

# ONE MILLION LIVES REACHED

2020 BioLite Impact Report







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# LETTER FROM THE CEO

I'm not going to bury the lede here. Amidst a year of major uncertainty and disruption, the BioLite team rallied together to achieve a massive milestone: over 1.7 million individuals reached with BioLite's clean energy solutions across Africa and Asia. That's up by an additional one million people from when I last wrote this letter.

Crossing the million lives threshold is a reason to celebrate in any year, but I am especially humbled and inspired by how my colleagues pivoted to protect impact – and each other – in 2020.

At BioLite we are on a mission to empower people to feel safe, productive, and connected through renewable energy; this took on an even deeper, more personal meaning over the past twelve months as we all confronted challenges that put health, work, and relationships all at risk. Through a combination of agility, perseverance, and shared purpose, our team was able to band together and make incredible things happen:

- Scale commercial distribution of SolarHome 5000, a Solar TV system signifying a major step up the energy ladder for homes in emerging markets.
- Launch two new HeadLamps and three FirePit accessories in outdoor markets, further expanding how and where we can show up in the outdoor customer's life.
- Execute a top-to-bottom packaging redesign that not only carried us into the future visually, it also dramatically reduced our use of plastics and non-recyclable materials, a critical step in our continued commitment to sustainability.

And all of this was done in a fully remote capacity.

2020 was not just a testament to our model, it was a testament to the people who drive our success at BioLite, their resilience, and a reminder of the shared humanity and future that connects all of us. If we can do all this in a year like 2020, imagine the possibilities that lay ahead of us.

As we kick off this impact report, I leave you not only with immense gratitude, but with refreshed and focused determination, best summed up by BioLite's first-ever public facing vision: to reach 20 million individuals with clean energy and avoid 3 million tons of CO<sub>2</sub>e by 2025.

To the team at BioLite: thank you for your strength, your patience, and your energy. This would not have happened without you.

To the broader BioLite community: thank you for your support. We can't wait to show you what comes next.

In Good Energy,

**Jonathan Cedar**  
CEO, BioLite



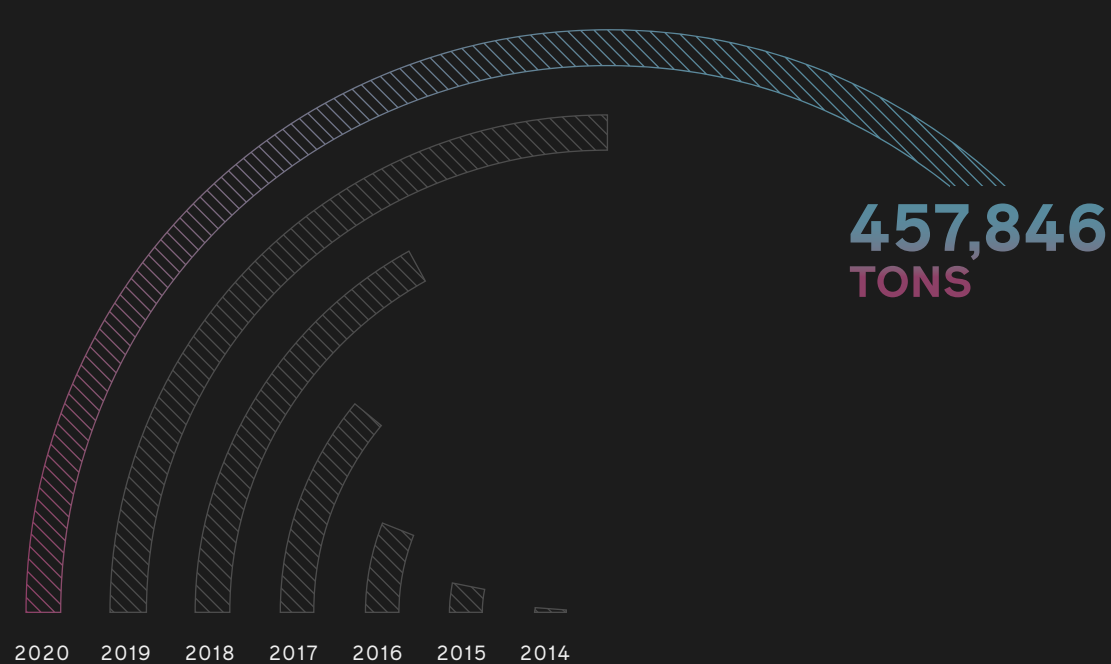
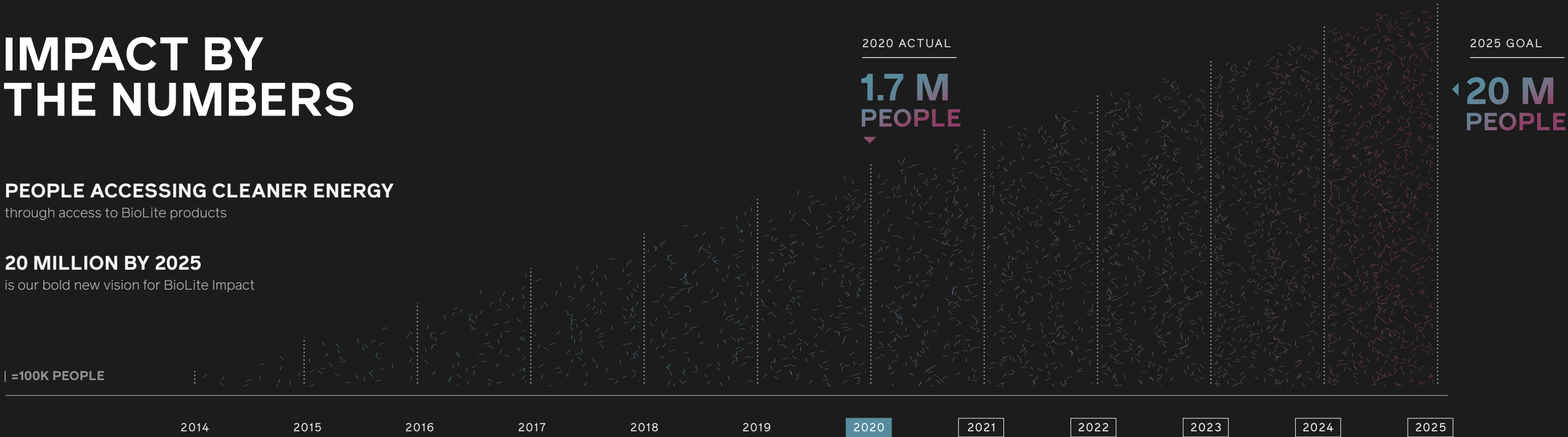
# IMPACT BY THE NUMBERS

