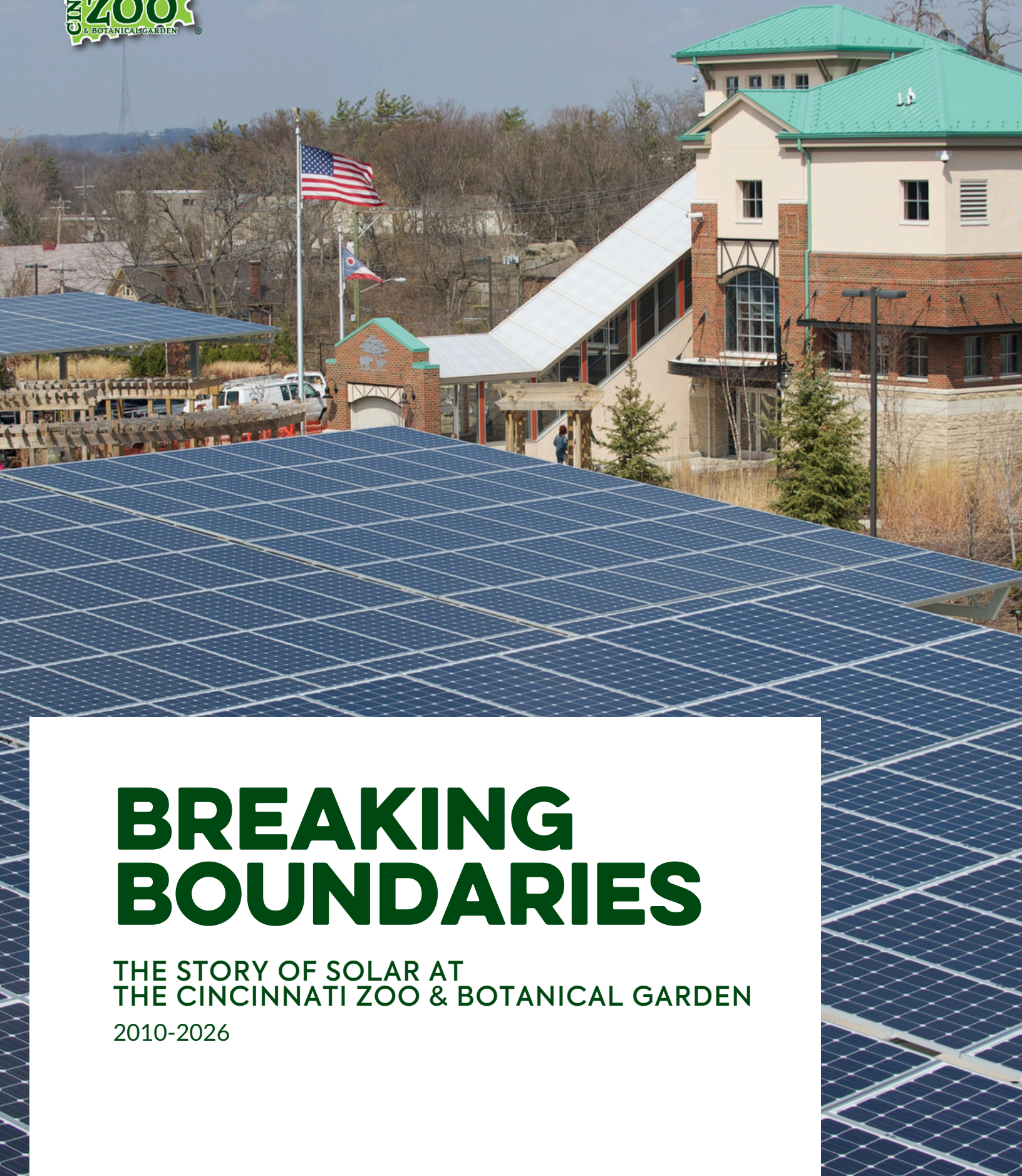




BREAKING BOUNDARIES

THE STORY OF SOLAR AT
THE CINCINNATI ZOO & BOTANICAL GARDEN

2010-2026

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Executive Summary

The Cincinnati Zoo & Botanical Garden has been a leader in renewable energy generation for over a decade. **With a robust 4.55 MW of on-site solar capacity, the Zoo produces more electricity than it uses and has significantly reduced utility costs—demonstrating that investment in renewable energy delivers both environmental and financial benefits.**

Building on more than 15 years of experience with solar energy, the Cincinnati Zoo has grown its commitment into a comprehensive Sustainability program. This work now includes water reclamation and reuse, organic waste recycling, local procurement, farmed food, and more. **Despite being the nation's second oldest zoo and landlocked in an urban setting, the Zoo has become synonymous with innovation and sustainability, earning the title of the Greenest Zoo in America since 2010.**

Beyond dramatically reducing our utility bills, the Cincinnati Zoo & Botanical Garden **has installed 9 solar arrays totaling 221 kW throughout the Cincinnati community, with many more to come.**

To build on this momentum, the Zoo has formalized the **Community Solar Resiliency Program (CSRP)**, an initiative designed to extend climate and financial resilience to Cincinnati communities. Additionally, since 2025, the CSRP has expanded its reach by working with our global conservation partners as well.

