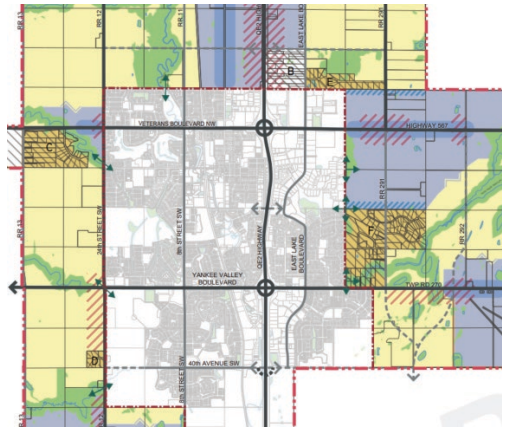
# MPSC Renewable Energy and Energy Storage Facility Siting Meeting




MPSC Staff

May 15, 2024

MPSC
MICHIGAN PUBLIC SERVICE COMMISSION

# Disclaimer

*The opinions expressed today are the speaker's own and do not reflect the view of the Michigan Public Service Commission or the State of Michigan.*

This meeting will be recorded and the recording will be posted.

**Sign up for our email distribution list:**
www.michigan.gov/mpsc/commission/workgroups/2023-energy-legislation/renewable-energy-and-energy-storage-facility-siting

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# Agenda

- **Welcome and Intro – Cathy Cole, MPSC**
- Panel Discussion:
  Farmland Preservation, pollinator habitats, agrivoltaics, and related issues
  - Moderator:  Sarah Mullkoff, MPSC Staff
  - Lee Andre, Lenawee County Conservation District
  - M. Charles Gould, MSU Extension
  - Jake Marley, Hyperion Systems LLC
  - Iain Ward, Solar Agriculture Services
  - Christina Martens, Savion, LLC
- MPSC Staff Straw Proposals:  Decommissioning Plans and Agreements
  - Julie Baldwin and Nick Taylor, MPSC Staff
- Open Comment Period – All participants
- Next Steps and Closing – Cathy Cole, MPSC

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# Implementation Process

## Collaborate on solutions
Work collaboratively to develop potential draft guidance and application instructions

## Public comment period
Public comment period in case docket followed by Commission order adopting application instructions and guidance


## Solicit input
What questions and issues should the Commission address prior to the effective date?

## File Staff proposal
File Staff proposed application instructions and guidance in docket June, 21, 2024

## Implementation
The effective date of the new law is 11/29/24.

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# PA 233 Sec. 226 (6) - Land Use Considerations

*(6) In evaluating the application, the commission shall consider the feasible alternative developed locations [...] and the impact of the proposed facility on local land use, including the percentage of land within the local unit of government dedicated to energy generation. The commission may condition its grant of the application on the applicant taking additional reasonable action related to the impacts of the proposed energy facility, including, but not limited to, the following:*

*(a) Establishing and maintaining for the life of the facility vegetative ground cover.*

*(b) Meeting or exceeding pollinator standards throughout the lifetime of the facility, as established by the "Michigan Pollinator Habitat Planning Scorecard for Solar Sites" [...] Seed mix used to establish pollinator plantings shall not include invasive species as identified by the Midwest Invasive Species Information Network [...]*

*(c) Providing for community improvements in the affected local unit.*

*(d) Making a good-faith effort to maintain and provide proper care of the property where the energy facility is proposed to be located during construction and operation of the facility.*

# Harvesting Benefits:

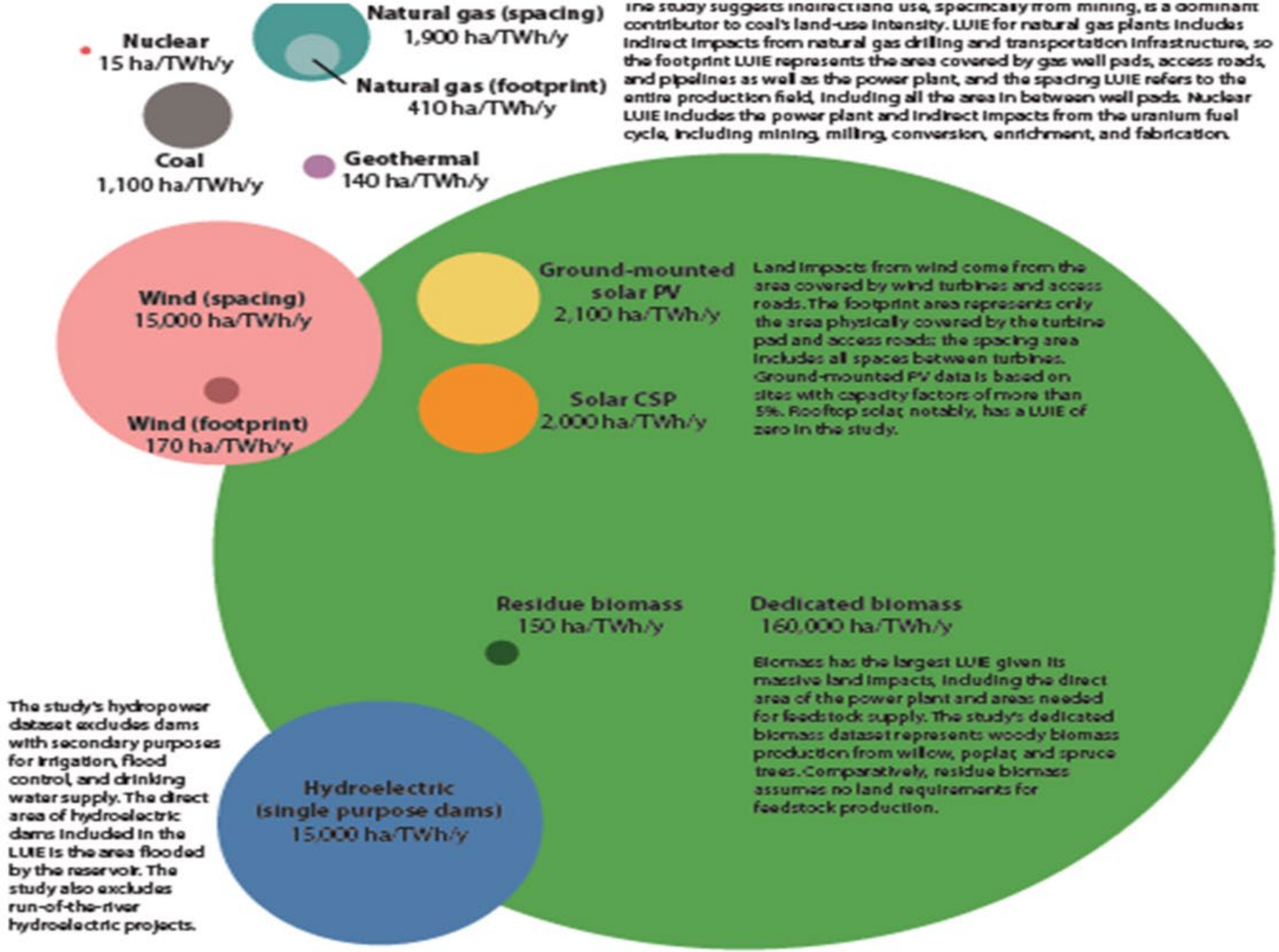
## Land Use Considerations for MPSC Renewable Energy & Storage Engagement Session

