



## POA DESIGN CONSULTATION REPORT

### **(1) PoA's objective-**

The goal of the Namene Solar Lights Distribution Programme in East Africa (the PoA) is to provide clean sources of lighting to the population without access to electricity for basic uses. The programme will do so by distributing ultra-affordable solar lights (the Project Lamps) in rural households in multi countries in East Africa that currently rely on the use of kerosene and other fossil fuels for lighting.

The Project Lamps use integrated photovoltaic panels to recharge the batteries that power the LED lights, providing a safe, bright, safe, and renewable source of lighting. A significant market penetration through this programme of solar lights in the hands of families in East Africa will reduce the greenhouse gases (GHGs) and climate forcing black carbon by substituting polluting, dangerous kerosene lamps and paraffin candles that only produce a low quality, dim light.

The PoA is designed to achieve this rapid adoption and high penetration by providing affordable high-quality solar lights and using regional clusters, including rural schools and health clinics. By tapping into the voluntary carbon markets to monetise the emission reductions achieved by the programme, the price of the Project Lamps will be subsidised so that every household can afford them. Over a short period of time, the use of Project Lamps will result in direct savings from expenditures on kerosene or candles for lighting. This in turn, will enable the households to take their first steps towards the clean energy ladder.

The Project Lamps distributed as part of the programme will be compliant with the Lighting Global Pico PV Quality Standards that provides portability, reliability, and high quality, demonstrated by extensive tests conducted and customers' feedback in other African countries. Over time, the programme is intended to bring to the market additional solar lighting systems with multiple lamps that can also charge phones, connect a radio and other small devices.

The PoA will be implemented using the CDM methodology AMS-III.AR Version 9.0 "*Substituting fossil fuel-based lighting with more efficient lighting systems*".

In addition to a reduction in GHGs, the programme delivers significant social impacts and positive outcomes:



- Education – extra study hours for children that supports higher school grade attainment.
- Health – better air quality in homes, brighter light to avoid straining eyes and avoidance of a source of potentially life-threatening fires.
- Financial – saving money due to the avoidance of regular purchase of kerosene or paraffin candles for lighting.
- Road accidents – visibility of pedestrians or cyclists at dusk, dawn and night.
- Safety - Female safety at night.
- Energy Access - access to the first rung of the clean energy ladder.
- Employment - Opportunities for local employment to support deployment of solar lights into rural communities. Extension of the working day due to accessing affordable bright light creates an opportunity to earn more income.

Consequently, the UN SDG impacts of this Project, spanning local rural community, provincial and national levels, are significant, broad, and far reaching.

## **(2) Entities involved**

The Coordinating Management Entity of the PoA will be Namene Solar Lights Ltd.

## **(3) Geographical boundary**

The geographical boundary of the PoA includes East African countries of DRC, Burundi & Tanzania. The programme will be implemented across these East African countries and all the VPAs included in the PoA will be implemented within this boundary. While the programme is multi-country in its scope, each VPA will be implemented in only one of the countries mentioned above, so each VPA will be applied to a specific country.

#### **(4) Duration of the PoA**

The duration of the PoA would be for 20 years starting from April 2025- April 2045.

#### **(5) Implementation plan of the PoA**

This PoA is a private sector initiative led by Namene Solar Lights Ltd, acting as the Coordinating/Managing Entity (CME). The CME will coordinate with the VPA Implementer in the management of each VPA included in the PoA. In some cases, the CME will act as the VPA Implementer, when suitable. The VPA implementers will be supported by local partners for the distribution and customer support of the Project Lamps. The VPA Implementer will be responsible for ensuring that the monitoring information is captured and stored as per the GS rules to facilitate the monitoring during the crediting period. Local Partners will be trained and supervised by the VPA Implementer. The data collected during the distribution of Project Lamps will be stored and managed in the PoA database. The lights shall be distributed either via an internal team of the PD in the host country or through contracting local distribution partners.

