



POWERING

W I S C O N S I N

RESOURCE
TOOLKIT

SPRING
2024

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POWERING WISCONSIN

Powering Wisconsin is a member-led coalition aimed at advancing renewable energy solutions that move Wisconsin toward increased sustainability while **spurring economic development and protecting personal property rights**. The coalition was established in 2023 to highlight and promote the importance of a **diversified energy grid in Wisconsin**.

Powering Wisconsin works together with a number of stakeholders that promote clean energy as a way for Wisconsin to move towards **energy independence, stimulate economic growth, create jobs, protect and responsibly use our natural resources**, while increasing grid efficiency and improving reliability and flexibility.

WHY RENEWABLES?

Renewable energy **creates jobs, drives innovation, and strengthens our economy** as a key player in moving the Midwest towards a diverse energy future. Just like corn, ginseng, and cranberries, Wisconsin farmers are increasingly learning that renewable energy is a **cost-effective, drought-resistant, and reliable** cash crop that can supply a significant portion of the Midwest's electricity needs.



\$8.8m

invested in local communities through tax benefits¹



\$3.0b

contributed towards capital investments²



\$9.5m

provided to landowners and farmers through lease payments³



WISCONSIN'S RENEWABLE ENERGY MIX

Solar Power

One solution is clear as day: solar power creates jobs, drives innovation, and strengthens our economy as a key player in moving the Midwest toward a diverse energy future.

Learn more about solar power in Wisconsin on page 8.



Wind Power

The most cost-efficient source of renewable energy, wind power, moves the Midwest toward a diverse energy future.

Learn more about wind power in Wisconsin on page 11.

Energy Storage

Strong storage infrastructure can bring down energy costs by increasing grid efficiency and improving reliability and flexibility.

Learn more about energy storage in Wisconsin on page 12.

THE FACTS

Renewable Energy Creates Jobs in Wisconsin

- Clean energy jobs now outnumber fossil fuel jobs in the United States, and more jobs are being created right here in the Midwest.⁴
- Clean energy is creating new jobs, new businesses, and new economic development in Wisconsin.
- 6,866 Wisconsinites already have well-paid, family-supporting jobs in renewable energy.⁵



THE FACTS

Renewable Energy is Compatible with Traditional Farming in Wisconsin

- Wind and solar are compatible and profitable ways **farmers can grow their businesses, support their families, and be the stewards of their land.**
- Renewable energy sources can be harvested all year long—increasing efficiency and **providing another income source for farmers.**
- Farming can take place right up to the base of a wind turbine.
- Big Government **limiting the use of a farmer's land infringes** on their property rights. Farmers are the best stewards of their own land.
- Wind and solar are **reliable, drought-proof, high-yield cash crops** that can produce for decades at a time without expensive inputs like fertilizers and irrigation, helping landowners diversify their income portfolio and ensure their livelihood.
- The use of ground-cover crops that attract bees and butterflies is increasingly common in solar farms and has been shown to help improve yields of nearby crops. In addition, temporarily using land for energy production can help **rejuvenate the soil for future farming use.**

Renewable Energy is Clean, Affordable, and Reliable

- Homegrown energy in the Midwest helps power our homes.
- Solar prices have **decreased over 40%** in the last ten years, making it one of the cheapest renewable energy sources on the market. ⁶
- Investments in renewable energy help **create thousands of jobs** right here in Wisconsin. Energy storage helps **maintain a reliable grid.** Stored energy can be released on short notice to meet changing energy needs.
- Energy storage through renewable sources reduces the amount of wasted energy and saves consumers money. Energy storage helps capture clean energy when demand is low, and releasing it when demand is high, helping to reduce waste and save consumers money.



DEFENDING PERSONAL PROPERTY RIGHTS

Renewable energy projects continue to **strengthen Wisconsin's energy grid.**

Wisconsin's renewable energy permitting process prioritizes Wisconsinites' needs for reliable energy and personal property rights. Farmers are the best stewards of their own land, and the decision to place land into service for a renewable energy project relies on several factors including the need for steady, diversified income; maintaining passive income; and more. The government should not dictate what farmers can do with their own land, and we must continue to champion private property rights in Wisconsin.