The CSRP is the Cincinnati Zoo's response to the increasing threats of climate change and the need for increased resilience in under-resourced communities. **By annually supporting the installation of solar systems on community centers, schools, and places of worship, the program aims to reduce greenhouse gas emissions while lowering utility costs for community organizations. These savings can then be redirected toward mission-critical work, building organizational capacity, and better serving local communities.**

This document serves as a narrative and introduction to the Community Solar Resiliency Program. **Leveraging its experience, networks, and passion, the Cincinnati Zoo is positioned to ensure the program's success by providing technical assistance, fostering partnerships, securing funding and in-kind donations, and empowering communities to drive sustainable development.**

Where We Began With Solar

“The most important and impactful step we can take in lowering our footprint on this Earth, and the people, animals and plants that depend on it, is by dramatically reducing our use of natural resources in our own backyard. As a conservation-based organization, this is absolutely critical in terms of living our mission.”

- MARK FISHER, Chief Operating Officer

The Cincinnati Zoo & Botanical Garden’s sustainability journey began in 2006 when Mark Fisher identified significant cost savings and environmental benefits through more efficient utility use.

What started with repairing a water leak led to a comprehensive assessment of the Zoo’s utility systems. This work created momentum for broader improvements, including collaboration with local experts and partners focused on energy efficiency.

Later that year, the Cincinnati Zoo installed its first solar array—a 20 kW system gifted by Duke Energy—on the Harold C. Schott Education Center, making it one of the largest solar installations in the Midwest at the time.

In 2011, the Zoo installed a much larger solar array over its Vine Street parking lot through a Power Purchase Agreement (PPA) with PNC Bank and Melink Corporation.

Neighbors and city officials were engaged for feedback, funding was sought from a mix of grants and private equity, and Melink Corporation provided technical assistance. Scholarships enabled students from Cincinnati State Technical & Community College to help install the 6,400-panel array while completing certification requirements.

This 1.56MW solar array was the largest urban, publicly accessible array in the nation at the time. After seven years, ownership of the array transferred to the Cincinnati Zoo.



Harold C. Schott Education Center array (2006)

Learning From On-Site Solar

- Since 2010, photovoltaic (PV) panel efficiency has increased significantly
- Power Purchase Agreements (PPAs) help organizations acquire large solar assets with reduced upfront costs
- Highly visible solar arrays increase visitor awareness of sustainability initiatives
- Leading by example demonstrates that projects like this are possible across the region

Key Factors for Success:

- Public-Private Partnerships & Funding Sources
- Collaboration with Local Industry Experts
- Leadership Support
- Proven Savings from Reduction in Utility Use



Elephant Trek Barn rooftop solar (2024)

The following list includes all solar arrays installed **on-site at the Zoo**, primarily funded through leveraging capital investments (building renovations, new habitats, parking expansions):

- 20 kW array on Education Building (2006)
- 1.56 MW array over Vine St Parking Lot (2011)
- 35 kW array on Hippo Cove Building (2016)
- 33 kW array on Painted Dog Building (2017)
- 165 kW array on Elephant Trek Barn (2024)
- 2.8 MW array over Euclid Ave Parking Lot (2024)

Future On-Site Installations:

- Dury Ave Parking Lot array
- Upgrade & expand Vine St. Parking Lot panels



Vine Street Parking Lot array (2011)

Why Solar?

With the climate crisis threatening wildlife & human populations worldwide, it is critical to think globally and act locally. For the Cincinnati Zoo & Botanical Garden, investing in renewable energy is both a responsibility and a strategic choice aligned with our mission.

Ensuring access to affordable, reliable, sustainable, and modern energy is the United Nations' Sustainable Development Goal #7, which recognizes clean energy as essential to economic stability, public health, and climate resilience.



Solar energy is also identified as a high-impact, scalable solution to climate change in Project Drawdown, one of the most influential research-backed databases of climate solutions.

