You belong here.

It is the mission of the Urbana Park District to:

- *Improve the quality of life of its citizens through a responsive, efficient, and creative park and recreation system,*
- *Pursue excellence in a variety of programs, parks, and special facilities that contribute to the attractiveness of neighborhoods, conservation of the environment, and the overall health of the community.*

NOTICE AND AGENDA OF MEETING
URBANA PARK DISTRICT BOARD OF COMMISSIONERS
BOARD STUDY SESSION
TUESDAY, OCTOBER 3, 2023
6:30 PM
PLANNING & OPERATIONS FACILITY
1011 E. KERR AVENUE
URBANA, IL 61802

Board Study Sessions are designed for the Board to study, review and discuss specific topics. Actions are not typically taken during a Study Session, unless specifically noted on the agenda.

I. Call to Order

A. Remote Attendance

The Board may authorize, by a voice vote of the physically present board members, any Commissioner wishing to attend remotely, pursuant to the UPD Remote Attendance Policy (Ord 2017-03).

II. Accept Agenda

III. Public Comment

Any member of the public may make a brief statement at this time within the public participation rules of the Board.

IV. Discussion

A. Prairie and Weaver Park Master Plan-Updates

B. Solar Plan-Updates

V. Comments from Commissioners

VI. Adjourn

Note: This Meeting Agenda and its supporting materials are on the UPD website at http://www.urbanaparks.org/documents/index.html, choose the "Public Meetings" category and search for the meeting information you wish to download.

Urbana Park District

Solar Project Review and Recommended Options

October 3, 2023

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Why Consider Solar Now to Reduce Total Energy Supply?

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Funding was Made Available from Climate and Equitable Jobs Act (CEJA) in September 2021

- Behind the Meter Solar Installations for all account sizes
- Funding Available for an 8-10 Year Programs (Currently in Year 2)
- Will be Distributed on First Come First Serve Basis (Highly Competitive)

Utility Rebates for Solar

- Invertor Rebates ($250/kW) from Ameren
- Expected to Sunset in 2024 once Ameren reaches 5% saturation of solar. Ameren has requested assessment by the Illinois State Legislation.

Federal Tax Credits

- Tac Credit increased to 30% for the next 10 years per the Inflation Reduction Act (IRA). Non-Profit entities can tax advantage of this one-time credit under the IRA.

Accelerated Depreciation Credit for Profit Business

- 3rd party financed extended per IRA

Typically, the 3 Ways to Secure Solar:

1. **Third Party Power Purchase Agreement (PPA)**
2. **Outright Purchase the Solar Array**
3. **Third Party Loan Option**

Continued Volatility in Wholesale Market Conditions and Utility Cost increases have made Solar the best position to secure long term budget certainty against continued rising costs.

Requirements for Behind the Meter Solar Developers

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1. Solar development options for the Planning & Operations, Nature Center, Aquatic Center, and Health & Wellness Building

2. Present proposals for
   - 20-year Power Purchase Agreement
   - Cash Purchase of Solar System

3. Provide project specifications and details in proposal.

4. To make proposals apples to apples we asked the developers to confirm their proposals with a due date of August 21, 2023.

5. Proposals send out to GRNE Solar, General Energy, StraightUp Solar, Windfree Solar, Renewable Energy Revolutions and Verde Energy.

6. Received replies from:
   - Verde Energy
   - General Energy (lowest developer)

Key Assumptions

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- 30% Tax Credit
- Current LTRRO SREC Amounts Paid Over 7 Years
- $250/Kw Ameren Inverter Rebate
- Current Market Pricing
- Paying Prevailing Wage on All Projects
- Fixed 20-year Power Purchase Agreement
  - No Annual Escalator
- No Increase in Electric Prices over 20 years
- Can the Current Roofs Support New Solar Panels

Planning and Operations

System size (KW DC)		346
Module wattage		490W
# of Modules		705
Year 1 production (kWh)		387,200
Annual consumption (kWh)		188,043
Annual kWh offset		206%
Production guarantee		85%
Contract type		PPA
Aggregated PPA rate		$0.06400
Contract term (years)		20
Annual escalator		0.00%
Decommision guarantee (year 19)		yes
Annual degredation		.5% every year less
Operation & Maintenance		20 years included with PPA
Warranty		20 years included with PPA
Purchase Price		$670,353
Type of installation		Roof Mounted
Metered Connections		4

