

Living Energy Farm

February - March 2020 Newsletter

We Did It!

After successfully installing 47 of our Iron Sun solar kits in the Dine (Navajo) and Hopi reservations, the crew from Living Energy Farm is happy to be back home, knowing that we made a big difference in the lives of 47 families. While we were at it, we made new friends, learned about Dine and Hopi culture, honed our electrical skills, and had a lot of fun.

We couldn't have done this project without the support of three organizations: Dineh Water Users, Hopi Tutskua Permaculture Center, and Second Mesa Community Center in Hopi. These organizations set up our installations, showed us around, gave us places to stay, and offered moral, logistical, and even mechanical support. We are very excited to continue to collaborate with these folks on future projects. All of them are interested in continuing the distribution of Iron Sun boxes (our nickel-iron based solar electric kits) in their communities. They may do this by building and selling the kits themselves, or pursuing funding to partner with us again and do more non-profit distribution. We are glad to be able to support them in this endeavor by offering training on building and repairing our kits, and possibly making another trip to do non-profit installations next year. We left them with an additional 8 solar kits to seed their future distribution efforts.



Debbie and the crew from Second Mesa



Our first installation, for a Dine elder

We certainly weren't planning on having nearly as many (mis)adventures as we did. Our donated SUV named Bert broke down in New Mexico on I-40 West and two fellows from Dineh Water User, Emerson and Darron, had to rescue us with their farm truck and 30 foot trailer. They both turned out to be the best guides we could ask for. Never will we forget mud bogging (sometimes in reverse) with them down country roads to installation sites. One day an installation was canceled and we had some free time to explore the rim of Canyon De Chelly, right in the backyard of some very kind Dine elders for whom we did installations.

Emerson's daughter, Ashleigh, took us on a few scenic drives after work. One particularly memorable one was to the "Crack of Dawn" rock on the road to Farmington. There are a lot of rocks on the

reservation that are supposed to sort of look like something. The Crack of Dawn, however, is unmistakably a giant butt.

Up in Hopi, our new friends and guides Alex, Samantha (Sam) and her family were very happy to tell us all about Hopi culture and traditions -- making piki bread, the Kachinas, and even took us to several important Hopi Petroglyph sites, including Prophecy Rock, which predicts the World Wars and the climate crisis. Sam's sister Clanessia is an artist and made each of us a little piece of Hopi art to take with us. Our last few days, the family invited us to watch a public ceremonial dance in the village plaza. These few weeks were an experience like no other, and we feel honored to be able to help out such wonderful people with our solar installations, and are so thankful for the hospitality they showed us in return.



Stephanie, Onyx and a satisfied customer!

We saw plenty of broken solar equipment around the reservation, as Alexis warned us we would. Throughout the reservation, we only saw one home that already had functioning off-grid solar kit. Many houses were running on generators, or had kerosene lamps. Some had no wiring at all. Many of the homes where we set up kits were too rural for grid power, or couldn't afford it, or were denied grid power for political reasons. Others choose not use use grid power because of their traditions and environmental values.

Many other folks on the "rez" have tried, or knew someone who had tried a lead acid, AC-based solar kit. Tribal utilities and other non-profits have run several programs over the years installing these systems in people's homes. The batteries quit after a few short years, and people have nothing to show for it but a useless chunk of lead outside their house. At this point a lot of people consider this approach to be a waste of money.

The conventional off-grid "wisdom," which dictates that all appliances should be run through a battery bank, has real financial implications for people on the reservation. One of our new friends and supporters asked us to look at the pump that ran the drip irrigation in her greenhouse. She had a DC pump hooked up to a PV panel via a lead acid battery and charge controller. (At least it was all DC!) It worked, she said, but she was constantly buying new batteries as they wore out every few months. We realized that the pump and the panel were both nominal 12 volt, so the system would probably run just fine daylight drive. We re-wired the system for her, bypassing the battery and charge controller. It worked! She will have to irrigate during the day, but she'll never have to buy a battery again.

Folks on the reservation generally want modern conveniences like smartphones and refrigerators, but after being burned by the conventional off-grid approach, they are happy to explore alternative ways to meet these needs. Because of this flexibility, folks are very receptive to our DC Microgrid model. Most people, even those with good jobs and financial resources, have electrical needs that are pretty straightforward: lights, charging phones, refrigerators, small televisions, water pumps. All of this is easy to do with a DC Microgrid.



One of our solar panels atop a typical stone Hopi household

movement. Because the challenge of achieving a sustainable future lies not in the technology itself, but in finding the willingness to use it. This is one of the many lessons that the Dine and Hopi people can teach us.

We would like to thank Jonathan Poehler and Chris Craig for their help. Jonathan is an old friend of ours from Charlottesville, and a top-notch electrician. He and Chris came to Arizona to help provide technical and logistical support. Their help made a huge difference.

Iron Sun Boxes available for sale at LivingEnergyLights.com!



Eric, Nika and Debbie plant potatoes. Nika is the fastest potato planter on the crew!

We're excited to welcome three of our Dine and Hopi friends- Emerson, Darron, and Alex- to Living Energy Farm in the fall, to receive in-depth training on building, maintaining and repairing the Iron Sun kits. Training local people to repair the systems, and to instruct homeowners on how best to use and maintain their kits, will make all the difference in the long-term success of this program.

I'm so glad that we made the choice to promote our DC Microgrid in the Dine and Hopi reservations. It feels great to help people, and people have been so happy to get our kits and "go solar." The technology fits perfectly with their lives, and their values.

