

Unlocking a Brighter Future

Advancing the United Nations Sustainable Development Goals







SolarBuddy and the Interwoven United Nations Sustainable Development Goals (SDGs)

The SDGs are a set of 17 goals established by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development. These goals encompass 169 specific targets which are aimed at addressing our most pressing global challenges. They serve as a guiding framework to promote a fairer, more sustainable, and prosperous world for everyone.

SolarBuddy's vision is crystal clear—to illuminate the futures of all children. At the core of our mission lies the acknowledgment that energy poverty is one of our biggest obstacles and a pervasive challenge. One that intricately weaves into the fabric of each of the 17 SDGs.

SolarBuddy stands as a unique and formidable force in addressing energy poverty. This report delves into how our initiatives actively contribute to each of the SDGs, reflecting our steadfast commitment to transformative change.

In a world where sustainability propels progress, SolarBuddy is forging a ripple effect across the 17 SDGs that extends well beyond illumination. Our uniqueness isn't just a strategic approach; it's a passionate conviction that transformative change demands a catalyst.

SolarBuddy is that catalyst; a beacon of empowerment and belief in the extraordinary. We test limits to break away from the norm. And we stand proud of it.

The Solar Buddy Difference



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SolarBuddy is working to advance progress on each of the 17 SDGs because affordable reliable, clean and sustainable energy is a fundamental enabler to economic, social, and environmental objectives.

"Alleviating symptoms of extreme poverty provides temporary relief; however, the profound impact comes from addressing the root cause, which, in sustainable development, is the lack of access to clean energy. We aim to not only illuminate darkness but to also unleash a ripple effect that transforms lives and ensures enduring change."



Ensure access to affordable, reliable, sustainable and modern energy for all.



PEOPLE











PLANET

13 CLIMATE ACTION















PROSPERITY









Energy is the golden thread that connects economic growth, increased social equity, and an environment that allows the world to thrive. Development is not possible without energy, and sustainable development is not possible without sustainable energy.

— Former UN Secretary-General Ban Ki-moon



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Sustainable Energy: The golden thread





Affordable and clean energy: ensure access to affordable, reliable, sustainable and modern energy for all.

Targets being advanced by SolarBuddy

7.1: Ensure universal access to affordable, reliable and modern energy

7.2: Increase substantially the share of renewable energy in the global energy mix

7.3: Double the global rate of improvement in energy efficiency

7.a: Enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology and promote investment in energy infrastructure and clean energy technology

7.b: Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small developing states and land locked developing countries in accordance with their respective programmes of support

"Energy poverty condemns billions to darkness, ill health, unfulfilled futures and repeated cycles of poverty."

Sustainable Energy: The golden thread



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How is SolarBuddy's work advancing progress on SDG #7 targets?

Universal access of energy efficient, renewable energy:

SolarBuddy provides sustainable, energy efficient solar devices to communities without safe and reliable access to electricity, ensuring they have a modern, sustainable, and affordable source of energy. By harnessing solar power, SolarBuddy helps reduce dependence on non-renewable sources like kerosene lamps and diesel.

Expanded technology: By distributing purpose designed solar devices, SolarBuddy actively engages in technological advancements that enhance access to clean energy. Additionally our extensive research and development pipeline includes patented breakthrough solar devices, large solar systems that incorporate IOT, illumination of community spaces and community based micro/mini grids. This continued focus on innovation is due to a determination to contribute to the expansion of infrastructure for supplying modern and sustainable energy services, especially in developing countries.

Collaboration, Co-operation and increased investment:

SolarBuddy aims to be a catalyst for community development and attract further support and resources to the area. Through our initiatives and extensive partnership networks, SolarBuddy contributes to international cooperation and collaboration, and the promotion of the use of renewable energy. Our focus on educating and inspiring agents of change to end energy poverty, including students via our Social STEM education program, is a deliberate strategy to build a next generation of skilled, sustainability focused leaders, globally.

