

Meade County Solar



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About Meade County Solar



Meade County Solar is a proposed:

- 40 megawatt (40MW) solar farm
- Located on 370 acres spread across two sites west of Flaherty
- Selling 100% of its output to Big Rivers Electric Corporation
- Under development by Community Energy



About Community Energy



- In business for 21 years
- A leader in the development of renewable energy projects (especially in new markets)
- Headquarters in Radnor, PA
 - Additional offices in Colorado and North Carolina
- **Successful, experienced, and trusted**



Why Meade County?



Last year, Big Rivers Electric Corporation conducted a competitive bid process, seeking to buy solar power under a long-term fixed-price contract.

Community Energy's proposal for a solar farm in Meade County was one of the bids selected.

The result will be low-cost locally-produced solar power.



What is a ‘Solar Farm’?

A ‘**solar farm**’ is essentially a power plant that converts sunlight to electricity.

The basic building block of a solar farm is a solar panel.

Solar panels are rectangular, about 3 ft wide and 5 ft tall. They’re black or dark blue, with glass on top.

A solar farm is just a whole lot of solar panels, bolted to a racking system, and placed in a field.



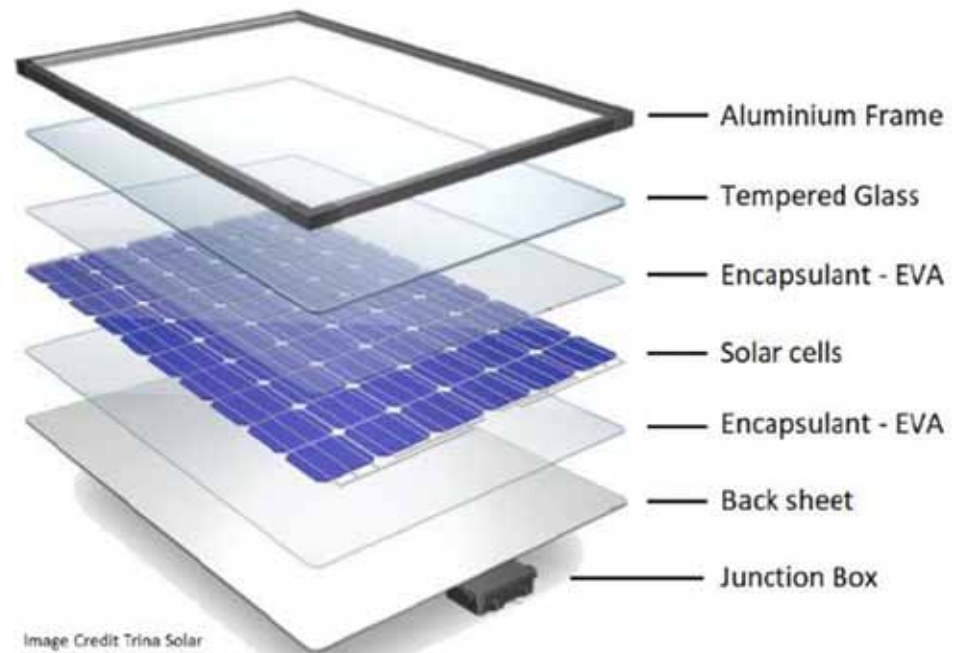
Solar Panels



Solar panels are made of simple materials, including:

- Glass (+/- 85%)
- Aluminum (+/- 8%)
- Silicon (+/- 6%)
- Wiring (+/- 1%)
 - Wiring is typically made of copper, silver, and zinc

The proposed solar farm will use 104,000 solar panels.



Racking

The proposed solar farm will use a **'Single-Axis Tracking System'** – a rotating racking system that will follow the sun from east to west.

- First, a post is driven into the ground
- Then, the racking system is bolted to the posts
- Then, the solar panels are attached to the racks



Inverters



Solar panels produce 'DC' power (the same as in a car battery).

