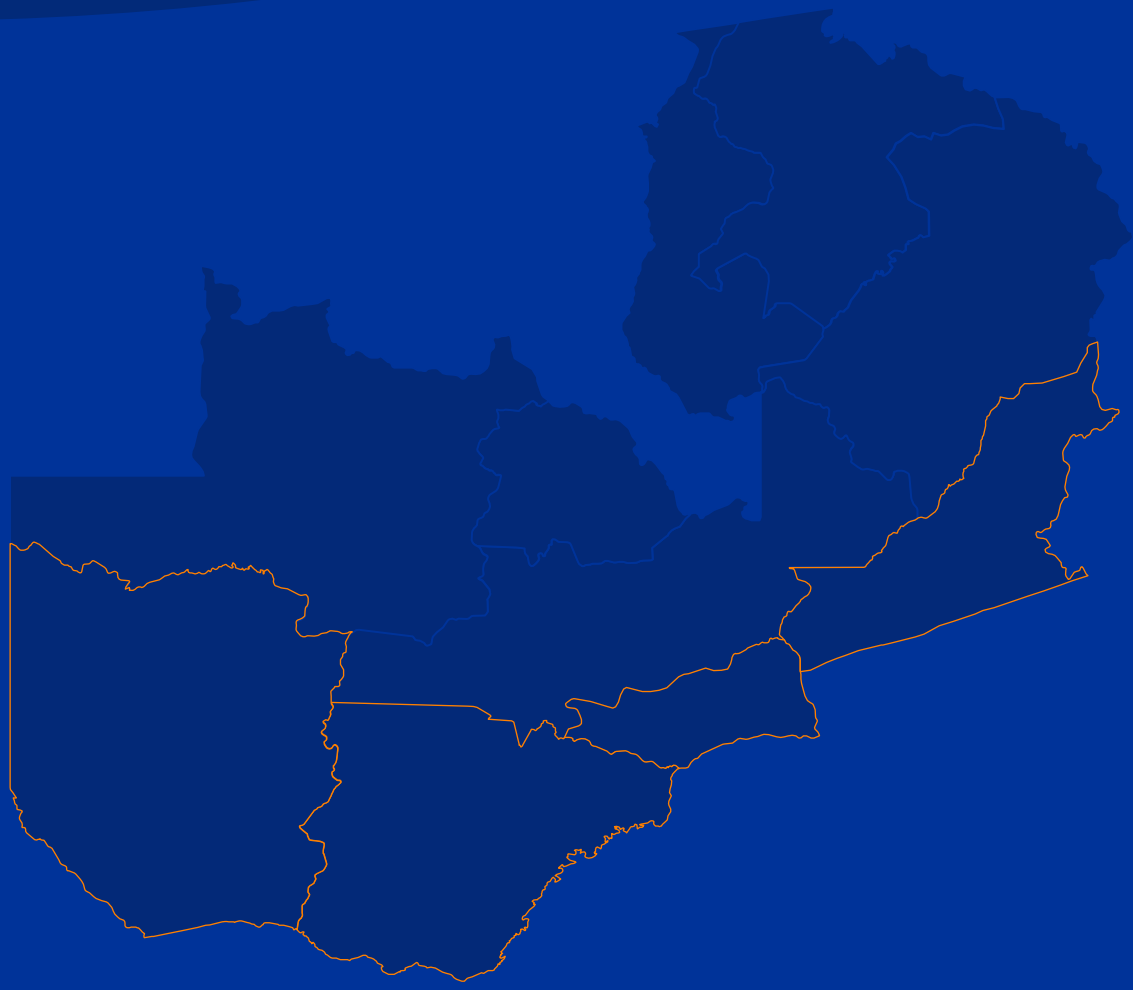
Solar Lights Distribution Project in Zambia



Developed by Namene / May 2023

Harnessing solar energy to transform lives
Our project delivers solar lights to Zambian families living without electricity. This gives them truly affordable, clean lighting for the first time and has life-changing impacts. Currently, these households rely on dim and sooty kerosene lamps for lighting. Our project replaces these polluting lamps with ultra-affordable solar lights. This exchange alleviates poverty, promotes education, and safeguards the health of families. Crucially, this substitution decreases dependency on fossil fuels, eliminating ongoing fuel costs for low-income households and helping to address climate change.

Our lights are distributed to rural households across four provinces in Zambia, as shown below. In Zambia, 90% of the rural population live below the international extreme poverty line. These families live on less than $1.25 per day. One of the many implications of this reality is energy poverty. With no access to electricity, families resort to using outdated kerosene lamps or paraffin candles to light their homes. These are low-quality and dangerous sources of light. Fossil fuel lamps emit toxic fumes that cause respiratory illnesses, create fire risks, and contribute to climate change.

Lights distribution in four provinces in Zambia

Combining quality with affordability
Our portable solar lights are built to last and have won awards for their quality and accessibility. Thanks to the issue of Gold Standard accredited Verified Emissions Reductions or VERs, our lights are priced with a 60 to 70% discount on the retail value – making them affordable to all.

Our lights have quickly gained significant market shares in the pico lights market in Namibia (90%), Zambia (72%) and Zimbabwe (83%)[1] over the relatively short time of their distribution – showing that trust in the durability of the product, as well as affordability made possible through our carbon subsidy model, are key to unlocking clean technology for those who need it the most.

