Living Energy Farm

September - October 2017 Newsletter

LEF is launching our Wholistic Sustainability Weekend Immersives!
Have you ever seen a 100 year old battery that still works? Would you like to learn how to wire a homestead using DC electricity? Would you like to learn how to grow all of your own food in organic gardens and orchards? Would you like to be part of a movement to create sustainable villages? Come and live with us for a weekend at LEF, and we will conduct a series of workshops while you are here to help you understand how to live comfortably and happily without fossil fuel. **First immersive is Jan 19 - 21**, at LEF, 1022 Bibb Store Rd, Louisa VA 23093. Contact Brie at 443-417-7328, briennagerard @gmail.com, or livingenergyfarm@gmail.com See http://livingenergyfarm.org/workshops/2018jan19immersive.html for more information.

Sunnelin, Rosa, and Nika holding colorful ears of Kentucky Rainbow corn, and Olan with a persimmon.

LEF in the News
Two articles have been written about LEF in the last month. The local paper in Louisa County is called ***The Central Virginian***. As we head to press, we are told a new article about LEF will be out very soon. Their website is http://www.thecentralvirginian.com/ (They have written about LEF previously, see the bottom of the newsletter.)

Permaculture International is an extensive, very well produced permaculture magazine from the UK. They have done articles in issue #93, Autumn 2017 and issue #94, Winter 2017. The second article is about LEF's DC electrical systems. One either has to sign up for a free trial or buy a subscription to view the magazine. The website is https://www.permaculture.co.uk/

Please Help Us Help You

The environmental price of the fossil fuel economy is huge. There are coal mines in West Virginia that cover as much area as New York City. Fracking natural gas is causing massive methane leaking into the atmosphere, and is poisoning groundwater across America. Nuclear power is leaving behind waste that will remain toxic for longer than humans have existed as a species. As much as grid-tie solar electricity has a green glow about it, the reality is that the coal, nuclear, and natural gas generating stations all have to remain fully operational to cover electrical load when solar and wind are not available. The reality is that "renewable" energy is intermittent, and when we simply add it on to the existing industrial economy, we add another enormous environmental expense.

There is another way. If all of you reading this started moving your lifestyle to how we live at LEF, we could shut down the coal plants, and the nuclear plants, and the frack gas wells. All of it. Building integrated village-level energy systems would generate more jobs than those lost in the mines and power plants.

Rosa with some of our Persimmon Harvest

At LEF, our home stays delightfully warm all winter. We can take a hot shower any time we like, 365 days a year. We can surf the internet any time we like. Our appliances look a bit different than a conventional house or kitchen, but we have the tools to live easily and comfortably. Our model is much simpler, cheaper, more durable, and more effective than conventional "off grid" design, and it is radically more efficient than fossil energy supplemented by grid-tie solar electricity. The build-out cost of our home is about $12,000 per person. To cover all of our residential needs, as well as providing power to support our (largely) self-sufficient economy, our current electrical supply is 200 watts per person. At current prices, that's $300 dollars per person, and solar electric panels last for decades. Our electrical storage in nickel-iron batteries cost an additional $100 per person. (The average grid-tie solar rack has 10 - 20 times more per-capita power as we use at LEF, and that does not included the rest of grid power infrastructure.)

As much as we may be alarmed by the

political chaos and denial now sweeping America, the mega-corporations and their politicians could care less what we think as long as we remain utterly dependent on their products and keep giving them our money. History is clear. There is no liberty absent an economy where the common people are economically empowered in their own communities.

We feel like we have found an effective model that represents a significant step forward in addressing climate change, and species extinction. We are largely economically self-sufficient. We are growing a lot of our own food, and we live on a plant-based diet. We are now living in an age whereby humans are creating events that will have future impacts on a geological time scale. Earth has suffered five great extinctions over the past 4.5 billion years, caused by massive meteorites and other Earth-changing events. Humans are now causing a sixth great extinction. If you include LEF's organically grown, plant-based diet as a model for broader social change, we could stop climate change and the human-induced extinction of species in their tracks. We would, incidentally, save our own democracy from extinction as well.

As much as we like to think of ourselves as agents of our own free will, the reality is that we all live in the context of the larger culture around us, the group mind. The moods and fashions, prejudices, fears, ideas, and hopes of the people around us have an inexorable impact on how we think. In short, we all think together. We do not pretend that we have any final answers at LEF, and we are certainly working to improve our model. We greatly appreciate the people who have donated money to our education fund, and put their sweat and good will into our project.

As much as we appreciate the people who have supported us, as much as we recognize the countless worthwhile efforts of activists and thoughtful people around the world to recognize and address these issues, it often feels like we are all waiting for someone else to solve the big problems. Some new technology, some compelling social movement, some dashing new leader that can sweep us off our feet. We are the new technology. We are the social movement. We don't need magic. The answers are in our hands. We simply have to take the tools we have, find some other people to help us, and get it done. It's time for you to move the group mind, not wait for it to move you. The longer you wait, the more damage is done to future generations, of humans, and of the countless species who now live under our dominion. The time has come for you to get involved in helping us create LEFs in other locations.