Nature Center

System size (KW DC)		41
Module wattage		490W
# of Modules		83
Year 1 production (kWh)		39,390
Annual consumption (kWh)		55,961
Annual kWh offset		70%
Production guarantee		85%
Contract type		PPA
Aggregated PPA rate		$0.06400
Contract term (years)		20
Annual escalator		0.00%
Decommision guarantee (year 19)		yes
Annual degredation		.5% every year less
Operation & Maintenance		20 years included with PPA
Warranty		20 years included with PPA
Purchase Price		$92,682
Type of installation		Roof Mounted
Metered Connections		2

Prairie Park (Estimated)

System size (KW DC)		270
Module wattage		490W
# of Modules		551
Year 1 production (kWh)		311,850
Annual consumption (kWh)		400,000*
Annual kWh offset		78%
Production guarantee		85%
Contract type		PPA
Aggregated PPA rate		$0.06400
Contract term (years)		20
Annual escalator		0.00%
Decommision guarantee (year 24)		yes
Annual degredation		.5% every year less
Operation & Maintenance		20 years included with PPA
Warranty		20 years included with PPA
Purchase Price		$523,865
Type of installation		Roof Mounted
Metered Connections		3

Urbana Indoor Aquatic Center

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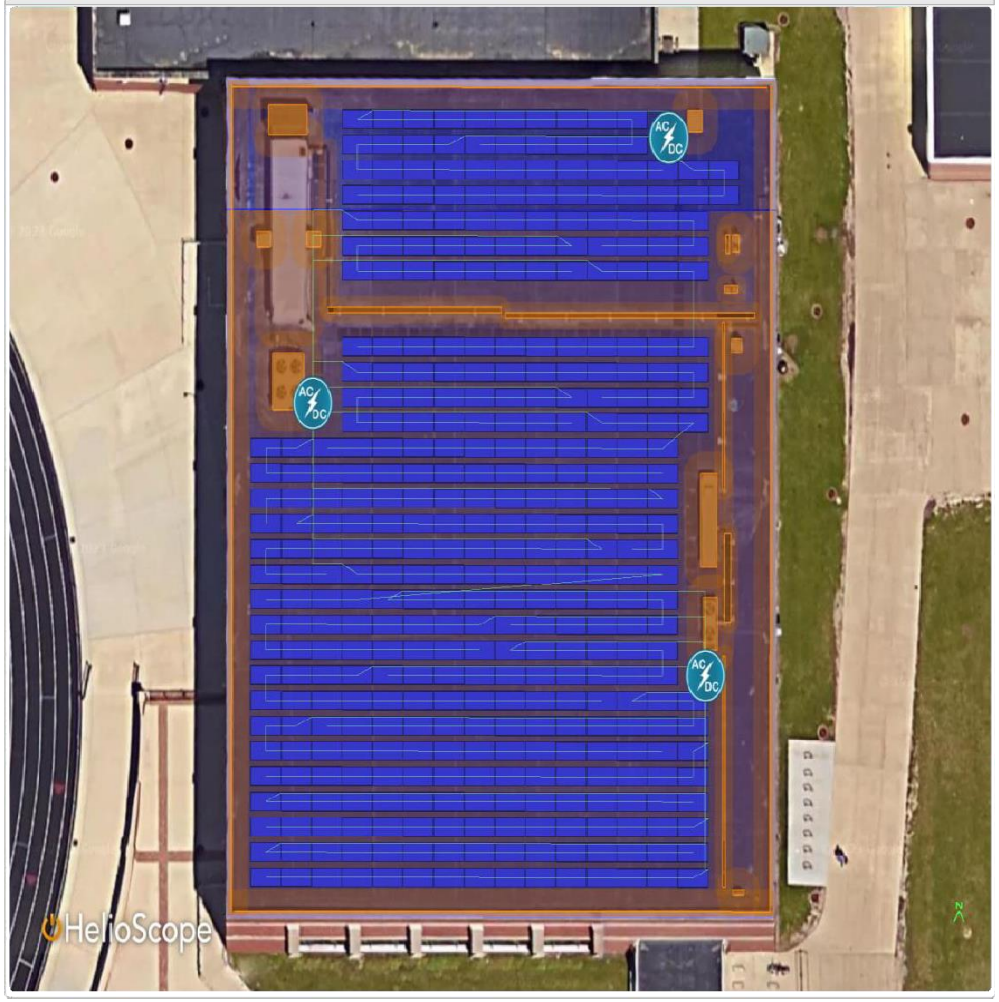