Lee Andre, Board of Directors, Lenawee County Conservation District

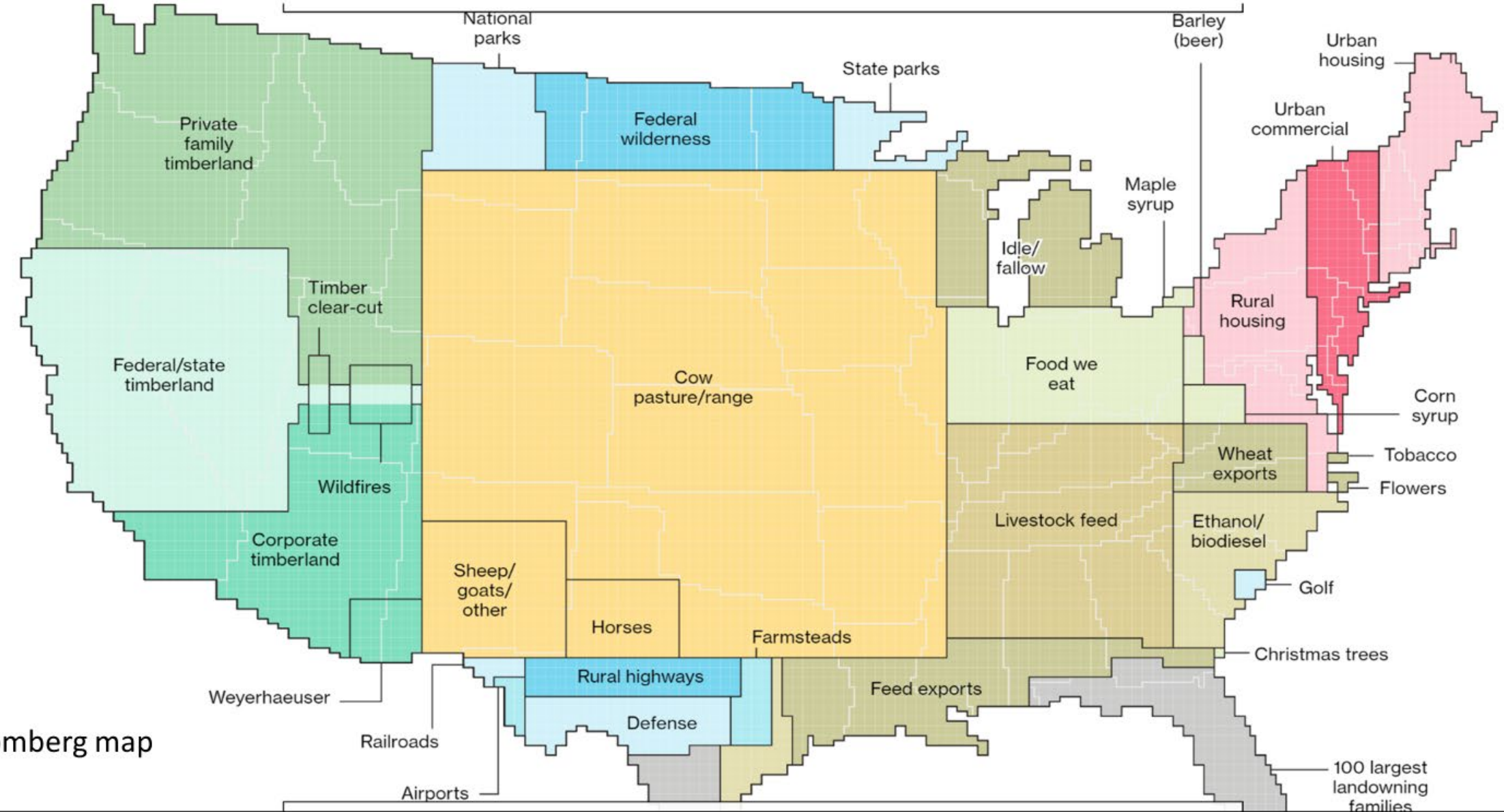
May 15, 2024

# Land intensity

Each circle Makes The Same power For the Grid

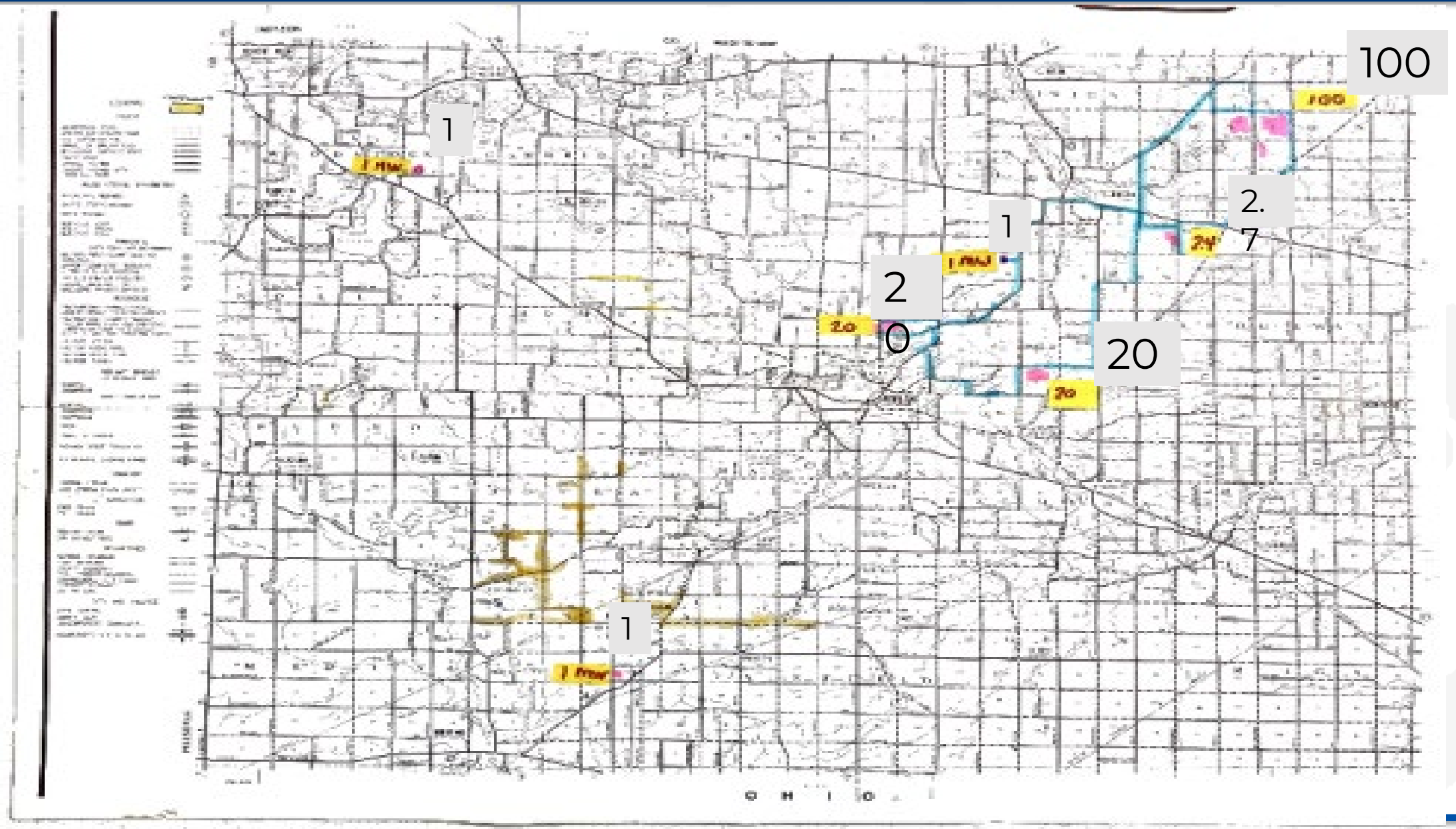


# Golf + Airports = needed PV???




Bloomberg map

# Lenawee County -22 townships with 146 MW??83X = 12 GW



# Siena Heights University

Case 1, decarbonizes by using E85 in the Ford Focus and growing the renewable corn on one half acre, the size of the parking lot under the array.
½ acre=> 100 bushels => 280 gallons of ethanol @ 28 MPG = **7840 miles/year on E85**

Case 2, decarbonizes by using a Chevy Bolt ( 28 KWH/100miles) and power from only the 120 KW parking shelter in Adrian Michigan (149,000 KWH per year per NREL). 149,000 KWH/28 KWH per 100 miles X 100 miles= **532,000 miles per year using PV**

**How to fund this message—utility marketing funds matched to MPSC educational funds**

# 11 acres of woods and a mile of sod waterways

No construction Crossing

Woods cleared and chipped, no burning

Significant Screening tree Losses

No bare soil & No agriculture additives going to the N. Branch of the River Raisin

# What local benefits can co-exist

1) the reality of the need for watershed stability ,
2) the need for storm water detention & polishing from areas outside the array,
3) the opportunity of ground water recharge,
4) the need for pollinators in the nearby community no one size fits all
5) the need for a woodlot mitigation bank due to woodlot removal, located in other parts of the county and protected
6) the need for wildlife corridors or connection to nearby habitat
7) urban gardening in the perimeter areas or with professional produce in the energized shaded area