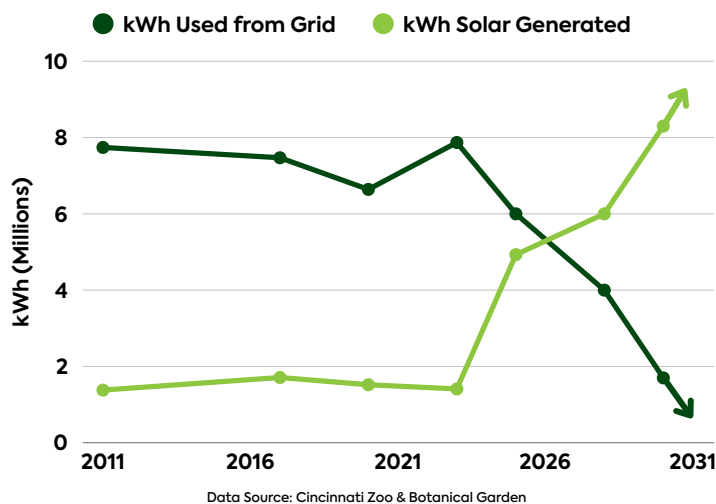


At the local level, this work is just as critical. The Zoo's renewable energy work supports key goals of the Green Cincinnati Plan (2023)—the City's official climate action roadmap—by advancing clean energy adoption, reducing emissions, and strengthening community resilience.



Reducing Reliance on the Grid

For the Zoo, solar energy is not only a climate solution—it is also a practical strategy. The graph below shows how the Zoo has steadily increased on-site solar generation while reducing the amount of electricity purchased from the grid, helping stabilize long-term energy costs and lessen dependence on an increasingly strained electric grid.



Since 2025, electricity rates across the Midwest have increased by 25–30%, driven by growing demand and limited supply. New energy-intensive industries, including AI and data centers, are expected to place additional pressure on regional power systems in the years ahead—at a time when 1 in 4 U.S. households is already *energy burdened*.

By generating more power locally, communities can reduce reliance on the grid, stabilize energy costs, and build a more resilient energy future.

NEW! Euclid Ave Parking Lot Solar Array

Based on the success of the original parking lot solar array, the Zoo has built another solar array with nearly double the capacity over the new Euclid Ave surface parking lot. This 2.8 MW solar array is another visible example to visitors of the Zoo's commitment to renewable energy and climate resiliency. [Learn more here.](#)

A large battery storage system and microgrid will also be installed. These aspects of the project help manage peak demand and maintain essential operations during a blackout.

Key Factors for Success:

- Maintaining a queue of “shovel ready” projects for when funding opportunities arise
- Inflation Reduction Act (IRA) Tax credits
- Leveraging Capital Project Funding
- Benefits to Visitors - Shade Cover
- Increased Efficiency of PV Panels

Plants + Solar

As both a Zoo *and* a Botanical Garden, transforming landscapes is a core part of our approach to conservation and sustainability. By bringing our botanical expertise to solar projects, we connect renewable energy, community partnerships, and habitat creation in ways that *support both people & wildlife.*

From an annual trial garden beside the newest parking lot array, to wellness gardens at schools and community centers, to a sheep-managed field of native plants & pollinator habitat at Bowyer Farm... our solar projects are designed to grow more than energy.



Euclid Lot Trials Garden

**Awarded
2024 Solar
Builder
Project of
the Year!**



Euclid Avenue Parking Lot array (2024)

Farming the Sun & Sheep

In addition to the 78-acre land-locked campus in Cincinnati, the Zoo owns 600+ acres of land in Warren County, called Bowyer Farm. Over the past decade, this land has seen over 100 acres of wetland restoration, grown and sold over 10,000 native plants, grown food for our very own animals, and hosted research on hundreds of wildlife species.

Now, Bowyer Farm is home to one of the largest solar arrays (28 MW) in SW Ohio.
[Learn more here.](#)

The Zoo is leasing 125 acres at Bowyer to Harrison Street, a power producer. The renewable energy produced is bought by companies in the region to help them reach sustainability goals. The Zoo also partners with Ohio Solar Grazing to manage vegetation using hundreds of grazing sheep alongside the establishment of pollinator habitat. This integrated approach keeps farmland in production, improves soil & ecosystem health, eliminates mowing emissions, and provides a local, organic meat source.

[Learn more here.](#)

In 2025, properties owned by the Zoo produced 4x more energy from solar than was used by operations, including both electricity and natural gas. This will continue to increase as more arrays are added in the next 10 years.

4x
more energy
produced on Zoo
properties than the
Zoo uses

In addition to Zoo-owned properties, the Zoo has installed 9 solar arrays throughout the community over the past 7 years, inspiring the creation of a sustained program to continue this work.

