

Question: Who are you, and what do you want to know about large-scale wind and solar?



Please take this quick poll. Point your phone at the QR code and click on the link that appears, or go to menti.com/al4hqp4u4fn4

- Do you have large-scale wind or solar projects in your community?
- Do you have any specific questions?



Extension
UNIVERSITY OF WISCONSIN-MADISON



U.S. DEPARTMENT
of ENERGY

Awardee

Large-Scale Wind & Solar in Wisconsin

American Planning Association Wisconsin Chapter

October 8, 2026

Renewable Energy Siting and Engagement for Tomorrow (RESET)

jessy.bradish@wisc.edu | go.wisc.edu/reset

What is RESET?

Renewable Energy Siting & Engagement for Tomorrow (RESET) helps communities develop local priorities so they can have input with developers on large-scale solar and wind projects.

RESET's work is supported by the U.S. Department of Energy Office of Critical Minerals and Energy Innovation (CMEI) through the Reliable Energy Siting through Technical Engagement and Planning (R-STEP) program.

R-STEP is administered with support from the Partnership Intermediary Agreement (PIA) that the U.S. Department of Energy (DOE) has established with Energywerx.



U.S. DEPARTMENT
of **ENERGY**

Awardee



energywerx



Extension
UNIVERSITY OF WISCONSIN-MADISON

The views expressed herein do not necessarily represent the views of the U.S. Department of Energy or the United States Government.



Photo: OneEnergy Renewables

The RESET Collaborative



Photo: OneEnergy Renewables

Today's Agenda

- What communities can do
- RESET's community engagement
- Wisconsin's electricity landscape
- Large-scale wind and solar projects in Wisconsin
- What's happening to Wisconsin's farmland?
- Wisconsin's regulatory landscape (under and over 100 MW)
- Utility aid
- Negotiating development contracts

Audience poll results



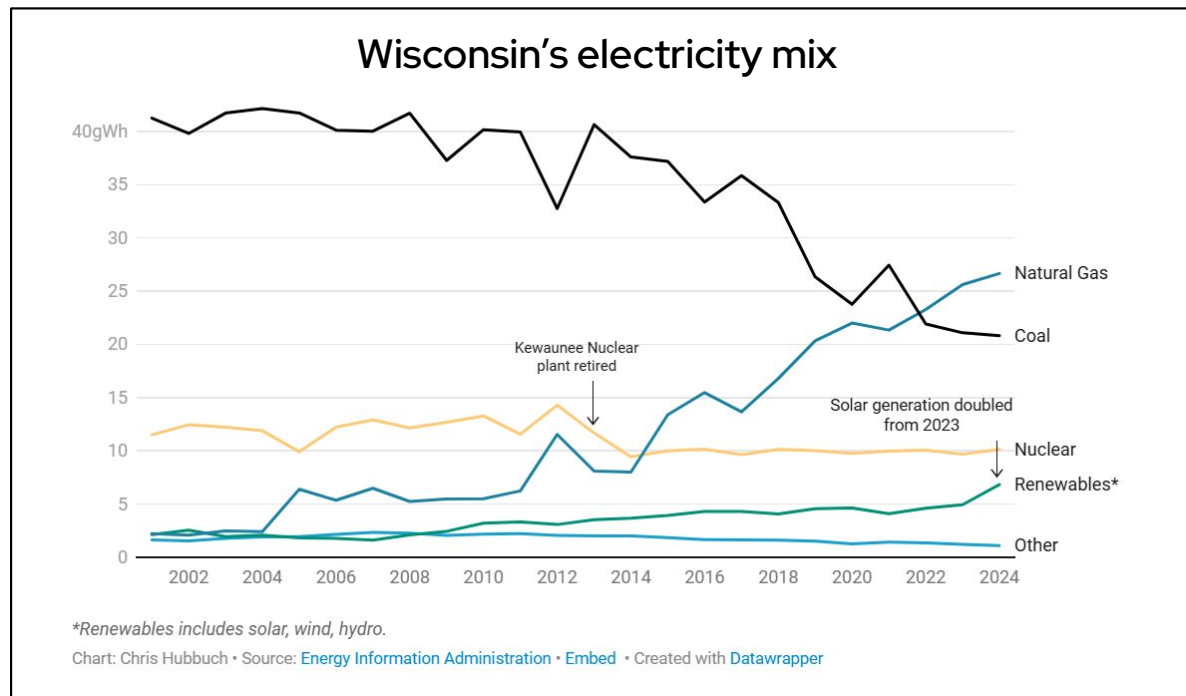
Wisconsin's electricity landscape

How does Wisconsin's grid work?



