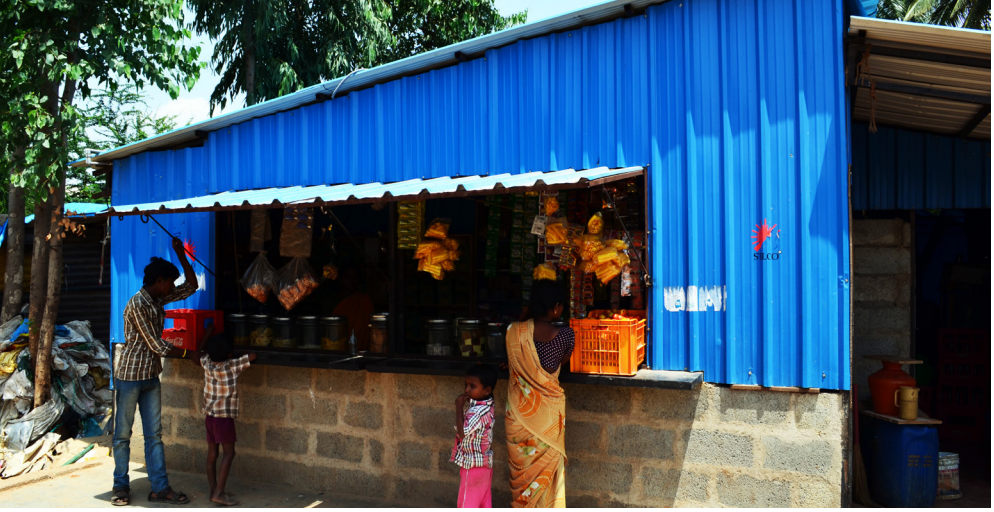
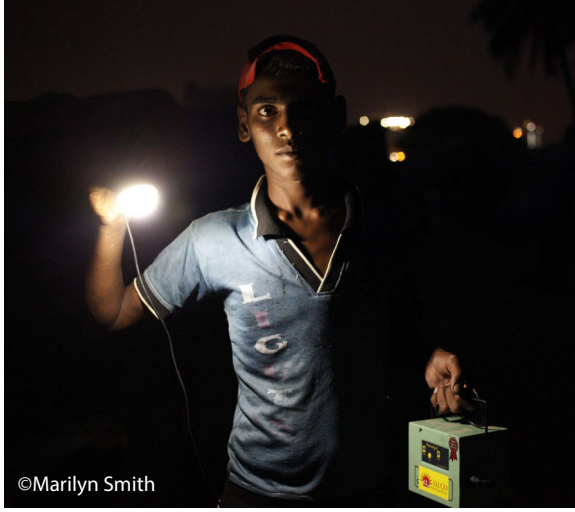




SELCO Foundation
ANNUAL REPORT 2014 - 2015

SELCO FOUNDATION

True progress of human society today faces multiple issues like poverty, energy access, climate change, inclusivity, education and other basic issues of well being. These challenges are leading to enormous gaps in equity, resulting in large scale social un-sustainability. SELCO Foundation is playing a role to create and replicate solutions, that can bridge that very inequality, by linking poverty reduction with sustainable energy and building the ecosystem around it.

Foreword

SELCO Foundation in the financial year 2014-2015 entered its 5th year of operations. The primary mission of the foundation is to create appropriate holistic solutions that link sustainable energy and poverty reduction, while analyzing the existing ecosystem available to the different segments of the underserved population and contextualizing solutions. It started with humble beginnings in a rural setting of Karnataka with 2 employees. Now, over the last 5 years, it has grown to more than 40 employees with a presence in three locations across India. SELCO Foundation has worked on building a sound base to create solutions that combine technology, finance and dissemination models for rural, urban poor and tribal communities.

Contents

Overview:

SELCO Foundation, in 2014-2015, strengthened its strategy and grew in terms of deliverables and human resources. The foundation uses a holistic innovation approach comprising community labs, focus labs and ecosystem support structures to simultaneously address the issues of poverty alleviation and climate change through energy access.

- The Community Labs design solutions that consider the needs of varied segments–from migrant labourers in urban areas and small scale farmers in rural regions, to tribal communities in remote regions and disadvantaged groups across these contexts.
- Through a dynamic and complementary structure the Focus Labs prioritize the issues of Education, Livelihood and Vulnerability through impactful interventions.
- Ecosystem Support provide a foundation for effective support, scale and implementation of solutions across the social sector, considering identification and development of appropriate technology; incubation and capacity building; and leveraging the practitioner's perspective in policy.

Two of the community-based laboratories have been fully established – rural and urban. The third community based lab - The tribal Lab is in its initial st ages of operation. Efforts are on for strengthening and consolidating the focus labs - livelihoods, education and vulnerability.

The ecosystem support teams, Technology, Policy and Incubation are fully resourced and are working on issues of innovation and design, financing, skill development, entrepreneurship and policy & planning.

In December, 2014 SELCO Foundation received the FCRA, permitting it to receive foreign funding. The primary sources of funding for the SELCO Foundation were the Lemelson Foundation, Halloran Philanthropies, Good Energies Foundation, USAID, REEEP and the Menda Foundation. The total budget for the year was over $ 500,000. The total strength of the organization increased from 25 people to 40. Total number of processes and projects delivered were 60+ and over 30,300 number of people were directly and indirectly impacted. Also in 2014-2015 SELCO Foundation was able to establish strong partnerships with over 6 organizations.

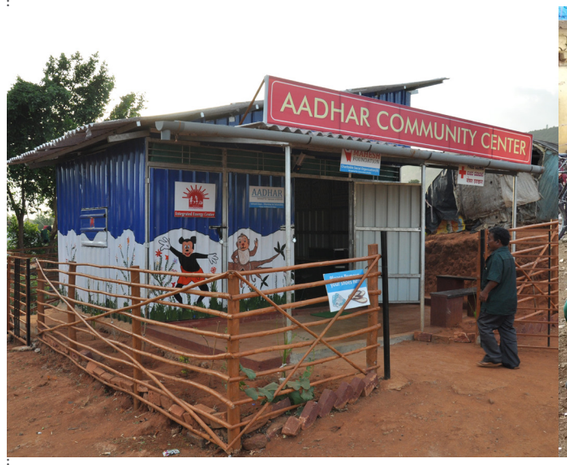
The Foundation's emphasis has been on creating replicable processes and models that can be disseminated in an open-source fashion. The foundation believes that it has built a solid platform in the past 5 years and is confident of entering its next phase where it further seeks to address the heterogeneity within the poor by providing appropriate and contextualised solutions. Finally, the Foundation aspires to build replicable solutions, facilitate their dissemination and strengthen the ecosystem for energy access.

