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FROM THE CEO

For the past ten years, BioLite has been on a mission to introduce and lead people across the globe towards a renewable energy future, one watt a time.

We have dedicated ourselves to building the technologies and distribution channels required to help families living in energy poverty, beyond the reach of the grid, gain access to the essential functions abundant energy access delivers. And, at the same time, we engage outdoor adventurers in building belief in renewables through small daily interactions with award-winning alternatives to the unsustainable fossil fuel systems we used to rely on. Terms like rechargeable, solar-powered, self-reliant infuse our communications with our communities, ushering in a new awareness and understanding of what a sustainable energy future can look like.

2019 was a thrilling year of growth for BioLite as we reached more customers than ever before across both of our markets. It was also a year for a bold, humbling, and motivating call to action: for impact to really take hold, it's going to take all of us – and that means energy needs to become everybody's business...including businesses.

It takes energy to make stuff, be it a service or physical product. That process produces emissions, most notably CO2, and those emissions are warming our planet. Through our line of work, BioLite has gained a highly specialized expertise around carbon footprinting, carbon markets, and our responsibility as an enterprise to be accountable to our emissions.

But here's the thing: we don't think that should be special – it should be universal. That's why in 2019 we co-founded **Climate Neutral**, an independent non-profit dedicated to helping all companies measure, reduce, and offset their carbon footprint. The faster we demystify and democratize the knowledge around carbon, the faster we can put a price on it and accelerate a global economy that values and prioritizes renewables at every level of participation. After all, what good is our collective 'impact' if there's no planet left to experience it?

In this year's report, you'll find a new special section outlining our vision toward a carbon free future and how, no matter your industry, we are all ultimately connected by energy. You'll also find personal stories of the individuals and businesses working to build our clean energy future, one stove and solar panel at a time, in-depth measurement of BioLite emissions and the third-party-confirmed data detailing BioLite's impact.