An 'Inverter' changes the power from 'DC' power to 'AC' power (the same as you use in your home).

Inverter stations will be located throughout the solar farm.



Transformers

Solar panels produce low-voltage electricity.

Transformers are used to increase the voltage to a usable level.

“Step-up Transformers” within the solar farm increase the voltage to a level similar to the typical voltage in the power lines that run along roads.

A “Main Transformer” at the project substation increases the voltage again, to the level in the transmission line.



Project Substation

To connect the solar farm to Big Rivers' transmission line, a substation will be built on the project site.

The substation will be a “low profile” design, surrounded by a security fence.

Underground power lines will be used to connect the solar arrays to the project substation, and to connect the project substation to Big Rivers' transmission line.



Security Fence



The solar farm will be built in two sections. Each section of the solar farm will be surrounded by a seven-foot tall security fence.

Project Location

The project will be located in southern Meade County, approximately 4 miles west of Flaherty.



Project Site

The project site is comprised of two sections: one section off Stith Valley Road, and one section off Big Spring Road.

Most of the project site is currently open land used for row-cropping.



Project Layout



The solar panels will be set back from public roads and neighboring residences by at least 500 feet.

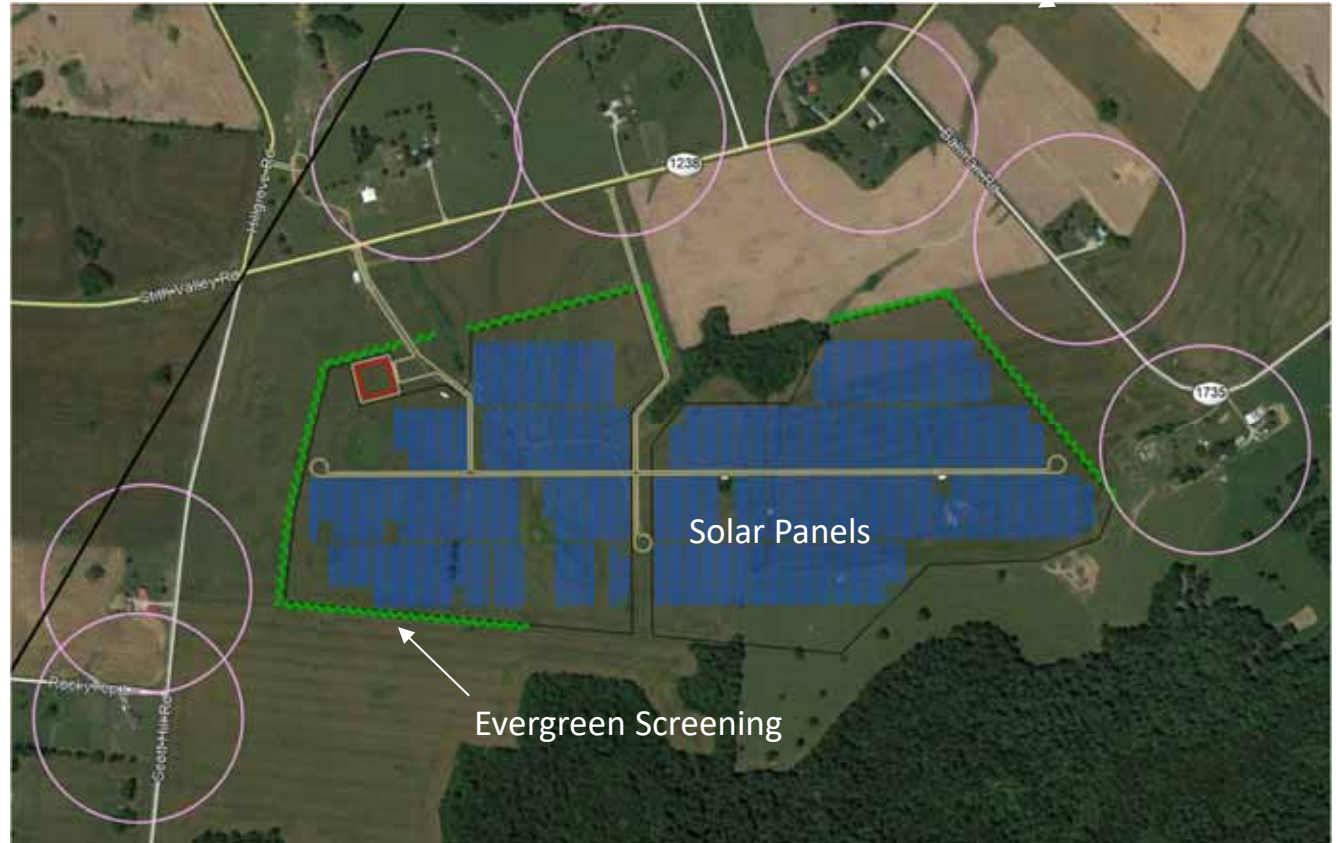


Project Layout – Stith Valley Section



This close-up of the Stith Valley section of the solar farm illustrates the setbacks from neighboring houses. The pink circles have a radius of 500 feet.

Where existing natural vegetation doesn't exist between the solar farm and neighboring houses, a double offset row of evergreens will be planted.