System size (KW DC)		191
Module wattage		490W
# of Modules		390
Year 1 production (kWh)		387,200
Annual consumption (kWh)		598,251
Annual kWh offset		65%
Production guarantee		85%
Contract type		PPA
Aggregated PPA rate		$0.06400
Contract term (years)		20
Annual escalator		0.00%
Decommision guarantee (year 24)		yes
Annual degredation		.5% every year less
Operation & Maintenance		20 years included with PPA
Warranty		20 years included with PPA
Purchase Price		$412,667
Type of installation		Roof Mounted
Metered Connections		3

Behind the Meter Solar Pricing Scenarios

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Scenario Options to Present	All Facilities	Nature Center and Health &Wellness	Nature Center, Health & Wellness, + Planning Building	Planning Building Only	Aquatic Center Only	Aquatic Center and Planning Building
Power Purchase Agreement Rate:	$0.06400/kWh	$0.0950/kWh	$0.0850/kWh	$0.0950/kWh	$0.1050/kWh	$0.0880/kWh
Contract Term:	20 years	20 years	20 years	20 years	20 years	20 years
Annual Savings vs. Current Supply Rate:	$30,559	($866)	$4,394	($2,102)	($5,034)	$1,097
20-year Projected Savings:	$611,174	($17,711)	$87,873	($42,050)	($100,672)	$21,942
Solar Provider:	General Energy	General Energy	General Energy	General Energy	General Energy	General Energy
Energize Date:	Late 2024	Late 2024	Late 2024	Late 2024	Late 2024	Late 2024

Estimated Annual Savings with a Power Purchase Agreement

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Pricing Scenario - All Accounts Included							
Power Purchase Agreement (PPA) with General Energy - Planning and Building							
Ameren Grid (kWh)	387,200		Solar Production (kWh)	387,200			
Total Invoiced Rate (kWh)	$ 0.08957		Solar PPA (kWh)	$ 0.0640			
					Solar Savings %		28.5%
Solar Cost/Year	$ 34,682		Solar Cost/Year	$ 24,781	Solar Savings/year	$	9,901
25 Year Cost (no increases)	$ 867,038			$ 619,520	**20-year Savings**	**$**	**198,014**
Power Purchase Agreement (PPA) with General Energy - Nature Center							
Ameren Grid (kWh)	39,390		Solar Production (kWh)	39,390			
Total Invoiced Rate (kWh)	$ 0.115		Solar PPA (kWh)	$ 0.0640			
					Solar Savings %		44.6%
Solar Cost/Year	$ 4,548		Solar Cost/Year	$ 2,521	Solar Savings/year	$	2,027
25 Year Cost (no increases)	$ 113,709			$ 63,024	**20-year Savings**	**$**	**40,548**
Power Purchase Agreement (PPA) with General Energy - Aquatics Center							
Ameren Grid (kWh)	387,200		Solar Production (kWh)	387,200			
Total Invoiced Rate (kWh)	$ 0.092		Solar PPA (kWh)	$ 0.0640			
					Solar Savings %		30.1%
Solar Cost/Year	$ 35,444		Solar Cost/Year	$ 24,781	Solar Savings/year	$	10,663
25 Year Cost (no increases)	$ 886,107			$ 619,520	**20-year Savings**	**$**	**213,270**
Power Purchase Agreement (PPA) with General Energy - Health and Wellness							
Ameren Grid (kWh)	311,580		Solar Production (kWh)	311,580			
Total Invoiced Rate (kWh)	$ 0.090		Solar PPA (kWh)	$ 0.0640			
					Solar Savings %		28.5%
Solar Cost/Year	$ 27,908		Solar Cost/Year	$ 19,941	Solar Savings/year	$	7,967
25 Year Cost (no increases)	$ 697,706			$ 498,528	**20-year Savings**	**$**	**159,342**
**** Health and Wellness is assuming the current contract avg. rate on the bills reviewed and is subject to change****							
					Total Projected Annual Savings	$	30,559
					Total Projected 20-year savings	**$**	**611,174**

