

Opponent Testimony-HB 5120-5123

Our Home, Our Voice

Protecting our homes, our land and our families from special interests that threaten reasonable regulation.

Our Home, Our Voice is a pure grassroots coalition of local officials and private citizens dedicated to protecting Michigan's long-standing right of local regulation of land use. OHOV is funded entirely by rural residents and receives no industry support of any kind.

We are here at our own expense.

Our Home, Our Voice LLC - Deerfield, MI

Kevon Martis

- Lenawee County Commissioner in SE Michigan
- Deerfield Township Zoning Administrator, Lenawee County
- MSUE Extension Certified Zoning Administrator and Planner
- Involved in land use since 2005 as local PC member
- Has lectured in 10 different states on renewable energy siting issues
- Receives no industry funding of any kind
- Media reports of financial ties to various entities are false



My talk will be broken into three parts:

1. Fundamental failures in the legislation itself
2. Basic information about wind and solar development in MI
3. Myths propagated by the sponsors of this legislation



The Bills' Wind and Solar Regulations

The wind and solar regulations in these bills are outdated and have no basis in sound science and they do not include many common protections for wildlife, natural vistas and human neighbors to these projects.

Following is a list of matters in which these regulations are either silent or deficient.



Avian Protection

These bills contain no protection for threatened and endangered species or migrating birds.

Common recommendations are for a 5-mile setbacks from Great Lakes shorelines as well as additional protections for endangered species like the piping plover.

<https://www.glc.org/wp-content/uploads/2016/10/2011-tnc-gl-regional-guidelines.pdf>



Bat Protection

Michigan is home to endangered bats including the Indiana bat. Wind turbines are the leading cause of death for bats in the US. The standard method to protect bats is to shut down turbines at wind speeds below 6.5 M/s.

<https://www.scientificamerican.com/article/bat-killings-by-wind-energy-turbines-continue/>

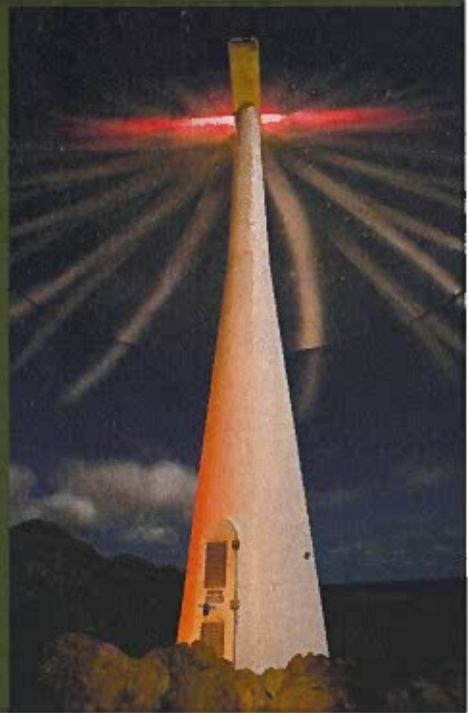
<https://www.scientificamerican.com/article/3-ways-to-keep-bats-away-from-wind-turbines/#:~:text=Ultrasonic%20%E2%80%9Cboom%20boxes%E2%80%9D%20that%20emit,by%20interfering%20with%20their%20echolocation.>



Dark Sky/Light Pollution Protection

Wind turbines have flashing red FAA lighting. It turns out that these flashing lights are high on the list of annoyances for neighbors and is highly disruptive to natural vistas. Many ordinances require the developers to install radar activated FAA lighting that only turns the lights on when aircraft are detected.

<https://www.wamc.org/new-england-news/2016-05-12/aaa-approves-new-radar-activated-lights-for-wind-turbines>



Funding for Intervenors

Most modern wind ordinances require developers to escrow money both for the processing of land use permit applications as well as future enforcement.

These bills allow neighbors and local units to intervene by right. But township liability policies do not fund such intervention.

The MPSC is already the playing field for developers, utilities and enviro groups, all who are well funded. Locals simply cannot afford to represent themselves in any proceedings. To be just, there must be funding available for intervention pre-approval and for post-construction enforcement.



Wind Turbine Noise

The bills include a 55 decibel noise limit for wind turbines and is measured at neighbors' homes, not property lines.



Wind Turbine Noise: the Science

There are many high-level sources indicating that the correct noise level for wind turbines is 40 decibels or lower.



World Health Organization

The WHO guideline says the correct noise level is 45 decibels but uses the descriptor "DEN" after the dB number: day-evening-night.