Key Factors for Success:

- Community engagement from the beginning
- Sheep grazing supports local farmers
- Attracting other key corporate partners
- Payment in Lieu of Tax (\$150k annually) for local school district
- Enhanced pollinator habitat



Going Beyond Industry Norms

The Cincinnati Zoo has been at the forefront of on-site renewable energy generation for over a decade. Cincinnati is facing climate effects that amplify the occurrence and length of extreme heat and precipitation. These changes have been shown to disproportionately affect low-income communities due to lack of green space and expansive hardscapes that create impermeable heat islands.

It's essential that we leverage our experience and networks to work alongside our neighbors in Avondale and other communities with high rates of poverty to increase access to solar energy.

"The Cincinnati Zoo prides itself on being involved in the communities it serves, paying forward the generosity of supporters that help the Zoo achieve its mission each and every day."

- **THANE MAYNARD**, Executive Chair

The Zoo has created a funding framework for driving positive impact, in part to fulfill our Net Zero Energy and emissions reduction goals. Rather than following the industry norm of purchasing outsourced Renewable Energy Credits (RECs) with intangible environmental impact, the Zoo is selling Sustainable Renewable Energy Credits (SRECs) generated directly from its on-site solar arrays. **Revenue from SREC sales is reinvested right back into the Zoo's positive impact initiatives, including the Community Solar Resiliency Program.**

By creating this program, the Cincinnati Zoo's mission pillar of *Serving Community* is put into action. **Helping neighbor organizations reduce energy use and utility costs allows them to redirect savings into their mission-critical work, capacity, and community services.**



Solar in the Community

The Zoo's commitment to sustainability extends beyond our campus and into communities across Greater Cincinnati. Since 2013, the Zoo has partnered with the Reds Community Fund and other iconic Cincinnati organizations through the Annual Community Makeover, contributing horticultural expertise, resources, and volunteer support to transform community spaces. [Learn more here.](#)

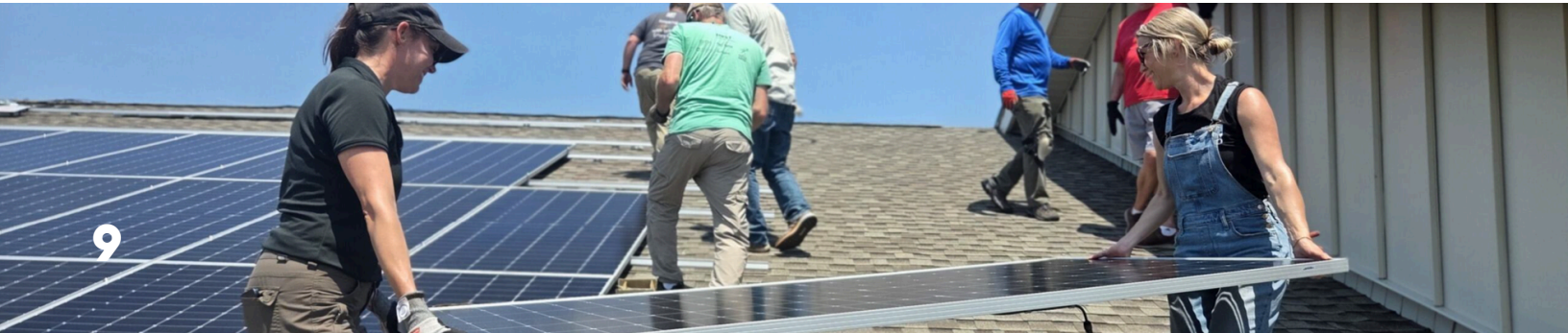
Through these projects, the Zoo also began incorporating solar installations at schools, churches, and other community organizations. While the Zoo continues to partner with the Reds Community Fund, our investment in community solar has expanded and formalized.

Today, the Zoo continues this work through its **Community Solar Resiliency Program (CSRP)**, partnering with technical experts to install solar systems for community organizations across Greater Cincinnati. By increasing climate and financial resilience, these projects help organizations reinvest resources into their missions and better serve their communities.

221 kW

total solar capacity installed in the Greater Cincinnati community between 2019-2025

Capacity	Location	Year Installed	Project Program
1.2kW	Horses on the Hill (BLOC Ministries), Price Hill Solar Irrigation	2026	CSRP
45 kW	Talbert House, Klekamp Family Veteran Residences, Walnut Hills	2025	CSRP
54 kW	Talbert House, Carthage Flats, Carthage	2025	CSRP
28 kW	Frederick Douglass Elementary, Walnut Hills	2025	Community Fund
16 kW	Horses on the Hill (BLOC Ministries), Price Hill	2024	CSRP
10 kW	Lydia's House, Norwood	2024	CSRP
13 kW	John P. Parker Elementary, Madisonville	2023	Community Fund
12 kW	Lincoln Heights Elementary, Lincoln Heights	2022	Community Fund
12 kW	Rockdale Academy, Avondale	2021	Community Fund
30 kW	New Prospect Baptist Church, Roselawn	2019	Community Fund



Completed Installations



Leveraging Capital Projects for Additional Benefits

As part of the Zoo's parking lot array built in 2024, there was space leftover in the last shipping container of solar panels. Instead of paying to ship a half-empty crate, extra panels were ordered to fill the container. The extra 220 kW of panels were donated to the Community Solar Resiliency Program, benefitting projects listed below.



