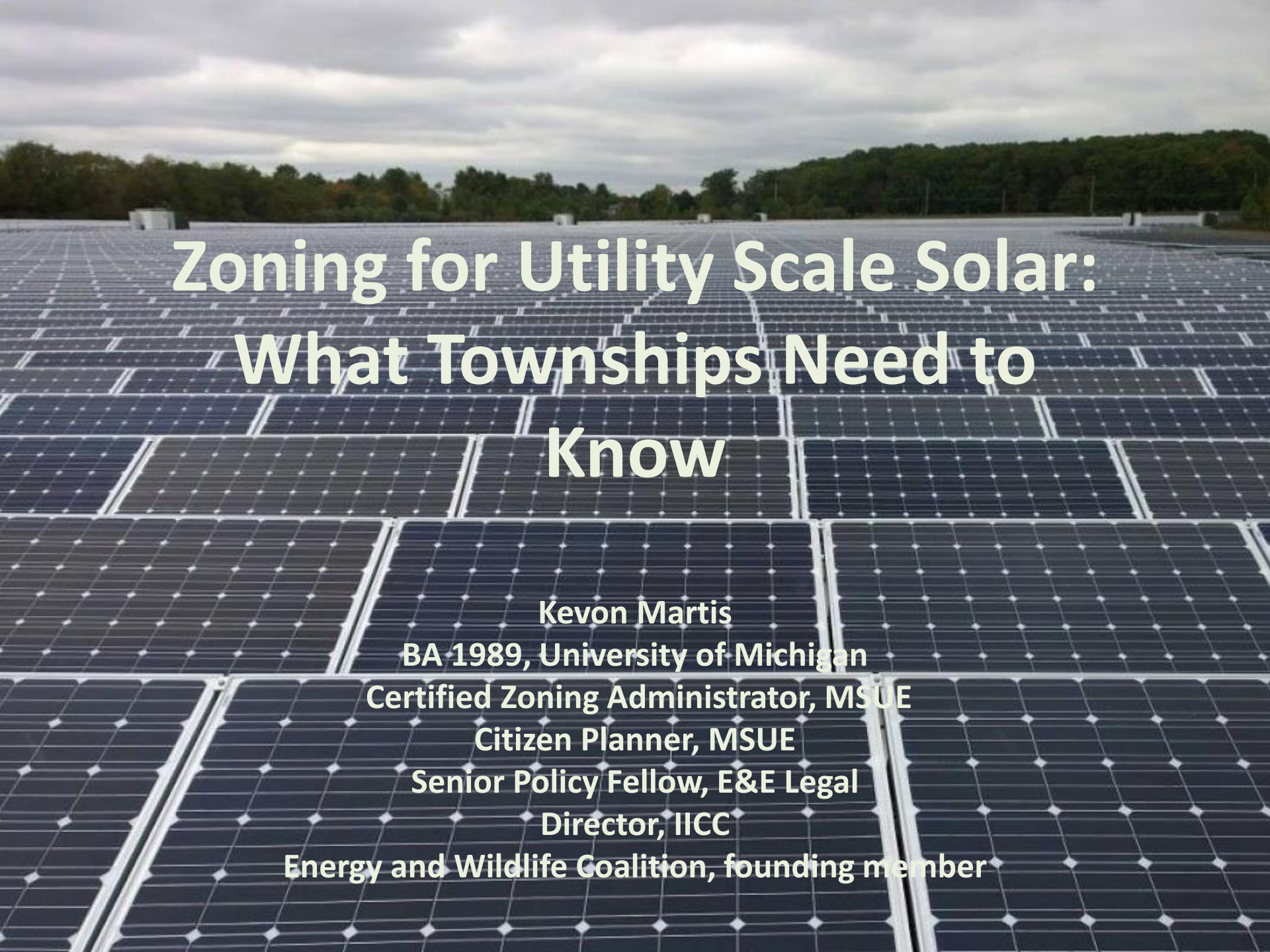


Zoning for Utility Scale Solar: What Townships Need to Know

Kevon Martis
BA 1989, University of Michigan
Certified Zoning Administrator, MSUE
Citizen Planner, MSUE
Senior Policy Fellow, E&E Legal
Director, IICC
Energy and Wildlife Coalition, founding member

Credentials

- **MSU Certified Zoning Administrator and Citizen Planner**
- **Deerfield Township Zoning Administrator**
- **Former Vice-chairman Riga Township PC-6 years**
- **Worked for 2 years drafting ag preservation plan for Lenawee County**
- **Helped draft wind energy ordinance that became a State model ordinance**

Please note:

If you google my name, it doesn't take long to find a number of articles linking me financially to fossil fuel interests.

Those articles are false.

I receive no money and take no direction from any energy interests of any kind.

Note:

I am currently the Zoning Administrator in Deerfield Township. But I am speaking tonight as an independent zoning expert and my comments in no way represent the policies or interests of Deerfield Township government.

Further:

Most SE Michigan township officials want to know whether they should restrict solar on prime farm ground. And they also want to know what they can do under Michigan law to protect farm ground if that is the policy direction they adopt.

That is the direction of my talk today.

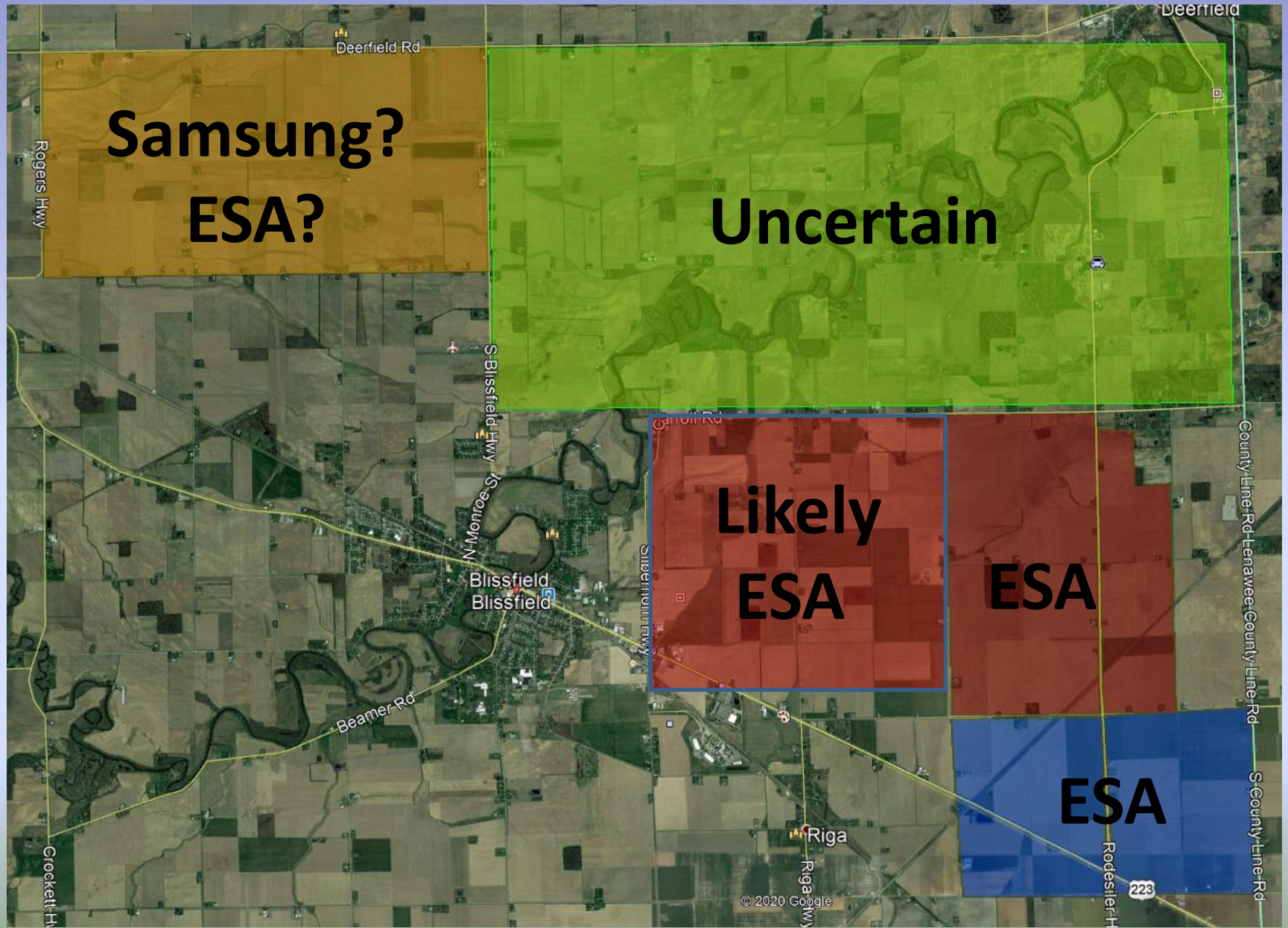
However:

If your township wants large scale solar on farm ground, most developers are happy to draft regulations that make that possible at no cost to the township.

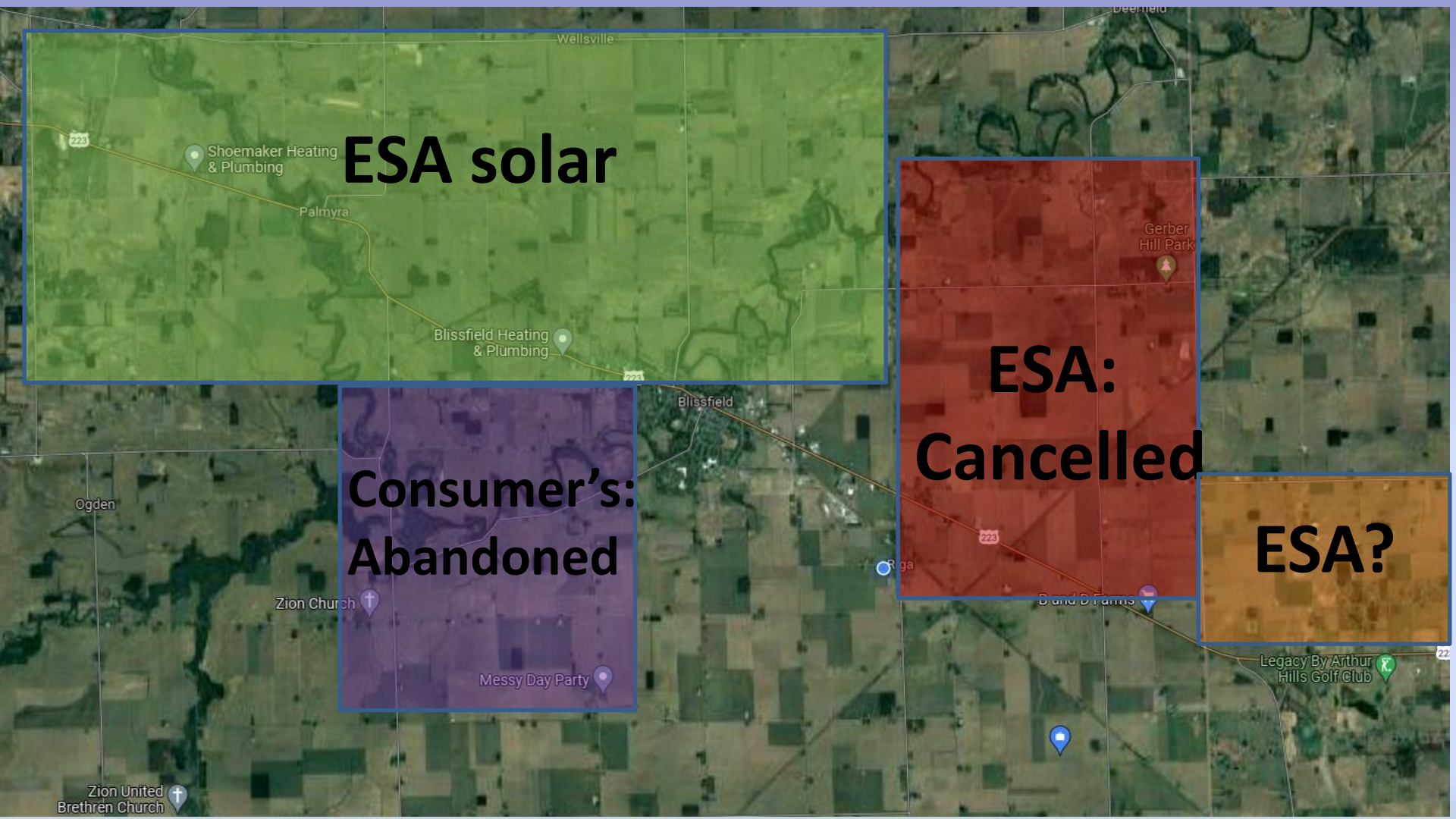
That is not the direction Deerfield Township took and I am here to share what we have learned over the past two years.