This means the WHO limit is **45dB day, 40 evening and 35 night**.

The bills before us use a **55dB standard** which is **4 times louder*** than the WHO nighttime recommendation.

* The decibel scale is logarithmic so a 10dB increase equals an apparent doubling of the noise level



3.4 Wind turbine noise

Recommendations

For average noise exposure, the GDG **conditionally** recommends reducing noise levels produced by wind turbines below **45 dB L_{den}**, as wind turbine noise above this level is associated with adverse health effects.

To reduce health effects, the GDG **conditionally** recommends that policy-makers implement suitable measures to reduce noise exposure from wind turbines in the population exposed to levels above the guideline values for average noise exposure. No evidence is available, however, to facilitate the recommendation of one particular type of intervention over another.



South Australia

South Australia limits noise to **35dB** at homes intended for rural living:

2.2 Noise criteria – new wind farm development

The predicted equivalent noise level ($L_{Aeq,1h}$, adjusted for tonality in accordance with these guidelines, should not exceed

- 15dB(A) at relevant receivers in localities which are primarily intended for rural living

OR

- 40dB(A) at relevant receivers in localities in other zones

OR

- the background noise ($L_{Aeq,1h}$) by more than 5dB(A)

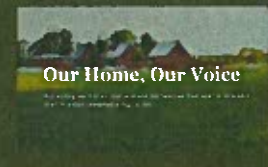
whichever is the greater, at all relevant receivers for wind speeds from cut-in to rated power of the WTG and each integer wind speed in between. These criteria apply for both day and night time hours, but have been based on conservative night time levels.

The background noise should be as determined by the data collection and wind speed bin analysis procedure recommended under these guidelines (section 3). It should be read from the resultant graph at the relevant integer wind speed. Compliance with the noise criteria should also be demonstrated for approved developments in the zones adjacent to the wind farm.

Rural living

A rural living zone is for an area intended as rural-residential 'lifestyle' with high amenity requirements. This area should not be used for primary production purposes other than to produce food, crops or keep animals solely for the occupier's own use, consumption and/or enjoyment. It is expected that these zones have amenity that is quieter than urban residential and land uses that promote primary production.

If there is uncertainty a zone is to be classified as rural living, the EPA will determine this based on the desired and performance outcomes as laid out in the [Planning and Design Code](#).



Wind Developer NextEra Canada/US EPA on Noise

“The Ontario Ministry of Environment's Sound Guidelines for rural areas establish maximum permissible sound levels at residences of **40 decibels**, which is **consistent with the standards set by the United States Environmental Protection Agency.**”

<https://web.archive.org/web/20180727080509/http://www.nexteraenergycanada.com/faq.shtml>



Solar Noise Limits

Because many solar inverters produce a “pure tone”, **ANSI standards indicate** that the correct noise limit for solar arrays is in the **35-38dB** range for quiet rural areas.

The bills before us permit 55dB.

<https://iiccusa.org/solar/rob-rand-noise-impact-assessment-overview/>



Wind Turbine Setbacks

The bills permit a 500' turbine to be sited only 1,100 feet from someone's bedroom window.

But **Ontario requires** at least **1800'** and **South Australia requires** a kilometer or **3,280'**.



Turbine Manufacturers

Major turbine manufacturers publish safety manuals that identify an evacuation zone for wind turbine technicians that is much larger than the 2.1x turbine height setback (1,100 feet for a 500' turbine).



Turbine Manufacturers

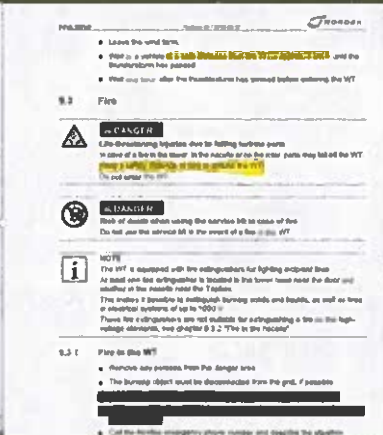
From Vestas "Health & Safety Instruction":

"If a runaway operation should occur, the plant must be evacuated immediately by running upwind, and access to the surrounding area in a radius of at least **500 metres** must be restricted"-1640'

Nordex:

"In case of a fire in the nacelle or on the rotor, parts may fall off the wind turbine. In case of a fire, nobody is permitted within a radius of 500 m from the turbine."-1640'

Nordex instructs employees to remain 1km (3,280') from turbines and inside vehicle during storm event and to remain there for one hour.



