

From The Desk Of

Michael J. Fournier



May 5, 2018

Via Email

Hon. Kathleen H Burgess, Secretary to the NYS PSC Siting Board

Re. Case No. 17-F-0602: Application of Franklin Solar, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article 10 of the Public Service Law for Construction of a Solar Electric Generating Facility Located in the Town of Malone, Franklin County.

Dear Hon. Burgess:

On behalf of Friends Against Rural Mismanagement (FARM), I would like to submit this comment as a filed document to the DMM, responding to the PIP filed by Franklin Solar (Geronimo Energy) for case no. 17-F-0602, hereafter referred to as Geronimo.

As mentioned in previous correspondence, I head Friends Against Rural Mismanagement (FARM), being a group of individuals who live either within the boundaries of the project or within 5 miles of the Town of Malone.

We might call the theme of this document “decommissioning.” Decommissioning the solar panels — lots of them — at the end of the project.

Geronimo is vague on the subject. In its glossy “Frequently Asked Questions” brochure, embroidered by pretty pictures of cows, horses, barn — the whole bucolic stereotype — Geronimo sidesteps the issue:

Solar equipment has a life span that extends for decades — sometimes up to 50 years. Modules will continue to produce electricity well past their warranties. At the end of the life of the project, solar equipment can be removed, recycled and salvaged for additional value. Because solar energy projects are considered



low impact development, solar projects allow for flexibility in regards to the land use after its removal. Some solar project lands are even returned to their original agricultural use.¹

In a presentation to the Malone town board on October 11, 2017, Geronimo passed out yet another glossy “information” booklet. Under the heading Common Solar Concerns, we find “Decommissioning”:



Common Solar Concerns

SOUND

- At 150 feet sound from a PV system is at a background level

“Study of Acoustic and EMF Levels From Solar Photovoltaic Projects”, Prepared for: Massachusetts Clean Energy Center. Prepared by: Tech Environmental, Inc. December 17, 2012

DECOMMISSIONING

- Equipment removal and site restoration, minimal concrete usage

WATER USAGE

- Module cleaning not anticipated



“Equipment removal and site restoration, minimal concrete usage”: Evasive. Blandishments. Designed to anesthetize the reader. In short, meaningless.²

Finally, we turn to Geronimo’s PIP (Nov 2017), hoping for something of substance. What we get are four lines of the same empty rhetoric.³

Franklin Solar’s solar projects positively impact the environment by providing natural vegetation that can serve as wildlife habitat and improve water quality by reducing stormwater runoff. As required by Article 10, the Project will have a decommissioning plan that includes financial security to ensure that the cost of removing the facility’s infrastructure at the end of the project’s life will be covered. The Project area will have multiple use options at the end of the Project lifespan. The Project may be repowered if financially feasible, or could be restored to farmland or repurposed for another use.

Whose “financial security”? The Town of Malone? The property owner? Or whoever owns the project at that point in time? It’s not reassuring to be told that, “the Project area will have multiple use options at the end of the Project lifespan.” Two suggestions being to “repower” it or repurpose “for another use” (whatever this means).

¹ Geronimo Energy, “Frequently Asked Questions,” p. 11.

² Geronimo Energy, “Malone Town Board Meeting,” October 11, 2017, p. 19.

³ Geronimo Energy, “Public Involvement Program Plan: Franklin Solar Project,” November 2017, p. 7.

Geronimo still hasn't told us what it's going to do with the zillions of PV panels when eventually, for all practical purposes, they stop working.

We turn to Geronimo's "Memorandum of Land Lease and Solar Easement" agreements to see if we can get a better fix on the elusive issue of decommissioning. Under Recitals, item C, we discover that the lessee (who, though initially Geronimo, might be a different "successor," "assignee," or "transferee" by the end of the lease) can renew the lease for up to 47 years, total. Within this (nearly) half century, Geronimo and its assorted successors, assignees, and so on, can do any and all of the following (D-3):⁴

