ALL WE ARE

IMPACT REPORT

WWW.ALLWEARE.ORG

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EXECUTIVE SUMMARY

All We Are is a diverse nonprofit with stakeholders spanning across North America and Uganda. The organization is committed to providing communities with solar energy to improve educational equity and access to electricity.

With one of the world's largest populations under 18, investing in Uganda's infrastructure is vital to building a sustainable future. However, low enrollment and retention in schools is a significant barrier to Uganda's development, compounded by poor access to electricity. All We Are is on a mission to increase educational opportunities through clean, renewable solar energy.

As a result, All We Are has 35 active solar installation sites, impacting nearly 40,000 people.

OUR MISSION

All We Are is a nonprofit organization **bringing sustainable energy solutions to communities in Uganda.**

OUR VISION

A world where everybody has access to affordable energy through community-focused, renewable solutions

OUR LEADERSHIP

NATHAN THOMAS
Founder, CEO
Raleigh, NC

BRIAN DDIBYA
Chief Country Officer
Kampala, UG

STEPHEN PERKINS
Chief Operating Officer
Cincinnati, OH

CAMERON WHITEMAN
Chief Technical Officer
San Jose, CA

RACHEL THOMAS
Chief Marketing Officer
Raleigh, NC

RICHARD ABEL
Chief Financial Officer
Cincinnati, OH

Where our team is located

Our growing team of volunteers located across the country and the globe continue to innovate and further our work in Uganda. We are grateful to have such dedicated members who work outside of their full time jobs on our mission.

OUR BOARD

Deborah Schultz	USA
Mary Ssebaddukka	UG
Susan Martin	USA
Aaron Tindiseega	UG
David Gonahasa	UG
Thomas Kamphuis	UG
Hussein Kyagulanyi	UG
Ibrahim Kakaire	UG
Renee Waun	USA
Surry Roberts	USA
Xavier Sentamu	UG

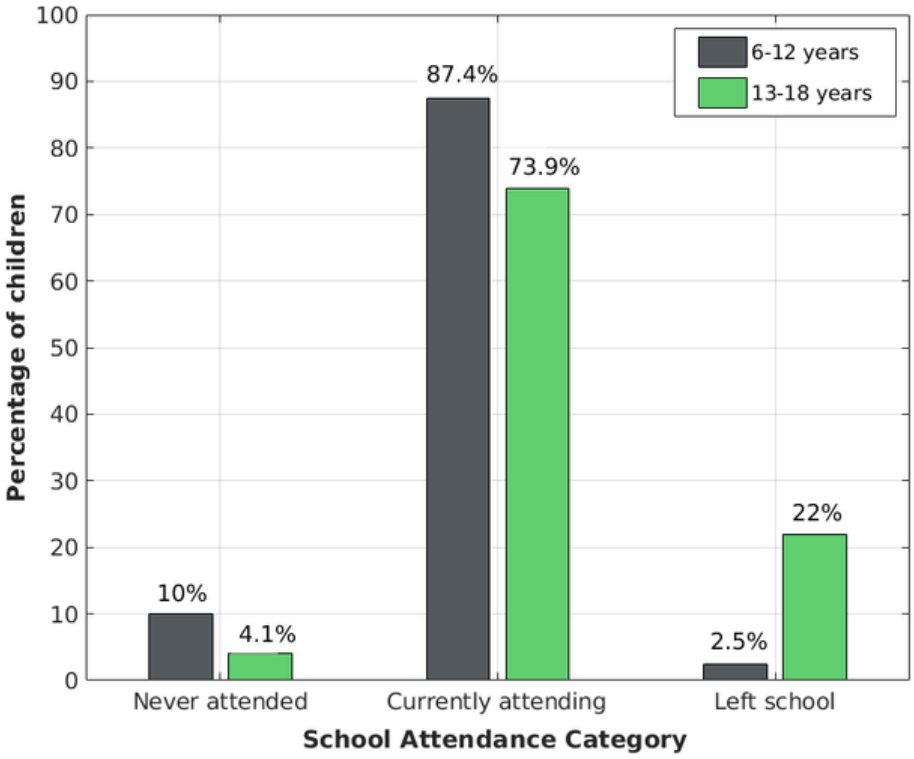
Education in Uganda

Young people, the heartbeat of a nation, provide impetus to socio-economic development as well as fresh perspectives and ideas to drive social, cultural, and political change. Uganda is fortunate to be endowed with one of the world's largest populations under the age of 14 years (46.5%) [1], and this population is projected to rise from 21 million to approximately 29 million by 2060 [2]. Further, 77% of Uganda is under 25 years [3]. To empower youth and harness that potential, quality education is essential. A study in Uganda found that education reduces the risk of poverty. An extra year of schooling increased wages by 17% [4].