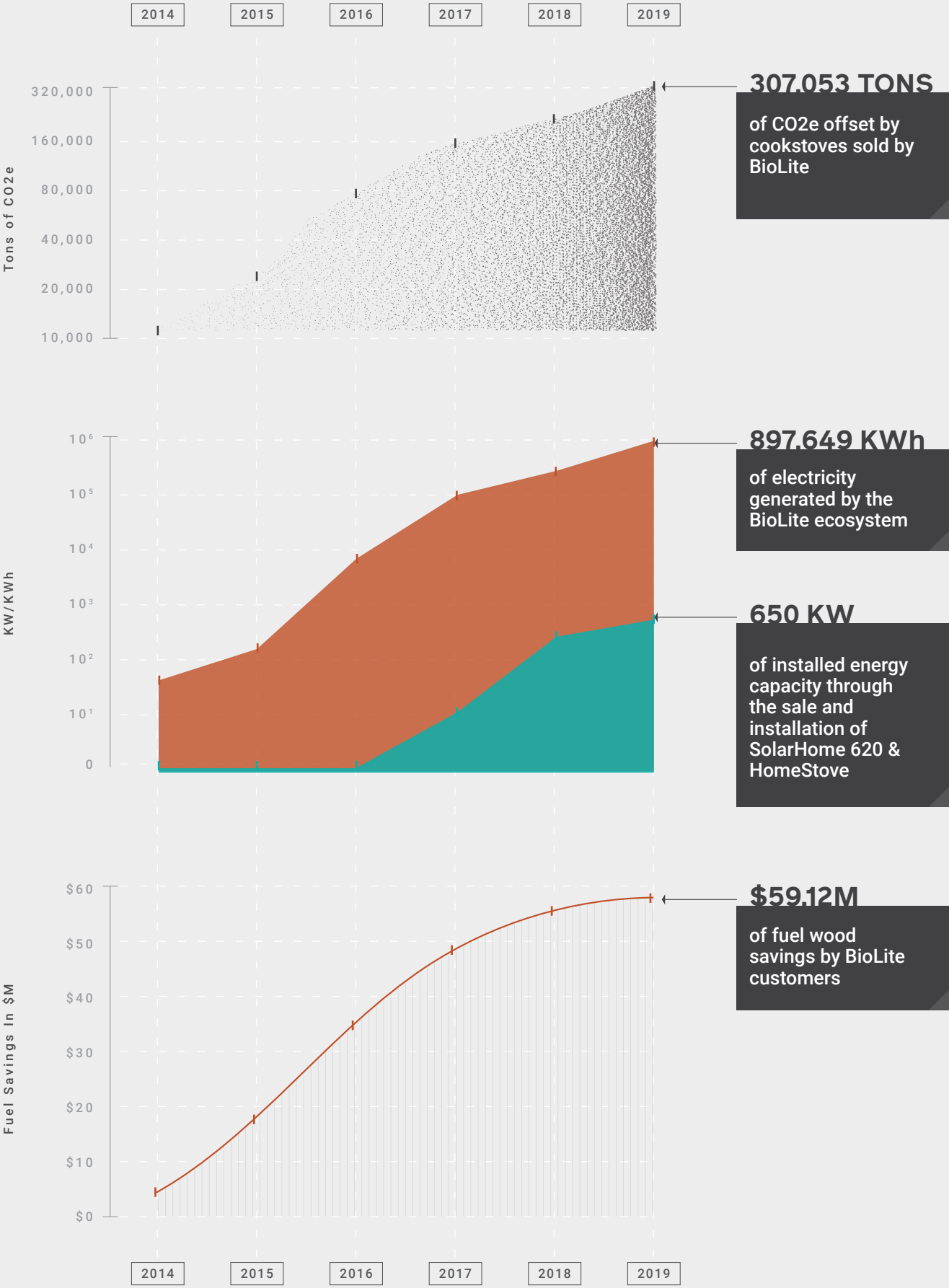
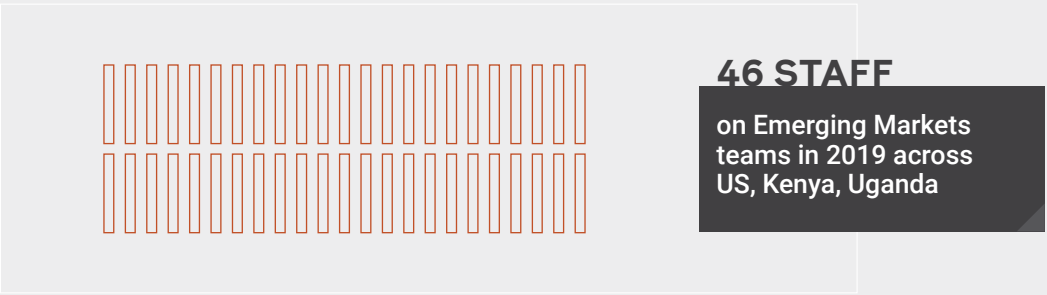
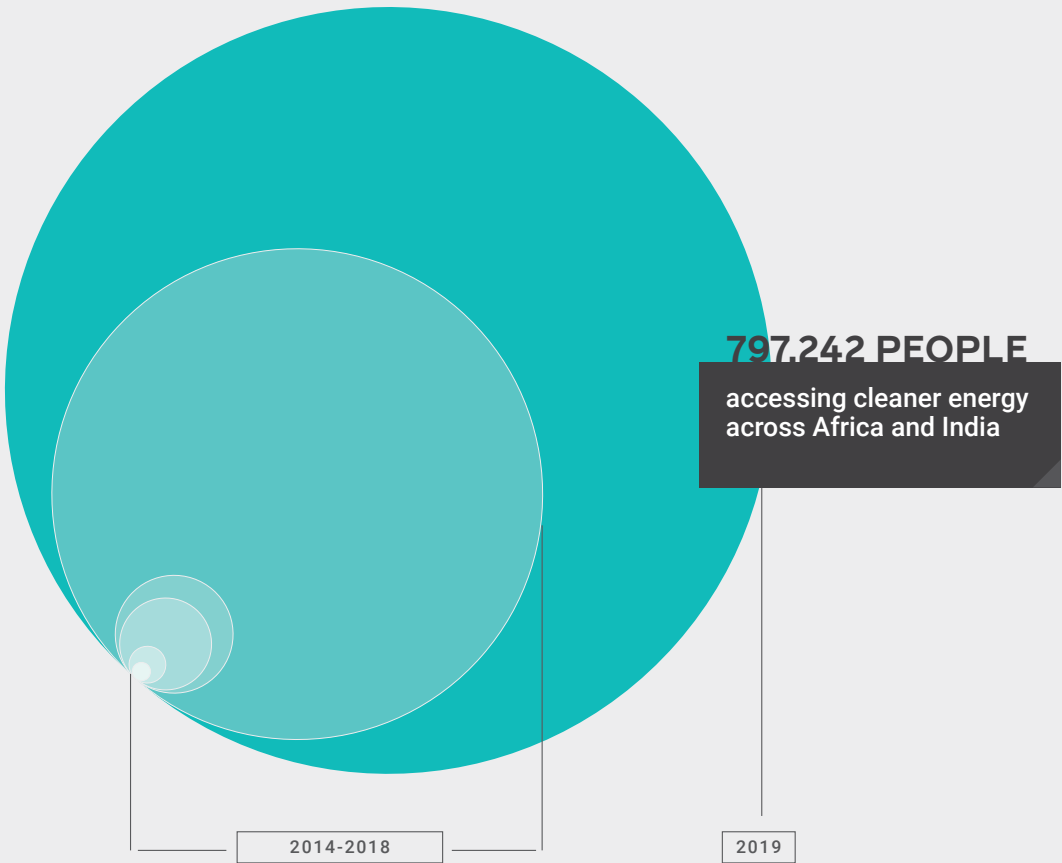
The future of energy is shared by all of us – let's do our part to make sure it stays bright.

