



The story:

STG International is a not-for-profit organization focused on jump-starting enterprises in developing countries based on our novel solar energy technology that simultaneously provides electricity and hot water to off-grid institutions (such as health clinics and schools) at a price close to half that of competing technologies. This strategy maximizes impact of energy provision, by drastically improving basic services to rural communities, while also providing local job creation and economic stimulation to provide a sustainable source of manufacturing and maintenance expertise.

STG has been working for the past 6 years with stakeholders at all levels, from nurses employed in these clinics to governmental/NGO managers of the centers to the international funders supporting their work (e.g., the World Bank, Clinton Foundation), as well as with technology partners on the ground in Lesotho to demonstrate this model, leading to the recent installation of our first clinic-scale system in Lesotho, expected to go online later this year when clinic building renovations are completed.



The details:

Without access to modern forms of energy, rural service providers are crippled in their missions: they have no access to communications, electronic record keeping and teaching tools, diagnostic equipment, or lights after sundown.

Electrification of remote schools and clinics currently has no affordable option: the cost of grid extensions is crippling while distributed systems like PV panels and diesel generators suffer from, respectively, high capital and high fuel costs. In addition, none of these solutions simultaneously provides the co-generation (electricity + heat/hot water) required for institutions to provide quality services to rural citizens.



In contrast, our Solar ORC provides emissions-free electricity at a price that undercuts competitors (~\$0.25/kWh compared to \$0.30-0.35 for PV or \$0.50-\$1.10 for diesel fuel in RSA) **while simultaneously providing hot water or space heating at no additional cost.** We achieve these cost savings via use of simple manufacturing methods and a design using repurposed, already mass-manufactured OEM equipment. In addition, by designing for provision of electricity **directly to service providers**, we maximize the impact of each kW of installed capacity, enabling improved quality of health care and education received by their rural, often poor, beneficiaries.



Because our design is based on global supply chains, our distribution model can be locally based, focused on training domestic manufacturing/sales partners, promoting regional economic growth, and facilitating job creation. In addition to providing technology training for partners over the past 6 years, we have also developed a business plan focused on solar manufacturing within Lesotho. In the next five years, we expect to complete training of 2-4 additional partner organizations within Africa, India, or Southeast Asia; in this way, we will be able to simultaneously supply Solar ORCs to these diverse markets and aim to reach upwards of 200 rural clinics and schools by 2016. **This will amount to over 400,000 beneficiaries - patients seeking medical care, medical staff, students, and teachers - and nearly 1000 tons of carbon offsets.**

Thanks to our previous funders: World Bank Development Marketplace, US EPA P3, NCIIA, Conoco Philips Energy Prize, Constellation Energy, & the International Foundation!

And please visit our first Global Giving Project!

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