What does it mean to be a health provider without electricity? It means working by the glow of a candle, the dim light of a kerosene lantern, or the beam of a flashlight. It means postponing critical procedures for hours, until they can be conducted by the light of day. It means being unable to use essential medical devices or your cell phone to call for help. It means being afraid to work at night because you know it’s impossible to provide optimal care.

We founded We Care Solar in 2010 to provide the first 100 watts of electricity to energy-deficient health centers. We created a rugged, simple and dependable solar energy kit that could be transported anywhere light and power were needed. Many of you joined us back then, and what started as a backyard project blossomed into an international movement to empower health centers, and eventually schools, around the world.

2019 was a remarkable year. We celebrated the success of our first national initiative in Liberia. Thanks to your support of Light Every Birth, every public maternal health center in Liberia has reliable light and power for safe childbirth! We introduced an even better version of our Solar Suitcase and immediately received international acclaim for the design of this life-saving technology. We led training programs in three countries. We opened a Regional Center in Uganda, and added staff in Zimbabwe, Sierra Leone, and Liberia.

Our We Share Solar program continues to inspire students to become global changemakers. 120 schools engaged 22,750 students with our project-based, service-learning solar energy program, enabling 173 Solar Suitcases to be deployed to energy-poor schools in Kenya, Uganda and Haiti. Closer to home, Solar Suitcases were delivered to homeless shelters, Native American reservations, and school-based emergency preparedness programs.

We couldn’t do this without you. Please enjoy our 2019 Annual Report, reflecting on the people and programs that made 2019 a special year. Thank you for being on this journey, and showing that it is possible to transform health care and education by the light of the sun.

With Gratitude

Laura Stachel, MD MPH
Executive Director and Co-Founder
Our Reach to Date

Health
- ✔️ 5,209 health centers equipped with Solar Suitcases
- ✔️ 59 organizational partners
- ✔️ 686 technicians trained in installation and maintenance
- ✔️ 20,836 health workers trained in equipment use
- ✔️ 5.6 million mothers and babies served

Education
- ✔️ 2,227 Solar Suitcases assembled
- ✔️ 803 Solar Suitcase deployed to energy-poor schools and centers
- ✔️ 14,631 students educated
- ✔️ 425,100 students, educators, and volunteers impacted

Additional Health Care Programs

Light Every Birth Countries
In 2019, We Share Solar conducted education programs in California, Colorado, Illinois, Minnesota, New Jersey, North Carolina, and Wisconsin, as well as a program in Ontario, Canada.
No family should have to wonder whether light will be available for urgent nighttime medical care. **Light Every Birth** is our international initiative calling for the electrification of every health facility to save lives in childbirth. We are partnering with an ecosystem of government, health, and technical partners to eradicate energy poverty in frontline health centers.

**We are united by three fundamental beliefs:**
1. Every mother has the right to safe childbirth
2. Every health facility is entitled to reliable electricity
3. Solar electricity offers an immediate and sustainable solution to this global problem

**Light Every Birth (LEB) was first launched in Liberia in 2017, in Uganda in 2018, and this year, Zimbabwe signed on as our third LEB country—part of our plan to reach every public health facility in 5 countries in 5 years.**
Light Every Birth: Liberia

This year, We Care Solar completed installations in Liberia, successfully powering all 445 targeted health facilities. This is an incredible milestone for us, proving that it is feasible and possible to “Light Every Birth” throughout an entire country. We next hired a Liberian consultant to co-develop a country-wide sustainability plan. We aim to transition full responsibility for the maintenance of Solar Suitcases to the Liberian Ministry of Health and Social Welfare.

The future of Light Every Birth in Liberia requires creating a public-private partnership to support government-led efforts on sustainability, building capacity of government technicians to support maintenance of the Solar Suitcases, fostering skills of health workers to use the Solar Suitcase and conduct troubleshooting, and ensuring that spare parts are available to technicians when needed so that all non-functional Solar Suitcases are repaired in a timely manner.

Building Sustainability

As important as it is for health centers to receive clean energy for safe childbirth, installing Solar Suitcases is only part of the equation. Equally important is building capacity to ensure that our equipment lasts for years. We train local technicians to maintain and service Solar Suitcases, supported by our Certified Solar Suitcase installers.

Photo: Liz Hale
Strengthening Healthcare

Midwives are essential in the battle to reduce maternal and newborn mortality, providing a range of services in community-based health centers. Their struggle to provide life-saving care in un-electrified health facilities motivates our work.