Lenawee County Proposals

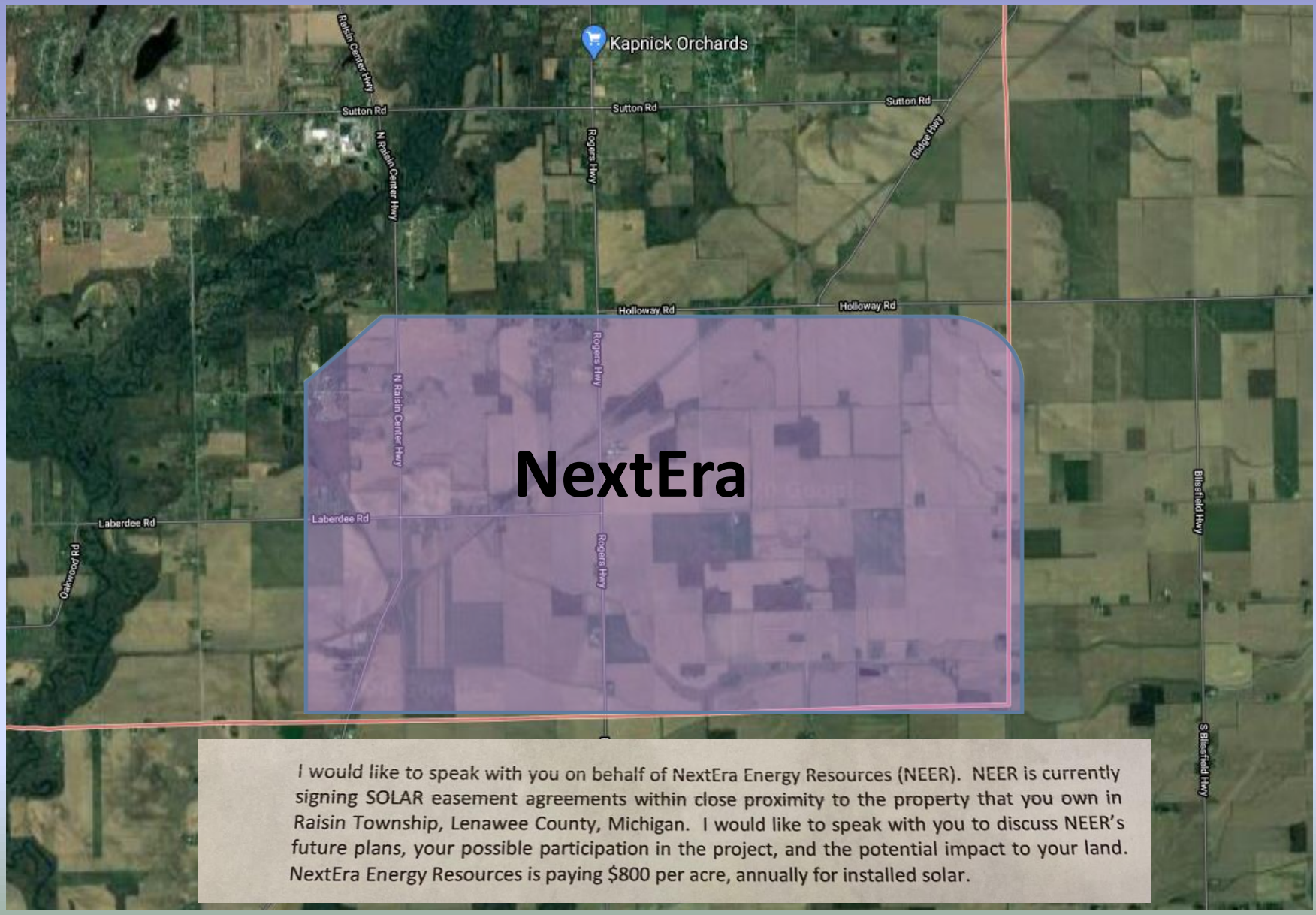
Area Solar Proposals-2020



2022 Update

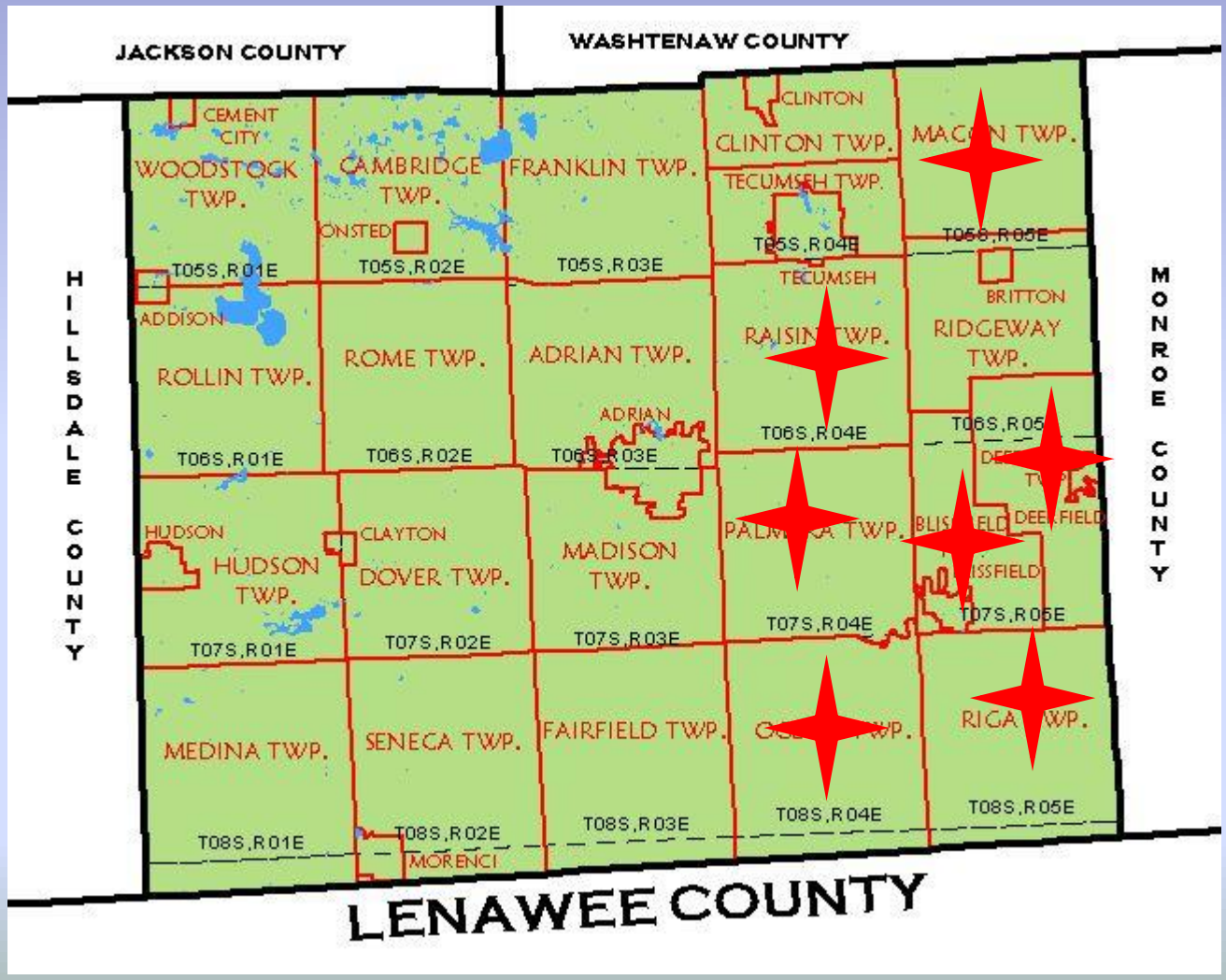

ESA solar
ESA: Cancelled
Consumer's: Abandoned
ESA?
Wellsville
Shoemaker Heating & Plumbing
Palmyra
Blissfield Heating & Plumbing
Blissfield
Gerber Hill Park
Ogden
Zion Church
Messy Day Party
Legacy By Arthur Hills Golf Club
Zion United Brethren Church

NextEra Energy now leasing in Raisin

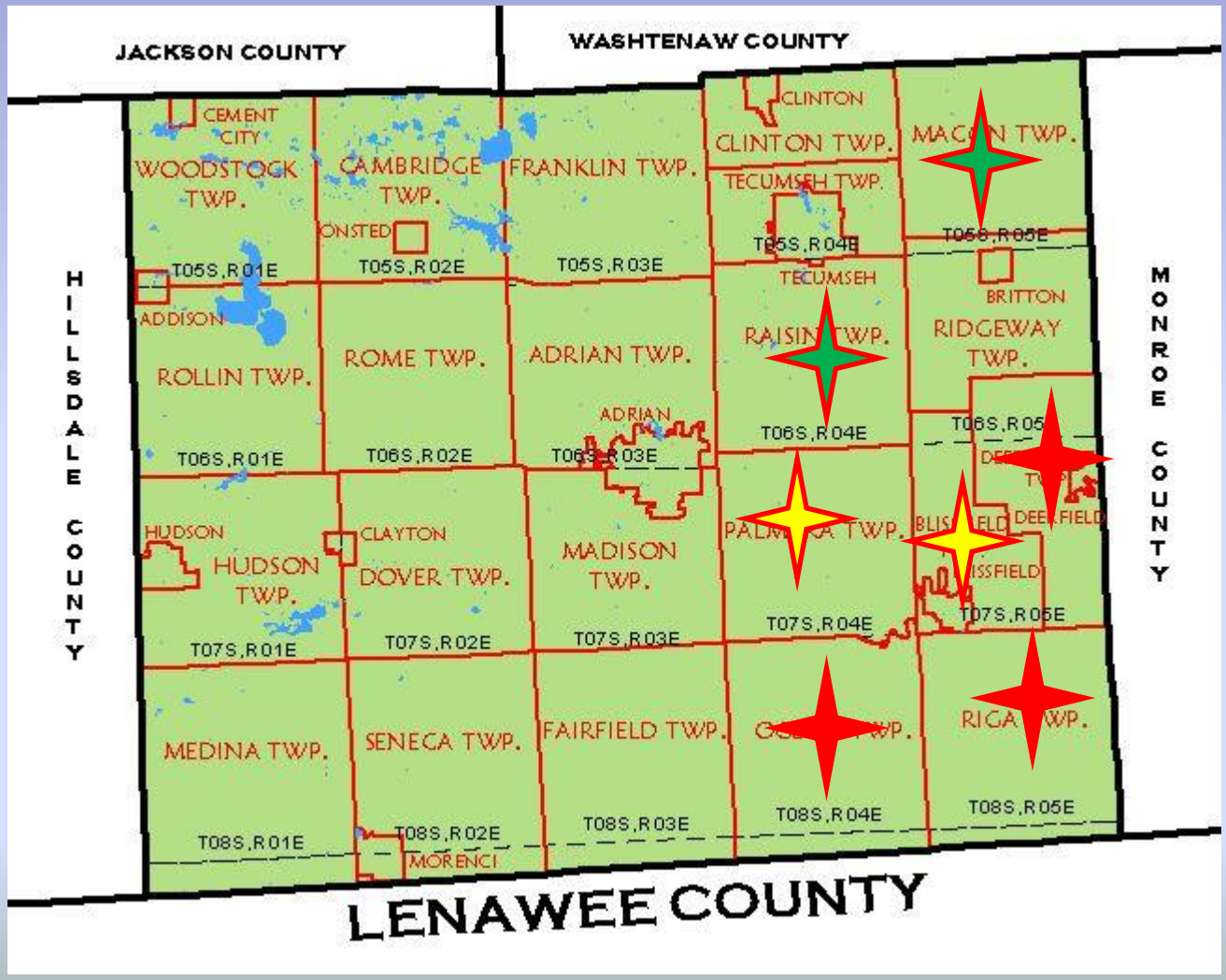


I would like to speak with you on behalf of NextEra Energy Resources (NEER). NEER is currently signing SOLAR easement agreements within close proximity to the property that you own in Raisin Township, Lenawee County, Michigan. I would like to speak with you to discuss NEER's future plans, your possible participation in the project, and the potential impact to your land. NextEra Energy Resources is paying $800 per acre, annually for installed solar.

In 2020-2-21 much of SE Lenawee County was Under Development Pressure



But Only Raisin and Macon Remain Open



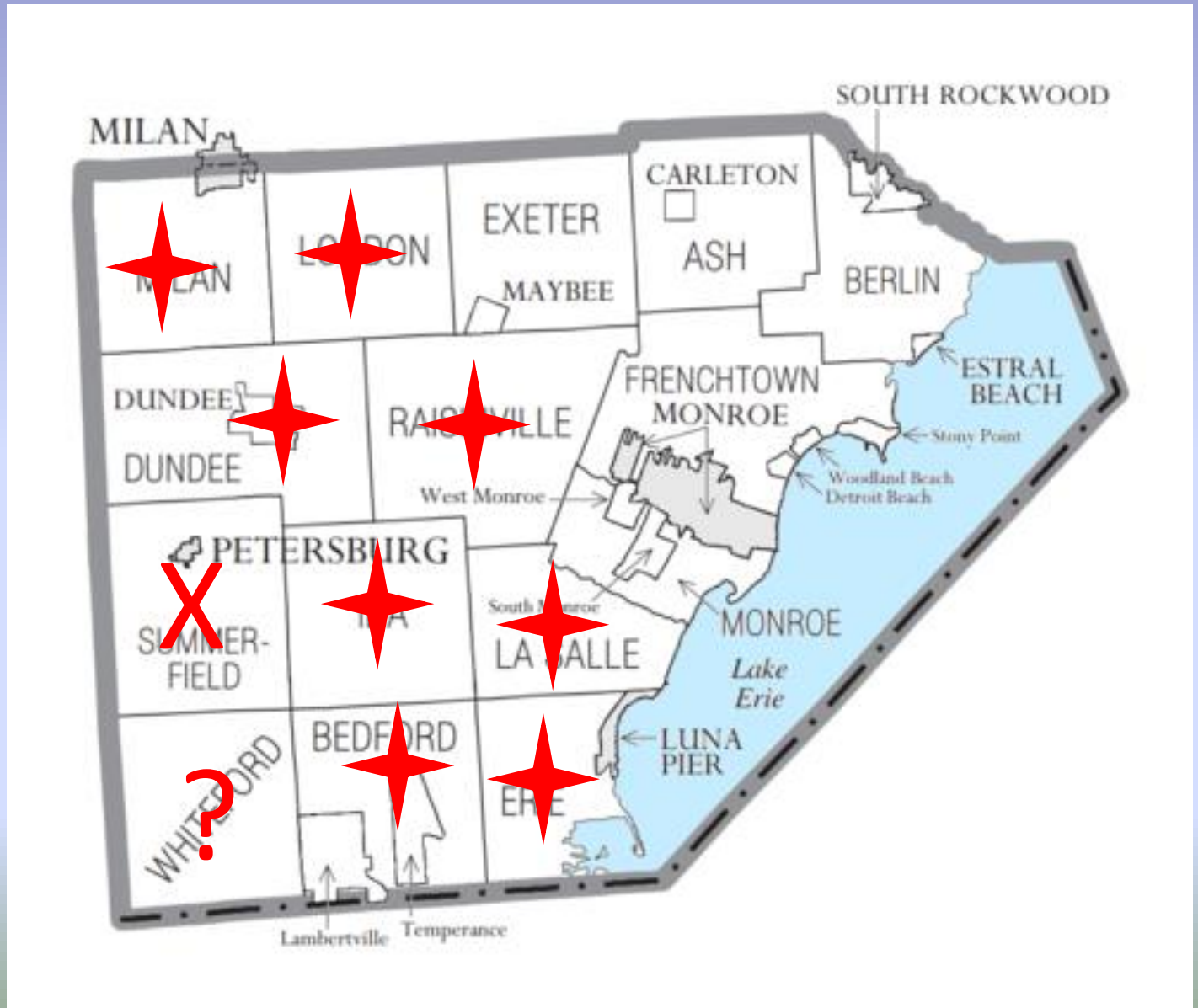
Macon Township Update

The approval of the Invenergy solar project in Macon Township is being challenged in the Lenawee County Circuit Court by multiple residents and the local airport. The lead plaintiff is the chairman of the Macon Township PC.