**Invoiced Rate does not include the future price increases in Ameren delivery charges. Pricing is based on the most current invoices reviewed*

Estimated Annual Savings with a Power Purchase Agreement

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Pricing Scenario - Nature Center and Health & Wellness							
Power Purchase Agreement (PPA) with General Energy - Nature Center							
Ameren Grid (kWh)		39,390	Solar Production (kWh)		39,390		
Total Invoiced Rate (kWh)	$	0.115	Solar PPA (kWh)	$	0.0950		
						Solar Savings %	17.7%
Solar Cost/Year	$	4,548	Solar Cost/Year	$	3,742	Solar Savings/year	$ 806
25 Year Cost (no increases)	$	113,709		$	93,551	**20-year Savings**	**$ 16,126**
Power Purchase Agreement (PPA) with General Energy - Health and Wellness							
Ameren Grid (kWh)		311,580	Solar Production (kWh)		311,580		
Total Invoiced Rate (kWh)	$	0.090	Solar PPA (kWh)	$	0.0950		
						Solar Savings %	-6.1%
Solar Cost/Year	$	27,908	Solar Cost/Year	$	29,600	Solar Savings/year	$ (1,692)
25 Year Cost (no increases)	$	697,706		$	740,003	**20-year Savings**	**$ (33,838)**
**** Health and Wellness is assuming the current contract avg. rate on the bills reviewed and is subject to change****							
						Total Projected Annual Savings	$ (886)
						Total Projected 20-year savings	**$ (17,711)**

**Invoiced Rate does not include the future price increases in Ameren delivery charges.*

Estimated Annual Savings with a Power Purchase Agreement

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Pricing Scenario - Planning, Nature Center, Health & Wellness							
Power Purchase Agreement (PPA) with General Energy - Planning and Building							
Ameren Grid (kWh)	387,200	Solar Production (kWh)	387,200				
Total Invoiced Rate (kWh)	$ 0.08957	Solar PPA (kWh)	$ 0.0850				
				Solar Savings %		5.1%	
Solar Cost/Year	$ 34,682	Solar Cost/Year	$ 32,912	Solar Savings/year	$	1,770	
25 Year Cost (no increases)	$ 867,038		$ 822,800	**20-year Savings**	**$**	**35,390**	
Power Purchase Agreement (PPA) with General Energy - Nature Center							
Ameren Grid (kWh)	39,390	Solar Production (kWh)	39,390				
Total Invoiced Rate (kWh)	$ 0.115	Solar PPA (kWh)	$ 0.0850				
				Solar Savings %		26.4%	
Solar Cost/Year	$ 4,548	Solar Cost/Year	$ 3,348	Solar Savings/year	$	1,200	
25 Year Cost (no increases)	$ 113,709		$ 83,704	**20-year Savings**	**$**	**24,004**	
Power Purchase Agreement (PPA) with General Energy - Health and Wellness							
Ameren Grid (kWh)	311,580	Solar Production (kWh)	311,580				
Total Invoiced Rate (kWh)	$ 0.090	Solar PPA (kWh)	$ 0.0850				
				Solar Savings %		5.1%	
Solar Cost/Year	$ 27,908	Solar Cost/Year	$ 26,484	Solar Savings/year	$	1,424	
25 Year Cost (no increases)	$ 697,706		$ 662,108	**20-year Savings**	**$**	**28,478**	
**** Health and Wellness is assuming the current contract avg. rate on the bills reviewed and is subject to change****							
				Total Projected Annual Savings	$	4,394	
				Total Projected 20-year savings	**$**	**87,873**	

**Invoiced Rate does not include the future price increases in Ameren delivery charges.*

Estimated Annual Savings with a Power Purchase Agreement

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Power Purchase Agreement (PPA) with General Energy - **Planning and Building Only**					
Ameren Grid (kWh)	387,200	Solar Production (kWh)	387,200		
Total Invoiced Rate (kWh)	$ 0.08957	Solar PPA (kWh)	$ 0.0950		
				Solar Savings %	-6.1%
Solar Cost/Year	$ 34,682	Solar Cost/Year	$ 36,784	Solar Savings/year	$ (2,102)
25 Year Cost (no increases)	$ 867,038		$ 919,600	**20-year Savings**	**$ (42,050)**

