurs
- corporate social responsibility (CSR)–employer partnerships
- finance and credit providers (banks, credit cooperatives, MFIs)

The study assesses 1) the extent to which each channel can produce high-volume sales, 2) the type of consumer reached, 3) benefits and challenges of each, 4) the conditions under which each is most successful, and 5) trends in how channels are prioritized. The full study can be found on Winrock’s DSCS project website at: <https://www.winrock.org/document/advanced-biomass-cookstove-distribution/>

USAID Energy Toolbox Cookstove Toolkit

Winrock also developed technical content for the USAID Energy Toolbox Cookstove Toolkit. The toolkit can be used by various stakeholders, but is primarily aimed at bringing USG staff and external project developers and implementers up-to-speed on significant developments in the cookstove sector in recent years. The goal is to showcase, through accurate and up-to-date information and links, the way cookstove projects can achieve impacts across a range of sectors, from forestry, energy and environment to livelihoods and income generation, not to mention health, school feeding, and women’s empowerment. The toolkit provides an overview of how the cookstove sector is evolving, best practices, and key challenges.

Content was drafted for all sections including health, technologies and fuels, market development and finance, consumer preferences and adoption, climate, standards and testing, cross-sectoral collaboration, and M&E. Each section was sent to a list of peer reviewers in the sector to check accuracy and add other major relevant information if omitted. Winrock then revised each section based on USAID and reviewer comments, added introductory ‘best practice tips’ and ‘why it matters’ sections. Winrock hired a graphic designer to incorporate photos and format the toolkit into a pdf version as requested by USAID. That pdf version is available on Winrock’s website at: <https://www.winrock.org/document/clean-and-efficient-cooking-technologies-and-fuels/>.

III. Results

Below is the final analysis of program results, as compared to targets indicated in the DSCS Performance Monitoring Plan:

1. Quantity of greenhouse gas emissions, measured in metric tons of CO₂e, reduced or sequestered as a result of USG assistance

Using 2.5 t-CO₂-e/stove for charcoal stoves and 2 t-CO₂-e/stove for wood stoves, and the ~30,000 additional stoves sold as a result of Winrock/USAID activities, with a lifetime of approx. 3 years each and 10% drop off in use per year, this translates into an estimated:

- Total GHGs offset from additional stoves sold through DSCS project activities during ***project period FY14, FY15, FY16 and FY17 combined***: ~138,000 t-CO₂-e
- Total GHGs offset from additional stoves sold through DSCS project activities during ***life of stove (assumed 3 years)***: ~200,000 t-CO₂-e

Project Target life of stove	Project Actual life of stove
135,000 t-CO ₂ -e	200,000 t-CO ₂ -e

2. Number of financial products (loans or other financial tools) available to cookstove enterprises.

Two financial products were created by KUSCCO and MESPT for cookstove distributors/enterprises and SACCOs and MFIs that act as cookstove distributors. Three additional financial products were developed for consumer financing by Juhudi Kilimo, LivelyHoods and Wisdom Innovations as part of the innovative, informal financing pilots. One financial product for consumer financing was greatly enhanced and expanded under this project – the Eco Moto loan created by Equity Bank and MEC. There were also dozens of new cookstove consumer finance loan products made available by participating SACCOs to their SACCO members for purchase of cookstoves.

ENTERPRISE FINANCING PRODUCTS DEVELOPED

Project Target	Project Actual
4	2

CONSUMER FINANCING PRODUCTS DEVELOPED

Project Target	Project Actual
0	3+

3. # of cookstove enterprises (distributor and retailers) and/or savings groups accessing financing as a result of USG assistance

The total is 25 (for the project overall) including 18 SACCOs taking loans from KUSCCO as a result of USG assistance, as well as 7 MFIs, SACCOs and distributors taking loans from MESPT. Three SACCOs took repeat loans with KUSCCO and one MFI took a repeat loan with MESPT bringing the **total loans to 29**. This doesn't count the Equity agents taking loans from Equity Bank for the purchase of stock for their stores, since we don't have the exact number.

Project Target	Project Actual
25	25

4. Percent change in sales of fuel-efficient cookstoves in Kenya as a result of USG assistance [This is now being reported as **number of additional cookstove sales in Kenya as a result of USG assistance** since percent change was not possible to track]

BURN sold 8,026 stoves through Equity Bank directly to consumers during the BURN grant period, but since the end of the grant that total has increased to 11,500 stoves sold through Equity Bank's Eco Moto program. Through financing from MESPT, an additional 3,700 stoves were sold to distributors, MFIs and SACCOs to extend financing for consumers to purchase stoves. KUSCCO's Jiko Safi fund facilitated the sales of just under 15,000 stoves to SACCOs during the project period. **This brings the total stoves sold by these three financial institutions as a result of DSCS project support to 30,000 cookstoves.**

Almost all the stoves (about 95%) were charcoal stoves vs. about 5% wood stoves.

5. Aggregate value of loans or other forms of financing disbursed to cookstove enterprises with USG assistance.

The Jiko Safi Fund disbursed \$173,547 in loans to SACCOs, and MESPT disbursed \$222,400 in loans to cookstove distributors, MFIs and SACCOs. **The total value of loans disbursed through the program is \$395,947.**

Project Target	Project Actual
\$300,000	\$395,947

More than \$100,000 in loans (additional to the above) was extended to **consumers directly** through Equity Bank's Eco Moto loan.