Full disclosure: I have been retained by the plaintiffs as an expert so I cannot offer much comment beyond what is in the public record.

Matters being litigated are whether the project comports with the township zoning ordinance and township master plan. A matter of conflict of interest on the part of a township board member is also in dispute.

Monroe County Seeing Same Pressure



The Carroll Road Solar Farm: A Case Study

The Carroll Road Solar farm was a 200 MW solar plant proposed by Florida-based ESA Solar.

It was to stretch across Deerfield and Riga Townships. Deerfield was unzoned and Riga had just updated their solar ordinance.

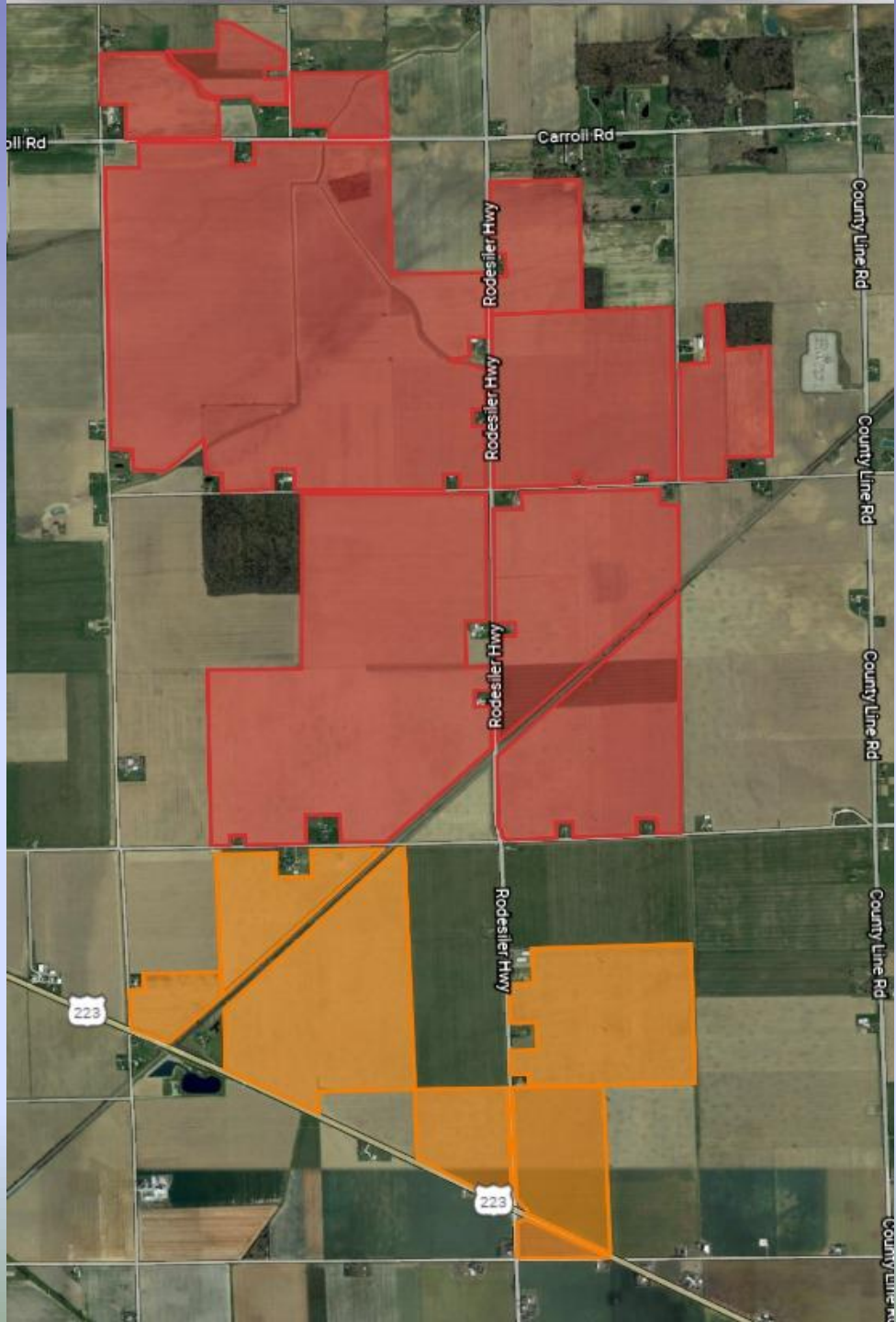
Although the Riga solar regulations were intended to protect ag ground, Governor Whitmer's changes to PA116 Rules took away the protections the Riga Ordinance had in place, namely it relied upon the former PA116 ban on solar.

ESA has never built a solar farm of this scale anywhere in the US.

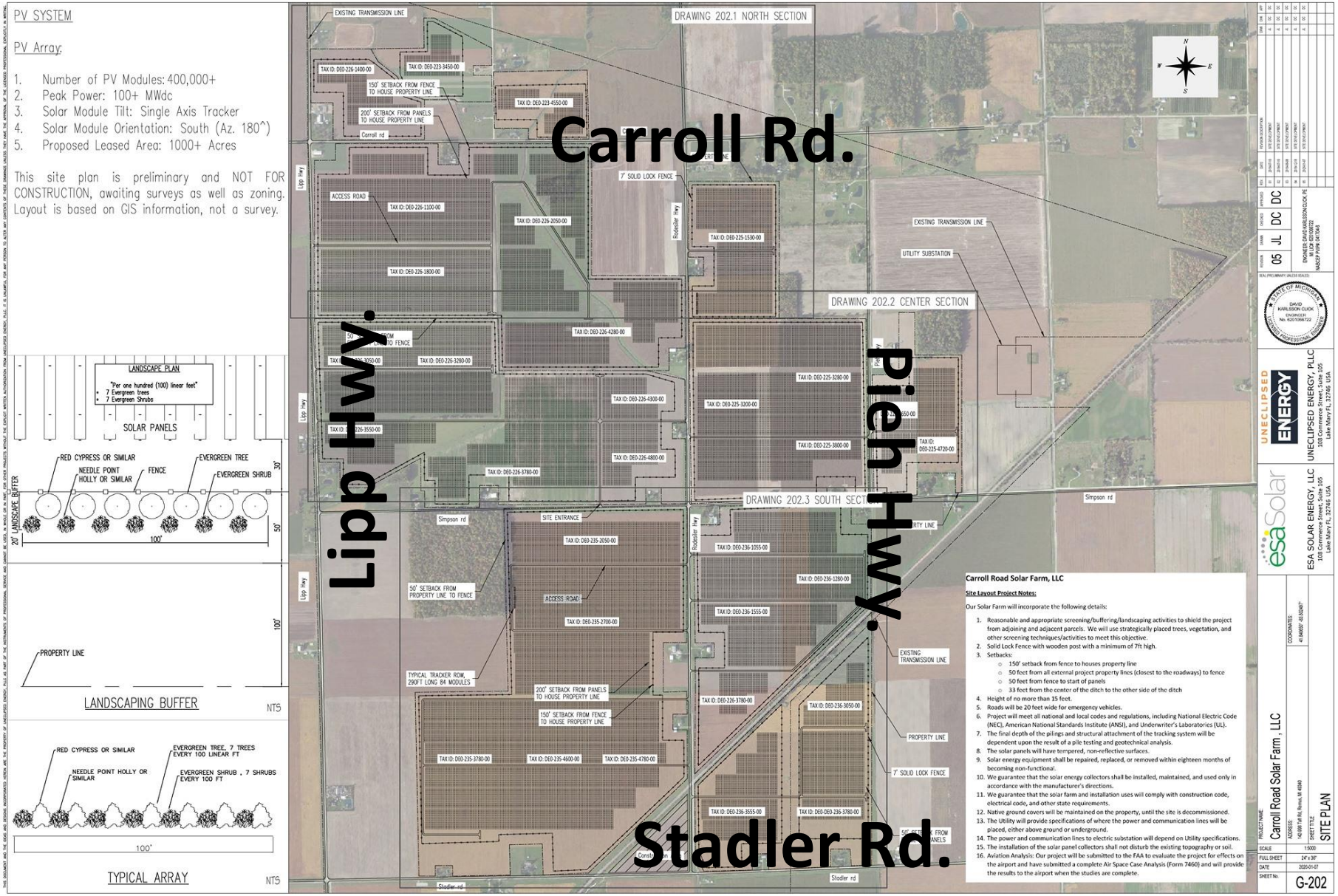
ESA's business model is to procure zoning approval and to flip the approval to a larger entity.

In this case, Consumer's Energy was likely purchaser.

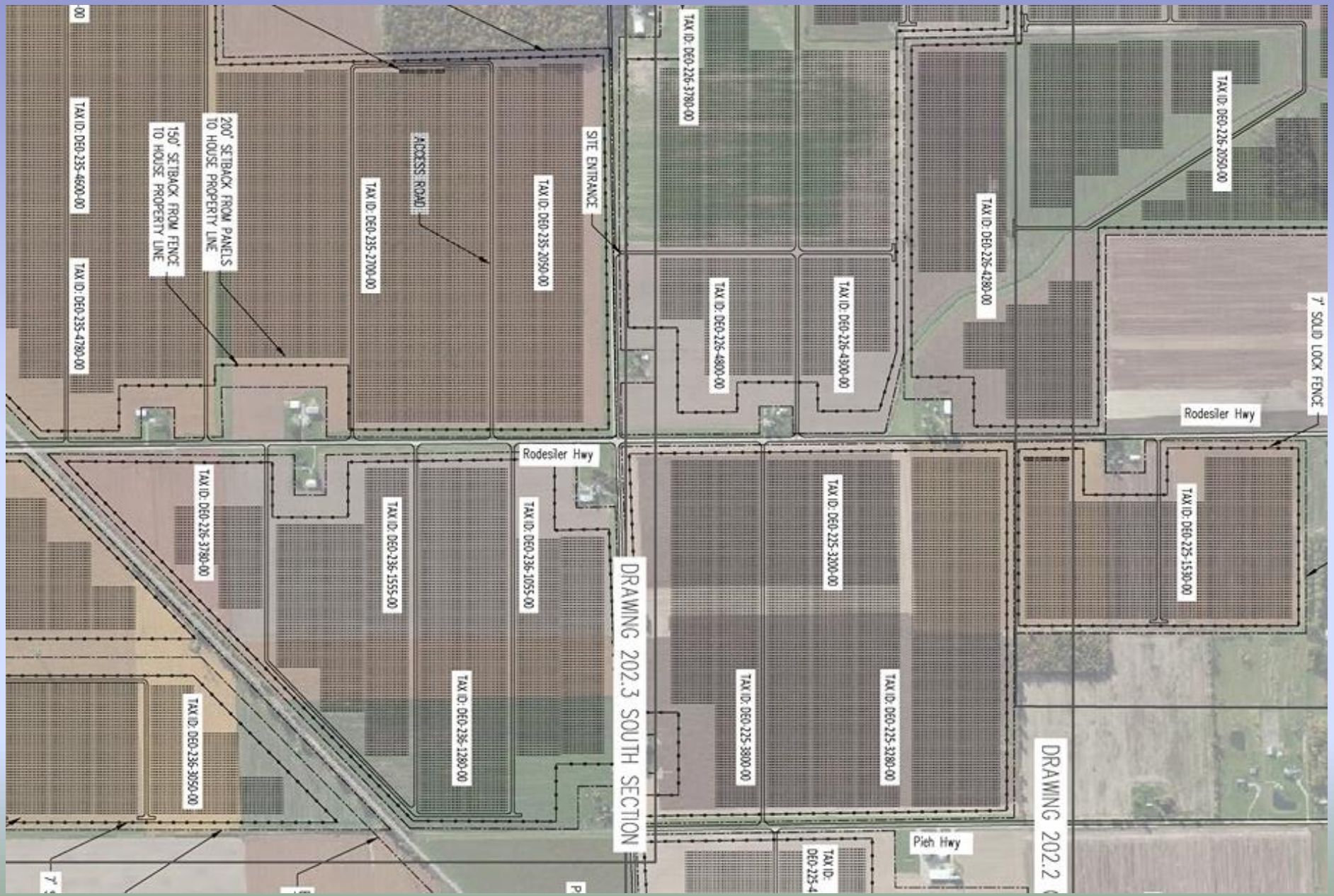
Combined Riga and Deerfield approximate project footprint as of January 2020. In excess of 2,000 acres.