3. Lessee and any successor or assign of Lessee has the right under the Lease, without need for Lessor's consent, to do any of the following, conditionally or unconditionally, with respect to all or any portion of the Premises for solar energy purposes: grant co-leases, separate leases, subleases, easements, licenses or similar rights (however denominated) to one or more third parties; or sell, convey, lease, assign, mortgage, encumber or transfer to one or more third parties or to any affiliate of Lessee's this Lease, or any right or interest in this Lease, or any or all right or interest of Lessee in the Premises or in any or all of the solar power facilities that Lessee or any other party may now or hereafter install on the Premises provided that (i) any such assignment, transfer or conveyance shall not be for a period beyond the term of the Lease; (ii) the assignee or transferee shall be subject to all of the obligations, covenants and conditions applicable to the Lessee; and (iii) Lessee shall not be relieved from liability for any of its obligations under the Lease by virtue of the assignment or conveyance unless Lessee assigns or conveys all of its interests under the Lease to the assignee or transferee, in which event Lessee shall have no continuing liability.

At the bottom of this legal hairball we find the answer to, *What's Geronimo's decommissioning plan?* Answer: *They don't have one.* Sure, they can tell Malone and the Siting Board they have plan, but with the cunning exit clause at the end of the paragraph, all plans and solemn promises are meaningless. Exit clause: "Lessee shall not be relieved from liability ... *unless Lessee assigns or conveys all of its interests under the Lease to the assignee or transferee, in which event Lessee shall have no continuing liability.*"



Geronimo doesn't have a decommissioning plan; it has an escape plan. It's simple. At some point when the subsidies and tax write-offs have dried up, Geronimo (G) sells the Project to Fast Eddy Solar, LLC, whereby G assigns and otherwise conveys all its interests under the lease to Fast Eddy, whereupon G "shall have no continuing liability." Fast Eddy, of course, has zero assets — just a '39 Dodge with a blown engine.



⁴ Geronimo Energy, Memorandum of Land Lease & Solar Easement with Mobedick & Associates, Inc., Instrument #2017-4067 filed with the Franklin County Clerk, August 28, 2017, p. 3.

Clearly, we're going to have to look beyond Geronimo for guidance and assurances about decommissioning PV panels. A good place to start is with the State of North Carolina, which has been wrestling with utility-scale solar projects far longer than we have in NYS. In North Carolina the best place to turn is the *Carolina Journal* (CJ), a seasoned and widely respected, 2-fisted investigative organ. CJ, we read on its masthead, "has exposed corruption, conflicts of interest, and misuse of public funds by public officials, including members of Congress and members of the North Carolina Gen. Assembly. It has also exposed malfeasance on the part of economic developers and nonprofits that receive state and federal funds."⁵

It's not surprising that the Journal has featured the solar energy industry. On August 10, 2015 it published, "Lawmakers Warn of Solar Farm Cleanup Costs: Utilities Commission head admits 'decommissioning' has not been a focus."⁶ We have excerpted the article, because it highlights a problem we are ignoring in New York State: What happens to all these PV panels at the end of their lifetime?

RALEIGH — State Rep. Chris Millis, R-Pender, warns North Carolina "may be on the way to [becoming] the next Superfund site" because it lacks a closure plan for hundreds of millions of tons of solar farm materials containing hazardous substances when the solar facilities wear out.

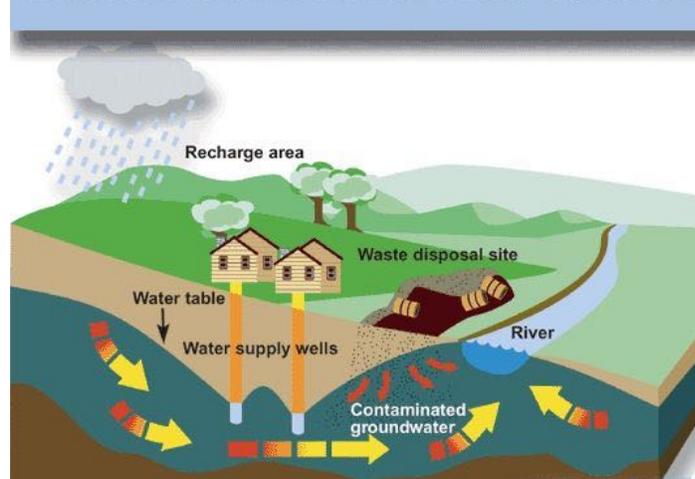
"I'm not an opponent of the actual aspects of solar energy," Millis said, but he opposes mandated solar subsidies, and exempting solar installations from environmental disposal regulations others must follow.

