

# RURAL ELECTRIFICATION

➤ LAS LAJAS, NICARAGUA



“I WANTED TO GIVE BACK, AND POWER TO THE PEOPLE’S MISSION RESONATED WITH ME; SOLAR FOR LIGHTS AND POWER FOR REMOTE SCHOOLS. HOW OFTEN CAN ONE MAKE A POSITIVE, LASTING IMPACT FOR HUNDREDS OF KIDS AND THEIR FAMILIES?”

PETE FROM BOSTON, MA ➤ POWER TO THE PEOPLE VOLUNTEER

➤ LOCATION

Las Lajas, Nicaragua

➤ CHALLENGE

To bring reliable power to a rural Nicaraguan community.

➤ SOLUTION

Solar system with Trojan deep-cycle batteries for storage.

➤ OUTCOME

Power for the community’s school and health clinic.



12 FLOODED LEAD ACID BATTERIES

2 IMPORTANT BUILDINGS ELECTRIFIED

5,000+ PEOPLE SERVED

## LOCATION

Nicaragua is known for its tropical climate and countryside marked with numerous lakes, volcanoes, and craters. In the middle of the country, in the department of Boaco, is a deep crater that locals say has been there for thousands of years. Today, there are more than 5,000 people that live in the base of the crater without access to electricity.

## CHALLENGE

It is cost prohibitive for the main electrical grid to extend to these rural communities. For years, people from the towns of Las Lajas, La Uva, and El Caribe have been going to school without lights or power and visiting a small health clinic that has no ability to use electrical devices or lights at night.

## SOLUTION

Volunteers from the U.S.-based group Power to the People\*\* traveled to Nicaragua to work alongside local volunteers and a local solar company to install a 1.32kW PV system on the school and a 340W PV system on the health clinic.

In remote areas like Las Lajas, energy storage is a key part of a PV system and Trojan batteries were chosen for their durability and long life cycle. The batteries were wired in a series to create a 48-volt battery bank. With proper maintenance, the batteries could last 10 years.

## SYSTEM SPECIFICATIONS

## ELEMENTARY SCHOOL

- Batteries: (8) SSIG 06 255\* Trojan batteries
- Solar (PV) modules: (6) 220W Solar Semiconductor
- Inverter: (1) Xantrex SW 5048
- Charge Controller: Morningstar 10A
- Racking: Aluminum racking, locally made
- System installers: Power to the People (Grid Alternatives) and Suni Solar

## HEALTH CLINIC

- Batteries: (4) SSIG 06 255\* Trojan batteries
- Solar (PV) modules: (2) 170W Schuco
- Inverter: (1) 300W Morningstar
- Charge Controller: BlueSky 25A
- Racking: Aluminum racking, locally made
- System installers: Power to the People and Suni Solar

*\*The Solar Industrial SSIG 06 255 battery was previously known as the T-105 battery.*

*\*\*Power to the People is now Grid Alternatives.*

CHARGING  FORWARD

**For More Information** / [www.trojanbattery.com](http://www.trojanbattery.com) / [www.gridalternatives.org](http://www.gridalternatives.org) / [www.sunisolar.com](http://www.sunisolar.com)

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Trojan batteries are available worldwide and backed by outstanding technical support provided by full-time application engineers.

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## OUTCOME

**The system has brought lights and AC power to Las Lajas. It has also given community members a safe place to hold meetings, study at night, and access televised remote learning classes. The school raises funds by selling electricity to charge cell phones and other batteries. The presence of electricity at the school has also improved teacher and student attendance.**

## BATTERY SOLUTION



- Low Maintenance
- Long Lasting
- Durable in Tropical Climate



## PARTNERS



[www.gridalternatives.org](http://www.gridalternatives.org)



[www.sunisolar.com](http://www.sunisolar.com)



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