

MOBISOL – SMART HIGH-QUALITY SOLAR SOLUTIONS FOR 30,000 HOUSEHOLDS IN TANZANIA



Mobisol Tanzania, the Tanzanian subsidiary of the Germany-based solar service provider Mobisol, has come a long way from a promising EEP pilot project in Tanzania in 2011. Mobisol is now East Africa's largest rent-to-own solar service provider by capacity installed and a reputable company with 185 permanent employees and over 200 freelancers in Tanzania. Mobisol has so far electrified over 35,000 households in East Africa and has installed more than 3.5MW solar capacity. In total they have saved over 15,500 tons/year of CO2 emissions by substituting fossil fuels.

The EEP fund helped pave the way for this solar revolution in Tanzania: Initial funding was an important facilitator for the development of the high-quality product-service-offer and the necessary infrastructure. The trust and support of early strategic and financial partnerships has enabled Mobisol Tanzania to thrive and to become a company that now brings clean and affordable solar energy to thousands of people in Tanzania, provides education and economic opportunities and contributes to global environmental protection.

Mobisol's work and impact have been honoured by a number of prestigious recognitions such as a "Momentum for Change" Award by the United Nations Framework Convention on Climate Change, the PV Magazine Award for "Top Business Model 2015" and the Off-Grid Expert Award. Mobisol's CEO has been honoured as "Social Innovator of the Year 2015" by the Technology Review and the company has been recognized as "EEP Project of the Year" Finalist and was honoured by SUSTAINIA as one of the TOP10 sustainable solutions in the world.

Mobisol's success story has manifested itself in a number of important milestones reached:

High-quality products affordable to rural Tanzanian customers

Mobisol has developed an innovative product design and service offering fully adjusted to Tanzanian customers' needs: The mature product-service offer combines high-quality solar products, innovative IT solutions and remote monitoring, microfinance via mobile banking and comprehensive customer services. Mobisol's products are made affordable by a rent-to-own instalment scheme offering micro-finance loans over a period of 36 months in small, flexible instalments which are payable via Mobile Money.

The plug'n play Mobisol system is quickly installed by locally trained and certified technicians. It includes a solar panel, battery, solar controller, lights, as well as cell phone chargers. The system is available in three different sizes between 80 and 200 Watts. The systems can illuminate entire households, and power e.g. laptops, radios, TVs, fridges and charge cell phones. The larger systems are powerful enough to run energy-based businesses.

Comprehensive services adjusted to customers' needs

Mobisol solar systems come complete with an extended warranty and comprehensive customer service. A full service package complete with free installation by certified technicians, free maintenance for three years including a free-of-charge service hotline and 48 hours repair service, is standard. Through the GSM modem included in the solar controller, technical data regarding the panel, battery and energy consumption is tracked and monitored by local technicians in a web-based interface. The remote monitoring technology allows potential maintenance problems to be addressed swiftly and enables systems to be locked automatically in case of theft or overdue repayment.

Employment and capacity building in rural off-grid regions

Mobisol is empowering rural entrepreneurs to start their own energy-based businesses. Approximately one third of Mobisol's customers earn incremental income by running energy-based businesses such as by charging mobile phones and solar lanterns, running barber salons or operating village cinemas.

In order to further capacity building and job generation in structurally underemployed regions, Mobisol has developed the "Mobisol Akademie" concept. The Mobisol Akademie was established in 2014 to train local entrepreneurs working as Mobisol technicians and sales staff to effectively service customers, while supporting the sustainable growth of the company. The Mobisol Akademie trains and certifies all customer facing staff and has so far trained over 700 people. The company has so far employed 350 full-time employees and empowered over 300 small entrepreneurs working as contractors, with over 90% of the team working in Tanzania and Rwanda.

Positive impact on the quality of life, health, education and economic opportunities of rural communities

Mobisol has so far electrified over 35,000 households in East Africa and has installed more than 3.5MW solar capacity. Over 175,000 indirect beneficiaries are profiting from an electrification infrastructure made possible by Mobisol.

Owning their personal electricity source has a positive socio-economic impact on low-income households. Customers reported that efficient, bright LED bulbs and longer light hours increased family productivity; in the evening customers are able to work and children have light to do their homework thereby improving education levels. Over 100,000 children were enabled to study at night with clean efficient solar light. Mobisol clients no longer have to travel long distances to shops with diesel generators to charge their cell phones. Additionally, Mobisol solar home systems avoid dangerous fumes which, according to the World Bank, cause approximately 600,000 premature deaths in Africa per year. To emphasize their commitment to sustainable socioeconomic and ecological development, Mobisol has become a certified B Corporation – a designation that requires companies to meet high standards of social and environmental performance, transparency, and accountability.

Contribution to global environmental protection

Mobisol's solar product-service packages compensate for traditionally used market alternatives of kerosene, diesel generators and open flames from wood or candles. Mobisol currently saves over 15,500 tons/year of CO2 emissions by substituting fossil fuels.

All systems come with extended warranties and free maintenance for a long and extendable period thus ensuring the sustainability of the systems. During system operation the battery is permanently protected from overcharge and deep discharge by the solar controller. The batteries are particularly designed for solar applications, therefore they provide a characteristic deep cycle ability with a long lifetime expectancy. Mobisol additionally offers a recycling program for batteries. All batteries come affixed with the Mobisol controller – a stand-alone measurement and control unit complete with charge controller and an integrated GSM module. The charge controller measures voltage and bi-directional current measurements of the battery, load and solar panel and communicates all data via the GSM network to the remote monitoring database – which enables for swift trouble-solving in case of maintenance issues. Mobisol lights are high-quality efficient LEDs.

Mobisol Tanzania has developed a carbon offset project in cooperation with myclimate, whose climate protection projects are characterised by their compliance with very strict environmental and social criteria.

A scalable, replicable business model which is already being implemented in other countries

The success of the company in Tanzania has proven the feasibility of the business model and led Mobisol to develop a broader strategy for sustainable scale-up, to secure more financial and strategic partners and expand into a new project country: Rwanda. Scalability and replicability were further emphasized by a cooperation with the Rwandan Government, the largest Rwandan mobile network operator MTN and the European Union to jointly facilitate access to clean and reliable energy for a total of 49,000 Rwandese households and 1,000 schools. Within five years, 50,000 high quality solar systems will be supplied and installed to reach approximately 645,000 beneficiaries in the Eastern Province of Rwanda.

Incubator for further innovation

Mobisol aspires to provide clean, reliable electricity to millions of households in low-income communities. After having successfully installed 35,000 live systems in Tanzania and Rwanda and having proven the feasibility of the concept, Mobisol is now moving into the business at a larger scale. Mobisol is currently working on expansion strategies into further markets and expanding their product portfolio – thereby piloting visionary new ideas such as a solar-powered drone delivery network.

Here are some videos displaying Mobisol's work and impact:

Welcoming Mobisol's 20,000th customer: <https://vimeo.com/133522790>

Mobisol tests solar powered Drone Delivery Network: <https://vimeo.com/148290428>

Mobisol service animation: <https://vimeo.com/37653157>