

# **CITIZENS FOR SOLAR AND SOLAR GUILD MEMBERS INSTALL A NEW SOLAR LIGHTING SYSTEM AT CATALINA STATE PARK by Bruce Joseph, Chair of Citizens for Solar**

On Sunday, November 8, several members of Citizens for Solar and Solar Guild installed a stand-alone solar lighting system on the Granite Area group ramada at Catalina State Park.

This is the fourth lighting system that CFS/SG has installed at Catalina State Park. All systems are working well, and the Park is very happy with the work we've done for them.

These lighting projects are done as part of Citizens for Solar's Community Service work, and they are funded through sales of raffle prizes at our Annual Solar Potluck and Annual Equinox Potluck. For years, Citizens for Solar had planned to install a solar hot water system on the park's Large Group Area restrooms, but we never received adequate funding for that project, and park officials had concerns about liability issues. In 2013 we were contacted about installing solar lighting on the Large Group Area ramada. That installation went very well, and we did two more within the next year.

The Granite Area lighting system is very similar to the other three systems. It consists of a 100 W PV panel, a 20 W LED floodlight, a 12 V DC 50 Ah battery, a charge controller with a dusk-till-dawn setting, and a 60-minute spring timer that controls the light. The PV panel was mounted on the center of the ramada's roof, facing south. The LED floodlight was installed just below it on the ramada's ceiling. The battery box (actually an old military ammo box) was mounted on a center beam of the ramada and holds the battery and charge controller. The one-hour spring timer is mounted just below the battery box.

We've learned a few tricks while doing these systems, and this is the first one that we did without using conduit. This resulted in a faster and

cleaner installation.

The system took six people about six hours to install. Citizens for Solar purchased the materials, while Solar Guild provided the installation expertise. Labor on the project was a joint CFS/SG effort, with work done by Patrick Cobb, Rob Crosland, Eric Lee, Ron Kuykendall, Sharon Irene and Bruce Joseph.

You can view photos of the installation [here](#).

Bruce Joseph  
Chair, Citizens for Solar

## **YOU'RE INVITED To Our 3rd Annual Holiday Party!!**

We're having our Holiday Party this year on Saturday, December 12 at 1801 South Kevin Drive in Tucson. Bring a dish for the potluck and rub shoulders with the solar gang. It all starts at 4:00 pm. Please join us! For more information, contact Rob at [rtcrosland1@aol.com](mailto:rtcrosland1@aol.com).

## **We've Been Busy! Solar Events in September - November**

September 4 - CFS had a booth at Corona de Tucson demonstrating solar cooking to about 50 Cub Scouts who were attending a special STEM camp. Kids were learning about science, technology, engineering and math.

September 19 - Our 3rd Annual Equinox Solar Potluck was held at the Valley of the Moon. Goodwill Industries supplied their stand-alone photovoltaic system to power the music. The weather was overcast most of the day, but our cooks did their best with what little sun there was. You can see lots more photos of this event [here](#). The members of the Board of Directors of Valley of the Moon were so pleased with the event that we forever hold the Saturday closest to the Fall Equinox for this event. Yeah!

October 18 - CFS and the Solar Guild demonstrated at Sustainable Tucson's Imagine Tucson event. We were positioned between TEVA-2 and a vegetable garden at the YWCA. Our Vice Chair Rob Crosland dried sunflower seeds and pumpkin seeds from his garden, made prickly

pear fruit syrup, and completed a creosote salve with his solar oven.

November 1 - CFS and the Solar Guild demonstrated solar cooking and solar electricity at the Cyclovia event where thousands of bicyclists took to the streets. We were at Mansfield Park.

November 7 - Members of the Solar Guild spoke to students in photovoltaics classes at Pima Community College, West Campus, to introduce them to our organization and stress the importance of solar.

November 13 - Members of Citizens for Solar and the Solar Guild joined the Goodwill Goodfutures crew to clean the weeds from the photovoltaic cells at Biosphere 2. Afterwards, Biosphere 2 offered everyone who helped a pass to the entire park and a backstage tour of the Living Building. Here are the before and after photos plus one of our great solar workers.

## Upcoming Events

**December 2 - Evacuated Tube Solar Oven Discussion**, 7:00 pm at Xerocraft, 101 West 6th Street. Our secretary Meli Engel will be leading the discussion. There's no fee to participate, nor are you required to RSVP, but we ask that you contact Meli ([smile4latte@yahoo.com](mailto:smile4latte@yahoo.com)) if you plan on attending so that we can take a head count beforehand. The class begins with a PowerPoint presentation of some tube structure and scientific concepts. Several inspirational photos of tube design options will be discussed, assistance will be available with laying out a design plan, and the great resources of Xerocraft are at hand to make your design a reality. Come join the fun, learn something new, and get a great deal on a Rand evacuated tube!

Tube dimensions:

2-1/4" outer diameter

1-3/4" inner diameter

20-1/2" external length

18-1/4" internal length

If you're looking for a perfect holiday gift, you will have the chance to purchase an evacuated tube and a custom made cooking grade stainless steel tray at the workshop for \$25 apiece (\$50 total). These two items comprise 90% of an evacuated tube cooker. The GoSun cookers retail for \$300 apiece so this would be a great deal for anyone looking to invest in one of these cookers.

**April 30, 2016 - 34th Annual Solar Potluck and Exhibition**, Catalina State Park, 11570 N Oracle Rd, Tucson. [Visit CFS's 2016 Solar Potluck page here](#)

## Something New On Our Website - Again

The [solarguild.org](http://solarguild.org) website has recently been edited. We've added a new [Newsletter section](#) in the main menu where we'll post the great newsletters that Vivian Harte whips up which cover a lot of our events past and future.

In addition, we've added a section for the solar oven workshops at Xerocraft under the [Projects tab](#). Photos from the last workshop in July, lead by Solar Toby, have been added as well as the plans for the solar oven that we built during the workshop.

Also visit the CFS part of our website at [citizensforsolar.org](http://citizensforsolar.org).

## Monthly Meetings

Please join us the first Tuesday of every month at the Ward 6 office located at 3202 East 1st Street, Tucson. Our meetings start at 6 pm and go until about 7:30 pm. At our next meeting on **December 1**, we will be discussing potential projects to submit to a professional grant writer. If you wish for your project to be in the running, please come to our meeting to discuss it.

## Garden Delight Soup

by Toby Schneider

1 cup any dried beans	½ teas. whole cumin seeds
3 large carrots, chopped	1 TBS. Italian seasoning (or oregano)
2-3 onions, chopped	½ teas. whole peppercorns
1 bell pepper, chopped	1 TBS. olive oil
3 small potatoes, cubed (leave skins on)	2 bay leaves
3-4 tomatoes, sliced	1 TBS. lemon basil
1 can stewed tomatoes	2 TBS. vegetable broth
1/3 to 1/2 cup ketchup	1 uncut jalapeno pepper
2 handfulls fresh string beans, chopped	

Remove any dirt specks pretending to be beans. Wash the beans well

and soak overnight in cold water. This removes the starches that cause gas. Rinse and drain, discarding the bean water. Cover with fresh water and cook 1 hour or until the beans are almost tender. Rinse and drain water again. Add 1 quart of fresh water and all other ingredients. Additional water may be needed. Cook in your solar oven for 4 to 5 hours. Serve with buttered bread.

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