The CME will also be responsible for communications with the Gold Standard and will coordinate all work relating to validation, verification, registration, and issuance of Verified Emissions Reductions (VERs) generated by the PoA.

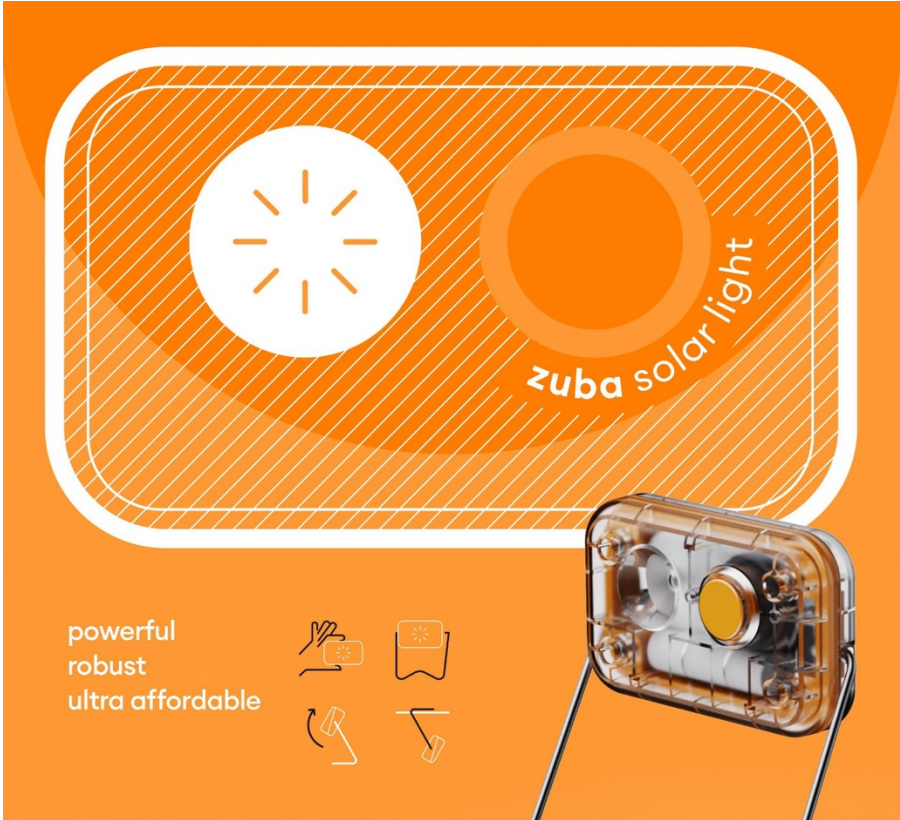
The PoA is being supported by private investment and underpinned by market-based environmental financing mechanisms that provide the speed and capacity needed to scale the programme in East Africa.

#### **(6) Technology/measures to be implemented under the PoA-**

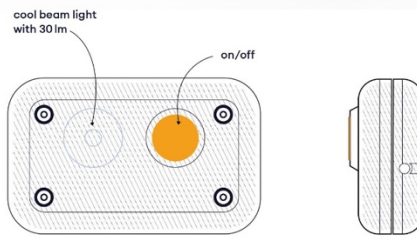
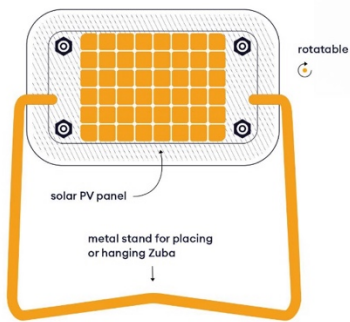
The PoA will develop VPAs for the distribution of solar lights (Project Lamps) to end users (mainly households) that are not connected to the electricity grid in the PoA participating countries in East Africa, mainly in rural areas, where the access to electricity is more limited and the need to serve the Base of the Pyramid (BOP) is greater. The Project Lamps will reduce GHG emissions by displacing the use of kerosene, candles or other fossil fuels for lighting used in the absence of the project. The technologies employed in this PoA don't lead to GHG emissions as the batteries used to power the LED lamps are charged by the sun using photovoltaic (PV) panels.

