

SUN TRANSFER

Sustainable Off-grid energy solutions

Seminar on
Ensuring Access to Affordable, Reliable, Sustainable and Modern
Energy for All (SDG 7)
Organized by the Division for Sustainable Development of UNDESA,
In Cooperation with UNECA and UNITAR
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Addis Ababa, Ethiopia

Sun Transfer Tech Plc Best Practices



By: Yonas Workie
Managing Director

Back ground

- Sun Transfer Tech PLC is a private limited company Established in 17 December 2011 mainly focused on providing sustainable off-grid solar solutions to the rural community
- Established by prominent practitioners in the sector with lots of experience both in business and NGO environment which enable us to see the social and business side of the sector.
- Partnered with solar technologies manufacturing sc. (STM) for local solar lanterns and home systems assembly

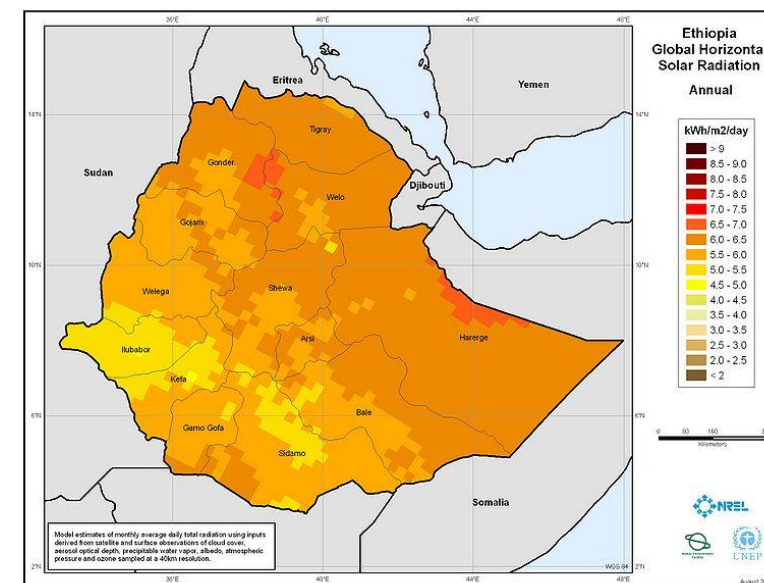
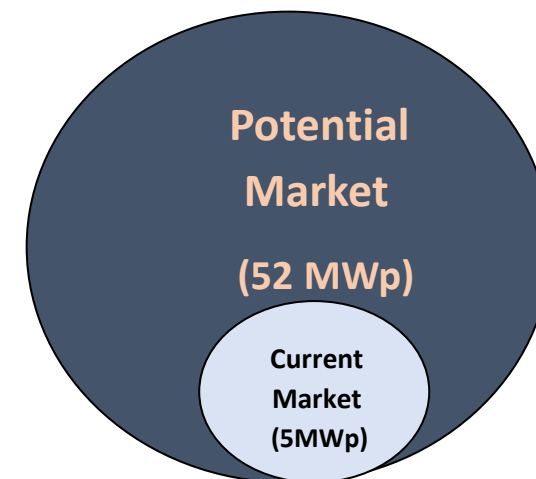
Activities

The major activities that our company engaged in are:-

- Provide solutions according to the customer needs: System sizing according to the energy demand of the customer
- DC Solar Home systems and solar lanterns: mainly for rural community such as farmer houses, rural schools and clinics
- Solar water pumping systems: drinking water for humans and cattle, irrigation etc... according to the daily water requirements and other data collected.
- Medium range off-grid solar solutions : for schools, offices, health centers, community centers, churches, Mosques etc
- Technical service on installation and troubleshooting problems of any installed PV systems who requires repair.

PV Market potential in Ethiopia

- Ethiopian population now exceeds 95 million, of which more than 80% continue to live in rural places. Although the country's access to the grid assumed to be around 29%, the extension of the electric grid reaches fewer than 5% of rural homes, which means more than 70 million people in rural area living without any modern energy access (which some studies suggested that the demand for off-grid solar systems for rural community is more than 14 million.
- Furthermore, those homes connected to the electricity grid suffer from unreliable and inconsistent supply.