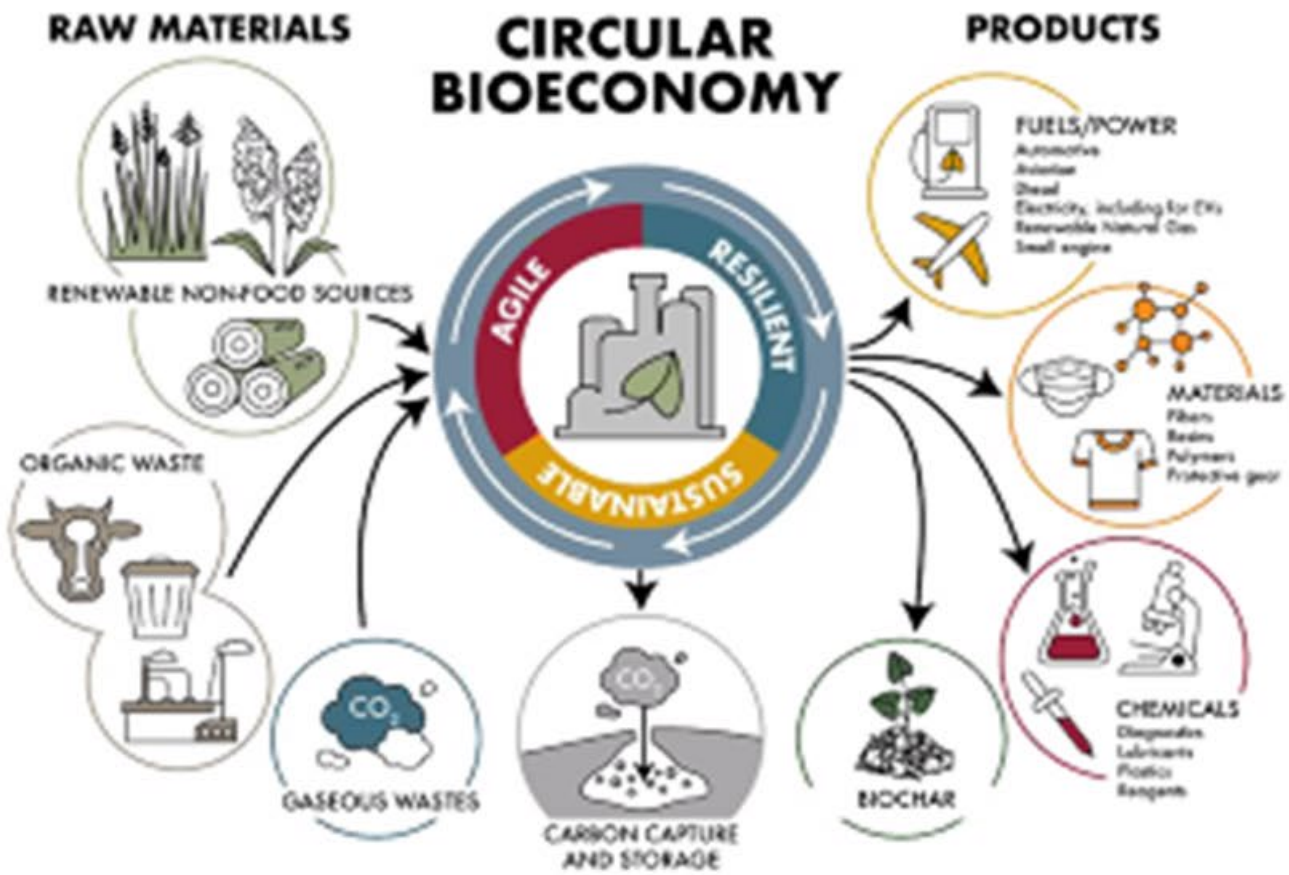
# design???

- We do not need to do it now

  **In all places**

- But we can build it for the future
- Keep the rows open
- Keep the soil safe
- Resist invasive plants
- Capture carbon in the soil
- Retain or recycle Phosphorus

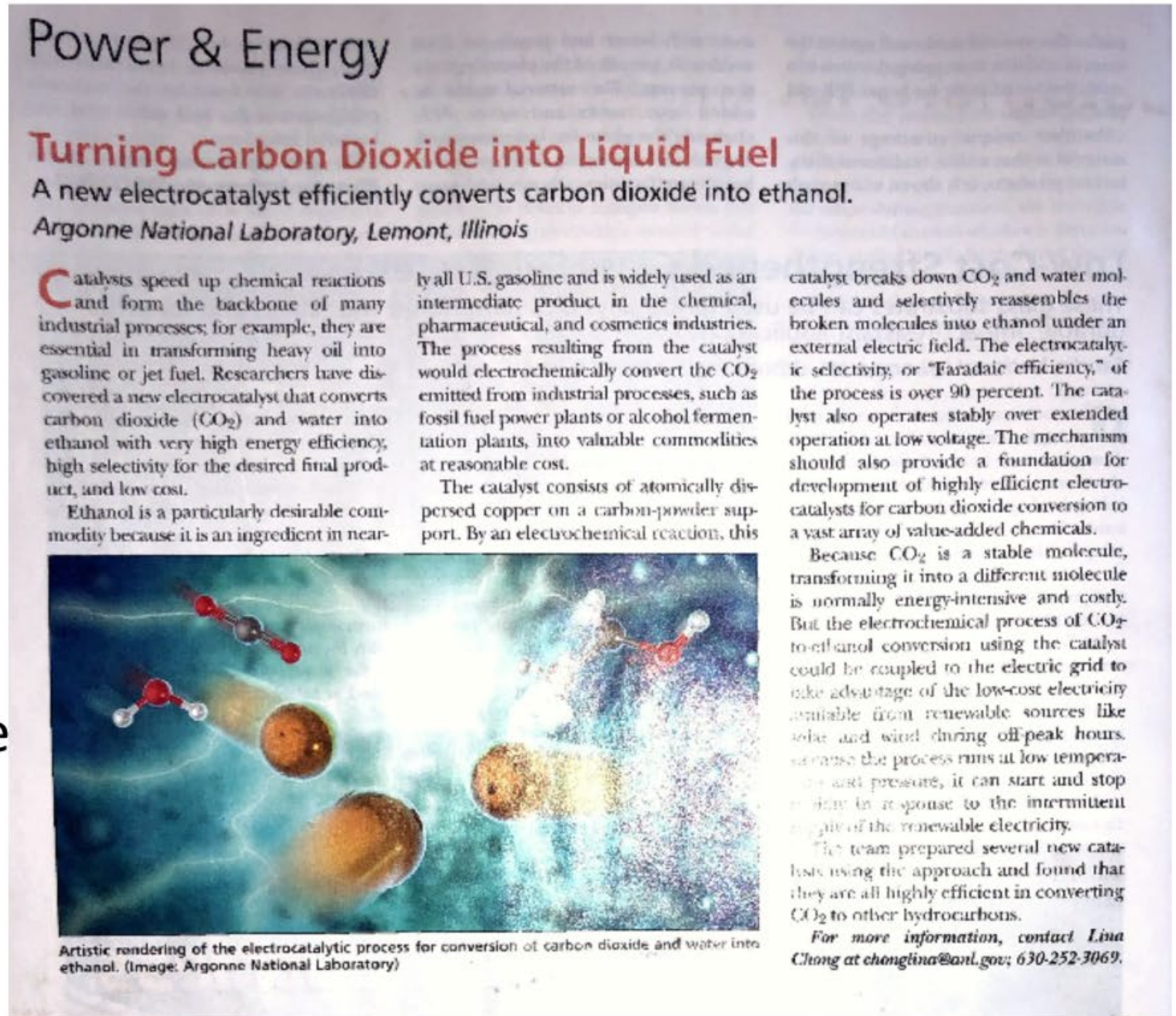
# Building a Circular Bioeconomy Ecosystem




## Renewable Natural Gas – Carbon Management – SAF / Biobased Chemicals

# Where?

Energy generation close to users that can have **Demand response** can provide low energy prices to fossil transitional industries to further reduce atmospheric CO2 levels



Power & Energy

## Turning Carbon Dioxide into Liquid Fuel

A new electrocatalyst efficiently converts carbon dioxide into ethanol.

*Argonne National Laboratory, Lemont, Illinois*

Catalysts speed up chemical reactions and form the backbone of many industrial processes; for example, they are essential in transforming heavy oil into gasoline or jet fuel. Researchers have discovered a new electrocatalyst that converts carbon dioxide ($CO_2$) and water into ethanol with very high energy efficiency, high selectivity for the desired final product, and low cost.

Ethanol is a particularly desirable commodity because it is an ingredient in nearly all U.S. gasoline and is widely used as an intermediate product in the chemical, pharmaceutical, and cosmetics industries. The process resulting from the catalyst would electrochemically convert the $CO_2$ emitted from industrial processes, such as fossil fuel power plants or alcohol fermentation plants, into valuable commodities at reasonable cost.

