



PROJECT FACT SHEET

Solar Farm 2.0 is a 12.32 megawatt (MWdc) utility-scale array located on campus, north of Curtis Road, between First Street and Dunlap Avenue (U.S. 45), near the Village of Savoy.

The solar farm produces approximately 20,000 megawatt-hours per year (MWh/year)—tripling the university's existing on-site renewable energy generation. Solar Farm 2.0 helped the University of Illinois Urbana-Champaign make the U.S. Environmental Protection Agency's top-30 list of the largest on-site green power users in the Green Power Partnership. The university is the third-largest user of renewable power produced on campus for all higher education institutions in the country.

Renewable electricity production helps meet sustainability goals outlined in the Illinois Climate Action Plan (iCAP), campus' plan to meet the Climate Leadership Commitments, including being carbon neutral as soon as possible and building resilience to climate change in the local community. Learn more at icap.sustainability.illinois.edu.

PROJECT SPECIFICS

- A 20-year power purchase agreement with Sol Systems LLC, to design, build, operate, and maintain Solar Farm 2.0
- A 20-year land lease agreement
- Electricity produced by the farm is delivered to the campus grid
- All the renewable energy certificates and carbon credits are owned by the university

ARRAY DETAILS

System size (dc): 12,318,930 watts
Peak output: 10 MWac
Module type: bifacial monocrystalline
Module wattage: 400/395/385
Module dimensions (in): 39.1 x 77
Modules per string: 26
Total strings: 1,197

Total modules: 31,122
Racking System: north-south single axis, self-powered tracker
Inverter Specs: 1500 volts, with 98.8% efficiency and grid support
Total inverters: 4

LANDSCAPE BUFFER

The landscape buffer zone is a fence line foundation planting that positions large trees and shrubs to reduce the visual impact of the solar farm installation on nearby residential neighborhoods. Partially funded by the Student Sustainability Committee, the landscape buffer includes over 200 trees and several native plant species meant to increase pollinator and ecosystem benefits.



A landscape buffer was installed between Solar Farm 2.0 and Village of Savoy homes and businesses.



Photo by James Baltz

PROJECT TIMELINE

Request for Proposal Publication:

February 2019

Board of Trustees Approval:

September 2019

Contracts Signed:

December 2019

Start of Construction:

July 2020

Commercial Operation Date:

January 2021

University Ownership:

2041

PROJECT CONTACTS

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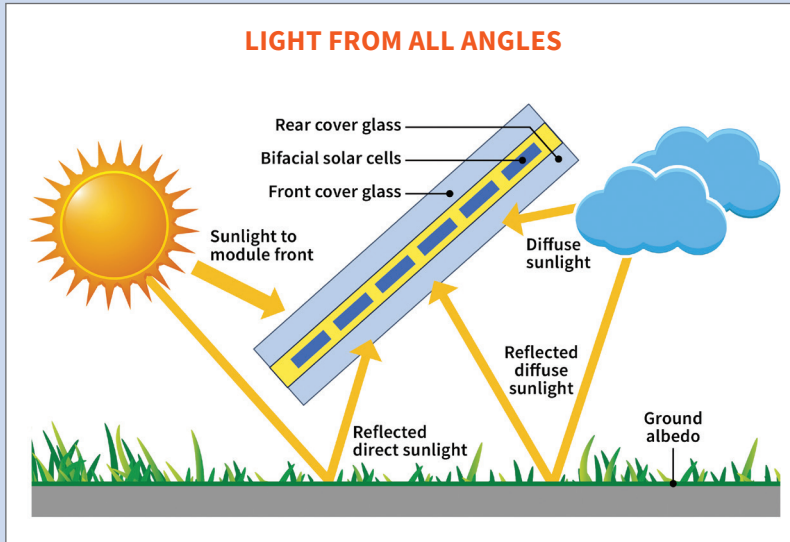
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Project location: The array is located on 54 acres immediately north of Curtis Road between First Street and the railroad tracks.



INNOVATIVE TECHNOLOGY



Bifacial Panels

The design features 31,122 bifacial solar panels that produce energy on both sides. Energy is captured on the back of the panels by collecting sunlight that is reflected off of the ground.

Single-Axis Trackers

Single-axis trackers allow panels to start the day facing east as the sun rises, and then they rotate on an axis to track the sun throughout the day as the sun sets in the west. This way, the panels will receive direct sunlight throughout the day.

ZERO WASTE CONSTRUCTION

The Waste Transfer Station worked with contractors to collect and process all the materials so everything that could be recycled was recycled. Nearly 90 percent of all the packaging and installation-related materials were recycled through this collaboration with F&S. Recyclable items included cardboard, scrap metal, wooden pallets, and other construction and demolition materials.

Frequently Asked Questions

How much did the project cost?

The total cost of the project was \$20.1M. The university saved \$300,000 in its first year compared to electricity that would have been purchased conventionally from the regional grid.

What is the lifespan for the type of panels used at the solar farm?

The panels are warranted for 25 years. Solar energy researchers on campus estimate that the panels will continue to collect energy for up to 40 years.

Who uses the power from the Solar Farm?

All of the electricity generated by Solar Farm 2.0 will be used exclusively by the Urbana campus. Approximately six percent of the campus' annual power demand will be generated by solar arrays on campus.

Are there any risks or dangers to living near a solar farm? Will the panels present any kind of inconvenience to nearby areas?

No. Solar photovoltaic panels are one of the least intrusive and cleanest ways to generate electricity. Their height is lower than the average cornstalk. The panels' dark coating maximizes light absorption and efficiency. Because light is not lost through reflection, the surrounding air temperature is not affected. Additionally, site traffic is limited to monthly tours and periodic grounds maintenance by contractors.

What measures have been taken to protect the wildlife that visit or live on the property?

In accordance with the State of Illinois Pollinator Solar Site Act, Solar Farm 2.0 is home to dozens of pollinator-friendly plants. This pollinator-friendly site serves local and migratory birds/insects, butterflies, and bees. The plants selected for Solar Farm 2.0 were 100 percent native species, benefitting the local insect population.