



2017 Impact Report



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ENERGY EVERYWHERE

Hello from New York City! Welcome to the 2017 BioLite Impact Report.

2017 was an exciting year of growth for us with the introduction of new products and markets that dramatically expanded our ability to help off-grid families access clean, affordable home energy.

In this year's Impact Report, you'll see our emerging markets headlines focus on our work in Kenya and Uganda. With high customer demand and governments welcoming clean energy initiatives, we have scaled rapidly through key partnerships and expansion of our core product line from cooking to include home lighting and charging.

In June 2017 we launched SolarHome 620, a solar lighting and charging system for the home that fits in the size of a shoe box. One of the most exciting things about SolarHome 620 is the path to ownership built directly into the product: each unit is built with a mobile-money-based payment system that allows customers to pay for the product in small installments over 1-2 years, the same rate at which they realize savings from not purchasing kerosene for candles. We believe the future of energy should be shared by all and that means unpacking the idea of "access" in all its forms –including the rapidly evolving financial tools available in east Africa.

We also learned some tough lessons along the way – as a young organization, we are forced to focus our efforts on where it can have maximum impact with our customers. With India's demonetization in late 2016 leading to compression among local microfinance and ongoing VAT & duty barriers, we made the difficult choice to shut down regional operations and redirect our resources to building deeper professional teams in east Africa.

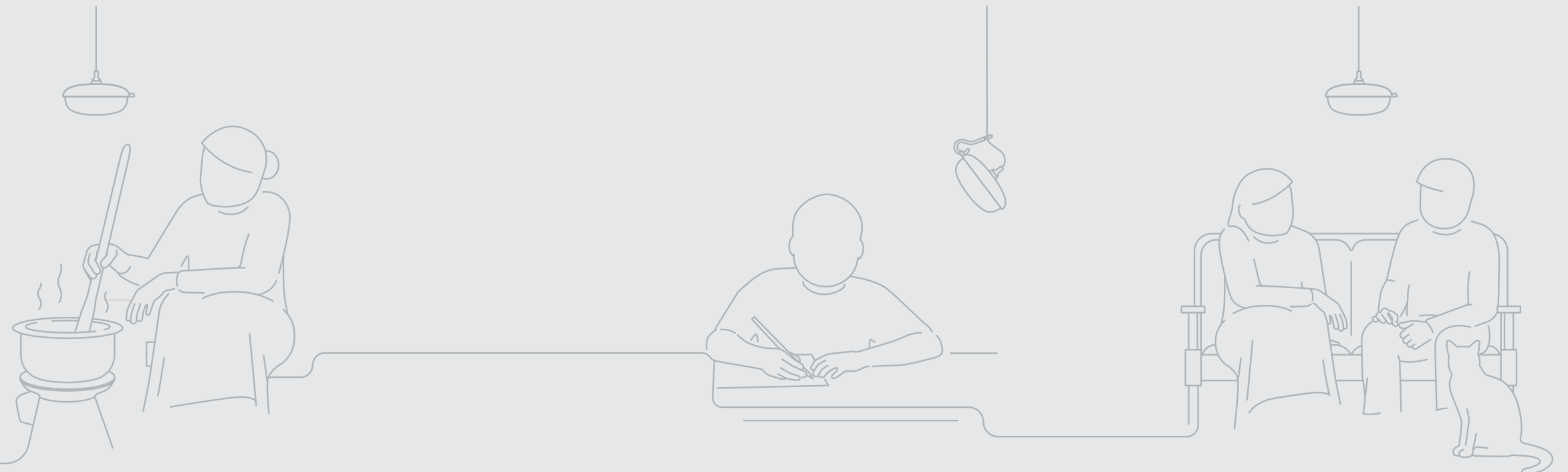
With BioLite headquarters now open in Nairobi and full-time staff of 35, we are already achieving levels of scale that enable us to show up as a significant new entrant in the renewable energy landscape.

While 2017 was a year of lighting and solar in our emerging markets, our outdoor market returned to its fiery roots with the FirePit, utilizing our core combustion technology and applying it to our largest design yet. It became our most successful Kickstarter in the organization's history, raising over \$2.5M in a month and giving us incredible momentum to continue our team's work both outdoors and off-grid thanks to our model of parallel innovation.