Power Purchase Agreement (PPA) with General Energy - **Aquatic Only**					
Ameren Grid (kWh)	387,200	Solar Production (kWh)	387,200		
Total Invoiced Rate (kWh)	$ 0.092	Solar PPA (kWh)	$ 0.1050		
				Solar Savings %	-14.1%
Solar Cost/Year	$ 35,622	Solar Cost/Year	$ 40,656	Solar Savings/year	$ (5,034)
25 Year Cost (no increases)	$ 890,560		$ 1,016,400	**20-year Savings**	**$ (100,672)**

Power Purchase Agreement (PPA) with General Energy - **Aquatic + Building and Planning**					
Ameren Grid (kWh)	698,780	Solar Production (kWh)	698,780		
Total Invoiced Rate (kWh)	$ 0.090	Solar PPA (kWh)	$ 0.0880		
				Solar Savings %	1.8%
Solar Cost/Year	$ 62,590	Solar Cost/Year	$ 61,493	Solar Savings/year	$ 1,097
25 Year Cost (no increases)	$ 1,564,743		$ 1,537,316	**20-year Savings**	**$ 21,942**

**** Health and Wellness is assuming the current contract avg. rate on the bills reviewed and is subject to change****

**Invoiced Rate does not include the future price increases in Ameren delivery charges.*

Power Purchase Agreement (PPA) vs. Ownership vs. Lease for Behind the Meter Solar

Power Purchase Agreement (PPA)	Ownership for the System	Lease Program
Federal Tax Credits/Accelerated Depreciation are used by a third-party entity who owns the system	Under Inflation Reduction Act (IRA) allows for a 30% investment tax credit and accelerated depreciation on tax liabilities.	Under Inflation Reduction Act (IRA) allows for a 30% investment tax credit and accelerated depreciation on tax liabilities.
Fixed Energy Cost for 20-years	Essentially free power from Solar Generation	Essentially free power from Solar Generation
20-year Performance Guarantee	Warranty Based on Contract	Warranty Based on Contract
Decommissioning paid by vendor	Owner would Decommissions Field	Owner would Decommissions Field
No Solar Expertise Needed	Must Hire/Contract Expertise	Must Hire/Contract Expertise

Typical Project Timeline (High Level)

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Pre-Construction Phase (13 - 14 Weeks)

- Engineering Drawings
- Submit Construction Permit Application
- Submit Interconnection Agreement Application
- Submit Solar Renewable Energy Credit (SREC) Application
- Bill of Materials Procurement
- Interconnect Agreement Approval

Construction Phase (10 – 12 Weeks)

- Jobsite and Project JHA Analysis
- String Plans for Arrays
- System Installation
- Update As-Builts
- Electrical Installation
- System Commissioning

Post Construction Phase Administrative (2 – 3 weeks)

- Certificate of Completion
- Submit Final Interconnection Application
- Submit Net Meter Application
- Submit Utility Inverter Rebate Application
- Finalize SREC contract
- Project Closure
- Generate Onsite Electricity for Energy Independence

Next Steps

- Receive confirmation from Urbana Park District on proceeding with the project or projects.
- Finalize complete project scope and developer
- Contract review and finalization
- Target Construction 2024 - Energized in 2024/2025

Greenhouse Gas Emission Reduction over 20 years	**7,294 CO_2 Metric Tons**

Solar Projects Developed by Progressive

Completed Projects	Size
City of Plano	1.3 MW
Kendall County	2.0 MW
Mooseheart	2.0 MW
Fox Metro	2.0 MW
Fox Valley Park District Greenhouse	0.15 MW
Fox Valley Park District (Cole Center)	0.2 MW
Rollomatic	0.85 MW
Peace Village	0.20 MW
Progressive Energy Group	.01 MW
Kendall County Forest Preserve	0.03 MW
Rutland Township	0.03 MW
Toyoda	2.0 MW
NexAmp Community Solar	22.0 MW
US Solar Community Solar	6.0 MW

Signed Projects	Size	Signed Projects	Size
Kane County	2.0 MW	Fox Metro (Phase 2)	1.6 MW
City of Sandwich	0.25 MW	Macomb Park District	.025 MW
Woodsmoke Ranch	1.3 MW	Aurora Airport	26.6 MW
Village of Waterman	0.075 MW	Aurora Brownfield	2.8 MW
Marmion Academy	0.85 MW		
Fox Valley Park District	1.0 MW		
Aurora Turners Club	0.250 MW		
Aurora Interfaith Food	0.025 MW		
Sycamore Park District	0.40 MW		
Winfield Park District	0.100 MW		
Village of Hinckley	0.250 MW		
Hinckley Big Rock CUSD	0.450 MW		
Sandwich CUSD 430	0.850 MW		
MTH Tool	1.0 MW		
Hesed House	0.250 MW		

