

Living Energy Farm

October - November 2019 Newsletter

Taking the LEF Model Abroad

We have built and wired about 90 solar electric boxes for our solarization projects in Arizona and Ghana. We had planned to provide solar electricity to 100 homes in Arizona. At this point, we are going to shift a few of those solar kits to Ghana, and Jamaica. These are the locations where we have other people wanting to establish pilot projects. We may shift a few kits to other locations in the Caribbean and Latin America as opportunity allows. Stephanie from LEF spent a week in Arizona meeting with people from several indigenous organizations. She made face-to-face contact with some of the people we are going to be working with, which is very good.

Much to our frustration, our battery supplier has informed us that we will not receive our first battery shipment until mid January. Not much we can do about it, and future shipments should move much more quickly. The battery company is making batteries custom for us, and losing money (at least for now) in the process. We are all hoping we can make our small solar kits available worldwide.

But for now, we are looking at installing solar kits on the high mesas in Arizona in February. We have been talking to folks who live out there about winter weather. They tell us it might be fine, or not. So we will have to wait and see. We are still about four thousand dollars short of what we need to make the project happen. We will make it happen one way or another, but **if you can support us, please do.**

<https://www.gofundme.com/climate-justice-now>

Tax deductible donations can go to <https://donatenow.networkforgood.org/1388125> Designate Living Energy Farm



Piles and piles of solar battery boxes, bound for the Navajo Nation, Ghana, Jamaica, and possibly other locales, stacking up in our workshop.

People and Events at Living Energy Farm

We continue to have a lot of people interested in LEF. The presence of talented and motivated people at LEF allows us to get more done. Our house is often full. We have an excellent group of focused, fun and hardworking people, which is great. Our ninth anniversary celebration was one of the largest events we have ever had at LEF. We had an incredible attendance, with kids events, music and good food late into the evening.

We appreciate the energy that Brenda and Stephanie have put into outreach and organizing events at LEF for our wider community. It's important that we challenge the myth that off-grid living is a big sacrifice. We have a lot of fun too!

Celebrate Winter Solstice at Living Energy Farm

Speaking of fun, our next event is happening soon, when we celebrate Winter Solstice at LEF on **Saturday, December 21. Events begin at 1:30 and run till 5:30.** Winter Solstice is an especially poignant celebration for those of us who live off grid, with our energy needs provided by the sun. The short days and lower angle of the sun has an impact on how we live our lives on a practical and also spiritual level. At winter solstice we celebrate the returning of the light. It is a time to slow down, look inward, and also celebrate our inner light.

The events we are planning include: Solstice Ceremony, A Visit from the Solstice Elf, Gingerbread "Homestead" Making, Interactive Hand Puppet Story, Live Holiday Music/Sing-along/jam (bring your instruments)

You can stay for a potluck dinner and a fire circle in the evening, and spend the night if you want (bring your own bedding).

If you want to make a Gingerbread Homestead with us, please email us to reserve your spot, so we will be sure to have enough supplies. A donation to help with the supplies would be appreciated, \$3.00 to \$6.00 suggested (but not required). Pay when you arrive, or through PayPal to Livingenergyfarm@gmail.com. Please RSVP if this is your first time at the farm, and be aware that it is a half mile walk from the parking lot to the house. (Address is Living Energy Farm, 1022 Bibb Store Rd, Louisa VA, 23093)



Great persimmon harvest this year! These are Nikita's Gift grafted onto wild persimmon sprouts, and a big food source for us.

Cooking at LEF

Biogas has been up and down for us. We are trying to learn the best way to operate it, and how it might (or might not) fit into the LEF model of simple, durable models of sustainable living. One of our interns, Jessie, has adopted our biogas digester, and is trying to figure out how to get a more predictable output from it. She's named him Seymour, and he's always hungry.

Here's what we have learned about biogas so far. Biogas is like having a flock of animals. Animals need food and tending regularly, as do the archaea in the digester (the micro-organisms that make methane). The archaea also need to be kept warm. We knew that, and we insulated our digester well, and put a solar heating coil under it tied to a flat plate collector normally used for solar water heaters. Even with good insulation and solar heat, the temperature in the digester is oscillating more than we had hoped. A biogas digester emits lots of foul odors, so there's no hope of putting one of any size indoors. Another big lesson is that if you let the archaea in the digester die off, it can take quite a number of weeks to build back up the population using manure from ruminants. And a good sized digester needs quite a lot of inputs. If you have your own single family homestead,

you probably don't want your own digester, especially if you live in a colder climate. It's just too much work.

