



MIDWESTERN SOLAR INITIATIVE

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American Farmland Trust
SAVING THE LAND THAT SUSTAINS US

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In the last year there has been a noticeable increase in the development of commercial and utility scale solar in the Midwest. The rapid expansion creates opportunities for farmers and landowners, but also poses threats to farmland. Iowa must find a way to produce more renewable energy while protecting farmland and serving rural communities. To better understand farmer engagement

with solar development, AFT conducted a survey and in-person interviews with landowners and operators throughout the Midwest. In these conversations, participants described various benefits and drawbacks of solar energy deployment. This summary identifies the most important issues that participants raised, alongside AFT's research to inform Iowa's renewable energy strategy.

CURRENT PICTURE

Iowa defines “alternate energy” as solar, wind turbine, small hydro, and more. The Department of Commerce is required to set rates for alternate energy at a level that stimulates development of these projects. Electric utilities must allow customers to voluntarily contribute to development of alternate energy through a power purchase program. This means the state guarantees a competitive market for alternate energy, so long as projects can identify a customer base. At the state level, Iowa's policy is to encourage the development of renewable electricity to meet local electric needs. All Iowa governmental entities are required to consider planning, zoning, development, and resource management plans to promote clean and renewable energy use and increased energy efficiency.



BENEFITS

Income for Farmers and Landowners

In Iowa there are unique situations where a landowner and a solar developer work together on a renewable facility. The developer typically leases the land from the owner at a rate average of between \$800-\$1,200 per acre for a term of between 20-30 years. Grazing of animals or organic crops can be utilized as additional revenue to the landowner.

Iowa requires each utility to offer net metering to alternate energy producers. Net metering is the process of being tied to the grid, with excess power produced by the renewable facility credited to the owner's utility account, or in some situations paid out at a certain rate.

Tax incentives

The Renewable Energy Tax Credit provides a tax credit based on the volume of energy produced or purchased per type. Producers and purchasers may receive credit of 1.5¢ per kWh of electricity, as well as \$4.50 per million BTUs produced by gas for heating or electric generation. Producers or purchasers must apply for this credit to the Utilities Board within the Department of Commerce.

Easements

Iowa authorizes city or county boards to designate a solar access regulatory board to receive and act upon applications for solar access easements. Such easements must be recorded like other easements that run with the land. City and county boards are further authorized to create ordinances that prohibit deeds in new subdivisions from covenant restrictions on solar access.

DRAWBACKS

Loss of open space and farmland

The greatest and most frequently mentioned concern for participants is the impact of solar installations on farmland and open space: “Quality farmland is a finite resource. Taking this land out of production is in the worst interest for future generations and will remove less carbon from the atmosphere than if it was left in farmland. Solar panels should primarily be located on rooftops and on poor-quality, unproductive land.”

Difficulty accessing land

53% of respondents indicated that solar development impacted their ability to rent land currently (losing rented land because of solar development) or in the future (development making land scarcer and/or more expensive). “As the successor to this farm, solar projects in my county very negatively affect my future farming career by permanently removing land from agriculture, which in turn creates higher rental rates and inflated land sale prices.”

Decommissioning

Another major concern revolved around “decommissioning,” or removing solar arrays once their life span has ended. Participants were not convinced

that land under panels can be returned to farming after an array is deconstructed.

They also held concerns about the recycling of panel materials, wanting assurance that environmental harm would be minimized during decommissioning and in the event of panels damaged by weather incidents.

Protecting rural communities

Participants were concerned that rural communities would be exploited by solar energy development. “Big out-of-state energy conglomerates proposing new energy development projects never ends up well for the communities slated for the project. It’s always an extractive-based model.”



VISION

Participants indicated they'd be willing to lease ground for solar panels on their land that will generate electricity for off-farm use if the conditions addressed their concerns and provided added benefits for their operation and community.

Prioritize solar siting on rooftops, brownfields, and marginal lands instead of prime farmland

Locations other than productive farmland should be prioritized for solar siting—such as marginal land, unproductive land, rooftops, and parking lots.

Require farmland protection strategies

Participants said their concerns around productive farmland loss could be alleviated if solar developers were required to permanently protect other farmland in the community, and/or pay a mitigation fee per-acre based on the quality of the farmland impacted.

Advance agrivoltaics

When solar is sited on farmland, participants supported “agrivoltaics.” In these systems, panels are raised higher off the ground and spaced wider apart to allow primary agricultural activities (such as animal grazing and crop/vegetable production) to continue alongside energy production on that farmland. Agrivoltaics can provide consistent and diversified income for farmers, shade and water retention for continued agricultural production, and the opportunity to conserve farmland for carbon sequestration and the next generation of producers.

Require best practices for construction and decommissioning

The construction and removal of solar arrays should minimize environmental and agricultural harm and allow for production on the land after the project.

Embrace an equitable, ethical, and inclusive process for solar development

1. Communities where solar arrays are sited must have input in the development process.
2. There should be a special a focus on promoting equity for communities that are primarily BI-POC through the ownership of community solar projects
3. Small-scale farms should have equal opportunity at beneficial solar contracts at scales that work for their land and operation.

Set specific state targets

Iowa has numerous provisions that declare the state's policy to promote renewable energy by ensuring rates for renewables that encourage development of similar projects. However, it has not designated hard targets for renewable energy development. Hard targets will create a demand for RECs from public electric utility providers, who in turn will pay a premium to distributed renewable energy generators.

How threatened is your state's agricultural land? What is your state doing to protect it? What can each state learn from other states? A series of webinars hosted by the National Agricultural Land Network address these questions and more.

WATCH THE WEBINARS:

[**farmland.org/farms-under-threat-state-based-webinars**](https://farmland.org/farms-under-threat-state-based-webinars)