



Solar Electric Light Fund

Annual Report

2020





## in 2009, SELF:

- installed more than 27 kilowatts (kW) of solar electric systems in 7 health clinics;
- impacted more than 150,000 people in Burundi, Haiti, Rwanda, Lesotho, Benin and South Africa;
- continued to bridge the digital divide for over 3,000 students and their families in the remote Eastern Cape province of South Africa;
- continued monitoring and evaluating the success of our multi-phase solar drip irrigation project in Benin; added training and introduction of new seed varieties;
- drilled bore holes for 3 drinking water wells in Dunkassa and Bessassi, Kalalé District, Benin;
- began design of solar electric systems for these 3 wells, as well as for 17 health centers in Lesotho, Haiti, Ivory Coast and Rwanda to be completed in 2010;
- completed assessments and site planning for the electrification of 2 health clinics in Haiti and 3 clinics in the Ivory Coast.

# a letter from our executive director

The year **2009** marked both endings and beginnings. For SELF, it was the last year of our second decade fighting energy poverty. Indeed, as I write this, we are in the midst of observing our 20th anniversary!

2009 was also the year in which SELF laid the foundation for significantly scaling up—of our organization as well as the scope and impact of our projects. With new staff capacity in project management, development, finance and communications, we have begun replicating, expanding and promoting the models we have pioneered.

Our innovation in Benin—combining solar water pumping with drip irrigation to help women grow food and generate income—has not only been validated by Stanford University's **Program on Food Security and the Environment**, but has also attracted interest and support from a growing number of institutions.

And in the area of solar health care, what began in 2006 with a project to power a few clinics in Tanzania and Rwanda has grown into a much larger initiative. Together with **Partners In Health (PIH), Columbia University** and other institutions, we are advancing a model of sustainable energy for rural health centers in the developing world. In this report, you'll read about our



latest efforts to solar electrify clinics in Rwanda, Burundi, Lesotho and, most recently, Haiti.

As I write this during the summer of 2010, I am compelled to share news of SELF's work in Haiti after the earthquake. We are accelerating and increasing the size of our installations at PIH clinics and hospitals, and are working with new partners on emergency centers and other facilities. On a sad note, among the 230,000 souls who perished in the quake was Walt Ratterman, a senior project manager who had worked for SELF in multiple countries over the past four years. A true solar hero, Walt touched the lives of thousands of people all over the world. We miss him dearly.

As always, we are deeply grateful to all of our funders and partners, listed on pages 27-29, who have made our work possible. I thank each and every one for their support of our mission to empower rural and remote communities around the world with clean energy from the sun.

Sincerely,

A handwritten signature in blue ink that reads "Bob". The signature is fluid and cursive, written in a personal style.

Robert A. Freling  
Executive Director



10 kW solar-diesel hybrid system installed May 2009 at Village Health Works

“What I saw in **burundi**, as a human being and a native of the country, made me question my entire existence. You look into the faces of so many people and you wonder how can they possibly experience happiness again. Could there be any better moment for change than when an entire population is exhausted by a bloody thirteen-year war, forced to endure the inevitable toll on their health from substandard care in an undignified environment, and then imprisoned when they cannot pay? I could not walk away from such tragedy and forget about it. I promised myself that with the help of my American friends and colleagues, I would do everything humanly possible to change the situation.”

- deogratias niyizonkiza, founder, Village Health Works



# burundi

The remote village of Kigutu, Burundi lies 90 miles from the nation's capital, and the nearest hospital is a 14 mile walk. Life expectancy is a mere 49 years in this country ravaged by malaria, tuberculosis and HIV/AIDS. In May, SELF completed the solar electrification of the first **Village Health Works (VHW)** clinic in Kigutu, and for the first time ever approximately 60,000 people in the surrounding area have access to life-saving services, preventive care and HIV/AIDS education.