Jaminah Mnana cared for families for three years in a Ugandan clinic that had no electricity. Without light, Jaminah struggled to care for the patients who arrived at night in labor, using torchlights that would last only as long as their batteries. One evening, she delivered a baby, propping her torchlight on a nearby counter. “The mother delivered well. I cut the cord and placed the baby on the mother’s abdomen. But the torch went off. The mother got scared and dropped the baby to the floor.” Thankfully, the baby survived. However, the child had a permanently damaged wrist, a painful reminder of the dangers of working in near-darkness.

Jaminah tells us, she felt “very, very, very happy” when the suitcase arrived. “I saw the solar installers, and I knew they are going to give us good light.” Jaminah also appreciated the rechargeable headlamps, which she uses for suturing, as well as the cell phone charger, which saves time and money, allowing her to call for help during emergencies. “The nearest charging center is 2 kilometers away. It costs 1,000 UGX for transport each way and 500 UGX to charge the phone. So you are really going to go off air.”

Patients appreciated the new electronic fetal Doppler. Jaminah described how they “became so happy to know we have this machine here. When they go back from their appointments, they tell others.” As word spread within the community about these technologies, deliveries increased from an average of 3 deliveries per month to 15 per month!
Promoting Leadership

In 2019, we added staff in four countries: Uganda, Zimbabwe, Liberia, and Sierra Leone. We opened our first regional center in Kampala to oversee all of our Africa programs, strengthen partnerships with government agencies and local NGOs, and coordinate Solar Suitcase installation and training.

Dr. Ambrose Katungi Muhwezi, our first Africa Regional Director, was raised in a small village in Southwest Uganda, in a community that relied on kerosene lanterns at night. He lost his loving parents when he was young, and his sister became his primary caretaker. Despite a challenging start in life, he excelled academically, and secured a coveted spot at the Gulu Medical School and became a doctor.

As a physician, Ambrose was well aware of the challenges of energy poverty. He worked as a medical officer in Northern Uganda, where frequent power outages meant the health facility was plunged into darkness, forcing him to complete Cesarean sections by torchlight (flashlight). "Batteries would go dim, sometimes they wouldn't work at all. The whole room was dark except for that spotlight. Many babies would die." Ambrose eventually became a Subdistrict Medical Officer in Western Uganda and later the Technical Advisor for Doctors with Africa CUAMM. He had firsthand experience working in hospitals without electricity.

"Inadequate electricity is blinding the health sector and hindering the care for mothers and newborns. You cannot treat what you cannot see." Having seen the impact of Solar Suitcases on maternal-newborn services, Ambrose looks forward to improving health care at the systems level in Uganda and beyond.

A Regional Director’s Mission: Meet Ambrose
Andrew Engalu grew up in a small hut in Uganda without electricity, never imagining that one day he’d be leading a solar company that would equip hundreds of health facilities with reliable light and power. After seven years and 400 Solar Suitcase installations, he marvels at the changes that come about from the little yellow boxes. “I go to health centers that are completely in darkness. The midwives are demoralized; they are not able to help mothers as they should. The mothers are sometimes choosing to deliver at home because there is no difference between giving birth in darkness at the facility or giving birth at home, so you end up with complications.”

“These systems are really bringing about positive change to the lives of the mothers and to the lives of the medical personnel. I like being associated with the Solar Suitcase because of the positive changes it brings.”

Andrew describes how installing Solar Suitcases is empowering him and his entire team, both personally and financially. “We are able to make savings, build houses, provide for our families, and change the stories of our lives.”

“Being engaged in this program has had a positive effect in my life. I am relevant to the country, to our people and to each person that is saved and that could have died without that light. I’m part of the team that has installed it and it’s a blessing. It gives me self-confidence and it’s making positive change. I feel like I have a purpose in life.”
Supporting Families
With your support, we are uplifting communities, one family at a time. When a mother survives childbirth, her infant is more likely to survive the first year of life. Her young children are more likely to be well nourished and attend school. She can remain productive and contribute to the social, emotional, and financial health of her family and community.

A Mother’s Miracle: Meet Jane
This Ugandan baby was born by the light of a Solar Suitcase. His mother, Jane, described her relief in finding a health center with solar power. Her first birth took place in a nearby community that suffered from prolonged power outages. On the night of her first delivery, the clinic lost power while she was in labor. “There was no light. They had to get their lamps, but to buy the paraffin it was far away. I felt bad because the lights were off.” She prayed for the health of her baby.