SolarBuddy prioritises inclusive, collaborative action and actively seeks opportunities to advocate for and create large scale, systemic change and sustainable development. Valued partners include donors, technical experts, suppliers, advocates, community leaders, NGOs, education and governmental institutions.





1 NO POVERTY



No poverty: end poverty in all its forms everywhere.

- **1.1:** Eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
- **1.2:** Reduce at least by half the proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
- **1.4:** Ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance
- **1.5:** Build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters





Zero hunger: end hunger, achieve food security and improved nutrition and promote sustainable agriculture.

- **2.1** End hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round.
- **2.2** End all forms of malnutrition, including achieving, by 2025, the internationally agreed targets on stunting and wasting in children under 5 years of age, and address the nutritional needs of adolescent girls, pregnant and lactating women and older persons.
- **2.3** Double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment.
- **2.4** Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
- **2.a** Increase investment, including through enhanced international cooperation, in rural infrastructure, agricultural research and extension services, technology development and plant and livestock gene banks in order to enhance agricultural productive capacity in developing countries, in particular least developed countries.



3 GOOD HEALTH AND WELL-BEING



Good health and well-being: ensure healthy lives and promote well-being for all at all ages.

- **3.1:** Reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- **3.2:** End preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- **3.3:** End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
- **3.4:** Reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing
- **3.7:** Ensure universal access to sexual and reproductive health-care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes
- **3.9:** Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
- **3.d:** Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks





Quality education:
ensure inclusive and
equitable quality
education and promote
lifelong learning
opportunities for all.

- **4.1:** Ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes
- **4.4:** Substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship
- **4.5:** Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
- **4.6:** Ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy
- 4.7: Ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non violence, global citizenship and appreciation of cultural diversity and of cultures contribution to sustainable development





Gender Equality: achieve gender equality and empower all women and girls

- **5.1:** End all forms of discrimination against all women and girls everywhere
- **5.2:** Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
- **5.5:** Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
- **5.6**: Ensure universal access to sexual and reproductive health and reproductive rights
- **5.b:** Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women



6 CLEAN WATER AND SANITATION



Clean water and sanitation: ensure availability and sustainable management of water and sanitation for all.

- **6.2:** Achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
- **6.3:** Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally



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How is SolarBuddy's work advancing progress on these targets?

SolarBuddy advances human well-being by addressing fundamental needs such as education, health, safety, and economic opportunities through the provision of clean and sustainable solar solutions. By doing so, we positively impact the lives of individuals and communities in energy-poor regions, offering a brighter and more sustainable future. Energy is indispensable in the advancement of human well-being and clean energy can break the vicious cycle of intergenerational extreme poverty.

Improved Education: Access to solar devices allows children to study after dark, which is essential for their education. It takes away the need for girls to be removed from school for chores like collecting firewood or kerosene. This can lead to better academic performance, increased literacy rates, and improved prospects for the future.

Amongst other benefits, improved education increases awareness about the importance of clean water and proper sanitation practices, water conservation and builds resilience to climate change by better preparing for changing environmental conditions.

Evidence reveals that educated women marry later and have fewer children, lowering fertility rates and decreasing long-term population growth. It also leads to increased awareness of food security and nutrition, enabling families to make informed choices about their food resources and agricultural practices.