The catalyst consists of atomically dispersed copper on a carbon-powder support. By an electrochemical reaction, this catalyst breaks down $CO_2$ and water molecules and selectively reassembles the broken molecules into ethanol under an external electric field. The electrocatalytic selectivity, or "Faradaic efficiency," of the process is over 90 percent. The catalyst also operates stably over extended operation at low voltage. The mechanism should also provide a foundation for development of highly efficient electrocatalysts for carbon dioxide conversion to a vast array of value-added chemicals.

Because $CO_2$ is a stable molecule, transforming it into a different molecule is normally energy-intensive and costly. But the electrochemical process of $CO_2$-to-ethanol conversion using the catalyst could be coupled to the electric grid to take advantage of the low-cost electricity available from renewable sources like solar and wind during off-peak hours. Because the process runs at low temperature and pressure, it can start and stop readily in response to the intermittent supply of the renewable electricity.

The team prepared several new catalysts using the approach and found that they are all highly efficient in converting $CO_2$ to other hydrocarbons.

*For more information, contact Lina Chong at chonglina@anl.gov; 630-252-3069.*

Artistic rendering of the electrocatalytic process for conversion of carbon dioxide and water into ethanol. (Image: Argonne National Laboratory)

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# Michigan Public Service Commission Siting Workshop

M. Charles Gould

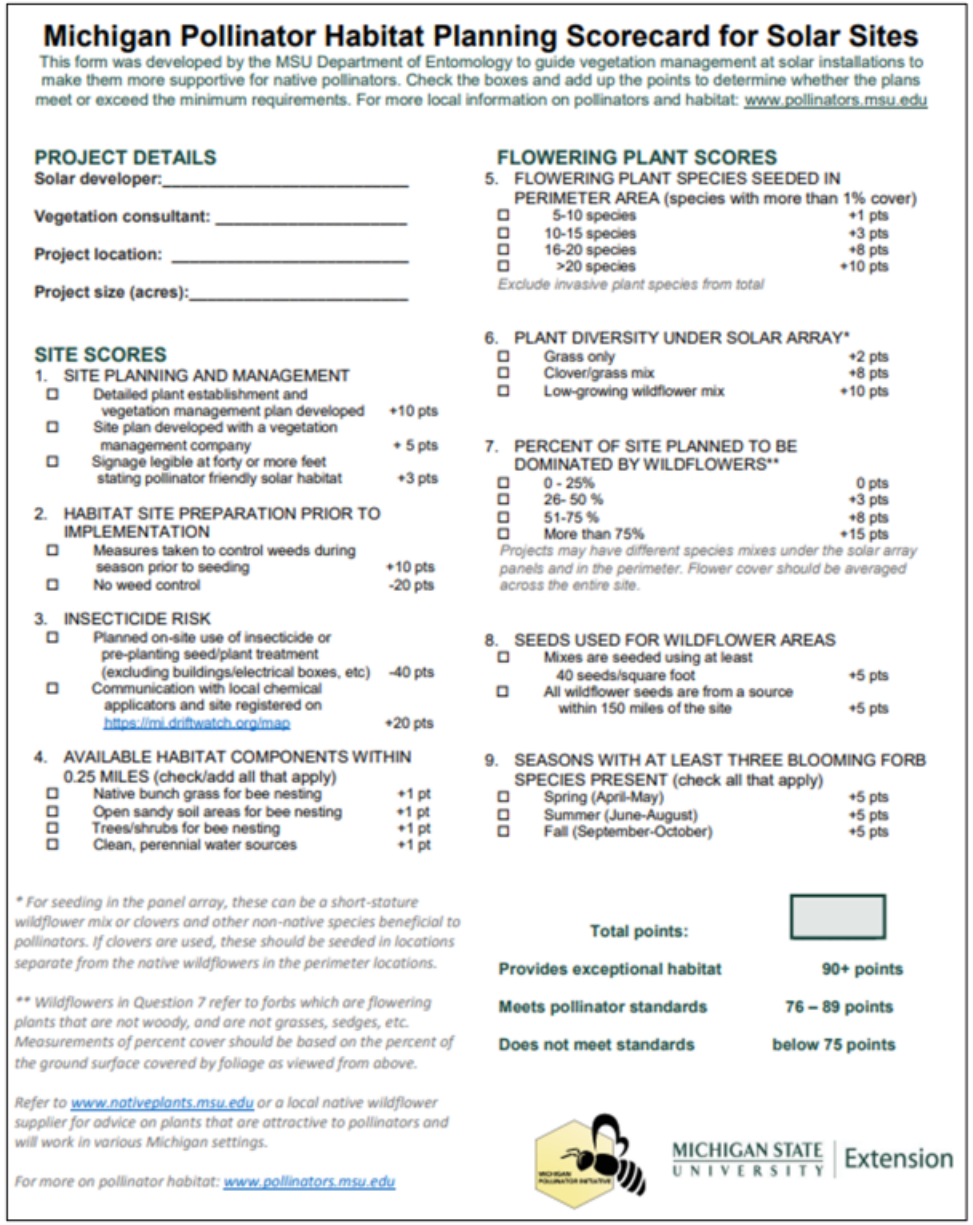
Extension Bioenergy Educator

# Topics To Be Covered Today

- Describe how the pollinator habitat scorecard is intended to be used.
- What things should the MPSC consider in its guidance for approval of a siting application regarding approval of groundcover beyond pollinator and conservation cover.
- What considerations pertaining to soil health, conservation practices, and carbon sequestration should MPSC have some understanding of as they develop guidance for siting.
- Resources MSU Extension can provide to planners, developers, local units of government, and the State who are working on wind/solar/energy storage projects.

# Pollinator Scorecard

- Developed by the MSU Department of Entomology to guide vegetation management decisions at solar installations to be more supportive of native pollinators
- It is a planning tool, not a maintenance tool.
- Check the boxes and add up the points to determine if the plan meets or exceeds pollinator habitat establishment standards.
- A minimum score of 76 meets pollinator standards.
- An online course will be available in July.



## Michigan Pollinator Habitat Planning Scorecard for Solar Sites

This form was developed by the MSU Department of Entomology to guide vegetation management at solar installations to make them more supportive for native pollinators. Check the boxes and add up the points to determine whether the plans meet or exceed the minimum requirements. For more local information on pollinators and habitat: www.pollinators.msu.edu

**PROJECT DETAILS**

**Solar developer:**_____

**Vegetation consultant:** _____

**Project location:** _____

**Project size (acres):**_____

**SITE SCORES**

1. SITE PLANNING AND MANAGEMENT
   - ☐ Detailed plant establishment and vegetation management plan developed +10 pts
   - ☐ Site plan developed with a vegetation management company + 5 pts
   - ☐ Signage legible at forty or more feet stating pollinator friendly solar habitat +3 pts
2. HABITAT SITE PREPARATION PRIOR TO IMPLEMENTATION
   - ☐ Measures taken to control weeds during season prior to seeding +10 pts
   - ☐ No weed control -20 pts
3. INSECTICIDE RISK
   - ☐ Planned on-site use of insecticide or pre-planting seed/plant treatment (excluding buildings/electrical boxes, etc) -40 pts
   - ☐ Communication with local chemical applicators and site registered on https://mi.driftwatch.org/map +20 pts
4. AVAILABLE HABITAT COMPONENTS WITHIN 0.25 MILES (check/add all that apply)
   - ☐ Native bunch grass for bee nesting +1 pt
   - ☐ Open sandy soil areas for bee nesting +1 pt
   - ☐ Trees/shrubs for bee nesting +1 pt
   - ☐ Clean, perennial water sources +1 pt

**FLOWERING PLANT SCORES**

5. FLOWERING PLANT SPECIES SEEDED IN PERIMETER AREA (species with more than 1% cover)
   - ☐ 5-10 species +1 pts
   - ☐ 10-15 species +3 pts
   - ☐ 16-20 species +8 pts
   - ☐ >20 species +10 pts

   *Exclude invasive plant species from total*
6. PLANT DIVERSITY UNDER SOLAR ARRAY*
   - ☐ Grass only +2 pts
   - ☐ Clover/grass mix +8 pts
   - ☐ Low-growing wildflower mix +10 pts
7. PERCENT OF SITE PLANNED TO BE DOMINATED BY WILDFLOWERS**
   - ☐ 0 - 25% 0 pts
   - ☐ 26- 50 % +3 pts
   - ☐ 51-75 % +8 pts
   - ☐ More than 75% +15 pts