When she delivered in the shadows of the lantern, Jane could barely see her baby. Her midwife was trying to suture in the dark and struggled to provide postpartum care. It was a frightening moment that Jane never wanted to repeat.

When Jane became pregnant again, she selected a health center with solar power. She traveled to the health facility with confidence. Her baby was born at night under the bright light of a Solar Suitcase. “I delivered at 8 pm, but the lights were on and I felt very good.” She immediately saw that she had a healthy boy, and named him Miracle.
The hardest part of my job is working alone at night with no light. With no light in the facility, patients don’t even want to come here. They would rather visit others who may not even be health workers. Now that we have this solar source of light, the women in our community want to come here.” —Community Health Extension Worker, Nigeria

Prolonged drought in Zimbabwe depleted the country’s supply of hydroelectricity and most rural health centers are without reliable power. Rather than working in darkness, health workers advise their patients to pack candles for nighttime deliveries. After engaging in our Solar Suitcase training, installation partners—ZimEnergy EcoFoundation, Eletech, and Engineering World installed 219 Solar Suitcases, making deliveries safer for 90,000 mothers and babies annually.

In Sierra Leone, we expanded our programming with Doctors with Africa CUAMM. Solar Suitcases were installed at 100 health facilities, benefiting 28,800 mothers and newborns.

Pathfinder International installed Solar Suitcases in 85 Nigerian health facilities in Gombe and Niger states, resulting in a 166% increase in facility-based deliveries. Mothers appreciated the security of reliable lighting and the opportunity to hear the fetal heartbeat using the Doppler.

In Ethiopia, our partners at Hamlin College of Midwives, Greenlamp and Pathfinder Ethiopia received 173 Solar Suitcases to provide light and power for enhanced maternal-newborn care.
“Now we can work calmly. The lights are sufficient to cover the whole room so it is easy to move around. The headlight has helped us to properly examine the progress towards delivery. As both the hands are free we can quickly find equipment. Even starting the IV has been easier.”
— Skilled Birth Attendant, Rachuli Health Post, Nepal

Reaching the Last Mile

With funding from the Zayed Sustainability Prize, Wells Fargo Foundation, and Arrow Electronics, We Care Solar continued to reach more health posts in remote areas of Nepal. Despite the difficult terrain, our partners at One Heart Worldwide and SunFarmer installed 149 Solar Suitcases and trained 280 health workers.

The Ministry of Health, local governments, and skilled birth attendants themselves all welcomed the Solar Suitcases. They provide essential electricity in areas where access to power is limited or unavailable. To ensure maintenance of the Solar Suitcases, we are working with local governments who have pledged their commitment to sustainability.
Innovation

Meet the newest member of the We Care Solar family. Version 3 features advanced electronics, a lithium battery with greater storage capacity, a friendlier interface making it easier for health care workers to use, customized dimmable lights, dedicated USB ports and 12V DC outlets to charge a range of other devices, and mesh pockets to store the LED headlamps, phone charger, fetal Doppler, and AA battery charger included in every suitcase. We updated the features on the outside of the Solar Suitcase to streamline the installation process.

The Solar Suitcase is the only off-grid system developed specifically to provide electricity to remote maternal health centers, and is designed to be safe, easy-to-install, and easy-to-use. This new design was the result of years of field testing and engineering. Our partners are not the only ones who love our newest suitcase. We received the Gold Award from Edison Innovation and were featured in TIME Magazine as one of the Best Innovations of 2019.
We Share Solar Education

The We Share Solar U.S. programs teach middle and high school students about solar technology, engineering and global energy issues. Students build bright blue We Share Solar Suitcases: stand-alone renewable energy systems that can light a room and charge mobile phones, laptops, e-readers and headlamps. U.S. students share the results of their efforts with peers in energy-scarce regions by sending completed Solar Suitcases to schools and community centers, improving opportunities for children around the world.