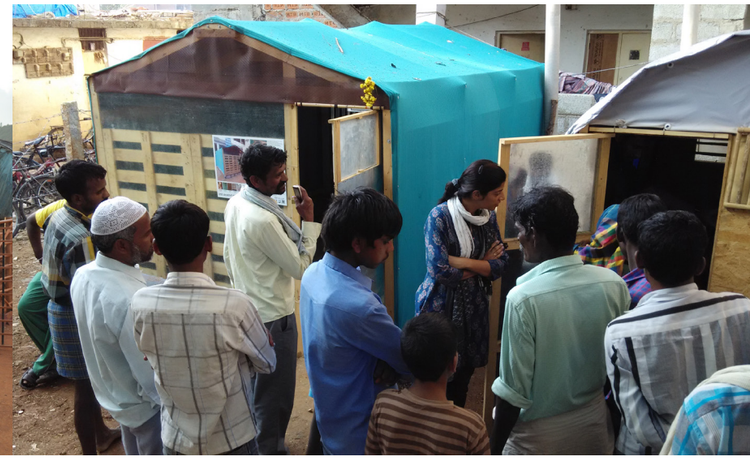
Snapshot of deliverables 2014-15

PROGRAM	METRICS	TARGETS	ACTUALS
Product Innovation	No. of technical products worked on	3	24
	No. of products taken to market	2	4
	No. of business innovations introduced	2	5
Technical Testing and Evaluation	State of market report	1	2
	Corporate Relationships	2	2
Community Organizations	Organizations worked with	5	4
	Products introduced	2	2
University relationships and internships	Students impacted through university programs	800	1200
	Internships	13	65
Entrepreneur Incubation	Small size	5	8
Policy	No. of policies impacted	1	2
Process documents	Internal documentations	4	4
End users impacted	Direct	4000	5000+
	Through partners	8000	21300
	Through entrepreneurs	3000	4000+

URBAN COMMUNITY LAB

The Urban Community Lab is a young inter- disciplinary team of professionals, students, local social workers and community representatives seeking to address issues in urban slums, low income households and small businesses and livelihoods in the urban poor segment. The lab focuses on issues of Energy, Water, Built Environment and Livelihoods, that are closely inter-linked on the ground. It engages in design, piloting and replication of customized solutions.





	Milestones	Outcomes and Impacts	Next targets
	ENERGY ACCESS		
Integrated Energy Centers	• 7 new IECs set up with a total of nearly 300 households directly impacted through the centers • First partner run IEC with Mahesh Foundation in Kanbargi, Belgaum (North Karnataka) with 140 lights on rent, livelihood training for women, a bi-weekly medical clinic and tuitions for schools students run through the Center • New services such as solar powered community TV, mobile charging, projectors and refrigeration and cooling introduced through IECs • Ideation around basic health interventions such as eye testing through IECs. Existing IEC being identified for pilot.	• Replication of the model facilitated across urban and tribal geographies • The rental services provided through the IEC are based on specific requirements of communities, keeping in mind affordability and social dynamics. • Internal capacity developed on ideation, process and strategy development, design, transferring technology know-how, field level capacity building and implementation.	• Reach out to another 500+ households with basic energy systems, • Initiate increased entrepreneurial approaches within IECs , through strong ground partners.
Refrigeration and Cooling	• Testing and evaluation of a number of existing solutions for identified refrigeration needs. • A solar powered refrigerator of Western Refrigeration piloted in a petty shop in the Tubrahalli community, Bangalore, and then moved to Vasanth Nagar IEC owing to higher potential for financial viability.	• An addition to the services provided through the IECs in urban slums, where communities can now ensure storage and thereby consume perishable products, without wastage.	• Initiate replication across geographies through incubates and other organizations, while exploring improvements in financial viability.

BUILT ENVIRONMENT			
Housing for Urban Migrants (HUM)	• Conceptualized the need for redesign of urban migrant housing to address issues linked to convenience, health and well being • 2 HUM designs piloted in partnership with APSA at a community in Bangalore- with positive responses from community	• Solutions driven by community feedback to address challenges of current migrant housing design • Improved awareness of benefits and importance of improved design • Able to demonstrate construction using innovative materials and alternate material technologies for better quality of living	• Develop Version 3 of HUM project- simplified, economical and easier to replicate • Develop communication tools to facilitate awareness on physical environment and linkages to health, productivity • -Develop financial mechanism that incentivizes households as well as stakeholders (such as landlords)
Natural Lighting and Ventilation	• Solutions and prototypes developed for RCC roofs and tarpaulin sheets • Replication of airlite • Manufacturers identified for existing Airlite solution (light and ventilation product)	• Improper planning of structures and roofing has adverse impact on wellbeing of dwellers; solutions address expenditure on electricity during the day, individual productivity, long term health. • Internal knowledge developed on solutions for multiple types of roofs- thatch, corrugated sheets, RCC slabs • An array of solutions being designed for day lighting and cross ventilation in varying structure types, through passive design techniques (non-energy based)	• Determine financial, technical and dissemination models for all solutions designed and facilitate pilots of the same.
Hawker Project	• In-depth analysis and study of Tannery road hawker market in Bangalore; Proposal for the same presented to authorities • Partnered with the Alternative Law Forum and the Hawker Federation of Bangalore to look into implementation of solutions.	• Complete understanding of all aspects of vending activities, including different typologies of vendors, their processes, threats faced by them as well as their social and economic contribution to the neighborhood. • Planning of holistic solutions for hawkers to include energy technologies, improved cart design as well as issues of market, finance and regulation	• Work towards designing guidelines for model hawker spaces in the city, and develop comprehensive analysis document for 'Model Hawker Market' in Bangalore. • Develop toolkit for conducting detailed exercises in other locations.
LIVELIHOODS			
Kowdi Kutumba (A patchwork embroidery craft of the migrant women from North Karnataka)	• 6 month pilot run to assess viability of an enterprise including pilot design, trainings and market linkages • 500 products for Kowdi produced by women from the communities (with design and finishing support) and sold- including bags, laptop cases, cushion covers and so on. • Full-fledged business plan created with feedback from community women and field experts.	• Serves as an alternate source of livelihood for migrant women in slums in Bangalore, while promoting their traditional craft of Kowdi. • Product design diversification, facilitated through this model, increases market potential for the products being created by the women. • Facilitates better utilization of energy solutions such as solar powered lighting and sewing machines, while enterprise development ensures actual income increase from improved productivity.	• Initiate Entrepreneur-in- residence programme to support with expertise, capacity building, financial know-how and mentorship to take forward Kowdi Kutumba.
'Papad' dryer:	• 6 months of user research and feedback to understand areas of intervention • Papad dryer design developed using solar energy powered halogen bulbs	• The Papad dryer overcomes issues associated with open air drying such as hygiene, quantity and quality of products – for women whose main income is dependent on this livelihood.	• Pilot product during the monsoons to test financial viability and end user impact.

WATER			
Water transport	• Testing and Evaluation of 3 water transportation options including water wheel and roller • One product tested with the community and feedback indicates need for changes	• Attempts to address long term health issues and time spent by women in urban slums in making multiple trips over large distances to access water in pots	• Customize solution with a willing manufacturer to pilot product in Bangalore slums
Water purification	• Water testing undertaken in 3 sites • Partnerships fostered with 3 Water purification system manufacturers and basic system testing undertaken	• Attempts to address health impact of impure drinking water through water purification units in urban slums while taking note of system efficiency and water wastage.	• Explore cost and efficiency levels of 2-3 water purification system manufacturers • Undertake pilots with other systems

Key failures, learning and insights:

Stakeholder buy-in for community interventions: For all interventions undertaken with urban communities, particularly migrant settlements, stakeholder buy-in is critical for long term sustainability. This would include neighbours, land owners, as well as local administrative bodies. While some interventions have been taken forward with the support of some of these stakeholders, dealing with land owners and local administration particularly around eviction or fear of permanency of these communities hinder scale up of key projects. This is particularly true for built environment projects as they may cause a change in the landscape.