[1] Gogla – 2022 H2 report

Project Details

Project owner	Namene
Carbon Standard	Gold Standard for the Global Goals
Project ID	GS 7002
Carbon methodology	AMS-III.A.R v6 – Substituting fossil fuel-based lighting with LED/CFL lighting systems
Certification stage	GS Design Certified Issued 10,000 VERs so far
Development stage	Distribution of lights in progress. 450,000 lights distributed so far.
Technology	Renewable energy – solar lights
Project scale	Small scale. Distribution of up to 652,000 solar lights
Target beneficiaries	Rural households without access to electricity
Project duration	10 years
Crediting period	15/09/2020 – 15/09/2025
Average VERs per year	41,000 VERs

Our technology

Portable, reliable, high-quality solar lights

Empowering every community
Our lights are delivered by our in-country teams, as well as last-mile distribution partners. They are sold through community networks and regional clusters, such as rural schools.

We design our products to last as long as possible, and provide maintenance support and tailored after-sales care to our buyers, including those living in the most remote locations. In doing so, we build long-term relationships with each of our customers based on trust and mutual benefits.

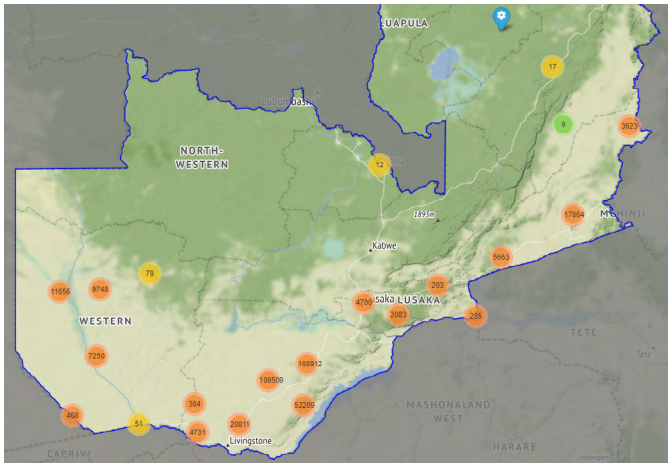
Our lamps are multifunctional and portable. They can be used indoors as desk lamps or hung on the wall. They can be turned into headtorches perfect for walking, cycling, or commuting.

This project delivers a host of socio-economic benefits, with specific impacts measured against three UN Sustainable Development Goals.

High-integrity carbon credits
We're committed to making a measurable, transparent and positive impact with our carbon credits.

In addition to Gold Standard's requirements, we apply a stringent internal audit process which goes beyond these requirements – with higher frequency monitoring and surveys, increased product warranty periods, and ongoing customer engagement campaigns to guarantee the emissions reductions created by our projects.

We use a customised digital tool that captures customer data at the point of sale, collects automated statistics into a central database and monitors the ongoing performance of our projects. We also conduct regular customer surveys.



Visualisation of units deployed under the carbon project using Namene's bespoke monitoring systems.

Our focus is on tracking the impact of all Namene devices, including where and how they are used, and when they should be serviced for maximum efficiency. We are also constantly improving the design of our products, with a usage reporting functionality built into models launched in 2023.

We take care to partner with committed organisations who buy our VERs to complement, not replace, actual reductions in GHG emissions from their operations and value chain.

SUSTAINABLE DEVELOPMENT GOALS

Certified contributions to three SDGs

SDG 1: No Poverty
Our lights tackle poverty by saving household expenditure on lighting fuels and batteries. They also unlock extra study hours for children, which helps break the cycle of poverty.

SDG 7: Affordable and Clean Energy
Our project makes solar light truly affordable and accessible to over one million people in Zambia.

SDG 13: Climate Action
Our project reduces greenhouse gas emissions by replacing fossil fuel-based lighting by clean pico solar lights.

Additional project impacts
Light quality – Fossil fuel lamps typically produce 10 lumens of light. Our solar lights produce 34 lumens.
Education – Extra study hours for children, which supports higher grade attainment.
Health – Better air quality in homes, protecting families' respiratory systems, and brighter lights that avoid straining eyes.
Road accidents – Visibility of pedestrians and cyclists at dusk, dawn, and night.
Safety – Fossil fuel lamps are dangerous to ignite and pose poisoning risks to children. Solar lights can also help women be safe when outside at night
Income generation – We offer employment opportunities through our project. Extension of the light hours also enables new income generating activities.

'Solar lanterns currently provide the most "bang-for-your-buck." […] The impact they create is often greater than that of higher-capacity systems. This is because […] these small but mighty products are the first step up the modern energy staircase.'

Why off-grid energy matters – report by 60 Decibels, Feb 2020
www.60decibels.com

About Namene

Our purpose is to empower every community through clean technology.

Namene is a business that believes people and planet should come first. We provide affordable, highly reliable, everyday devices to those who need them the most – harnessing clean technology to transform lives and livelihoods.

Without ever compromising on quality, we make sure our products are always affordable and accessible to all by using their carbon-saving value to subsidise prices through the sale of high-integrity carbon credits, and enabling our customers to buy what they need when they need it.

Our 'Buy As You Can' approach offers a much needed alternative to traditional utilities packages, which are most often not affordable to low-income families, or when they are, commit households to purchasing bundles of overspecified products through expensive, long-term loans. By offering single, modular and affordable products, we enable our customers to free up income to buy other clean devices when they need and can afford them.

All devices distributed by Namene are designed to help people and families thrive, wherever they live, by meeting their daily utility needs while eliminating sources of combustion – starting with eradicating harmful kerosene lamps.

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