Approach

- Distribution of solar lanterns and home systems using small and micro enterprises and cooperatives in the rural area, that includes solar energy technicians who were working in solar energy Foundation has been empowered to establish a micro-enterprise of their own thereby being responsible to sale, install, maintain and give after sales service to the end users.
- Special emphasis on building **CUSTOMOR TRUST**, since CUSTOMER TRUST is the secret behind the success of solar business.
- Distribution of solar lanterns and home systems through micro finance institutions (MFI's)
- Promote our products and services to various NGOs and governmental organizations which enables us to get inquiry for bigger PV system projects like for : water pumping, PV systems for schools, clinics, and institutions.
- Work with specific organizations who has strong network in the rural community such as: oil and gas stations, telecom service etc...

Success stories

20kw three phase PV system and street lights installed in Oromia region around Sendafa. The system can also be charged by the grid or other source of energy



Success stories...

Solar water pumping system installed in Northern part of Ethiopia Tigray region (4.6kw) (20,000 liters of water at about 70m TDH for drinking



Success stories...

Solar water pumping system installed in REMA for Solar energy foundation 6.5/9.2/8.4 kw three series water pumping system to pump 50,000 liters of water per day at a total 300 m of TDH



Success stories...

We won 100,000 USD Off-grid energy challenge 2014 grant from USADF for import and distribution and installation of 338 SHSs.

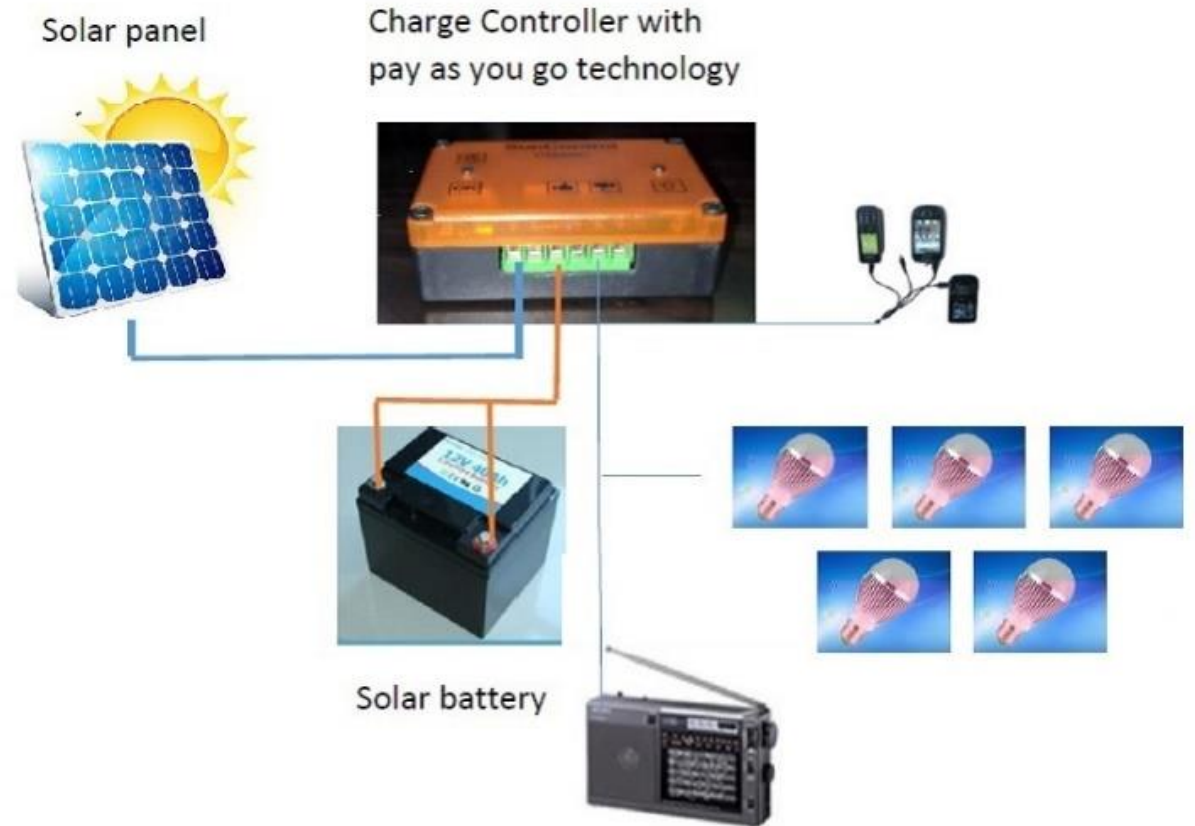
- Pay as you go technology
- Sales , Installation and after sales service to be done by rural SMEs of our previous solar technicians