Lydia's House, Norwood

The Cincinnati Zoo's Facilities and Sustainability teams assisted SonLight Power to install a 10kW solar array at Lydia's House. Eighteen solar panels and labor were donated by the Zoo for the June 2024 installation. [Learn more here.](#)

The mission of Lydia's House is to provide safe, stable, and supportive housing for women and children in crisis. The organization provides both short term and permanent housing solutions.

Horses on the Hill, East Price Hill

Horses on the Hill (HOTH) received a 16 kW solar array in fall 2024 through a partnership with the Cincinnati Zoo, SonLight Power, and local contractors. With guidance from the Zoo, SonLight Power secured a Seeds of Change grant through the City of Cincinnati, completing the funding needed to install the 28 solar panels donated by the Zoo, with B & J Electric providing permitting and engineering services. [Learn more here.](#)

HOTH is part of BLOC Ministries, a nonprofit that has worked in Price Hill for 25 years. HOTH serves economically disadvantaged youth and families, victims of domestic violence, and individuals in recovery through nature-based and equine-assisted learning services.





Carthage Flats, Carthage

Talbert House - Walnut Hills & Carthage

In the summer of 2025, the Cincinnati Zoo partnered with Talbert House to bring solar to two new supportive housing developments, aligning clean energy investment with housing designed for families, individuals, and veterans. Together, the project delivers durable, community-centered infrastructure with long-term benefits for residents and the organization.



Talbert House is a community-based organization serving children, adults, and families across Southwest Ohio through a

wide range of programs, including housing, mental health care, addiction services, and reentry support.

The Zoo donated solar panels and staff time to equip the buildings with rooftop solar, working alongside installation partners. Klekamp Family Veteran Residences now features 79 panels, and Carthage Flats includes 94 panels. These systems will generate clean energy for decades, reducing operating costs and strengthening Talbert House's ability to focus resources on housing and supportive services. [Learn more here.](#)

"The Cincinnati Zoo has led the way in sustainability for years. We are proud to partner with them and be a part of a project that brings clean energy to our community. These solar panels aren't just about saving money; they are creating a healthier community for all of us."

- **Jessica Powell, Talbert House Vice President of Housing**

Together, projected to save more than \$450,000 in energy costs over 25 years.



**Klekamp Family Veteran Residences,
Walnut Hills**

Solar Power Beyond the Grid

Not every solar solution requires a rooftop or utility connection. *Off-grid solar systems* provide reliable power where traditional electrical infrastructure is unavailable, impractical, or costly. Through the Community Solar Resiliency Program, the Zoo also works with partners to deploy smaller-scale solar systems that solve practical challenges, address local needs, and can be replicated in communities around the world.

Farm to Table Program Horses on the Hill, East Price Hill

After leading the installation of a 16 kW rooftop solar array in 2024 that saves thousands of dollars annually, the Zoo continued its partnership with Horses on the Hill (HOTH) through an off-grid solar-powered irrigation project.

Designed with North Hadrian LLC, the system uses solar power to pump water—reducing manual labor, improving crop yields, and expanding educational opportunities within HOTH's Farm to Table garden. By lowering operating costs while increasing food production, the project demonstrates how solar energy can strengthen community resilience in multiple ways.