## PEOPLE ACCESSING CLEANER ENERGY

through access to BioLite products

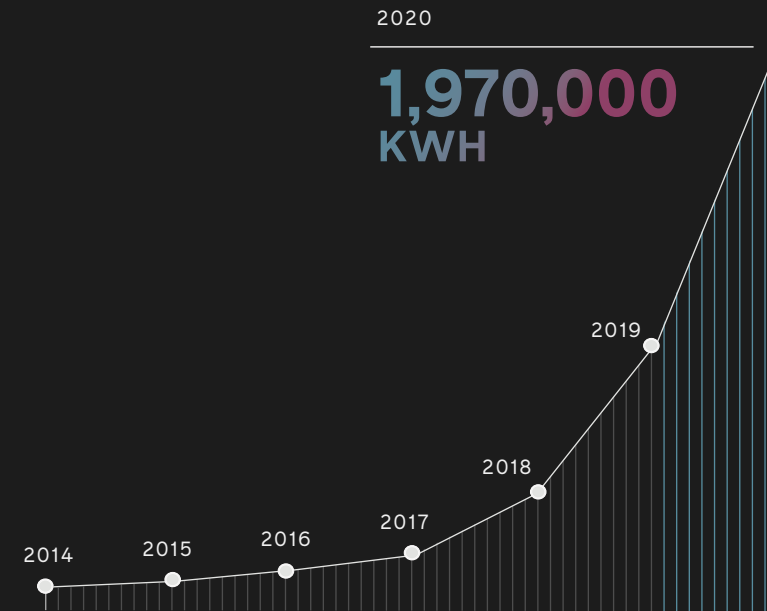
### 20 MILLION BY 2025

is our bold new vision for BioLite Impact



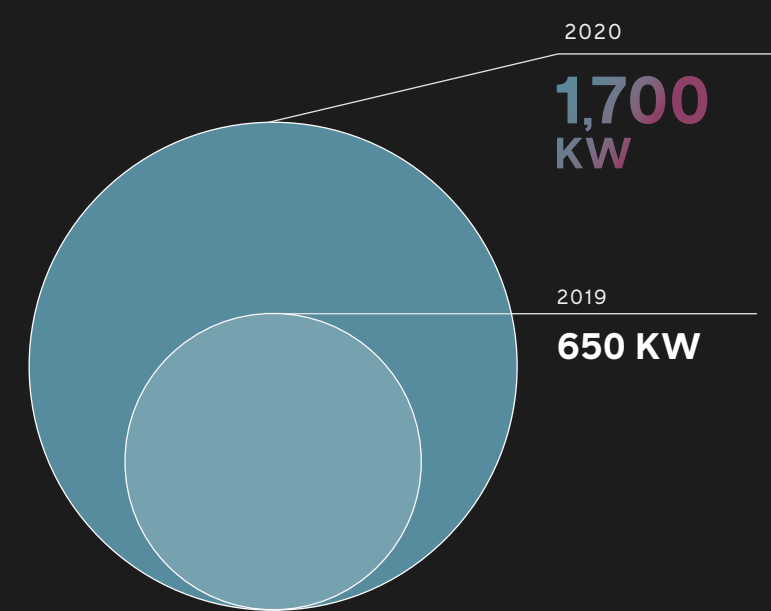
## TONS OF CO2e OFFSET

through the sale and use of BioLite HomeStove. That's like taking about **100,000 cars** off the road for a year.



## WH OF ELECTRICITY GENERATED

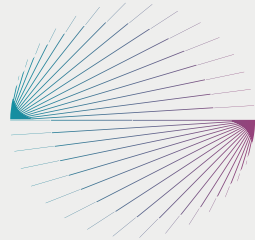
by all BioLite products. That's enough energy to fully charge about **1 million smartphones** every day for one year.



## INSTALLED ENERGY CAPACITY

through the sale and installation of SolarHome 620+ HomeStove, and SolarHome 5000.





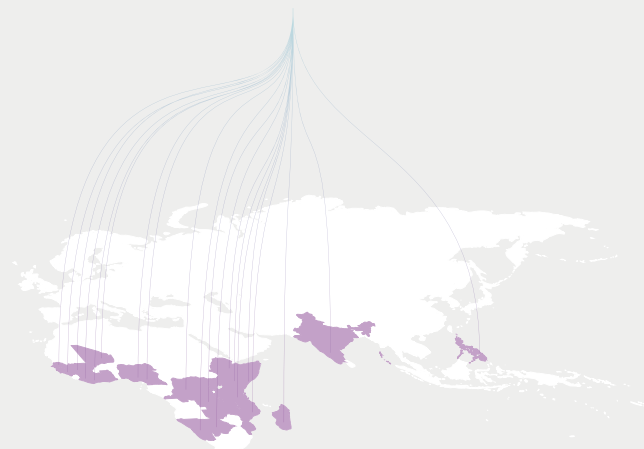
BioLite is proud to share a major milestone we reached in 2020: **1,785,509 people** are now living with clean energy access through BioLite products.

A year ago, this number was just shy of 800,000 – and with a year full of challenges and disruptions like 2020, it is especially meaningful and motivating to our team to see what we can all accomplish, together. **Thank you for helping us make this possible.** This is parallel innovation not only in action – it's parallel innovation **at scale**. This a big number – so big, that it can be hard to wrap your head around what it actually means.

Here's how this impact takes shape:

## 462,186 PRODUCTS, 23 COUNTRIES

The total number of BioLite SolarHome systems, charcoal and wood stoves sold since 2014



# 1.7 M PEOPLE REACHED

The total number of people living safer, brighter lives because of clean energy access through BioLite products



AT A HOUSEHOLD VIEW

## 5.5 PEOPLE

The average number of people per household

## \$3.10/DAY

The daily income for those who live at the Poverty Line

## 53% OF OUR CUSTOMERS

The percentage of BioLite customers who live below this Poverty Line



BIOLITE CUSTOMER

**TERESA**

FINANCIAL IMPACT

### \$173/YEAR

saved annually on fuel by replacing traditional cooking methods with BioLite Stoves

For customers living at or below the Poverty Line, this annual savings represents 15% of their income going back into their pocket.



BIOLITE CUSTOMER

**ABDI**

EDUCATION IMPACT

### 350 HOURS/YEAR

of additional study time through extended lighting at night



BIOLITE CUSTOMER

**MARY**

TIME IMPACT

### 51 MIN/DAY

saved because she's collecting less fuel for cooking, now using a BioLite JikoMalkia Stove.

Pre-COVID, the average American commute to work was roughly 53 minutes round trip.