In the clinic's initial phase, staff members are focused on providing primary care, especially pediatrics and women's health, including mother-to-child transmission of HIV. Comprehensive services for HIV/AIDS, malaria, TB prevention and care, and nutritional support are also being implemented.

With support from Partners In Health, VHW continues to recruit, train and employ local health professionals. VHW believes integrating community members in every phase of their projects is critical to achieving long-term success.

Patients are now receiving quality care, 24/7, thanks to a generous private grant from Lekha Singh and solar panels donated by Cermet Materials and Bosch Solar Energy AG.



Change a village. Change the world.





10 kW solar-diesel hybrid system installed September 2009 at Zanmi Lasante

“Whether you’re in the mountains of Lesotho or **haiti**, or whether you’re in a city in the United States, a doctor can’t work without electricity and energy, not that I know. You need diagnostic capacity, you need light to examine a patient, you really do need electricity to do the kind of work we’re doing. Transporting large amounts of fuel necessary to power generators; and to power clinics, hospitals, schools; is difficult, and especially during the rainy season it’s difficult...The roads are either absent or treacherous; it’s a huge logistic challenge as well.

There’s no question for me as a doctor, as a teacher, as someone who’s been working in very difficult conditions, that solar energy can save lives.”

- dr. paul farmer, co-founder, Partners In Health



# haiti

**Zanmi Lasante (ZL)**—“Partners In Health” in Haitian kreyol—clinics are located in the mountainous highlands of Haiti, where decent roads, reliable electricity and other forms of infrastructure do not yet reach. Erosion, caused by deforestation, leads to frequent flooding, making travel difficult if not impossible. Formed in 1983 by Dr. Paul Farmer and Ophelia Dahl, ZL provides critical preventive and emergency services to villagers who would otherwise perish.

Doctors operated for years with only diesel generators to supply electricity. The danger from fumes and exhaust, as well as from transporting the explosive fuel, coupled with the expense and unreliability led ZL to consider solar power.

In response to ZL’s needs, SELF designed a 10 kW hybrid solar-diesel system to power lights, microscopes, centrifuges, operating equipment and computers for the clinic in Boucan Carré. SELF and its partners installed this system—a first for Haiti—in September 2009.

SELF will install similar systems in four more ZL clinics in 2010, and in the remaining five in 2011.



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1.2 kW solar-powered drip irrigation system installed in Bessassi, November 2007

“Here in my village in **benin**, the garden saved me. I’m always in the garden. We didn’t know that the sun could do all of this. Now we sell, we eat. We eat a lot here. The water is helping us not only feed our families, but also to gain extra income to send our children to school. One day I said to Jennifer, the woman who has been helping us, ‘For so many months, you have been coming here, and I never had money to buy you any pounded yam to thank you. Now, after what we have sold, I can finally buy you pounded yams. So sit down. You're not going anywhere!’”

- yarou ganni, Dunkassa Women’s Farming Collective



facing page: Farmers now spend 50% less time in the field yet produce many times the prior yield.

# benin

Now entering its third year, SELF's Solar Market Garden (SMG) project has proved that solar energy can provide long term solutions to hunger, malnutrition and poverty in developing nations.

At Stanford University, the **Program on Food Security and the Environment** conducted an economic and environmental assessment of our multi-sectoral effort in Benin, beginning with the pilot phase. Researchers found that income and nutrition have improved significantly for women and their families since SELF installed three solar irrigation systems in 2007.

Women farmers are spending 50% less time in the fields, even though their plots are 10-30 times larger than before. They are growing enough produce to feed their families 3-5 servings of vegetables and fruits per day, the recommended daily allowance. And they are taking their excess crops to market, earning money for the first time in their lives. Many of the women are now planning to use their earnings to send their children to school.

The study also concluded that the SMG is cost-effective and environmentally sustainable. The systems should pay for themselves in approximately 2.3 years; and they are durable, emissions-free and more economical over time compared with gasoline or diesel-powered water pumps.