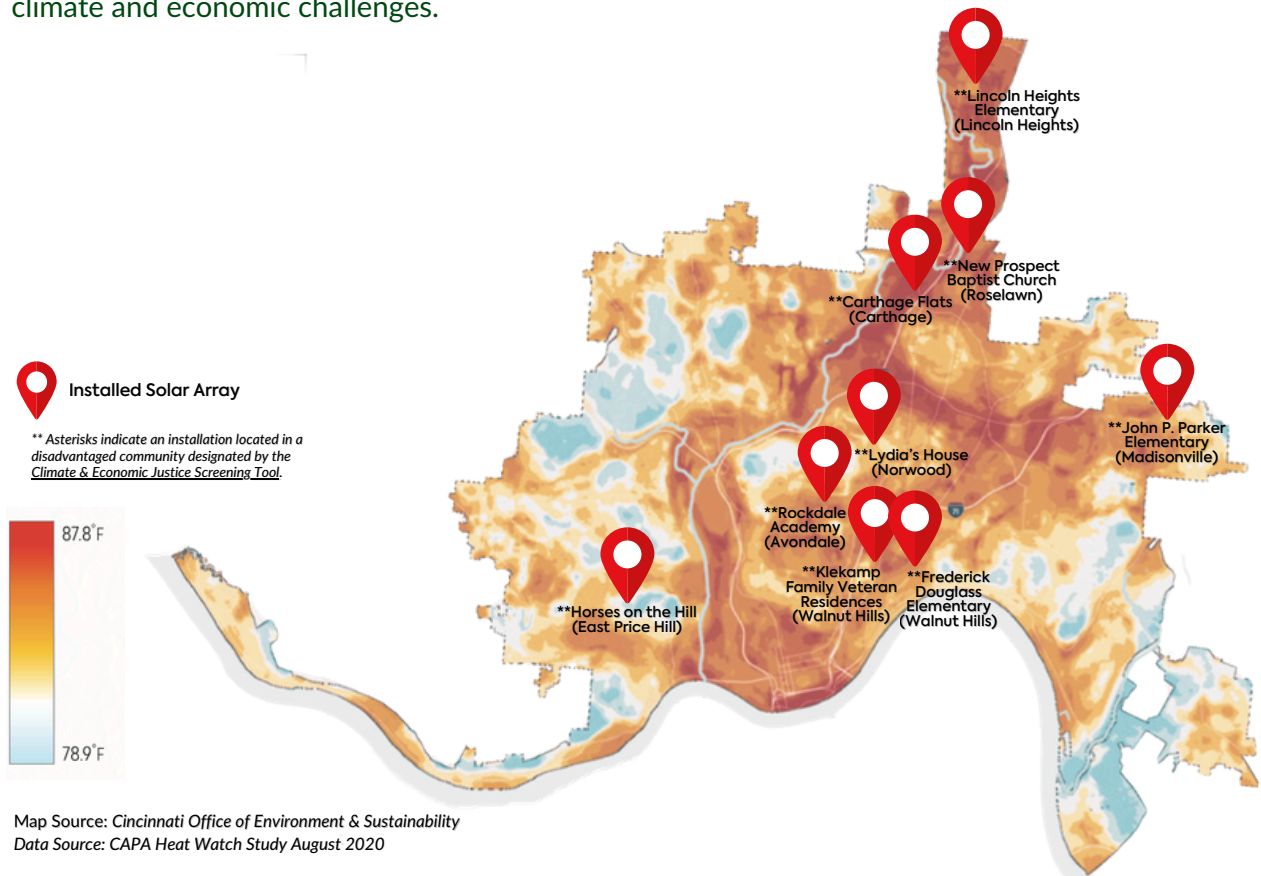
Education Barn Boone County Conservation District, KY

Sharing a commitment to ecological restoration and conservation education, the Cincinnati Zoo & Botanical Garden partnered with the Boone County Conservation District (BCCDKY) and North Hadrian LLC to install an off-grid solar power system at BCCDKY's historic education barn.

Previously lacking access to electricity, the barn can now provide lighting and power for workshops, educational programs, equipment charging, and other essential needs. By bringing clean energy to a conservation-focused community space, the project expands opportunities for environmental education.