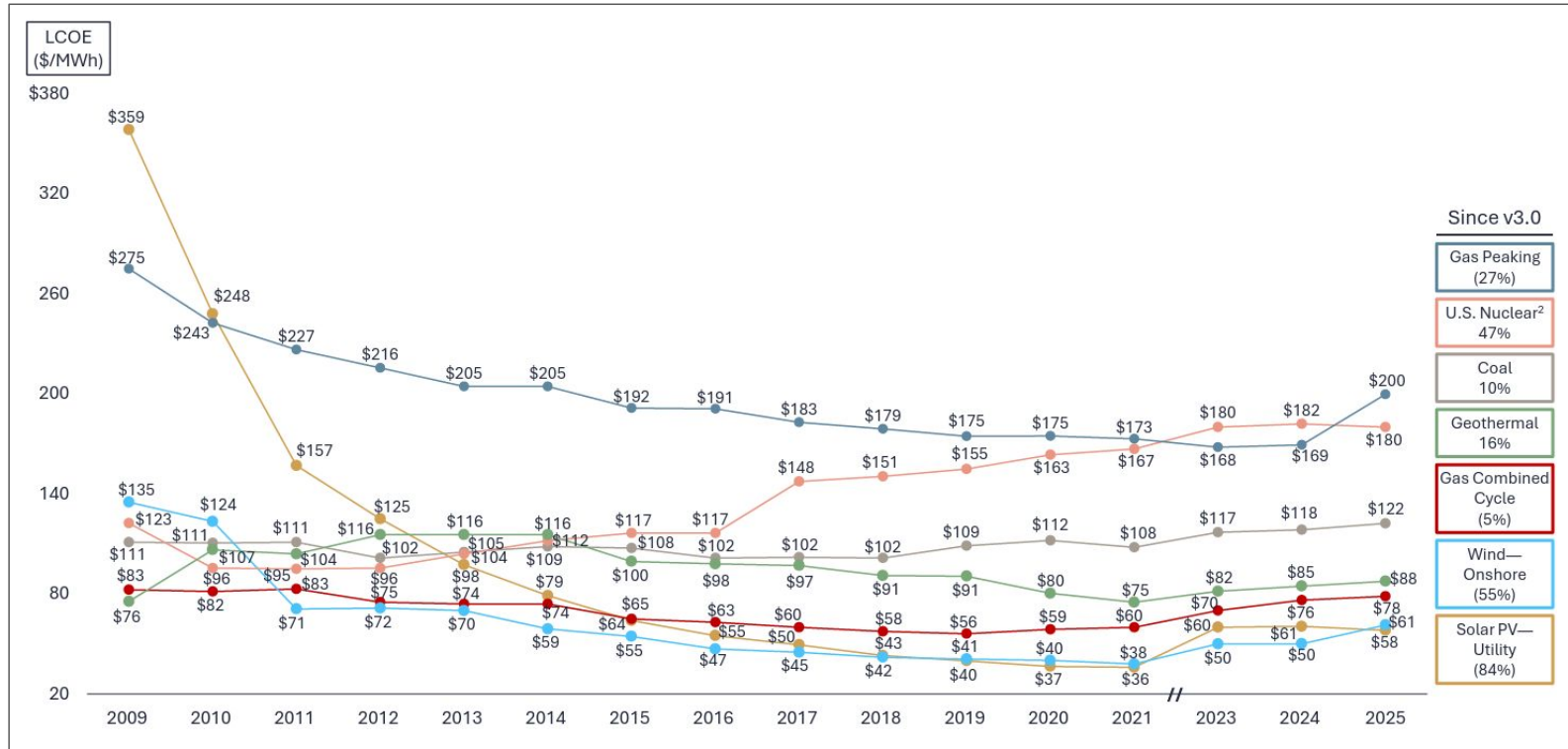
- We are part of MISO (Midcontinent Independent System Operator)
- MISO has more than 40 million customers in 15 states
- Approves all project interconnection
- Mission to deliver a consistent supply of electricity at an affordable cost
- Facing increasing electricity demand while decommissioning old power plants

Where does our electricity come from?



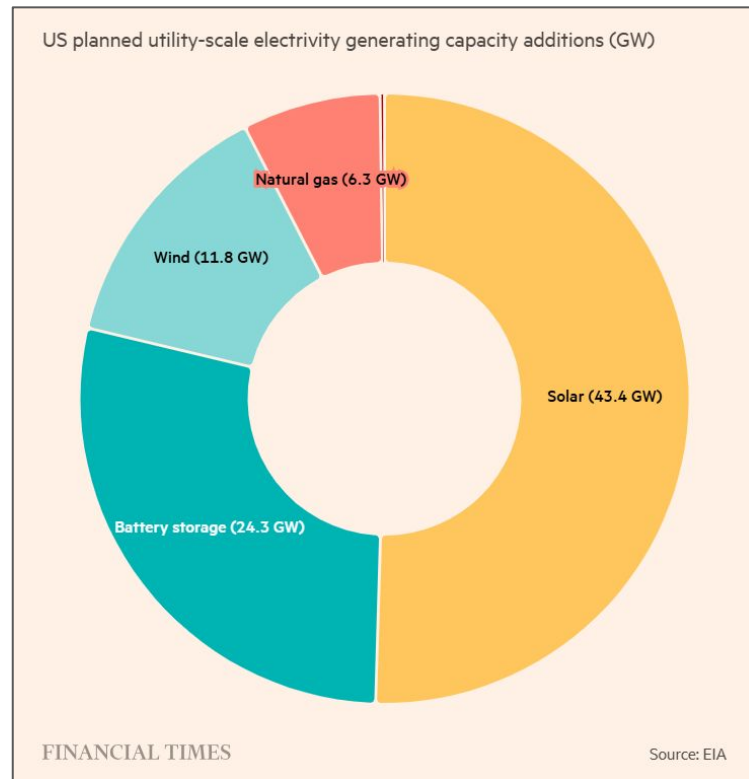
- Natural gas (~36%)
- Coal (~35%)
- Nuclear (~15%)
- Solar, wind, hydro (~12%)

What's the lowest-cost electricity without subsidies?



What are we building in 2026?

- Solar (more than 50%)
- Battery storage
- Wind
- Natural gas



Large-scale wind and solar projects in Wisconsin

What is a large-scale project?

Projects are at least 1 megawatt (MW)

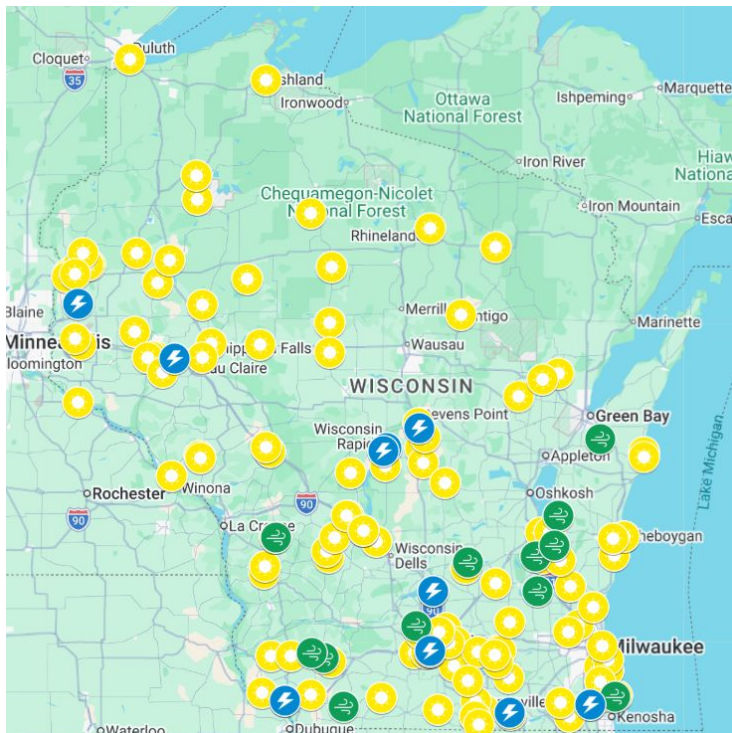
1 MW powers more than 160 Wisconsin homes

- **Solar:** 1 MW uses about 5-8 acres of land
- **Wind:** 1 turbine produces 3-6 MW of power, and uses 1-1 ½ acres



Photo: OneEnergy Renewables

Large-scale projects in Wisconsin



Solar, wind & battery projects

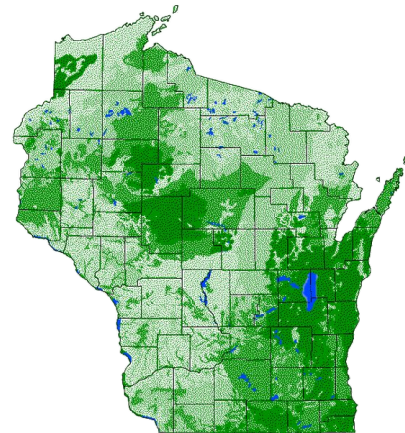
- Dozens of solar projects operating – more than 3,300 MW capacity
- 13 wind projects with more than 800 MW of capacity
- More projects proposed or approved
- Mostly built on agricultural land

What's happening to
Wisconsin's farmland?