Accordingly, Uganda invested in its education sector and launched the Universal Primary Education Program (UPE) in 1997. This program increased budget allocation to the primary school sector, increased the number of schools and teachers, and abolished primary school fees. These actions increased the enrollment numbers, with net primary school enrollment rising to 91% in 2015, per United Nations [5].

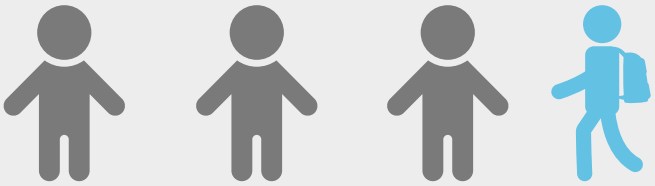
77%

of Uganda's population is under 25 years of age [3]



School attendance in Uganda, per the 2014 census. More than one-fifth of Uganda's teenagers are not attending school.

UGANDA'S EDUCATIONAL INFRASTRUCTURE CAN BE IMPROVED

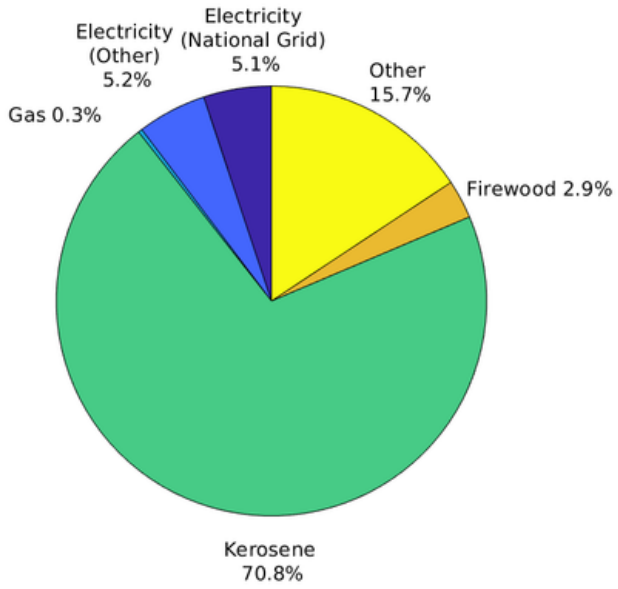


Less than 1 out of 4 children who start primary school enroll in secondary.

While the quality of education in Uganda has made several strides since the launch of the UPE program, there are still many challenges. 52% of students drop out before completing the seven primary grades [6]. Enrollment in secondary school is a low 24%, i.e., less than 1 of 4 children who start primary school in Uganda make it to secondary school [7].

Uganda's educational infrastructure is ill-equipped to support the high number of primary school enrollment. Besides other factors such as a low student-teacher ratio, and high indirect expenses (transportation, uniforms, meals, etc.), the education system is hampered by limited access to reliable, affordable electricity.

The Challenge to Obtain Reliable Electricity



Source of light in rural Uganda, per the 2014 census [12].

90%

of rural Uganda does not have access to the national grid [10].

In 2018, more than half of Uganda did not have access to any source of electricity [8]. Of the 20% of the population with access to the national Ugandan grid, 35% report an unreliable connection and frequent blackouts. [9]. In rural Uganda, 90% of the population does not have access to the national grid [10]. As of 2019, about 75% of Uganda lived in rural regions [11], forcing people in these regions to rely on dirty, carbon-based sources for electricity and lighting.

Access to indoor lighting means that students have time to finish homework and study after sunset. Outdoor lighting provides security for students after dark and gives parents the confidence to send their children to school safely. This access also allows health centers to refrigerate life saving vaccines and deliver babies at night with ease. Adequate lighting requires reliable access to electricity, which cannot be taken for granted in Uganda.

AWA PROVIDES SUSTAINABLE ENERGY SOLUTIONS

All We Are (AWA) recognized the need for clean and affordable electricity in Uganda, and has been working since 2015 to improve infrastructure and transform communities through sustainable energy. To date, AWA has completed 35 active solar installations, impacting nearly 40,000 people in Uganda.

Electrification of schools has proven to have a significant impact on improving the productivity of students, reducing absenteeism, and increasing graduation rates.

