

Living Energy Farm
April--May 2023 Newsletter

LEF in the News

There have been two articles published about LEF recently in the media. Matt Dhillon at Cville Weekly did one of the best brief summaries of LEF we have ever seen. The article is entitled *Power Shift, Award-winning Living Energy Farm Makes Living Off-grid Sustainable*. It is at

<https://www.c-ville.com/power-shift>

Truthdig did an article on LEF by Megan McGee, an excellent review of our work in Puerto Rico. It is entitled *Decolonizing Puerto Rico Through Solar Power*. It's at

<https://www.truthdig.com/articles/decolonizing-puerto-rico-through-solar-power/>

We continue to post new videos on Youtube. The latest is *Solar Power Systems That Last Forever*, focused on our solar powered kitchen. See

<https://youtu.be/6XiHClx8d2Q>

DC Solar in Puerto Rico

We've been getting a lot of positive feedback about the DC systems we installed in Puerto Rico last winter, along with requests for similar systems from other individuals and community centers. We're working on building solar kits and fundraising for another round of installations, probably in January and February of 2024. It's likely these installations will be mostly in Maricao, a mountainous municipality which is the poorest in Puerto Rico. We're collaborating with a team of organizers from this region, including Jacqueline Pérez from Fundación Bucarabón, Andrew Hermann from Monte Azul, and writer Aurora Levins-Morales. Our goal is to install DC battery kits, direct drive refrigerators, and DC pumps for up to 15 working class families. We're moving forward on a purchase of direct drive refrigerators for this project. Andrew and Aurora are working on fundraising, as we don't yet have the funds to cover the shipping and installation.



Debbie and Alexis with Jacqueline Pérez, director of Fundación Bucarabón, where we set up this direct drive refrigerator last winter. Now Jacqueline is working on connecting us with families in her community who need this equipment.

Sponsor a Boricua to Learn about Direct Drive DC!

We're pleased to be working with El Departamento de la Comida (El Depa) once again this summer, on a second DC Solar Immersion and Training for Puerto Ricans (Boricua), to be held at Living Energy Farm. El Depa is a non-profit based out of Caguas, Puerto Rico that promotes food and energy sovereignty. (We installed a DC Microgrid in their community kitchen in Caguas last winter.) Read more about the upcoming immersion/training program on their website: https://eldepartamentodelacomida.org/blogs/news/convocatoria-2da-inmersion-solar-dc?_pos=1&_sid=06694a0e2&_ss=r

It costs about \$1,000 per participant to bring someone from Puerto Rico to Virginia to train. We want to offer this program free of charge to ten participants. Please consider contributing to El Depa's fundraiser: https://www.paypal.com/donate?campaign_id=RYZE5X6KP2TF4

This year, the program is going to include online classes and a week of in-person training focusing on skills required to install the DC systems. We're asking that participants contribute at least 30 hours of follow-up



Vidal Carrion, who participated in last year's training program, has set up direct drive appliances and nickel iron batteries in his home. He is one of a handful of Boricua who may distribute durable solar equipment as we build awareness of our approach.

Teaching Kids About Renewable Energy

We have been doing a kids' shop class for kids from neighboring intentional communities, as well as Rosa and Nika who live here at LEF. Alexis is teaching metalworking and mechanics. We believe it's important for kids to learn the skills they need to build themselves a sustainable future. And it's fun, too! We have been making chess pieces (on the lathe) and a metallic maze (on a milling machine). Now we have started converting an old gasoline engine to run on steam. That is relatively simple actually, and a project we have been thinking about undertaking for our own reasons. Such an engine will have very poor efficiency, but the advantage of steam is that you can use anything that burns to make a machine move. If you think of all the machines in modern times (cars, trucks, trains, etc), then we can't go back to steam, and a small gas engine is a pretty crummy steam engine. But if you think of emergency power on a small farm, then such a simple conversion might make some sense. It's a fun project with the kids, and one that might be useful in the future.

Simplified Combine

Alexis has been working full time on trying to make our simplified combine harvester work. This machine is important because it is much simpler than any combine harvester ever

volunteer work, helping with installations in Puerto Rico in 2024. Millo Huertas and Eva Campbell, who worked with us on installations in PR last winter, will be coming to the training and are also doing a lot of the organizing work. Tara Rodriguez Besosa, who organized last year's training, is involved this year as well, and will be coming to the farm to help with interpretation. We're so excited to see everyone again and continue to push this movement forward.

Solar Equipment Available through Living Energy Lights

We have solar refrigerators, pumps, and 12V lighting and charging kits in stock and available for sale through our non-profit solar company, Living Energy Lights. Profits from these sales go directly towards subsidized installations for people who can't afford the full price. Find out more about our products at <https://livingenergylights.com/>



Rosa holding a solid aluminum chess piece that she and the other kids made.

marketed. It could make small scale grain farming more economical for farmers all over the world. I (Alexis speaking) think it is our most important invention.