The VPAs under this PoA will distribute primarily a pico-solar light (single lamp). The pico solar light will have an integrated solar panel and a single LED lamp and represent an entry level solar lamp for the users.

Figure 1 Example of a solar light model distributed by the PoA: Zuba Solar light (single lamp)



powerful  
robust  
ultra affordable



**(7) Interaction with other similar initiatives/programmes in overlapping geographical boundaries, and**

Project Lamps will be distinctively and permanently marked with either a unique VPA ID or PoA ID to avoid potential double counting of emission reductions with other similar initiatives/programmes in overlapping geographical boundaries.

End users are informed of their carbon rights waiver when taking part in the VPA during briefings prior to the subsidised sale of Project solar lights. This avoids the risk of double counting by end users.

For Local Distribution Partner(s), a clause is included in a standardised Distribution Agreement to ensure full and uncontested legal ownership of carbon credits generated during the crediting periods and avoids the risk of double counting.

**(8) Target end-users of the PoA**

This VPA will involve the distribution of pico solar lights to households which are not connected to the electricity grid and where fossil fuel is commonly used for lighting.

**(9) SDGs contribution targeted by the PoA**

The POA intends to make a contribution towards the following SDGs -

Sustainable Development Goals Targeted	Most relevant SDG Target	SDG Impact
		Indicator (Proposed or SDG Indicator)
<b>SDG 1 – No Poverty</b>	<b>Target 1.1- By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day.</b>	<b>Average household savings i.e., decrease in expenditure on basic service such cooking, lighting, drinking</b>
<b>SDG 3 – Good Health and Wellbeing</b>	<b>Target 3.9 - By 2030, substantially reduce the number of deaths and illnesses from</b>	<b>Number of households visited medical facilities/dispensary for treatment of respiratory</b>

	<b>hazardous chemicals and air, water and soil pollution and contamination</b>	<b>issues etc. such as cough, shortness in breath, pneumonia, and other respiratory issues</b>
<b>SDG 4 – Quality Education</b>	<b>Target 4.4 - By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship</b>	<b>Number of employees provided skills development training</b>
<b>SDG 7 – Affordable and Clean Energy</b>	<b>Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services.</b>	<b>Number of beneficiaries: Households with access to clean and affordable solar lights</b>
<b>SDG 8 – Decent Work and Economic Growth</b>	<b>Target 8.5 - By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value</b>	<b>Total number jobs created because of the project</b>
<b>SDG 13 – Climate Action</b>	<b>Target 13.3 – Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.</b>	<b>GHG Emission reductions</b>

## (10) Compliance with safeguards

The project has carried out a detailed safeguarding principles assessment as recommended by GS4GG principles. The project shall implement mitigation measures (where applicable) to mitigate the risk of any potential negative impact arising due to the project activity. In terms of safeguards, the project only foresees risk in terms of principle P.9.4 |RELEASE OF POLLUTANTS. The Project Lamp has a bill-of-materials that includes UV resistant durable plastic casing, metal stand, printed circuit board (PCB), solar PV panel and a rechargeable LiFePO4 battery. All internal components (PV panel, PCB and battery are configured as plug & play to enable field repair and easy separation for end-of-life recycling and disposal. Exposure to risk of pollutant release is at end-of-life of product or from defect parts that are replaced for field repairs.

In the event of a solar light failing the light is designed on a plug & play architecture that enables easy, field replacement of failed component and recovery of failed component for recycling by the sales agent network. The components or solar lights at the end of life will be collected and disposed or recycled safely according to the Host Country's regulations and available facilities.