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Three 3 kW solar-diesel hybrid systems installed March 2008 at Partners In Health clinics

“In four countries [including **lesotho**], we've taken on the major health problems of the poorest—tuberculosis, maternal mortality, AIDS, malaria... We've scored some victories in the sense that we've cured or treated thousands and changed the discourse about what is possible.”

- dr. paul farmer, co-founder, Partners In Health



facing page: Roads are absent or treacherous in the rugged, windswept highlands of Lesotho.

# lesotho

Lesotho—a small, mountainous nation located entirely within the borders of South Africa—suffers from the third highest rate of HIV infection and the fourth highest rate of tuberculosis in the world. Almost one quarter of the adult population is estimated to be HIV-positive and life expectancy has plummeted to less than 35 years.

Of the 2 million people living in Lesotho, only 10 percent live in the capital. The remainder live in the lowlands or remote mountain regions that are largely inaccessible and home to a significant population of persons with HIV infection. These regions lack access to even the most basic health care services.

SELF has once again joined forces with **Partners In Health (PIH)** to bring the benefits of solar electricity to rural health clinics in Lesotho. In 2009 we designed solar electric systems for seven PIH clinics, and installation will begin in the spring of 2010. Once completed PIH will have the energy necessary to power medical equipment, diagnose and treat HIV/AIDS and TB patients, provide critical lighting, and ensure communications/IT connectivity.



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Five 1-2 kW solar electric systems installed January 2009 at the Access Project.

“If you make **rwanda** a better place, you haven’t solved all the world’s problems, but you have demonstrated that the problems can be solved. There are three reasons why I am excited about Rwanda. First, the government is very progress-oriented and pragmatic. Second, Rwanda is a small enough country, with about nine million people, so you have a feeling you can actually make a difference. Finally, the legacy of the 1994 genocide creates a moral imperative to work there. It always takes a little longer than you think, but I think we’re moving the needle.”

- rob glaser, co-founder, Access Project



# rwanda

In 2008, the **Access Project** approached SELF and asked it to bring a steady supply of renewable energy to five health clinics in the remote communities of Nyakaliro, Kamabuye, Nzanagwa, Mwogo, and Gihinga, Rwanda. As the country continues to rebuild and recover from the genocide of 1994, few people realize the greatest killers in this lush, green and beautiful nation are poverty and the lack of access to health care. The Access Project focuses on health first, because poor health is both a cause and an effect of extreme poverty. High rates of sickness and disease keep families, communities and entire countries destitute. With good health, both productivity and prosperity increase at the household level, and nation building can begin.

The Access team has taken on challenges most would avoid. Many health clinics can afford only two or three staff, and often lack running water and electricity—yet they are expected to serve as many as 25,000 people or more.

In January 2009, SELF's technicians installed five solar-diesel hybrid systems ranging in size from 1 kW to 2 kW to meet the clinics' need for electricity. Now equipped with lights, computers and diagnostic laboratory equipment, the doctors and nurses are able to provide high-quality care for over 80,000 residents in the surrounding villages.



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7 kW solar system installed August 2008 at Zwelenqaba Senior Secondary School

“On the Eastern Cape of **south africa**, educational access to the facilities are secured, since children are our future and their education and social competencies are paramount for the well-being of our planet.

The learners themselves have already started organizing to assist each other and beginners. After school hours, the ICT centre is open for public use and it offers a set of practical, useful electronic services to the community: a training program and immediate assistance from the owner and registered teacher of the centre is available to those who have no computing experience and members of the community with low or no literacy skills. This is a fantastic opportunity to boost self-confidence in the community and to familiarize them with new technologies that enable a knowledged society.”

- ron wertlen, co-founder, *eKhaya* ICT



facing page: Ron Wertlen, CEO of *eKhaya* ICT, (first row, second from right) poses with the first graduates of the adult computer literacy class, June 2009.