There is a disposal fee capture embedded in the electronics industry for televisions, computers, and other electronic devices, he said. But solar investors, who enjoy a lucrative 35 percent tax credit for spending on their projects, have downplayed the role of decommissioning and cleanup in their advocacy.



hazardous
materials

Groundwater contamination from a waste disposal site



Millis made his comments after listening to testimony from state regulators and solar industry enthusiasts at a Thursday hearing of the House Agriculture, and Natural and Economic Resources Appropriations Committee.

"Their comments were not conclusive that there is a uniform requirement by the industry," or a state mandate requiring landowners to be fully informed about potential liability risks of leasing land for solar panels containing hazardous

⁵ See <https://www.carolinajournal.com/about/>

⁶ Dan Way, "Lawmakers Warn of Solar Farm Cleanup Costs: Utilities Commission head admits 'decommissioning' has not been a focus," *Carolina Jour.*, August 10, 2015.

materials that “can’t be currently disposed of in a North Carolina landfill,” Millis said.

“On behalf of the taxpayers we can look at what happened in the past,” Millis said. Citing the shorthand reference for the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, he said,

“Orphan landfills, coal ash basins ... it appears as if we’re on the track here in North Carolina to be setting up for the next Superfund site [with costs placed on] the shoulders of the taxpayer.”



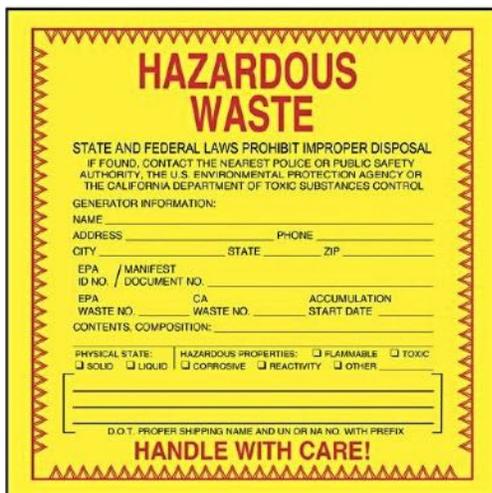
.....
 Betsy McCorkle, spokeswoman for the North Carolina Sustainable Energy Association, said no state has a solar decommissioning regulation.

.....
 John Evans, chief deputy secretary of the state Department of Environment and Natural Resources who coordinates energy policy, said solar solid waste is “an issue we are becoming aware of” as solar projects boom, likely due to the tax credit.

When the state’s 2007 Renewable Energy Portfolio Standards law enacted the tax credit and mandated electric utilities to purchase increasing levels of renewable energy, it was assumed that 50 percent of that green power would originate from biomass, and the tax credits never would exceed \$5 million.

Instead, Evans said, 90 percent of renewable power produced since the law passed has been solar, and \$513 million in tax credits were earned from 2010 to 2013 alone.

Evans acknowledged concerns about the disposal of 200 million pounds of solar panels — a volume expected “to go up three- to fourfold.” That doesn’t include other infrastructure materials on solar farms.



He said DENR officials “don’t have the data yet” on effects of herbicides sprayed on the solar farms to keep weeds and grass from obscuring the panels, or how to revegetate and return land to productive use once obsolete solar projects are removed.

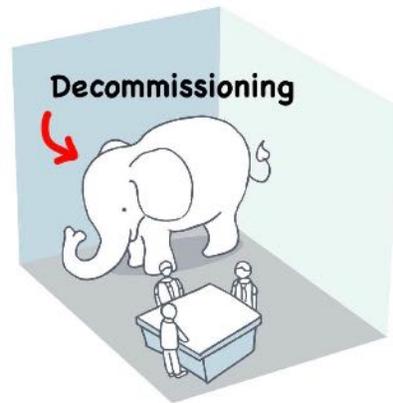
The U.S. Bureau of Land Management requires solar developers to post a bond on the front end of development, Evans said. Massachusetts has a bond opportunity for environmental decommissioning. “California actually treats the solar panels as hazardous

waste." And the European Union established a mandatory recycling program for solar components.