Success stories...

USADF grant: 20Wp Solar home system

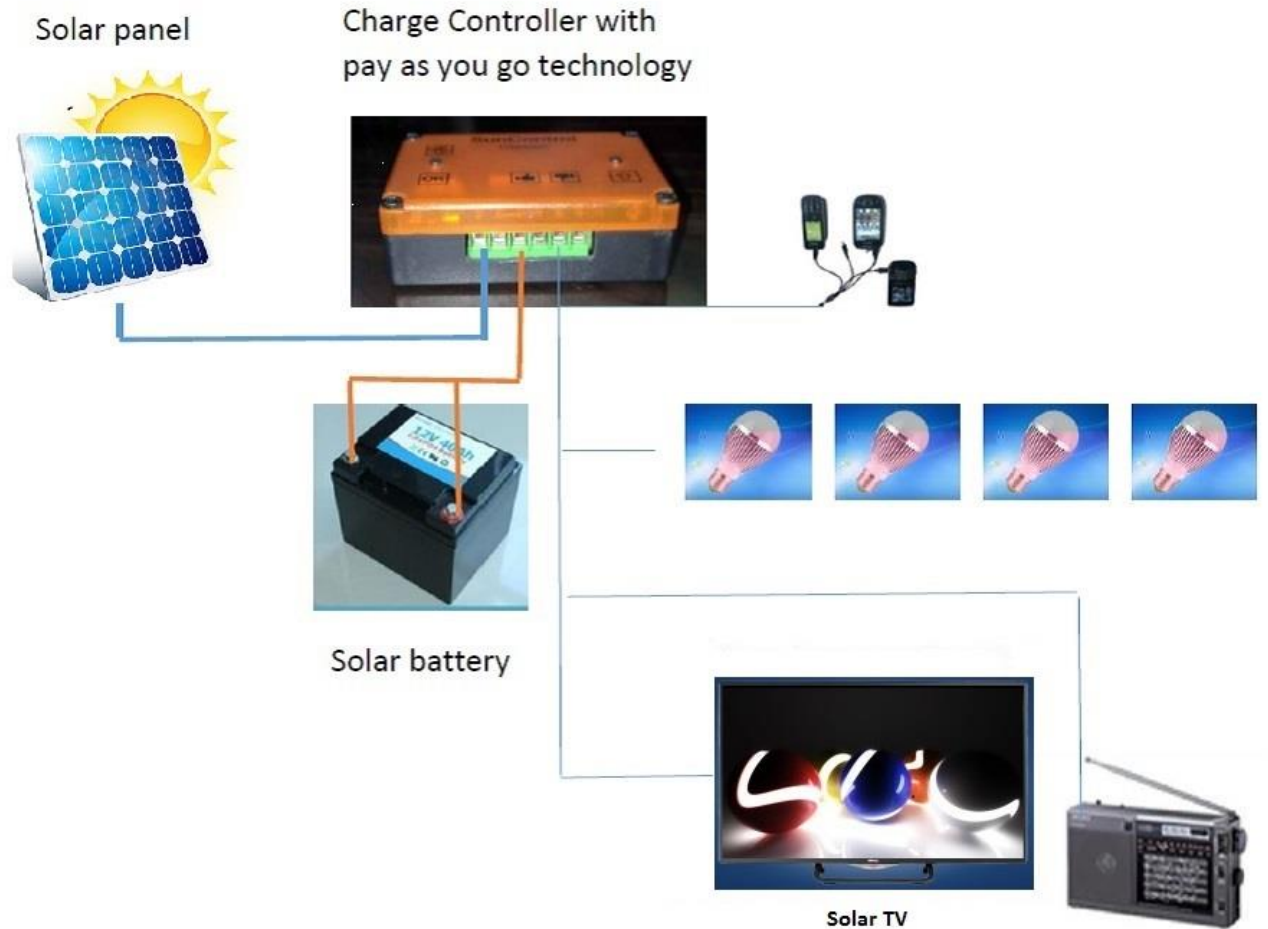
20Wp PV System required to power, 5 lights for 5 hours/day, Small radio for 6 hours/day plus mobile phone charging, 12V DC output, (system also includes LED lamps)