ESA Deerfield Project: ~1,640 acres

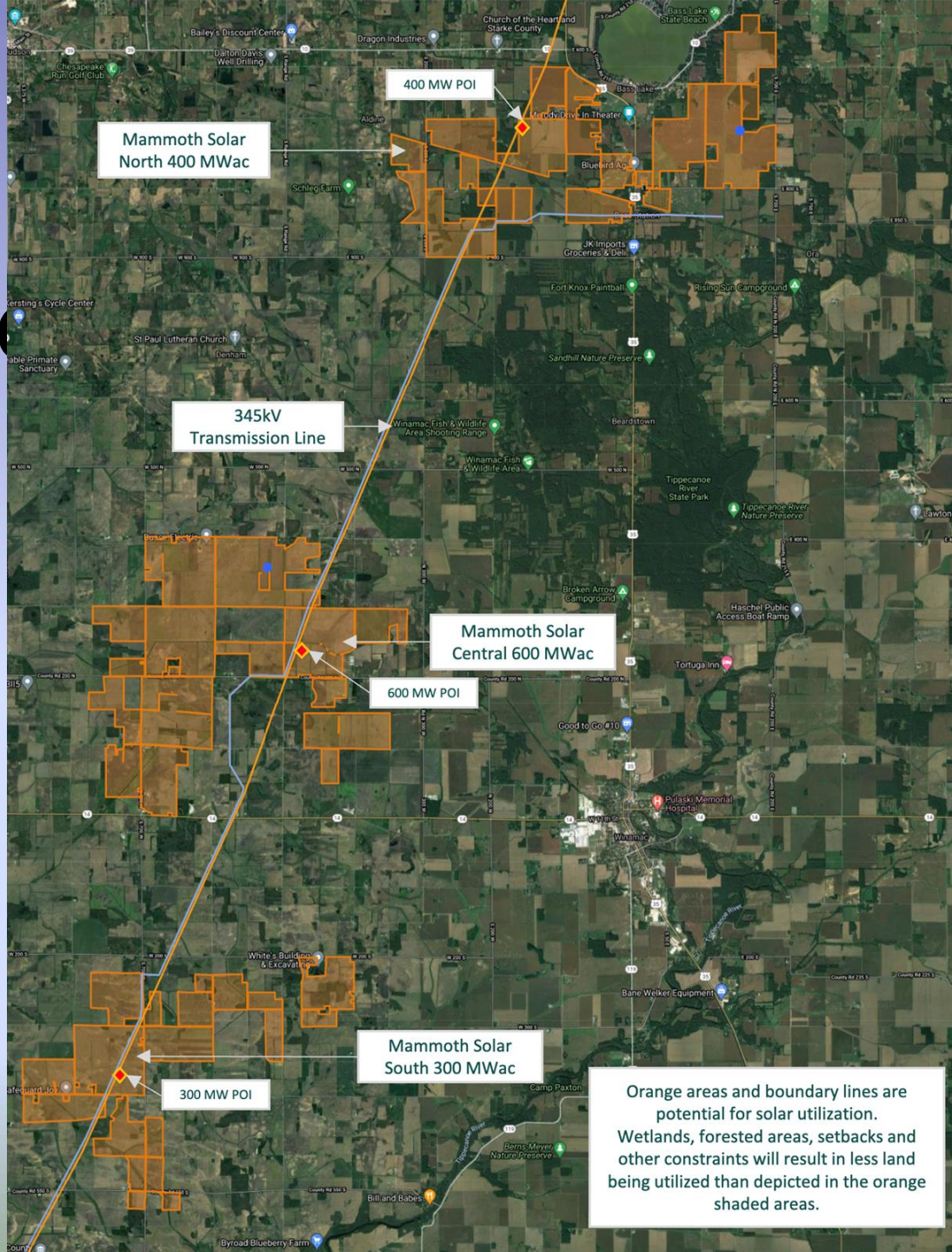


ESA Deerfield Project Closeup



Typical smaller installation

Mammoth Solar Farm: 13,000 acres in Indiana It will be largest in US when in operation.



Understanding Zoning and Developer Claims And Zoning

Beware of Zoning Excuses

"Sad but true, far too many hearings on rezoning cases resemble a horse trading affair being carried out in a comic soap opera fashion. Some of the more ridiculous excuses offered for granting rezoning follow such lines as…."

Adapted from the Michigan Planning Guidebook: for Citizens and Local Officials, May 2008, MSU Extension

“Ridiculous” Zoning Excuses-MSUE

- **You can’t keep a man from using his land**
- **This will bring in more revenue**
- **The owner of the land can get more money for the land if it’s rezoned commercial**
- **They are too big of an outfit; we can’t deny the rezoning.**
- **We don’t have any right to say where commercial or industrial developments should go.**
- **He invested a lot of money into this land thinking the rezoning would be granted. How can we deny it?**
- **We don’t want to have to go to court; after all, it really doesn’t look that bad.**

Adapted from the Michigan Planning Guidebook: for Citizens and Local Officials, May 2008, MSU Extension

Benefit Side of Ledger

For obvious reasons, developers want to talk up any financial benefits that may accrue to the community even though those alleged benefits are not particularly relevant zoning criteria.

What about the cost side of the ledger?

Nevertheless, economic benefits often dominate the zoning discussion.

Therefore, I think we should at least take a look at common developer claims and see if they have merit.

Claim 1: Saving the family farm

Saving the family farm?

We often hear statements about solar leases being a benefit to struggling family farmers. But is that true across the board?

If you are a farmer and you own ground that could host solar, $800-1,400 per acre per year is certainly good money. That cash could be useful to maintain farming operations on non-solar ground if they have such ground.

But often, farm ground leased for solar development is not owned by people actually farming the ground. The landowners may be corporate/private real estate investors or they have inherited land, etc.

While these people still benefit when they lease, it must be understood that since they are *not farmers,* solar money is not a benefit to a *farmer* in this case.

And when land is owned by real estate investors or is in an estate that doesn't farm, that ground is typically farmed by tenant farmers who cannot compete with lucrative solar lease payments.

As a result, those farmers are driven off that farm and may lose income from many hundreds of acres.

And finally, when a landlord leases hundreds of acres for solar development, the windfall is so large (hundreds of thousands per year), that smaller operators may find it hard to compete at future land or equipment auctions against buyers with so much more expendable income.

Claim 2: Solar is good for the larger agriculture industry

MSU Econ. Analysis of Carrol Rd.

Deerfield Township worked with Dr. Steven Miller at MSU's *Center for Economic Analysis* at the Dept. of Agricultural, Food and Resource Economics to develop a local economic cost analysis for the Carroll Road Solar plant.

A copy of this analysis is available tonight.

MSU Econ. Analysis of Carrol Rd.

Model simulation: Lost Farm Sales Impacts on Lenawee County, MI

Impact Type	Employment	Labor Income	Regional Income	Output
Direct Effect	6	$48,980	$713,567	$1,092,848
Indirect Effect	2	$106,285	$209,064	$320,187
Induced Effect	0	$35,682	$21,220	$110,923
Total Effect	8	$184,030	$943,851	$1,523,958

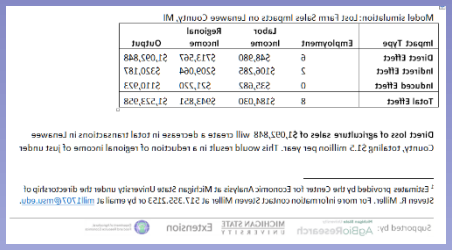
Direct loss of agriculture sales of $1,092,848 will create a decrease in total transactions in Lenawee County, totaling $1.5 million per year. This would result in a reduction of regional income of just under

[1] Estimates provided by the Center for Economic Analysis at Michigan State University under the directorship of Steven R. Miller. For more information contact Steven Miller at 517.355.2153 or by email at mill1707@msu.edu.

Supported by: Michigan State University AgBioResearch | MICHIGAN STATE UNIVERSITY Extension | Department of Agricultural, Food and Resource Economics

Dr. Miller's model estimates approximately $1.5 million annual economic losses to the Lenawee County ag economy over 35 years or $52.5 million in aggregate, not including Riga Township portion.

Furthermore:



Model simulation: Lost Farm Sales Impacts on Lenawee County, MI

Impact Type	Employment	Labor Income	Regional Income	Output
Direct Effect	6	$68,080	$713,567	$1,092,868
Indirect Effect	2	$106,285	$209,064	$330,187
Induced Effect	0	$35,687	$21,220	$110,923
Total Effect	8	$184,030	$943,851	$1,533,978

Direct loss of agriculture sales of $1,092,868 will create a decrease in total transactions in Lenawee County, totaling $1.5 million per year. This would result in a reduction of regional income of just under

[1] Estimates provided by the Center for Economic Analysis at Michigan State University under the directorship of Steven R. Miller. For more information contact Steven Miller at 517.355.2153 or by email at millS707@msu.edu.

Supported by: AgBioResearch MICHIGAN STATE UNIVERSITY Extension

This analysis included only one of several proposed Lenawee County developments.

Personally, I see no way to reconcile this with local Master Plans which typically state that land use policies are to support the overall ag economy, not transfer wealth out of ag production and into a very small number of solar beneficiaries.

Claim 3: Tax Benefits

Local Economic Impacts Benefits

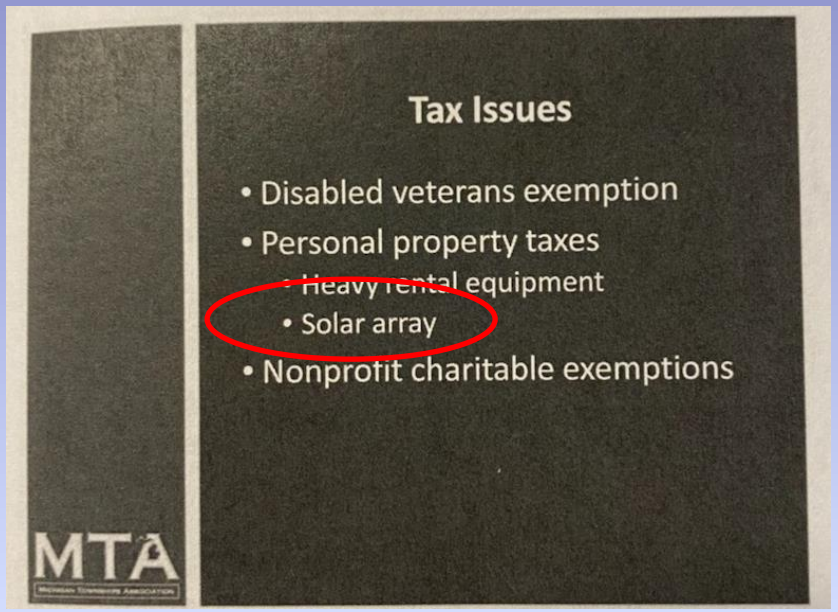
ESA Solar claimed tax benefits of roughly $18.5 million over 35 years for their Deerfield Township project.

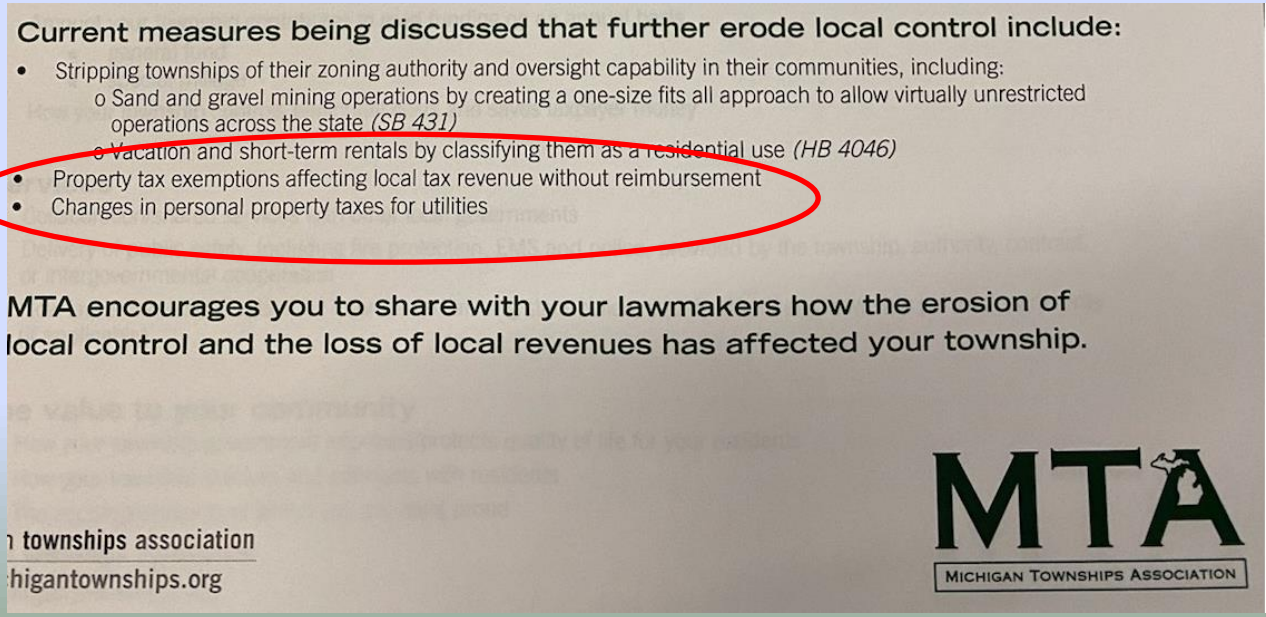
But did you know?

In 2020, the MTA had an educational event for local officials in which they discussed various topics of concern for township governments.

One of those concerns is the effort by the solar lobby to make utility solar installations exempt from paying the Personal Property Tax, essentially the only tax they pay.

MTA


Tax Issues
• Disabled veterans exemption
• Personal property taxes
• Heavy rental equipment
• Solar array
• Nonprofit charitable exemptions
MTA


Current measures being discussed that further erode local control include:
• Stripping townships of their zoning authority and oversight capability in their communities, including:
o Sand and gravel mining operations by creating a one-size fits all approach to allow virtually unrestricted operations across the state (SB 431)
o Vacation and short-term rentals by classifying them as a residential use (HB 4046)
• Property tax exemptions affecting local tax revenue without reimbursement
• Changes in personal property taxes for utilities
MTA encourages you to share with your lawmakers how the erosion of local control and the loss of local revenues has affected your township.
townships association
higantownships.org
MTA
MICHIGAN TOWNSHIPS ASSOCIATION

Continued…

The legislature passed the reduction in taxes for utility solar. But Governor Whitmer vetoed the bill.

MTA calculated that the vetoed bills <u>would have slashed tax revenue to townships by 70%.</u>

Governor Whitmer has a commission working on updating tax policy for solar which will certainly result in substantial cuts to the current tax regime for solar.

Claim 4: CO2 Emissions

CO2 Reduction

One of the reasons solar is developed is ostensibly to halt climate change.