APEX Clean Energy

"Dan and Nancy Welke live in Merrill, Lafayette Township, where they say they have one turbine less than **1,600 feet** from their home and another one about **2,600 feet** away. They say they have been "battling" with DTE Energy and Gratiot County officials for the last year and a half regarding the negative effects of the turbines. Nancy called the ongoing experience "a living hell." ...**Apex Clean Energy's** Senior Development Manager Albert Jongewaard noted that another wind developer constructed the Gratiot County wind farm — not Apex — but he sympathized with the Welkes and he has even visited their property to see the situation for himself. "I think they do have a heartfelt grievance," Jongewaard said. **"I think the turbines in that particular location were improperly sited. I have no problem saying that out loud."**

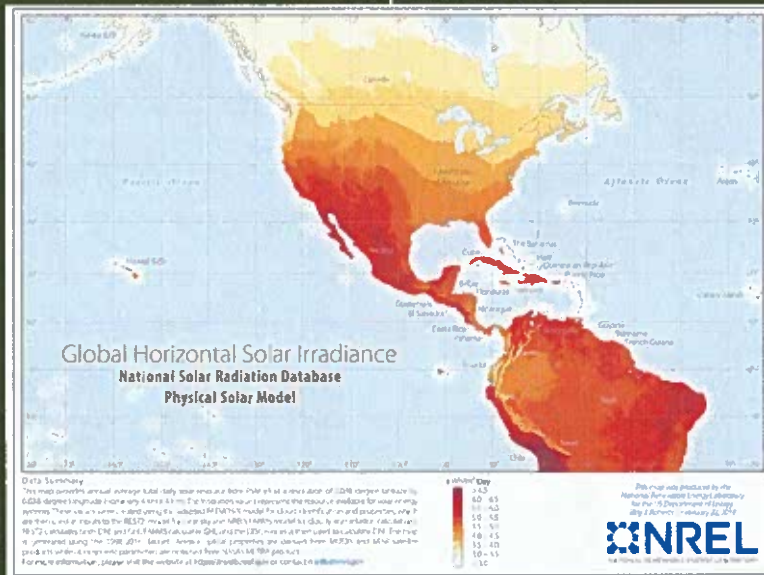
<https://www.windaction.org/posts/52649>



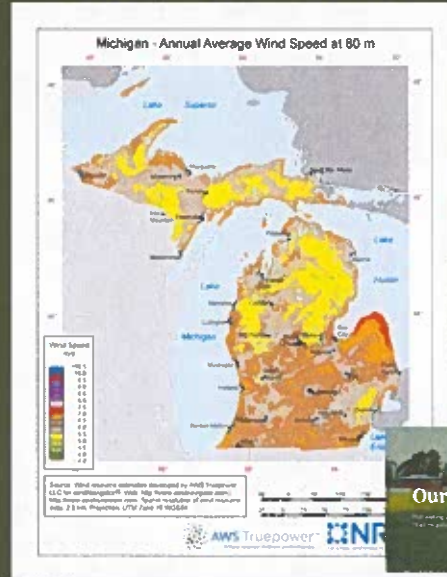
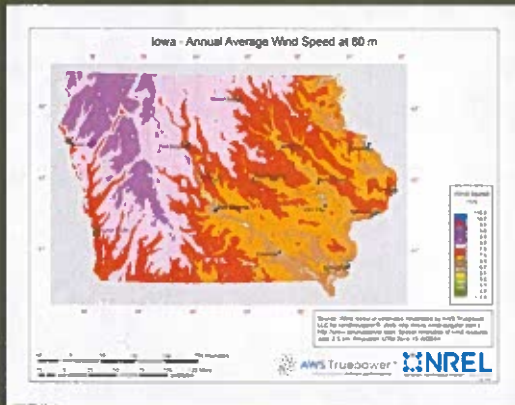
Basic Facts About Wind and Solar in Michigan



Michigan's Solar Resource is Poor: Poor = expensive



Michigan's Wind Resource is Marginal: MI wind contracts 2-3x more costly* than Prairie states



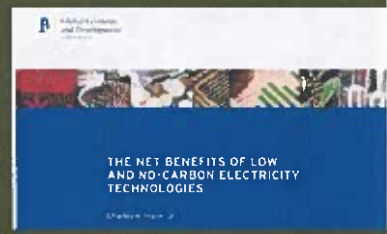
*<https://www.youtube.com/watch?v=W1VLIQJsaos>