From 2015-2020, AWA's partner institutions experienced on average 34.8% growth.

AWA'S SOLAR INSTALLATIONS IN RURAL REGIONS REPLACED KEROSENE LAMPS

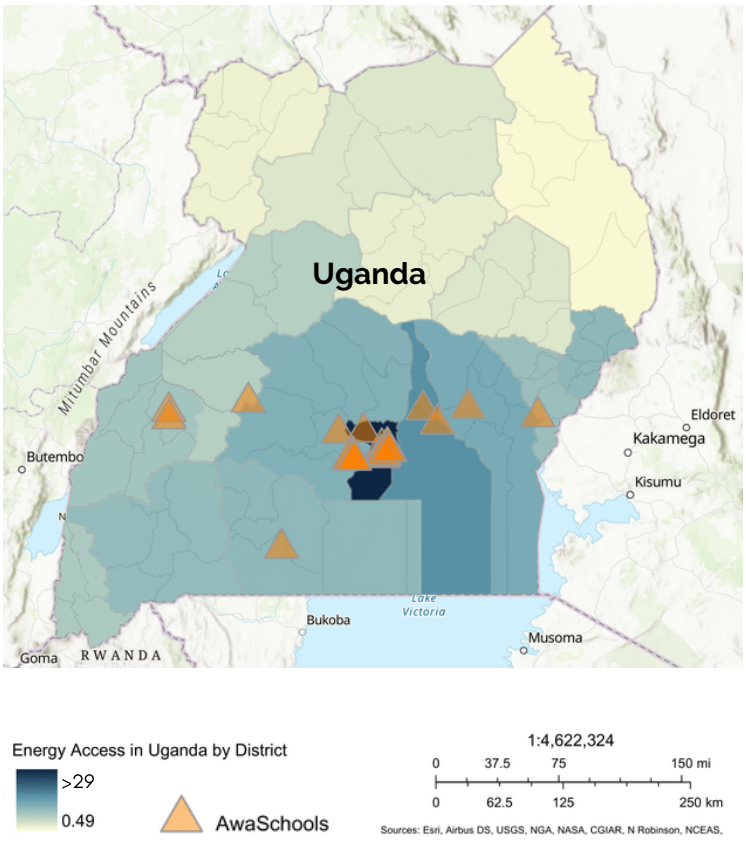
Eleven of AWA's partner institutions are in districts where less than 12% of the population have access to the national grid. AWA's LED lamps in these schools provide a cleaner, more potent, and efficient source of lighting, replacing carbon-based lighting sources such as kerosene lamps.

Kerosene lamps are not ideal for reading and writing. The brightness of a light source is measured in "lumens", and the resulting illumination in terms of lumens per square meter, also termed "lux". According to a study, “typical kerosene lamps deliver between 1 and 6 lux of useful light, compared to typical standards of 150 lux for studying” [14].

In a mid-sized school, it would take

60,000 kerosene lamps

to generate the equivalent lighting of AWA's solar powered LEDs.



All We Are solar installations in comparison to access to the national grid. Darker colors represent regions with higher access.

LED lamps are brighter than dim, smoky, and dangerous kerosene lamps. Light output, in lumens, of a single 10 Watt LED lamp is at least 10 times more than that from a kerosene lamp. In a mid-sized installation site, AWA installs 89 outdoor and 68 indoor 10 Watt LED lamps, which is equivalent to replacing more than 60,000 kerosene lamps to provide identical lighting per site.

AWA'S SOLUTIONS ARE CLEAN

In typical AWA sites, indoor lights are switched on for six hours a day, from 6 PM to midnight, and outdoor lights for 12 hours a day, from 6 PM to 6 AM.

From 2015 to date, AWA partner institutions have saved an estimated 44,527 metric tons of CO2 emissions.

AWA installations have helped provide a healthier environment for students to study. A study showed that switching from kerosene to solar-powered lamps improved the health of Ugandan school children and reduced the chances of air-quality-related symptoms such as headaches, chest pain, fever, and eye irritation [15]. A similar study by SolarAid found a reduction in respiratory illnesses and burns, and eye strain. [16]

	Wick Kerosene Lamp (Tadooba)	Hurricane Kerosene Lamp	5 Watt LED Bulb
Cost Per Unit	0.5 to 1 US Dollars	3 to 10 US Dollars	1.5 to 2 US Dollars
Brightness of Generated Light	10 lumens	30 lumens	300 lumens
Lifespan	0.5 years wick life	2 years wick life	3 to 15 years (used 9 hours a day)

A comparison of the cost, brightness, and lifespan of LED and kerosene lamps.