## south africa

The installation of SELF's solar-powered computer lab has mobilized a poor, rural community to take action and begin developing itself. Since the lab became operational in August 2008, the project has inspired the community to provide training to its members and to promote full use of the facilities, including night classes.

In February 2009, the first adult computer literacy courses were held and 20 people joined the course. Fifteen successfully graduated in June. In December, an additional 13 school children and 15 adults completed the computer literacy course. School children are also exposed to computers during their regular class work.

SELF and its partner, *eKhaya* ICT, are even more excited to report that Zwelenqaba Senior Secondary School had the highest number of passing seniors in the local area in 2009, and it registered a 25% improvement in its pass rate.

The solar school network was admitted to the European Network of Living Labs in December 2008. This will pave the way for integrated communication and education research projects, as well as further support for the solar schools.



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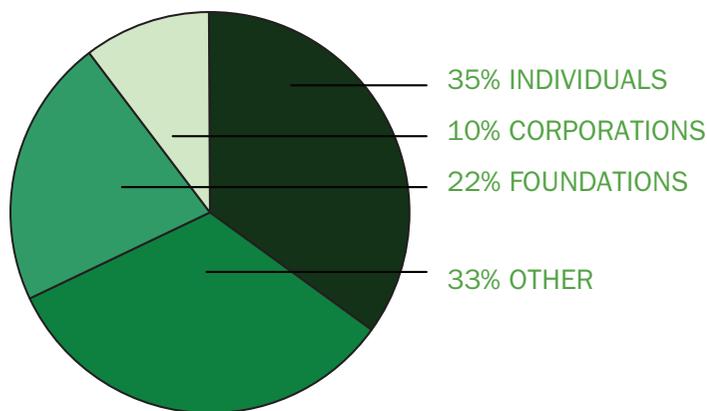
## financial highlights

**FINANCIALLY, FY09 WAS A YEAR FOR BUILDING INFRASTRUCTURE AND GROWTH.** Revenue dropped off slightly and expenses increased proportionally as SELF focused on building its capacity to take its mission to a higher level. SELF has strengthened its development, communications and financial capabilities to enable it to aggressively pursue opportunities to expand its most critical program efforts to provide solar power to the poorest communities, including SELF's Solar Health Care Partnership with Partners In Health and expanding the success of the Solar Market Garden project to more villages in Benin.

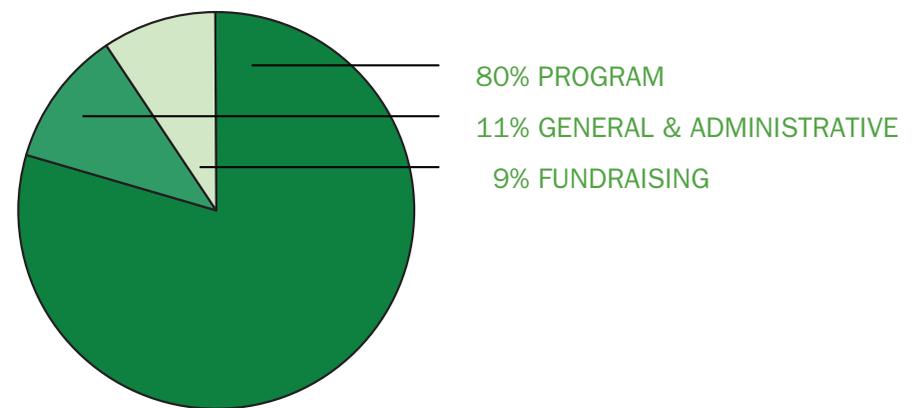
Generous donations from individuals and foundations provided the majority of the revenue which was supplemented significantly by contract work with our long-term partners. Corporate donations remained strong, and are expected to increase in future years with the dedicated effort of the new development staff. Thanks to this generous support, SELF has been able to maintain a strong balance sheet, and is well positioned to take on the increased program activity planned for the coming years.