LEF Needs an Outreach and Social Media Intern
We want to reach out in as many ways as we can so people can understand that -- yes, we are not just a bunch of pretentious ecofreaks -- we really have found a set of tools that can allow people to enjoy the comforts of modern industrial society with a tiny fraction of the environmental pricetag. Want to come stay with us, promote events, and cruise about on social media with solar-powered electrons? We want to publish articles, put our material on social media, make short films, create conferences. For interns, we provide room, board, a stipend, and good company. Send us an email at livingenergyfarm@gmail.com

LEF Needs a Technical Intern
Last year we advertised for a technical intern, and Eddie answered the call. He is still involved in the project, working on homemade nickel-iron batteries in Pittsburgh. (Which could, by the way, have a big impact on the lives of millions of poor people around the world.) A technical intern is someone who helps us build new devices. The next two projects on our agenda are a high-temperature solar storage system for cooking, and continuing our work on farm-grown fuels. It would be helpful if you had some basic skills, but we can train you even if you have little skill. We will ask for at least a six month commitment if you are not skilled. Send us an email at livingenergyfarm@gmail.com

And How are Things at LEF?
Great, mostly! We had a wonderful open house Oct 21 - 22. Lots of people came by. The weather was beautiful.

The kids made some major renovations to the sandpile. We explained how we do things to lots of interested people.

We're wrapping up the agricultural year, with generally good yields despite some challenges. We made significant steps this year towards food self-sufficiency, as we added wheat, eggs, and beans to our list of home grown staple foods. But the deer did more damage than any year since we have been here. And we had a drought through most of the summer and fall. We pumped more water than we ever have, though our solar powered well did exactly what we needed it to do. (Which was to pump about 10,000 gallons of water a day...) The dry weather was a benefit come harvest time. We brought in record crops of peanuts and lima beans. The work is winding down as we shell and winnow the proceeds of our harvest.

Micro-Grids?

The idea of solar powered "micro-grids" is spreading. The devastation this year from the hurricanes in Puerto Rico and other Atlantic islands has caught our attention at LEF, as well as that of a number of solar energy companies. Tesla Inc. and a number of other companies are setting up demonstration projects in Puerto Rico to supply energy to small areas and emergency facilities on the island. As far as we know, these systems are all based on providing AC power to existing infrastructure using lithium batteries. The weaknesses of this approach is that it is very expensive and complex compared to what we are doing at LEF. The approach at LEF can provide, in most cases, similar services for one-tenth the cost. The lithium batteries used by Tesla and the others will die in 10 years. It's certainly an improvement over the large-scale industrial grid, and we wish the micro-gridders luck, but we are concerned that their approach seems to (once again) limit renewable energy systems to a privileged few.

We are concerned that is that it is not easy for people do not understand what we are doing at LEF. To our knowledge, no one has ever built a community scale high voltage DC micro-grid, combined with a design process intended to minimize electricity storage (what we do at LEF). The idea of using some industrial technology, but finding the right balance of tools and energy systems to keep things cheap, simple, and durable does not fit with the modern fascination with progress.. Our current plan is to spend the next year consolidating our model at LEF. We will be producing printed materials and (hopefully) some short films to explain how things work at LEF, and why what we do is different from other approaches to sustainable living.

The big difference between the LEF model and most of the other folks working in renewable energy is essentially class. It is easy enough for people who live in wealthier countries to forget, or to never notice, that three-quarters of humanity lives on less than five dollars a day. The big difference between the LEF model and the other micro-grid systems is that ours could be economically viable even for people of modest means. If we could start establishing working models in other parts of the world, people would start adopting our model simply because it works. Big changes always have to start small.

The current industrial economy was built on the steam boiler. For boilers, the bigger the better in terms of efficiency per unit of output. And it would not have worked for peasants in the early industrial revolution to build their own boilers. So big boilers were built to run AC generators that pushed power out hundreds of miles -- which is the industrial economy we have now. (The benefit of AC is that it travels well.) The solar powered economy, with photovoltaics as its backbone, is fundamentally different. It is modular. You can add or subtract watts one panel at a time. There is no need for huge, centralized power systems. Once enough people understand the LEF model, a lot could change. Solar power in its modern form represents a miraculously powerful and flexible energy source, but shackling it to the old boiler economy destroys its potential. Such an approach leaves energy available only for the wealthy.

We will continue to work with groups in the U.S. who have expressed an interest in LEF's model. We are

assessing what it would take to transplant LEF's model to places like Puerto Rico, to actually go abroad and do the work ourselves. For us, it is important that we transplant a philosophical model, as well as a set of tools to empower that model. We will keep you posted as to how that evolves.

In the meantime, please support us if you can.

Articles and videos about LEF:
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

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.