   *Projects may have different species mixes under the solar array panels and in the perimeter. Flower cover should be averaged across the entire site.*
8. SEEDS USED FOR WILDFLOWER AREAS
   - ☐ Mixes are seeded using at least 40 seeds/square foot +5 pts
   - ☐ All wildflower seeds are from a source within 150 miles of the site +5 pts
9. SEASONS WITH AT LEAST THREE BLOOMING FORB SPECIES PRESENT (check all that apply)
   - ☐ Spring (April-May) +5 pts
   - ☐ Summer (June-August) +5 pts
   - ☐ Fall (September-October) +5 pts

** For seeding in the panel array, these can be a short-stature wildflower mix or clovers and other non-native species beneficial to pollinators. If clovers are used, these should be seeded in locations separate from the native wildflowers in the perimeter locations.*

*** Wildflowers in Question 7 refer to forbs which are flowering plants that are not woody, and are not grasses, sedges, etc. Measurements of percent cover should be based on the percent of the ground surface covered by foliage as viewed from above.*

*Refer to www.nativeplants.msu.edu or a local native wildflower supplier for advice on plants that are attractive to pollinators and will work in various Michigan settings.*

*For more on pollinator habitat: www.pollinators.msu.edu*

**Total points:** ☐

| | |
|---|---|
| **Provides exceptional habitat** | **90+ points** |
| **Meets pollinator standards** | **76 – 89 points** |
| **Does not meet standards** | **below 75 points** |

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# Approval of Groundcover Beyond Pollinator and Conservation Cover: Things to Consider

- Grazing and Forage Production
  - Solar sites that incorporate rotational livestock grazing and forage production as part of an overall vegetative maintenance plan.
  - Planning for grazing sheep and cattle begins early in the solar project planning process and involves the farmer.
  - If done right, solar grazing can be leveraged to *support* farmers, rather than threaten them.

Photo: M. Charles Gould

Sheep grazing paddocks made with two strands of wire.

# Solar Grazing Examples

## Grafton Solar, MA

Photo: AgriSolar Clearinghouse

## Lancaster Solar, GA

Photo: M. Charles Gould

# Solar Grazing Examples

## Lancaster Solar, GA


Photo: M. Charles Gould

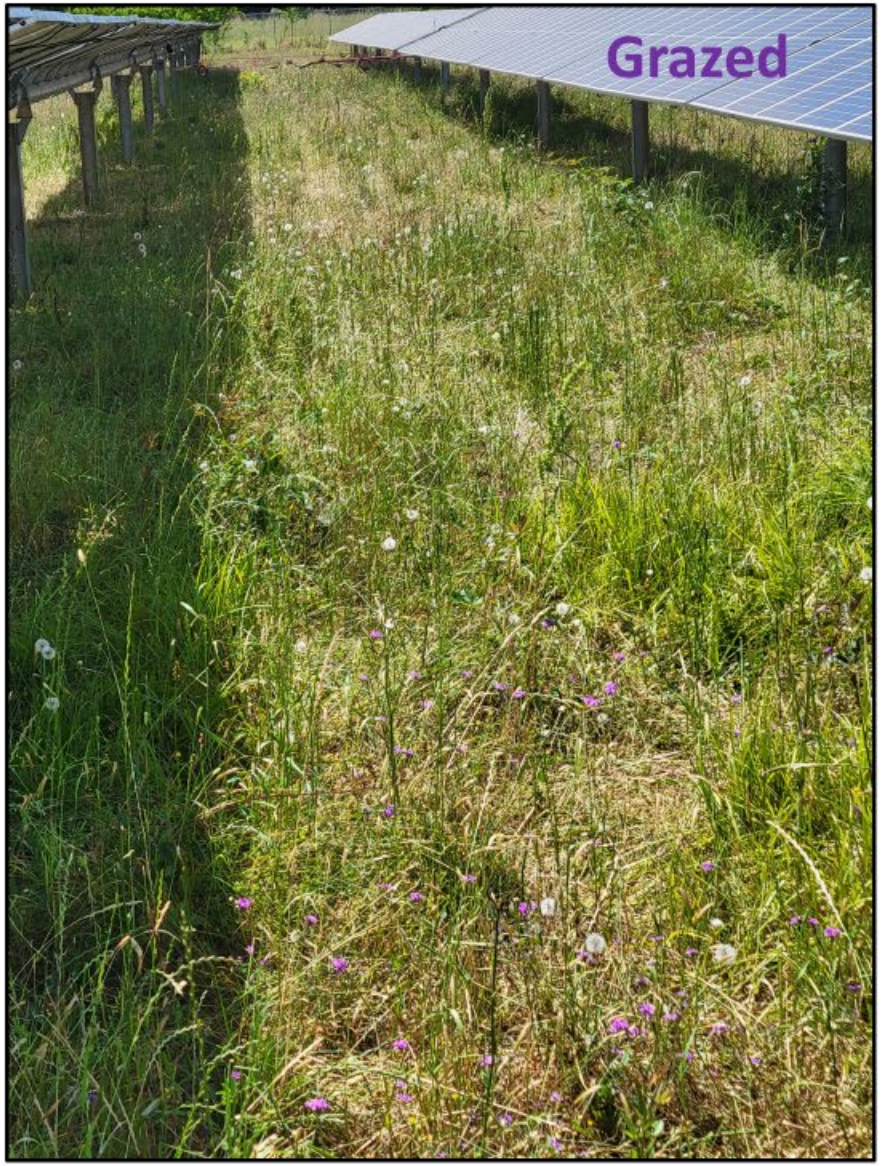


Photo: M. Charles Gould

# Approval of Groundcover Beyond Pollinator and Conservation Cover: Things to Consider

- Agrivoltaics
  - Solar sites that incorporate crop production as part of an overall vegetative maintenance plan.
  - Planning for agrivoltaics begins early in the solar project planning process and involves the farmer.
  - Issues that affect the success of growing crops in solar projects:
    - Soil compaction
    - Drainage
    - Aboveground DC cable
    - Topsoil removal
    - End row width
    - Alley width
  - If done right, agrivoltaics can be leveraged to *support* farmers, rather than threaten them.

# Agrivoltaic Examples

## Hay production 1

Photo: AgriSolar Clearinghouse

## Hay production 2

Photo: Next2Sun

# Agrivoltaic Examples

## Grafton Solar, MA

Photo: M. Charles Gould

## UMASS Research Facility

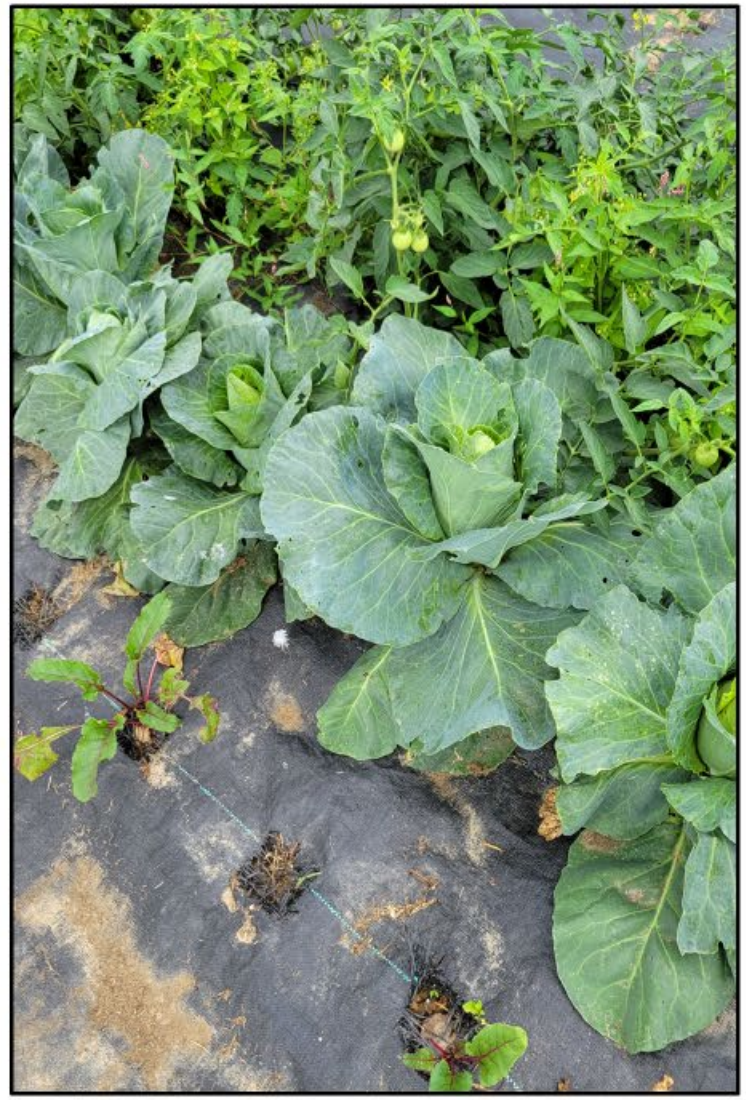

Photo: M. Charles Gould

# Soil health, conservation practices, and carbon sequestration considerations

## Soil Health

- Keep the soil covered.
- Minimize soil disturbance.
- Plant diversity.
- Continual live plant/root.
- Livestock integration.

