

# Light is a Right

More than 1.6 billion people on the planet do not have access to electricity. This group, numbered at five times the total population of the United States, must rely on dirty kerosene lamps, biomass and wood fires for simple evening activities like reading and family meals. Fuel lamps degrade air quality and can lead to burns and devastating home fires. Moreover, purchasing lamp fuel is an increasing drain on already modest incomes.

Alongside more widely recognized rights like shelter and clean water, NGOs around the world are embracing access to artificial light as a fundamental human right and a primary component of healthy and vital communities. A host of organizations, several exhibited here, are working to provide these communities with access to light.

Here at home, superstorm Sandy was a potent reminder that our communities are not immune to crisis. Access to lighting solutions that do not rely on batteries or elaborate, and expensive, distributed generation systems could dramatically improve the resiliency of our communities.

***Bright Ideas for a Resilient World*** is our modest attempt to increase exposure of the organizations working in this important field and cultivate a dialogue among those that are committed to a planet of healthy, sustainable communities.

We hope you enjoy this exhibit on low carbon lighting solutions from organizations working throughout the world and encourage you to support their important missions.

***"If you want to go quickly, go alone;  
if you want to go far, go together."***

***- African proverb***

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# GravityLight

Generating light from gravity.

An innovative engineering approach, the GravityLight relies not on the fickleness of the sun but on resources that are always at hand - earth, rocks or sand. The GravityLight is charged by hanging a bag filled with 12kg (26lbs) of material from the gear cable that descends from the light. A series of gears inside the device translates this weight into energy, providing about 30 minutes of light.

It takes only 3 seconds to lift the weight into place, compared to the 3 minutes of cranking required to charge a traditional hand-crank device. The GravityLight can power daisy chains of LED lanterns or can be wired to recharge radio or phone batteries.

To distribute GravityLight, designers Martin Riddiford and Jim Reeves, have created **Deciwatt**, a product development initiative committed to empowering people through sustainable and affordable low power solutions.

Deciwatt  
London, England

email: [info@gravitylight.org](mailto:info@gravitylight.org)  
web: [www.deciwatt.org](http://www.deciwatt.org)



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# Little Sun

**A work of art that works in life.**

Little Sun is the creation of world renowned artist Olafur Eliasson and Frederik Ottesen, an entrepreneur and engineer. The core offering of this social business venture is an attractive, high-quality solar-powered LED lamp that provides clean lighting to communities without electricity. The lamp itself is a marriage of beautiful design and exceptional engineering and is currently distributed in seven African countries: Zimbabwe, Uganda, Kenya, Burundi, Senegal, Ethiopia, and South Africa, as well as in the European Union, the United States, Canada, Australia, and Japan.

Little Sun is much more than the distributor of a unique product. Rather than focus on simply donating lamps to off-grid areas, Little Sun creates long term value in each community by building profitable local businesses that distribute the Little Sun light. This program trains young entrepreneurs to become Little Sun sales agents and powers these small business with seed capital.

Felix Tristan Hallwachs, Director  
Christinenstrasse 18/19, Haus 2  
Berlin, Germany

email: [business@littlesun.com](mailto:business@littlesun.com)  
web: [www.littlesun.com](http://www.littlesun.com)



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# Luci

**Light in weight, heavy with ambition.**

Weighing in at just four ounces, the inflatable Luci solar lantern is one of the most compact low carbon lighting solutions available. This unique design is the brainchild of MPOWERD, a Benefit Corporation that aims to turn a profit while having a significant positive social impact, or as they say, “do well by doing good”. Though not a traditional not-for-profit, the business model is effective - with Luci shipping to more than 50 countries throughout the developing world.

MPOWERD has also established a solar justice initiative, **Give Luci**, through which customers purchase the Luci at discounted rates and select NGOs to distribute the lights to communities in need. This program allows them to focus on areas in need of urgent disaster relief like the Philippines, Sub-Saharan Africa, the Amazon and refugee camps.

Luci includes 10 LEDs that take about 8 hours to charge and deliver enough light to illuminate a 10-foot room for 6-12 hours depending on the selected setting. Each Luci delivered is another step toward eliminating energy poverty.

MPOWERD, Inc.  
231 West 29th Street  
Suite 1105  
New York, New York, 10001  
(212) 844-MPOWERD

web: [www.mpowerd.com](http://www.mpowerd.com)



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# LuminAID

**Inflatable, rechargeable disaster relief.**

Developed in response to the 2010 earthquake in Haiti, the inflatable LuminAID solar lantern can be shipped flat, allowing this progressive non-profit to deliver 50 units of the lantern in a volume that would typically accommodate only 8 traditional flash lights. The pillow of translucent plastic diffuses the powerful glare of the bright LEDs and allows the lantern to easily illuminate a room or a task. Critically, the LuminAID includes a lithium-ion battery that can hold a full charge for up to 4 months, greatly increasing the flexibility of deployment and emergency preparedness.

Through their Give Light, Get Light program, individuals or organizations can sponsor lanterns that are distributed by NGO partners around the world. Most recently, LuminAID has formalized a partnership with the international disaster relief charity ShelterBox to distribute the lantern in their highly popular aid packages.

LuminAID Lab  
5718 Westheimer Rd., Suite 765  
Houston, TX 77057

email: [info@luminaidlab.com](mailto:info@luminaidlab.com)  
web: [www.luminaid.com](http://www.luminaid.com)



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# Nokero

Short for “No Kerosene”.

Nokero designs, manufactures and distributes solar-based lights and battery chargers. Founder Steve Katsaros began Nokero in 2010 to provide an affordable, safe alternative to burning kerosene lamps and paraffin candles to any community in the world. With a focus on high quality design and construction the Nokero solar light bulb has brought clean lighting to more than 120 nations in a remarkably short period of time.

The bulb-shaped design of the Nokero product makes it easy to identify and use, and the simple swivel mechanism makes it simple to set the bulb out in the sun at an optimal angle. Ideal for disaster relief, emergency preparedness, and off-grid communities, the Nokero bulb has also become popular for outdoor recreation.

More than one million of the bulbs have been distributed worldwide through NGO partners.

Nokero US Headquarters  
1031 33rd Street, Suite 231  
Denver, CO 80205  
(303) 991-9871 x1

email: [info@gravitylight.org](mailto:info@gravitylight.org)  
web: [www.nokero.com](http://www.nokero.com)



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# Socialite

## Illuminating waste.

Socialite began in 2006 when Cooper Union engineering Professor Toby Cumberbatch challenged his first year students to design a safe lighting system for rural and poverty-stricken communities in Ghana. The students devised a novel means to create solar-powered lanterns using commonly available materials, and powering them with a simple centralized system. In this approach each village uses a single large solar panel to charge a car battery which in turn charges smaller batteries in the lanterns.

The lamps themselves combine affordable LED technology with throwaway bicycle spokes, Tampico soda bottles and Ultra Beauty hair product containers. The kits provided to communities can be customized to meet a village's lighting needs for a modest down payment of \$5 and a recharging fee of \$1 a month. Communities can pay back their lighting systems within 18 months. The money generated by Socialite enables students and faculty from Wa Polytechnic, Cooper Union's local partner in Ghana, to visit and train remote communities to assemble and maintain their lighting system.

Toby Cumberbatch, Professor  
41 Cooper Square  
New York, New York 10003

email: [toby@cooper.edu](mailto:toby@cooper.edu)  
web: [www.socialitelantern.com](http://www.socialitelantern.com)



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