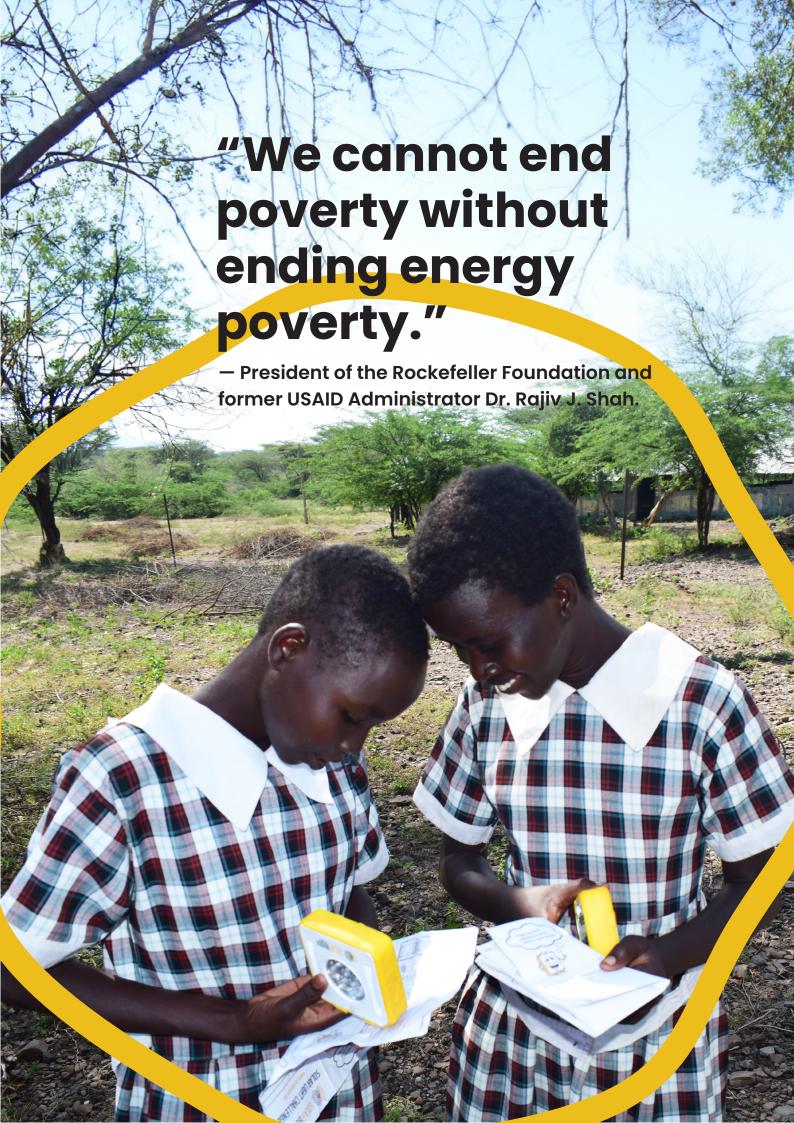
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Health and Nutrition: By replacing kerosene lamps and open flames with solar lights, SolarBuddy reduces indoor air pollution, which can have severe health implications, and leads to millions of deaths every year. Clean lighting contributes to better respiratory health, especially for children, who are vulnerable to respiratory illnesses and promotes good maternal health, lowering maternal and newborn mortality rates. Improved health can lead to increased productivity, which contributes to better food security. Additionally, SolarBuddy intends to deliver sustainable initiatives to enable safe, hygienic and effective cooling and cooking of food.

Economic Empowerment: Families and individuals in energy-poor communities often spend up to 40% of their income on kerosene or other traditional lighting sources. SolarBuddy's solar devices can significantly reduce these energy costs, leaving families with more resources for other necessities.

SolarBuddy's efforts enable income-generating activities after dark, such as small businesses and cottage industries. This empowers individuals in these communities to generate income and improve their economic well-being. Empowered adults, especially women, provide strong role models for children, especially girls who can witness their mothers creating economic independence and prosperous communities, all of which contributes to gender equality and breaking the cycle of poverty.

Safety and Security: Solar lighting increases safety in communities by illuminating streets, homes, and public spaces. This not only reduces the risk of accidents but also enhances personal security. Improved access to energy also removes the need to undertake potentially dangerous travel in search of it. This directly reduces the level of violence directed at women and girls in particular.





RESPONSIBLE CONSUMPTION AND PRODUCTION



Responsible consumption and production: ensure sustainable consumption and production patterns.

Targets being advanced by SolarBuddy

12.6: Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

12.7: Promote public procurement practices that are sustainable, in accordance with national policies and priorities

12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature

12.a: Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production.