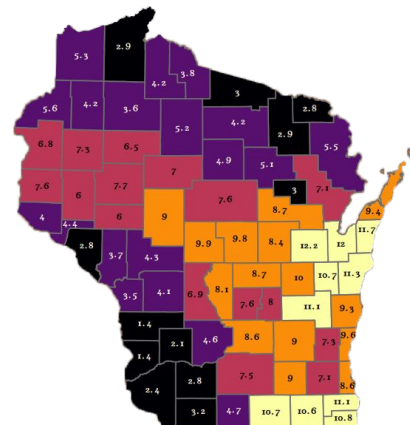
Why build on farmland?

- Large parcels of land
- Flat and ready to build
- Near transmission lines
- Building on farmland yields the lowest cost electricity production
- Rooftops and parking lots are good for residential/commercial scale production (not utility-scale)

Prime farmland (dark green)



Prime solar energy (yellow, orange, red)



Educate landowners about solar land leasing

Landowners can earn \$500-\$1,500+ annually per acre.

What should landowners find out before signing a binding long-term contract?

- What to ask (and why): *Guide for Leasing Land for Solar Development.*
- Companion worksheet: *Conversations with Solar Developers.*

These are not a substitute for legal advice.

The information provided within this presentation does not, and is not intended to, constitute legal advice. All information, content, and materials available here is for general informational purposes only and may not constitute the most up-to-date legal or other information.

Attending this presentation does not create an attorney-client relationship between you and the presenters or with the University of Wisconsin-Madison. Seek legal guidance from competent legal counsel.



Documents and webinar at go.wisc.edu/solarguide

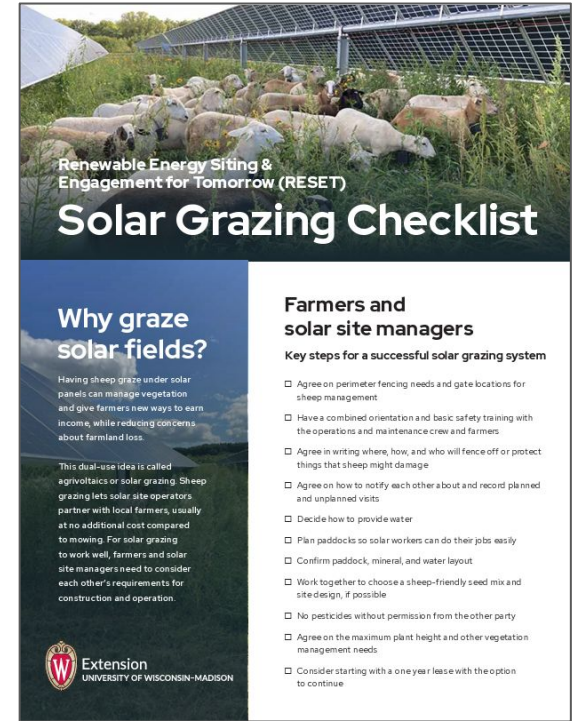


A dual-use approach to large-scale solar

“Agrivoltaics” uses the same land for both agriculture and solar photovoltaic energy.

Sheep grazing is one common practice.

Pollinator habitat helps biodiversity and builds soil health.



What can communities do?

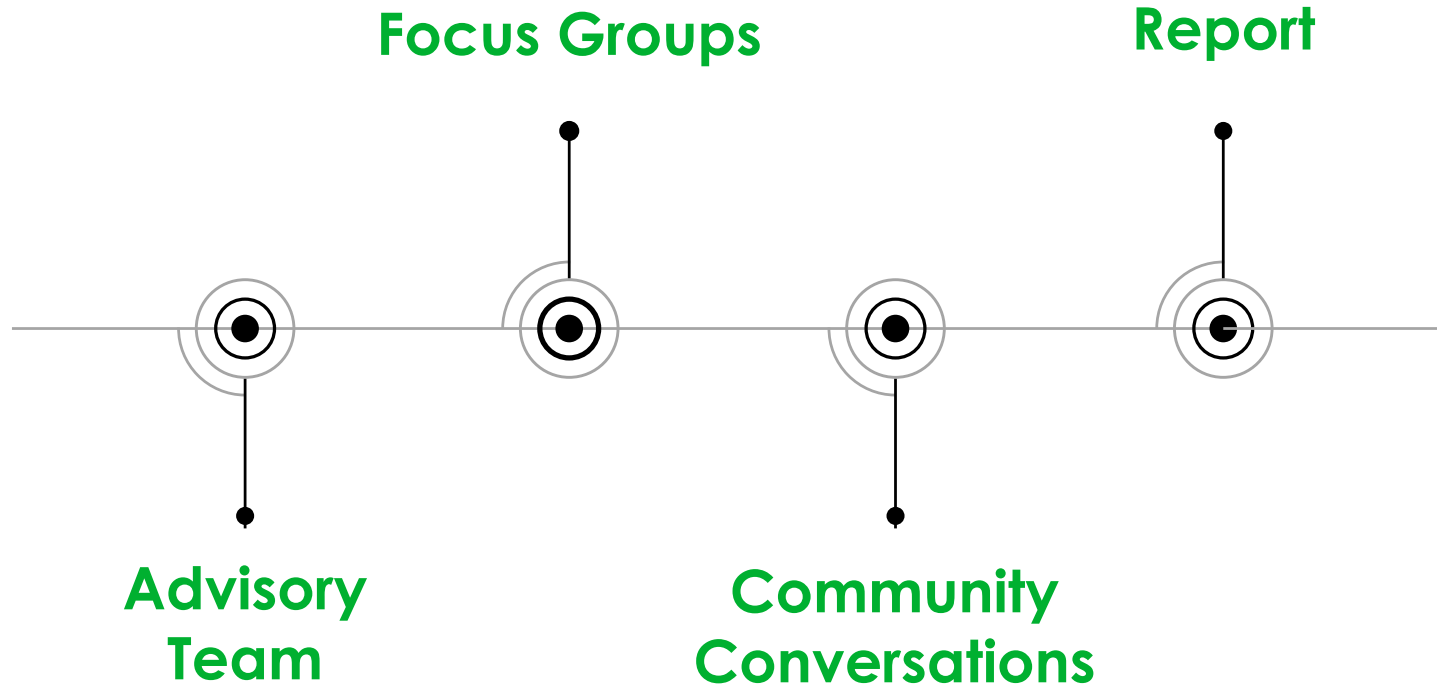
- Document **community priorities**
- Update **comprehensive plans**
- Adopt **local ordinances**
- Develop **solar maps**
- **Participate** in PSC proceedings
- Negotiate **development contracts**