The whole issue of who manages the digester, and how, is a big one. We have been told by people who have worked with setting up digesters in non-industrial countries that the work of collecting animal dung for the digester usually falls on the already overburdened women of the household. At LEF, we have been swapping roles around, but that inconsistency really clobbered the balance in our digester. It wasn't fed consistently, the archaea population collapsed, and we haven't been able to rebuild it properly even after a couple of months. In theory, the biogas could supplement the daylight drive solar cooking really well. It did back in the summer. We went for numerous days cooking on nothing but solar and biogas. That was great! More recently, gas production has been low. We're not sure if this is because the archaea is unhappy or because the temperatures are too low. The point of setting up a moderately sized kit system was to learn from our mistakes before we invest in a larger, community sized system. Hopefully, that's what we are doing.

We continue to use our high-voltage daylight drive system to cook using hot plates tied directly to our photovoltaic panels. It works well, especially in the summer. Historically, one would never dream of making heat using photovoltaic (PV) generated electricity. But the price of PV panels has fallen dramatically. Certainly, the mainstream notion that we can heat the millions of poorly insulated American homes using large scale PV and industrial lithium battery storage is simply delusional. But for us, direct use of PV electricity (not stored in batteries) to make heat is practical, and it is certainly easier to achieve very high temperatures with electric heating elements than with solar thermal collectors. We are looking into a hybrid of the high-temperature solar idea we worked with for several years and PV powered cooking we are working with now. In theory we could use PV to heat and store mineral oil, and then use that oil to transfer heat to cook food in small steam-jacketed kettles. It might be much easier than high-temperature solar using parabolic troughs or dishes. We are looking at the numbers. Stay tuned.



Orchard ladders are expensive to buy, so we made one! This one works great -- lightweight, stable, and effective.

In Defense of Wheat

Of all the staple crops we grow and eat at Living Energy Farm -- corn, wheat, beans, potatoes, sweet potatoes, and peanuts -- none needs defending as much as wheat. Wheat has gotten a pretty bad rap in recent years. As many as 20% of Americans identify as gluten intolerant. In double blind studies, between 1 and 6% (estimates vary) of Americans turn out to actually have Celiac's disease or be gluten intolerant. Why do so many people think they are better off without wheat?

Commercial wheat products are a far cry from wheat itself. It's hard to find commercial wheat bread without white flour, which is highly refined, has an elevated impact on blood sugar, and has very little nutrition beyond calories. (Read the labels -- even products labeled "whole grain" usually have white flour as the first ingredient.) Also, several food additives that are banned for use in many parts of the world are commonly added to commercial baked goods in the US. These include potassium bromate, azodicarbonamide (ADA) and BHA, all of which the International Agency for Research on Cancer consider to be possible human carcinogens. Also used in commercial baked goods are dough conditioners, emulsifiers, oxidizing chemicals, bleaching agents (including nitrogen peroxide, which is banned as a food additive everywhere except the US and Australia),

reducing agents and preservatives. (Incidentally, most commercial “gluten free” baked goods are not much better, as they are made from processed starch, and are usually full of chemicals.)

At LEF, we grow and mill our own wheat. The list of ingredients in our sourdough bread is: freshly milled whole wheat flour, water, levain (prefermented flour and water), and salt. That’s it.

Starting with fresh milled flour also makes a big difference. Most of the nutrition in a whole wheat berry is volatile once it is ground. The oils in the germ go rancid within a few days at room temperature. Beneficial enzymes and some vitamins begin to break down quickly after milling. Fresh milled flour is alive, and the yeasts and bacteria in a sourdough starter love it. The fermentation happens more quickly if a starter is fed fresh milled flour, and the rise is improved.

While whole wheat can be enjoyed in many unfermented forms (pancakes, biscuits, homemade pasta...), it reaches its full nutrition and flavor potential in long-fermented sourdough. The lactic acid produced in the long fermentation process makes many of the vitamins in wheat more accessible, and breaks down the protein (gluten) before baking, making it easier to digest. Also, the impact of long fermented, whole grain sourdough bread on blood sugar is much gentler than quick rise bread, making it more suitable for diabetics (and everyone else). Many of our many gluten intolerant friends have been able to come to our farm and enjoy bread again without any negative reaction. Perhaps it’s not the gluten itself that is the source of widespread digestive trouble.



Homegrown, home ground, long-fermented bread is a staple at LEF. The flavor is out of this world! And people think of our lifestyle as a hardship...

Living Energy Farm is a project to build a demonstration farm, community, and education center in Louisa County that uses no fossil fuels. For more information see our website www.livingenergyfarm.org, or contact us at livingenergyfarm@gmail.com or Living Energy Farm, 1022 Bibb Store Rd, Louisa VA, 23093. Donations to the Living Energy Farm Education Fund are tax deductible.

Articles and videos about LEF:

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>

First video on youtube

<https://www.youtube.com/watch?v=ppTBO8d6jhY>

Second video on youtube

https://www.youtube.com/watch?v=wdSX_TIYkD4

Video on vimeo

<https://vimeo.com/128744981>

Slideshow produced by Alexis a while ago

https://www.youtube.com/watch?v=4x_C3iScoAw