But one thing we know for certain is that solar is one of the most expensive ways to reduce CO2 emissions in the electricity sector.

“Renewables are not going to get us there.”

-Dr. James Hansen, Climate Scientist

https://www.youtube.com/watch?v=YutnsTMi0i4&feature=youtu.be

Jeff Gibbs, producer
Bowling for Columbine

“It was kind of crushing to discover that the things I believed in weren’t real, first of all, and then to discover not only are the solar panels and wind turbines not going to save us ... but (also) that there is this whole dark side of the corporate money ... It dawned on me that these technologies were just another profit center.”

https://www.apnews.com/933b49681b0d47d3a005d356f35251ab

Michael Moore

“I’m one of those people who wanted to believe all of these years that [solar energy] was the right path…”

https://www.apnews.com/933b49681b0d47d3a005d356f35251ab

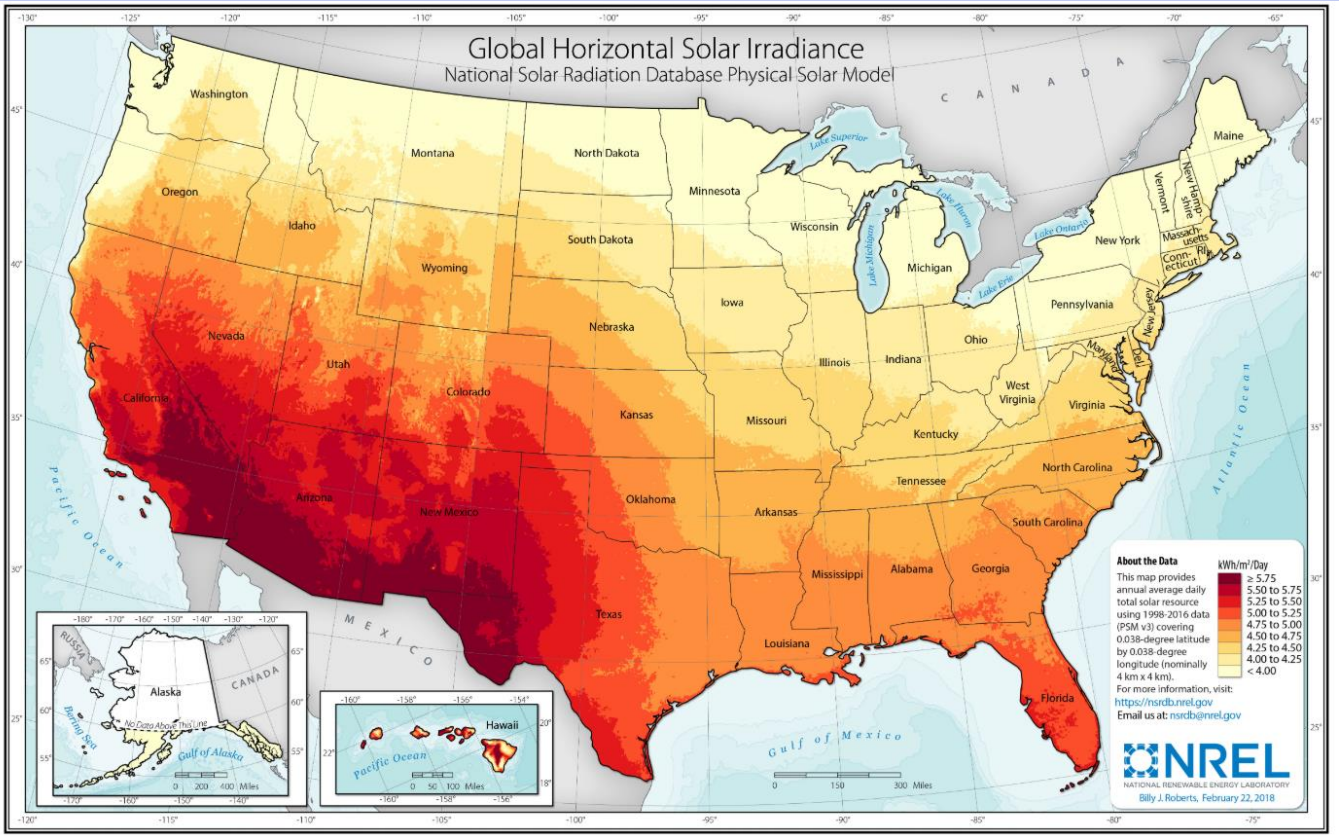
Claim 5: Southeast Michigan's Solar Resource

Southeast MI Solar Resource

One developer ran ads suggesting that Lenawee County's solar resource is the best in the state.

While technically true, it is deceptive.

MI solar insolation is among the worst in the US which makes MI solar expensive.



If this is Arizona Solar…

…this is MI Solar.

Solar Increases Retail Electricity Bill

Solar developers talk about declining costs for solar but that doesn't change the fact that intermittent generators drive up system costs for ratepayers as my colleague Michael Shellenberger explains in Forbes:

Forbes Billionaires Innovation Leadership Money Business Small Business Lifesty

Apr 25, 2018, 1:53 pm EST

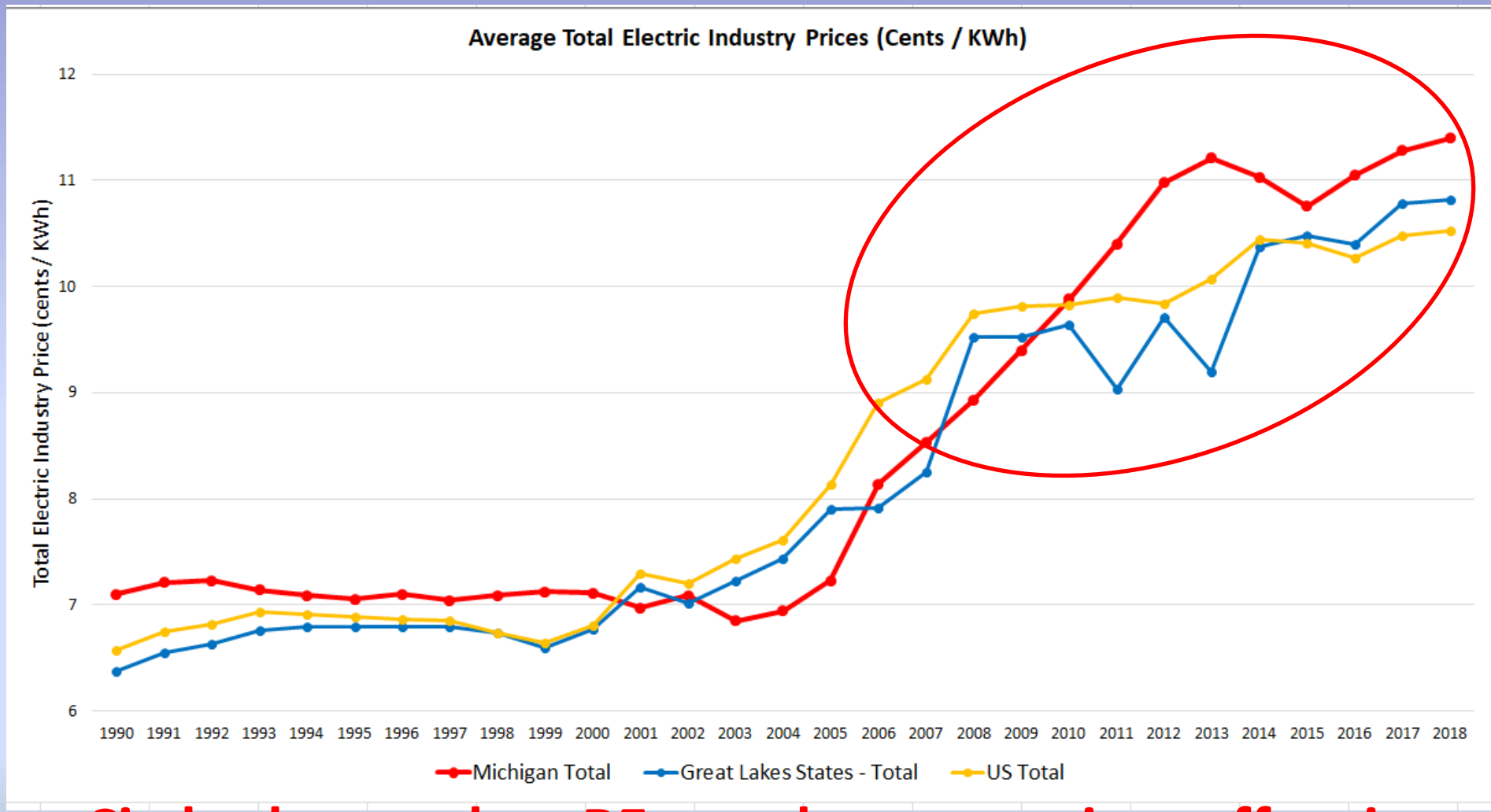
Yes, Solar And Wind Really Do Increase Electricity Prices -- And For Inherently Physical Reasons

Michael Shellenberger Contributor ⓘ

Energy

I write about energy and the environment.

And renewables lead to $ electricity.



Circle shows when RE mandates went into effect in the Great Lakes States.

Again:

These developer claims are not particularly relevant to land use policy decision making.

But due to their deceptive nature, they deserve a response.

Thinking About Regulation

MZEA

The Michigan Zoning Enabling Act grants townships the right to create land use regulations that protect the community's Health, Safety and Welfare as well as regulate aesthetics like size of structures, percentage of coverage of ground, setbacks, etc.

http://www.legislature.mi.gov/(x3eqqx2ix0ez34nsk1zysl45)/documents/mcl/pdf/mcl-Act-110-of-2006.pdf

PA295-Renewable Mandate

PA 295 was adopted in 2008. It included a mandate for 10% renewable energy.

That mandate was raised to 15% in 2016 in the new energy bill. That increase was a result of an amendment by Sen. Dale Zorn.

http://www.legislature.mi.gov/(S(qgez42e30g4205pti45jclxt))/mileg.aspx?page=getObject&objectName=mcl-Act-295-of-2008

PA295

Renewable energy developers regularly cite this renewable energy mandate when they are requesting zoning amendments to permit wind and solar to be constructed in local townships. They often say that "The State says we have to do this."

Leutheuser Amendment

Since so many developers were telling townships that "The state mandate means you have to let us into your community on our terms", I approached Senator Shirkey about an amendment to the 2016 energy legislation that would reinforce local control of power plant zoning.

Leutheuser Amendment

At Shirkey's prompting, Rep. Leutheuser in Hillsdale County added this language and it is now law.

Amendment No. 2e
December 15, 2016

Senate Bill No. 438 (H-7)

Rep. Leutheuser moved to amend the bill as follows:

1. Amend page 42, following line 7, by inserting:

"SEC. 54. NOTHING IN THIS SUBPART ABROGATES THE POWERS GRANTED TO LOCAL UNITS OF GOVERNMENT UNDER THE MICHIGAN ZONING ENABLING ACT, 2006 PA 110, MCL 125.3101 TO 125.3702.".

My point?

Solar and wind power plants are totally subject to local zoning regulations just like any other power plant.

The renewable energy mandate does not make them a special class.

Where SHOULD Utility Solar be Locate?

PA 116

As many township officials know, PA116 is a property tax rebate policy for agricultural land. Until 2019, solar power plants on ag land would disqualify that ground from participating in PA116.

But is ag ground the best place for solar?

Charles Gould, MSUE

“[Charles] Gould maintains that prime agricultural land should be the “last resort” for development — that projects should first be considered on marginal or industrial land.”

https://energynews.us/2019/04/10/michigan-revisits-policy-that-limits-solar-development-on-farmland/

MI Farm Bureau Policy:

- Incentivizing the production and use of renewable energy on non-agricultural use areas such as brownfield, public property, Michigan Department of Transportation rights-of-ways and other marginal lands, as well as industrial, residential and agricultural buildings, to reduce easements across farms for renewable energy projects and to protect prime farmland.
- Solar developers disclosing chemical and electronic components of solar panels and equipment to the landowner.

Massachusetts Audubon

"If this trend continues, as much as 150,000 acres of [Massachusetts] land may be lost to meet the targets for renewable energy development—land that is needed to provide other important functions in responding to climate change. This loss can be avoided by incentivizing solar installations within already developed sites and lands with lower resource values (e.g., parking lots, roofs, highway right-of-ways, and large turfgrass landscaped areas).

Minn. Rule 7850.4400

"No large electric power generating plant site may be permitted where the developed portion of the plant site, excluding water storage reservoirs and cooling ponds, includes more than 0.5 acres of prime farmland per megawatt of net generating capacity, or where makeup water storage reservoir or cooling pond facilities include more than 0.5 acres of prime farmland per megawatt of net generating capacity, unless there is no feasible and prudent alternative. Economic considerations alone do not justify the use of more prime farmland.