With your continued support we believe 2018 can be even bigger: we believe that we can reinvent the grid with an ecosystem of household energy appliances that are cheaper and higher performing, that can be owned by individuals, and that ultimately will protect both their health and that of the planet. This 2017 report demonstrates that, even with the inevitable challenges that arise, we're well on our way.

Thank you for joining us on this journey.

Jonathan Cedar
Co-Founder & CEO, BioLite



IMPACT BY THE NUMBERS

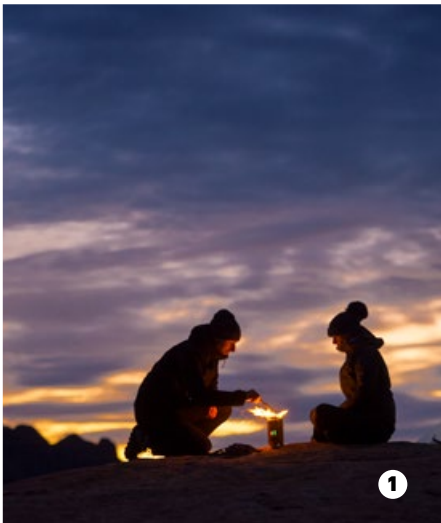
	2014	2015	2016	2017
People Accessing Cleaner Energy	20,975	41,085	100,000	127,235
Watt Hours of Electricity Generated by the BioLite Ecosystem	7,755,425	27,517,028	69,314,508	123,141,204
Tons of CO2e Offset by HomeStove	8,316	30,583	75,253	137,300
Installed Electrical Generation Capacity Through the Sale & Installation of SolarHome 620 + HomeStove	8,390 W <i>(HomeStove Only)</i>	16,434 W <i>(HomeStove Only)</i>	32,358 W <i>(HomeStove Only)</i>	72.68 KW
Staff Members on Emerging Markets Teams	10	25	55*	35
Net Promoter Score Across Kenya & Uganda	94.82%	94.71%	95.45%	97.85%
Fuelwood Savings by BioLite Customers (\$)	\$1.72M	\$4.86M	\$12.72M	\$25.53M
Tonnes of Wood Avoided	3,539	11,262	31,895	65,792



* At the end of 2016, India Operations were shutdown leading to a reduction in staff. 2017 numbers represent growth of team primarily across Kenya and Uganda.

2017

Year In Review



1



2



Community

JUNE

BioLite celebrates 5 Year Anniversary of the CampStove Launch

NOVEMBER

Released first ever mini-documentary, The Power Of Home

Product Development

FEBRUARY

- 1 Launched CampStove 2, the second generation of BioLite's flagship product and introduced it's caffeinated companion, CoffeePress

MARCH

- 2 Expanded Light & Power lineup with SiteLight Mini, SiteLight XL, SolarPanel 10+, and Charge Series

JUNE

- 3 Official Launch of SolarHome 620 with 50,000 units delivered to key distribution partners over the year

SEPTEMBER

- 4 Kickstarted the smokeless and meal-cooking FirePit, securing 10,238 backers and raising over \$2.5M.

Market Development

SUMMER

- 5 BioLite Emerging Markets Headquarters open up central office in Nairobi, growing East Africa team to 30 people

SEPTEMBER

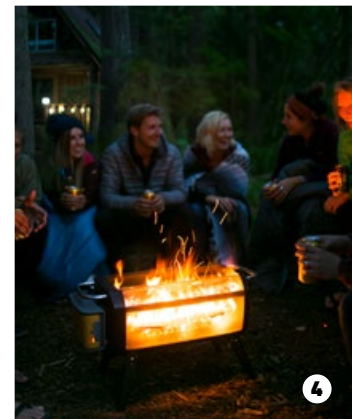
BioLite joins Global Off-Grid Lighting Association (GOGLA)

OCTOBER

BioLite's Emerging Markets site, BioLiteGlobal.com, goes live

OCTOBER

Raised \$50,000 in microloans for customers through Kiva platform



4



5



7



8

Awards

FEBRUARY

Winner of NY NOW® Best New Product Award for Accent on Design

JUNE

Received ASME Innovation Showcase Award for HomeStove

JULY

- 6 Outside Gear of the Show Outdoor Retailer 2017 Winner - BioLite SolarHome 620