13 CLIMATE ACTION



Climate action: take urgent action to combat climate change and its impacts

Targets being advanced by SolarBuddy

13.1: Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries

13.3: Improve education, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

13.b: Promote mechanisms for raising capacity for effective climate change related planning and management in least developed countries and small island developing states, focusing on women, youth and local and marginalised communities





Life below water:
conserve and sustainably
use the oceans, seas
and marine resources for
sustainable development

Targets being advanced by SolarBuddy

14.1 Prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.

14.3 Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels



15 LIFE ON LAND



Life on land: protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Targets being advanced by SolarBuddy

15.2 Promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

15.3 Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

15.5 Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity

15.a Mobilize and significantly increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems

15.b Mobilize significant resources from all sources and at all levels to finance sustainable forest management and provide adequate incentives to developing countries to advance such management, including for conservation and reforestation



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How is SolarBuddy's work advancing progress on these targets?

SolarBuddy stands as a dedicated guardian of the planet, with an unwavering commitment to fostering resilience and environmental well-being. Our mission champions the preservation of our planet and the cultivation of resilient ecosystems, which are intricately intertwined with human rights and fundamental needs such as education, health, and economic opportunities.

Sustainable Energy Solutions: One of SolarBuddy's core principles is sustainable innovations. Our clean energy solutions are specifically designed to be maintainable, ensuring longevity of product life in some of the harshest environments worldwide.

In collaboration with 'in-country' community partners, SolarBuddy fosters trust in renewable energy within beneficiary communities by delivering high-quality, long-lasting solar solutions. This approach not only raises awareness about the environmental impact of energy choices but increases the uptake of renewable energy options. Furthermore, SolarBuddy's Social STEM education program is available for students in developing countries, inspiring a generation to learn scientific and technical skills.

SolarBuddy has also strategically created virtual opportunities in our core programs, providing further sustainable engagement options for organisations. These virtual opportunities minimise the shipping involved to deliver a solar device to a child living in energy poverty, while maintaining the educational and inspirational aspects of participating in a SolarBuddy initiative.



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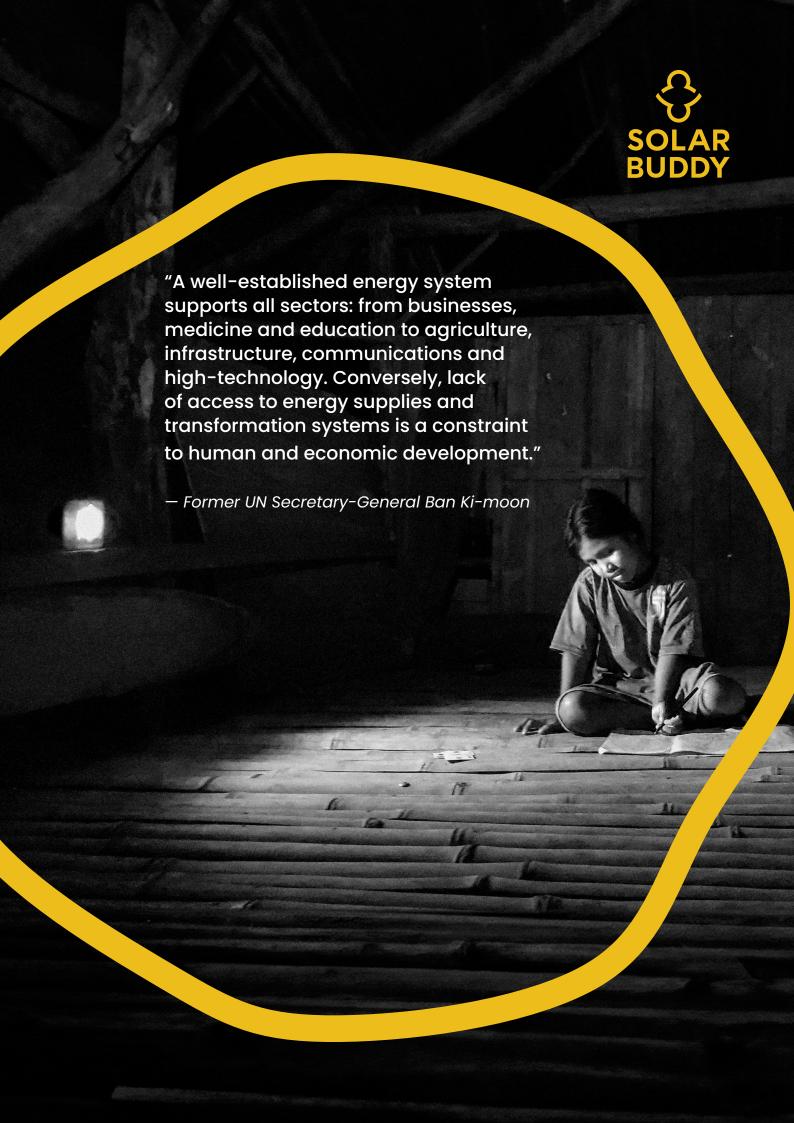
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Environmental Benefits: SolarBuddy serves as a formidable force in climate action, replacing traditional, carbon-intensive energy sources like kerosene lamps with clean and renewable solar energy. This pivotal shift to solar for millions significantly reduces greenhouse gas emissions, playing a crucial role in mitigating climate change. Beyond reducing dependence on disposable batteries, non-renewable energy sources like kerosene and firewood, SolarBuddy actively contributes to minimising electronic waste, preventing land and forest degradation, and curbing emission pollution. These efforts lead to a significant reduction in toxic emissions, directly countering pollution and its detrimental impact on ocean acidification. Through every solar solution, SolarBuddy contributes not just to illuminating lives but to sustaining a healthier, more resilient planet for future generations.