# CORPORATE SUSTAINABILITY SUMMARY

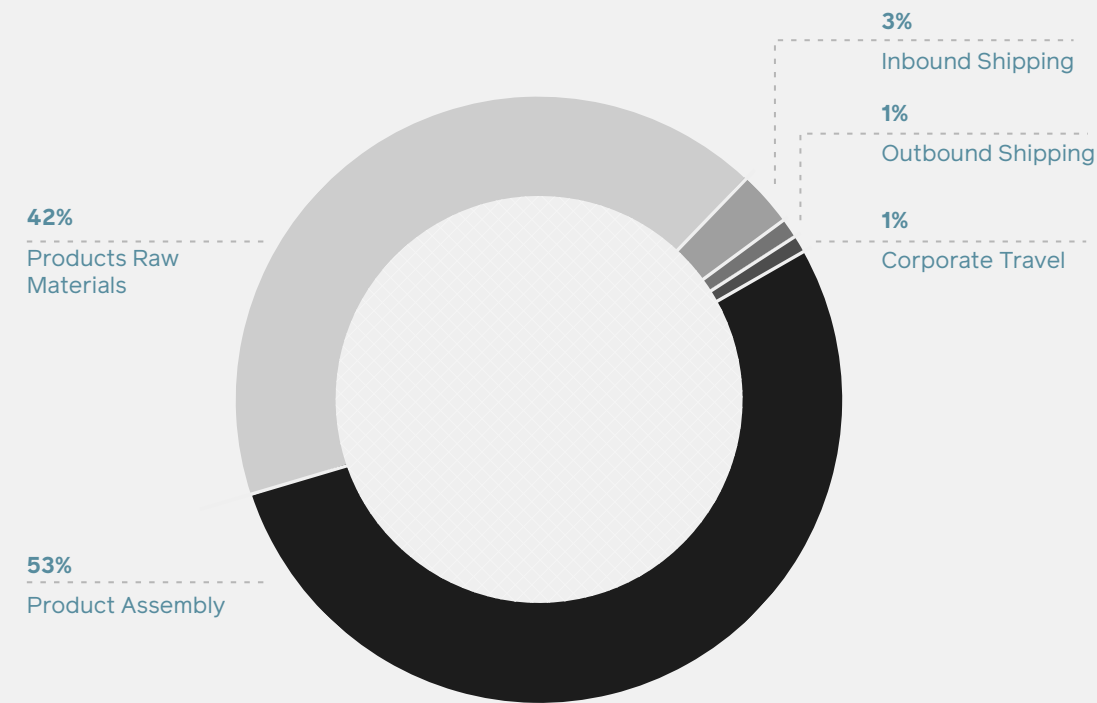
For every **[1] ton** of carbon BioLite emits, we avoid roughly **[20] tons** through our renewable energy solutions in action. Examples of this include our high-efficiency cookstoves replacing smoky open fires and reducing wood fuel consumption. These savings are independently verified by Gold Standard Foundation, the leading carbon accreditation body.

Still, takes energy to make energy – and with us reaching more people than ever in 2020, that means our company emissions were significantly higher year over year (see right hand orange graph). When you take a closer look at where that energy is going, it's concentrated in our Scope 3 emissions, with the vast majority concentrated in the raw materials and assembly of our finished products.

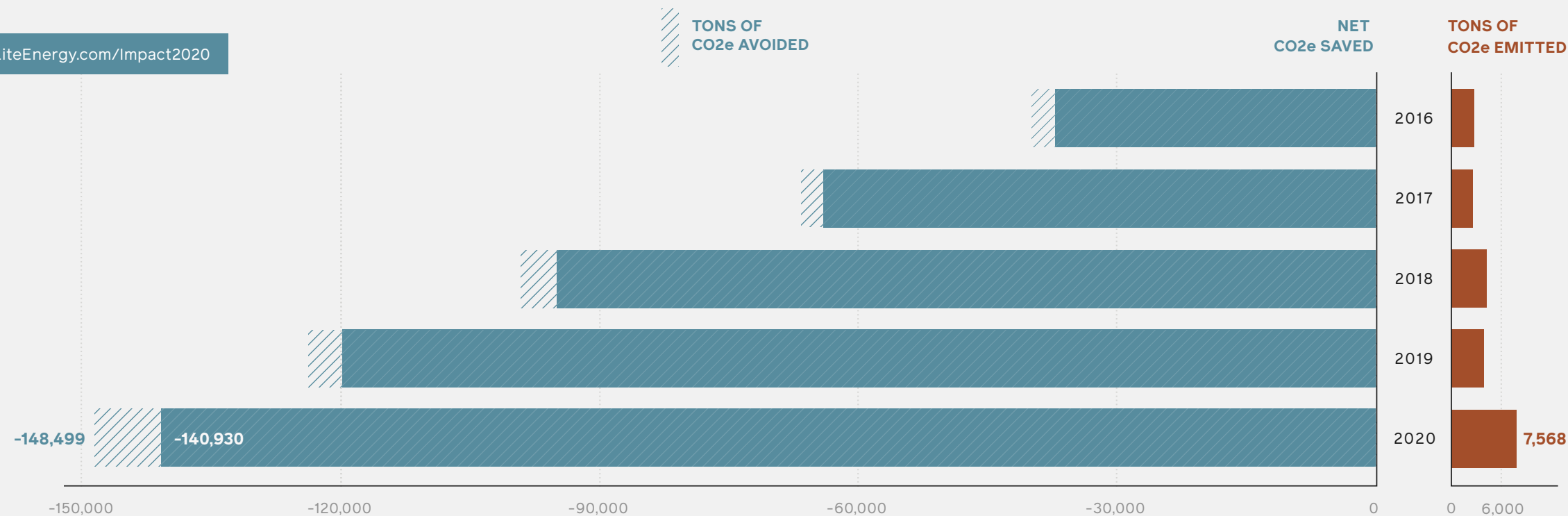
Click on the link below to download our full sustainability report for more on these metrics and areas of focus for 2021 mitigation.