At LEF, we made a mistake this year in planting our wheat. We were having disease issues in the variety we were growing previously, so we decided to try a new variety. Unfortunately, we did not do adequate research on the new variety, and now we have a wheat crop that is four to six feet tall. Modern commercial wheat is mostly about 18 inches tall, which is much easier to harvest. This tall stuff at LEF has forced us to modify the intake on our prototype combine. I suppose the silver lining is that we now have a machine that can harvest grain of most any height. At this point, the machine works. We have “proof of concept,” though it needs some more tinkering.

We are still considering whether or not to patent the machine. Our first priority is to make sure the technology is available to small farmers. But if the machine is ever mass manufactured, it would be highly beneficial for us to make money on that to use for spreading knowledge about the combine, as well as our DC Microgrid. That issue is not resolved, but we are looking at options.

Farm Update

It’s hard to say how much of weather is related to climate change, but it has been a peculiar spring. We had a warm winter, and now a very cool spring. Debbie has been focusing on solar projects, so Carrie, Brenda, and Otto are running the farm and taking care of the gardens this year. We have the usual crops of grains and vegetables, including the largest sunflower crop (for seeds) we have ever grown right in front of the house. That will be a glorious site when they bloom! So far our crops look good and rainfall has been sparse but not in severe shortage. Overall the season is going well. The spring garden is in full swing, and we are eating well. The orchards have not fared as well. We lost a lot of fruit to late freezing weather, though the persimmons and blackberries always pull through. We are still eating lots of dried persimmons from last year, which are super tasty.

Alternatives to Deforestation

Our work in Puerto Rico has been a success by most any measure, except it is clear that the uptake on people adopting our technology is going to be a long, slow process. The DC Microgrid can provide energy services without coal, nuclear, natural gas, or industrial solar. If you think that last category is benign, think again. We have lost thousands of acres of land to industrial solar fields in our county (Louisa) alone, and we are but one county of hundreds in the southeastern U.S. There are now more than a dozen applications on the books to build more solar fields in our county that will destroy thousands more acres of hardwood forests to build more solar fields. Over six thousand acres have been destroyed already within a few miles of LEF. “Solar strip mining” may be a provocative term, but if the forest is destroyed and paved over, is it not accurate?

And deforestation is only one environmental cost of industrial renewables. An attempt to power American consumerism with solar panels and batteries would require mineral extraction on an unprecedented scale, and would be catastrophic for many indigenous and frontline communities. According to the article “*Green Tinted Glasses*” from Truthdig, “The quantity of



Green wheat berries harvested by the simplest combine ever built (we think...).

minerals required for the presumed energy transition will be equal to all of the minerals ever consumed to date in the course of human history.” For example, “over the next 22 years humanity will have to mine more copper — some 700 million tons — than has been mined in the last 4,000 years.” Maricao, Puerto Rico is currently being targeted for mineral extraction, mostly because of the demand for electric cars.

There is an alternative. The response to our work in Puerto Rico has been encouraging, and we’ll keep that project moving. Closer to home, where staying warm in winter is central to any energy system design, we would like to build (or retrofit) off-grid “condos,” buildings with LEF’s thermal and solar electric systems that can keep people comfortable without devastating the forests. Is that not a far smarter approach than destroying our forests in order to pump energy into badly insulated houses and badly designed appliances? LEF’s energy approach is *NOT* more expensive, but it does represent changing our relationship with energy. We are looking for funding to make the alternative energy systems more widely available. In general, people just want to be comfortable. They want to be warm in the winter, to eat cooked food, to have lights at night. But they don’t understand their options. We are going to keep trying to open that door wider, to help people understand that we don’t have to destroy the forests to provide for our basic needs. Please support us if you can.

*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 Institute are tax deductible. **To make tax deductible donations, do not go to the Virginia Organizing website, go here instead: <https://donatenow.networkforgood.org/1388125>** Make sure to designate your donation for Living Energy Institute (formerly the Living Energy Education Fund).*

Articles and videos about LEF:

Decolonizing Puerto Rico through Solar Power

<https://www.truthdig.com/articles/decolonizing-puerto-rico-through-solar-power/>

Megan McGee, a former LEF intern, wrote this article about the installations we did in Puerto Rico in early 2023.

Power Shift, Award-winning Living Energy Farm Makes Living Off-grid Sustainable

Matt Dhillon at Cville Weekly did one of the best brief summaries of LEF we have ever seen. The article is entitled *Power Shift, Award-winning Living Energy Farm Makes Living Off-grid Sustainable*. It is at <https://www.c-ville.com/power-shift>

How to Never Pay an Electric Bill

<https://www.youtube.com/watch?v=N5Wk7inoIxI&t=201s>

This video is a walk-through of our energy systems at Living Energy Farm. It is a concise summary of how these systems work, and why they are not in common use already.

Solar Installations In The Navajo (Dine’) And Hopi Reservations, March 2020

<http://livingenergyfarm.org/solar-installations-2020/>

This is a photo essay about our project to bring durable solar energy systems to the Dine’ and Hopi Reservations, where thousands of people live without grid power involuntarily.

Support Living Energy Farm’s Climate Justice Campaign, and Bring DC Microgrids to People Who Need Them

<http://livingenergyfarm.org/support-our-climate-justice-campaign/>

This is an updated web page describing our broader social justice ambitions.

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>