Thank you for your continued support – here's to an impactful year ahead in 2020.

Jonathan Cedar
CEO, BioLite



IMPACT BY THE NUMBERS

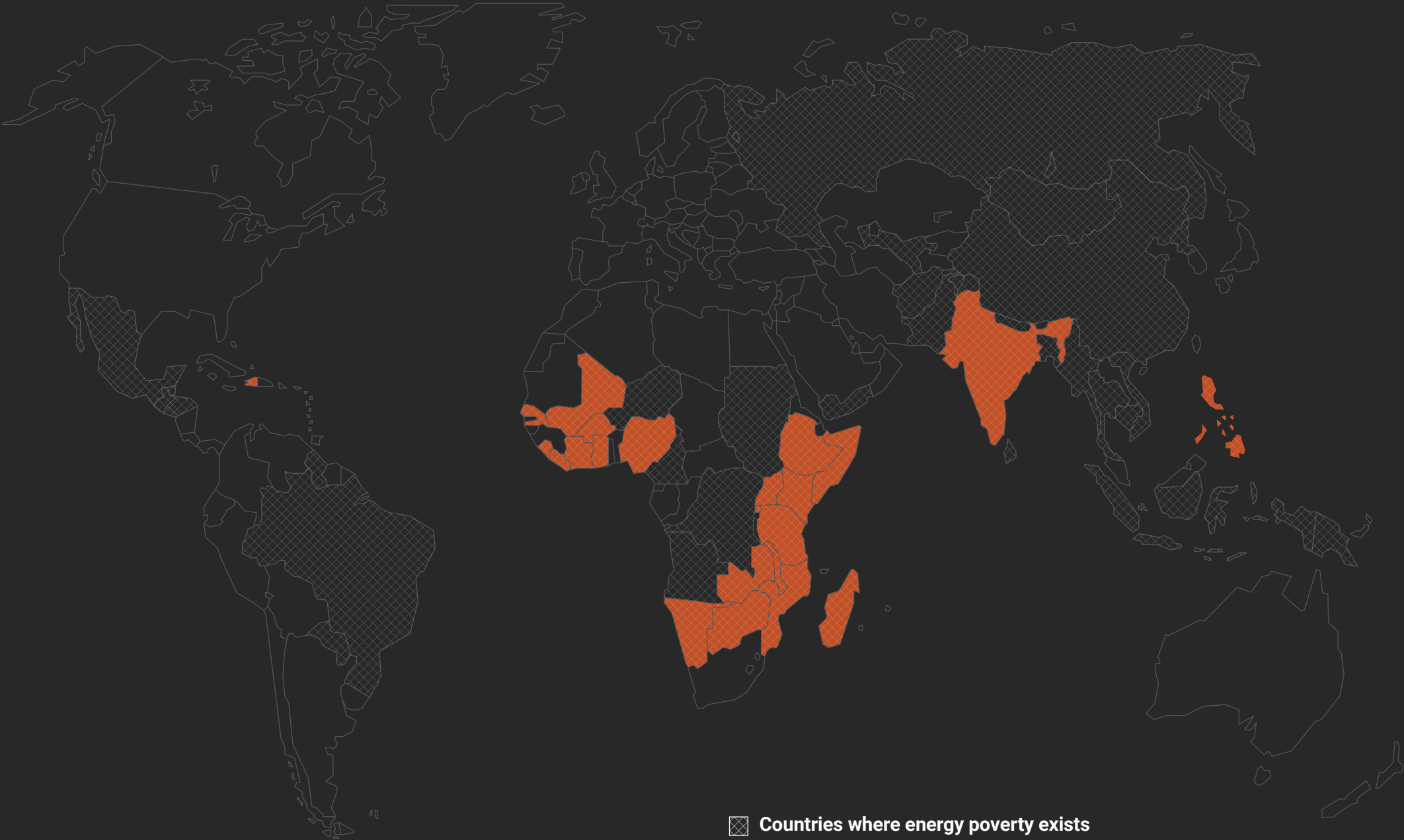




GEOGRAPHIC EXPANSION

Reaching Scale Across Sub-Saharan Africa

For the past 7 years, BioLite has focused its emerging markets work in the East African countries of Kenya and Uganda.

