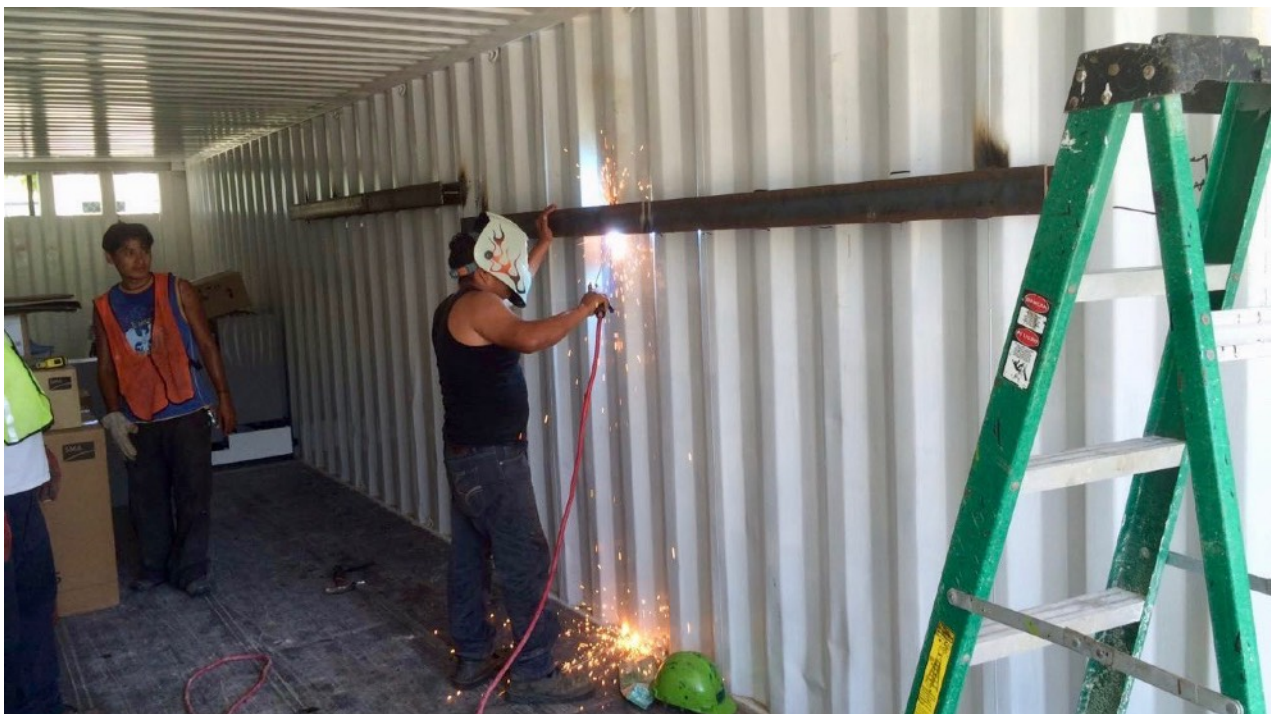


Newsletter 11/16 Smart Solar Off-Grid for La Gracia

No news are usually good news, right? It's not any different when it comes to the Smart Solar Off-Grid project for La Gracia!



Despite Hurricane Earl making landfall in Belize beginning of August and delaying the works by several weeks due to the nationwide clean-up efforts, significant progress has been made since we last reported on the project. We are actually running the last tests before connecting the houses! But first things first:



The focus was on preparing and securing the container, so that the solar equipment could be safely mounted.



Simultaneously, a crew of villagers along with the team from SESB continued to work on the drains and the power substations. After Hurricane Earl it was clear, that running the distribution lines underground was the way to go.



Upon completion of the fence around the container, the solar panels, inverters and batteries were mounted and connected. 96 solar panels are adding up to 24 kWp of Photovoltaic and are producing 96 kWh/day average.



The Hoppecke battery bank is maintenance free and supplying the village with power during the night and on rainy days.



The LP-Gas back-up generator was delivered, connected to the gas tank and the solar system. On rainy days it will start automatically and cover the electricity demand if needed.



One of the core items to be highlighted is the green "Power-Sale and Monitoring Board" that will ensure the prepaid sale of electricity and the remote monitoring of the solar system. It is the first of it's kind in Belize and has been customized for this project.