[BioLiteEnergy.com/Impact2020](https://www.BioLiteEnergy.com/Impact2020)

2020 Emissions By Function



Lifecycle Carbon Impact, Past 5 Years





# CLIMATE NEUTRAL UPDATE

Since its initial launch at Outdoor Retailer in 2019, Climate Neutral has now grown to over 325 committed brands across food, fashion, retail, software, design, beauty, media, and more. What once started as a passionate idea among a few outdoor brands has now grown to a universal call to action for brands across all industries to step up and take responsibility for their carbon in a visible, measurable, way.

A quick refresher on the terminology used to describe organizations involved with Climate Neutral.

## CERTIFIED BRANDS

Brands that have successfully submitted documentation measuring their full scope footprint using the Climate Neutral calculator tool, articulated clear ways to work towards actively reducing their footprint, and offset their carbon balance for the entire calendar year of their certification.

## COMMITTED BRANDS

Brands who have signed on to complete the work above by the next certification cycle.

BioLite is a proud co-founder of Climate Neutral, an independent non-profit organization dedicated to building a carbon-free future.

BioLite officially joined Climate Neutral as a certified brand in 2020.

Learn more at [ClimateNeutral.org](https://ClimateNeutral.org).



## MAJOR WINS

### 155 CERTIFIED BRANDS

This is more than DOUBLE the certified list from 2019.

### 800K+ TONS OFFSET

That's like taking 174,000 cars off the road for a year.

### 325 COMMITTED BRANDS

The number of brands that will be certified by June 2021.



“Going forward, we’re embedding the impact of doing business, and the cost, into our business model.”

#### ERIC ARTZ - CEO OF REI

*On announcing REI's carbon neutrality commitment and ambitious new climate platform, September 2020*

## AWARDS



OUTDOOR RETAILER  
INNOVATION AWARD  
FINALIST

FASTCOMPANY

WORLD CHANGING  
IDEAS FINALIST  
AND HONOREE

Backpacker

BACKPACKER  
MAGAZINE EDITORS  
CHOICE GREEN AWARD

TRAVEL+  
LEISURE

TRAVEL + LEISURE  
GLOBAL VISION  
AWARD





# 2020 PACKAGING REDESIGN PROJECT

In 2020, BioLite redesigned the packaging of our entire 53-SKU portfolio. Two major goals of the redesign project were to reduce the amount of plastic used in our packaging and increase the use of recycled materials.

This project took about 10 months and involved not only refreshing the packaging visuals, but completely rethinking our structural material usage. We redesigned 9 products that previously used plastic blisters to be paper only. In the 2 products that still use a blister since no other option could be identified, we reduced the amount of plastic used by over 50%.

Our “premium” packaging now uses greyboard made from 100% recycled material and water-based coating that can be recycled anywhere. Paper sleeves are coated in a plastic lamination (like milk cartons) that can be recycled in most municipalities.

BioLite's “basic” packaging uses standard corrugated cardboard, with a mix of water-based and plastic coating depending on the application. We are currently stress testing the water-based coating in an effort to eliminate more of the plastic coating in the future.