ECONOMIC DEVELOPMENT



Renewable energy projects offer significant **economic development opportunities** for counties and municipalities across Wisconsin. In 2022, solar and wind power accounted for over 6,000 Wisconsin jobs - more than natural gas, coal, oil and other fossil fuels combined!⁷ Solar and wind projects alike are giving communities the opportunity to **boost their budgets and provide taxpayers relief.** With more jobs and greater investment in our communities, we unleash the power of solar and wind to move our communities forward.



UTILITY AID PAYMENTS

Strengthening Wisconsin communities through improved local infrastructure and services.

In Wisconsin, Utility Aid Payments refer to the payments municipal and county governments receive from the state’s Shared Revenue Program for hosting renewable energy projects.⁸ The funds can be used by local governments in any way approved by the governing body, such as to strengthen infrastructure like schools and parks, improve community services, or cut taxes.

Who Receives Funding?

Under Wisconsin’s Shared Revenue Program, renewable energy projects provide increased payments that are shared between municipal and county governments.⁹

Local governments receive \$5,000 per megawatt (MW) per year in Shared Utility Revenue Payments. Based on a 100 MW capacity project, this amounts to \$500,000 per year in new revenue.¹⁰ This means that the payments provide local governments with more money than property taxes would. For example, the payment breakdowns of a 100 MW renewable energy project sited in a single City, Village, or Town are as follows:

System Location	Jurisdiction	Amount paid per year (100 MW project)
City or Village	City/Village	\$283,333
	County	\$216,667
Town	Town	\$216,667
	County	\$283,333



UTILITY AID PAYMENTS

Who Funds the Program?

All public utilities and certain energy developers are taxed annually by the State of Wisconsin. When a solar or wind energy project becomes operational, the state takes state tax receipts and provides funds to local governments that host a project in their community, and the funds may be used within their annual operating income.¹¹

Joint Development Agreements (JDAs)

Renewable energy companies can also coordinate with local governments to create joint development agreements (JDAs) that clearly state the commitments agreed to by both parties. JDAs include commitments to receive local construction permits, processes for reviewing and resolving community comments, and more.

Collaboration with Local School Districts

These companies also frequently make extra efforts to partner with local school districts in the project area to make voluntary payments to the schools, which help them achieve their educational goals.



SOLAR POWER IN WISCONSIN

Solar power has become a low-cost source of electricity generation in Wisconsin, providing **new jobs, new businesses, and new economic development** in the state. In communities across the state, locals benefit from powering the economy with solar energy.



Across Wisconsin, utilities, corporations, and the general public **increasingly want electricity produced from clean, renewable energy**, including solar. Some of the United States' largest corporations have invested in projects in Wisconsin.

Solar is also a new cash crop for farmers. Solar power only takes up a small amount of land and **provides a new source of income for landowners and rural communities**.

Powering Wisconsin understands the importance of a diversified energy grid, and supports a robust solar market as a bright light in our future's renewable energy portfolio.

Current Solar Crop Values in Wisconsin

*Wisconsin has 1,291 MW of solar - enough to power 212,971 homes.*¹²

- In 2021, Wisconsin solar projects generated over 93,000 MWh of electricity.¹³
- At a value of \$58.08 per MWh, Wisconsin's existing solar footprint has an annual production value of nearly \$5.5 million.¹⁴



SOLAR POWER & AGRICULTURE

Renewables and Prime Farmland

Wisconsin is home to about 14.3 million acres of farmland, about 6.2 million acres of which are considered “prime.”¹⁵

- Wind and solar are compatible and profitable ways farmers can grow their business as the stewards of their own land.
- Limiting use of prime farmland is unnecessary, and doing so infringes upon personal property rights. All possible sites should be evaluated to best serve the community, the environment and our clean energy needs.

prime-farm-land

NOUN

Land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses.

For Perspective...

There are 4,173 MW of solar under construction and in advanced development across Wisconsin, requiring approximately 30,000 acres of land. If every solar farm were sited on prime farmland, only **0.5% of Wisconsin's prime farmland** would be used.¹⁶

Property Rights

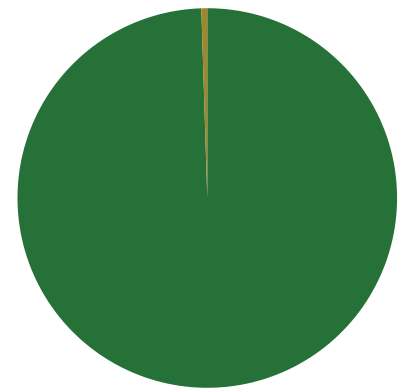
A landowner has the right to make decisions about how their land is used.