Photo: OneEnergy Renewables

RESET's community engagement

RESET's Pilot County Process



Case Study: Green County



Conversations

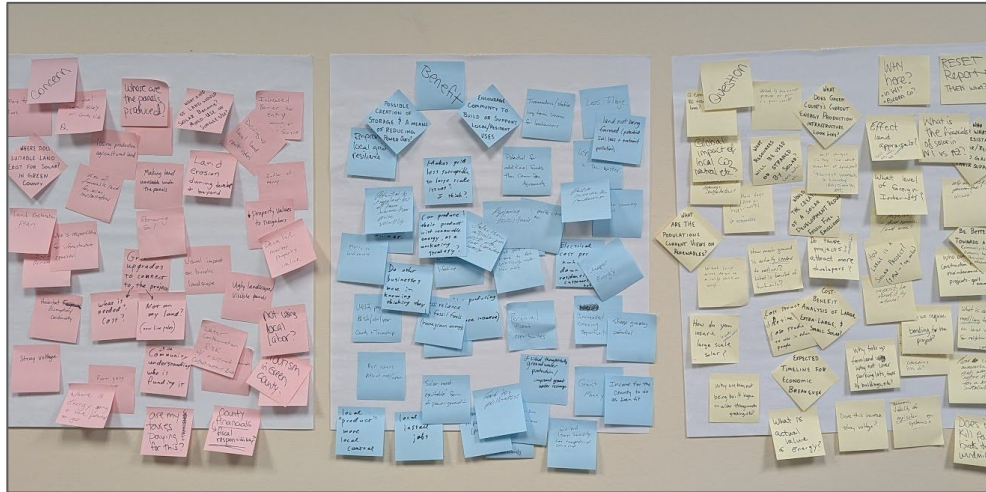


Benefits · Concerns · Questions



1,021 comments were gathered across **22 engagement sessions** in Green, Taylor, and Vernon Counties.

Red post-its were concerns, blue were benefits, and yellow were questions.



- 279 Benefits
- 376 Concerns
- 366 Questions

Wisconsin Report

The Wisconsin Report answers frequently asked questions from RESET community engagement pilots in Green, Taylor, and Vernon Counties. Topics include:

- Electricity and Large-Scale Solar and Wind
- Law, Policy, and Planning
- Economics
- Environment
- Land Use
- Health and Safety
- Emergency Response, Fires, Toxins, Stray Voltage
- Decommissioning / End of Life

Wisconsin Community Perspectives on
Large-Scale Solar and Wind Development

Renewable Energy Siting & Engagement
for Tomorrow (RESET)

Engaging Wisconsin Communities
in Renewable Energy

August 2026



Learning in the field

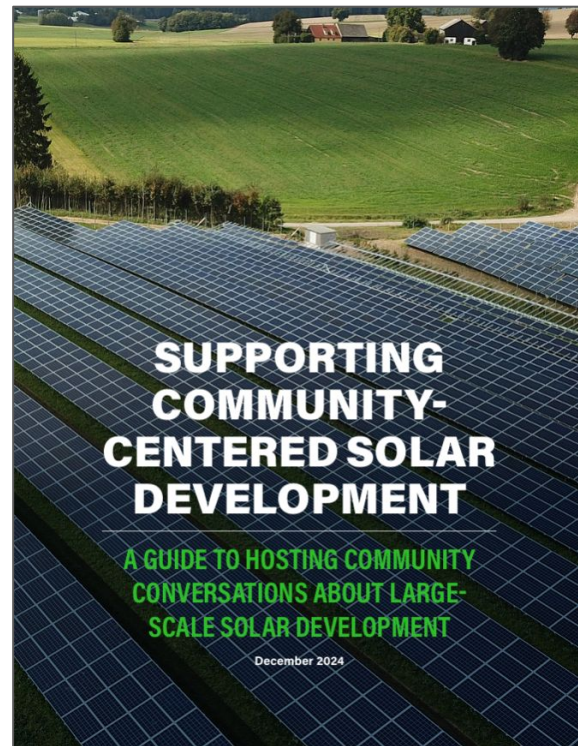


How can your Town and community engage?

- The *Supporting Community Centered Solar Development* guide is for community leaders, planners, developers, and residents
- Helps people have open and respectful conversations about large-scale solar
- Offers 8-step process to plan and lead discussions about solar's impacts
- Based on real experiences in five different states, led by Extension professionals



Extension
UNIVERSITY OF WISCONSIN-MADISON



Wisconsin's regulatory landscape



Siting Authority Depends on the Project Size

Under 100 MW

Local Siting Authority

- Conditional Use Permitting authority
- Must be supported by “substantial evidence,” not public opinion.
- Authority to restrict systems limited by § 66.0401.
- If application satisfies all CUP requirements, it must be approved.

Wis. Stat. § 66.0401 • Wisconsin Act 67 (2017) • §§ 59.69(5e), 62.23(7)(de), 60.61(4e)

100 MW or Larger

Public Service Commission

- Certificate of Public Convenience and Necessity (CPCN) process.
- Once a CPCN is approved, local government may not inhibit or restrict the project.
- State law preempts local zoning regulations.

Wis. Stat. § 196.491(3)(i) • Responsible Use of Rural & Agric. Land v. PSC, 2000 WI 129 • Am. Transmission Co. v. Dane Cty., 2009 WI App 126

Under 100 Megawatts



What can local governments regulate?

Solar Regulation Guidance for Wisconsin Counties, Cities, Villages and Towns explains

- how utility-scale solar project siting works
- what local governments can and cannot do, and the legal background on why

This guide is not legal advice. Local governments should talk to a lawyer before developing laws about solar projects.

