



### Solar Farm Frequently Asked Questions

#### **Why is the university planning a Solar Farm?**

The solar farm will increase the use of renewable sources of energy for campus electrical needs and help meet commitments set by the Illinois Climate Action Plan (iCAP). The goal is for 5% of total campus energy from renewable sources by fiscal year 2015, with 25% by fiscal year 2025.

#### **How much energy will the solar farm provide?**

The solar farm will produce an estimated 7.86 million kilowatt-hours (kWh) annually or 1.8% of the electricity for the campus based upon the fiscal year 2012 usage of 432.45 million kWh. The percentage increases to 2.1% based upon usage projections for fiscal year 2015 of 368 million kWh.

#### **Where will the solar farm be located?**

The solar farm will be located southwest of the intersection of Windsor Road and First Street. The farm will be set on 20.5 acres. A map is included as a part of the fact sheet.

#### **How was the solar farm site selected?**

The university engaged in a thorough site selection process. Preliminary calculations estimated that a 30 acre solar farm would produce 5% of the projected campus electricity demand by fiscal year 2015. Therefore, campus sought to identify 30 acres of space to meet this interim renewable energy demand. While 27.8 acres were originally identified, the available space was reduced to 20.5 acres due to an Ameren easement along the railroad tracks and a flood zone near the stormwater retention pond.

#### **When will construction be completed?**

Upon approval, the selected vendor will be issued a notice to proceed and substantial completion of the solar farm is anticipated in Fall 2013.

#### **How much will this project cost the university?**

The total cost of the project is estimated at \$15.5M over 20 years. The amount requested for this project is \$5.3M with \$1.05M requested from the Student Sustainability Committee (SSC) and \$4.25M from campus. Facilities & Services (F&S) also provided \$85K for use of the land and for permitting requirements. The remaining cost would be paid through the power purchase agreement with the vendor, dependent upon the amount of electricity generated by the solar farm.

#### **What contracts will be signed for this project?**

There will be three separate agreements: a land lease agreement, a development agreement, and a power purchase agreement.

**Land Lease Agreement:** The university is planning a land lease agreement where the contracted vendor would pay \$1 per year for a period of ten years. The university owns the land and will retain ownership throughout the duration of the project.

**Development Agreement:** The university is planning a development agreement that allows the contracted vendor to design, build, operate, and maintain a solar farm on the university-owned land. The vendor would provide delivery and installation of photovoltaic (PV) panels/collectors, renewable electricity, and the connection to the university's electrical grid.

**Power Purchase Agreement:** The university is planning to enter into a ten year power purchase agreement with the contracted vendor to purchase all renewable electricity generated on the solar farm. Under Illinois procurement laws, the financing for this public-private partnership is limited to a ten year term.



### **Are there any additional agreements involving the solar farm?**

Yes, there will be an additional warranty agreement. The project cost calculations are based upon a 20 year project life and an anticipated warranty option for the inverters on the site.

### **Who will use the power from the solar farm?**

All of the electricity generated by the solar farm will be used by the Urbana campus. The university also will own/receive any and all current/or future Renewable Energy Credits (RECs) and emissions credits associated with energy from this project.

### **What is the lifespan for type of solar PV panels to be used at the solar farm?**

Solar energy researchers on campus estimate that the solar PV panels will continue to collect energy for more than 40 years.

### **What will be the long-term energy return for solar PV panels?**

Solar PV panels exhibit normal degradation over time, so the anticipated energy generation declines each year. Yet, the solar farm would still generate 91% of its original energy output, 7.15 million kWh in year 20, and it is likely going to generate 76%, or over 6 million kWh, in year 40.

### **Are there any risks or dangers living near a solar farm?**

No. Solar PV panels are one of the least intrusive and cleanest forms of power generation available. Following construction of the solar farm, general maintenance will be performed by the contractor and there will be limited on-site traffic.

### **How tall will the solar panels be?**

Solar PV panels are typically low-profile with heights varying between 6 to 12 feet above ground. For comparison, typical corn can grow anywhere from 4 feet to 12 feet tall.

### **Will the solar PV panels produce a glare?**

No. Solar PV panels are specifically engineered to absorb light rather than reflect it because reflected light results in lost energy output. Panels include a dark, absorptive coating that enables the panels to gather as much of the available light spectrum as possible.

### **Will the solar PV panels increase the temperature around the site?**

No. Although the panels will be warm to the touch, they will not noticeably affect the temperature of the surrounding area; temperatures under the panels will be typical of the ambient temperatures in any shaded location.

### **Can I still access the pond for fishing and recreation?**

The pond will still be completely accessible to the public along the full perimeter for recreational purposes such as fishing. Additionally, the land northeast of the pond by the corner of Windsor Road and First Street will not be impacted by the solar farm.

### **What measures will be taken to protect the herons and other wildlife that visit or live on the property?**

The university completed an Ecological Compliance Assessment Tool (EcoCAT) review request through the Illinois Environmental Protection Agency, which provided recommendations on best methods to protect native and migratory species on the property, including birds and animals. The university will comply with all state and federal laws.

### **Contact Information:**

For more information, please contact the Facilities & Services Sustainability Coordinator, Ms. Morgan B. Johnston, at [mbjohnst@illinois.edu](mailto:mbjohnst@illinois.edu) or 217-333-2668.