## BY THE NUMBERS

### 53 TOTAL SKUS

were completely redesigned, from the structure to the visual composition

### 93% PLASTIC REDUCTION

through drastically reducing plastic blisters and polybags

### 2.9 TONS OF PLASTIC

will be avoided from hitting the waste stream in 2021

### 22% RECYCLED MATERIALS

will comprise our total packaging material usage in 2021



A sample of the redesigned BioLite packaging family



Unboxing the redesigned CampStove 2+ packaging



# STORIES OF IMPACT



**EMERGING MARKETS**



**OUTDOOR MARKETS**



**BIOLITE TEAM**



**PARTNER**



EMERGING MARKETS - KABATI, KENYA

## MOVING UP THE ENERGY LADDER WITH SOLARHOME 5000

"Tumeric, honey, lemon, ginger, water – that's how you make dawa to get rid of a cold."

This advice comes from Jacinta, a small-share farmer based in Kabati Kenya who wakes up daily at 6am to tend to her livestock and crop farm of maize, cassava, mangoes, spinach and Sukumawiki. After her morning routine, sometime around 10am, she returns to her mud-built home and turns on her television to catch up on local news and learn from her favorite health channel (that's where the dawa came from). After this, she'll move on to supervising details on the construction of her new stone house, an upgrade made possible in part due to the savings she has amassed no longer paying for expensive paraffin fuel. Her grandchildren complete homework in the other room, moving through their workbooks without strain thanks to the overhead lighting that now fills the house. At the end of the day, Jacinta turns on her radio and sings along to her favorite Kikuyu Christian songs – her favorite one is a song of praise, a reflection on how far she has come.

This is the transformative power of energy access – and all of it powered by the sun.

Jacinta's journey with BioLite dates back to 2018, with her first acquiring a SolarHome 620 at her local micro-finance center. Her main motivation? To move away from her reliance on paraffin lamps: they were expensive, smoky, and despite being relegated to only one small room, it wafted a terrible odor throughout her entire home.



And not only was it expensive, it was dangerous, making it near impossible to leave the lamp unattended for fear of accident or fire, especially with young grandchildren around.

With paraffin as her main energy source, days would end early, the home shutting down into complete darkness around 9pm. Ironically, these were the days when Jacinta needed dawa the most, noting she frequently found herself catching colds from the paraffin fumes.

When SolarHome 620 came into her life, the change was instant: suddenly, multiple rooms could be used at once thanks to the multi-light setup, the harsh paraffin smell disappeared, and music and information flowed into the home through the included FM radio. Jacinta had taken that critical first step onto the energy ladder.

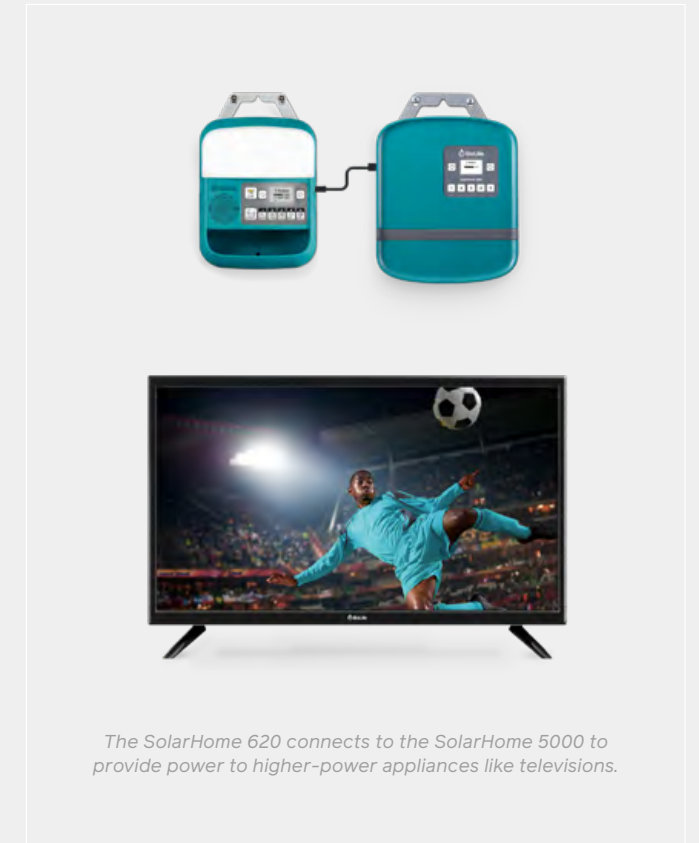
At BioLite, our vision is not only to help our customers onto the Energy Ladder – a concept used to describe how access to increased energy capacity map to substantial improvements in quality of life – we want to help our customers

move UP the Energy Ladder with higher-power solutions that can bring even more benefits to the home.