Solar Regulation Guidance

for Wisconsin Counties, Cities, Villages, and Towns

February 10, 2026



Extension
UNIVERSITY OF WISCONSIN-MADISON

Developed by UW-Madison Division of Extension's
RESET and Local Government Education Programs

Model Solar Zoning Ordinance

- Offers example language local governments may draw from for guidance
- Helps communities understand their options and take clear, locally appropriate action

Author: Bill Oemichen, J.D., UW-Madison Extension Local Government Education Professor of Practice-Law

Modeled in part on: Columbia County, Jefferson County, City of Greenfield, Town of Lomira, and Town of Saratoga ordinances

Model Solar Zoning Ordinance

for Wisconsin Counties, Cities,
Villages, and Towns

May 27, 2026



Extension
UNIVERSITY OF WISCONSIN-MADISON

Developed by UW-Madison Division of Extension's
RESET and Local Government Education Programs

Regulating projects under 100 MW

Local government authority is limited under
Wis. Stat. § 66.0401

- Case law indicates local governments with zoning authority must follow a conditional use permit (CUP) process
- Case-by-case review of specific projects
- No “**one size fits all**” regulation



Any local rules must either:

#1: Preserve Public Health and Safety

Must directly preserve and protect public health and safety
(General visual preferences or aesthetics do not qualify)

#2: Protect Siting Costs and Efficiency

Local zoning or conditions cannot significantly increase project costs, or significantly decrease its efficiency

#3: Provide Alternative of Comparable Value

Regulations must allow for a viable alternative solar system option of comparable cost and efficiency



Review Criteria Example: Roads (<100 MW)

Section 1.06(6)(b)

"Maintenance and repair of damage to local roads due to project construction, including a Road Maintenance Agreement and financial assurance during the construction phase in the form of a surety bond, letter or credit, escrow account, reserve fund, parent guarantee, or other suitable financial mechanism."

Review Criteria Example: Setbacks (<100 MW)

Section 1.06(6)(c)

"Setbacks from participating and non-participating property lines, residential structures, unique adjacent land uses, and roadways, assessed on a case-by-case basis for each parcel affected."

- Cannot create one-size-fits-all setback regulation

Review Criteria Example: Agrivoltaics (<100 MW)

Section 1.06(6)(k)

“To the extent feasible and practical, plans to use the land for both electricity generation and agriculture or conservation, possibly including but not limited to:

1. Grazing of livestock such as cattle, sheep, and/or chickens; or
2. Planting and maintaining pollinator-friendly native plant species and reduced herbicide applications;
3. Planting of crops.”

100 Megawatts and Larger



About the Public Service Commission of **WISCONSIN**

The PSC ensures safe, reliable, affordable, and environmentally responsible utility services and equitable access to telecommunications and broadband services.

Types of utilities regulated include **electric, natural gas, water**, and certain aspects of **local telephone service**.

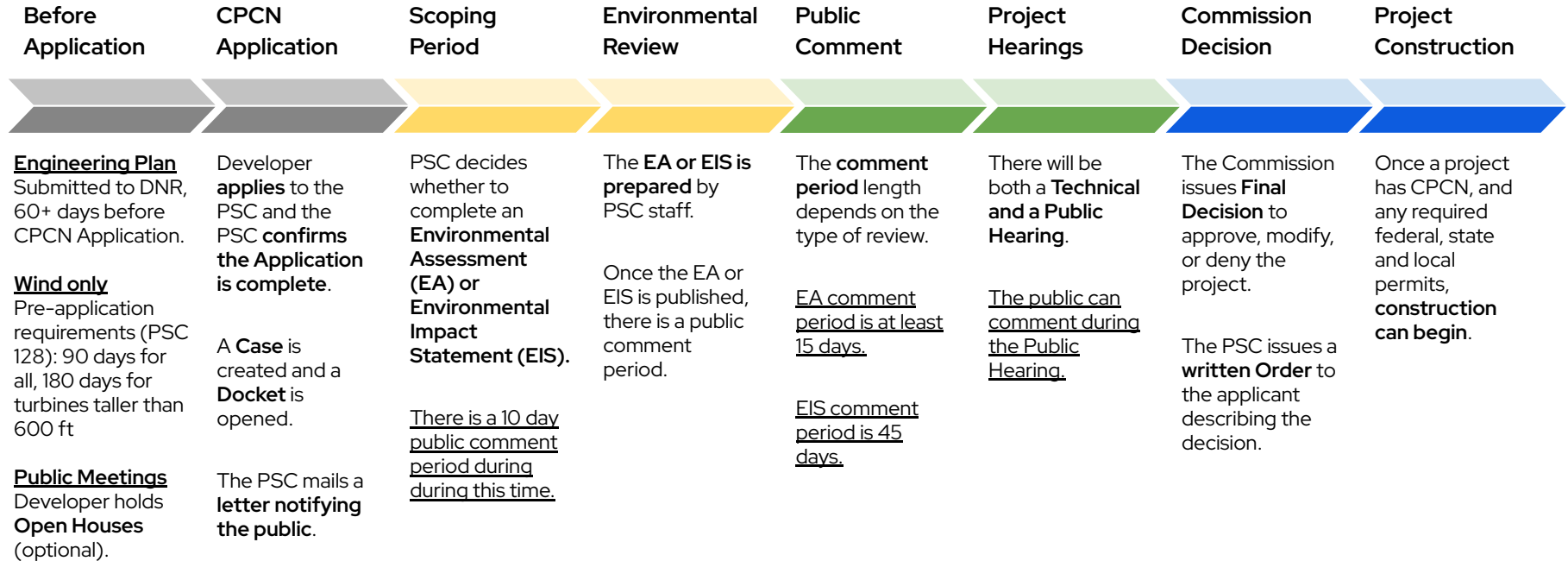
- More than **1,100 utilities** under the agency's jurisdiction
- PSC approves rate changes, issuing stocks or bonds, and **new power plants** or transmission lines

What are project application requirements?

A **Certificate of Public Convenience and Necessity (CPCN)** is required for proposed electric generation facilities of 100 or more megawatts (MW) and proposed high-voltage electric transmission lines of 100 kV or more.

- Project **must be in the public interest**.
- Pre-existing zoning regulations can be preempted by the Commission.
- The project review must be completed within one year. It usually takes 6-12 months for a project review to be completed.