Renewables:

- Help diversify income portfolios.
- Are harvested all year long.
- Are drought-proof, high-yield land outputs that can produce for decades at a time without expensive inputs like fertilizers, pesticides, and irrigation.

Wisconsin Prime Farmland¹⁷

■ Prime Farmland
■ Land used for solar in the pipeline



SOLAR POWER & AGRICULTURE

Solar Land Use

Land used for solar remains versatile, coexisting with a variety of conservation efforts.

- An average of between 7 and 10 acres of land are required to produce one MW of electricity from solar energy.¹⁸
- Some utility-scale solar projects pair beehives with pollinator-friendly native plants and flowers in and around the project area.
- Pollinator-friendly solar can recharge groundwater and reduce soil erosion, at the same time increasing yield of pollinator-dependent crops, such as soybeans.¹⁹

Wisconsin farmers, ranchers and landowners receive \$2.7 million in annual land-lease payments from solar energy.²⁰



WIND POWER IN WISCONSIN

The most cost-efficient source of renewable energy, wind power, moves the Midwest towards a diverse energy future. Drought resistant and reliable, wind leads the way, while generating revenue for communities and landowners.

Wind is the largest renewable energy source on the grid, and **more cost-effective than current coal plants** and competitive with existing natural gas.

Compatibility with Wisconsin's Heritage

Wisconsin law already requires wind projects to “minimize the conversion of land from agricultural use.”²¹ In fact, farming can take place right up to the base of a wind turbine. Wind energy production **provides a stable income source for farmers** that is drought resistant and flood proof.



Protections for Neighbors

Setbacks are important provisions that ensure wind turbines aren't built too close to neighboring properties. Wisconsin law already outlines setbacks for occupied community buildings, participating residences, nonparticipating residences, nonparticipating property lines, and public road right-of-ways.²²

Understanding that Wisconsin's rural way of life should remain undisturbed by new development, Wisconsin law already sets limitations and requirements for wind projects to reduce the sound and shadow flicker produced by rotating wind turbines. Wisconsin law sets different limits for daytime and nighttime noise levels in addition to setback requirements.²³ If any issues occur causing excessive noise, developers are required to promptly address the issue to permanently eliminate the noise.²⁴

Wind projects are also required to minimize shadow flicker at a residence or occupied community building to a reasonable level.²⁵ In fact, Wisconsin limits shadow flicker in nonparticipating residences and community buildings to just 30 hours per year.²⁶ If shadow flicker exceeds 20 hours per year, developers are required to provide reasonable shadow flicker mitigation at their expense.²⁷



ENERGY STORAGE IN WISCONSIN

Strong storage infrastructure can **bring down energy costs by increasing grid efficiency and improving reliability and flexibility**. The sun doesn't shine and the wind doesn't move 24 hours a day. But, the sun is always shining and the wind is always moving – somewhere.



Low-cost renewable energy production ebbs and flows, but a diverse electric grid coupled with investments in energy storage ensures reliability and resilience for generations to come.

Powering Wisconsin supports competitive and reliable energy storage systems across the Midwest. Our advocacy is based on the vast range of benefits energy storage provides. It can integrate resources, reduce negative environmental impacts, save customers money, and increase the reliability and resilience of the grid. Battery storage is economic today and ready to address many of the challenges our grid faces – now and into the future.



RENEWABLE ENERGY PROJECT APPROVAL PROCESS

The Public Service Commission of Wisconsin (PSC) has siting authority for renewable energy systems with a capacity of 100 MW or more.²⁸ For this process, the PSC utilizes the Certificate of Public Convenience & Necessity (CPCN) process, which notifies local stakeholders and provides opportunities for public feedback and input on the proposed projects.²⁹

Environmental Assessment

Before every renewable energy project is approved, the PSC and Wisconsin Department of Natural Resources work to ensure environmental protection in a project area by conducting an environmental assessment that evaluates a project's impact on waterbodies, wetlands, and natural resources.³⁰

Special Requirements for Wind Energy Projects

Wisconsin has extensive regulations in place to prevent noise pollution, shadow flicker, signal interference, and stray voltage.³¹ Local governments may also establish sound and shadow flicker standards to the levels specified by the PSC.³²



CERTIFICATE OF PUBLIC CONVENIENCE & NECESSITY PROCESS

CPCN Review moves according to the following process:³³

1

Application filed with Public Service Commission (PSC).