In 2019, equipped with a highly skilled team of engineers, field staff, and local partners, BioLite expanded significantly, bringing our energy solutions to 19 additional countries across sub-Saharan Africa and South Asia.



-  Countries where energy poverty exists
-  Countries where BioLite operates

YEAR IN REVIEW

PRODUCT LAUNCH

HeadLamp 330 Launches



Honorable Mention in Fast Company's Innovation by Design Awards



Honorable Mention in Core 77 Design Awards

ACQUISITION

BioLite Acquires EcoZoom East Africa to Focus on Charcoal Stove Expansion

– JikoMalkia, BioLite's First Charcoal Stove Launches in Kenya



RECOGNITION

The United Nations Recognizes BioLite

UN cites BioLite as "[a] leading sustainability change agent for achieving the Sustainable Development Goals."

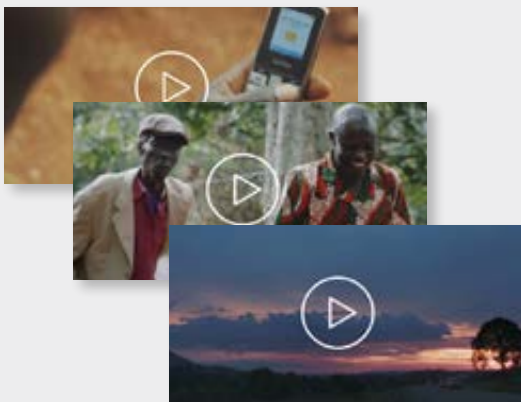


EMERGENCY ENERGY FUND

In partnership with Mercy Corps, BioLite launches a new fund to deploy off-grid energy solutions quickly & effectively to regions impacted by natural disasters.

MEDIA

BioLite's First Docu-Series *Connecting the Watts* Launches



ANNIVERSARY

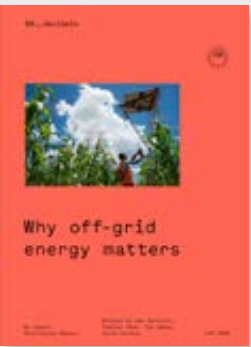
FirePit's First Full Season in Market

- FireMat & FirePoker Accessories Launch
- Named Best FirePit by: Popular Mechanics, Men's Health Awards, Outside Magazine
- FirePit Climate Neutral Launches



RECOGNITION

BioLite Named Highest Performing Company in Acumen's 60 Decibels Off Grid Energy Impact Index



PRODUCT LAUNCH

BioLite & Peak Design Launch a New Non-Profit, Climate Neutral Certified



BioLite & Peak Design CEOs named Outsiders of the Year for Co-Founding Climate Neutral



SPECIAL REPORT

CO-FOUNDING A NON-PROFIT TO FIGHT CLIMATE CHANGE

Greenhouse gases are changing our climate.

Governments aren't acting fast enough.

It's time to put a price on carbon – and brands can lead the way.

Climate Neutral is the New Standard for Responsible Business

BioLite has been proudly measuring and offsetting our carbon footprint since 2015. In 2019 we co-founded **Climate Neutral** with our friends at Peak Design to demystify the footprinting process and help other brands take immediate action on their emissions.

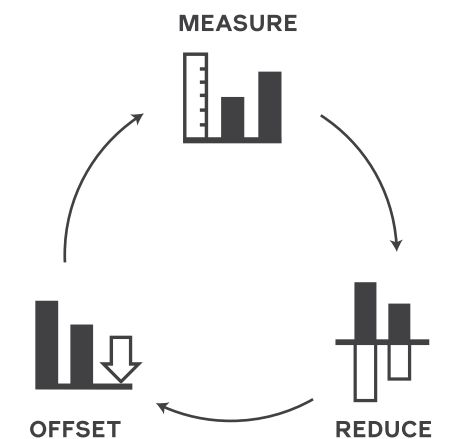
Just like an Organic or Fair Trade label, Climate Neutral Certified is an instant signal for responsible business, ushering in a new wave of awareness and giving customers an easy way to choose products (and the brands behind them) that want to do right by people and planet.



How it Works: It's Cheaper and Easier Than You Think

Through a proprietary, easy-to-use calculator, brands can quickly measure the full scope of their carbon impact. From there, brands must use this information to identify targeted areas of reduction. Whatever cannot be reduced to zero is then offset through a network of credible partners and projects.

Once a brand has achieved these key steps, they earn their Certified status and may use the Climate Neutral Certified label on all products and communications.