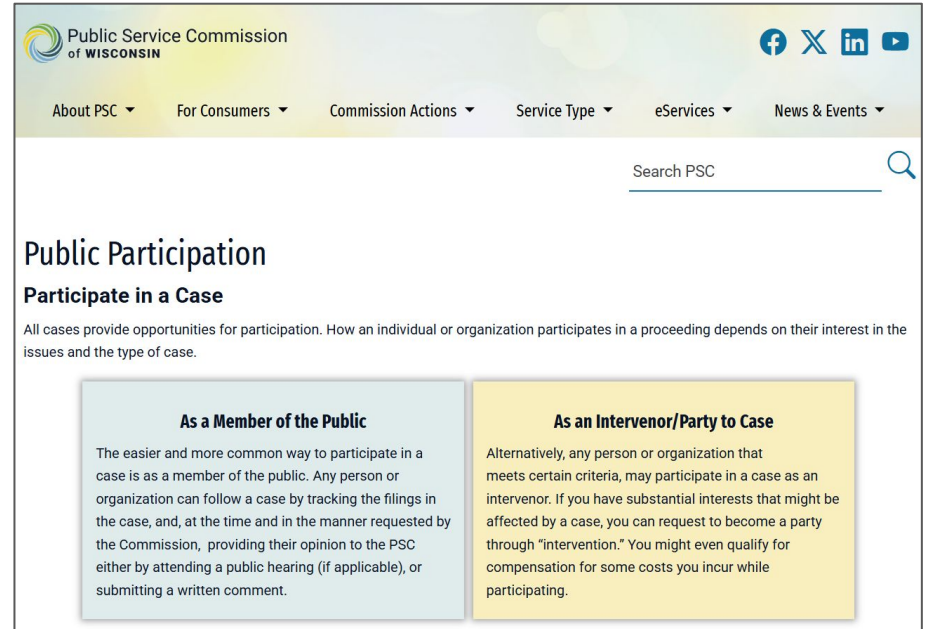
High level flow chart of the PSC review process



You can participate in a Case as a

- Member of the Public
- Intervenor/Party to a Case

Learn more about the steps for each option on the PSC website.



The screenshot shows the Public Service Commission of Wisconsin website. The header includes the PSC logo, navigation links (About PSC, For Consumers, Commission Actions, Service Type, eServices, News & Events), and social media icons. A search bar is located on the right. The main content area is titled "Public Participation" and "Participate in a Case". It explains that all cases provide opportunities for participation and that the method depends on the individual's interest. Two options are presented in colored boxes: "As a Member of the Public" (light blue) and "As an Intervenor/Party to a Case" (yellow).

Public Service Commission of WISCONSIN

About PSC ▾ For Consumers ▾ Commission Actions ▾ Service Type ▾ eServices ▾ News & Events ▾

Search PSC 🔍

Public Participation

Participate in a Case

All cases provide opportunities for participation. How an individual or organization participates in a proceeding depends on their interest in the issues and the type of case.

As a Member of the Public

The easier and more common way to participate in a case is as a member of the public. Any person or organization can follow a case by tracking the filings in the case, and, at the time and in the manner requested by the Commission, providing their opinion to the PSC either by attending a public hearing (if applicable), or submitting a written comment.

As an Intervenor/Party to a Case

Alternatively, any person or organization that meets certain criteria, may participate in a case as an intervenor. If you have substantial interests that might be affected by a case, you can request to become a party through "intervention." You might even qualify for compensation for some costs you incur while participating.

How to Prepare Effective Public Testimony

- Identify yourself and your relation to the docket.
- Be specific about your concern.
- Explain the basis for your opinion and knowledge.
- Propose an alternative.

PSC Resources

- [Learn What to Expect at a PSC public hearing](#)
- [Requirements for Public Comments](#)
- [How to Prepare Effective Public Testimony or Public Comment](#)

Comprehensive plans

What to add to Comprehensive Plans?

Updated comprehensive plans provide developers and the PSC clear guidance about planned future growth areas, including:

- Annexation possibilities
- Utility and sewer expansions
- Environmentally sensitive resources
- Agricultural priorities
- Community vision and goals

For solar projects 100 MW or larger, the PSC must determine if a project “unreasonably interferes with orderly local land use.”

Utility Aid



How Utility Aid works in Wisconsin

- Utility aid is paid from the state General Fund for any energy generating facility 50 Megawatts or larger (and many smaller projects).
- \$5,000 per megawatt to the jurisdictions hosting the equipment (county and town, city, or village)
- Annual payments start the year after the project is energized, and continue for the life of the project.

\$5,000/MW for solar & wind

60% to county
40% to towns

\$1000/MW for BESS

50% to county
50% to towns

WI Land + Water



Wisconsin Land+Water has resources including:

- Renewable Energy Guide
- Guide to Local Regulation
- Addressing Community Concerns
- Property Tax Impacts and Property Tax Calculator
- Decommissioning Wind & Solar Energy Systems in Wisconsin
- Land-Use Concerns on Prime Farmland
- Solar Developer Contract information

Negotiating development contracts



Center for Land Use Education
College of Natural Resources
University of Wisconsin-Stevens Point



Extension
UNIVERSITY OF WISCONSIN-MADISON

Lynn Markham, Land Use Specialist

What is a Solar Contract?

Local officials may negotiate directly with a solar developer to approve a contract, in which the solar developer and local governments formalize roles and financial commitments

Does not affect **if** a project is built, only **how**

Contracts are voluntary and binding

Solar contracts are also known as:

- Joint Development Agreement (JDA)
- Local Operating Contract (LOC)
- Memorandum of Understanding (MOU)

16 out of 21 solar projects

100 MW or larger in Wisconsin
have a signed contract



Solar Contracts

Resources for communities

- Tips for negotiating a contract
- Existing contract language
 - standards to consider
 - explanation for each standard
 - most favorable language found
- Full text of 14 Wisconsin solar contracts

wisconsinlandwater.org/solarcontracts

RENEWABLE ENERGY: Solar Contracts

Solar Contracts

When a project is proposed, local governments have the opportunity to negotiate with developers to ensure emergency response needs are addressed, conservation priorities are protected, wildlife corridors remain open, and the community benefits from the development.

University of Wisconsin - Stevens Point's Center for Land Use Education (CLUE) is in the process of compiling tools to help local governments engage with developers. Check back as we continue to update this page with more information.

SOLAR CONTRACT PROCESS HANDOUT

LANGUAGE FOR STANDARDS TO INCLUDE IN CONTRACTS



Example Solar Contracts

Download this table to learn more about the available final Solar Contracts. Then, click on the button below to read the final PDF contracts from projects across the state.