Energized Local Projects Progressive was the Project Developer / Consultant

Fox Valley Park District - Cole Center
Annual Production = 186,000 kWh in the 1st year
Lifetime Production = 4,189,888 million kwh's

Peace Village
Annual Production = 174,000 kWh/year
Lifetime Production = 3,910,220 million kwh's

Energized Local Projects Progressive was the Project Developer / Consultant

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Kendall County, IL
(Public Safety Building, Courthouse and Health Services
Annual Production = 3.3 million kWh/year
Lifetime Production = 82.5 million kwh's

Mooseheart Child City & School
Annual Production = 3.5 million kWh/year
Lifetime Production = 84.5 million kwh's

Energized Local Projects Progressive was the Project Developer / Consultant

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Water Treatment Facility City of Plano, Illinois
Annual Production = 1.3 million kWh/year
Lifetime Production = 32.5 million kwh's

Fox Metro Water Reclamation District
Annual Production = 3.3 million kWh/year
Lifetime Production = 82.5 million kwh's

Profit Improvement Services

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Shawn Ajazi

Vice President

Email: Shawn@savewithprogressive.com

Phone: 630-886-9800

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SOLAR – FAQ's
10/3/2023

Frequently Asked Questions

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What are the two types of solar power projects?

- **Purchase and own the solar installation** as the Park District did for the panels at the Nature Center. The Park District purchased the panels, had them installed, and is responsible for the maintenance on those panels.
- **Power Purchase Agreement** (PPA) A 3rd party pays to build a solar installation on public property. The 3rd party owns the system and is responsible for the maintenance and ongoing operability of the system. The Park District provides the space and is able to purchase the energy produced at a reduced rate.

Was the proposed project sole sourced or did multiple companies quote?

- As District's energy consultant, we did look at multiple companies for the solar project just as we do on the energy supply procurement.

What is the project savings over the 25-year term for the District?

- We are finalizing the total savings the District will receive and will update once final array placement is confirmed. We are targeting 15-30% savings per year for the District.

Is there any reason that the savings will go down every year if the District continues to use the same annual usage?

- The savings is projected off current Ameren tariff rates and metered Peak Load values. The annual solar production will decrease 0.5% each year after for 25 years. Any power that is not produced by the array, will be procured from a supplier during On-Peak and Off-Peak times.

Proposed timeline for the solar project?

- We are projecting the field to be energized in 2024.

How long will the system last?

- Expectation is that solar production will be for 35 years or more.

Frequently Asked Questions

Does the system come with live real time monitoring that shows the production of the system?

- Yes, there will be a live monitoring website that allows for the live production view of the solar production. The District can place a link on their website for owners to view at anytime.

Does solar work in the Midwest?

- Yes! Illinois can produce approximately the same amount of electricity as East Texas, and about 30% more than Germany, which produces more solar than any other country in the world.

Who handles the site maintenance?

- Under a Power Purchase Agreement (PPA), General Energy will lease the facility rooftops from the District and will be responsible for maintenance of the array. Items to include the following:

- Infrared Scan (IR) of all solar modules to identify any damage caused by lighting, hail, delamination, module connectors, etc.
- Spot check wiring for loose connections, any cables/wiring touching the roof membrane, and broken cable ties. Installation of CAM CLAW
- Installation of deflectors and verification of six-point installation integrity.
- Verification that LOCK CLAW is fully engaged on the solar module frame flange (high side).
- Verification that CAM and MODULE are near flush (low side).
- Spot check the integrity of labels.
- Perform inverter maintenance as per manufacturer instructions.
- IR scan of electrical enclosures and connections, including wire terminations, breakers and fuses, and PV source circuits.
- Inspection of roof drains to ensure they are not clogged and confirmation of no signs of water pooling in the vicinity of the array only.
- Check for corrosion on the outside of enclosures and the racking system.
- Conduct I-V Curve Tests for Array Strings to understand array operating parameters, detect faulty modules, identify voltage drop, and identify signs of damage to insulation or resistance/leakage from other sources such as loose wire connections.
- Facilitate warranty repairs.
- Exercise breakers and AC/DC disconnects.
- Test fuses.
- After year 15, the full cost of replacing (3) inverters will be covered.