And this is exactly what happened with Jacinta, with the SolarHome 5000 being installed in her home in late 2019, enabling her to experience it in full during all of 2020.

The larger power storage enables her to run her lights all day as well as power the included satellite television that brings news, education, and entertainment to the family. With a smile, Jacinta told our team that watching TV with her husband is now one of their favorite ways to spend time relaxing together after a long day of work.

"We're building our new house, we just bought two pigs, so much feels possible," says Jacinta, "I'm very grateful for how far we have come and I am excited to watch everything around me grow."



The SolarHome 620 connects to the SolarHome 5000 to provide power to higher-power appliances like televisions.







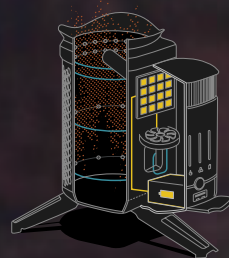
OUTDOOR MARKETS

## POWER TO THE PARENTS

And uncles, aunts, teachers, siblings, neighbors, and everyone who helped kids find joy and learning in a wild year.

Eager for fresh activities away from screens and tight quarters, families looked to the outdoors for a safe way to decompress and recharge during a scary and uncertain year.

Our own BioLite community poured in with photos of dinnertime moving to the backyard, day-hikes with the CampStove, and creative ways to use lighting for imagination-fueled exploration and even the occasional indoor fort. We're honored to play some small part helping you power through.



### A MINI STEM LESSON WITH BIOLITE

In May 2020, BioLite engineers and designers put together kid-friendly lesson plan into the science behind the CampStove and how different careers in science, tech, engineering, and math help them solve tough problems and build amazing things.



[VIEW THE LESSON](#)



“Since before COVID, one of my biggest goals for the year was to introduce the joy of the outdoors to my nephews. Overall the trip was a success, especially hearing them say that ‘Watching the sunrise was way better than playing video games.’

BioLite Ambassador Clifford Mervil

[@cliford.mervil](#) ▶







## BRINGING THE LAB HOME

Special thanks to the family members, roommates, and pets who suddenly ended up with BioLite workspaces, galleries, and labs in their home.

Living rooms transformed; masked hand-offs of prototypes on the street; zoom breakout rooms to discuss how we work together as a company. This was 2020 – the year of major disruption and incredible resilience from the BioLite Team.

In March 2020, the team moved to an all-remote capacity, providing new and unexpected challenges for an organization that designs and manufactures physical hard-good technology.

How would product programs work? How do we program circuit boards and test rigs when the office is closed? How do we re-design fifty-three physical packages in a virtual space?

Like any problem we face at BioLite, we met these head-on with solutions and a spirit of possibility. Here are just a few ways our team adapted to not only stay productive, but connected as well:



"Like any good BioLiter, I love to iterate and refine things. As the months went by, I kept upgrading the "nerd corner" - fully kitted out with all sorts of test equipment."

**Anthony, Senior Electrical Engineer**



"A major work-from-home advantage in my world as an engineer has been monitoring and debugging problems 24/7 "in the wild" - which would have actually been much harder to reproduce in simulated lab tests!"

**Robin, Electrical Validation Engineer**



"I got to host some socially distanced dinners in my backyard with the help of FirePit. I'd even be logging temperature data for validation testing while doing so - work/play, at its finest!"

**Tim, Senior Product Engineer**



"The area in this photo is normally my living room, but has since become home to all the bulky equipment I need for product testing, which were key to launching HeadLamp 750 in Fall 2020! I guess magic can happen right from the living room."

**Melisa, Staff Test Engineer**





PARTNER SPOTLIGHT, BAOBAB+

## BUILDING A BLUEPRINT FOR ENERGY EXPANSION IN WEST AFRICA

BioLite has grown its presence in West Africa substantially thanks to a collaborative partnership with Baobab+, a social business committed to providing access to energy and digital, dedicated to building digital and financial inclusion for off-grid and unbanked households across sub-Saharan Africa.

At the core of this successful relationship is a shared commitment to user-centered design and building products that have beauty and soul: ““Selling a product to lower-income customers should never be an excuse to compromise quality, design, and customer satisfaction – which is, sadly, often the case,” says Baobab+ CEO, Alexandre Coster, “we are proud to work alongside BioLite in delivering energy solutions that delight families not just in how they perform, but in how their physical appearance brings excitement and pride to the home.”



