

Mayan Power and Light 2015

Thank you for supporting Mayan Power and Light in 2015-2016, as 11 women plus 2 young boys set off with their first microbusiness providing affordable clean energy in their communities.

From November 14, 2015 to November 20, 2015, Mayan Power and Light held a weeklong solar and business training class for 24 women and girls from Alta Verapaz, Baja Verapaz, Cobán, Quiché, Sololá, and Suchitepequez.

Mayan Power and Light 2015 training program was held as a weeklong summer camp at the CCDA's agricultural training center at their coffee cooperative center. Women and girls aged 13 to 47 stayed in dorms provided by the CCDA, shared 3 meals a day and trained in solar and business skills together. By the end of the week, meaningful friendships were formed.

The CCDA is an indigenous rights-based organization that works with small-scale farmers in isolated areas of 11 Departments of Guatemala. They have a strong Gender Department that serves campesinas with women's empowerment and food security projects, thus having a network of women living isolated, unelectrified communities who know from personal experience, the demand for solar energy.



THE BENEFICIARIES



The change in Beneficiaries became apparent in March 2015, requiring the MPL team to adjust the business training program to suit our new beneficiaries' educational levels. The women and girls, identified by CCDA Agricultural Technicians, come from isolated farming communities in remote regions of Guatemala. In these communities, few have been lucky enough to graduate primary school, with even fewer passing high school. Their communities rely on small-scale agriculture and day-labor on nearby fincas. With little access to education, financial services and legal assistance, women and girls are the poorest of the poor in these marginalized rural communities.

For most participants, **MPL is the first time they will earn their own income.**

The CCDA runs agricultural projects and women's empowerment trainings to address women's concerns for food security and family welfare in these regions. In 2013, the CCDA contacted ATC in interest of our solar programs because many of the communities they serve remain out of reach of grid electricity.

Mayan Power and Light provides these un-electrified communities with access to affordable solar lighting, while supporting the local economy and women's economic participation.



Two such communities directly benefited from this week's Mayan Power and Light program: Nuevo Amanecer, Suchitepequez and El Esfuerzo, Suchitepequez. Students were tested on their new electrical skills by installing solar on two public schools in un-electrified communities. These schools were the first building in each town to have lights at night, providing space for community meetings and events.

To start off the virtuous cycle of a sustainable economy, we educated women and girls from these communities to provide the social service of affordable and accessible clean energy while empowering women and

girls with their first try at a microbusiness. In communities where income earning opportunities are few and the demand for lighting is high, Mayan Power and Light creates a system where beneficiaries are serving beneficiaries in a self-sustaining program.



The beneficiaries came from rural communities all over the country with varying backgrounds in:

- Age: 13 years to 47 years
- Education: semi-literate to Bachelors Degree
- Language: Low to high Spanish comprehension and communication

The week of November 14-20 was a life-changing experience for the SEA team and the students alike, most of whom have never left their Department of Guatemala, and none of them had ever seen Lake Atitlan before. A total of 22 of the 25 invited participants

arrived and worked hard for the duration of the week, plus two teenage boys who were sent by their communities unbeknownst to us¹. These two young boys proved their worth, being very respectful of the dynamic of women's space yet very serious about not letting this opportunity pass them up. The SEA and ATC team agreed to let them participate as additional beneficiaries above our target 12-24 *asesoras comunitarias* microbusinesswomen.



Throughout the week of solar electricity, business communications and marketing training, SEA and ATC engaged with participants regarding their potential long-term relationship with SEA as solar micro-businesswomen. There were frequent discussions in groups and individually regarding each woman's potential business plan for sales in their region. Some expressed fears of difficulty selling due to: attitudes of dependency for donated panels; having to walk long distances to

¹ Rudy, 16 studying to be an electrician joined from the first day, a recommendation from someone in the CCDA. William, 15, joined in the installation at his school in Nuevo Amanecer on Sunday. He is in a special group of excelling students with two girls who had joined Mayan Power and Light. I found him sitting in the truck with his backpack ready for a week of training. Both boys proved undeniably that we had to give them a chance at microbusiness too.

reach other isolated communities; small communities are suspicious and won't buy from outsiders; family responsibilities; educational responsibilities; safety.

Nonetheless, participants were very positive about the program and expressed the demand for solar in their communities. Therefore, although some did not want to commit to a long-term business relationship with SEA as *asesoras comunitarias*, they were enthusiastic about promoting the products voluntarily. We recognized their support as Volunteer Promoters of Solar Energy, *promotoras voluntarias de energía solar*. By Thursday evening, we identified 11 *asesoras comunitarias* and 2 male *asesores comunitarios* who set off home with seed capital in the form of 1.5W 'Egglights' and LED lightbulbs to start off their December sales.