AUGUST

- 7 Best Cooking Gear Winner for 2017 Digital Trends Outdoor Awards

SEPTEMBER

- 8 HomeStove named finalist for National Geographic Chasing Genius Award

DECEMBER

Digital Trends named FirePit 'Best Outdoor Product of 2017'

Corporate Sustainability Summary

BioLite's 2017 carbon footprint analysis reveals some key conclusions and trends. First, BioLite's products result in a significant reduction in greenhouse gas emissions compared to emissions produced from BioLite operations and manufacturing. This fact is evident from the graph below, which is further explained in the "Lifecycle analysis" section of the full Sustainability Report.

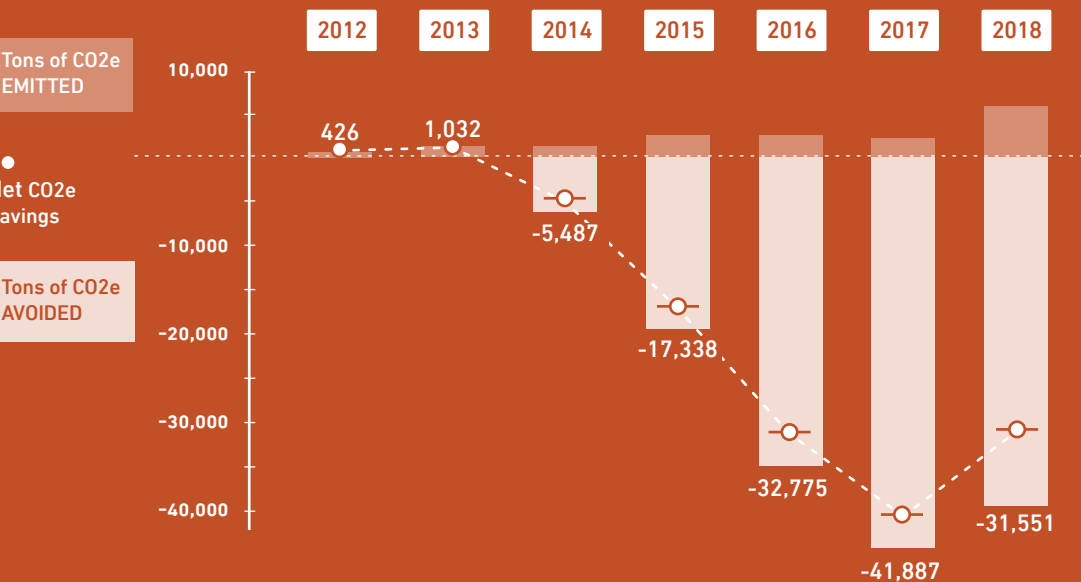
Although our products are becoming increasingly more complex, our product mix in 2017 was relatively less carbon intensive than in previous years; the smaller products were some of the best sellers. Since raw materials account for approximately a third of BioLite's carbon footprint (see chart below), this has a significant impact on the carbon intensity per product.



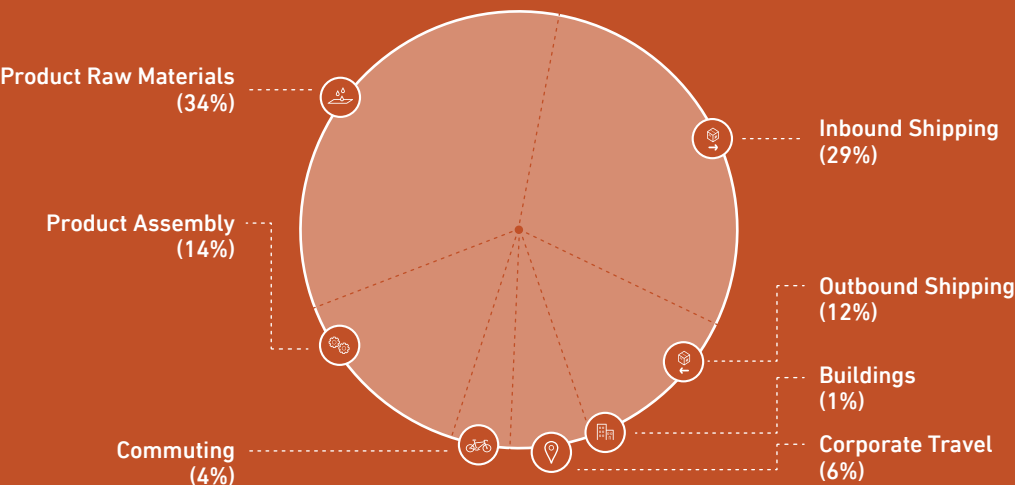
Download The Full
2017 Sustainability Report