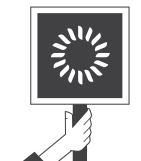
Building a Bridge to Zero Carbon: Why Offsets Matter



Internalizes the cost of doing business as usual – by making it expensive to pollute, businesses are incentivized to seek new alternatives



Drives funding to the R&D of low-carbon technologies and solutions that can become those alternatives business seek



Shows policymakers and markets that a growing portion of the businesses that make up our economy are ready to act

Look For The Label

It's carried by brands that measure, reduce, and offset all of the carbon generated by making and delivering their products.



CORPORATE SUSTAINABILITY SUMMARY

In 2019, BioLite emitted a total of **3,782 tCO2e**. This represents an **8% drop year-on-year**, driven primarily by a slight drop in sales of higher emitting products coupled with increased sales of smaller and low carbon-intensive products such as the HeadLamp 330 and SolarHome 620. This led to lower raw material demand, greater shipping container utilization, and lower inbound shipping requirements. As a result, BioLite's 2019 carbon intensity, as defined by emissions per product manufactured, reduced to a low not seen since 2013.

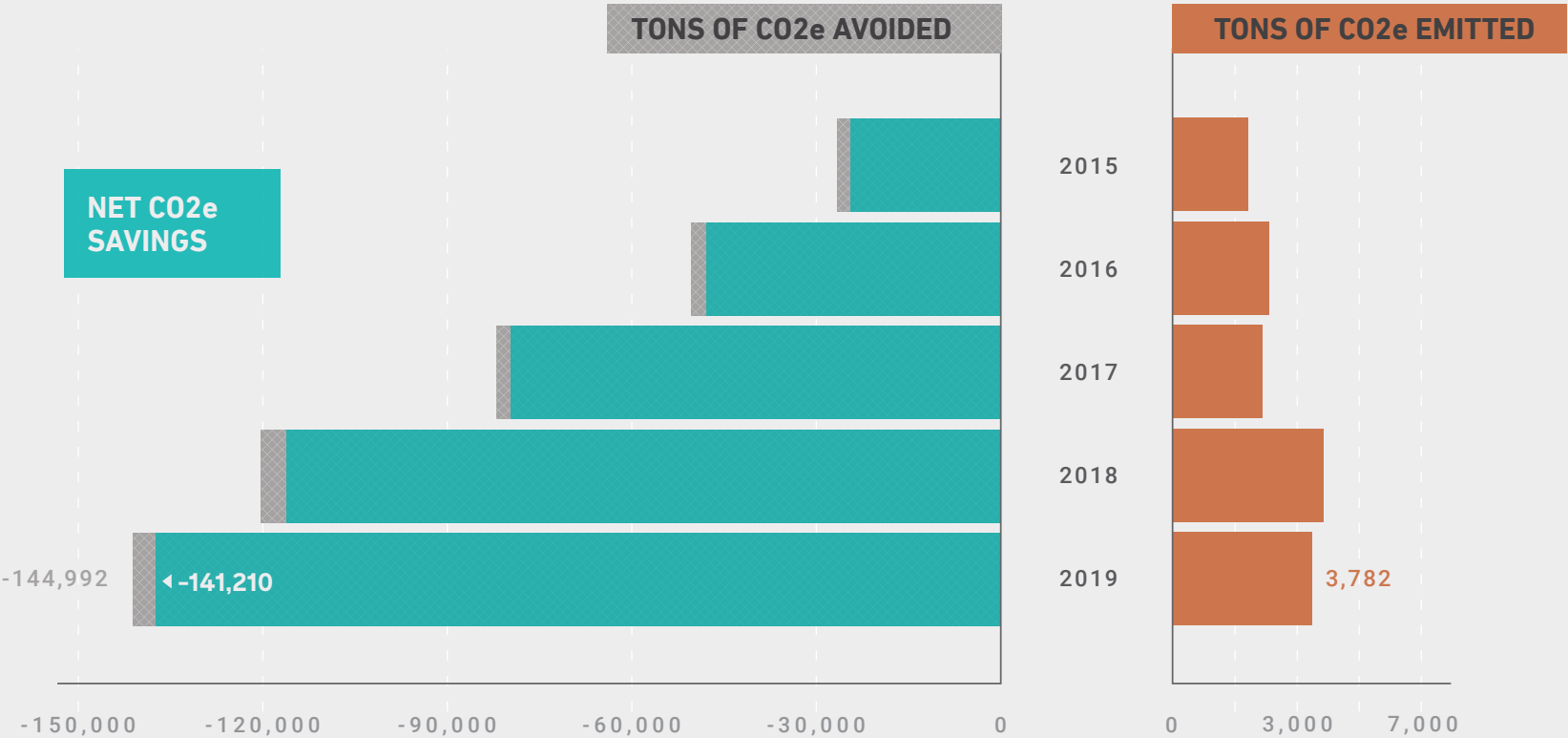
Given the steadily increasing amount of absolute emissions driven by BioLite's growth, we remain committed to exploring ways to mitigate our impact. In 2020, we plan to conduct a review of raw materials used in new products to ensure that low-emission materials are used whenever possible. BioLite also commits to the following reduction measures:

- 1. Investigate the feasibility of replacing virgin feedstock with recycled feedstock for some of the company's more resource intensive raw materials such as aluminum.
- 2. Revisit our supply chain to evaluate opportunities to reduce shipping and manufacturing emissions.
- 3. Complete a packaging re-design of the BioLite portfolio with a specific lens towards reduction of plastic and non-recyclable materials in the structural sourcing.