In 2019, we trained 50 new teachers in the United States and East Africa allowing us to lead programs at more than 120 schools, reaching 22,750 students with engaging, hands-on curriculum. Our corporate and community events gave 168 volunteers the opportunity to light up lives through global service. 173 Solar Suitcases were deployed to energy-poor schools and refugee camps in Haiti, Kenya, and Uganda, reaching 60,000 people. In the United States, Solar Suitcases were delivered to homeless shelters and Native American reservations, and supported school-based emergency preparedness programs.
Creating Impact

We Share Solar was a partner in the Lawrence Hall of Science EPICC (Educational Pathways into College and Career) Summer Program targeting high school students from Oakland California at risk of failing a math or science course. Two cohorts of students engaged in hands-on learning by building our blue Solar Suitcases for communities in need. An EPICC research paper concluded that students traditionally underrepresented in STEM fields strongly engaged with our service-learning activities and showed improvements in measures of “Science Fascination,” “Science Values,” and “STEM Career Affinity.”

A second study of 300 middle school students in Minneapolis, documented increases in knowledge acquisition, “STEM Fascination” and “STEM Attitudes.” Girls had a significant increase in knowledge acquisition and all students saw how solar electricity could be used to help combat climate change.
Girl Power!

In a region where many girls are unable to complete secondary school and cultural norms often prevent women from entering STEM fields, We Share Solar teamed up with WISEe Cooperative Society (Women in Sustainable Energy and Entrepreneurship), Remote Energy, and the WISER Girls School to launch a full STEM education program in Muhuru Bay, Kenya. Twenty-two teachers learned how to instruct students on the science behind solar energy and then assembled Solar Suitcases to power 11 energy-deficient schools, impacting 6,200 people.

Students from WISER Girls School learned about solar electricity through a hands-on Solar Suitcase build-session with women trainers and technicians. By extending productive classroom time and enabling students to study for critical national exams that determine eligibility for higher education, the addition of solar powered lights can be life-changing.

To further encourage participation of women in the renewable energy sector, Solar Suitcase installations in the rural schools were led by an all-female team of technicians from WISEe, providing wonderful role models for the students.
Cross-Cultural Connection

We Share Solar service-learning projects bring Minnesota students into contact with their Kenyan counterparts.

Lighting Refugee Education

Located in Kenya, Kakuma Refugee Camp is one of the world’s largest refugee settlements—home to over 180,000 East Africans, of whom nearly half are children. The camp has no power grid.

We Share Solar launched a new program in Minneapolis, connecting U.S. students with their Kenyan counterparts in Kakuma. At our opening event at the Bakken Museum of Electricity, special guest Muzabel Welongo—founder of refugee-led Resilience Action International, based in Kakuma—described ways in which renewable energy can empower youth at the refugee camp.

Educators from eleven Minneapolis programs attended the event before initiating the We Share Solar STEM curriculum with their own students in support of Kakuma youth. Solar Suitcases were assembled for energy-poor schools identified by Resilience Action International. Many of the schools have an average class size of 200 students! With our solar lights, Kakuma schools have extended their hours to reduce classroom overcrowding and increased learning opportunities. Students can now study safely in school at night in a secure, well-lit environment.
Recognition

Clean Energy for Healthcare Conference, UN Foundation, Nairobi

Women leaders in Clean Energy, Science, and Technology, Istanbul

Solar Family’ International Development Award, Solar Energy International

Global Social Benefit Incubator and Tech Museum, San Jose, California

Zayed Sustainability Award Abu Dhabi

Gold Edison Award for Innovation New York

Savvy Awards, Germany

TIME Best Inventions of...
## Statement of Activities for the Year Ended December 31, 2019*

### Without Donor Restrictions  |  With Donor Restrictions  |  2019 Total  |  2018 Total
--- | --- | --- | ---
REVENUE
Grants and donations  | $310,279  | $6,684,493  | $6,994,772  | $2,550,286
Program revenue  | 223,871  |  | 223,871  | 309,055
In-kind support  | 74,600  |  | 74,600  | 78,050
Investment return  | 12,104  |  | 12,104  | 11,860
Other income  | 67,706  |  | 67,706  | 3,158
Net assets released from restrictions:
  Satisfaction of program restrictions  | 3,678,641  | (3,678,641)  |  |  
TOTAL REVENUE  | $4,367,201  | $3,005,852  | $7,373,053  | $2,952,409

EXPENSES
Program services  | 4,193,827  |  | 4,193,827  | 4,081,578
Management and general  | 538,204  |  | 538,204  | 326,196
Fundraising  | 129,700  |  | 129,700  | 113,512
TOTAL EXPENSES  | $4,861,731  |  | $4,861,731  | $4,521,286