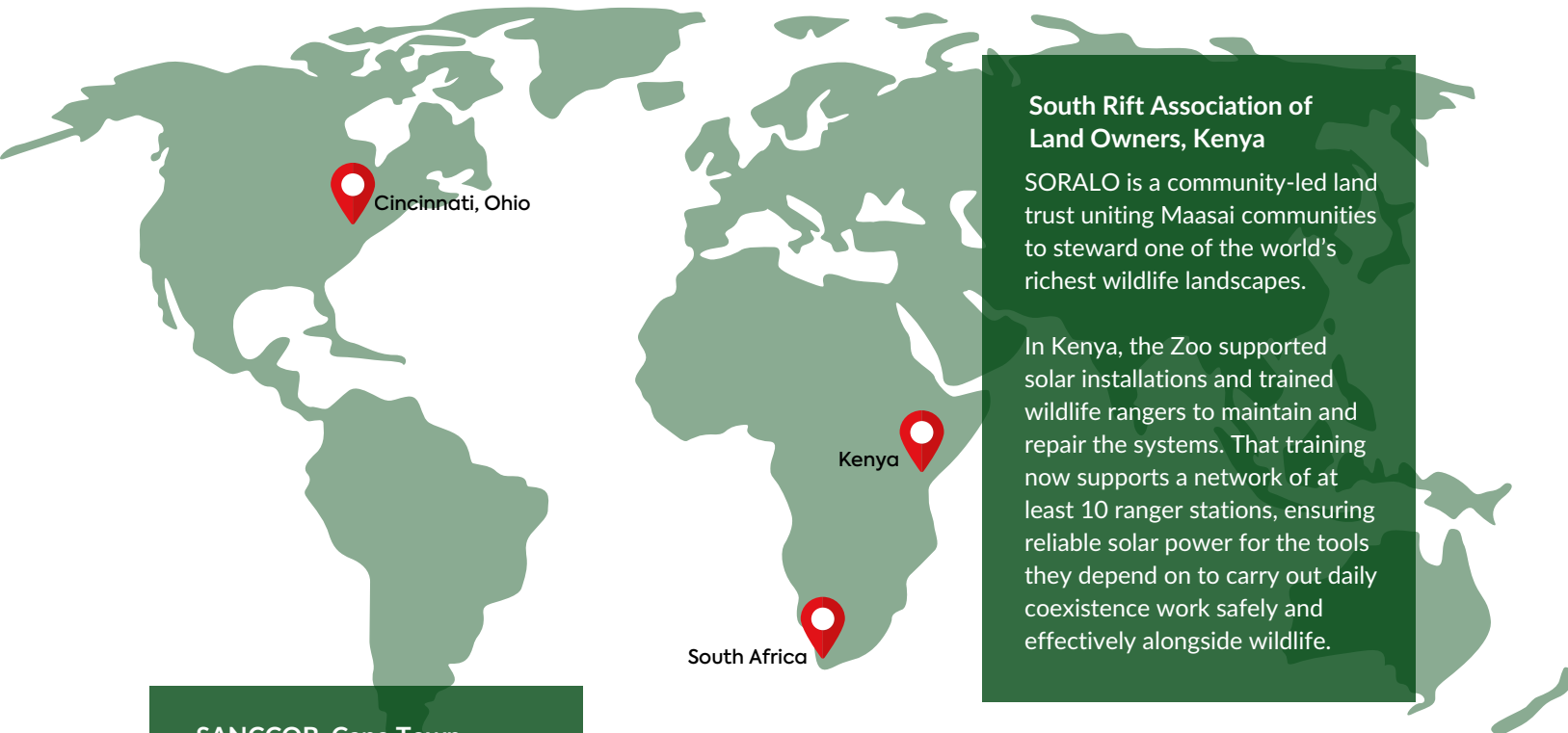
Across the Street

The map below illustrates how the Zoo's community solar work is intentionally focused where it matters most—bringing clean energy into neighborhoods experiencing the greatest heat impacts and highlighting the importance of investing in communities that are facing disproportionate climate and economic challenges.



& Across the Globe

Solar power does more than just reduce emissions—it directly supports our mission of conservation and human-wildlife coexistence around the world. **For communities living alongside wildlife, access to reliable energy can improve safety, strengthen livelihoods, and reduce pressures that contribute to human-wildlife conflict.** Starting in 2025, the CSRP has expanded its reach by working with our global conservation partners. Together we can help facilitate practical solar solutions that support people, wildlife, and the landscapes they share.



South Rift Association of Land Owners, Kenya

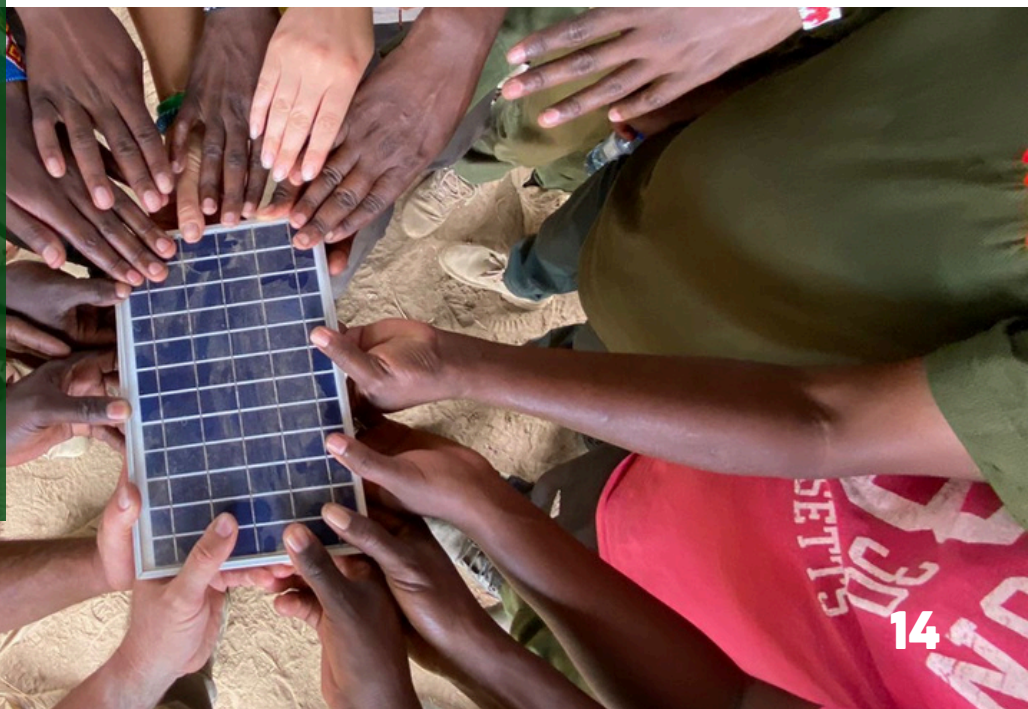
SORALO is a community-led land trust uniting Maasai communities to steward one of the world's richest wildlife landscapes.