The financial results depicted on page 31 are derived from SELF's audited December 31, 2009 consolidated financial statements, which received an unqualified opinion. SELF's complete, audited financial statements can be obtained by calling (202) 234-7265.

### SELF CONTRIBUTIONS IN FY09



### PROGRAM EFFICIENCY





## 2009 statement of activities

### REVENUE AND SUPPORT

Grants and donations	815,268	212,826	1,028,094	1,885,846
Contracts	119,193	384,702	503,895	-
Investment income	1,504	-	1,504	8,842
Other income	7,802	-	7,802	-
Net assets released from restrictions:				
Satisfaction of program restrictions	647,627	(647,627)	-	-

### TOTAL REVENUE AND SUPPORT

1,591,394	(50,099)	1,541,295	1,894,688
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### EXPENSES

Program Services	1,383,124	-	1,383,124	1,378,362
Support Services:				
Finance & Administration	189,980	-	189,980	76,253
Fundraising	165,742	-	165,742	91,972

### TOTAL EXPENSES

1,738,846	-	1,738,846	1,546,587
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### Change in net assets

(147,452)	(50,099)	(197,551)	348,101
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### NET ASSETS, BEGINNING OF YEAR, AS RESTATED

745,588	525,667	1,271,255	923,154
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### NET ASSETS, END OF YEAR

598,136	475,568	1,073,704	1,271,255
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## board of directors

**Ed Begley, Jr.**

*Actor, Environmentalist*

**John Paul DeJoria**

*Chairman & CEO*

*John Paul Mitchell Systems, Inc.*

**Freeman J. Dyson**

*Professor Emeritus*

*Institute for Advanced Study*

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*Executive Director*

*Solar Electric Light Fund*

**Larry Hagman**

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**Mary Green Swig**

*President & CEO*

*Mary Green*

**Steven L. Swig, Chair**

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## staff

**Lisa Esler**

*Finance Director*

**Robert A. Freling**

*Executive Director*

**Tommy Jacoby**

*Project Manager*

**Julie Junod**

*Office/Communications*

*Manager*

**Jeff Lahl**

*Project Director*

**Rick LaRue**

*Development Director*

**Lauren Taylor**

*Communications Director*

**Jerome Uwimana**

*Assistant Project Manager*

## fellows

**Adam Price**

*Oliver Wyman*

*Nonprofit Fellow*

## interns

**Danielle Bash**

*Marketing*

**Chris Bennett**

*Social Media*

**Eden Full**

*Social Media*

**Kelly Parshall**

*Development Research*

**Alan Pinkert**

*Video Communications*

**Evan Weingarten**

*Social Media*

## volunteers

**Reanna Blackford**

**Mary Olive Jones**

**Nathan Levine**

**Lauren Sheffield**

**Monica Stitt**

**Jin-Ah Yang**



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# SELF's guiding beliefs

## vision

**SELF believes that energy is a human right.**

To meet global challenges such as water, food security, climate change and poverty, SELF is working to assign greater priority to the importance of sustainable energy among international development banks, aid agencies, foundations, and philanthropic individuals who are committed to improving the health, education and economic prospects of the world's poorest citizens.

## mission

Our mission is to provide solar power and wireless communications to a quarter of the world's population living in energy poverty.

## programming principles

**SELF Determination**—Villagers choose the solar electrification projects based on their needs. The community determines its own priorities and participates in all phases including design, implementation, monitoring and evaluation.

**SELF Help**—Families purchase their own solar home systems through microcredit financing. Villagers participate in the ownership of community systems, spreading development funds further to help more people.

**SELF Reliance**—Village men and women receive training to install, maintain and replicate their solar systems. Initial project funding provides spare parts, and local partners establish the supply chain to support future needs.



Solar Electric Light Fund



[www.self.org](http://www.self.org)