[Impact2017.BioLiteEnergy.com](https://www.bioliteenergy.com/Impact2017)

BioLite's Lifecycle Carbon Impact By Year



BioLite's 2017 Emissions By Function



New Partner Highlight: Carbon Offsets with Autodesk

In the sustainability section of our 2016 report, we highlighted that surplus carbon credits generated by BioLite can be purchased by other organizations and institutions looking to offset their own footprints. In 2017, the Autodesk Foundation purchased offsets from BioLite as part of their strategic focus on climate change: "We are always interested in exploring how to drive systemic change in Autodesk's markets and industries to address this global challenge. By purchasing BioLite's offsets, we not only meet Autodesk's objectives, but we hope to create a ripple effect of interest and activity in carbon finance amongst other social enterprises." – The Autodesk Team

Stories of Impact

This year, members of the BioLite community, whether it was a backpacker in Peru or a family updating their house in Kenya, reminded us how important creating a sense of home is when you're off the grid. Access to clean and reliable cooking, charging, and lighting plays a central role in making any location feel like home. In this section of the report, we'll introduce you to a few community members, teammates and partners who are bring energy everywhere in their own way.



Outdoor



Emerging Markets



BioLite Team



Partner Spotlight



Finding Home Up High

Last February, BioLite ambassador Abigail set out with her friend Rachel on a trek through the Ausangate mountain region of the Peruvian Andes. The area sits at an elevation of 5.2k meters (17,000 ft) – that’s nearly as high as Everest Base Camp (5.38k meters). With high elevations, ambitious trails, and unpredictable weather patterns, the mountain asks a lot of your mind, your body, and your gear.

As seasoned, self-sufficient backpackers, the idea of needing guides for the trek felt unfamiliar; but on routes with extreme and volatile conditions like this one, guides are required to accompany anyone trying to reach the summit. With a pre-dawn wake up and full day of intensive glacier hiking in low oxygen on day one alone, spirits were high but strength was depleted – as the sun set, a damp fog rolled in. With whipping winds not far behind, it was time to set up a base camp, and fast.

As guides and hikers alike worked together to get the tents up quickly, Abigail noticed the kit of kerosene lamps and gas stoves and leapt at the chance to offer an off-grid alternative; her BioLite NanoGrid lighting system could offer illumination far brighter than the dim kerosene while the CampStove 2 could help cook a hearty meal and charge the team’s gear – would they like to give it a try?

“Charlie [our camp cook] was the first to flip out,” Abigail wrote, “he took the SiteLight XL and BaseLantern from the NanoGrid and experimented with how to set them up to aid in his meal prep.”

Ultimately, the lights found a home inside the communal tent where everyone spent the night swapping stories and becoming fast friends – no longer a makeshift shelter in a storm, this space was now a home away from home; warm tea brewed on the CampStove 2 soothed aching lungs while bright overhead lights replaced harsh shadows with smiling faces.

Through the power of home, Abigail helped her group connect in a way that made them feel more comfortable in their surroundings. The simple setup allowed them to replenish their energy for the frontier that lay ahead. As Abigail put it, “if you’ve spent time sleeping outside, you know that once the light goes, the evening often ends quickly; with the NanoGrid going strong, we were able to keep conversation flowing well after sundown, a much-needed distraction from our exhausted bodies. I’d never be able to do that hanging out in a tent by myself.”