## Conservation Practices

- Practices that build and sustain soil organic matter.

## Carbon Sequestration

- Particulate organic matter ≠ mineral associated organic matter.
- Soil carbon is a valuable resource, but all soil carbon is not created equal.

# Online Resources from MSU/MSU Extension and Other Reputable Sources

- Online resources have been provided in a separate document.

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# Online resources for planners, developers, local units of government, and the State who are working on wind/solar/energy storage projects.

## MSU/MSU EXTENSION ONLINE RESOURCES

**Title:** Planning and Zoning for Solar Energy Systems: A Guide for Michigan Local Governments

**Description:** The purpose of this guide is to help Michigan communities meet the challenge of becoming solar-ready by addressing solar energy systems within their planning policies and zoning regulations. The Guidebook has particular relevance to communities who are developing zoning ordinances for solar energy systems less than 50 MW.

**Title:** Sample Zoning for Wind Energy Systems

**Description:** Provides comprehensive guidance on planning and zoning for wind energy systems and a sample zoning ordinance.

**Title:** Zoning Checklists

**Title:** Planning Checklists

**Description:** Checklists to help communities navigate each step of what can be complex planning and zoning processes, such as adopting a Master Plan or amending a zoning ordinance.

**Title:** Soil Health Nexus

**Description:** Soil health resources website.

**Title:** Michigan Pollinator Initiative

**Description:** Website that provides resources related to pollinators and pollination in Michigan.

**Title:** Native Plants and Ecosystem Services

**Description:** Website designed to use Michigan native plants to produce win-win situations for agriculture, communities, and the environment.

(OVER)





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**Title:** Center for Regenerative Agriculture

**Description:** Website with information on regenerative agriculture.

**Title:** Enviroweather

**Description:** Website with weather-based pest, natural resource, and production management tools.

**Title:** Michigan State University Extension

**Description:** This website helps people improve their lives by bringing the vast knowledge resources of MSU directly to individuals, communities, and businesses. Contact information for MSU Extension personnel can be obtained using the "Staff Directory" tab at the top of the web page.

## NON MSU/MSU EXTENSION ONLINE RESOURCES

**Title:** American Solar Grazing Association

**Description:** Solar grazing resources for farmers and solar developers.

**Title:** AgriSolar Clearinghouse

**Description:** A website connecting businesses, land managers, and researchers with trusted resources to support the growth of co-located solar and sustainable agriculture.

**Title:** Smart Solar

**Description:** Smart solar guides solar development to where it has the least negative impact on land well suited for farming, ensures that agricultural land where projects are sited can be farmed in the future, and promotes agrivoltaic solar projects to create opportunities for both farming and solar energy on the same land.

**Title:** National Renewable Energy Laboratory

**Description:** Repository for breakthroughs in fundamental science from new clean technologies to integrated energy systems. Type "agrivoltaics" in the search box and a treasure-trove of understandable and practical information is available.

**Title:** DriftWatch

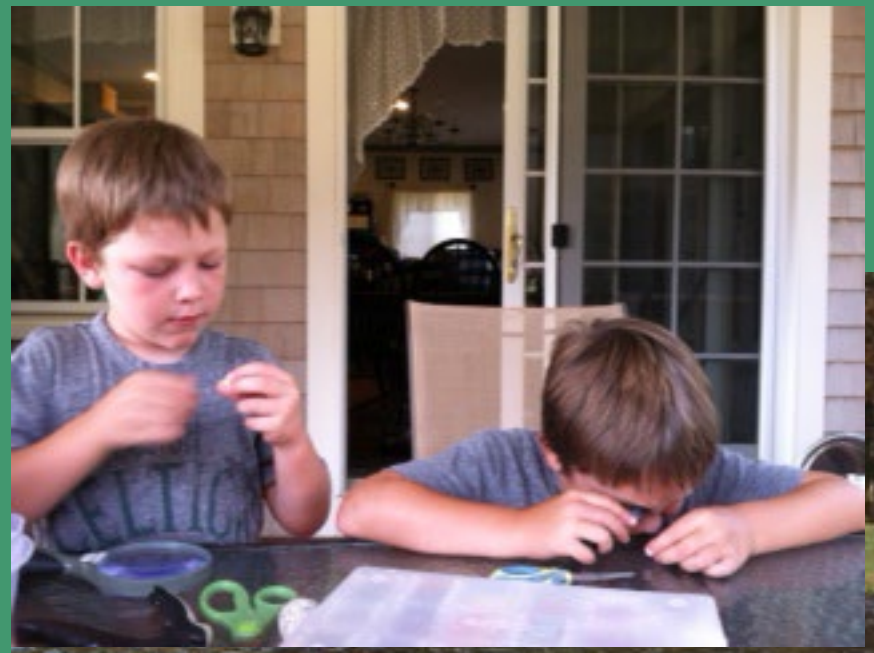
**Description:** This site is a voluntary communication tool that enables Michigan crop producers, beekeepers, and pesticide applicators to work together to protect specialty crops and apiaries through the use of mapping programs. It is not a substitute for any state regulatory requirements.

**To contact an expert in your area, visit extension.msu.edu/experts or call 888-MSUE4MI (888-678-3464)**

# Who is SolAg?

- Representing the farmers voice with over 20 years of experience in farming and conservation planning.
- Collaborating with universities, government officials, and NGO’s
- Planning and implementing 1000’s of MW’s of agri-solar projects throughout US including Savion’s utility scale projects.


SILO LN
TISPAQUIN ST



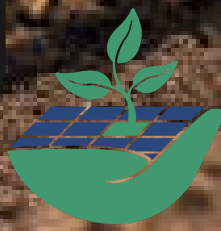

Ocean Spray
Ocean Spray

# Bigger Reason

**Revitalize**

**Regenerate**

**Renourish**




DEVELOPED LOTS
FOR SALE
ZONED B2 & PUD
740-817-7854


NO
SOLAR PANELS
ON
PRIME FARM LAND


JOHN DEERE
4x4

# Agrivoltaic **BLUEPRINT**

## Increase Capacity of Land, Farmer and Solar

- ✓ Has the landowner/tenant farmer been engaged in the planning process?
- ✓ Is there a customized project specific Farm Logistics Plan?
- ✓ Is soil health, water availability, site access, product market incorporated?
- ✓ Is a farm succession plan or process in place for the project duration?
- ✓ Is there dedicated agricultural oversight during construction?
- ✓ Is there built in permit/reporting flexibility for the farmer and project?

**Value = REVIATILIZED FARMS AND PROJECTS**

# Agrivoltaic **BLUEPRINT**

## Increase Capacity of Land, Farmer and Solar

- ✓ Can Michigan provide regulations, including review of projects, assessment of the agricultural validity and enforcement of conditions?
- ✓ Can local communities determine where or how monies derived from the solar facility are spent?
- ✓ Can Michigan State Extension be incorporated into the review process to validate agrivoltaic projects?
- ✓ Can the land under valid agrivoltaic projects continue to qualify for agricultural property taxs vs. commercial.