📍  
**ABENGOUROU,  
CÔTE D'IVOIRE**

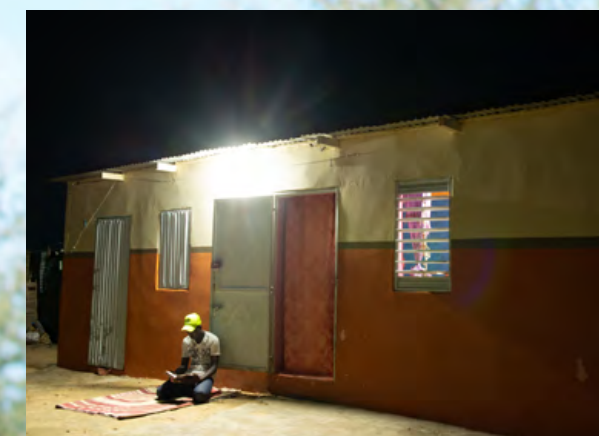
In addition to product quality and design, BioLite and Baobab+ also share a belief that deep product knowledge inside our teams is key to longterm adoption and success. That's why, in early 2020, we set out together on field trials for our newest offering, the SolarHome 5000.

Engineers from BioLite's US and Kenya teams, local Baobab technicians, and members from Baobab's Portugal office all converged in Abengourou, a city three hours north of Côte d'Ivoire's largest city, Abidjan. From there, this collective installed SolarHome 5000 units across four homes, closely documenting the steps required for installation, questions raised by the end-customer, and any small challenges that could require field support in the future. The insights gained through these real-time applications became the foundation for the sales and technical guides developed by the BioLite training team, helping hundreds of agents gain the knowledge needed to successfully demonstrate, install, and support this new, bigger system.

“There are always things you uncover when testing a product in an end customer's home which don't show up

in the lab or at a desk,” says BioLite SolarHome Program Manager Hayley Manning, “I'm so grateful we were able to conduct this visit in January of 2020, especially before the world shut down. We gained useful feedback from customers which directly informed the work of our team – and I was grateful for the chance to bond with our Baobab+ counterparts in person – with so much of our day-to-day communications happening virtually it was a grounding moment to all be together in this shared mission.”

Fast forward to the present and Baobab+ is now BioLite's #1 distributor of the SolarHome 5000 system, delivering tens of thousands of units into people's homes across Senegal, Mali, Madagascar, and the Ivory Coast. We are proud to be launching into even more geographies together in 2021, expanding into Nigeria and the Democratic Republic of Congo with these life- changing solutions.





# MAKING A MORE INCLUSIVE BIOLITE

Over the past five years, we have compiled this annual report through two key dimensions of impact: the reach of our energy solutions and company carbon & sustainability.

Going forward, we will be adding a third lens to this report: Justice, Equity, Diversity, and Inclusion.

From the internal culture we build to the external relationships we nurture, we have a responsibility to understand, own, and shape the impact and influence we create as an organization. While we may be focused on our specific mission of energy access, we are participants in broader industries and systems that demand examination and change. And part of that includes BioLite holding itself accountable to documenting and reporting on the promises we are making to build a more just and equitable workplace and company.

As signatories of the Outdoor CEO Diversity Pledge since 2019, we are committed to improving inclusion, representation, and access in the outdoor industry, but that is just one piece of the puzzle. Thanks to the hard work of the internal JEDI and Usawa (Equity) volunteer task forces here at BioLite, we are building an organization that expands awareness, improves transparency, is actively anti-racist, and promotes a culture that enables everyone to show up as their full selves. This work is just the beginning and we look forward to sharing updates – in this impact report and beyond – in the months and years ahead.

## EXAMPLES FROM 2020

- Bias, anti-racism and inclusion trainings
- BioLite \$10k match in employee donations
- Support BIPOC-led ambassadors and organizations through gear donations, event participation, platform amplification, and grantmaking
- Language bias decoder implemented for job descriptions
- Expanding job board postings & recruitment tools
- DEI assessment with Culture Cipher to build 2021 roadmap
- Increased transparency, communication, and feedback cycles





For more information on the methods and calculations presented, view our full 2020 Environmental Sustainability Report at [BioLiteEnergy.com/Impact2020](https://www.bioliteenergy.com/Impact2020).

#### SOURCES

[GOGLA Standardised Impact Metrics for the Off-Grid Solar Energy Sector](#)

[60 Decibels](#)

[Acumen Energy Impact Report](#)

[US Census Bureau](#)