CHANGE IN NET ASSETS
(494,530)  | 3,005,852  | 2,511,322  | (1,568,877)

NET ASSETS, BEGINNING OF YEAR  | 2,171,585  | 3,106,175  | 5,277,760  | 6,846,637

NET ASSETS, END OF YEAR  | $1,677,055  | $6,112,027  | $7,789,082  | $5,277,760

*Revenue includes multi-year grants

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### Financials

#### Functional expenses

- **Solar Suitcase programs**: 21.1%
- **Education programs**: 11.1%
- **Research & development**: 5.8%
- **General & administration**: 2.7%
- **Fundraising**: 1.0%
- **Other income**: 1.1%

#### Revenue by category

- **Grants & donations**: 94.9%
- **Program revenue**: 3.0%
- **In-kind support**: 1.1%
Deepening Partnerships
Collaboration is in our DNA. Our programs rely on rich partnerships with governments, UN agencies and NGOs.

**We Care Solar Partners**
- All in Trade Ltd. (Uganda)
- AVSI Foundation (Uganda)
- Brick by Brick (Uganda)
- Doctors with Africa CUAMM (Sierra Leone, Uganda)
- Ekide Investments Ltd. (Zimbabwe)
- Eletech Investments (Zimbabwe)
- Energising Development (Liberia)
- Engineering World (Zimbabwe)
- Feni Certified Installation Team (Uganda)
- Hamlin College of Midwives (Ethiopia)
- Healthy Child Uganda (Uganda)
- IntraHealth International (Uganda)
- One Heart Worldwide (Nepal)
- Pathfinder International (Ethiopia, Nigeria)
- SunFarmer (Nepal)
- ZimEnergy Eco Foundation (Zimbabwe)

**We Share Solar Partners**
- United States
  - American Indian Science & Engineering Society
  - Boys & Girls Club of Twin Cities
  - California State University
  - Charlotte-Mecklenburg Schools
  - Creation Technologies
  - Expanding Lives
  - Minnesota Independent Schools Forum
  - Remote Energy
  - Rutgers University
  - Trees, Water & People
- **Global**
  - Brick by Brick (Uganda)
  - Change Mtaani (Kenya)
  - Kabale University (Uganda)
  - Kabale We Share Solar Community Team (Uganda)
  - Resilience Action International (Kenya)
  - SEGA Girls School / Nurturing Minds (Tanzania)
  - Solar Electric Light Fund (Haiti)
  - WISEe—Women in Sustainable Energy & Entrepreneurship (Kenya)
  - WISER International (Kenya)

**Government Partners**
- Ministry of Energy, Sierra Leone
- Ministry of Health and Child Care, Republic of Zimbabwe
- Ministry of Health and Sanitation, Sierra Leone
- Ministry of Health and Social Welfare, Republic of Liberia
- Ministry of Health, Republic of Uganda

Photo: Stage Media
Thank You

We are grateful for the generous support of all our donors, including the following institutions and individuals who have contributed $5,000 or more:

### Principal Benefactors
- Anonymous Foundation
- Child Relief International Foundation
- Gilead Foundation
- The Meadow Fund
- Pathfinder International
- Starr International Foundation
- UBS Optimus Foundation
- Wells Fargo Foundation
- Zayed Future Energy Prize

### Lead Funders
- Arrow Electronics
- Cold Mountain Fund of RSF Social Finance
- Global Health Foundation
- Greater Houston Community Foundation
- GreenLamp
- Jim and MA Rogers
- Montei Foundation
- Ocorian Trustees
- Pacific Gas and Electric Company
- Segal Family Foundation

### Key Supporters
- Cal State University East Bay
- DEPCOM
- Edgewater Foundation
- Gigi and Jim Goldman
- Xcel Energy

### Champions
- Ascenzo Family Foundation
- Boys and Girls Club of Carson
- Chen-y (Janny) Chen
- Clif Bar Family Foundation
- Communities Foundation of Texas
- Every Mother Counts
- James and Sharon Maida Foundation
- Minnesota Timberwolves Fastbreak Foundation
- Mission Community College
- MPH Fund of the Hawai’i Community Foundation
- Music for Relief Foundation
- Nina Richardson & Doug Condon
- Oakmere Foundation
- Project Bo
- Trees, Water & People
By developing robust technologies and building an ecosystem of support, we are creating programs to meet Sustainable Development Goals for poverty alleviation, health care, education, clean energy, gender equity, and climate action.