Frequently Asked Questions

During the 25-year term of the agreement, how does the Park District ensure that the solar panel technology is kept up to date and relevant with the newest technology?

- The 3rd Party Solar company is responsible for the maintenance and repair of the entire system. It is in the best interest of the solar company to keep all of the equipment producing as much power as possible. In fact, they are contractually obligated to sell the Park District the amount of power that is specified in the contract whether they can produce it or not. Based on the design of the agreement, any energy that is produced that exceeds what is used by the Park District is then sold back to the grid through ComEd's net metering program.

Is the electric voltage at a solar project dangerous?

- The electric current generated at solar panels is lower than the voltage in a home outlet. Electricity from a solar project travels through buried cables to a transformer, where voltage is increased so that it can feed into the electric grid. All the electric equipment on the site is secured and will not pose a risk to people or animals.

Doe solar work in the event of a blackout?

- Unless you have battery backup, your solar system will not produce power during a blackout for the safety of any line workers

Do solar panels create glare?

- Glare from solar panels is not a problem because PV solar panels are designed to absorb sunlight, rather than reflect it. Panels are made of dark colored materials and treated with anti-reflective coatings. The FAA has created standards to assess glare from solar facilities to ensure that they are safe for pilots flying nearby. Using these standards, the FAA has approved solar arrays near several major airports.

Frequently Asked Questions

After 25 years who is responsible for the clean up or removal of the Solar panels?

- Included in the Power Purchase Agreement and Site Lease there will be a decommissioning plan outlined which allows the District to purchase the field, General Energy to remove the panels + remediate the site or option to extend the agreement for an additional term.

Are there batteries and if so, who is responsible for the disposal?

- There are no batteries included in the project. All power will be consumed by the District or placed back on the grid. Ameren monitors this through their smart inverter.

Do solar panels contain toxic chemicals? Could solar facilities affect land or water quality for families living nearby?

- Solar panels are safe to touch, attach to your home or install in your neighborhood. Panels are primarily made of glass, aluminum, copper and other common materials . Solar farms also utilize steel racks to position panels, electrical cable and a small number of inverters and electric transformers to deliver power to the grid. All of this equipment is safe and contains the same materials that are found in household appliances. There are trace amounts of chemicals in solar panels that enable them to produce electricity. These compounds are completely sealed within the glass and coatings of the panels.

- After their useful life, solar panels and equipment are easy to disassemble and recycle. Solar facilities are constantly monitored, and the owners have a business interest in keeping them well-maintained and operating properly. Solar plants are designed to withstand severe weather, and panels are built to last for up to 40 years. If solar panels are damaged, they can be quickly replaced with new ones.

Frequently Asked Questions

Do solar projects create electromagnetic fields?

- Solar projects do not create electromagnetic fields that could be measured outside a project. Inverters used in solar facilities generate electromagnetic fields that are similar to household appliances, and many times weaker than those created by normal power lines. The weak electromagnetic fields from solar equipment can only be detected within around 150 feet of a solar farm's inverters.

Do solar farms create a fire hazard?

- PV solar projects are safe and do not use heat to generate electricity. Millions of solar panels have been safely installed on homes and rooftops around the world for decades – including more than 53,000 MW of solar in the US. All solar installations in the US are fully permitted and inspected by relevant local authorities including fire departments, incidents of any kind are extremely rare.

Do solar farms harm birds or wildlife?

- Solar farms do not pose a threat to wildlife. Wildlife studies are an important part of solar development - trained experts study proposed sites to ensure that solar development minimizes impact to wildlife. Solar projects can also provide important habitat for pollinators like bees and butterflies that make farmland more productive.

Do solar farms increase runoff, erosion or flooding?

- Solar farms do not increase runoff and will improve soil and water quality. Storm water management plans are a required part of the solar development process. These plans are prepared by professional engineers to ensure that projects don't contribute to erosion or flooding. The land on a solar farm is not paved and can be covered with native plants that absorb rain and runoff and help recharge groundwater. Native grasses planted on solar farms create the added benefit of preventing erosion and improving soil quality.