This power substation is now as good as finished and the prepaid meters for the houses were mounted inside.



The first houses are now ready to be connected. And it's as clear as it can be: The villagers of La Gracia are ready, too!



Right before starting into the CARICOM Energy Week November 13-19, 2016, a workshop was held in collaboration with representatives of the cdw Stiftung, the Energy Unit, SESB, ZENNA. An essential part of this pilot project is to narrow down on different operation and tariff models when it comes to the solar system in La Gracia in particular and to off-grid community based systems in general.



We were happy to welcome several project stakeholders in La Gracia Village during the past few weeks. Mrs. Irene Cramer from cdw Stiftung Germany made a day-trip out to La Gracia. We truly appreciate her sincere interest in the project.



Minister Hon. Frank Mena, CEO Dr. Peter Allen and other delegates from the Energy Unit of the Ministry of Public Service, Energy and Public Utilities as well as Mrs. Grace Chung, Deputy High Commissioner were amongst the visitors.



The village chairman Mr. Menendez joined the group on a tour around the village to see the work in progress.

We are positive, that in the next newsletter you will hear about the first experiences operating the Smart Solar Off-Grid Project in La Gracia!



For people interested in the technical aspects of the system we have created a public link, that allows you to follow the systems performance:

<https://www.sunnyportal.com/Templates/PublicPageOverview.aspx?plant=115eff94-d189-434f-858d-05e8719934ac&splang=>

SUNNY PORTAL US-English ▾

SES8 La Gracia SES8 La Gracia

SES8 La Gracia PV System Profile

Location: La Gracia, Belize
Operator: SES8 - Solar Energy Solutions Belize Ltd.
Commissioning: 11/7/2016

PV system power: 25.200 kWp
Annual Production: approx. 34,020 kWh (1,350 kWh/kWp)
CO2 avoided: Approx. 23.8 tons per annum

Modules: Renosola VirtusII 255Wp
Communication: Sunny WebBox
Inverter: 4 x Sunny Boy 6000TL-US-22
4 x Sunny Island 6048U

Description:

Belize is located in the southeastern part of the Yucatan peninsula, bordering on Mexico to the north and Guatemala to the west. Around 10,000 inhabitants in Belize's rural areas have no access to the electricity grid.

Within the REPIC project's framework, a stand-alone network shall be built in the La Gracia municipality, comprised of 45 households. This autonomous network is powered by a 24 kW photovoltaic system with battery storage and a back-up gas generator. The network has a modular design and uses only proven technologies. It is designed to be locally operated and maintained by the villagers, as well.

A part of this REPIC Project is to develop a resilient business model, which shall serve as a basis for the regional multiplication of such small stand-alone networks.

For this project, ZENNA is supported by SES8 - Solar Energy Solutions Belize, zhaw Zürcher Hochschule für Angewandte Wissenschaften (CH), cdiw Stiftungverbund (DE), Ministry of energy (BZ), ROTARY International, Coin Invest Trust (LI), LIPPUNER EHT (CH), Trama Tecnio Ambiental (ES), HOPPECKE Batterien (DE), SMA Solar Technology (DE), Müller Azmoos AG (CH).

© 2016 SMA Solar Technology AG | Home | Information | User manuals | FAQ | Terms of Use | Data protection declaration | Legal Notice

We would also like to introduce our newest project partner. We are very grateful for the support at this stage of the project, thank you! <http://www.muellerazmoos.ch>



müller azmoos ag
Gemüseanbauorganisation
www.muellerazmoos.ch

The Energy Department has posted a video on it's youtube channel to announce the "Energy Week" in Belize. The Smart Solar Off-Grid project takes place in this video.



[https://www.youtube.com/watch?v= wBESiuW7s](https://www.youtube.com/watch?v=wBESiuW7s)

ZENNA also developed the updated presentation video of the Smart Solar Off-Grid. The movie is available online on vimeo:



<https://vimeo.com/145614639>

ZENNA's Smart Solar Off-Grid for La Gracia Project is also displayed online on the REPIC-platform of the Swiss federal offices SECO, SDC and SFOE:



<http://www.repic.ch/repic-en/projects/ongoing-projects/photovoltaics/zenna-belize/>