Conservation and Biodiversity: SolarBuddy's clean energy solutions actively contribute to the preservation of terrestrial ecosystems and biodiversity. By reducing the need for firewood, SolarBuddy aids in diminishing deforestation and forest degradation. This reduction in human impact on land ecosystems and wildlife habitats is further complemented by the educational component of SolarBuddy's initiatives. By fostering awareness about the importance of protecting terrestrial ecosystems, SolarBuddy empowers communities to take actions that promote sustainable land use and conservation.

'People living in energy poverty are forced to use unsustainable and harmful energy sources, creating a large carbon footprint. This footprint amounts to about 3.6 billion tons of CO2 per year. That's almost 10% of annual global emissions. For comparison that's about 3.5 times the annual amount of emissions produced by global aviation'.

 - 'Why Ending Energy Poverty is essential for carbon reduction and sustainable development,' UCLA commissioned report.





B DECENT WORK AND ECONOMIC GROWTH



Decent work and economic growth: promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

Targets being advanced by SolarBuddy

- **8.2:** Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high value added and labour-intensive sectors
- **8.3:** Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalization and growth of micro, small, and medium sized enterprises, including through access to financial services
- **8.6:** Substantially reduce the proportion of youth not in employment, education or training

'The importance of energy is never questionable as it is used in all economic activities.'

- Science Direct 24







Industry, innovation and infrastructure: build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.

- **9.1:** Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- **9.4:** Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
- **9.5** Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
- **9.a:** Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States
- **9.b:** Support domestic technology development, research and innovation in developing countries.
- **9.c:** Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries



10 REDUCED INEQUALITIES



Reduced inequalities: reduce inequality within and among countries.

Targets being advanced by SolarBuddy

10.1: By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average

10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status







Sustainable cities and communities: make cities and human settlements inclusive, safe, resilient and sustainable

Targets being advanced by SolarBuddy

11.5: Significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

11.6 Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste managementicity, origin, religion or economic or other status



PEACE, JUSTICE AND STRONG INSTITUTIONS

Peace, justice and strong institutions: promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

Targets being advanced by SolarBuddy

16.1 Significantly reduce all forms of violence and related death rates everywhere

16.b Promote and enforce non-discriminatory laws and policies for sustainable development



17 PARTNERSHIPS FOR THE GOALS



Affordable and clean energy: ensure access to affordable, reliable, sustainable and modern energy for all.