Abigail shared her story during *The Power of Home*, our 2017 Holiday Series that celebrated the invisible energy that connects us all. When in her home-state of Colorado, she adventures with her two pups Kodi and Kuma. Follow their travels: [@abi.lafleur](#)

With the NanoGrid going strong, we were able to keep conversation flowing – something I’d never be able to do hanging out in a tent by myself

Abigail, BioLite Ambassador



STORIES OF IMPACT
Peruvian Andes

I want to give people the power to make their homes their most favorable place in the world

Kennedy, BioLite Field Technician, Western Kenya



STORIES OF IMPACT
Kitale, Kenya

The Power Of Home

In November 2017 BioLite released its first short film, The Power of Home, following BioLite Field Technician Kennedy Yamame as he brought light and power to households through his work delivering, installing, and serving BioLite SolarHome 620s.

For Kennedy, this job isn't just professional, it's personal: having grown up in the very region he now services, he's had firsthand experience of the profound impact energy has on a home and a community. We sat down with him to discuss his work and why something as simple as a reliable light could change the course of someone's future.

You have a personal connection to this area.

I was born in Western Kenya. That's where I went to nursery school. This is where I lived all my life before going to college. So, coming back here to install these systems, I feel honored about that. My time before college, I was in this remote area of the country, with no hope of electricity anytime soon. I thought to myself, I have to do something about this. It's part of my responsibility, my conviction that I have to give back, but I wanted to do it in a way that I also feel connected. These homes I visit, I always feel like these people are people you know. I can't find the words to describe that. Access to energy is so important to me because it empowers people with a lot of things.

People talk about "empowerment" a lot in vague terms – what does it mean to you?

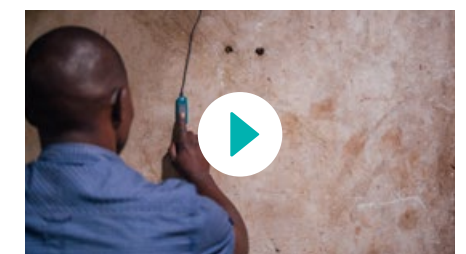
Well, for example, kids studying can develop eye problems because of these kerosene lamps – the same small lamps I used to use to study. There's a family I visited with a boy who used to study with a kerosene lamp and all that. Once they got the SolarHome 620 you could actually see improvement in his grades and you notice a real change in a couple of months. He gets longer study hours* and you can actually gauge the performance – he's got his standard exams coming up and I think he will do very very well. In fact, maybe I will be the first one to welcome this kid to college when he comes to Nairobi. I will just say "Welcome to the city, you did great. You have to study hard." It's a really important thing because when you see kids from these backgrounds with no electricity like going to school and getting some very nice grades from there you know you feel like this something that will have an impact in the next few years – I'm very proud to be a part of that... I've got a small kid, what can I say.

What does the future of energy look like in Western Kenya?


It's the small things we do outside here that really matter – we cannot expect a huge gridline to be built overnight so basically it's a collective responsibility that starts in each home. With the Solar Home System, once you have it purchased and installed, you don't pay anyone else. This is you. That is your energy. You have a radio and you have lights in your house – it's an amazing thing. The exponential effect of what I'm doing now, of course, people cannot see it clearly in an instant – but I believe in the next few years people will see the impact of all that we are doing right now.



**Kennedy's observation isn't alone: according to Acumen's 2017 Energy Impact Report, children study for an hour longer each night with access to solar lighting. See more at acumen.org/energy-impact-report*



WATCH: The Power Of Home
youtube.com/user/BioLiteChannel/videos



*Could we make a better campfire?
I think we can make a better campfire.
Let's make a better campfire.*



The Insight That Launched 10,000 FirePits

It happened around a smoky open campfire on an island in Lake George, NY, reachable only by a 25 minute motorboat ride (a four-hour journey if you decide to chance it in a small sailboat). This tiny island is where the BioLite Team builds a home for four days every September, living completely off-grid using our BioLite gear. We call it our annual Honesty Mission; putting ourselves – and our products – to the test, and seeing where we can make things better.