**Value = REVIATILIZED FARMS AND PROJECTS**

- ✓ Enhance access to farmland
- ✓ Align with rural communities
- ✓ Get ahead of the curve

# IF ALL...

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  - See also "Comment Request"
- Open Comment Period – All participants
- Next Steps and Closing – Cathy Cole, MPSC

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# Staff Decommissioning Plan Straw Proposal

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# PA 233 – Decommissioning Plan

*Sec. 225: (1) (r) A decommissioning plan that is consistent with agreements reached between the applicant and other landowners of participating properties and that ensures the return of all participating properties to a useful condition similar to that which existed before construction, including removal of above-surface facilities and infrastructure that have no ongoing purpose. The decommissioning plan shall include, but is not limited to, financial assurance in the form of a bond, a parent company guarantee, or an irrevocable letter of credit, but excluding cash. The amount of the financial assurance shall not be less than the estimated cost of decommissioning the energy facility, after deducting salvage value, as calculated by a third party with expertise in decommissioning, hired by the applicant. However, the financial assurance may be posted in increments as follows:*

*(i) At least 25% by the start of full commercial operation.*

*(ii) At least 50% by the start of the fifth year of commercial operation.*

*(iii) 100% by the start of the tenth year of commercial operation.*

# Decommissioning Plan Development

- Examples for existing projects in Michigan
- A Survey of Federal and State-Level Solar System Decommissioning Policies, NREL December 2021

  https://www.nrel.gov/docs/fy22osti/79650.pdf
- New York Office of Renewable Energy Siting Regulations

  chapter-xviii-title-19-of-nycrr-part-900-subparts-900-1-through-900-15.pdf

# Decommissioning Plan - 1

1. An overview of the proposed energy facility including the following:
   (a) A description of the proposed energy facility and overview of the current land use of the site where the proposed energy facility will be located.
   (b) The expected useful life of the proposed energy facility.
   (c) A description of events which would trigger decommissioning.

# Decommissioning Plan - 2

2. A description of the energy facility removal process including the following:
   (a) A proposed decommissioning schedule.
   (b) A description of facilities that will be removed or kept in place.
   (c) A description of removal methods and site clearance activities.
   (d) A description of hazardous material use and removal from the site.
   (e) A description of disposal methods and transportation plans and whether components will be sold, landfilled, recycled or other.
   (f) A description of resources, conditions, or activities potentially affected by decommissioning and mitigation measures to be employed.
   (g) An emergency decommissioning plan for energy storage facilities.

# Decommissioning Plan – 3 through 6

3. A description of the site restoration plan and process.

4. A commitment and plan to coordinate with landowners and affected local units prior to beginning decommissioning activities.

5. A list of expected necessary permits for demolition or new temporary construction which may be required for component removal and a statement that such permits will be obtained prior to the start date of decommissioning.

6. A commitment that restoration will be in accordance with easement agreements with landowners.
   (a) Within 30 days of filing the application, the applicant shall meet with Commission Staff to demonstrate that the decommissioning plan complies with individual landowner easements.

# Decommissioning Plan - 7

7. A decommissioning cost estimate which includes the following:
   (a) Detailed cost estimates for removal of energy facility equipment and infrastructure, land restoration and reclamation, and insurance requirements calculated by a third party with expertise in decommissioning.
   (b) An estimate of emergency decommissioning costs for energy storage projects.
   (c) An estimate of salvage value for energy facility equipment and infrastructure calculated by a third party with expertise in decommissioning.
   (d) An estimate of the cost to hire a decommissioning consultant to manage the decommissioning process in the event of owner abandonment or bankruptcy.

# Decommissioning Plan - 8

8. Details describing the financial assurance:

(a) The type of financial assurance to be provided (cash is prohibited):

i. Bond;

ii. Parent company guarantee;

iii. Irrevocable letter of credit.

(b) Such financial assurance shall be expressly held by and for the benefit of the Michigan Public Service Commission.

(c) A plan for annual proof to the Commission that the financial assurance remains sufficient and in effect.

# Decommissioning Plan - 9

9. A commitment to providing decommissioning plan and cost updates on a 5-year basis for the first 20 years of commercial operation and every 3 years thereafter:
    a. Decommissioning plans shall be updated to incorporate any improvements in the decommission process or necessary changes.
    b. The decommissioning cost estimate must be updated by a third party with expertise in decommissioning based on the updated decommission plan.
    c. The updated decommissioning plan and cost estimate shall be filed in the MPSC docket assigned to the energy facility.
    d. The financial assurance shall be updated according to such periodic updated cost estimates.

# Decommissioning Plan 10 & 11, Appendices

10. A decommissioning agreement addressing the decommissioning process.

11. A statement agreeing to provide a decommissioning completion report shall be provided:

    (a) Within 60 days of completing decommissioning activities, the applicant must notify the Commission and submit a decommissioning report in the MPSC docket assigned to the project that includes a summary of decommissioning activities and a description of any mitigation measures used during decommissioning.

**Appendix 1** – Figure showing energy facility layout
**Appendix 2** – Detailed decommissioning cost estimate breakdown
**Appendix 3** – Decommissioning Agreement

# Sample Decommissioning Agreement

MPSC
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# Disclaimer

- Any positions or opinions discussed in this portion of the meeting are my own. They do not constitute legal advice regarding the relevant law or subject matter. These do not represent the positions of the Michigan Public Service Commission, Staff, the Department of Attorney General, or the State of Michigan.

- The Sample Decommissioning Agreement is intended to solicit feedback and comments regarding the overall decommissioning process as well as specific terms to be included in any potential agreements. Neither the Michigan Public Service Commission nor Staff intend to be committed to, or bound by, any of these sample terms in future proceedings unless specifically agreed to at that time.

# Public Act 233 – Decommissioning

"An application for a certificate submitted to the commission under section 222(2) shall contain all of the following: . . .

(r) A decommissioning plan that is consistent with agreements reached between the applicant and other landowners of participating properties and that ensures the return of all participating properties to a useful condition similar to that which existed before construction, including removal of above-surface facilities and infrastructure that have no ongoing purpose. The decommissioning plan shall include, but is not limited to, financial assurance in the form of a bond, a parent company guarantee, or an irrevocable letter of credit, but excluding cash. The amount of the financial assurance shall not be less than the estimated cost of decommissioning the energy facility, after deducting salvage value, as calculated by a third party with expertise in decommissioning, hired by the applicant. However, the financial assurance may be posted in increments as follows:

(*i*) At least 25% by the start of full commercial operation.

(*ii*) At least 50% by the start of the fifth year of commercial operation.

(*iii*) 100% by the start of the tenth year of commercial operation." MCL 460.1225(1)(r).

# Structure of Decommissioning Process

Who should be named as the beneficiary or obligee of the financial assurance instrument for the Project?

- Some states with similar laws retain the local unit of government's primary role in this process.
- Feedback suggests that some find the Commission to be the appropriate entity to serve in this role in the PA 233 context.
- Staff is still examining both the advisability and feasibility of both approaches and welcomes feedback on the overall structure of decommissioning.

# Structure of Decommissioning Process- Ohio

Ohio (Ohio Admin. Code 4906-4-06) requires that developers include decommissioning financial arrangements in siting application:

> **(F)** The applicant shall provide information regarding public responsibility:
>
> **(2)** The applicant shall describe any insurance or other corporate programs for providing liability compensation for damages to the public resulting from construction, operation, or decommissioning of the proposed facility.
>
> **(5)** The applicant shall describe the plan for decommissioning the proposed facility, including a discussion of any financial arrangements designed to assure the requisite financial resources.

Ohio has more specific decommissioning requirements for wind turbines outlined in Ohio Admin Code 4906-4-09. Section (A)(8) requires the applicant to post and maintain a performance bond, the form of which shall be mutually agreed upon between the applicant, facility owner, and Ohio Power Siting Board.

# Structure of Decommissioning Process- New York

- The Office of Renewable Energy Siting requires that a Decommissioning and Site Restoration Plan be filed with an application for renewable energy siting. (chapter-xviii-title-19-of-nycrr-part-900-subparts-900-1-through-900-15.pdf)

- New York Codes, Rules and Regulations require financial security be established by the permittee to be held for each City, Town, or Village hosting facility components. The Office of Renewable Energy and Siting makes final determinations on the appropriate amount of financial security to be provided. (NYCRR § 900-6.6 Decommissioning)

- New York State Energy Resource and Development Authority has published an extensive guide on decommissioning of Solar Panel Systems, including types of financial security in its Solar Guide Book available at New York State Solar Guidebook – NYSERDA

# Structure of Decommissioning Process- Wisconsin

Wisconsin requires the owner of a wind energy system to file a decommissioning and site restoration plan providing reasonable assurance that the owner will comply with the below section in its application to construct a wind energy system. (Wisc. Admin Code PSC 128.30).

Wisconsin regulations (Wisc. Admin Code PSC 128.19) allow a city town or village (which they refer to as “political subdivisions”) to require that the owner of a wind energy system provide financial assurance of the owner’s ability to pay for actual and necessary costs of decommissioning.

The financial assurance allows the political subdivision to access the funds for the purpose of decommissioning the wind energy system if the owner does not decommission the wind energy system when decommissioning is required.

