



The Appropriate Technology Collaborative

## Projects waiting to be funded

ATC projects are identified and co-designed by community groups who approach ATC to assist in their development goals with appropriate technological solutions. Through a series of visits and communications, needs are assessed and the project goals become clear. The beneficiary communities are charged with designing their own plan for a maintenance fund that fits into their organizational structures and fluctuations of income.

ATC projects like these have been funded by Rotary Clubs, volunteer groups, individual donors and foundation grants.

These are the projects awaiting implementation below:



### **Village Water System and Solar Power at Comunidad Santa Isabel, Patulúl, Sololá**

160 extremely poor farmers live in 20 basic homes after the Guatemalan Land Reforms gave these landless laborers a plot to grow their own produce. Unable to produce enough food to feed themselves year-round, many of the village children work in the larger towns – on microbuses and in market places. Girls more often stay behind with domestic duties including carrying water from the spring. With no electrical lighting and no running water, Santa Isabel struggles to meet their basic needs for increased sanitation, health, education, and income. Installing 10 Watt home solar kits and a gravity-fed tap at every home provides the first foundation of development for 160 people in Santa Isabel.

Category: Water - Budget Estimate: Solar – \$5,000

### **Elementary School Computer Lab at Public Elementary School at Comunidad San Jose, San Lucas Tolíman, Sololá**

ATC will take first steps towards meeting essential educational equipment needs by focusing on creating a small, affordable computer lab with laptop computers that allow children to learn basic typing, word processing and engagement with the internet. This project will significantly change the educational environment for 60 children at a rural school in a town of agricultural day laborers.

With educational equipment equivalent to urban public schools, the children of San Jose have hope of competing in the labor market for better paid work. Introducing rural kids to use the internet for communications brings them out of their isolation and opens opportunities for community development. Category: Education - Budget Estimate: \$5,000

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### **Organizational Sustainability Project with CEIPA – Alternative School for Child Laborers**

The Centro Ecumenico de Integracion Pastoral has been serving underprivileged children in Guatemala for over 30 years. Mayan Power and Light can strengthen their institutional capacity serving 300 students per year by reducing the organization’s monthly energy bills and 55,000 pounds of CO2 per year. This project educates and empowers children with our STEM-rich Circuits and Solar class and installs a 500 watt on-grid solar system for daily environmental and economic benefit with a back-up power for the administrative offices to maintain organizational efficiency despite frequent black-outs on the grid.

Categories: Education, Economic Development - Budget Estimate: \$13,000

### **Solar at Public School of Aldea Captzin Ii, San Juan Ixcoy, Huehuetenango**



In a community with no electricity at all, 200 People regularly use the school building for community events and meetings, a health center on top of school events. 160 Watts of solar will electrify the building for good reading light in the day and night, ability to charge cellphones and radios, play music in class, and run a microphone for meetings. Community Circuits and Solar class to 15-30 male and female community members and leaders.

Category: Education - Budget Estimate: \$3,200

### **Solar at Public School of Aldea La Laguna, Concepcion Tutuapa, San Marcos**



250 people use the un-electrified school building for classes, community meetings, events, and medical clinics. 160Watts of solar will enhance the building’s ability to serve its community by increasing its hours of use with lights, cellphone recharge and microphones at night. Community meetings are often affected by afternoon rains on the tin roof, rendering it difficult to hear the speaker. Community Circuits and Solar class to 15-30 male and female community members and leaders.

Category: Education - Budget Estimate: \$3,200

## Educational Solar Hardware for our Circuits and Solar workshops



*Solar saleswoman, Fatima, helps teach community Circuits and Solar*

Our current set has been used by SEA and ATC to educate over 500 Guatemalans since Mayan Power and Light began in 2012. The majority of our equipment is still in good shape, including the batteries and solar panels. However, the controllers tend to wear out during our workshops when students make errors with wiring. To maintain equipment for our Circuits and Solar class for the next two years, we urgently need 15 Controllers at \$30.00 each and 20 wire cutting tools at \$9.00 each.

Category: Education - Budget Estimate: \$1,080

## Mayan Power and Light 2017



Advance our award-winning program to grow an inclusive, sustainable economy in Guatemala. Train 6-8 rural women in advanced sales, marketing and communications to help her build the next level of skills towards entrepreneurship. Help us amplify our impact by promoting water filters and fuel efficient stoves in rural and urban communities. The program offers community workshops and demonstration installations of solar, stoves and water filters in community centers and kitchens.

Rotary Categories: Economic Development, Education  
Budget Estimate: \$52,000

## Final Model of Amaranth Machine and Training a Welder



Help us finalize and publish an ATC design of an agricultural machine that supports sustainable farming and food security. The women's amaranth cooperative *Oxlajuj 'E*, employs 110 women in natural agriculture of the native superfood, Amaranth. A prototype winnowing machine, designed by ATC in cooperation with community leaders, is very efficient. It reduces the tedious unpaid labor of cleaning amaranth husks off tiny seeds. This project will build an updated model of the Amaranth winnowing machine after field testing the prototype in the harvest season of 2015-2016. A local welder will participate in the build of this final model, training him to make and maintain the machines.

Categories: Economic Development, Nutrition -  
Budget Estimate: \$6,000

### **Finca La Florida Bulk Macadamia Nut Cracking Machine**



This community of 46 farming and day laborer families has built a social compact dedicated to diversify their agriculture and food production to reduce dependency on fluctuations of coffee prices. They decided to plant high value macadamia trees. After 7 years, their macadamia trees are just starting to produce. In the next 3 years they will be at full production, which will last over 50 years. We can help this poor agricultural community increase their income by building a commercial grade macadamia nut cracker that leaves the nut

at its highest value - whole. Help 46 small-scale farmers access a higher value market by funding the design, prototype and construction of this appropriate technology.

Category: Economic Development - Budget Estimate: \$11,000

### **“Save the Lake” Education and Community Mobilization**



Lake Atitlan is in trouble. Increased population and agricultural run-off create toxic algae blooms and dead zones where aquatic animals cannot live. Public awareness and action are necessary to improve water quality before time runs out. ATC in cooperation with Municipal governments and the San Pablo la Laguna Youth Group propose to run an educational campaign on actions and behaviors individuals can take to *Salvar el Lago* (Save the Lake). The San Pablo Youth Group is made up of talented actors, musicians and dancers that have a strong theme on cultural and environmental preservation and human rights. Several have acted in community theaters around the lake on HIV/AIDS awareness. The *Salvar el Lago* educational program will be held at schools and venues. The *Salvar el Lago* campaign will consist of music, theater and dance, community discussions, and community workdays planting Tul (reeds) and building greywater systems with local volunteers. Mobilizing a conscious youth group to share a unifying message on practical actions individuals can take to save the lake will raise awareness and demonstrate practical solutions needed to save the lake to 50,000 people living in the lake Atitlan watershed.

Categories: Clean Water, Education - Estimated Budget: \$20,000