Manufacturers willing to undertake prototyping and modifications: A key challenge for introducing new products and services within the communities, across issues, has been the identification of manufacturers who are willing to spend time and resources on creating prototypes and modifications on products without commitment of large volumes. To address this, in some cases, the focus has been to work with smaller manufacturers and ones with stronger social impact interests who can bring in modifications in their products at various stages.

Identification of entrepreneurs: There is a high level risk associated with identification of local entrepreneurs with the right background, skills and willingness to take on new projects such as those developed through the Urban Community lab. Issues around land ownership, permanency of the community and the financial viability of the business add to the challenges for a potential entrepreneur. This has been addressed so far mainly- extensive community engagement, assurance of constant hand-holding and most importantly, de-risking by incubating the entrepreneurs for an initial period of time till financial viability is established and other issues are ironed out.

RURAL COMMUNITY LAB

The Rural Community Lab seeks to address issues of farmers, agricultural labourers, local entrepreneurs across the rural poor segment. The lab focuses on issues of Energy, Agriculture and Livelihoods, through solutions of products, services, financing and capacity building.

	Milestones	Outcomes and Impacts	Next targets
AGRICULTURE			
Solar-biomass dryer for fish	• Technology model created and tested on the field with a partner • Field staff (through branches of SELCO India) trained on installation and implementation of the dryer system.	• Focuses on overcoming the issues faced with open-sun drying, particularly aspects of hygiene. • Allows entrepreneurs to charge higher prices for hygienically dried fish • Reduces wastage (since birds are a common issue with open sun drying)	• Support enterprises like SELCO India in the implementation of hybrid dryers • Scope out alternate drying technologies for other crops
Paddy thresher	• 2 farmers identified who bought and tested versions of SELCO Hold-on thresher at their farms • Rental model piloted where one farmer rents the thresher to farms within a 50kms radius- cost was recovered within 1 year • Market analysis, case studies, surveys and documentation undertaken to facilitate replication through partner	• Developed as part of addressing the needs of small farmers through low cost and efficient machinery • Reduces cost, drudgery and time involved in manual threshing • Reduces scattering losses and is portable	• Work with partners to determine ways of scaling up and reaching target customers • Connect with local organizations involved in farm equipment rentals
Insect traps	• Post initial scoping, 3 different traps identified and tested with University of Agri Sciences, Dharwad • Final report created and shared on feasibility and efficiency of solar light traps to curb harmful attacks of pest.	• Report concludes that light traps are useful to understand insect population and typology (to determine course of action) • Tests showed negative impact of traps on crop development as well • Light traps not ideal as the only solution for pest control	• Based on farmer needs, determine feasibility of other options for pest control
Insect traps	• Communities identified across Joida (Karnataka) and Kalahandi (Odisha) and initial need assessment conducted • Existing mini hullers identified within India and abroad- Testing and evaluation of 1-2 options underway	• Overcomes high costs involved in transportation and avoids unfair practices that reduce margins of farmers • Could facilitate value addition at the source of production itself.	• On field, Pilot testing of identified mini rice hullers • Design viable operational and financing models
LIVELIHOODS			
Areca Leaf Products	• Key partner with relevant experience working with Areca farmers on dried Areca leaf products identified • Design of products with higher margins and relevant market linkage identified • Partner has also developed an innovative way of making dried Areca leaves malleable	• Facilitates production of biodegradable products using abundantly available dried Areca leaves • Promotes livelihood for small farmers, while ensuring higher margins for products • Attempts to utilize additional power generated from pico-hydro or larger decentralized solar systems	• Identify farmer entrepreneurs who can learn the skill and begin production • Facilitate training and market linkages with partner support • Determine next steps and implementation plan with identified community

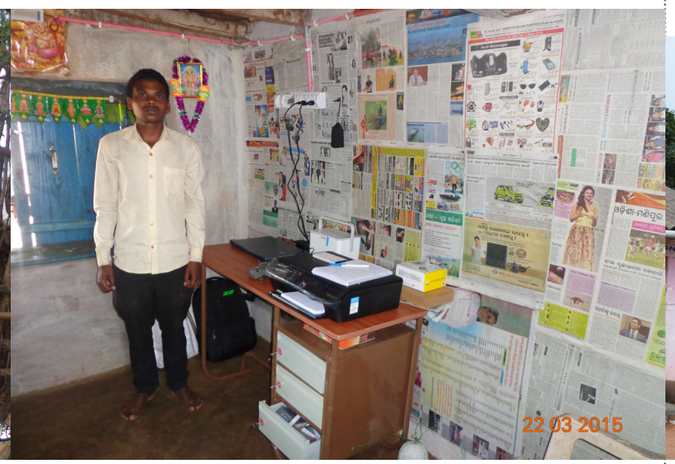
Key failures, learning and insights:

Digging deeper into financial innovations: While we have used varied financial mechanisms to promote energy access solutions, there is a greater need to explore newer financial mechanism and schemes that can be capitalised on particularly for agriculture.

Need for more women-centric programs and projects to ensure better gender-balance: Need to focus more on women and energy, women as economic producers, asset owners and caregivers

TRIBAL COMMUNITY LAB

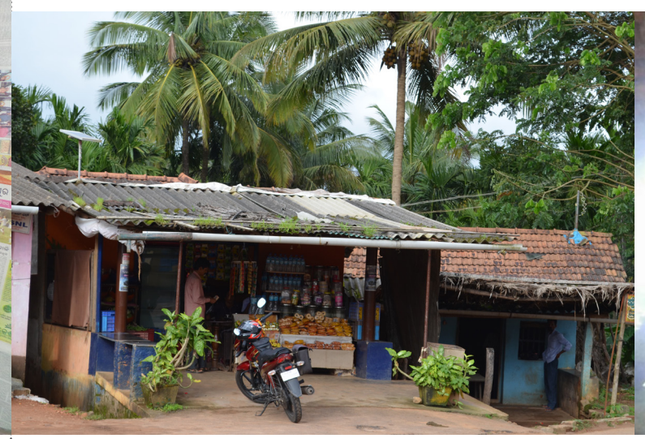
Tribal Community Lab at SELCO Foundation is an interdisciplinary team that focuses on linkages between energy access, creation of livelihoods and social infrastructure. It is based out of Kalahandi, Odisha and works to build solutions to issues faced in tribal contexts.

