

Living Energy Farm
March 2026 Newsletter

DC Solar Training Program happening in central Vermont this July

We're pleased to announce that our 2026 DC Solar Training program will be happening on July 24, 25 and 26 in Montpelier, Vermont. [Click here for more details, and to find out how to apply.](#)

This year, we're going to be installing a DC Microgrid in the common building of an off-grid tiny home village, in the mountains of central Vermont. This program will combine classroom-style learning with hands-on training on a real installation, which will include a direct drive refrigerator, insulated solar electric cooker, and 12VDC circuit for lights, fans and device charging. Spots are limited, and applications are due June 1.

Radically Inexpensive Solar Grain Grinding in Sub-Saharan Africa -- Two Videos

Most of the rural expanse of Sub-Saharan Africa has no grid power. Many people rely on flour ground by stationary diesel engines powering hammermills. Those mills are expensive to run and rely on a daily supply of diesel. Millions of dollars have been spent to try to run those hammermills on solar power. As we discussed in the last newsletter, that results in very sophisticated and expensive answer to foolish question. The wise question is to figure out how to run a burr mill on solar power.



Community House in Montpelier Vermont where our summer solar immersive training will happen.

To prove the point, we did some test runs using a \$70 mill at Living Energy Farm while overloading our energy system. Like putting an extra passenger in a car that is already making a journey, adding a mill to our DC Microgrid is all but free in terms of energy supply. *The result was that we made corn flour at 20% of the rate of a diesel mill while our solar electric system was running at a nominal 250% load.* It would be fairly cheap to provide and power solar burr mills in Sub-Saharan Africa. See all this works in our new videos:

[Grain Grinding with Solar Energy Executive Summary \(7 min\)](#)

[Grain Grinding with Solar Energy \(30 min\)](#)

Direct DC Solar Microgrids for Maximum Access, Affordability, and Resilience

In March, we worked in cooperation with Pete Schwartz (from Cal Poly, currently Fulbright Scholar at Muzuzu University in Malawi), Richard Blanchard (Loughborough University, London) Rachel Fiedler (PhD, Muzuzu, Malawi), several other academics at Muzuzu, as well as solar installers and other interested parties in Malawi to submit a grant for \$300,000 for building direct drive solar installations in Malawi. The grant is titled *Direct DC Solar Microgrids for Maximum Access, Affordability, and Resilience*. This was a by-invitation grant application, which hopefully means our odds of getting it are at least decent. Wish us luck.

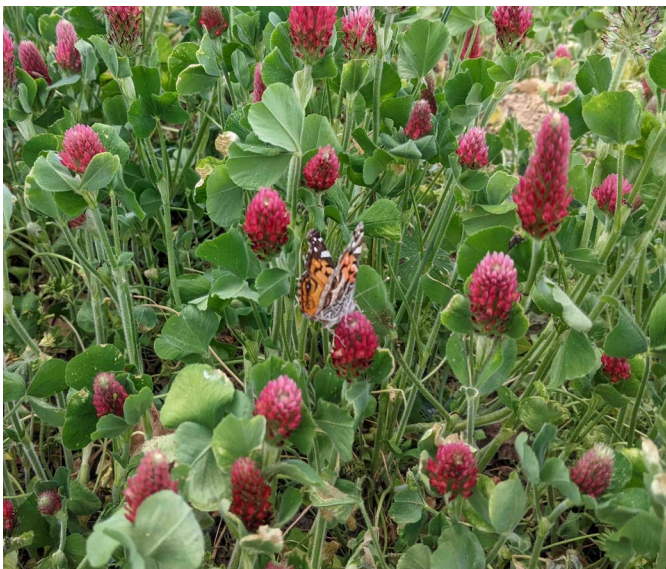
If the grant fails, we will be using our own funds to send Ryan Marienthal from Cal Poly to install solar powered grain grinders using our own resources. The grant will certainly make many more things possible, and make projects move dramatically faster, but we are moving forward either way.

How to Get Involved in Creating a Real Transition Away from Fossil Fuel

Here at LEF, we've been watching the unfolding events in the Middle East with fear and dismay. This shocking war, and the global energy crisis it has caused, may be a dress rehearsal for the "great simplification," or it may be the real thing. In either case, it has exposed without a doubt the world's continuing and complete dependence on fossil fuels.

It's clear that no renewable "transition" is coming along to free the global economy from the grip of fossil fuels. And it's not for lack of production, which is happening on a massive scale outside the US. China's installed solar capacity is roughly the same as the entire output of the US electrical grid (1.2 terawatts!), and yet they remain the world's largest source of carbon emissions. Growing demand for electrification infrastructure threatens to create shortages of critical minerals, like copper and silver. Despite all this, 86% of the world's primary energy demand is *still supplied by fossil fuels*.

The economic and climate forecast gets worse every day, and it's clear that more EV's, solar and wind are not going to save us. Our only hope is to learn how to **need less energy**. That's where the DC Microgrid comes in. It's not an add-on technology. It's a design process, a set of



Natural gas is critical for global nitrogen fertilizer supplies -- which we use none of. Thank you spring, thank you nitrogen fixing clover, thank you butterfly.



How do you run a blockade on international gas supplies through the Strait of Hormuz with only a pitchfork? Ask Ian, who takes care of Seymour, the biogas digester at LEF these days. (Hint, that blue bag is full of biogas.)

principles that empowers us to build village-level energy systems that can meet our needs with dramatically less energy and material throughput.

If the current crisis has woken you up to the urgency of the situation, and you're ready to make energy demand reduction a priority in your life, here's a few suggestions for next steps.

The best way to learn about the DC Microgrid is to see it firsthand, ideally live with one. If you haven't been to LEF yet, reach out to us about taking a tour- dates are posted on our website- or staying with us for a few weeks as a [residential volunteer](#). The harvest season (August through October) is a particularly good time for us to host volunteers, because there's plenty to do.

As we mentioned above, you are invited to apply for our three day DC Microgrid training in Vermont in July. We like to combine our training programs with real-life installations. Are you considering installing a DC Microgrid for your home or community? Would you like to work with the Living Energy Lights team to make your installation into a learning opportunity for others? If so, [please fill out this form](#) and we will consider making your project a future training opportunity.

If you can't attend an in-person event, there are educational materials on our website, Livingenergylights.com. Alexis' book, [Empowering Communities](#) has lots of technical detail about the DC Microgrid and is available for free online, or you can get a paper copy at one of our events.

Lastly, we're getting closer to the building stage of the "[off-grid condo](#)" project we've been talking about for years. We're looking for folks to get involved as investors, builders, and future residents. If you're interested, please reach out by email (livingenergyfarm@gmail.com). We'll be announcing future work parties and learning opportunities through this newsletter.

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.

Living Energy Lights is the nonprofit outreach arm of our project. Donations to LEL are tax deductible.

Click [here](#) to make a tax deductible donation to support our work. (That's the Living Energy Lights website, livingenergylights.com)

Articles, Videos, and Podcasts about LEF are [here](https://livingenergyfarm.org/articles-and-videos/). <https://livingenergyfarm.org/articles-and-videos/>