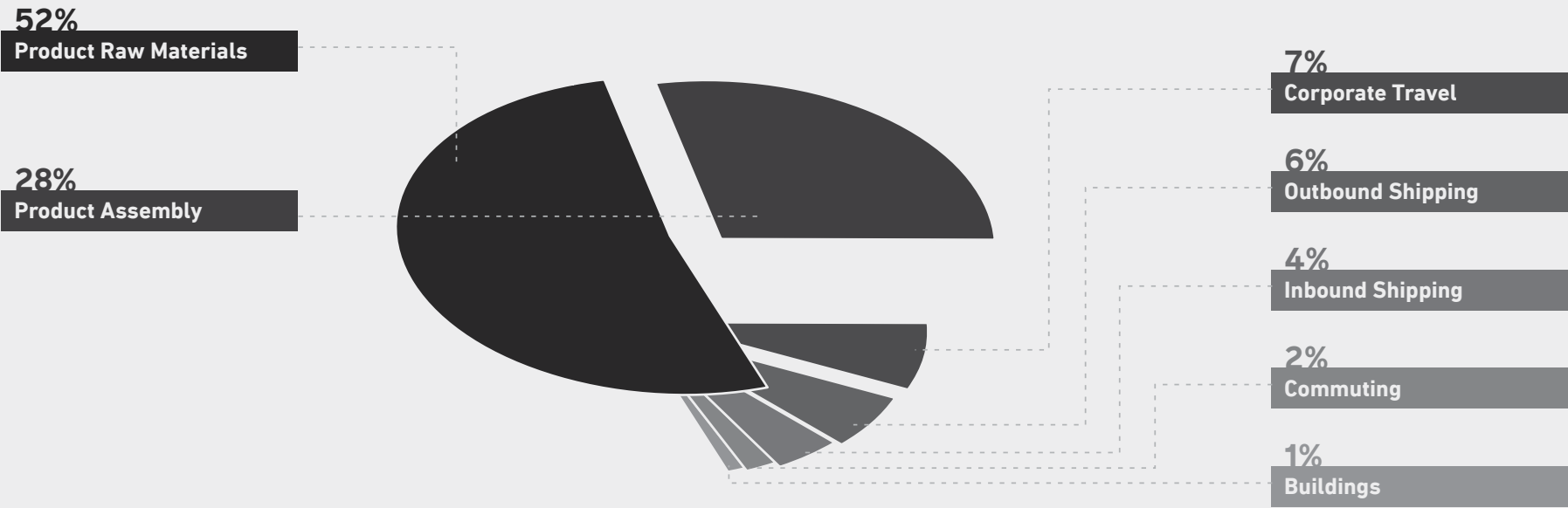
Download the full
2019 Sustainability Report

[BioLiteEnergy.com/Impact2019](https://www.bioliteenergy.com/Impact2019)

Lifecycle Carbon Impact, Past 5 Years



2019 Emissions By Function





STORIES OF IMPACT

► Emerging ► Outdoor ► Partner ► Team

Every year we share stories highlighting how BioLiters around the globe are bringing Energy Everywhere. This year we noticed a recurring pattern; our community members feel a strong responsibility to protect our planet and are taking action to do so.

In the following pages you'll meet a family of rice farmers growing their business, new members of the team expanding our commitment to the clean cookstove movement, a group of anglers working to make the outdoors a more inclusive space for all, and the BioLite team members using rigorous testing processes to accurately measure the emissions of our stoves.

Kerugoya has the best rice in the world. Other places might claim they produce the best rice in the world, this is better.

Geoffrey
BioLite's Kenya Sales Manager

Why Reducing Energy Poverty Starts With Smallholder Farmers

KERUGOYA, KENYA

We're on our way to meet local rice farmers Teresia & Andrew Cubi to learn about their experience with the HomeStove. It's no coincidence that they are farmers — BioLite has been actively seeking out farmers since we began operations in East Africa. By focusing on farmers, we're able to uncover valuable insights into daily life that directly inform future product designs and the financing options we make available.