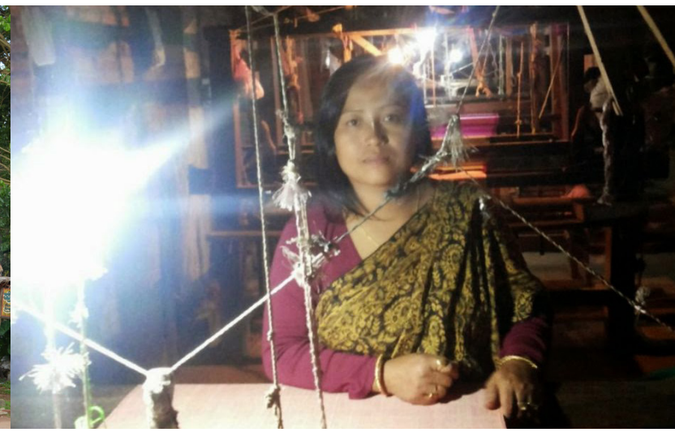


	Milestones	Outcomes and Impacts	Next targets
LIVELIHOODS			
Jan Sahaya Kendra	• 1 JSK set up • Entrepreneur identified Ratho Duria, 22 years • Current services: Passport size photographs, printing, scanning, photocopying, music & movie downloads , CD, rentals and WLL phone	• Earlier villagers traveled 30 kms-75km with expenses of up to Rs 300 (wage day loss, transportation cost, food cost) to obtain a photocopy worth Rs 10 • Customers benefit from services, avoid transactional costs saved as services offered locally	• New services renting portable solar home lighting system, sound system, lamination and internet access. • The project will be replicated in other Panchayats as well.
Solar Doctors & Solar Saathis	• Applications received: 20 • Participants chosen: 8 Entrepreneurs being incubated by SLECO-Incubation: 3	• A cadre of Solar Doctors (repairing dysfunctional solar systems) and Solar Saathis- assessing needs and willingness + ability to pay amongst potential customers to suggest solar products. • Potential Impact: Entrepreneurship and livelihood	SELCO branch locations across Karnataka
SOCIAL INFRASTRUCTURE			
Urja Gram Kendra	6 UGK set up this year (11 in total)	• Systems set up in individual homes and small clusters rather than centralised community centre due to lack of infrastructure and caste system • Process of solar operator induction set-up (includes exposure visits, technical training and record keeping, along with a operator kit) • O & M processes set up: Monthly meetings, knowledge transfer sessions (senior to new operators), updation of idea database, identification of new intervention areas • Informal communication systems set up to gather information from households to SELCO team on field via local market/petty shops	Building a more robust supply chain for solar system components

POLICY GROUP

The policy group undertakes in-depth analysis strongly influenced by the practitioners' and field perspectives and facilitates uptake of recommendations and interventions across key ecosystem aspects within decentralized energy access. The efforts are geared towards energy planning and convergence with other developmental programmes, energy ecosystem building- including finance, skill development and entrepreneurship as well as social enterprise issues.





	Milestones	Outcomes and Impacts	Next targets
DECENTRALIZED RENEWABLE ENERGY ACCESS			
Energy Planning with Karnataka Government	• Study undertaken to analyze availability and adequacy of electricity across districts in Karnataka. DRE interventions suggested to complement the grid. (commissioned by Karnataka Electricity Regulatory Commission (KERC), in partnership with CSTEP)	• Will be used by KERC and Energy department as part of the Power for All Planning in Karnataka state • Provides a clearer understanding of the need for DRE solutions in certain regions (given low power availability)	• Disseminate learnings through energy planners and practitioners • Map out availability and adequacy at the taluk level and share with Energy Department. • Replicate analyses in another state using real-time data monitoring on electricity to look at where DRE can complement the grid - Create a process document for further replication.
Value Added Tax	• After sustained efforts over 2 years, the Chief Minister of Karnataka announced a VAT exemption on certain solar panels and solar invertors *the Commercial Tax department notification was received in August 2015.	• Through the VAT exemption, the cost of solar panels and solar invertors sold individually reduces.	• Facilitate similar exemption for all RE devices and spare parts under the new GST regime (in FY 2016-17) • Create template and process document for VAT exemption advocacy in other states and begin efforts in 1 other state
Low Carbon Development Plan	• Report presented to MLA Arvind Bellad of Dharwad on low carbon energy development plan of 5 specific villages in Dharwad district. • Implementation plan finalized with partner- Climate Parliament	• Partnership established with MLA and Climate Parliament in determining clean energy solutions for specific regions • Requests shared with other MPs and MLAs in Karnataka to undertake low carbon energy planning in their model villages	• Facilitate implementation of specific interventions under the low carbon development plan in Dharwad. • Create toolkit for replication of model energy villages as part of Sansad Adarsh Gram Yojana (of MPs) and/or CSR initiatives
ENERGY ENTREPRENEURSHIP AND ECOSYSTEM			
Skill Development	• Staff Training & Research Centre (STARC), (Department of Employment and Training (DET)) in Karnataka has expressed interest in including solar PV technician training as part of their electrician trade.	• Would result in creating a large number of electricians capable of servicing solar systems on the ground. • Would be instrumental in increasing banker confidence to lend for energy systems (as servicing is assured)	• Identify potential partners for curriculum development and develop interactive, print and audio-visual content • Set up a Training lab in Manipal for Solar PV training and apply for accreditation (that can provide certificates to students trained.)

	Milestones	Outcomes and Impacts	Next targets
Financing for End users and Entrepreneurs	• Proposal developed for usage of National Clean Energy Funds for decentralized clean energy financing • Efforts ongoing to undertake Banker workshops to allay negative perceptions caused by suspension of Subsidy under the National Solar Mission scheme (for off-grid systems)	• Expected to improve financing for end users and small entrepreneurs through existing banks	• Organize National and State level interactions between Bankers and Practitioners to promote financing for DRE solutions • Work with State Level Bankers' committee to facilitate targets for Energy Financing • Facilitate usage of resources from National Clean Energy Fund for energy entrepreneurs.
Ecosystem Framework for energy Access	• Background discussions undertaken with existing energy entrepreneurs to understand their current ecosystem- the values and challenges • Based on discussions, a rough framework has been developed to be tested on the field	• This collaboration with WWF-India to formulate a comprehensive renewable energy ecosystem plan will help overcome issues of human-wildlife conflict in the areas they work in and improve general living conditions in both regions • The framework will be vital to analyzing the readiness of any new region for energy solutions and elaborate on the ecosystem requirements for long term sustainability	• Undertake field work in specific regions of Uttar Pradesh and Odisha • Based on field work and expert suggestions, finalize plan for Ecosystem development in the regions • Begin with 2-3 interventions based on the plan for each region.
SOCIAL ENTREPRENEURSHIP			
Impact Investments	• First social entrepreneurship workshop organized on Expectations and gaps in Impact investment, highlighting the Practitioner perspective. • Final report on Impact investing from a Practitioner perspective and Due diligence booklet for investors developed	• Impact investors would be better placed to understand the needs of small energy entrepreneurs • The expectations of investors and entrepreneurs would be better matched (unlike many current situations where expectations of IRRs, exit strategies, term sheets are skewed in favour of investors alone)	• Increase the number of Impact investors attending the workshop and determine ways of improving outreach around the philosophy

Key failures, learning and insights:

- **Ecosystem based approach to energy solutions and Policy:** The need for looking at the comprehensive ecosystem and the policies that affect various facets are critical. It is not merely sufficient to focus on regulation of tariffs, subsidies and taxes. Instead, the policies that govern skill development and financing are equally important to influence while looking at the energy access sector as a whole. The establishment of CLEAN - Clean Energy Access Network- is a key step towards this.
- **Inadequacy of data and the requirement:** For a number of issues, particularly those linked to energy financing and increasing decentralized energy solutions as a complement to the grid, there is a need to have some information and analysis to make a strong case to Banks and Government Ministries. In cases where available, it has proved useful in substantiating and pushing forward recommendations. The challenges going forward will be in actually accessing data (while the data exists but is not available in public domain) as well as balancing efforts on Data analysis and research with actual interventions and advocacy efforts. While dealing with Government entities, there is also the challenge of having to adapt and modify timelines taking note of delays or time constraints on the other end.
- **Replication potential of frameworks, pilot schemes:** By engaging in a few different projects requiring the creation of frameworks or processes of some sort, the team is now equipped to replicate analyses for similar issues in other geographies within the country. Specifically, these include: 1. Energy Access mapping- including availability of electricity 2. Low carbon energy planning in villages, as part of Sansad Adarsh Gram Yojana of MPs and MLAs 3. Ecosystem approach for DRE solution deployment.
- **Outreach efforts:** There is a need for greater outreach and efforts through media to disseminate the Practitioner's perspective on energy policy- as the media often becomes an opinion-maker on various issues. In addition, there is a need to increase partnerships, particularly in the work around the Social Entrepreneurship Sector. This would happen simultaneously while influencing mindsets of such partners, given experiences on issues of Impact investment and assessment.

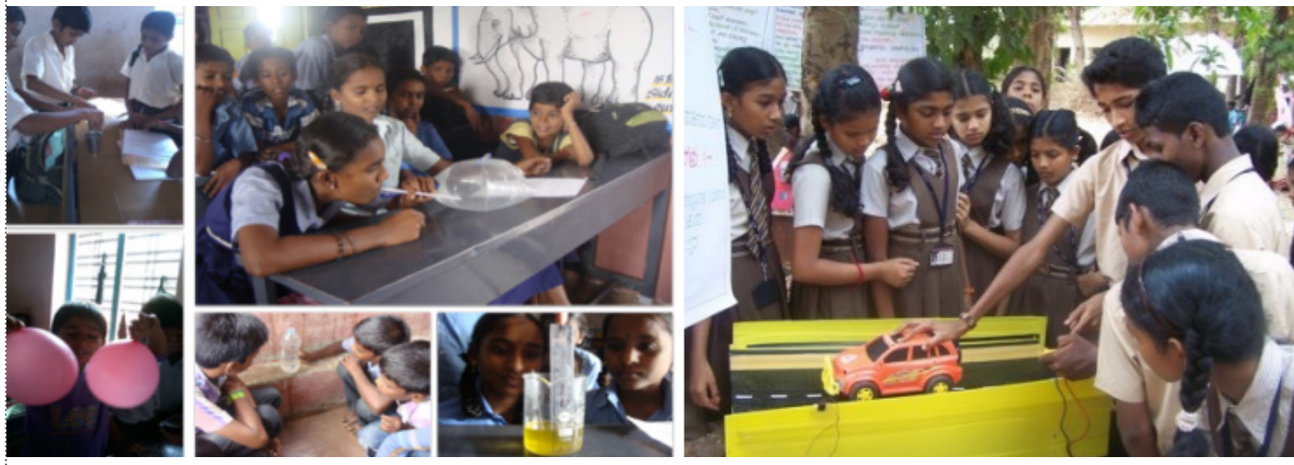
TECHNOLOGY and DESIGN TEAM

The Technology and Design team is a group focused on driving technology innovation for energy access and services in India, that could also be relevant in other parts of the developing world. The work includes pushing new technology development towards the needs of the poor and developing products and services for them.

	Milestones	Outcomes and Impacts	Next targets
TECHNOLOGY and DESIGN TEAM			
Micro Grids	• 4 pilot projects installed including one 14kW AC system for an off-grid school and three DC systems for communities. • 13 additional sites investigated and surveyed	• Robust DC micro-grid model created and Implementing partners trained on site specific system design, installation and servicing. • Micro grids allow for efficient energy usage, easier control and better integration of centralized community/ larger loads	• Explore context specific productive load options to serve as anchor loads • Integrate non-technical aspects such as financing and explore collection mechanisms.
Solar Pumps	• 4 pilots of AC pumps undertaken and 2 pilots for DC pumps • Test bed for pump identification created • Detailed testing of 4 manufacturers of solar pump controllers	• Overcomes issues of electricity scarcity/ unreliability and poor voltage quality that causes damage to the pump • Training and replication with young enterprises and entrepreneurs incubated by SELCO Incubation Center	• Support energy entrepreneurs in the design and implementation of pumping projects as well as in the certification process • Investigate smaller pumps alternative uses for pumps as well as • Low-cost tracking systems
Sewing Machines	• Pilot project of solar powered sewing machine implemented for an individual entrepreneur and financed through a bank loan • Field testing of retrofitting industrial tailoring unit undertaken • Energy efficient technology model created for retrofitting manual commercial and industrial sewing machines.	• Addresses issue of grid power hampering productivity of tailors and rising operational costs due to diesel back up generators • First bank loan extended for a solar powered sewing machine in the region	• Replicate the model with other partners and SELCO incubatees.
Grid Tied Systems	• Surveying and design for 13 systems, submitted for approval by the local utility	• Detailed assessment of the technology options	• Support enterprises in getting approval for grid-tie projects with the relevant utility • Completion of pilot project

Other Product Development	• The efforts of other labs were supported by testing 10 products for field application across rural, urban, tribal contexts- both in-house and on the ground	• Some of the products focused on during the financial year 2014-2015 were: • Solar PV panel and battery testing • Lighting, TVs, fans • Energy efficient refrigerators • Large cold storage units • Portable lighting solutions • Solar PCU/Inverter systems • Water purification systems • Internet connections for remote locations • Mobile chargers • Solar museum for a rural training institute	• New products will be selected by assessing the needs of the poor
Energy efficiency in livelihoods	• Deep dive into livelihoods related products like tailoring, wood lathes, silk reeling and silk weaving.	• Increased understanding of energy auditing practices and processes • Development, with partners, of energy efficient devices	• Application of learnings on improving the efficiency of devices to product development • Creation of energy auditing processes and tools for practitioners to assess and create solutions for small industries and livelihoods
Solar Thermal	• Lighting, TVs, fans	• Deep dive into clean cooking from a technology and community perspective.	• Development and testing of improved greenhouse dryers for crop processing
ECOSYSTEM SUPPORT			
Energy Systems	• Solar PV panel and battery testing	• Improved understanding of inverter/ PCU logic through lab testing, simulating field conditions.	• Detailed investigation into new storage technologies becoming available for underserved communities. • Integration of design processes into project management processes, to improve the efficiency of business for practitioners. • Improving the quality of design methodology.
Testing and Quality Assurance	• • Energy efficient refrigerators	• Developed test beds for a variety of products • Conducted tests for other practitioners	• Share test setup and procedures with others, work on replication of the testing facility • Focus on how testing and identification of areas for improvement can improve the innovation and R&D efforts of others for energy access