Targets being advanced by SolarBuddy

17.3: Mobilise additional financial resources for developing countries from multiple sources

17.7: Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms including on concessional and preferential terms, as mutually agreed

17.8 Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries and enhance the use of enabling technology, in particular information and communications technology

17.14: Enhance policy coherence for sustainable development

17.15: Respect each country's policy space and leadership to establish and implement policies for poverty eradication and sustainable development

17.16: Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilise and share knowledge, expertise, technology and financial resources to support the achievement pf the Sustainable development goals in all countries, in particular developing countries

17.17: Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships

17.18: Enhance capacity building support to developing countries including for least developed countries and small island developing states to increase significantly the availability of high quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts



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How is SolarBuddy's work advancing progress on these targets?

SolarBuddy's mission to eradicate energy poverty not only ensures access to safe and reliable energy but also triggers a ripple effect that empowers communities economically, reduces inequalities, and promotes inclusivity and collaboration. Moreover, we strive to dissociate economic growth from human rights abuses and environmental degradation, contributing to a comprehensive approach to sustainable development.

Economic Empowerment and Growth: Access to clean and sustainable energy is a catalyst for economic empowerment, fostering growth in energy-poor communities. SolarBuddy's initiatives create a domino effect of positive economic outcomes due to the ability to access work hours after dark. This extended timeframe allows for increased productivity and revenue generation, expanded businesses and the creation of more job opportunities, contributing to decent work, economic growth and well-being of the community.

Additionally, SolarBuddy's interventions contribute to building local economic resilience. By reducing dependency on traditional energy sources and creating sustainable economic activities, communities become more resilient to economic shocks and fluctuations.

Innovation and Infrastructure Development: SolarBuddy is defined by our commitment to innovate to solve some of the world's greatest challenges. Collaboration with, and feedback from, key stakeholders is core to successful product adoption, and all innovations always comprehend the need for people to move themselves up both energy and income ladders.

SolarBuddy's innovative project portfolio includes the illumination of community spaces in off-grid Australian communities, and a goal to widen this to communities internationally. Our research and design pipeline aims to scale mini-grid solutions, ensuring sustainable infrastructure development both locally and internationally.



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How is SolarBuddy's work advancing progress on these targets?

Equality, Community Development, and Peace: SolarBuddy's initiatives actively contribute to peace and justice by fostering community cohesion. Conflicts relating to resource scarcity can be reduced, promoting cooperation among community members and contributing to safer and more sustainable communities.

Moreover by supporting education through solar lighting, SolarBuddy plays a role in educating children about peace, justice, and human rights, nurturing a more informed and responsible generation.

By providing clean energy for lighting and charging, SolarBuddy contributes to gender equality, enabling girls and women to study and engage in activities after dark, breaking gender-related inequalities in access to education and economic opportunities.

Capacity building with partnerships SolarBuddy's impactful work is made possible through strategic partnerships with various organisations and stakeholders. Collaborations with local communities, NGOs, education institutions and businesses demonstrate the importance of partnerships for achieving sustainable development goals. Through partnerships, SolarBuddy aims to mobilise additional resources and expertise, expanding our reach to provide more communities with clean energy solutions and fostering global collaboration to achieve the SDGs.





Our Dedication

At SolarBuddy, our unwavering dedication to ending energy poverty lies in aligning all our efforts with the Sustainable Development Goals. We firmly believe in the principle of reaching the farthest behind first and ensuring no one is left behind.

By championing access to clean energy, nurturing innovation, empowering local communities, and forging invaluable partnerships, SolarBuddy is a dedicated contributor to the global mission of sustainable development, environmental preservation, poverty eradication, economic empowerment, and the creation of resilient, inclusive societies.

As we look ahead, SolarBuddy remains steadfast in advancing this vital agenda, with the vision of building resilient, equitable, peaceful, and prosperous communities worldwide, along with a thriving planet for all.

Illuminating the futures of all children



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