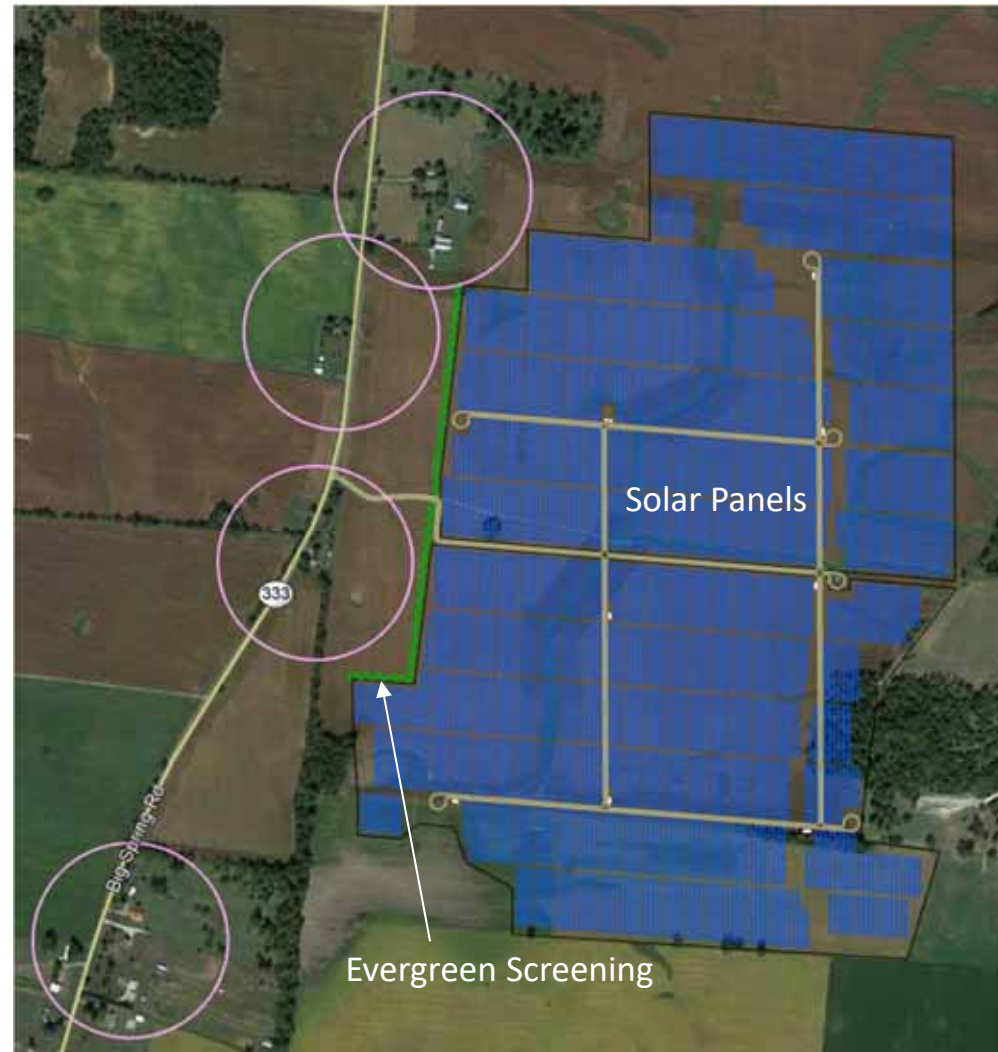


Project Layout – Big Spring Section



This close-up of the Big Spring section of the solar farm illustrates the setbacks from neighboring houses. The pink circles have a radius of 500 feet.

Where existing natural vegetation doesn't exist between the solar farm and neighboring houses, a double offset row of evergreens will be planted.



Interconnection Studies

The solar farm will connect to a Big Rivers transmission line which is part of a regional transmission network managed by the 'Midcontinent Independent System Operator' (MISO).

MISO will study the proposed facility, to determine whether the existing transmission lines in the area can absorb this additional power, or if they need to be upgraded.

Any required upgrades will be paid for by the project.



Environmental Studies



Multiple environmental studies have already been conducted:

- Wetlands and streams eligible for protection have been identified. Any required setbacks or buffers will be observed.
- Cultural resources eligible for protection have been identified. Any required setbacks or buffers will be observed.
- Threatened and endangered wildlife habitat has been identified (bats). Any required avoidance will be observed.



Impact Study

A 'Property Value Impact Study' has been conducted to determine whether the proposed solar farm will likely have a negative impact on local property values.

The most common areas for impact on adjoining property values are, in order of importance:

1. Hazardous materials
2. Odor
3. Noise
4. Traffic
5. Stigma
6. Appearance

- The Study reported no hazardous materials or odors associated with solar farms.
- The Study reported no instances of audible sounds at the periphery of the solar farms it inspected.
- The Study estimated that the anticipated 2-3 fulltime workers at the solar farm would not significantly impact traffic.