6. # of individual consumers accessing financing for the purchase of fuel-efficient cookstoves as a result of USG assistance

Although this exact number is hard to track, there are ways of estimating:

- KUSCCO facilitated the purchase of 14,658 stoves to SACCOs. Some SACCOs sold stoves on a cash basis to their members, but because a SACCO's main business is lending, it's likely that most sold them by extending credit. To be conservative, we estimate that approximately 50% of SACCO sales through KUSCCO ended up as credit sales to consumers. That brings the total estimated number of consumers accessing financing for the purchase of stoves from KUSCCO's Jiko Safi Fund to ~7,000.
- Approximately 30% of all BURN's Equity Customers are purchasing stoves on credit. Out of 11,500 stoves sold through Equity Bank channels, we can therefore assume roughly 3,450 stoves were sold through loans.
- Most sales of MESPT stoves have been through MFIs and SACCOs, which also offer financing for the stoves to their clients. If we also assume that 50% of MESPT's clients are also offering financing to end customers, that would be approximately 1,850 consumers.
- From the informal financing pilot activities, the following stoves were financed: LivelyHoods (712) and Wisdom (302) and BioLite (543) for a total of 1557 stoves

That brings the total (conservative) estimate of customers accessing financing for purchase of cookstoves to be around ~13,850.

Project Target	Project Actual
4500	~13,850

7. Person-hours of training in fuel-efficient cookstove business development and/or financial management supported by USG assistance.

Total confirmed person hours of training during the project period was 24,000+ person hours. The breakdown is below:

EETPs:

- From the empowered entrepreneur training roll out, 668 entrepreneurs (568 women and 100 men) were trained by certified trainers – the **number of hours of training received by entrepreneurs was 18,194**: 2,848 person-hours of training for men and 15,346 person hours for women

- 19 trainers (8 women and 11 men) received 40 hours of training during the India Empowered Entrepreneur ToT = **760 person hours of training**, 320 hours for women and 440 hours for men.
- 28 trainers (17 women and 11 men) received 40 hours of training during the Kenya 2015 Empowered Entrepreneur ToT = **1120 person hours of training**, 680 hours for women and 440 hours for men
- 22 trainers (12 women and 10 men) received 40 hours of training during the Kenya 2017 Empowered Entrepreneur ToT = **880 person hours of training**, 480 hours for women and 400 hours for men

KUSCCO:

- In the first round of SACCO trainings, 97 representatives (34 women and 63 men) from 56 SACCOs attended 5-7 hours of training each. The total number of person hours of training was **533 hours**.
- KUSCCO marketers received approx. 10 hours of training * 56 people = **560 person hours**.
- In the second round of SACCO trainings, ~600 attended 4 hours of training = **~2400 person hours** [breakdown of participants not available]

Project Target	Project Actual
2,500	Over 24,000 person hours

8. Funding leveraged from private sources for clean energy as a result of USG assistance*

In total, KUSCCO SACCOs have contributed approx. \$55,000 USD in savings to the Jiko Safi Fund. MESPT matched the DSCS project amounts and contributed \$90,000 USD total of its own resources to the cookstove facility. Equity Bank lent approximately \$100,000 USD for stoves to consumers for purchase of cookstoves through the Eco Moto program.

The total contributions of private sector funds into the DSCS project-supported financial products are cumulative ~\$245,000.

Project Target	Project Actual*
\$300,000	\$245,000

*This only counts funds contributed directly into the two DSCS credit facilities (KUSCCO/MESPT) that were extended for loans, and those loans made to consumers through Equity Bank. This doesn't include funds the SACCOs used to pay for stoves on cash basis that were then extended as loans to their members. KUSCCO also contributed another \$184,000 in

cost share in the form of staff time, transportation etc. to the project that is not included in this number. These sources all together total much higher than the \$300,000 project target.

9. Proportion of female and male participants in project trainings and capacity building activities.

- For the EETP roll outs 84% of the person hours of training were completed by female entrepreneurs and sales staff.
- For the EETP trainer certification program 55% of the trainers were women and 45% were men.
- KUSCCO SACCO and marketer trainings varied but were ~35-40% female participation

Project Target	Project Actual
40% women	84% for EETP roll out, 55% for EETP trainers; 35-40% for KUSCCO trainings

10. Number of individuals reached with lessons learned from DSCS activities

This includes distinct individuals who attended at least one of the three in-person full-day lessons sharing events (DC Nov '16, Nairobi July '17 or DC Sept '17) that Winrock held during the last year of the project. Winrock will seek additional opportunities beyond the project end date to share lessons with relevant stakeholders. Proceedings and studies were also emailed to additional people beyond those who could attend the events in person.

Project Target	Project Actual
300	173

11. Percent change in stove or fuel sales at entrepreneur level

Although many organizations did not have sufficient sales data for a full analysis of changes in sales before and after the training, there were some organizations for which we could gather this data. For Practical Action/SCODE, there was an increase in sales for those trained of 15% over baseline. Also, those who had received the training were twice as likely to be high sellers. An increased likelihood of being a 'high seller' also held true for Energy4Impact trained entrepreneurs. During the ROI study of Energy4Impact entrepreneurs in Tanzania, we found a 10.3% increase in sales.

Project Target	Project Actual
25%	Varied

12. % of participants that self-report positive changes in business growth indicators as a result of participation in program trainings or other activities.

Overall, 65% of entrepreneurs (for whom we have matched baseline and endline data) increased their number of sales strategies after the training. 45% of entrepreneurs and sales staff showed improvement in at least one of the following four business growth indicator categories: keeping business records, developing a business plan, providing after sales services, and financial planning. Combining these, we find that **75% of entrepreneurs saw improvement in at least one business growth indicator** after the training.

Project Target	Project Actual
75%	75%

13. % of participants that self-report positive changes in core competency proxy indicators as a result of participation in USG training or other activities.

Some 70% of participants report being better off in at least one category related to economic well-being (ability to feed the family, pay school fees, and/or pay rent), and 79% of participants report being better off in at least one category related to leadership qualities.

Project Target	Project Actual
75%	79%