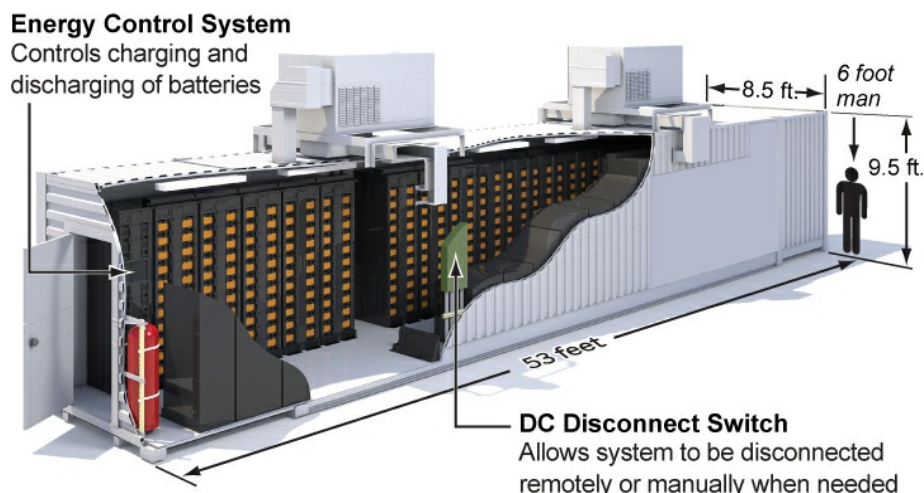


Yesterday I made an alarming discovery. I was reading the proposal by a Minnesota-based solar company calling itself Geronimo Energy which launched an Article 10 procedure with the NYS Public Service Commission to build a 950-acre, industrial-scale solar plant abutting the Village of Malone. I came across the following passage:

*In addition, the Franklin Solar Project may also include an Energy Storage System (ESS) consisting of pre-fabricated enclosures, a master site controller, batteries, Power Conversion System, fire detection, fire suppression, and HVAC systems. The ESS will be located within the existing footprint of the Project and will charge off the solar array sharing inverters and a common generator step up transformer. New ESS software offers the ability to control and acquire data from batteries, inverters, and numerous other sources, such as building load, solar output, and SCADA signals. Additionally, an increasing library of storage applications are available to provide hardware-neutral applications, such as frequency regulation, capacity shifting, and demand charge management, among other applications. The location of the potential Energy Storage System will be further identified as project engineering activities refine the electrical optimization of the facility. The outreach activities described in this PIP will also address the ESS, should this option be included in the final project design. Franklin Solar will provide additional details regarding the ESS as Project engineering activities refine the electrical optimization of the facility.*

Hmm. This prompted me to do some research into these so-called Energy Storage Systems (ESS). Basically they are large storage containers filled with batteries, with several large HVAC (Heating, Ventilation, Air Conditioning) units attached. Generally-speaking the batteries are lithium, since lithium ion batteries are the most efficient for charging, discharging, and electron storage. (Because lithium batteries are notorious for violently combusting, say, during the charging phase, battery manufacturers are trying to come up with a cost-effective alternative of comparable quality.) Here's a diagram of one of these ESS structures:



Here are several photos:



Energy Storage Systems (ESS) are the new the rage in the solar and wind energy business. (Click [here](#) for a YouTube video by GE.) By storing the energy (electrons) on-site and making it dispatchable (“deliverable”) when the grid demands it, solar and wind energy companies have solved the problem of producing superfluous energy and having to either dump it (say, into the ground) or try and find a cheap market for it far away—at a steep discount. At least this is the theory behind the ESS concept. Storage and efficient, split-second dispatch of battery-stored power is being hailed as the “missing link” in the solar and wind energy industry. (Think of the ESS as a solar or wind-plant grid within the larger, regional grid.)

This is all fine and dandy. The problem is that solar and wind companies build their machinery near people’s homes. Thus, the infrasound from turbines drives people mad. The shadow flicker from turbines, ditto. Now, with ESS added to the mix, neighbors are going to have to deal with the HVAC systems, notorious for producing ILFN (infrasound & low frequency noise). Indeed, HVAC systems on buildings are now considered to be the source of what’s called Sick Building Syndrome—essentially Wind Turbine Syndrome caused by HVACs instead of industrial turbines.

Then there is the problem of the lithium batteries catching fire. Click [here](#) and [here](#) for several YouTube illustrations. When they catch fire, they produce lots of toxic fumes, underscoring the folly of building these contraptions near people’s homes.

Consider Avangrid’s proposal in Hopkinton. Till now you thought your only worry was turbines and sub-stations. Add ESS stations to your list of worries. Yes, Avangrid’s leases allow for these to be built once the turbines are up and running. (I have 4 Avangrid leases. They’re all the same. It’s clear there are plenty of loopholes for installing ESS stations.) And no, the permission of the property owner and municipality is not required.