Success stories...

USADF grant: 50Wp Solar home system

50Wp PV System required to power, 4 lights for 5 hours/day, solar TV and small radio for 6 hours/day plus mobile phone charging, 12V DC output, (system also includes, LED lamps, solar TV



Success stories...

Technical service:-

Trouble shooting and problem solving of 64Kw PV system installed by a Korean NGO in Oromia region in 2011 but was not functional since the past 2/3 years.



Success stories...

Around 6000 units of solar lanterns and plug and pay type of home systems distributed through various networks like Total Ethiopia oil and gas stations and Hidase telecom.



Success stories...

STM (Solar Technologies Manufacturing S.C.)

- STM is currently engaged in assembling of Niwa solar lanterns and MSS (modular solar home systems) such as Multi 100plus, Multi 300 XL , Home 200, Home 300 and Home 400.

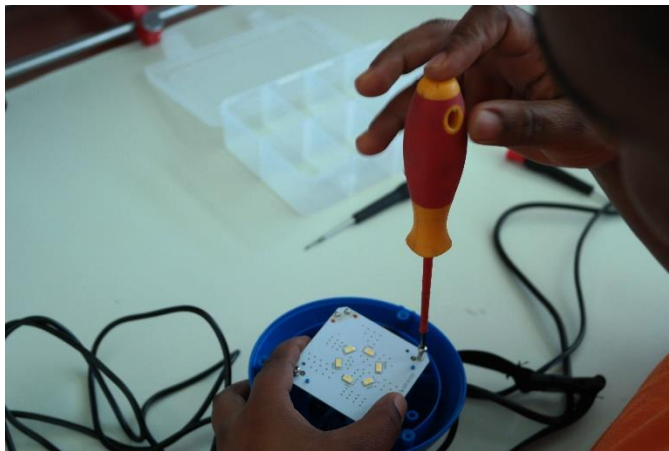
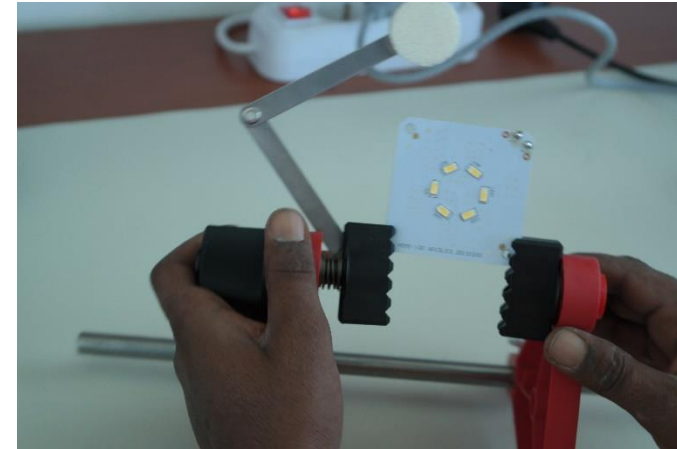
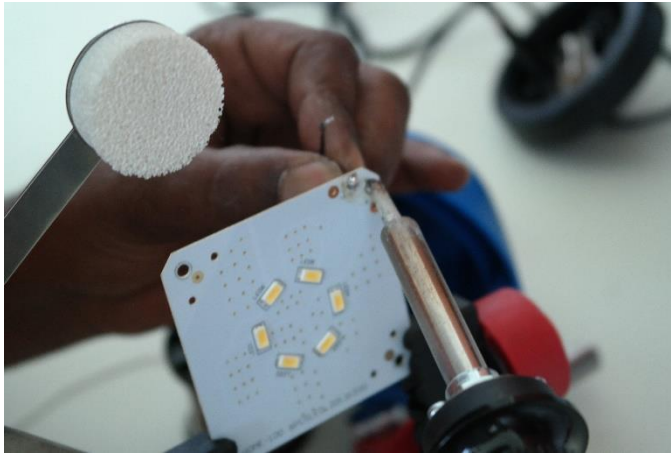
Success stories...