PA 116-Result

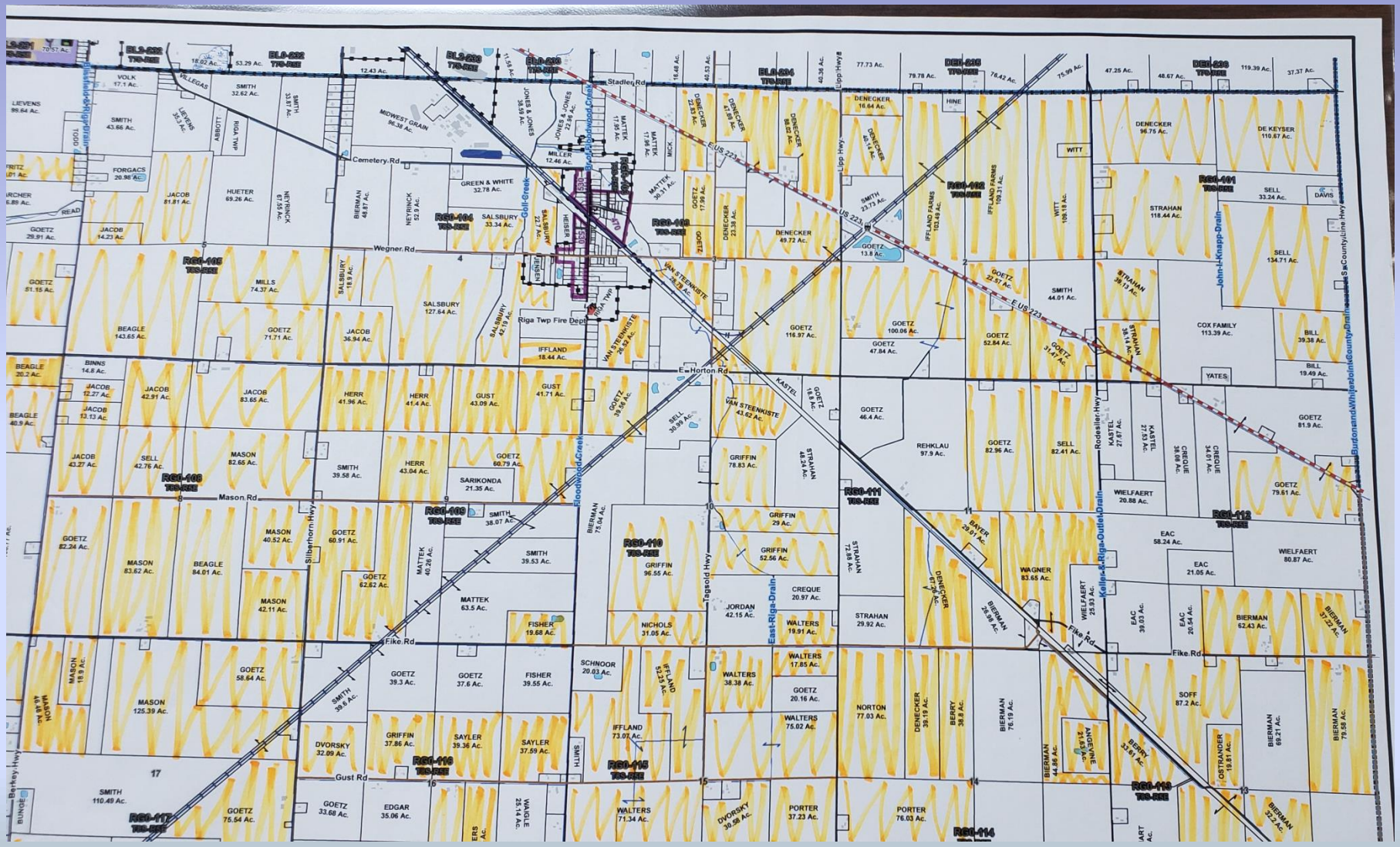
Even though the proponents of the PA116 rule changes for solar claimed that primarily poor farm ground would be impacted, the truth is that some of the most productive farm ground in the state is being sought for development even as many environmental experts disagree with that result.

PA 116 and Local Zoning

PA 116

Governor Whitmer changed the rules on PA116 qualification and under certain conditions, PA116 ground can host solar power plants. Unfortunately, solar supporters are using this change to imply that townships now *must permit* solar plants on enrolled ground.

Riga Has a High % of PA116 Ground



Former PA116 Rules Would Have Precluded Most of this Project

All PA116 ground open-2020?

Michigan Department of Agriculture & Rural Development
Environmental Stewardship Division
Commercial Solar Facilities on PA 116 Enrolled Land 6/3/2019

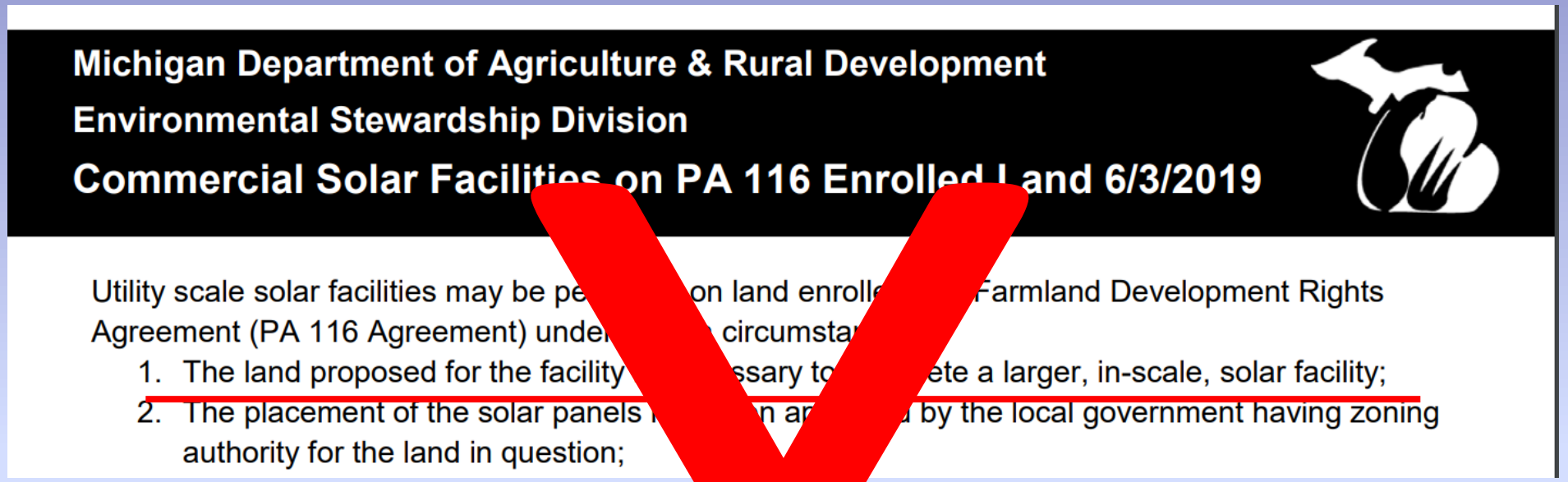
Utility scale solar facilities may be permitted on land enrolled in a Farmland Development Rights Agreement (PA 116 Agreement) under certain circumstances:

1. The land proposed for the facility is necessary to complete a larger, in-scale, solar facility;
2. The placement of the solar panels has been approved by the local government having zoning authority for the land in question;

The rule clearly states that the percentage of ground in PA116 must be a smaller portion of a larger project. In other words, all PA116 ground is not open for development.

https://www.michigan.gov/documents/mdard/Commercial_Solar_Facilities_on_PA_116_Enrolled_Lands_656804_7.pdf

Not So Fast!



Michigan Department of Agriculture & Rural Development
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https://www.michigan.gov/documents/mdard/Commercial_Solar_Facilities_on_PA_116_Enrolled_Lands_656804_7.pdf

What happened?

After I gave my first solar talk in Riga Township rule number 1, the developers ran back to MDARD. The result is that this rule no longer appears in any MDARD literature that I have been able to locate.

PA116 rule change take away local control?

"Pursuant to the Farmland and Open Space Preservation Act, MCL 324.36101 et seq. (the Act) and Paragraph 2 of the Farmland Development Rights Agreement with the Landowner, MDARD, subject to appropriate permitting by the local governing body, may permit structures to be built on property enrolled in the program if the structures are consistent with farm operations. "

The rule itself makes it clear that this PA116 rule for solar is subordinate to local township authority.

PA116 take away local control?

Solar Panel Approval Process
Farmland and Open Space Preservation Program

STEP 1
Local government approval/review

1.1 Landowner/Solar Developer contacts the local unit of government having zoning authority to determine if solar development is permitted on the land under local zoning. The following are possible responses that may be received:

a. Solar panel development is not permitted on the land.
b. Solar panel development may be permitted via either a rezoning, a special use permit or a use variance.
c. Solar panel development is permitted under local zoning.
d. If the land is not zoned the solar panel development would likely be permitted via a building permit.

1.2 If the project has been approved by the local government or you have documentation (i.e. meeting minutes, approval letter) from the local government that the project will be approved proceed to STEP 2.

1.3 The Solar Developer may request a listing of the PA 116 Agreements and PA 116 Liens in the area being considered for solar development and, if available, a map of these same parcels from the Michigan Department of Agriculture and Rural Development.

https://www.michigan.gov/documents/mdard/Solar_Panel_PA_116_Application_684964_7.pdf

More PA116 Rules to Consider

Under PA116 rules, landowner liable

4. The PA 116 landowner agrees to the following conditions and has signed an Amended PA 116 Agreement agreeing to the following additional provisions;
    a. The owner agrees not to claim PA 116 tax credits during the time the land is being used for the production of solar power as provided in the solar panel lease;
    b. The owner is responsible for the removal of the solar panels from the property and for the restoration of the formerly occupied land to agricultural use;
    c. The owner is to provide a surety in the form of a bond or irrevocable letter of credit to assure that the land is restored to agricultural use and that the solar panels, and all related equipment above and below ground are removed;
    d. The owner is required to notify the Michigan Department of Agriculture and Rural Development and the local governing body, having zoining authority, within 90 days if the ownership of the solar panels changes;
    e. The owner is required to notify the Michigan Department of Agriculture and Rural Development and the local governing body, having zoning authority, within 90 days if the ownership of the property changes;
    f. The owner agrees to plant a cover crop including pollinator habitat under the solar panels to reduce erosion and to maintain soil fertility;
    g. The owner agrees to maintain the existing drainage on the property during the life of the project;
    h. The owner agrees to notify any new landowner within 90 days of the requirements listed in the Amended Agreement;
    i. The owner must obtain approval from the local governing body, having zoning authority, and the Michigan Department of Agriculture and Rural Development for extension of the time period the solar panels are located on the property.

PA116 and Farm Drainage

Questions and Answers

1. **Question:** Why does the drainage need to be maintained on the property where the solar panels are located?
   Answer: It is important to maintain the drainage so the land may be restored to agricultural use. Also if the drainage is not maintained, the land may revert into a wetland area which may come under State of Michigan regulation. If the land becomes a wetland regulated by the State of Michigan, the land may not be used for farming.

Drainage maintenance a serious ag land issue.

Pollinator Habitat Critical

Development and the local governing body, having zoining authority, within 90 days if the ownership of the solar panels changes;

e. The owner is required to notify the Michigan Department of Agriculture and Rural Development and the local governing body, having zoning authority, within 90 days if the ownership of the property changes;
f. The owner agrees to plant a cover crop including pollinator habitat under the solar panels to reduce erosion and to maintain soil fertility;
g. The owner agrees to maintain the existing drainage on the property during the life of the project;
h. The owner agrees to notify any new landowner within 90 days of the requirements listed in the Amended Agreement;
i. The owner must obtain approval from the local governing body, having zoning authority, and the Michigan Department of Agriculture and Rural Development for extension of the time period the solar panels are located on the property.

Rules for pollinator habitat are extensive:

http://rightofway.erc.uic.edu/wp-content/uploads/2019/02/MSU_Solar_Pollinators_Scorecard_2018_posted.pdf

Developers and PA116:

Solar developers have stated in public meetings that these PA116 rules require them to return the ground to it's original condition at the end of the project.

The implication is that since those State rules are so rigorous, the township should not be overly concerned about decommissioning.

However:

A non-trivial portion of the ground in the Carroll Road Solar plan was NOT in PA116 which means those rigorous State reclamation rules will not apply.

Further:

This is particularly troubling since at least one area solar lease states:

"[Developer] shall have no obligation to remove any roads constructed on the Property or any subsurface improvements."

otherwise restore the Property to as near as possible to its original

and leave the Property in a good, clean condition. Notwithstanding the foregoing, Tenant shall have no obligation to remove any roads constructed on the Property or any subsurface improvements. Tenant shall have access to the Property and Leased Premises during the Restoration Period at no cost to Landlord in order to remove the Improvements and to restore the

Finally:

PA116 rules can be modified at the stroke of a governor's pen, now or 20 years from now.

If you want rigorous ag preservation rules, put them in your ordinance where *you* control it rather than the *State*.

By the way:

The list of regulations in this rule are substantial. Time does not permit me to address all of the issues in this document.

I encourage everyone to procure a copy of the rules, read and understand them.

https://www.michigan.gov/documents/mdard/MDARD_Policy_on_Solar_Panel_and_PA116_Land_656927_7.pdf

Local Regulations to Understand

Typical Township Documents

There are two documents that impact the placement of solar panels in townships

The first is the *Master Plan* which charts future land use policy in the township.

The second is the *Zoning Ordinance* which regulates land use.

Riga Township Master Plan Typical

Agricultural Goal

The Township shall maintain the rural character and preserve the local characteristics that contribute to a viable, stable, agricultural industry. It shall be the Township's responsibility to encourage the retention of farmland in agricultural production and encourage new economic opportunities within the agricultural community. It is a primary goal of Riga Township to maintain its agricultural heritage, culture, and way of life.

Policies

1) The Township shall identify prime agricultural lands and prime agricultural soils for the concentration of farmland preservation efforts.

2) The Township shall discourage non-agricultural development of important farm lands through the Master Land Use Plan and Zoning Map.

3) The Township shall promote the enrollment of Public Act 116, Farmland Agreements, Purchase of Development Rights (PDR), Conservation Easements, or other means to maintain the viability of agriculture and open space in the community.

Lenawee County Land Use Plan

Intensive Agricultural

Areas designated intensive agriculture are primarily based on the Lenawee County Soil Survey. These areas consist of the ancient lake bed east of the Ridge, as well as large agricultural tracts in the southern portion of the County. The county drain system made this land tillable and the soils are among the best in the state.

Agricultural preservation techniques are encouraged in intensive agriculture areas. Being of high clay content, the soils do not drain well, and hence are not well suited for septic tank absorption fields. In order to preserve the agricultural integrity of these areas, the extension of central water and sewer services should be avoided except to provide for public health and safety.

Frenchtown Township MP

Goal 1: Preserve farmland and open space by encouraging growth to happen along the transect model and development to occur adjacent to existing development in a logical, connected pattern.

Objectives:

1. Recognize the essential economic and environmental benefit of preserving prime agricultural land.
2. Strictly enforce the residential densities envisioned in the Master Plan and Zoning Ordinance.
3. Preserve agricultural zoning throughout the Township unless and until property owners request rezoning to a classification specifically envisioned in the Zoning Plan.