2

PSC sends letters to nearby property owners, local governments, media, and agencies.

3

PSC holds a project scoping meeting.

4

PSC analyzes applications for need and potential impacts.

5

Depending on the type and size of the facility, PSC prepares an Environmental Assessment (EA).

6

Draft EA is completed by PSC staff.

7

Public can request a copy of the EA from the PSC, review at a local library or obtain a copy on PSC website.

8

45 day waiting period before public and applicant may comment, PSC may hold a comment meeting.

9

Final EA prepared considering comments and concerns from public.

10

PSC reviews the staff analysis of the project, testimony, and other items entered into the record.

11

PSC holds public hearings and technical hearings.

12

PSC approves, denies, or modifies a project.



PROJECT SPOTLIGHT

Project Spotlight is an initiative from Powering Wisconsin that highlights the benefits of utility-scale solar and wind power developments in Wisconsin by showcasing the stories shared by local leaders, community members, and more. *Click the links below or visit PoweringWisconsin.org to see more.*

WOOD COUNTY SOLAR SPOTLIGHT #1



WOOD COUNTY SOLAR SPOTLIGHT #2



A LANDOWNER'S PERSPECTIVE

Lynn Wingers: Let solar energy shine for Wisconsin's farmers

July 15, 2023 | Wisconsin State Journal Opinion Column

Our great state of Wisconsin is made up of hardworking farmers and landowners who commit themselves to cultivating the land that helps feed, fuel and supply our communities.

Farming is in my blood. It's my way of life. I am proud to own a farm in Columbia County where my main crops are corn and alfalfa. But as the profession of farming and agricultural stewardship evolves in the 21st century, we must look at renewable alternatives such as solar energy to help move our small towns forward. We can do that while respecting our rural way of life.

Wisconsin is home to about 14.3 million acres of farmland, including 6.2 million acres of "prime farmland" – land that has the best physical and environmental characteristics for producing food, feed and fuel. Despite some concern that solar developments would take this "prime farmland" offline or impact the food supply, that is not the case. Significant land is being farmed, and that will remain true. Even if every solar farm were sited on "prime farmland" in Wisconsin, only 0.25% of it would be used, according to the Clean Grid Alliance.

Renewable energy projects are teaming up with family farms. Responsible solar developments, such as the Langdon Mills solar farm proposed in my backyard, provide opportunity and allow landowners to determine what is best for them and their families. Limiting the use of this "prime farmland" isn't justified and would infringe on our private property rights. Solar is a compatible and profitable way farmers can maintain and grow our businesses, especially during tough times, and be stewards of our own land. Projects such as this help diversify our income portfolios and are a generational opportunity for landowners and farmers like me to lease our land and provide additional revenue to support our families – no matter what the year's crop may bring.



A LANDOWNER'S PERSPECTIVE

Times have been good in recent years, but that's not always the case. Revenue from solar can help during tough times and is a way to take the peaks and valleys out of farming.

Solar energy projects create jobs, drive innovation and strengthen Wisconsin's economy. They are a key player in moving our state toward a renewable energy future. No matter what unpredictable weather Mother Nature may throw at us, solar is a reliable resource. You could produce 50% of the state's electricity using solar by occupying less than 1% of Wisconsin's farmland. Clean energy jobs now outnumber fossil fuel jobs in the United States with more of those clean jobs being created right here in the Midwest.

Solar brings benefits to the land, too. Temporarily using the land for energy production helps rejuvenate the soil for future farming use. At the end of the project's lifespan, we can continue to cultivate the land that we love.

Each farmer or landowner has the right to decide what is best for their family and their land, and renewable energy projects such as solar can provide an opportunity to do just that. The future is renewable, and Wisconsin needs to keep pace with the rest of the country to help future generations succeed and thrive. Doing so can help grow our state's rural communities and address the challenges we face while preserving the rural identity that makes us unique.

Wingers is a farmer in the towns of Courtland and Springvale in Columbia County and a participating landowner in the proposed Langdon Mills solar farm.



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