APPLE RIVER SOLAR

BADGER HOLLOW SOLAR

BADGER STATE SOLAR

DARIEN SOLAR

ELK CREEK SOLAR

HIGH NOON SOLAR

MAPLE GROVE

MUDDY CREEK

ONION RIVER SOLAR

PORTAGE SOLAR

SPRINGFIELD SOLAR

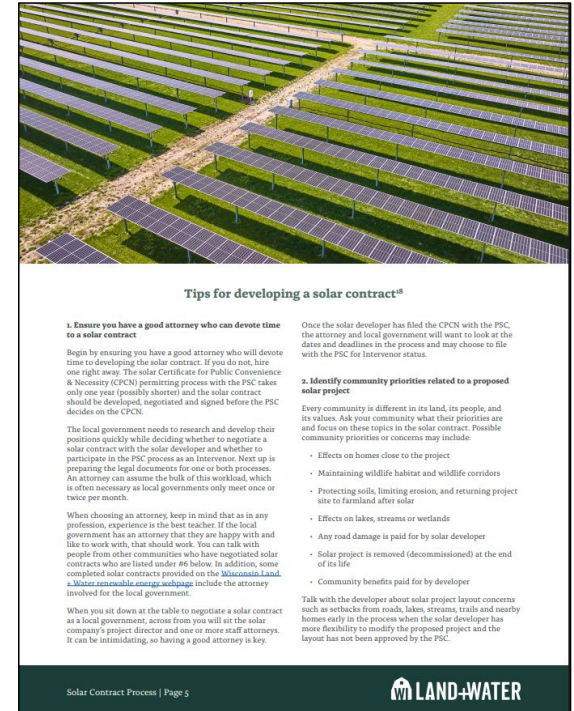
TOWN OF PARIS

VISTA SANDS SOLAR

WOOD COUNTY SOLAR/SARATOGA

Tips to create and negotiate solar & wind contracts

- Engage strong legal counsel early
- Define community priorities
- Reach out to the developer early
- Sign contract prior to CPCN decision – 1 year
- Share the workload
- Use strong, enforceable language that assigns accountability (who does what?)
- Build on previous solar & wind contracts
- Communicate contract standards to contractors & subcontractors



Developing a strong solar or wind contract

Use a Team Approach

- Legal counsel
- Planning & zoning staff
- Land + water conservation staff
- Highway/road officials
- Fire & emergency services
- Local governments (county and towns)
- Who will communicate solar contract standards to contractors, monitor whether standards are being met, and enforce if needed?

Table shows requirements the PSC has and has not placed on solar projects

PSC did not add requirements to	PSC sometimes added requirements to
Move arrays off agricultural land ¹	
Move arrays off red pine plantation land ⁴	Move proposed arrays off natural forested land or avoid mass tree clearing ^{5,6}
Move proposed arrays based on the comprehensive plan, stating the plan was out of date and the plan did not explicitly state or exclude energy generation facilities in area ⁷	
Move proposed arrays off multiple archaeological sites ⁸	Move proposed arrays off approximately 50 acres to avoid impacts to one archaeological site where thousands of artifacts have been mapped and collected ⁹
Move proposed arrays away from a neighbor's home ¹⁰	Move proposed array to be equal to a nearby setback from the highway ¹¹
	Require relocation of a laydown yard (construction hub) away from a neighbor's home ¹²
Move proposed arrays away from key documented habitat for a threatened species as recommended by DNR wildlife biologists ¹³	Reduce fence height to seven feet near documented threatened prairie species breeding grounds ¹⁴
Avoid trap situations for large wildlife ¹⁵	Require fencing with a specified size of bottom openings to allow small wildlife movement as recommended by DNR staff ¹⁶
	Exclude non-native aggressive plant species from the seed mix to be planted on the site as recommended by DNR staff ¹⁷
	Require winter soil stabilization ¹⁸

Do Counties & Towns work together?

Collaboration is common

- Counties and towns may develop contract terms together

Each brings value

- Towns know local landowners and community concerns
- Counties have planning, conservation, and legal staff

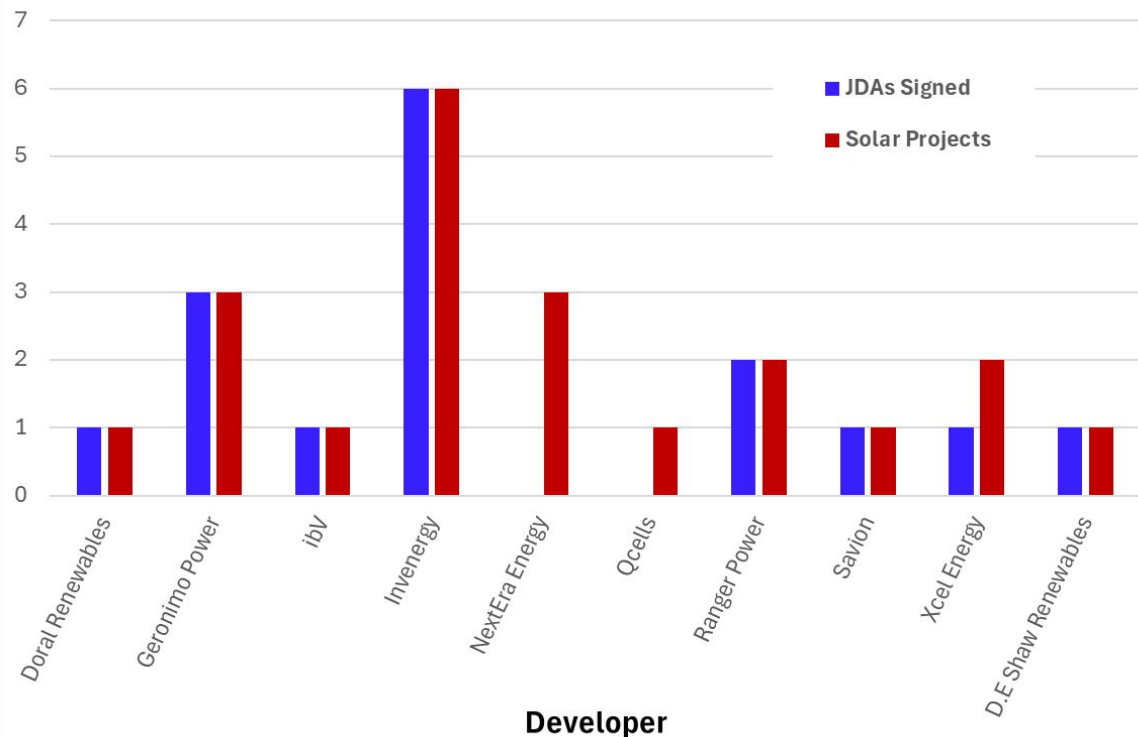
Roles may vary

- Either the county or town may lead negotiations

Separate contracts are often needed

- Counties and towns regulate weight & speed limits on different roads

Joint Solar Agreements Total Projects by Developer



In Wisconsin 10 developers have approved solar projects 100 MW+ through 2025

8 out of 10 solar developers have signed solar contracts for all their projects

NextEra Energy and Qcells have projects without solar contracts

What can solar or wind contracts include?