	AWA Installations*	Ugandan National Grid	Kerosene Fuel
Operational Cost After 1 Year of Installation	5166.67 US Dollars	5300 US Dollars	2945 US Dollars
Operational Cost After 3 Years of Installation	5500 US Dollars	15900 US Dollars	8835 US Dollars
Operational Cost After 15 Years of Installation	7500 US Dollars	79500 US Dollars	44175 US Dollars

A comparison of the operational cost of various electricity sources. Calculations assume typical AWA school sites. As a typical case, we assume that AWA systems have a lifespan of 15 years and an annual maintenance expenditure of 2500/15 = 166.67 USD.

AWA'S SOLUTIONS ARE AFFORDABLE

Since 2015, AWA has installed 1096 ten Watt LED bulbs and 687 five Watt LED bulbs. Given that the cost of electricity for businesses in Uganda is $0.158 US Dollars per KWh, a school on Uganda's national grid would have an annual electricity bill of just under $5300 US Dollars to generate the same amount of lighting as AWA. On average, AWA's solar system systems cost $5000 US Dollars for the initial installation, and 2500 US Dollars is budgeted for maintenance over the lifespan of the system. The above analysis implies that, in comparison to schools on the national grid, AWA solar systems have a payback time of around a year and a half at most, and thereafter, cost savings continue to increase with time.

Further, AWA purchases all of its components locally in Uganda, supporting the local economy.

AWA'S SOLUTIONS ARE RELIABLE

Unlike the intermittent supply from Uganda's national grid, the outage time of AWA's solar systems is minimal, with theft of components and tampering of components being the top two reasons for temporary system failure.

AWA visits each installation at least three times a year to maintain consistent contact with each school, perform routine maintenance, and proactively identify small issues before they become major failures. Moreover, AWA has designed a monitoring system, termed "Guardian", which will be implemented at installation sites to detect and respond to component and system failures. For instance, if a component is removed from the solar system, "Guardian" will alert the AWA maintenance team via SMS message while generating an audible alarm.

