

# Solar Sister

## Solar Sister – A Green Energy Revolution Powered by Women’s Enterprise

### Background and context

Sustainable energy powers economic opportunity. Yet 1.3 billion people in the world do not have access to electricity. 70% of these are women and girls. Twice this number, nearly 40% of the world's population, rely on wood, coal, charcoal, or animal waste to cook their food—breathing in toxic smoke that causes lung disease and kills nearly two million people a year, most of them women and children.

This energy poverty is most acute in Africa, which has the lowest per capita energy use of any continent. Over 600 million Africans, and more than 10 million microenterprises, have no access to electricity.<sup>1</sup> In 11 African countries, more than 90% of people live without any electricity. Access to improved cooking technologies that can benefit public health and the environment is also limited. Clean energy technology solutions have especially not been accessible to those living in rural communities across the continent. A gender- based technology gap combined with a lack of distribution channels has kept these life-changing technologies from widespread adoption. Table 1 depicts the state of poverty, electrification and gender inequality in Solar Sister priority countries, which are the focus of this proposal.

**Table 1: Energy Poverty, Human Development and Gender Inequality – Connecting the Dots<sup>2</sup>**

Country	Total Population (Million)	% Population below \$1.25 (PPP) per day	% Female Population	% Rural Population	Electricity Access	HDI	Gender Inequality Index	Labor market participation rate for women (%)
Uganda	34.5	38%	50.4%	84.1%	6%	0.446	0.577	78.3%
Tanzania	46.2	67.9%	50.1%	68.2%	13.9%	0.466	0.590	86.3%
Kenya	41.6	19.72%	50%	73.4%	16.1%	0.509	0.627	76.4%
Nigeria	162.4	68%	49.38%	43.2%	40%	0.459	n.a.	39.2%

Source: International Human Development Indicators 2012, UNDP; World Development Indicators, CIA Country Factbook

Solar Sister addresses energy poverty by building a women driven distribution business. Including women as a key part of the energy access solution is not just a good thing to do, but also essential for a scalable impact. In doing so, both the *geographical access* challenge (i.e. last mile distribution) and *cultural access* challenge (i.e. a gender inclusive solution) are addressed. Solar Sister’s proposed scale up efforts in partnership with ENERGIA will make a significant impact at organizational, programmatic and stakeholder levels in improving energy access and elevating the conversation about the importance of women inclusive solutions.

### Project summary

Sustainable energy powers economic opportunity. Yet 1.3 billion people in the world do not have access to electricity. 70% of these are women and girls. This energy poverty is most acute in Africa,

<sup>1</sup> Source: Lighting Africa 2014, <http://www.lightingafrica.org>

<sup>2</sup> The Gender Inequality Index (GII) is an index for measurement of gender disparity that was introduced in the 2010 Human Development Report 20th anniversary edition by the United Nations Development Program (UNDP). According to the UNDP, this index is a composite measure which captures the loss of achievement, within a country, due to gender inequality, and uses three dimensions to do so: reproductive health, empowerment, and labor market participation. Learn more at - <http://hdr.undp.org/en/statistics/gii>

which has the lowest per capita energy use of any continent. Over 600 million Africans, and more than 10 million microenterprises, have no access to electricity. Lack of electricity affects health, safety and economic advancement of women and girls. Without light, they are at a higher risk of violence as they walk through unlit areas. Maternal healthcare for pregnant women as well as girl's education prospects suffer without electricity. An African woman is 23% less likely to own a mobile phone, as compared to a man. By extending the benefits of mobile phone ownership (and powering mobile phones through solar power where grids do not exist) to more women, a host of gender inclusive socio-economic goals can be accomplished. Beyond electricity, access to clean cooking solutions is also limited. In Sub-Saharan Africa, over 82% of the population (~700 million people) remains dependent on solid fuels such as charcoal, dung, fuel wood, and other biomass for cooking purposes. Women and girls, who have primary responsibility for cooking, spend hours each week collecting fuelwood. This translates into further lost opportunities for increasing income, gaining education, and makes them subject to security hazards. A gender-based technology gap combined with a lack of distribution channels has kept life changing clean technologies from a widespread adoption.

## *Solar Sister changes this.*

Solar Sister is an award winning social enterprise addressing the gender face of energy poverty. To improve energy access, we address both the geographical access challenge (through last mile distribution) and cultural access challenge (through a gender inclusive solution).

With the support of ENERGIA Phase 5 program, Solar Sister proposes to build an expanded network of 1,000 additional Solar Sister Entrepreneurs (SSEs) who will bring life transforming green energy access to over 804,000 Africans over next three years. To achieve these objectives, Solar Sister's Women's Economic Empowerment (WEE) strategy makes a difference at three interventions levels:

**Intervention 1: Organizational Level** – Solar Sister is the only organization in the world formed with the exclusive mission to build an Africa wide network of women entrepreneurs to transition from an era of energy poverty to prosperity. Solar Sister's goal is to unlock the power of women's enterprise to spread light, hope and opportunity. As a uniquely women led effort, we do this at an organizational level by investing in recruitment, training and support of women's leadership across the program.

**Intervention 2: Programmatic Level** - Solar Sister's innovative approach is rooted in women's empowerment to bring high quality, affordable clean energy solutions to even the most rural customer's doorstep where traditional distribution channels simply do not exist. Our simple, yet effective mantra is: recruit, train and mentor. Solar Sister gives African women both a sense of agency and the skillset required to become clean energy evangelists. Implementation is a rolling process of community selection, entrepreneur identification, multi-stage entrepreneur training, mentoring and awareness building. It is the "Sisterhood" of Solar Sister that gives women a continuous community of support to build their own micro enterprises, while becoming role models for other women and young girls. Improving energy access through women's empowerment is not just a standalone one off "project" for Solar Sister. It is the very centre pin of our mission as an organization, and this makes us unique.

**Intervention 3–Stakeholder Level** –Through the partnership with ENERGIA, Solar Sister will continue to push the envelope for adding women's voice to the ongoing global dialogue on energy access. The Leadership team, led by Katherine Lucey, Founder and CEO of Solar Sister, will

play a vital role in this. Katherine is one of the world's foremost advocates for marrying women power with green power. The Advisory team consists of Proscovia Njuki, the first women engineer in Africa and the founder of the Association of Women Engineers, Technicians and Scientists in Uganda (WETSU); and Engineer Bahijjahu Abubakar, Nigeria's National Coordinator of Renewable Energy program and the program lead for Rural Women Energy Security (RUWES) program. Sarah Dagnou, President of the International Center for Research on Women serves as an Advisor to guide our gender inclusive strategy. Through this strong support network, social media and well-demonstrated impacts of Solar Sister Entrepreneurs, we will continue our multi-stakeholder advocacy efforts.