# Structure of Decommissioning Process- Minnesota

Minnesota's administrative rules require site permits for large wind energy conversion systems to include information regarding decommissioning of a project and restoring the site. (Minn. R. 7854.0500).

Minnesota Commerce Department has assembled Application Guidance for Site Permitting of Solar Farms as well as Application Guidance for Site Permitting of Large Wind Energy Conversion Systems in Minnesota

Minnesota requires Site Permit applications for Large Wind Conversion Systems to include a draft Decommissioning Plan including "A description or plan of decommissioning assurance – including the type of instruments being considered, a timeline for funding of the assurance, a description of how the amount of money available will be reconciled with the changing cost estimates, and the proposed beneficiary of the security." (13655 (state.mn.us))

Minnesota requires applications for solar permitting to provide decommissioning information, including:

- A table of financial assurances. Initial payments should start at approximately year 10, and increase over time to ensure full funding no later than the end of the power purchase agreement.
- Identifying the beneficiary of the financial surety, the surety instrument, and the amount of the surety.

# Decommissioning Agreements

- Outside of the PA 233 context, decommissioning agreements between the local units of government and developers are common. Landowners are sometimes also included.

- These agreements generally outline the process for decommissioning and the respective rights and obligations of the parties.

**SAMPLE DECOMMISSIONING AGREEMENT**

This Decommissioning Agreement is entered into between **[INSERT DEVELOPER NAME]** a **[INSERT BUSINESS STRUCTURE AND STATE OF ORGANIZATION]** at **[INSERT BUSINESS ADDRESS]** ("Developer"), the Michigan Public Service Commission (the "Commission" or "MPSC") at 7109 W Saginaw Hwy, Lansing, MI 48917, and **[INSERT LANDOWNER NAME]** at **[INSERT LANDOWNER ADDRESS]**.

WHEREAS, Public Act 233 of 2023 (the "Act") provides siting authority to the Commission for utility-scale solar, wind, and energy storage projects under specific conditions and requires applications under the Act to include a "decommissioning plan that is consistent with agreements reached between the applicant and other landowners of participating properties and that ensures the return of all participating properties to a useful condition similar to that which existed before construction, including removal of above-surface facilities and infrastructure that have no ongoing purpose";

# Sample Decommissioning Agreement

- The Sample Decommissioning Agreement is a starting point if the Commission is determined to be the appropriate decommissioning backstop.
- The sample agreement is intended to elicit feedback on both the structure and potential sample terms.
- We are also interested in Feedback on how the timeline of such agreements would fit into the Commission proceeding.

**SAMPLE DECOMMISSIONING AGREEMENT**

This Decommissioning Agreement is entered into between **[INSERT DEVELOPER NAME]** a **[INSERT BUSINESS STRUCTURE AND STATE OF ORGANIZATION]** at **[INSERT BUSINESS ADDRESS]** ("Developer"), the Michigan Public Service Commission (the "Commission" or "MPSC") at 7109 W Saginaw Hwy, Lansing, MI 48917, and **[INSERT LANDOWNER NAME]** at **[INSERT LANDOWNER ADDRESS]**.

WHEREAS, Public Act 233 of 2023 (the "Act") provides siting authority to the Commission for utility-scale solar, wind, and energy storage projects under specific conditions and requires applications under the Act to include a "decommissioning plan that is consistent with agreements reached between the applicant and other landowners of participating properties and that ensures the return of all participating properties to a useful condition similar to that which existed before construction, including removal of above-surface facilities and infrastructure that have no ongoing purpose";

# Sample Terms-Decommissioning Process

- A term to outline when decommissioning will commence:
  - Developer-Initiated Decommissioning
  - Landowner Agreements
  - Depowering
  - Failure of Financial Assurance
  - Change of Ownership
  - Repowering
  - Notice

**3. Decommissioning Process.**

**3.1. Initiation.** Decommissioning of the Project shall commence under any of the following conditions ("Decommissioning Trigger Events"):

**3.1.1. Developer-Initiated Decommissioning.** The Developer may, subject to its agreements with the participating landowners and the terms of Commission approval, provide written notice to the parties of this Agreement of its intent to decommission the Project or a portion thereof.

# Sample Terms-Commission Decommissioning Authority

- A term to outline the Commission's authority in the event that the Developer fails to satisfy its decommissioning obligations:
  - Commission-Initiated Decommissioning
  - Access
  - Future Obligations

**3.4. Commission Decommissioning Authority.**

**3.4.1. Commission-Initiated Decommissioning.** If the Developer, its successors or assigns, or any other person controlling the Project fails, refuses, or neglects to initiate decommissioning within 180 days of any of the Decommissioning Trigger Events, the Commission shall itself have the right, but not the obligation, to perform the Developer's decommissioning obligations under this Agreement, the Commission order approving the Project certificate, and the Commission-approved Decommissioning Plan. In such event, the Developer (or its successors or assigns) and the Landowner (or any of the Landowner's heirs or assigns)

4

# Sample Terms-Financial Assurance

- A term to describe obligations and rights regarding the financial assurance:
  - Estimated Decommissioning Cost
  - Bond Acquisition*
  - Use of Funds

**4. Financial Assurance. [ADJUST THESE TERMS FOR IRREVOCABLE LETTERS OF CREDIT OR PARENT COMPANY GUARANTEES]**

**4.1. Estimated Decommissioning Cost.** Pursuant to MCL 460.1225(r) and the Commission order approving the Project certificate, the estimated cost of decommissioning the project ("Estimated Decommissioning Cost"), which is subject to the periodic updates described below, is initially $_____. The Estimated Decommissioning Cost is intended to include the following:

**4.1.1.** Costs for removal of energy facility equipment and infrastructure, land restoration and reclamation, and insurance requirements

* The Sample Decommissioning Agreement is drafted assuming the use of a bond. However, there are placeholders in brackets indicating some of the terms that would need to be updated for other forms of financial assurance.

# Sample Terms-Termination

- A term to explain how the decommissioning obligations will be deemed satisfied and the financial assurance requirement will be terminated upon completion:
  - Commission-Approved Decommissioning
  - Financial Assurance Termination

**5. Termination.**

**5.1. Commission-Approved Decommissioning.** Upon completion of all decommissioning obligations described in this agreement, the Commission order approving the Project certificate, and the Commission-approved Decommissioning Plan, the Developer may apply to the Commission for termination of this Agreement. The Commission shall determine whether any outstanding obligations exist. Otherwise, the Commission shall terminate this Agreement.

**5.2. Financial Assurance Termination.** If the Developer applies for, and is granted, termination of this Agreement upon completion of all decommissioning obligations as addressed in the preceding paragraph, then the Commission may terminate the applicable financial assurance requirements.

# Sample Terms-Miscellaneous

There are other miscellaneous terms throughout the agreement to give a sense of what such agreements might look like.

**6. Miscellaneous.**

**6.1. Assignment.** No party may assign all or any part of this Agreement without the other parties' prior written consent. This Agreement inures to the benefit of the parties hereto and their successors and permitted assigns and is binding on each other and each other's successors and permitted assigns.

**6.2. Conflicts.** In the event of a conflict between the Commission order approving the Project certificate and this Agreement or any agreements between the Developer and Landowner, the Commission order shall control.

**6.3. Severability.** Any provision of this Agreement held to be void or unenforceable will not affect the validity of its remaining provision.

# Next Steps and Closing

- Thank you for your input and participation in today's meeting.
- Additional input is welcomed.

**Please submit your informal comments on these items by email to colec1@michigan.gov and baldwinj2@michigan.gov with Siting Comments in the subject line.**
**Your comments are requested on these items by May 28, 2024.**

## Written Comments

### Email To:

Colec1@michigan.gov and
Baldwinj2@michigan.gov

### Mail To:

Michigan Public Service Commission
Attn: Cathy Cole
P.O. Box 30221
Lansing, MI 48909

**Sign up for our email distribution list:**
www.michigan.gov/mpsc/commission/workgroups/2023-energy-legislation/renewable-energy-and-energy-storage-facility-siting

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# Next Steps and Closing

- **Next Meeting:  Tuesday, May 28, 2024 at 1:00 pm**

**Please email questions and informal comments to colec1@michigan.gov and baldwinj2@michigan.gov**

- **Staff proposal due in the docket Friday, June 21, 2024**

**Sign up for our email distribution list:**
www.michigan.gov/mpsc/commission/workgroups/2023-energy-legislation/renewable-energy-and-energy-storage-facility-siting