Road use, damage & repair obligations



Decommissioning & financial assurance



Lost tax revenue to schools & tech colleges



Utility aid payments to local governments



Road & neighbor **setbacks**



Conservation: topsoil, erosion, stormwater, fencing, vegetation



Noise, lighting & glare standards



Community amenity & **benefit payments**



Reimbursement for professional services

And more!

wisconsinlandwater.org/solarcontracts

Solar contract language - Analysis of 14 signed contracts

Goals of this document

- A. Provide a menu of standards to choose from
- B. Reduce time needed to develop a solar contract
- C. Build on the work of other counties & towns who developed solar contracts

Use community goals to guide solar contract

- Avoid new local government costs - yellow
- Protect topsoil for future farming - green

1. Project's use of roads and road repair obligations
2. Drainage repair obligations - ditches and culverts
3. Drain tile repair obligations
4. Local government permitting requirements
5. Erosion control and stormwater management plans
6. Wind erosion
7. Guaranteed level of revenue sharing for local governments
8. Replacement of lost tax revenue to school districts, technical colleges, fire departments and ambulance services
9. Assurances in support of decommissioning
10. Construction phasing
11. Grazing animals
12. Ground cover/vegetation plan with potential for pollinator habitat
13. Vegetation management
14. Topsoil preservation
15. Wetland setbacks
16. Reducing potential impacts on wildlife through project siting, corridors & fencing
17. Visual concerns and buffers for neighboring landowners
18. Noise impacts
19. Lighting and glare
20. Public safety and emergency management
21. Battery energy storage systems
22. Cooperation
23. Professional fee reimbursement
24. Establishing lines of communication, compliance and enforcement

Solar Contract language

1. Project's use of roads and road repair obligations (example)

Explanation: Building a solar project involves many heavy trucks hauling in equipment and supplies to build the project and later hauling the equipment out when decommissioning the project. Usage of local roads by these trucks may result in road damage that would impact a local government's finances. Contract language may cover:

- Designation of which sections of which roads may be used to transport solar equipment to the site
- Who will clean mud and other debris off the roads to keep them safe
- Weight limits and speed limits on these roads
- Penalties if solar project related vehicles use non-designated roads...

Standard to address	Most Favorable Language Found (Contract, section number)	How language benefits local governments and communities	State Statutes/BMP Recommendations	Unanswered Questions in Existing Contract Language
Maintenance of road conditions	Local governments shall not be responsible for construction or maintenance of any roads within the project site, including snow plowing. (Portage, 2.a)	Certifies that any roads on site shall not increase workload or financial responsibility to the local governments.		

Contract Example: Road use and repair obligations

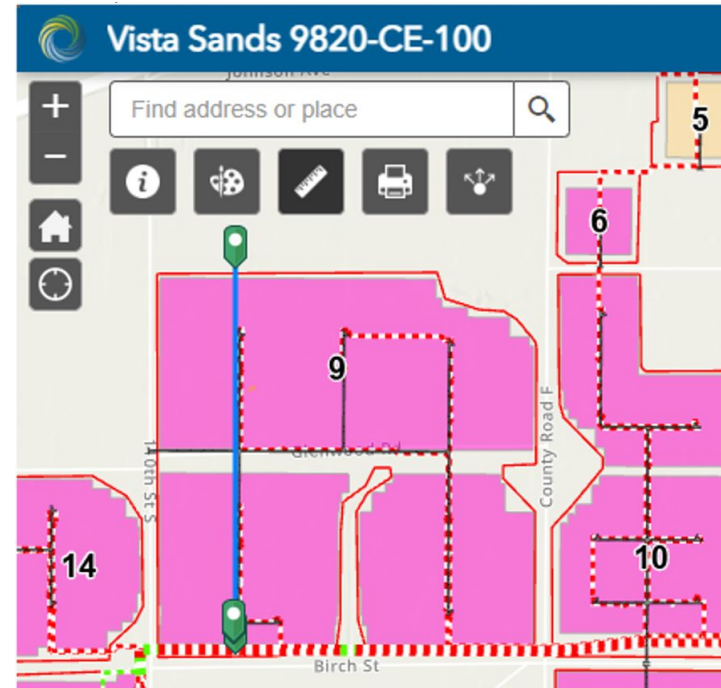
- Designate approved truck routes
 - Local governments set road weight & speed limits
- Require road condition report by mutually agreed upon expert before & after initial construction & decommissioning; paid for by developer
- Developer pays for road damage and repairs or a %
- Include private roads and driveway standards
- State who will clean up mud, sand & debris & pay for it
- Consider penalties if undesignated roads are used



Contract Example: Siting to reduce impacts on wildlife

Preserve habitat & habitat connections

- Avoid siting arrays on or next to state wildlife areas; array fencing can be a barrier
- Divide large arrays (320 acres or greater) into smaller arrays to provide corridors
- Maintain wildlife corridors along waterways



Contract Example: Fencing to reduce impacts on wildlife

Use wildlife-friendly fencing

- Raise fence 6-8 inches off the ground or use fence with large, defined openings near bottom
- Avoid barbed wire on fences around arrays
- Minimize fence height where possible



Looking ahead



Renewable Energy Academies, Lunch & Learns, & Tours

Renewable Energy Academies

- Portage County (Oct 7)
- Ashland County (Nov 5)
- Kenosha County (April 2027)
- Outagamie County (April 2027)
- Chippewa County (May 2027)

Lunch & Learns

- Request one for your County!

Tours

- Grant County BESS & Solar Tour (Oct 22)





Extension
UNIVERSITY OF WISCONSIN-MADISON



**U.S. DEPARTMENT
OF ENERGY**
AWARDEE™

Questions?

Renewable Energy Siting and Engagement for Tomorrow (RESET)

jessy.bradish@wisc.edu | go.wisc.edu/reset