We've been doing this since 2013 and it's where constraint-inspired solutions give way to new products; where a makeshift lampshade thrown over a tree branch becomes the SiteLight XL; where a challenge to feed a team of 25 becomes BaseCamp; where solving for a smoky campfire became our next big idea.

Everyone loves a big campfire after a long day outside, and the BioLite team is no different. After spending four summers playing musical chairs around billowing smoke from our group flames, we decided to do something about it; we set out to develop our largest combustion project yet, designing a unit that could provide the warmth and attraction of a classic outdoor fire but with a major upgrade to the physics inside to get rid of the smoke. We didn't replace the campfire – we just made it better.

By 2017 our prototype was ready to share with the world – and with the overwhelming support of the Kickstarter community, our honesty mission proved to be onto something, raising over \$2.5M in four weeks. With over 10,500 FirePits shipping in 2018, we hope everyone's summer gets a little less smoky.



An End-To-End Partnership with One Acre Fund

With 2017 as the year BioLite emerged into a full energy ecosystem in Kenya, we wanted to shine a light – literally and figuratively – on a key partner who helped us make this a reality: One Acre Fund.

Since 2006, One Acre Fund has worked to make Kenyan smallholder farmers more prosperous. They provide everything rural farmers need for bigger harvests: access to quality seeds and fertilizer on credit, and the training to improve crop yields and sell any surplus. With a team of more than 2,900 and a network of more than 335,000 farmers in Kenya, One Acre Fund has developed an in-depth understanding into the needs of rural Kenyan households and the complex challenge energy access plays in both livelihood and daily life. In 2015, BioLite and One Acre Fund launched a partnership to co-develop a solar-based home lighting system that would cater to the specific needs of a rural, smallholder farmer. This was the spark for BioLite SolarHome 620.

Through firsthand customer feedback, small-scale prototyping, and rapid testing, BioLite undertook five phases of product development and refinement to land on a final design that met performance and durability requirements aligned with customers’ real-life needs. One Acre Fund worked closely with the BioLite team on distribution for beta and pilot testing, collecting data and insights on usage and quality control, and developing

financing opportunities to help make ownership of SolarHome620 a reality. It is through this work that key features like the motion sensor and FM radio were incorporated as well as smaller but equally important details such as the cord length for each hanging light.

A product is only good if people use it – and One Acre Fund provides the access and training needed to help potential customers afford and adopt these new technologies into their lives; in July 2016 One Acre Fund served as BioLite’s launch partner on SolarHome 620, selling the first 5,000 units through their network and pairing it with invaluable orientation sessions that helped farmers navigate operation and installation of their new units. With the success and positive response received, One Acre Fund will go on to distribute an additional 30,000 systems in the first quarter of 2018 alone.

We are grateful to One Acre Fund for their continued partnership, their commitment to tackling complex problems, and for helping us scale our ecosystem and fulfill our promise of energy everywhere.





A BIOLITE FAVORITE IS BACK IN 2018

The Road To Impact, Reborn

In 2016 BioLite published The Road to Impact, a ten-part multimedia series that took you behind the scenes at BioLite for an honest look at what it takes to fulfill our mission of bringing Energy Everywhere. The community response was deeply motivating with a steady stream of encouraging comments thoughtful questions following us throughout the year – thank you for being so engaged with the heart of our work.

We are thrilled to announce that in 2018 we’re back at it, launching The Road To Impact: Future Energy, an update to the series that unpacks the future of energy through three short films. Working with a team of local journalists and documentarians, we’re digging deep into the emerging innovations, trends, and technologies that are revolutionizing the way people experience energy – and why we believe east Africa sits at the epicenter of these exciting changes.

Each film is packed with powerful voices including experts immersed in the forefront of major initiatives as well as the everyday families and customers who are experiencing these changes first-hand. The future of energy is bright, and here are just a few of the ways it’s emerging before our eyes:

- I. The Grid In The Sky
- II. Cooking And Climate
- III. Mobile Money

Join us for the launch of the series in May 2018 by subscribing to the BioLite Newsletter.



For more information on the methods and calculations presented, view our full 2017 Environmental Sustainability Report at [Impact2017.BioLiteEnergy.com](https://www.bioliteenergy.com/Impact2017)