Income Statement

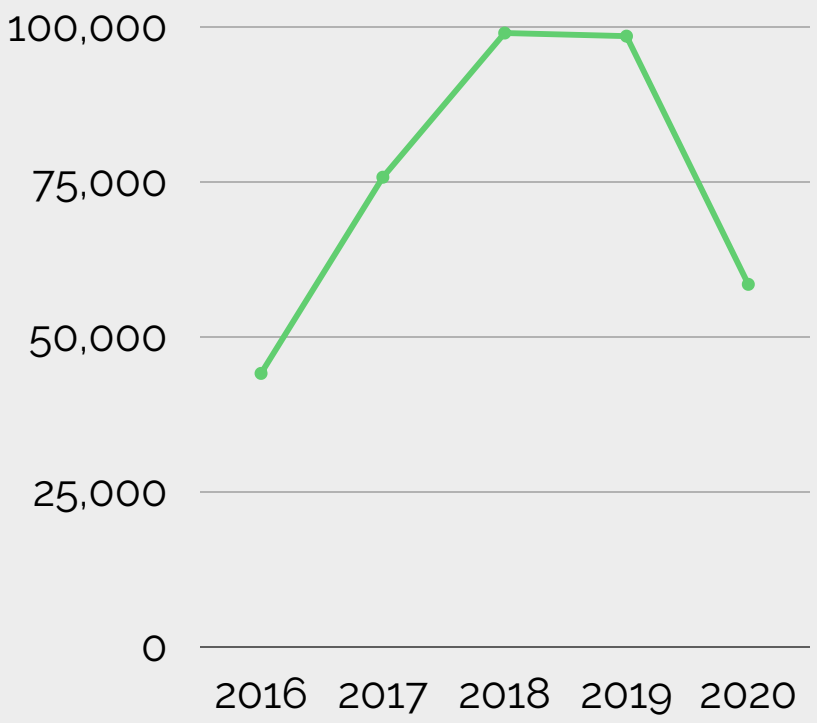
Recurring Donation Revenue

$1,536/month

$92,160

Raised since 2015
from Monthly Donors

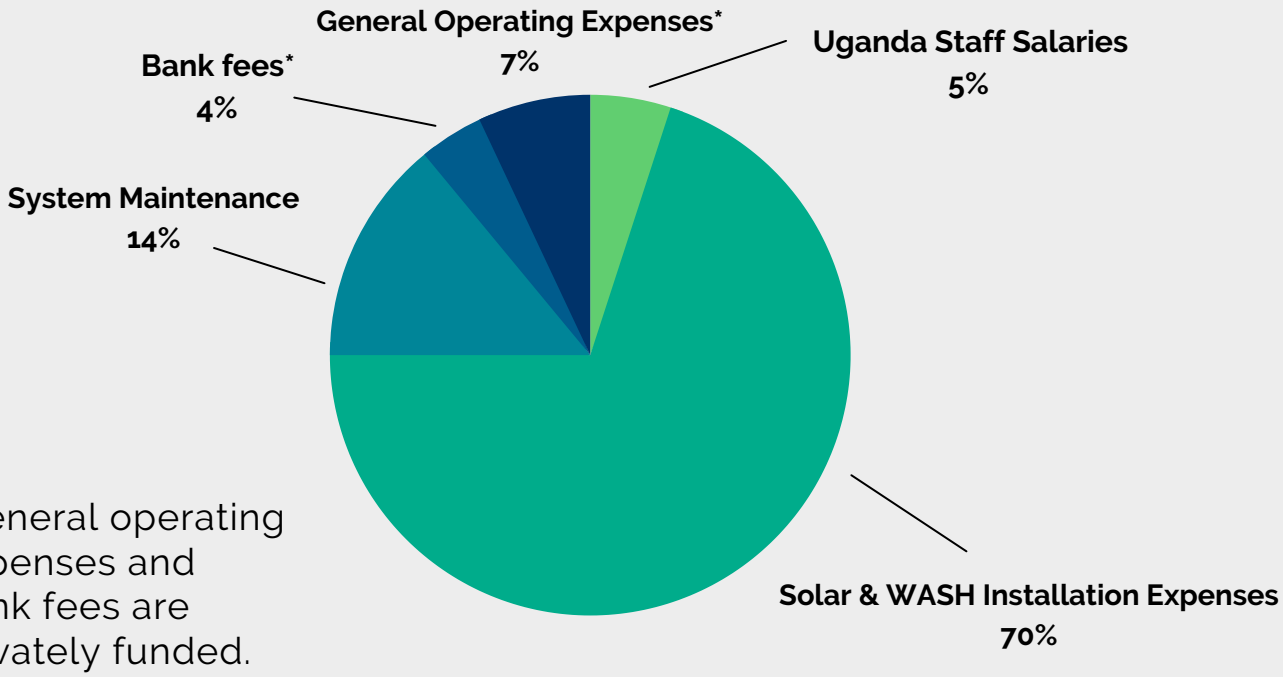
Annual Donation Revenue



Overall Donation levels, which include private, corporate donations, monthly donors, and Rotary grants decreased significantly in 2020 due to COVID-19. The pandemic has put barriers on travel to Uganda, and reduced the number of installations we were able to fund.

Allocation of Funds

2019



*General operating expenses and bank fees are privately funded.

Installation Costs

Average Cost Per Installation

$5,000 → Cost of Installation

+ $2,500 → System management costs

$7,500

ALL WE ARE & ROTARY

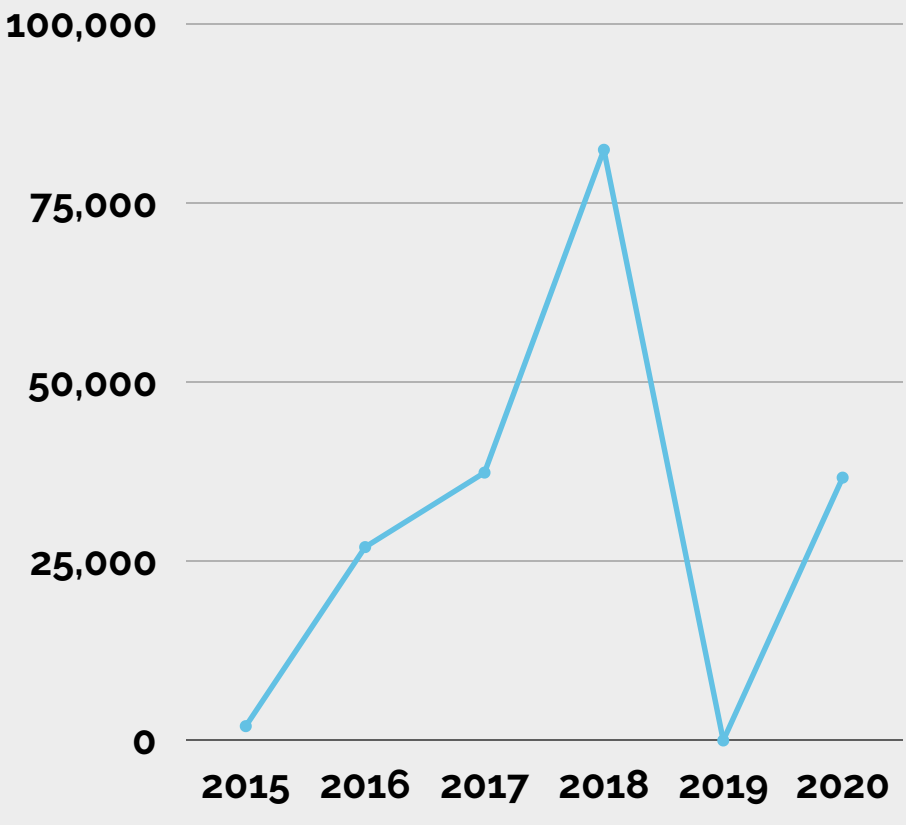
"Nathan Thomas and I met at a Rotary Club of Cincinnati meeting of our World Affairs Committee nine years ago. The Rotary Club of Cincinnati gave Nathan his first small grant of $2,000 to help fund two solar installations.

