CLEAN GRID ALLIANCE

FACT SHEET

Illinois Solar and Agriculture

Solar and Prime Farmland

Illinois is home to about 27 million acres of farmland, about 19.7 million acres of which are considered "prime."[1]

- 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 private property rights. All possible sites should be evaluated to best serve the community, the environment and our clean energy needs.

prime·farm·land

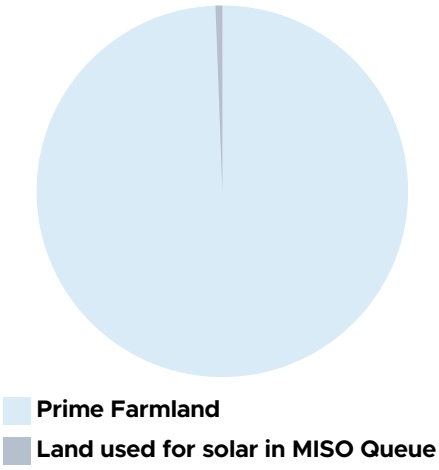
NOUN

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...

Illinois has about 14,350 MW of solar in the MISO Queue[2], requiring approximately 120,000 acres[3] of land. If all of this solar were to be sited exclusively on prime farmland, it would only use 0.6% of the land considered "prime."

Illinois Prime Farmland [1]



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 megawatt (MW) of electricity from solar energy.[3]
- Some community garden and 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.[4]

Agrivoltaics: A Value-Added Farmer Friendly Solution

Combining traditional farming and solar technology is called agrivoltaics.[5]

Agrivoltaics have a wide range of benefits for farmers, both immediate and long-term. Altogether, conservation and vegetation plans amidst renewables lead to healthier soil, improved water storage and filtration, sequestration of carbon, erosion reduction, habitat preservation and lower local energy costs.[6]

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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.

American Clean Power Estimates

IL Farmers, Ranchers, & Landowners receive

$57.6 million

in annual land-lease payments from clean energy.

Crop	Production Value per 8,000 acres	Harvested Acreage Actual
Solar	$29,801,545	8,000*
Sweet Corn	$22,144,000	6,300
Corn	$11,128,000	10,600,000
Pumpkins	$10,195,200	17,600
Soybeans	$7,207,200	10,750,000
Wheat	$5,346,720	560,000
Beans	$4,566,720	11,100
Hay	$3,755,520	495,000
Oats	$3,127,440	10,000

***Approximate**
Note: Crop values calculated using data from USDA NASS

Current Solar Crop Values in Illinois

Illinois has 1,000 MW of solar,[7] occupying approximately 8,000 acres of land.

- In 2021, IL solar projects generated 513,112 MWh of electricity.[8]
- At a value of $58.08 per MWh,[9] Illinois' existing solar footprint has an annual production value of nearly $30,000,000, placing it among the most valuable crops in the state.

Our Calculations

SOLAR

MWh * Avg price of electricity = Production Value

CROPS

Yield per acre * 10,000 = Yield per 10,000 acres

Yield per 10,000 acres * Price per unit = Production Value

Sources

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9. Calculated average MISO wholesale price of electricity based on EIA 2021 data.