SATURDAY: INTRODUCTION TO CARPENTRY AND CIRCUITS AND SOLAR



Upon arrival early Saturday morning, the students were quiet and subdued as we introduced ourselves and broke straight into introducing basic tools of carpentry. They were happy when we soon got out of the classroom and into the (outdoor) carpentry workshop. A perfect ice breaker, the students worked in teams to make their own wooden box, exactly the size of what's needed to hold batteries off the floor in SEA's small-scale system.

After carpentry class, we settled back down in the class room to focus on solar. We discussed, What is Solar Energy? It's importance and environmental impact. How solar panels work, advantages and disadvantages and how diodes transform solar heat into electrical currents. Please review the MPL Teacher's Guide for more detail on topics covered in each workshop.



Circuits and Solar class covered the basics of electrical circuitry, hooking up connections to turn on a buzzer, then turning on a little red light. The step-by-step guidance by Jose and his powerpoint illustrations of the connections connected theory to practice for easy understanding for all educational levels.



We certainly noticed the how the young students interacted with the solar equipment with a lot more ease and confidence than older students.

The young academic high schoolers picked up the concepts quickly and asked follow-up questions, whereas the older students followed slowly and step-by-step, delighted to make their electrical connections light up.



SUNDAY: CIRCUITS AND SOLAR PRACTICAL EXAM, STUDENT INSTALLATIONS

Equipped with their new skills in carpentry, electrical connections and solar power, Sunday served as a practical assessment, demonstrating to the students as much as to the teachers, how much they are capable of. We split

the 24 students into two pick-up trucks with solar installation equipment and set off to two un-electrified communities to install solar on their public school buildings.

Students broke up into work teams to install panels on the roof, install light fixtures, switches and wiring, build wooden battery boxes, set up control panels, bury the grounding wire and wire up the batteries.



These schools are **the first building in town to have lighting and electricity** to charge laptops, cellphones

and lanterns, better lighting for reading and for community meetings and events at night. The head of the Parents Association in Nuevo Amanecer told us they were holding their first meeting the same night we installed.



Because no household in this community has ever had electricity, the social impact of these small solar power systems has wide ripple effects. Productivity on a family and community level goes up when lighting is available at night. Women can weave, children can do homework, community members can meet and hold cultural events when lighting is available past daylight working hours.



The dynamic of the community changes forever when people can socialize and organize past daylight hours. Community meetings used to take place outdoors at dusk to take advantage of the last light before returning to their family fires. Now they can meet at the school after dinner, expanding opportunities for community development and strengthening the social fabric.

For Mayan Power and Light students, the benefit of the learning experience of installing solar doubled with seeing the benefit to a community much like their own. They commented on the importance of being able to meet in their communities after dark. They complained of getting bored at night because there is very little to do by candle light.



Students were tested on their new electrical skills by installing solar on these two public schools. They impressed us by the quality of their work in building wooden battery boxes, making strong electrical connections and installing fixtures. The experience showed each of them how quickly they are able to learn new practical skills.

“Now I don’t need to wait for a man to fix these things. I’m just going to do it myself. I used to think it was hard, now I know I can do it.” –Delia, 27

To start off the virtuous cycle of a sustainable economy, we educated women and girls from these communities to provide the social service of affordable and accessible clean energy while empowering women and girls with their first try at a microbusiness.

MONDAY – FRIDAY: BUSINESS PLANS, COMMUNICATIONS, MARKETING, SALES AND FINANCES



By Monday morning it was time to clarify how solar and microbusiness fit together. ATC and SEA presented the concept of Mayan Power and Light in an informative presentation on the series of opportunities and roll-on benefits that comprise a social enterprise. Teodoro Juracan, representing the CCDA, spoke to the value of solar energy for community development and the benefit it can bring to their communities. This week presented an opportunity for all to practice valuable business skills, and for those that succeed in this program, products to start off their microbusinesses without debt.

The purpose for learning about business plans, marketing, sales and communications is to a) aid in family business, economic decision-making and access to credit and b) understand SEA's business model and the role of *asesoras comunitarias* and to c) be prepared to register their successful microbusinesses at the end of 2016. We engaged the participants to ensure understanding by having them gather in their regional groups (to recover for language barriers), discuss and share with us five questions they wish to clarify.



With an understanding of business planning the students learned about SEA's business plan as a Mayan Power and Light social enterprise. The students understood how solar energy sales and women's microbusinesses in solar retail is a social business with environmental, social and financial benefits for customers and microbusinesses alike. During the week, students developed their own elevator pitches, practiced speaking out, learning to manage tough clients and rejection to keep morale and determination.



By the last day of the program, 11 of the most enthusiastic and committed students signed contracts with SEA to receive seed capital in form of solar products and LED Lights, ready to start business.