Unlike so many other Rotary International Projects, AWA's work was done in ten days; Impressed with their efficiency, and passion, the Rotary Club of Cincinnati has been a financial and moral supporter of SUN/All We Are ever since. Educationally and professionally my work with businesses and nonprofits has two things in common with Nate's aspirations: It has been international in nature and often entrepreneurial in the sense of "never done before projects." Nathan and I share a common global perspective.

It's a great pleasure to work with Nathan and the team he has assembled. AWA volunteers and staff are engaged in something that their minds, consciences, and hearts tell them is making an important contribution to the fight against climate change in a developing country, in schools where education is the clearest way out of poverty. AWA attracts young people seeking hands-on experience in international development and dedicated, long-time volunteers. AWA never stops innovating and moving forward. It is made up of talented young people and senior advisors whom all care about making a difference in the lives of others. The organization knows how to grow while maintaining what it has already built. I think the future is bright for AWA and this talented team of volunteers with whom I am a proud contributor."

– Deborah Schultz
Senior Advisor AWA
Member, Rotary Club of Cincinnati

Funding from Rotary



Meet the Students

THE PEOPLE WHO DRIVE ALL WE ARE'S PURPOSE

NAMUMBEJJA

"I'd want to be a lawyer because right now there's a lot of injustice in Uganda. Yesterday when I was watching the news I saw a story of an old woman whose land was grabbed by a pastor who claimed he had bought the land and yet he had fake land titles. I want to help such people get justice in the courts of law."

JORUM

"I admire Ochaya, who plays for the Uganda national team, because of his playing style. He's a position three that plays like a winger. Football is fun and entertaining, but it has its challenges. One time I was fouled in a game and my leg was dislocated. But once I got back on my feet, I was back on the pitch playing with more determination and passion than before. I'm from a big family of 16 kids and a poor background. Football has helped me get access to school."

Meet the Partner Institutions

THE PROCESS BEHIND THE PEOPLE

"With great pleasure, I thank All We Are for the support you have given Kisoko High School. We are certain that this has improved our academic performance notably from no first grade in 2018 to at least 3 first grades in the UCE Examination of 2019. The school enrollment has also improved from 174 students by the end of last year to 250 students."

Kisoko Secondary School (Tororo District, Eastern Uganda)

"Our facility got in partnership with All We Are in 2018. The achievements of the system include an increase in client numbers at the facility (deliveries and fully immunized children), improved security at night, and a drastic reduction in our hydroelectricity bills. Acknowledgment and special thanks go to All We Are and Rotary for the partnership."

Kitimba Health Centre III (Butambala District, Central Uganda)

"The benefits of the 5 solar panels installed by All We Are include increased academic performance because night classes are now possible. There has been increased enrollment and therefore we have hired more teachers. The school has saved expenses on electricity by 75%. "

Victory Junior Primary School (Wakiso District, Central Uganda)

Thank you for your support!

We want to extend our immense and heartfelt appreciation to everyone who has supported the work of All We Are in providing solar energy to growing communities. It is because of your generosity that we will meet our goal of 50 solar installations and help to change the lives of children, families, and communities in Uganda.
Thank you for your support!

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