Frenchtown Township MP

AGRICULTURAL AREAS

Agriculture provided the economic base upon which Frenchtown Township was built. It still plays an important role in the economy, occupying over 55% of the total land area of the Township. Most of the land used for farming is located on prime agricultural soils. County-wide, agriculture is a $200 million industry.

Much of the Future Land Use map envisions development on land that is currently agricultural (or otherwise undeveloped). However, this plan envisions the protection of agriculture in broad swaths of the northern part of the Township. Rezoning any of that land to a category that encourages intensive development is highly discouraged in order to protect the agricultural output and natural beauty of the northern portion of Frenchtown.

My quick read on Frenchtown MP

It appears to my quick read of the MP that Frenchtown Township has a policy of protecting ag ground as long as possible from encroachment.

But it also predicts that as farm ground is converted to other uses, those uses should be compact residential and commercial development. Utility scale solar is not a good fit for those future uses.

My quick read on Frenchtown MP

And with a relatively high percentage of commercial and industrial development in Frenchtown Township compared to more rural township, commercial rooftops and parking lots could be an ideal location for solar development.

Solar ‘Farming’?

Proponents of solar development often make statements like “solar farming allows farmers to harvest a new crop”, thus trying to paint the construction and operation of solar power plants as a farming activity.

Is solar development “farming”?

MI RTFA definition doesn't include power generation

(a) "Farm" means the land, plants, animals, buildings, structures, including ponds used for agricultural or aquacultural activities, machinery, equipment, and other appurtenances used in the commercial production of farm products.

(b) "Farm operation" means the operation and management of a farm or a condition or activity that occurs at any time as necessary on a farm in connection with the commercial production, harvesting, and storage of farm products, and includes, but is not limited to:

(*i*) Marketing produce at roadside stands or farm markets.

(*ii*) The generation of noise, odors, dust, fumes, and other associated conditions.

(*iii*) The operation of machinery and equipment necessary for a farm including, but not limited to, irrigation and drainage systems and pumps and on-farm grain dryers, and the movement of vehicles, machinery, equipment, and farm products and associated inputs necessary for farm operations on the roadway as authorized by the Michigan vehicle code, Act No. 300 of the Public Acts of 1949, being sections 257.1 to 257.923 of the Michigan Compiled Laws.

(*iv*) Field preparation and ground and aerial seeding and spraying.

(*v*) The application of chemical fertilizers or organic materials, conditioners, liming materials, or pesticides.

(*vi*) Use of alternative pest management techniques.

(*vii*) The fencing, feeding, watering, sheltering, transportation, treatment, use, handling and care of farm animals.

(*viii*) The management, storage, transport, utilization, and application of farm by-products, including manure or agricultural wastes.

(*ix*) The conversion from a farm operation activity to other farm operation activities.

(*x*) The employment and use of labor.

(c) "Farm product" means those plants and animals useful to human beings produced by agriculture and includes, but is not limited to, forages and sod crops, grains and feed crops, field crops, dairy and dairy products, poultry and poultry products, cervidae, livestock, including breeding and grazing, equine, fish, and other aquacultural products, bees and bee products, berries, herbs, fruits, vegetables, flowers, seeds, grasses, nursery stock, trees and tree products, mushrooms, and other similar products, or any other product which incorporates the use of food, feed, fiber, or fur, as determined by the Michigan commission of agriculture.

MI Farm Bureau Policy Book

We oppose:

- Right to Farm protection being extended to marijuana growing facilities until growing the plant becomes legal at the federal level.
- Ballot initiatives seeking to control generally accepted livestock production and management practices.
- The inclusion of commercial wind turbine or solar facilities in the definition of a farm. The Michigan Right to Farm Act should allow for and protect users of existing and new technology, including energy production for on-farm use.

Typical Township ZO defines agriculture

"AGRICULTURAL: Includes purposes related to agriculture, farming, dairies, pasturage, horticulture, floriculture, viticulture and animal and poultry husbandry."

<u>Power generation not included.</u>

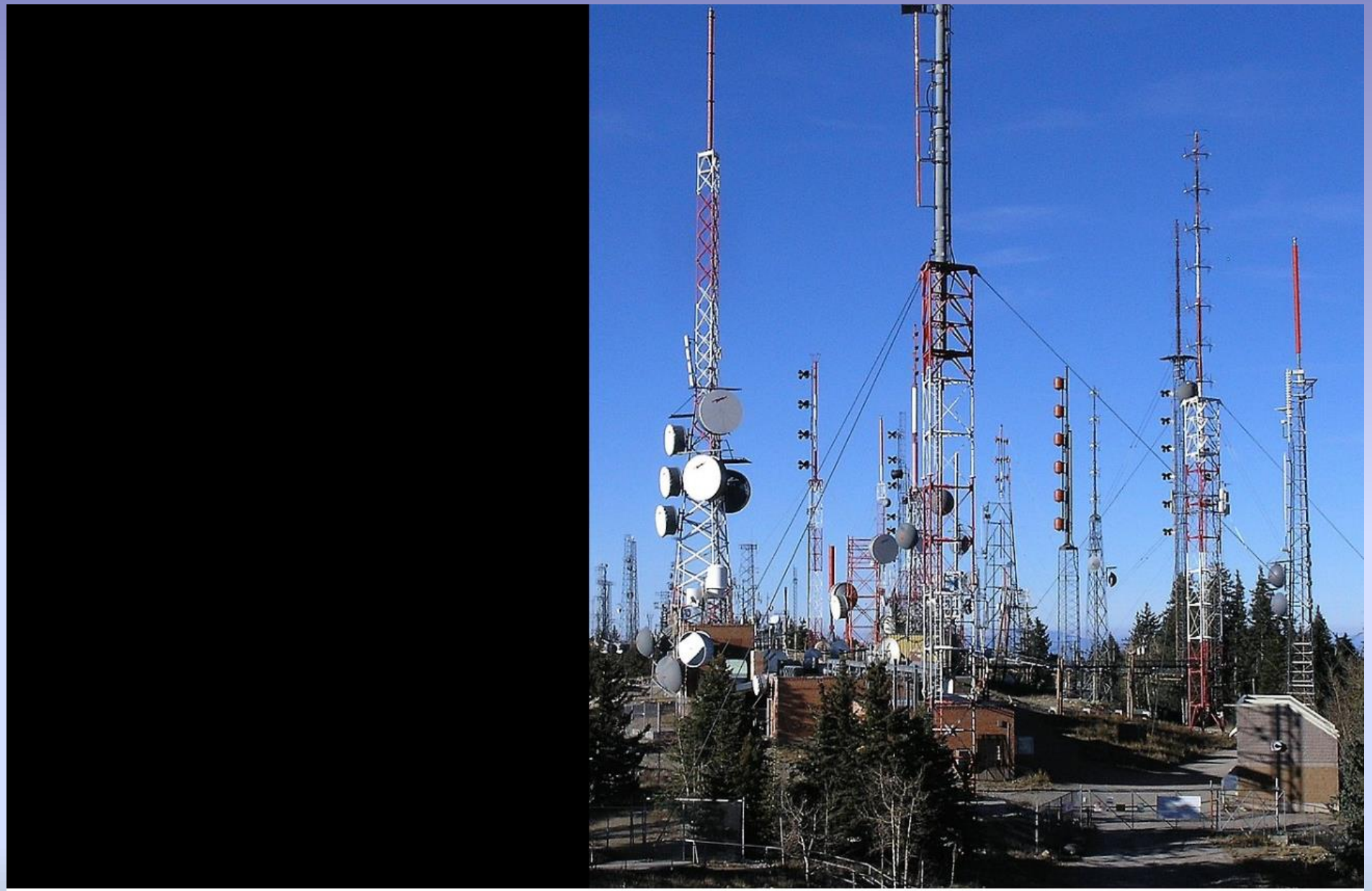
Did you know?

Many non-ag facilities include the word “farm”.

Are these ag uses?

8.5 Storage Facilities—Tanks

Tank farm areas require additional consideration for spacing not only between process hazards but from other storage tanks. Minimum tank, that is, shell to shell, spacing is well defined and is usually in accordance with NFPA 30, Flammable and Combustible Liquids Code. It also includes spacing requirements from buildings and property lines.



Huge antenna farm on Sandia Peak near Albuquerque, New Mexico, USA

This isn’t farming either.

Ordinance Recommendations

Industrial District Preferred

A plain reading of most rural township zoning ordinances would suggest that power plants belong in industrial areas.

When an industrial district exists, I recommend that solar be placed in that district.

If the Industrial district abuts commercial, institutional, residential or other aesthetically sensitive zones, I recommend requiring a landscaped earth berm to obscure the view.

Ag Preservation

Even though industrial zones are ideal for utility solar, developers regularly target ag ground for solar development due to low cost.

If that is the case and your township wishes to keep ag ground in agricultural production, I recommend that you limit the percentage of coverage on farm ground.

I recommend that no more than 10% of any parcel be covered by utility solar.

You may also prohibit solar on PA116 ground.

Setbacks

Setbacks are designed to provide aesthetic protection to neighboring residential land owners.

When regulating solar on ag ground, I recommend a waivable 500-1,000' setback from the array to the nearest property line.

Then the solar developer can negotiate a view shed easement or "waiver" with the neighbors to reduce the setback to something suitable for the developer, typically less than 100'.

Drainage Tile Issues

The PA116 rules describe a substantial future risk to farm ground hosting solar development in the event of tile failure.

I recommend requiring robotic inspection of every foot of tile pre-construction, repair of any inoperable tile in advance and then re-inspection every three years.

All video footage to be placed on file with Township.

The equipment exists

The Drain Camera Shop

CALL NOW FOR PAYMENT OPTIONS
888.913.3419

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QUESTIONS?
CALL NOW
888.913.3419

Name *

Email *

Phone Number
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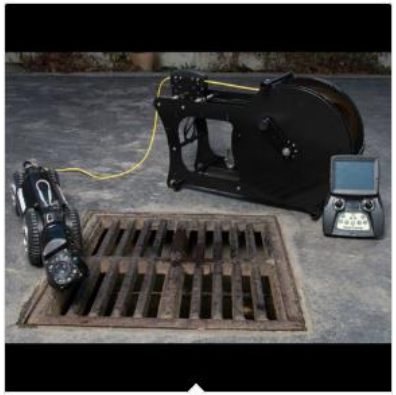


DT Crawler Package A

DT Crawler Package B

Iris Crawler Package A

Objections to Inspection

There may be resistance to such an inspection regimen.

But imagine 35 years from now when most of us will likely have gone on to our final rewards.

What if the tile has failed and the ground can no longer be farmed?

The solar plant operator's defense will almost certainly be "how do you know it was working when we started the project?"

Inspection creates a data trail.

Non-PA116 Ground

Since we have seen that some solar leases do not offer the same protections to farm ground not enrolled in the PA116 program, I recommend requiring all utility solar to honor the current PA116 rules on all ground, enrolled or not. This would add requirements for things like pollinators, etc., throughout the footprint of any development.

Noise

Inverter noise can be quite obnoxious. Most environmental noise standards recommend a 40-45dBa noise limit for rural areas. And they add 5dB penalty for noise sources that have a "tone" or a recognizable pitch as opposed to broadband or white noise-like inverters.

I recommend a 40dBa property line noise limit and adding the Lmax descriptor: 40dBa Lmax.

Noise

In addition, you can require a noise attenuating roof-less masonry structure around each inverter array. This will buffer the noise.

Proudfoot

ARCHITECTURAL ACOUSTICS • INDUSTRIAL NOISE CONTROL

SOUNDBLOX®

SOUNDCELL®

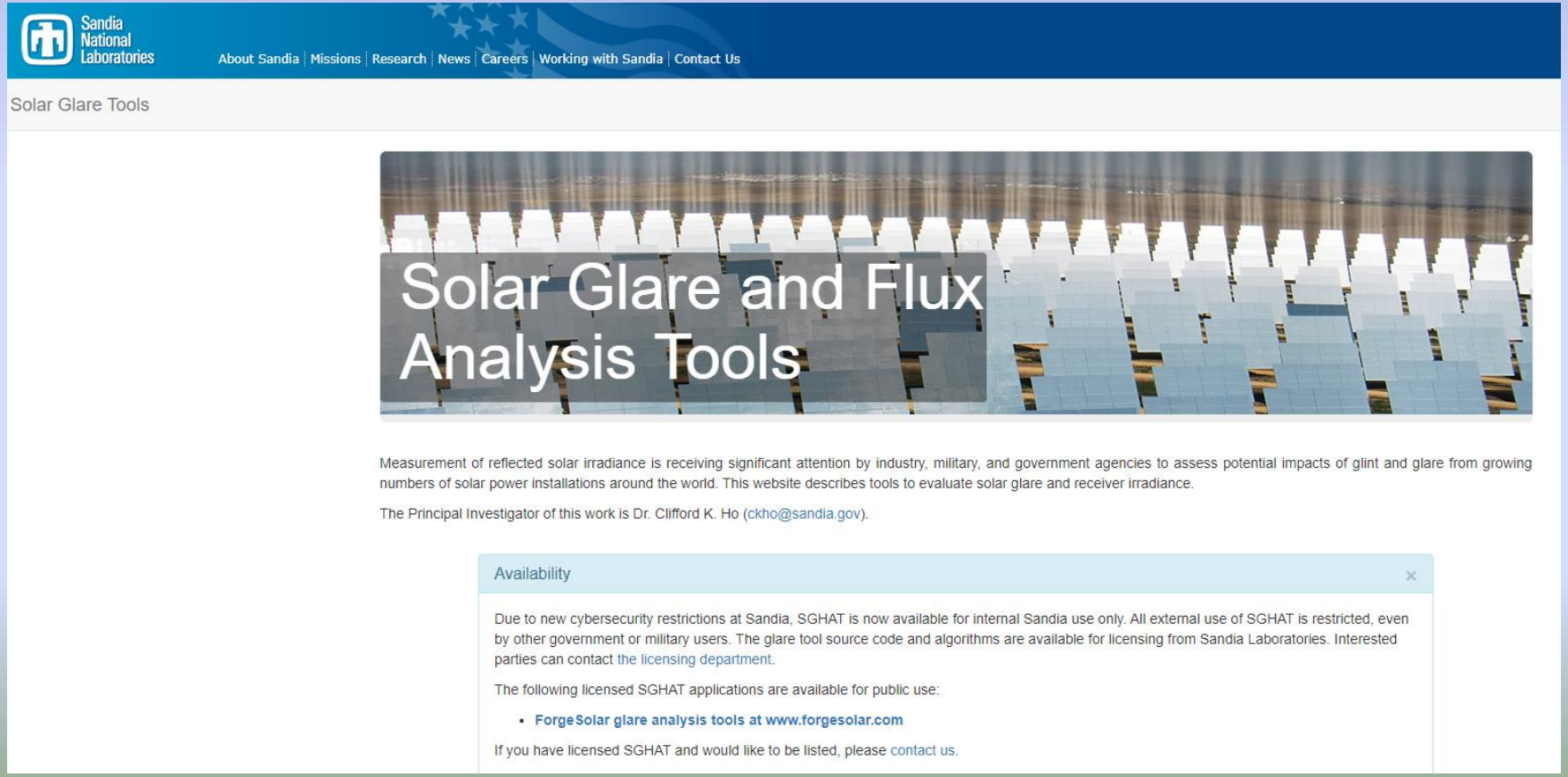
The Proudfoot Company is an industry leader in acoustical correction and noise control. Since 1965, Proudfoot has worked with architects, engineers, consultants, and specifiers to control noise on a wide variety of projects using Soundblox and SoundCell Acoustical Concrete Masonry Units (ACMU'S) . Tens of millions of these popular units are in place around the world today.