Some pictures from lantern assembly line



Success stories...

Some pictures from MSS lamp assembly line training



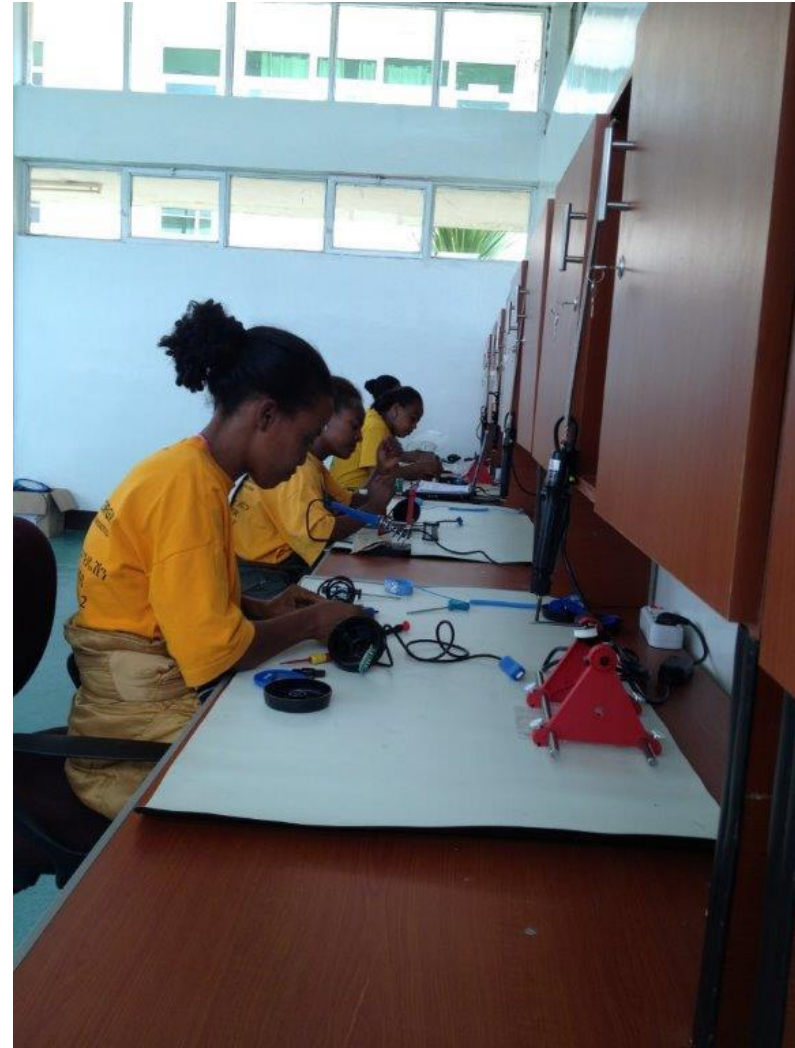
Success stories...

Quality control



Success stories...

90% of the technicians who are working on the assembly line are women.



challenges

- Unable to get enough working capital
- Requirement of collateral to get loans from local banks which is impossible for young companies like us.
- shortage of hard currency in the country in which we have to wait very long queue (more than 3 months) in banks to get L/C for import of solar systems.
- Difficult to scale up due to the above factors which is also a challenge for the SMEs working in the rural areas waiting for products from importers.

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Thank you for your Attention!