Our Home, Our Voice

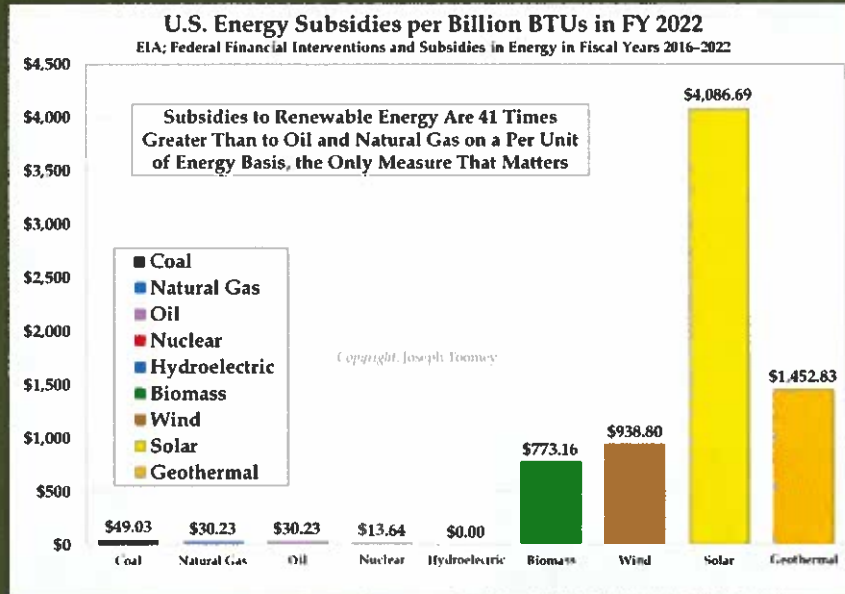
Bills presume RE+storage is the only answer but wind and solar most \$\$\$ means to reduce CO2

“First—assuming reductions in carbon emissions are valued at \$50 per metric ton and the price of natural gas is \$16 per million Btu or less—nuclear, hydro, and natural gas combined cycle have far more net benefits than either wind or solar. This is the case because solar and wind facilities suffer from a very high capacity cost per megawatt, very low capacity factors and low reliability, which result in low avoided emissions and low avoided energy cost per dollar invested.”

<https://www.brookings.edu/articles/the-net-benefits-of-low-and-no-carbon-electricity-technologies/>



Wind and (especially) Solar Heavily Subsidized



How Big Are Solar Power Plants?

Most Michigan solar plants are now in the 1,500-2,000 acre range, 2-3 square miles
They are almost exclusively being sited on prime farm ground.

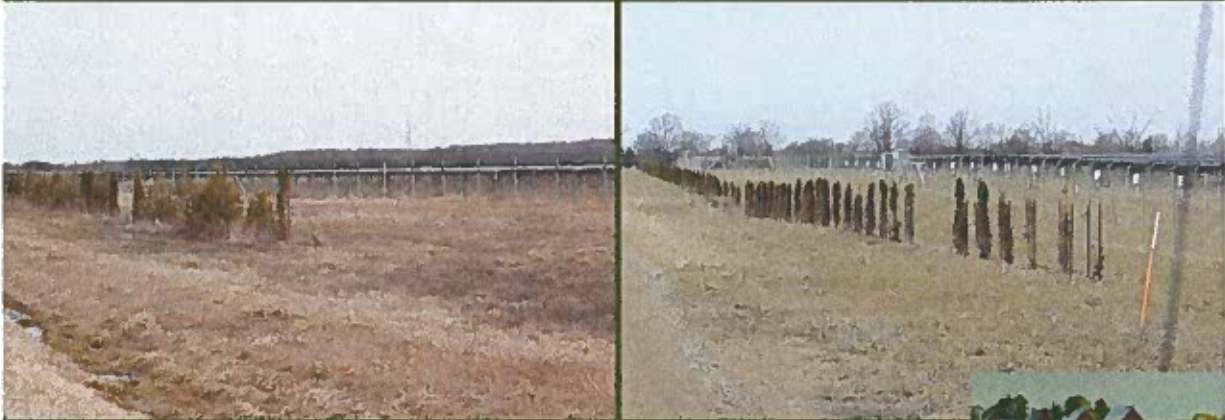
Solar proponents use photos like these to show what solar looks like:



These are photos from Ranger Power's Assembly Solar plant in Shiawassee County:



Assembly Solar:



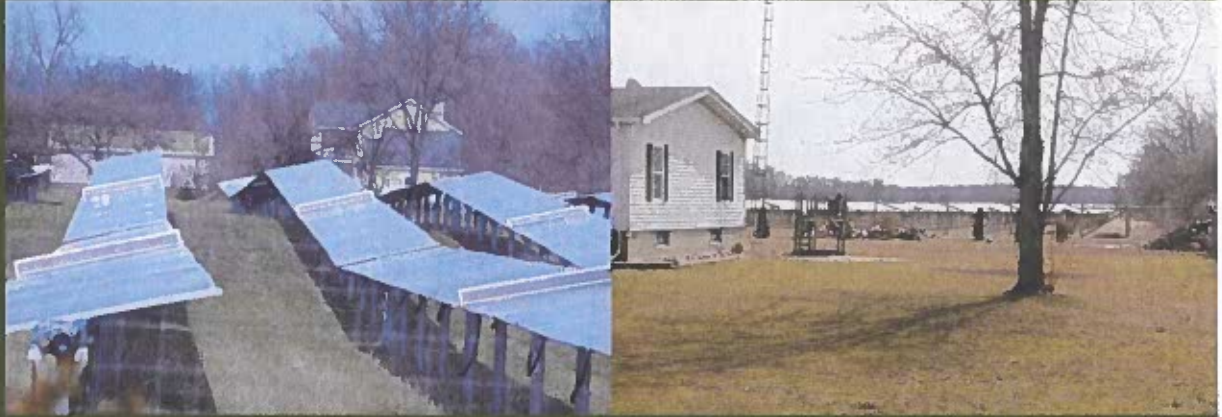
Assembly Solar Photos Credit: Clint Beach



Assembly Solar:



Assembly Solar:



How Big Are Wind Turbines?

We heard testimony that modern wind turbines are 100m tall (hub height).

Here is GE's latest onshore offerings:



GE 164 Onshore Wind Turbine

The latest GE 164 has a rotor diameter of 164m (538') and a **hub height up to 167m (547')**.

Adding half the rotor diameter to the hub height yields an **overall height of**

816'.

GE 164 Onshore Wind Turbine

Cypress wind turbine technical specifications

Cypress Platform	00 190	00 164
Power Output	4.6 MW to 6.3 MW's variable rating	6.3 MW
Rotor diameter	150 m	164 m
Hub heights	From 98' to 165' in 10m increments	From 112' to 167' in 10m increments
Frequency	50 or 60 Hz	50 Hz
IEC Class	S	S
Noise Reduced Operations	From 127 dB to 100 dB	
IEC Certification	Available	In Progress



816' is ~90' taller than the Ren Cen.

HB 5120-5123 have **NO** limit on height.



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Ludington Region

This wind turbine is “only” 476’ tall and is located 1,139’ from this home. The bills before you would allow this turbine to be placed even closer to the home with **no local input.**

The former homeowners had to move into their basement to sleep when it went into operation.



Same home, different perspective



False Narratives



Proponents' False Narrative 1

“We need farm ground (265,000 acres) to provide clean energy for Michigan.”



Fact

- The State of Michigan owns 4.6 million acres of ground. All the solar we need could be sited there by using just 6% of that ground.
- Michigan has 42,912 brownfield sites covering tens of thousands of acres. Solar can go there with no farm land impact.
- Michigan alone has 2 million roofs and 77% of them can host solar with a potential of 42.3 million MWh per year. No farm land impact.
- Michigan also has 1,200 miles of interstate ROW that can host thousands of acres of solar development with no impact on farm ground or neighbors.

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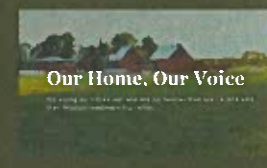
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My point:

Farm ground is being target for only two reasons:

1. It is cheap.
2. The monopoly utilities fight all expansion of rooftop solar.



Proponents' False Narrative 2

“Opposition to RE development is a right-wing phenomena, primarily Trumppers.”



Fact

Opposition to irresponsible wind and solar development in rural communities is strongly bipartisan and is often led by farmers and environmentalists.



Proponents' False Narrative 3

“Renewable Developers are part of the environmental movement”



Fact

RE companies are corporations with a fiduciary duty to increase corporate profits. Many are fossil fuel entities.

They ignore USFW guidelines for wind development, pretend that protected Indiana bats do not exist in SE Michigan and create massive fenced in solar arrays that are the very definition of habitat fragmentation.