Glare

Solar developers routinely state that the FAA permits solar panels to be installed near airports thus leaving the impression that glare is a non-issue.

Glare cont'd:

The truth is that glare is a serious problem and solar panels at airports must undergo rigorous glare analysis and follow rigorous siting criteria.



Examples of Glare from Solar Technologies

Sandia National Laboratories

Photovoltaics

Concentrating Solar Power

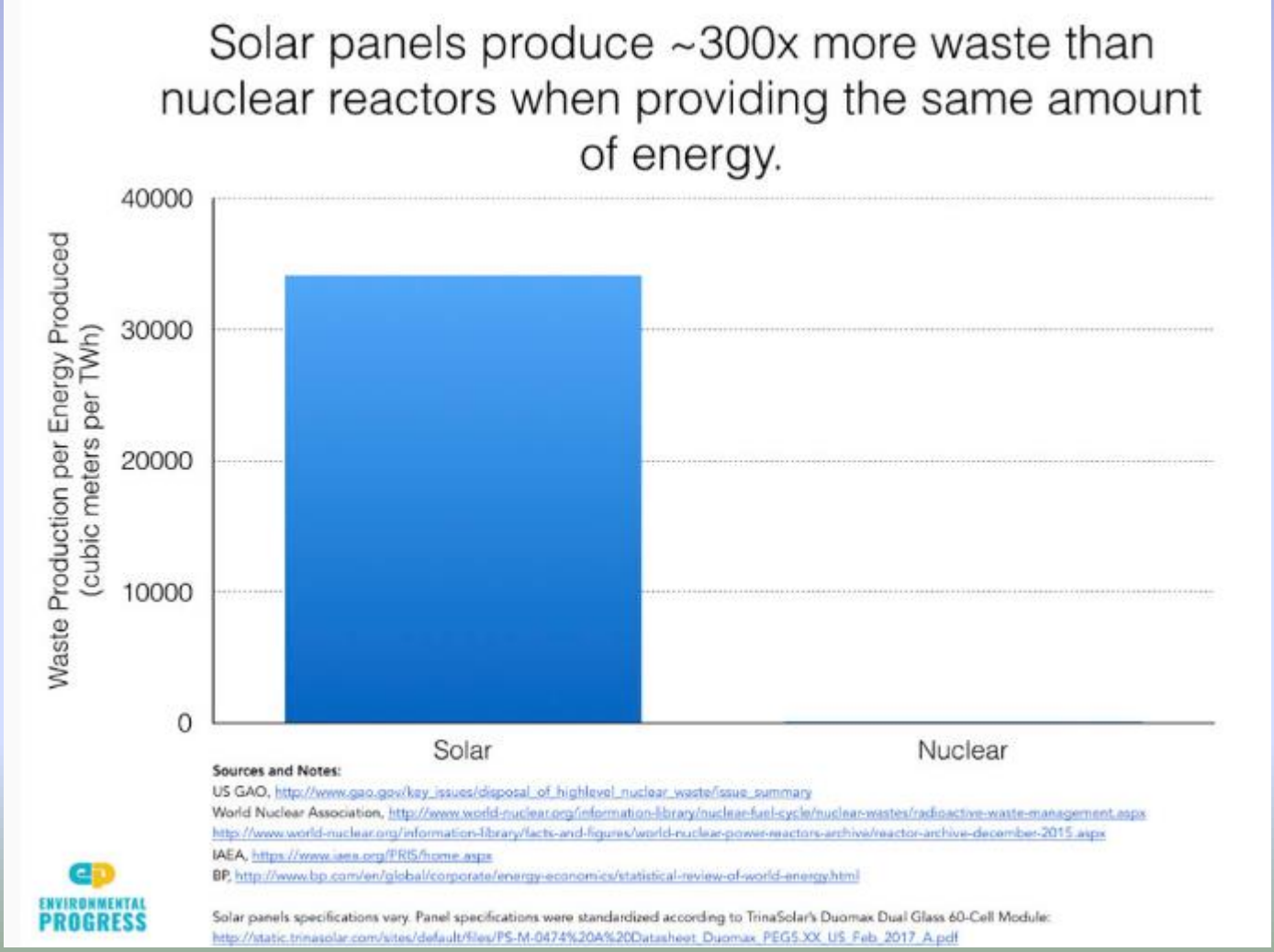
Heliostats and Central Receiver at Sandia Labs, Albuquerque, NM

Dish Collectors at Sandia

Parabolic Trough Collectors at Kramer Junction, CA

End of Life Issues

Solar arrays produce a lot of waste compared to energy delivered.



End of Life Issues

In the US, expired solar panels are either shipped abroad or placed into the waste stream.

gtm: Solar Grid Edge Storage Wind Trending Podcasts White Papers Webinars

SOLAR

Landfilling Old Solar Panels Likely Safe for Humans, New Research Suggests

Recycling the materials from spent PV panels and wind blades is the ultimate goal but doing so remains costly.

JASON DEIGN | APRIL 02, 2020

15

End-of-life modules can be recycled, but the IEA suggests they pose no landfill health threats. (Credit: PV

End of Life Issues

Severe storm damage can open pathway to leaching of pollutants and create surge in waste.

Recycling

Before we engender a solar waste crisis, I recommend that municipalities require developers to guarantee that 100% of the panels, wiring and attendant electrical hardware will not end up in the waste stream but be recycled.

Their components are not benign and they are of such massive volume, they pose an outsized long term risk to the environment.

Decommissioning

The PA116 rules require the *landowner* to furnish a bond to guarantee removal of the system at the end of it's useful life.

But not all ground hosting solar would be in PA116. Therefore, I recommend requiring a bond equivalent to the value of restoring the project site to it's original condition. That value should be determined by a third part engineer selected by municipality and paid for by developer. That value should be updated every three years.

Cash in escrow is better than a bond.

Enforcement Escrow

13 years' experience with wind energy development has taught us the need for small municipalities to require *zoning ordinance enforcement money* to be placed in escrow and maintained by the developer.

This is because most townships lack adequate funding for expensive ordinance enforcement, particularly when the developer is a large Fortune 500 company.

Property Value Impacts

We are now seeing more studies showing loss of property value for homes in close proximity to large-scale solar development.

The developers claim there is no valuation impact.

Since we cannot be sure, requiring a property value guarantee in local regulations would be reasonable.

If there is no impact as the developers claim, they should not hesitate to guarantee it.

Exclusionary Zoning?

Exclusionary Zoning

Often, officials think that every land use *must* be permitted or the township could be sued for "illegal exclusionary zoning".

Mich. Bar on Exclusionary Zoning

"Courts interpreting these provisions have found that, in order to establish [exclusionary zoning], "plaintiffs must show:

(1) that the challenged ordinance has the effect of totally excluding the land use within the [municipality]

(2) there is a demonstrated need for the excluded land use in the [municipality] or surrounding area

(3) the use is appropriate for the location

(4) the use is lawful."

-http://www.michbar.org/publiccorp/pdfs/winter09.pdf

Almer Township & Demonstrated Need

"Wind turbines produce energy, which is, of course, needed by the Almer Township community. But …[NextEra's Tuscola Wind project] cannot reasonably argue that the Township will have inadequate access to energy absent the wind energy project."

Accordingly, it is **ORDERED** that Defendant Almer Township Board's denial of Plaintiff Tuscola Wind III, LLC's, SLUP application is **AFFIRMED.**

Dated: November 3, 2017

s/Thomas L. Ludington
THOMAS L. LUDINGTON
United States District Judge

FAQ

Isn’t solar a temporary use?

Solar developers often wish to soften the impact of removing thousands of acres of ag ground from production by claiming that they will remove the project in 25-30 years and the ground will return to farming.

Solar a temporary use…

Utility scale solar is turning out to be very contentious. Zoning approval for solar on ag ground in Michigan has been hard to procure.

Once a project is constructed, it is grandfathered into your zoning in perpetuity as long as less than 50% of the project on any given parcel is replaced in a given year.

Solar a temporary use…

This means that even if you update your zoning to limit solar on ag ground, a careful developer can keep that plant in place for many decades. And if solar is truly the power source of the future, why would they remove it and move to a new location every 30 years?

They wouldn't.

And PA116 rules requiring removal, etc., can change with the stroke of a governor's pen.

Does developer have vested rights?

Townships often wonder whether they can amend their ordinance once a developer starts leasing or even applies to build. In other words, when does the developer have vested rights in the zoning ordinance?

Two Part Test

To have vested rights, a developer must have passed to hurdles:

1. **They must have received a building permit.**
2. **They must have commenced substantial exterior construction.**

https://fsbrlaw.com/2015/02/27/if-a-township-adopts-a-new-zoning-ordinance-or-amends-its-current-zoning-ordinance-how-does-that-create-a-nonconforming-use/

Note:

Building permits are only issued AFTER all zoning approvals are received.

This means it is possible to have issued a site plan approval and all special use permits and even then it is not too late to amend your ordinance as long as the building permits have not been issued and substantial exterior construction has not commenced.

Recommendation:

Even though a township is legally able to amend zoning after zoning permits are issued, it is better policy to update your ordinance long before you get to that point in the process.

Adding Conditions @SLU/CLU stage:

Often, townships will realize they have a permissive wind or solar ordinance that no longer seems appropriate for their township land use goals. But since their ordinance treats wind and solar as a special or conditional use, they decide they will just add conditions to hinder the project at that stage.

Be Careful!

While it is certainly true that you can add conditions at the SLU stage, I know of no *shorter path to litigation*.

The number one rule for lawful zoning regulations are that the rules must not be arbitrary or capricious. Nothing appears more arbitrary or capricious than adding heavy conditions to a solar or wind project that hinder its development when a plain reading of your ordinance permits the use.

Be Careful….

It is much better to amend your ordinance to establish the policy you wish to achieve then to add burdens at the SLU stage.

What if our ordinance is silent?

If your ordinance is silent on solar development, the developer cannot proceed. You cannot build on silence.

You must establish comprehensive regulations for the proposed use if the use is appropriate for the area where the use is proposed.

What about a moratorium?

A moratorium is the power the township has to halt all issuance of permits for a land use. Moratoria are typically issued for 6 months to 2 years. They can be extended.

The moratorium takes the pressure off the PC and board as they do their due diligence in creating reasonable regulations for the proposed use.

Two ways to do it:

A moratorium can be enacted as an zoning ordinance amendment. Probably the strongest way to do it legally. But it has the risk of referendum if the applicant is aggressive.

The other method is to enact a police power moratorium. It is quick and not subject to referendum. But there is one federal court case that found them unlawful. I disagree with that decision.

You can also simply do both. And if you make a moratorium only 6 months long and then renew, the risk of litigation is very low as it takes months to get in front of a judge and the suit would be moot.

By the way:

Unless your local ordinance sets a time limit to process applications, you are under no obligation to rush to meet the developer's timeline.

It is entirely acceptable to tell the applicant that you have decided to revisit your regulations for the proposed use and you will table their application until you have finished your work.

Will we get sued?

Litigation is always a possibility with contentious land use. But the risk is not only from the developer. As Macon Township has seen, the local folks can also file suit.

Deerfield Township was sued by ESA Solar. ESA's case was incredibly weak and they lost quickly. The township was protected financially by their liability insurance policy with only minimal cost to the Township.

If you are concerned, I strongly recommend you consult with your insurer and make sure you have the appropriate coverage for you situation.

But remember: <u>if you roll over to every developer who threatens litigation, you effectively turn over control of your township to the developer</u>.

Strong and reasonable regulations are defensible in court!

Conclusion

Bottom Line

Many SE MI townships are deciding that utility solar is a poor fit for high quality ag land.

The claims of solar developers are designed to win zoning approval by inducing the township government to value economics more than considering the highest and best use of land in the community.

And when there are millions of acres of brownfield, industrial or commercial land available that is suitable for solar development, there is simply no need for it on prime ag land.

Up To You

If you only take one thing away from this talk, it is this:

You have full authority to regulate utility scale solar in any fashion you wish. Solar development is not a special class of land use.

Reasonable regulations designed to protect ag ground from solar development are a legitimate use of township authority to advance a legitimate governmental interest.

Model Ordinance

I have developed a model solar ordinance that adds reasonable protections for high quality ag land like Riga Township.

Summerfield Township has also developed a solid solar ordinance that places solar in their industrial district.

And with a relatively high percentage of commercial and industrial development in Frenchtown Township, rooftops and parking lots could be an ideal location for solar development.

Questions?

Kevon@kevonmartis.com