- The Study reported no negative stigma against solar farms as a neighboring use.
- Based on the enhanced setbacks and buffers from neighboring residences, the Study anticipated no negative visual impact from the solar farm.
- The Study concluded that the proposed solar farm would not likely have negative impact on local property values.

Acoustical Analysis



An 'Acoustical Analysis' has been conducted to determine whether the proposed solar farm will likely increase noise levels in the area.

The study concluded that the enhanced setback distances between the solar farm and neighboring residences are anticipated to diminish sounds from the solar farm to a level below 40 decibels – lower than the existing daytime noise level in the area.

Table 1. Sound Levels of Common Activities/Situations.

Activity/Event	dBA
Lowest audible sound to person with average hearing	0
Quiet rural, nighttime	25
Crickets, distant frogs	30
Birds, distant dog bark	40
Quiet urban, nighttime	45
Large business office	60
Normal speech at 3 feet	60-70
Noisy urban area, daytime	75
Food blender at 3 feet	85
Gas lawn mower at 3 feet	100
Jet flyover at 1,000 feet	110

County Permitting



‘Meade County Solar’ will adhere to the Solar Ordinance adopted by Meade County.

Key provisions of the Solar Ordinance include:

- › All solar panels, transformers, inverters and substations shall be at least twenty-five (25) feet from the perimeter property lines of the project area and at least one hundred (100) feet from any residential structure.
- › The solar farm shall be screened with a seven (7) foot tall fence and, to the extent reasonably practicable, a visual buffer that provides reasonable screening to reduce the view of the solar farm from residential dwelling units on adjacent lots.