Sixty percent of the population¹ in sub-Saharan Africa are smallholder farmers who live partially or completely off-grid. While each farmer may have distinct cultural practices, they share similar basic needs when it comes to energy access. If BioLite can serve their needs well, it's one of the biggest opportunities to scale safe and reliable energy access to other rural households.

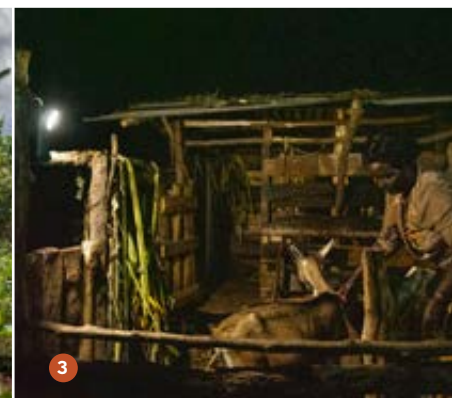
When a smallholder farmer gets access to energy it creates a ripple effect for their surrounding community. It has the potential to save farmers time and money which they can reinvest into their work while also opening a path towards improved health, education, and reduced inequality. And when farmers find something that works, word travels fast. That's exactly what happened when Andrew Cubi overheard his neighbor talking about a new stove that used less fuel wood and generated electricity - he knew he had to have it.

"It cooks chapati much faster," says Teresia. "This meal would take hours over the other fire." With the HomeStove, Teresia doesn't give a second thought to firing up the stove to make a quick cup of tea, chapati, or a full meal. The HomeStove also saves her hours each week on the fuel collection front. Time that can be spent tending crops, investing in upgrades to her farm, and at home with the family. Now, the Cubi's are the ones spreading the word. Anytime a neighbor visits, they are quick to light the stove to make tea and show off its features. Through their enthusiasm, we hope to reach more farmers in their community and continue the energy access revolution.

① **Teresia** loves how quickly the HomeStove cooks her food. She's also spending less time collecting fuel, saving roughly 3 hours each week. When you're a busy farmer, those extra hours are meaningful.

② Like many of our customers, **Irene** brings a radio outside with her while tending crops, giving us the insight that the SolarHome 620's Control Box should be detachable.

③ **Ruth** utilizes the SolarHome 620's detachable Control Box feature to tend to her farm after the sun goes down. Upon returning inside, she hooks it up to string lights and has tea with her sister.



Casting a New Light on Angling

OLYMPIC NATIONAL PARK, WA, USA

In 2018, BioLite ambassador Tracy Nguyen-Chung founded **Brown Folks Fishing** to “cultivate the visibility, representation, and inclusion of people of color in fishing.”

In a year’s time it’s done just that - #BrownFolksFishing has thousands of tags on Instagram, a dedicated community of ambassadors, and Tracy was named Outsider of the Year by Outside Magazine. All of this success inspired Tracy to bring an online connection off grid.

This is how we met Autumn Harry — a lifelong angler and a member of the Pyramid Lake Paiute Tribe in Northern Nevada. Autumn had never fished beyond the waters of her reservation until she discovered @BrownFolksFishing. Autumn began tagging her pictures with #BrownFolksFishing and building relationships with community members. Soon after, Tracy asked her to become a BFF ambassador. When Tracy planned a trip to Olympic National Park to cast for steelhead, she invited Autumn to experience a completely new watershed while beta testing BioLite’s HeadLamps.

Between learning to cast while confined to a small boat, fly fishing while floating down a fast moving river, and reeling in steelhead (which are known to be fighters), the whole trip was full of new experiences for Autumn.

“And there were quite a few challenges,” she says. “The first morning, we woke up at 4 am and it was pitch dark outside. Our BioLite HeadLamps came in handy here; we couldn’t have assembled our fly rods or gotten ready for the day without them.” Autumn’s experience was captured in the new short film *Connection*, where she unpacks what it means to overcome her own image of who is a fly fisher and uses the sport to fight for conservation. It’s currently making the film festival circuit and will be released in late 2020.

“In all the fly fishing films I’ve seen, it’s rare to see Indigenous representation,” says Autumn. “My hope is that people can connect with this story and other Indigenous Peoples can get excited about learning to fly fish and know there is a growing community of Indigenous anglers. @BrownFolksFishing is such a great way to connect with others and support the work of those who are fishing and preserving species within their respective homelands.”



▲ BioLite ambassador Tracy Nguyen-Chung and founder of Brown Folks Fishing.