EDUCATION



Program / activities	Milestones, outcomes and Impacts
K12 PROGRAMS (12 schools and impacted more than 800 students)	
Invention education	• Developed science workbook, needs assessment workbook and 'Inventor's toolkit' • Mid-intervention assessment in eight schools at Belthangady and Yadgir. • 14 solutions sent to National Innovation Foundation • Conducted "Invention Fair" in Ujire, Karnataka	400 students from 20 government schools participated.
Sustainable Science Lab	• Program expanded to include grades 6 through 9 (earlier only 7th grade) • Developed content along with the partner Anubhava Science Foundation. • Hired a facilitator, trained by Agastya Foundation, Karnataka. • Student project (drip irrigation system) sent to 'Design for Change' competition. • Content developed (for bridge school in the urban context) along with Anubhava Science Foundation, for BEETF • School and trained facilitators to deliver the content. • 12 theme based projects undertaken, students visited 6 different institutions.
UNIVERSITY ENGAGEMENT	
Workshops conducted	• IDEX Capacity Building Workshop for Community Engagement- Stakeholder • Mapping and Story Boarding workshop • Human Centered Design Workshop • Documenting Integrated housing solutions discussion, New York University students • Design + Build Workshop: at SELCO, 10 students and volunteers created 10 prototypes of various components of an urban home were developed. Outcomes discussed at BMS Ramiah college. • KRISTU JAYANTHI COLLEGE: workshop conducted to source Field coordinators and Field Workers for the UCL team. • Workshop at IN:CH STUDIO 2014 20 students (Spanish, German and Indian civil engineers, architects and designers), Duration: 1.5 hour • Design thinking and social innovation workshop at ACARA/IIHS 14 students (Civil and mechanical students, University of Minnesota), Duration: 1 day • 1 day workshop on Solar Cooking at SDM Institute of Technology

INTERNSHIPS

SELCO Foundation has a robust and rigorous internship/ fellowship program. It believes that via the internship it can inspire the younger students from across the world to become solutions providers for the various problems of the poor. Interns worked on projects such as:

Urban Issues	Rural Issues	Technology Issues	Policy Issues
• School in Dharwad, Karnataka • Housing for Urban Migrants (HUM) • Hawker mapping and profiling • Integrated Energy Centre (IEC) impact assessment report and case-study booklet.	• Solar Dryers: Drying characteristics • Setting up a biogas plant at Kalkeri Sangeet Vidyalaya (a music school for children from underprivileged families) • Cost benefit analysis of the same biogas plant and testing claims made by the manufacturers	• Mini-grids, solar dryers, solar cookers, data loggers, Solar Museum at ITI-Belgaum, grid analysis for all districts of • Karnataka, water purifiers, pico-hydro systems, solar refrigeration, structural analysis of street light poles, lithium ion • Battery testing • Four interns from TERI University interned with the TCL team for a period of two weeks and worked on participatory • Rural appraisal (PRA) report.	• Policy project tracking; CIP case studies; Policy planning and metrics, Metrics for Policy impact; Metrics for SELCO; • Small portable products vs. larger systems, Case studies for CIP and Scheme updates to team, Costing of Traditional • Grid vs. DRE; National clean Energy Fund exploration, Entrepreneur financing database, DRI case study, Energy efficiency Data survey

Thesis projects : Papad (dry salty snack) drying (livelihoods), Energy access indicators and mapping access (policy), Micro and mini grids (Technology)

Key failures, learning and insights:

BARRIERS

K-12 programs

1.Random changes in the school schedule that effect our weekly plan.
2.Less time availability to work with students.
3.Need for active and collaborative spaces to continuously work and store their work.
4.Unplanned expenses

University Engagement Programs

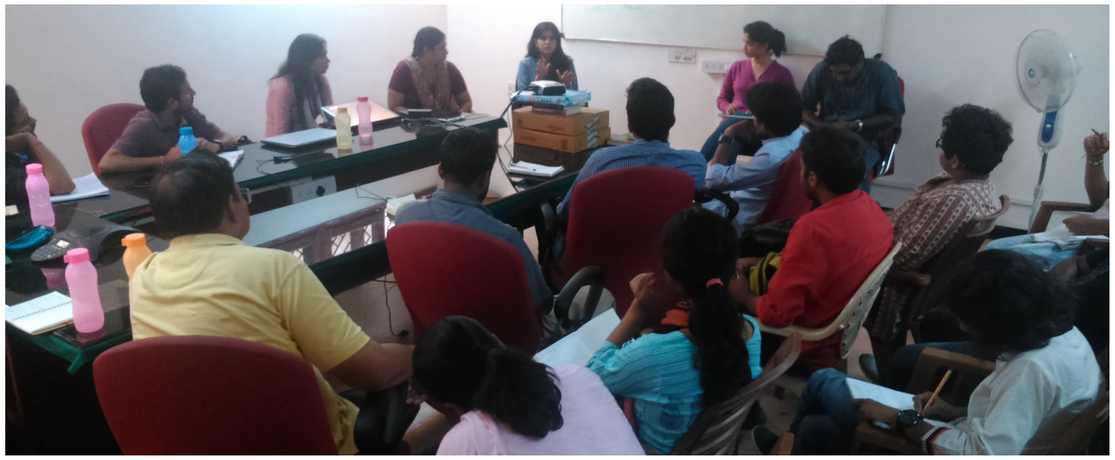
1.The request from the Universities were adhoc espcially in terms of workshops. Had to do planning in the last minute.
2.Too many request for community visits from the universities.

Key Learnings

1.Communication with stakeholders at all stages is critical
2.Fundraising responsibility need not lie with few in the organisation, each person or team can strive to raise their own funds locally by leveraging on rapport built over a period of time.

OUTREACH

SELCO Foundation in 2014-2015 did various outreach activities to publicize its interventions and processes as part of its open source policy. Following are the details:



ARTICLES AND PUBLICATIONS (INCLUDING MEDIA)

- http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/new-faster-hygienic-fish-drying-processarticle6660624.ece
- http://www.bangaloremirror.com/bangalore/others/MIT-solar-flair-will-provide-impetus-to-rural-Karnataka/articleshow/46900363.cms
- http://www.thehindu.com/todays-paper/tp-national/tp-karnataka/migrant-workers-enjoy-steady-power-supply/article6498902.ece
- http://nextbillion.net/m/bp.aspx?b=5366http://www.indiainvestmentjournal.indiaincorporated.com/impactinvestments-social-enterprises/
- http://www.indiainvestmentjournal.indiaincorporated.com/india-must-strike-local-tie-ups-in-energy-quest/
- http://brookings.in/making-small-scale-renewables-work/