Proponents' False Narrative 4

“OH and WI have state level siting and developers have enjoyed a smoother path toward development”



Fact

Under local control, MI has installed nearly twice as much wind capacity as OH and WI combined with their state siting.

And MI has installed nearly identical amounts of solar as WI and OH.

Developers exaggerate the roadblock local control presents.



Proponents' False Narrative 5

“State level siting will secure a sure path forward for RE development”



Fact

In 2007, Ohio established statewide setback requirements for wind turbines that were similar to those in the bills before us.

But by moving these regulations to the state, it only took a single line in a budget bill to increase those setbacks to a distance the developers found unpalatable and that is exactly what happened. That budget bill killed new wind energy statewide.

Live by state siting, die by state siting.



Proponents' False Narrative 6

“State level siting will end local skirmishes over wind and solar development”.



Fact

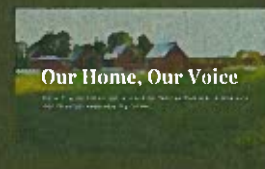
These bills simply move the fight out of the township hall and to your offices in Lansing.

No longer will state legislators be able to tell their constituents “The township or county board has the authority to regulate these installations. Go see them.”

These people will be here, and they will never go away.

In fact, after more than a decade, Ohio legislators got so tired of the wind and solar debate coming to Columbus that they passed a law allowing county commissions to simply ban wind and/or solar in all or part of their counties.

If nothing else, this brought peace to Columbus.



Proponents' False Narrative 7

“Solar development saves family farms”



Fact

Opposition to massive scale solar development on farm ground **is often led by family farmers.**

Most farmers lease a large portion of the ground they farm from landlords, and they cannot compete with the rent prices offered by solar companies. These tenant farmers are being driven off farms they may have rented for decades.

Further, massive corporations like CERES Partners from Indiana, are buying huge quantities of farm ground. They often acquire ground that has a high likelihood of hosting solar development as a business strategy*. *CERES is not a family farm.*

That means these bills are a massive payoff to these farmland robber barons who consistently outbid small family farmers wishing to acquire more land for the next generation to farm.

*<https://www.cerespartners.com/farmland/return> sources



Proponents' False Narrative 8

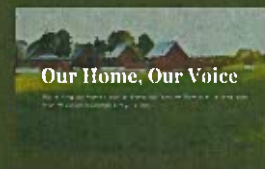
“Renewable Energy=Home Grown Energy”



Solar Manufacturing Facts

- 97% of silicon wafers for solar cells from China
- No solar cells produced in US today
- 75% of solar panels assembled in China

Source: Union of Concerned Scientists- <https://tinyurl.com/m5mvvvs>



Wind Manufacturing Facts

- Domestic wind manufacturing capacity contracting
- US produces no rare-earth elements
- Low-cost overseas labor threatening US competitiveness

Source: USDOE- <https://www.energy.gov/sites/default/files/2022-02/Wind%20Supply%20Chain%20Report%20-%20Final%202.25.22.pdf>



Concluding Statement

- These bills strip away land use authority for nearly all utility scale renewable energy development and turn it over to the MPSC.
- As we all know, the leanings of the MPSC change substantially with each change of administration and those in charge are not directly accountable to the voting public.
- The fact that neighbors and locals can “intervene” at the MPSC proceedings is of little value. It simply pits poorly funded locals and neighbors against the ample funding of enviros, utilities and developers while compelling the locals to play on the industry’s home field: the MPSC.
- And township liability insurance will not pay for such actions.



Cont'd:

- To be effective, zoning needs to be created by communities, not developers. It needs to be designed by zoning professionals rather than corporations. It needs to take into consideration the unique attributes of each community rather than a one-size-fits all statewide approach.
- It takes months of study and research to develop either a wind or solar or solar ordinance in isolation, let alone a 4-bill package that portends to regulate wind, solar and storage after only one or two hearings.
- The bottom line is this: local control zoning has allowed Michigan to become a leader in alternative energy development.
- There is an appropriate place for solar development, and it is on rooftops, brownfields, MDOT rights-of-way and other already-developer spaces.
- There is a place for responsible wind development but it has to take place within the parameters of sound science and with the consent of the impacted.
- These bills simply grant a statewide easement for both wind and solar developers that are designed by the industry and for the industry and simply fatten corporate coffers at the expense of the people we have all sworn an oath to protect.

Our Home, Our Voice urges you to reject this package of bills.