[State Rep.] Millis said he understands that a solar developer has been telling landowners in Scotland County that if they sign a 20-year lease the company will donate the solar facility to them after that. He said he is worried what that landowner would do "with those dead solar panels that are draped across their property" when they are no longer viable.

Looks like Geronimo has another elephant in the room. This one named "Decommissioning." So far, Geronimo has furnished no satisfactory answers, just "feel-good" bromides — with an escape clause tucked away in their Memorandum of Land Lease and Solar Easement.

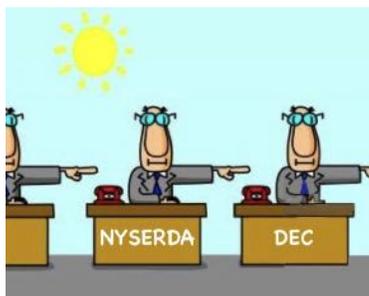
Turning to NYS agencies for guidance is likewise discouraging. In March of this year, one of our members wrote to NYSERDA inquiring about NYS regulations for recycling or disposing of PV solar panels. This is the response she got from Frank Mace, Senior Project Manager at NYSERDA on March 27, 2018:⁷



There are a couple of items in your question that we need to address.

The first is the question of recycling solar modules (panels). Because of the long useful life, there is not currently a large enough waste stream to consider recycling a viable option today. The waste stream is not expected to occur for another 20 to 25 years. NYS DEC is already considering what that will look like and what measures will need to be in place to take care of that. However, without a waste stream, recycling will remain in the planning stage. That does not mean that we should not plan for the eventual decommissioning of these systems.

NYSERDA, as part of the NY-Sun program, provides technical assistance and guidance to local governments, the "Guidebook" has a specific chapter relating to decommissioning. <https://www.nyserd.ny.gov/All-Programs/Programs/NY-Sun/Communities-and-Local-Governments/Solar-Guidebook-for-Local-Governments>.



NYS DEC is the state agency that will be fully involved in any disposal or recycling processes. PV panels are basically made up of three components, glass, metal and silicone crystals. As part of the manufacturing process they are encapsulated and sealed. Chemicals used during the manufacturing process can only be released at high temperatures, these temperatures are above those of most fires, so the chance of release and exposure are low. I'm not

⁷ Mace to Riggle, March 27, 2018.

aware of any that modules that are currently being disposed of in landfills. If you know of any being disposed of in any land fill, can you please send me that information?

We examined the NYSEDA Guidebook referred to by Mr. Mace, in particular the Fact Sheet titled "Decommissioning Solar Panel Systems." The sheet says nothing about disposing of dead solar panels, and nothing substantial about recycling dead panels. What it does do is urge property owners and municipalities to be vigilant and thorough about setting up a realistic decommissioning fund with the developer, in this case Geronimo, while suggesting several ways such a fund can be arranged. (The following is quoted from the Fact Sheet.)

Decommissioning costs will vary depending upon project size, location, and complexity. **Table 1 provides an estimate of potential decommissioning costs for a ground-mounted 2-MW solar panel system.** Figures are based on estimates from the Massachusetts solar market. Decommissioning costs for a New York solar installation may differ. Some materials from solar installations may be recycled, reused, or even sold resulting in no costs or compensation. Consider allowing a periodic reevaluation of decommissioning costs during the project's lifetime by a licensed professional engineer, as costs could decrease and the required payment should be reduced accordingly.⁸

Here is Table 1 referred to, above:

Table 1: Sample list of decommissioning tasks and estimated costs

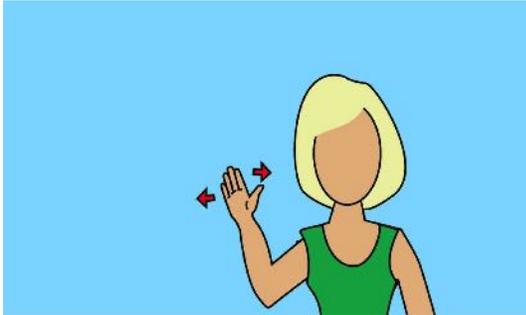
Tasks	Estimated Cost (\$)
Remove Rack Wiring	\$2,459
Remove Panels	\$2,450
Dismantle Racks	\$12,350
Remove Electrical Equipment	\$1,850
Breakup and Remove Concrete Pads or Ballasts	\$1,500
Remove Racks	\$7,800
Remove Cable	\$6,500
Remove Ground Screws and Power Poles	\$13,850
Remove Fence	\$4,950
Grading	\$4,000
Seed Disturbed Areas	\$250
Truck to Recycling Center	\$2,250
Current Total	\$60,200
Total After 20 Years (2.5% inflation rate)	\$98,900



According to NYSEDA's estimates, a 2 MW project will cost roughly \$60,200 to properly decommission. This suggests that Geronimo's 150 MW project would cost roughly \$4,515,000 (\$4.5 million) in today's dollars. Adding a 2.5% inflation rate over 20 years, today's 2 MW project will cost \$98,900 to decommission in 2038. This suggests that Geronimo's

⁸ NYSEDA, "Decommissioning Solar Panel Systems," n.d., page 1.

150 MW project will cost something on the order of \$7,417,500 (\$7.4 million) to decommission in 2038. Notice that these figures do not include the costs of disposing of these tens of thousands of PV panels according to what will someday be government-mandated regulations for hazardous waste. The NYSERDA figures simply assume a fairly standard dumping fee at the local landfill, so it appears. These numbers are a way off the mark for dead solar panels being trucked to, and buried within, a special, biohazard landfill.



Little wonder that Geronimo is not eager to get into too much detail about decommissioning costs, and seems more interested in building an escape strategy into its property leases.

Geronimo is a Minnesota-based company. Minnesotans are noted for their practicality and thrift. In this instance, the most thrifty solution is to figure out a way to wave goodbye before getting stiffed with decommissioning costs in the tens of millions of

dollars.

The biggest fear in the Malone community is “abandonment”: Geronimo or one of its “successors” or “assignees” or “transferees” — aka Fast Eddy Solar, LLC — simply walks away from the project. (See the waving lady, above.) Here’s what NYSERDA’s “Decommissioning Solar Panel Systems” Fact Sheet has to offer — and it’s not encouraging:⁹

Abandonment and Removal Clause. Local governments can include in their zoning code an abandonment and removal clause for solar panel systems. These cases effectively become zoning enforcement matters where project owners can be mandated to remove the equipment via the imposition of civil penalties and fines, and/or by imposing a lien on the property to recover the associated costs. To be most effective, these regulations should be very specific about the length of time that constitutes abandonment. Establishing a timeframe for the removal of a solar panel system can be based on system aesthetics, size, location, and complexity. Local governments should include a high degree of specificity when defining “removal” to avoid ambiguity and potential conflicts.

“These cases effectively become zoning enforcement matters, where project owners can be mandated to remove the equipment via the imposition of civil penalties and fines, or by imposing a lien on the property to recover the associated costs.” This is hilarious! In an ideal world, such a remedy might be compelling; in 2018 in rural America, this is a joke. A cynical joke.

⁹ Ibid., p. 2.

Ladies and gentlemen, towns like Malone struggle daily with slumlords and other scofflaw property owners, endeavoring to get them to pay taxes or abide by the NYS Uniform Building Code. In many cases, perhaps most cases, municipal authorities get nowhere with these scoundrels, who are well aware that the township doesn't have the money to sue them. At the end of the day, these ruined buildings and beaten-up properties wind up being taken over by the county and sold at public auction for pennies on the dollar.



Should Geronimo or Fast Eddie abandon the project, there is not the slightest chance the Town of Malone could afford \$4.5 million (or more) to get rid of this mess.

In three words: We'd be screwed.

Sincerely,

Handwritten signature of Michael J. Fournier in black ink.

Michael J. Fournier

President of FARM and party to case no. 17-F-0602

Handwritten signature of Calvin Luther Martin in blue ink.

Calvin Luther Martin, PhD

Member of FARM and party to case no. 17-F-0602