PAPERS AND WORKSHOPS AND CONFERENCES PARTICIPATION

- A paper on Grid-tie systems at Solar Rooftop PV systems and net-metering conference + workshop, at Mahatma Gandhi Institute of Rural Energy & Development (MGRIED), Bangalore, Karnataka, Date: 29th November, 2014
- Micro-energy Conference at BMS College of Engineering, Bangalore, Karnataka, Date: 22nd April, 2015
- Karnataka Electricity Network workshop, conducted by World Resources Institute, Bangalore, Karnataka, Date: 27th March, 2015
- 'Entrepreneurship in Renewable Energy' at Dhule, Maharashtra, Date: 24-25th January, 2015
- 36th Krishimela at Tiptur, where solar cooker, mini-model of a solar dryer and a solar pump were showcased and received a good response from the Mela visitors.
- Global Action on Poverty event held on 12th and 13th March, 2015 held at Sabarmati Ashram.
- Development Dialogue 2015, conducted at the Deshpande Foundation, Hubli, Karnataka, Date: 7th-8th Feb 2015
- Growing Prosperity Roundtable on Developing Repeatable Models to Scale the Adoption of Agricultural Innovations, Conducted by Acumen, Mumbai, Maharashtra. Date: Thursday 26th March 2015
- Sustainable Investments and Unlocking the National Clean Energy Fund, April 13th, 2015
- Micro grids paper at Micro Energy International conference- Bangalore, April 23, 2015
- Creation of a "Roadmap of DRE" to be presented to the Ministry of Renewable Energy with 3 partners from CLEAN network.
- Impact Investors workshop- April 2015
- CLEAN Introductory Workshop with Practitioners, Founding members, Policy think tanks and other Stakeholders, Sep 2014
- Focused Group discussion on Decentralized energy planning in Karnataka with key representatives from Karnataka Government Energy and Power institutions, Jan 6th

Key failures, learning and insights:

1. One of the key challenges was facilitating seamless communication internally and getting teams to work collaboratively as opposed to functioning in a silos.
2. Another outreach failure is that most of it was reactive as opposed to proactive.
3. Outreach efforts have to extend beyond English, communication has to happen in regional languages and in vernacular media as well.

CENTRE OF INNOVATIONS FOR THE POOR

In 2014, SELCO Foundation entered into a partnership with USAID for a period of two years to support the establishment of an anchor body, CIP, that links a network of LABS to drive innovations in technology, finance, process, market linkages, entrepreneur development, enterprise creation, policy – to catalyze the deployment of sustainable energy solutions to the poor.

PROGRESS AND STATUS

- Knowledge Capture: Over 19 case stories were documented ranging across three main categories-technical, financial and process innovations. It included a practice- which can be an activity, methodology, system, process, technique, tactic or approach.
- Replications on the ground: This written documentation stemmed from on the ground replication of key technical, financial and process innovations among LABS and between external partners. In total 7 processes were replicated through 4 external partners.
- Institutionalization of Knowledge Sharing among Labs: At present, each LAB has an internal reporting structure which mandates reporting on, amongst other aspects, replications undertaken by teams between themselves and external partners.
- Setting up a LAB: A LAB is the epicenter of the program, as a grassroots level R&D centre focused on innovative solutions for particular customer segments and focus areas. Last year, Tribal Lab has been established. This contributed to an understanding of how a LAB needs to be set up for future reference, early support required-financial and human resources, criteria for why a LAB is needed in the first place and so on.
- Partnerships: One of the critical linkages to be provided under the SCALE program was linkages with partners who can help with R&D, dissemination, financing, replication, human resources and so on. In one year, the program engaged with 6 university partners, 532 students and professionals, and 14 interns.
- Creation of Entrepreneurs: Through a series of identification and induction workshops, three entrepreneurs were shortlisted to support with energy businesses that could in turn be a dissemination point for some of the innovations developed under the LAB. Both entrepreneurs identified are from the same region as Tribal Lab, Orissa, and are already working together to provide a reliable supply chain for local communities.
- Policy Impacted: Through consistent advocacy efforts, three major changes were incorporated into the off grid component of GOI, National Solar Mission - inclusion of financial institution, increased system eligibility for subsidies bringing in more customers under the subsidy program and inclusion of solar water pumping system with financing through bank loans.

NEXT STEPS

- Provide greater visibility of overall program and concept of replication among relevant stakeholders like funders, peers, potential partners like NGOs, technology developers, policy partners, and universities.
- Develop and strengthen new and existing mechanisms to enhance knowledge sharing among LABS and the outside world.
- Develop platforms to spark replication of successful innovations or practices within the LABS, India and the rest of the world.

LESSONS LEARNT

There were two fundamental philosophies of SELCO Foundation, Since the beginning, two fundamental philosophies have guided our way in the way we have been approaching energy and poverty related issues

- To intervene from a basic needs perspective, related to livelihoods or basic quality of life, of the underserved population that it is partnering with.
- To find a holistic solution only after understanding the problem in-depth, as unlike in many cases it is always a solution seeking a problem.

Energy Access Solutions as Catalysts Many of the interventions done by the various teams in SELCO Foundation have further strengthened the points as articulated in (a) and (b). While the Foundation has built a niche for itself in creating solutions in the energy access area, most of the time it does not approach a community from the energy but from the critical need of the community. For example, in the Tribal Labs in Odisha, the team found problems that were health related (maternal, infant mortality, etc.) were the most critical issue of the tribal segment. Thus its approach has been to link energy access and health services, not only leading to gaining trust in these marginalized communities but also taking the first step in the ladder of holistic human development. The primary learning here has been that energy access solutions are to be seen as catalysts and entry points for solving some of the basic human problems and cannot be the end-solutions in themselves.

Technology, Affordability and Mixed Teams Many internal teams are time and again confronted with the very definition of affordability. Often organizations confuse affordability by relating it to the cost of the capital good and not the over all service the good can provide. Repeatedly, developers compromise on the value of a technology / product in order to make it 'affordable' for the poor, not realizing the fact that some of the sacrificed quality/value of the product is what was critical to effectively impact the poor in a much better manner. Technology solutions need to be found out in tandem with other parts of the eco-system (finance, social issues, local market conditions and eco-systems, family assets etc). The value of the technology intervention needs to be maximized considering the expectations and then the affordability can be determined. Making a technology 'affordable' purely on a cash flow basis many time has led to making the poor as consumers and not helped them get out of poverty. SELCO Foundation by having mixed teams with backgrounds from technology, design, finance and humanities has been able to hone down on solutions that are at the core of social sustainability and replicable.

Exit Strategies at the Project Level One of very important lessons many members of the SELCO Foundation learnt from various interventions was to have a very clear plan followed by regular evaluation of the progress. And the importance for not only a clear implementation plan, but also a strategy to regularly evaluate the progress.. The exit could be for various reasons – either the intervention has achieved its stated goals, or has no other added value or has not been the most feasible or viable intervention. In some of the projects, the absence of timely evaluations, have led to inefficient use of the foundation's resources. Thus, the evaluation framework is being strengthened, leading to better monitoring of projects.

Commonality of Processes SELCO Foundation has projects and interventions cutting across rural, tribal, urban communities. While many of these have specific difference because of the local context, they also have similar points of inflection which can serve as useful data for understanding and designing future projects- not only for the foundation but for many such interventions done by other organizations around the world. SELCO Foundation is creating a knowledge bank in order to share its learnings.