Who knows, maybe we've even started a

In these uncertain times, energy security is becoming a pressing concern for a lot of people. With the DC Microgrid systems available through Living Energy Lights, community energy self-sufficiency is simple, practical and affordable. Check out our newly revamped website. We're posting videos explaining our systems, how to set them up and how to use them. If you're not sure which one of our products is right for your household or community, we offer free consulting through email or over the phone. Reach out to us at info@livingenergylights.com, or call 540 205 9815.

We have two great new videos out that explain our Iron Sun boxes and our broader approach to domestic energy use at LEF.

Assembly and Use of an Iron Sun Off-Grid Solar Kit can be found at:

https://youtu.be/3RCMWe_cm-I

The second video, *How to Never Pay an Electric Bill*, is an overview of the energy systems we have at Living Energy Farm. It can be found at

<https://youtu.be/N5Wk7inoIxI>

“Social Distancing” at Living Energy Farm

In response to the coronavirus, we're following the advice of the CDC and distancing ourselves from the rest of the world, at least physically. Other than the kids staying home from school, life is not all that different from usual. We're getting ready for spring, starting seeds and transplanting, spending more time outside as the weather warms. We're doing more work online, marketing our Iron Sun boxes and starting a media campaign to promote our DC Microgrid model. We've got nine adults and three kids at LEF these days: Brenda, Rachel, Eric, Alexis, Dixie, Oliver, Debbie, Jessie, Stephanie, Rosa, Xander and Nika. It's enough people to keep the social scene fresh and interesting. Quarantine is not too bad when it's springtime, and you've got other folks in it with you.

As we head to print, the impact of the virus is growing exponentially in dozens of countries around the world. History is changing before our eyes. We surely are the lucky ones. The health impacts, as well as economic fallout, will reverberate for a long, long time. But as the pandemic wanes, what then? Back to business as usual? The industrial economy is unsustainable. We have been told that we have to destroy the environment to sustain "progress" and a modern lifestyle. We are lead to believe that renewable energy is prohibitively expensive, and that it can replace fossil energy in the existing economy. None of that is true. LEF has pioneered some tools that allow a very high standard of living with very little energy.

Our economy is polarizing, as is our politics. The globalized world we live with now is designed to maximize profit by flying resources and people from areas of the world where wages are much lower. That's about the concentration of power, not meeting human needs. Our air travel system is a horrible contributor to climate change, an extremely effective way to spread viruses, and an integral part of the globalized economy that concentrates wealth at the top.

There are other options. There is a political feeding frenzy starting to soak up the federal money being allocated to stimulate the economy. Such resources would be more than enough to fund a transition to a sustainable economy. Focusing on the beauty of that which is around you, building communities that can sustain themselves and support each other, would allow us to live with much lower risks of contagion. Self-determined communities would allow us to live gracefully and sustainably in a more equitable world. As the old order is increasingly strained, we need to have tools in place to transition to something better.

The donations we received to take our DC Microgrid to Arizona made that project possible, but they also fell short. We have used our modest, precious savings to make that happen, because we believe this technology can help humanity. Good conservationist design and DC Microgrids make coal mining, uranium mining, natural gas fracking, and industrial solar unnecessary. We are making progress on farm-grown fuel that would allow communities to run small, mobile machines -- tractors, harvesters and the like. We have started working on a grain harvester than can be made for a few hundred dollars. This too will be an important tool the world will need as the over-centralized industrial system we have now wanes.

Please support us if you can. If you can support LEF through Virginia Organizing, please do so. (We are discontinuing the gofundme link for now.) Living Energy Lights is a separate entity in a legal sense, but the primary workers and beneficiaries are your friends at LEF. Please help us promote Living Energy Lights if you can. The Arizona project is a huge milestone, and there are many miles to go.

Articles and videos about LEF:

Assembly and Use of an Iron Sun Off-Grid Solar Kit can be found at:

https://youtu.be/3RCMWe_cm-I

How to Legally Not Pay an Electric Bill, is an overview of the energy systems we have at Living Energy Farm, can be found at

<https://youtu.be/N5Wk7inoIxI>

How to Live Without Fossil Fuel (Introductory Video) <https://www.youtube.com/watch?v=Ri2U6u8p65E>

Powering a Community with Solar Electricity (LEF has the only DC powered community that we know of, here's how it works) <https://www.youtube.com/watch?v=FvdExgvHnRI&t=23s>

The Best Way to Store Off-Grid Energy <https://www.youtube.com/watch?v=2wOxQ3sL9zc>

Batteries that Last (almost) Forever <https://www.youtube.com/watch?v=dfrgLsyFs0E>

Virginia Homegrown created a program at LEF (the LEF part starts at the 29 minute mark in the program)

<https://www.youtube.com/watch?v=MDGP0C9MIzU>

International Permaculture has done 2 articles on LEF. One is in issue #93, Autumn 2017, and the second is in issue #94, Winter 2017. See <https://www.permaculture.co.uk/>

Article about LEF at the Atlantic Online Magazine

<https://www.theatlantic.com/politics/archive/2017/01/anarchism-intentional-communities-trump/513086/>

Article about LEF in The Central Virginian

<http://www.livingenergyfarm.org/cvarticle.pdf>

LEF on CNN

<http://www.cnn.com/interactive/2015/09/us/communes-american-story/>

Cville weekly in Charlottesville VA

<http://www.c-ville.com/off-grid-model-environmentalism-made-easy/#.VcHobF054yo>