Doubling Down On Our Commitment to Clean Cooking with EcoZoom

NAIROBI, KENYA

At BioLite we primarily talk about the importance of cleaning up wood cooking fires around the world as our flagship products are clean burning wood fueled stoves. But another pertinent reality is that charcoal remains one of the most popular cooking fuels in emerging markets, especially in urban areas. Charcoal itself is a problematic cooking fuel - its highly inefficient production process contributes to massive deforestation. It takes 10 pounds of wood to make just one pound of charcoal. It's also a key contributor to indoor air pollution which leads to millions of deaths each year.

In an effort to rapidly expand our capability to address this problem, BioLite acquired EcoZoom East Africa, a leading manufacturer of clean, charcoal fueled cookstoves.

With this new partnership comes a blending of teams, products, and distribution networks. The EcoZoom team joined BioLite's Nairobi HQ as full-time employees and their line of popular charcoal stoves was incorporated into BioLite's product lineup, furthering our robust portfolio of small-scale energy appliances. EcoZoom also brings a network of 45,000 customers across East Africa who will be introduced to BioLite's solar lighting and charging products to expand our combined impact and help even more families step up the energy ladder.

In 2019, we combined BioLite's technical know-how with EcoZoom's charcoal stove expertise to develop the cleanest charcoal stove on the market. The BioLite JikoMalkia, meaning Queen of Stoves in Swahili (below), offers the highest fuel savings, greatest durability, and largest cooktop of charcoal stoves in emerging markets. Our advanced combustion technology means the JikoMalkia is also more efficient and cleaner burning. A typical household will benefit from \$20 per month in fuel savings and a 75% reduction in smoke when compared to the average charcoal stove. With the launch of this new technology, we're positioning ourselves to achieve an unparalleled level of impact on public and environmental health in the region.



Together we bring a wealth of product knowledge and a deep understanding of the market, all in service to providing impactful solutions and best-in-class experiences for our customers.

Oli Raison
CEO of EcoZoom and now BioLite's Director of Operations for Emerging Markets.



Measuring What Matters

BROOKLYN, NY USA

Compared to a regular fire, the BioLite HomeStove reduces 90% of smoke & toxic emissions meaning that when families bring a HomeStove into their kitchen, they are no longer breathing in plumes of smoke while cooking. These stoves contribute to healthier homes and a healthier planet. We've talked a lot about the technology behind how we burn wood without any smoke, but haven't shown you how we actually measure this emission reduction. This process involves hours of in-house burn tests and data collection to determine just how much particulate matter each stove emits coupled with rigorous verification from outside partners who report their findings directly from the field.

When you're in the business of improving public health and protecting the planet, product validation testing is extremely important. Our emission testing program has been in place since our inception and ensures that we are distributing the cleanest, most efficient cookstoves to our customers in emerging markets. Once BioLite's engineers compile results from a series of burn tests, we look outside the organization to further confirm our findings.

Our teams in Nairobi and Brooklyn work closely with verified third party experts who visit our emerging markets customers to conduct tests that confirm that our stoves are as effective at reducing emissions as we are reporting. So when we say that our HomeStoves reduce up to 90% of toxic emissions compared to a normal cooking fire, we are using numbers verified by outside parties to confirm that families are breathing in way less smoke.

These tests are also a crucial aspect of our carbon credit verification. These partners are helping us more accurately report the impact our emissions reductions have on the environment. With their help, we've determined that each HomeStove that we get into the market offsets 3.5 tons of CO₂ and Black Carbon a year. That means to date, we've offset 307,053 tonnes of CO₂e and we're just getting started.

Thousands of hours of burn testing happens at our lab in Brooklyn, NY. Our testing rigs are designed specifically for the HomeStove and built in-house.



LOOKING AHEAD

Climbing the Energy Ladder With BioLite's SolarHome 5000 - Solar Lighting & Satellite Television

In 2019, we began field testing the SolarHome 5000, our newest SolarHome solution. A transformative leap up the energy ladder, the SolarHome 5000 delivers high-capacity power generation and storage for the modern home. Featuring a 50 watt solar panel and 115 watt hour control box, customers can charge mobile devices and even run the included television for on-demand connectivity and entertainment.

Designed as a modular solution, customers can upgrade their existing SolarHome 620 units seamlessly by choosing which power and/or lighting components are most relevant to them and easily add to their system as household energy needs increase. We're excited to offer energy solutions that grow with our customers.

SolarHome 5000 will officially hit the market in 20 countries in 2020 helping even more customers get access to affordable and reliable energy to power their lives.



▲ The SolarHome 5000 features a 50 watt solar panel, 24" television, 115 watt hour control box and optional hanging lights.



For more information on the methods and calculations presented, view our full 2019 Environmental Sustainability Report at [BioLiteEnergy.com/Impact2019](https://www.bioliteenergy.com/Impact2019)

¹<https://www.mckinsey.com/industries/agriculture/our-insights/winning-in-africas-agricultural-market>