CONCLUSION

The 2014-2015 has been a year that has helped SELCO lay the foundation for its 2015-2020 phase. The interventions and projects implemented have proven some of the initial presumptions of SELCO Foundation, which were:

- Solutions can be broken into multiple processes and these processes can be replicated leading to larger impacts.
- Permutation and combination of the above mentioned processes can lead to customized solutions, lowers the costs of innovations when one enters a new geography or community.
- Innovations in technology, finance, business models, and market interventions are all interlinked and cannot be thought or implemented in isolation

With its unique structure of community, focus and support labs, SELCO Foundation has given shape to thought processes that can in a way show a path to an inclusive society leading to less conflicts and more cohesiveness in the world. The 2015-2020 plan of the foundation is to further go deeper into the economic strata and prove that sustained solutions can be developed for communities living in abject poverty that are marginalized further because of rampant one-sided growth, climate change, social stigma etc: only then a holistic and positive society can be built.

Financial health

M/S RAMESH ASHWIN & KARANTH
CHARTERED ACCOUNTANTS

12.08.2015

INDEPENDENT AUDITOR'S REPORT

To the Trustees of Selco Foundation

We have audited the accompanying consolidated financial statements of Selco Foundation (Trust), which comprise the Balance Sheet as at March 31, 2015, and the Statement of Income and Expenditure and the Receipts and Payments Account for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation of these consolidated financial statements that give a true and fair view of the consolidated financial position, consolidated financial performance and consolidated Receipts and Payments of the Trust in accordance with accounting principles generally accepted in India. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the consolidated financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with the Standards on Auditing issued by the Institute of chartered Accountants of India. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Company's preparation and presentation of the consolidated financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of the accounting estimates made by management, as well as evaluating the overall presentation of the financial statements

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

Premier Presidency, # 35/17, 1st Floor, Langford Road, Opp. St. Joseph College,
Bangalore - 560 025. Phone: 080 - 41464630. Email: rakca2004@gmail.com

M/S RAMESH ASHWIN & KARANTH
CHARTERED ACCOUNTANTS

In our opinion and to the best of our information and according to the explanations given to us, the consolidated financial statements give a true and fair view in conformity with the accounting principles generally accepted in India:

(a) In the case of the Balance Sheet, of the state of affairs of the Trust as at March 31, 2015;

(b) In the case of the Income & Expenditure Account, of the Surplus for the year ended on that date; and

(c) In the case of the Receipts and Payments account, of the cash flows for the year ended on that date.

For Ramesh Ashwin & Karanth
Chartered Accountants
F.R No. 010680S

Prashanth Karanth
Partner
M No. 214235

Premier Presidency, # 35/17, 1st Floor, Langford Road, Opp. St. Joseph College,
Bangalore - 560 025. Phone: 080 - 41464630. Email: rakca2004@gmail.com

SELCO Foundation
 # 690, 1st Floor, 15th Cross, 2nd Phase, JP Nagar, Bangalore 560078

BALANCE SHEET AS AT 31ST MARCH 2015

PARTICULARS	Schedule	Current Year 31-03-15	Previous Year 31-03-2014
FUNDS AND LIABILITIES			
Non Corpus Fund	1	44,455,816.50	2,216,132.00
Total Liabilities		**44,455,816.50**	**2,216,132.00**
PROPERTY & ASSETS			
Fixed Assets	2	648,098.00	408,884.00
Current Assets, Loans & Advances			
Cash and Bank Balance	3	49,156,678.39	2,092,666.00
Current Assets	4	1,381,786.11	793,576.00
Less Current Liabilities & Provisions	5	6,730,746.00	1,078,994.00
Net Current Assets		**43,807,718.50**	**1,807,248.00**
Total Assets		**44,455,816.50**	**2,216,132.00**
Significant Accounting Policies & Notes to Accounts	8		

For SELCO FOUNDATION

Trustee Trustee

Place : Bangalore
Date : 12.08.2015

As per Our report of even date
For Ramesh Ashwin & Karanth
Chartered Accountants,

Prashanth Karanth
Partner
M No. 214235
F.R No. 010680S

SELCO Foundation

690, 1st Floor, 15th Cross, 2nd Phase, JP Nagar, Bangalore 560078

INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2015

PARTICULARS	Schedule	Current Year 31/3/2015	Current Year 31/3/2014
INCOME			
Grant Received - Foreign	6	64,920,016.27	10,648,644.52
Donations - Local		13,680,459.00	9,530,718.00
Contribution Towards Integrated Energy Center		111,821.00	5,200.00
Interest received		992,491.37	364,191.00
Other income		-	-
Total Income		**79,704,787.64**	**20,548,754.00**
EXPENDITURE			
Project Cost		32,625,849.60	18,727,720.00
Research & Development Costs		662,661.87	1,410,511.00
Administration Costs	7	3,852,463.67	2,261,398.00
Depreciation	2	324,128.00	130,791.00
Total Expenditure		**37,465,103.14**	**22,530,420.00**
Surplus		42,239,684.50	(1,981,666.00)
Provision for Taxation		-	-
Surplus (Carried to Balance Sheet)		42,239,684.50	(1,981,666.00)
Significant Accounting Policies & Notes to Accounts	8		

For SELCO FOUNDATION

Trustee Trustee

Place : Bangalore
Date : 12.08.2015

As per Our report of even date
For Ramesh Ashwin & Karanth
Chartered Accountants,

Prashanth Karanth
Partner
M No. 214235
F.R No. 010680S

SELCO Foundation

690, 1st Floor, 15th Cross, 2nd Phase, JP Nagar, Bangalore 560078

Receipts And Payments Accounts For The Year Ended 31.03.2015

Receipts:	Amount	Amount
Opening Balance		
Cash		**35,254.00**
Bank		**2,057,412.00**
Receipts during the year		
Grant Received	64,920,016.27	
Donation Received	13,680,459.00	
Interest received	596,605.22	
Service Income	111,821.00	
Security Deposit	4,150.00	
Advance receipt from IBM India	900,000.00	
Income Tax Refund	231,480.00	
Menda Foundation Advances	2,000,000.00	
Net Receipts		82,444,531.49
TOTAL		**84,537,197.49**
Payments during the year		
Project Costs	30,631,464.21	
Administrative Costs	3,297,246.80	
Research & Development Costs	660,201.87	
Fixed Asset purchased	563,343.00	
Fixed Deposit	45,631,000.00	
Micro Entrepreneur - Advance	50,000.00	
TDS AY 2015-16	178,263.22	
Nett Payments		**81,011,519.10**
Closing Balance		
Cash		**38,250.00**
Syndicate Bank A/C's		**3,487,428.39**
Total		**84,537,197.49**

For SELCO FOUNDATION

Trustee Trustee

Place : Bangalore
Date : 12.08.2015

As per Our report of even date
For Ramesh Ashwin & Karanth
Chartered Accountants,

Prashanth Karanth
Partner
M No. 214235
F.R No. 010680S


SELCO
FOUNDATION