In Kenya, the Zoo supported solar installations and trained wildlife rangers to maintain and repair the systems. That training now supports a network of at least 10 ranger stations, ensuring reliable solar power for the tools they depend on to carry out daily coexistence work safely and effectively alongside wildlife.

SANCCOB, Cape Town, South Africa

The Southern African Foundation for the Conservation of Coastal Birds rescues and rehabilitates endangered African penguins and other seabirds in South Africa.

The Zoo is supporting the install of a rooftop solar array at their Western Cape chick-rearing facility that will reduce reliance on diesel generators during grid outages, lower energy costs, and help ensure uninterrupted care for vulnerable chicks.



The Community Solar Resiliency Program

IMPACT VERIFIED®

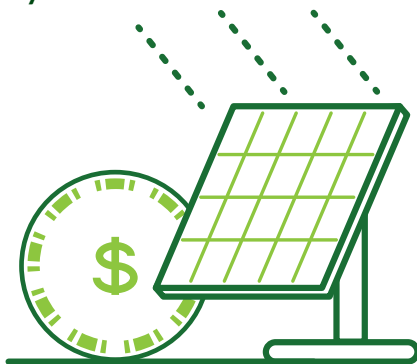


The CSRP has been independently evaluated and peer-reviewed leading to *Impact Verified* status by [Impact Genome Registry](#).

The Cincinnati Zoo & Botanical Garden is developing the Community Solar Resiliency Program to increase the energy and climate resiliency of community organizations in Avondale & the Greater Cincinnati area.

Based on years of experience and extending from the Zoo's mission of *Serving Community*, this annual program aims to reduce our neighboring facilities' energy use and greenhouse gas emissions while lowering utility costs. Ultimately, these **organizations can redirect savings into their mission-critical work, build organizational capacity, and further serve our communities.**

The Cincinnati Zoo will facilitate this program and ensure maximum, repeatable impact **by providing technical assistance, leveraging partnerships, sourcing funding and in-kind donations, and empowering the community.**



Goals

- Increase the energy, climate, and financial resiliency of community-critical organizations such as community centers, schools, and places of worship in Greater Cincinnati neighborhoods.
- Reduce greenhouse gas emissions and maximize renewable energy generation.
- Build community resilience, autonomy, and wellbeing to facilitate conditions that promote coexistence

Objectives

- Facilitate the installation of at least one solar renewable energy system per year and building energy efficiency upgrades when feasible.
- Reduce energy use and lower utility costs for receiving organizations.
- Collaborate with partnering organizations that align on the Zoo's sustainability and climate resiliency plans for vulnerable neighborhoods.
- Source funding to provide program services at a subsidized cost to the receiving entity.
- Enhance or increase greenspaces when feasible (i.e. planting trees or native plant gardens on the project site).

How to Get Involved

By getting involved, you become an integral part of creating a more resilient and sustainable future for our Cincinnati communities. Together, we can make a lasting impact towards climate resilience.

If you're interested in getting involved, please reach out to Megan O'Keefe (megan.o'keefe@cincinnati-zoo.org) or Mark Fisher (mark.fisher@cincinnati-zoo.org).



Sponsor An Array: Sponsor an array in the community.



Donate: Donations will directly fund the installation of solar PV systems in community centers, schools, and places of worship.



Partnership: Whether you have technical expertise or an aligned commitment to community resilience, your involvement could increase the collective impact.

Thanks to our Solar Partners!



- SonLight Power
- B&J Electrical
- North Hadrian, LLC



Thank you for your support of the Community Solar Resiliency Program.

Acknowledgements

The Community Solar Resiliency Program is made possible through the collaborative efforts and support of various individuals, organizations, and partners. We extend our heartfelt gratitude to Partnering Organizations, Technical Experts, Donors, and of course Community Partners.

Sustainability Department Leaders of the Cincinnati Zoo & Botanical Garden:

Mark Fisher, Megan O'Keefe, Mallory Geresy

Document Design: Julia Glenn

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