For more information, contact:

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State Permitting



Meade County Solar will be seeking a **Construction Certificate** from the Kentucky Public Service Commission

The Construction Certificate will be issued by the Kentucky State Board on Electric Generation and Transmission Siting (the "**Siting Board**").

The Siting Board review focuses on three areas:

- Environmental matters such as noise and visual impacts
- Economic impacts
- Impact of the proposed facility on Kentucky's electric transmission grid



Kentucky Public Service Commission



Commonwealth of Kentucky
**Kentucky State Board on
Electric Generation and
Transmission Siting**

Siting Board Members



The Siting Board will be composed of seven (7) members:

- **The (3) members of the Public Service Commission**
 - Chairman (Michael J. Schmitt)
 - Vice Chairman (Kent A. Chandler)
 - Commissioner (Talina R. Mathews)

- **Two (2) members of state government**
 - The Secretary of the Kentucky Cabinet for Energy and Environment (Rebecca Goodman), or her designee
 - The Secretary of the Kentucky Cabinet for Economic Development (Larry Hayes, Interim Secretary), or his designee

- **Two (2) members of local government**
 - The Chairman of the Meade County Planning Commission (Chuck Hansbrough)
 - A resident of the County (appointed by the Governor)

Siting Board Process



The Siting Board review takes approximately nine (9) months

Key steps include:

- **Public Meeting**
 - February 4, 2021
- **Application**
 - May 5, 2021
- **Evidentiary Hearing**
 - *Optional - TBD*
- **Local Hearing**
 - *Optional - TBD*
- **Decision**
 - Anticipated Q4 2021
- **Appeal**
 - If filed within 30 days of decision

For more information on the Siting Board:

<https://psc.ky.gov/Home/EGTSB>

To see Public Service Commission filings related to this project:

<https://psc.ky.gov/Case/ViewCaseFilings?caseN=2020-00390>

Case No. 2020-00390

Construction



If the Construction Certificate is approved:

- Construction will start in 2022
- Construction period will be 6-9 months
- Approximately 150 construction jobs
 - Mostly no experience required
- Hiring of local trades
 - Electric
 - Surveying
 - Earthmoving
 - Fencing
 - Landscaping



Operations and Maintenance



Typical operations and maintenance duties include:

- Preventive Maintenance
- Repair
- Mowing

Meade County Solar will require 2-3 full-time employees for operations and maintenance.



Output



Meade County Solar will produce **91 million** kilowatt-hours of electricity per year

Roughly equivalent to the electric consumption of **85% of all the households** in Meade County

100% of the solar power we produce will be delivered and sold to Big Rivers Electric Corporation.



Economic Benefits

Solar farms do more than generate clean, low-cost electricity. They also generate economic growth.

The Meade County Solar project will impact the local economy in multiple ways:

- **Construction Jobs** for local workers: 150+ jobs during the 6-9 month construction of the project
- **Construction Contracts** for local businesses: Electrical, Site Work, Landscape, etc.
- **Local Spending** during construction: Hotels, Restaurants, Shops, Entertainment, etc.
- **Long-term Tax Revenue:** The solar farm will pay substantial taxes over 30 years, without increased pressure on community services such as roads, schools, libraries, and first responders.
- **Full-Time Jobs:** 2-3 full-time operations and maintenance jobs

Summary



In a single hour, the amount of solar power that strikes the Earth is more than the entire world consumes in a year.

Meade County Solar proposes to capture some of that solar power, convert it to usable electricity, and deliver it to the local community at a competitive price.

We seek to develop a solar project that is respectful of our neighbors, and delivers multiple benefits to the greater Meade County community.

We invite your questions, comments, and feedback.



Contact Info



For more information, or to receive a printed version of this presentation:

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or call us at (866) 946-3123

Thank you