PLENARY 9:00–10:30 AM

Buildings, Energy, and Decarbonization

Megan O'Keefe, Director of Sustainability
Mallory Geresy, Natural Resources Manager
Cincinnati Zoo & Botanical Garden

Sabrina Jones, The Mariners' Museum and Park

Agenda

What we'll cover in this session:

1. Org Introductions
2. Moderated Panel
3. Discussion and Q&A

Learning Objectives

A useful starting point for your institution:

1. Explain how multi-building campuses can plan, govern, and make decisions about decarbonization.

2. Compare the strategies, investments, and key takeaways from a zoo and a maritime museum.

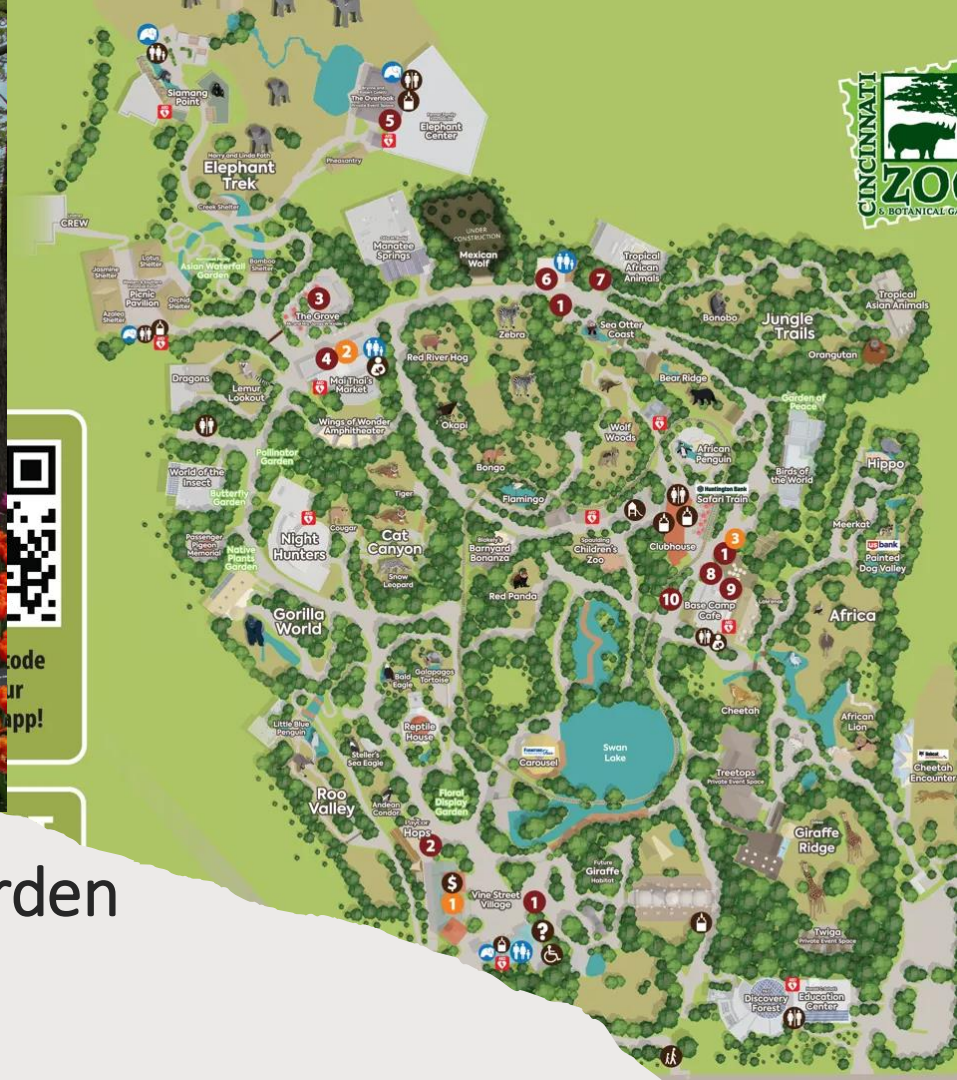
3. Identify potential first projects and the data an institution would need to begin.

Megan O’Keefe, Sustainability Director



Mallory Geresy, Natural Resource Manager





Cincinnati Zoo & Botanical Garden

How sustainability work gained momentum

2006: facilities leadership and resource efficiency

Water and energy savings created a practical starting point

Trust built over-time led to capital campaign investment

New construction created opportunities to improve existing infrastructure

Expanded reach of our positive impact

Campus systems, community solar, Bowyer farm, and collaboration with conservation support our mission

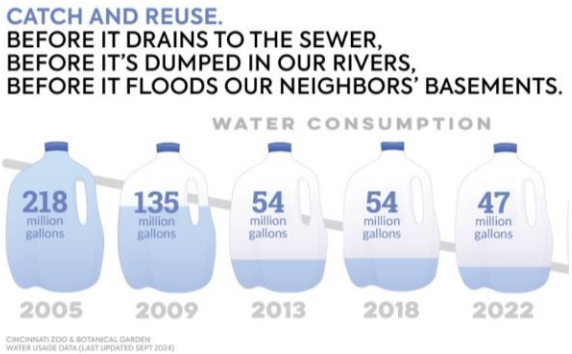
Water and energy savings – MH2R Infrastructure

1.5 million gallons

Stormwater collection capacity

4.5 MW

On-site solar generation



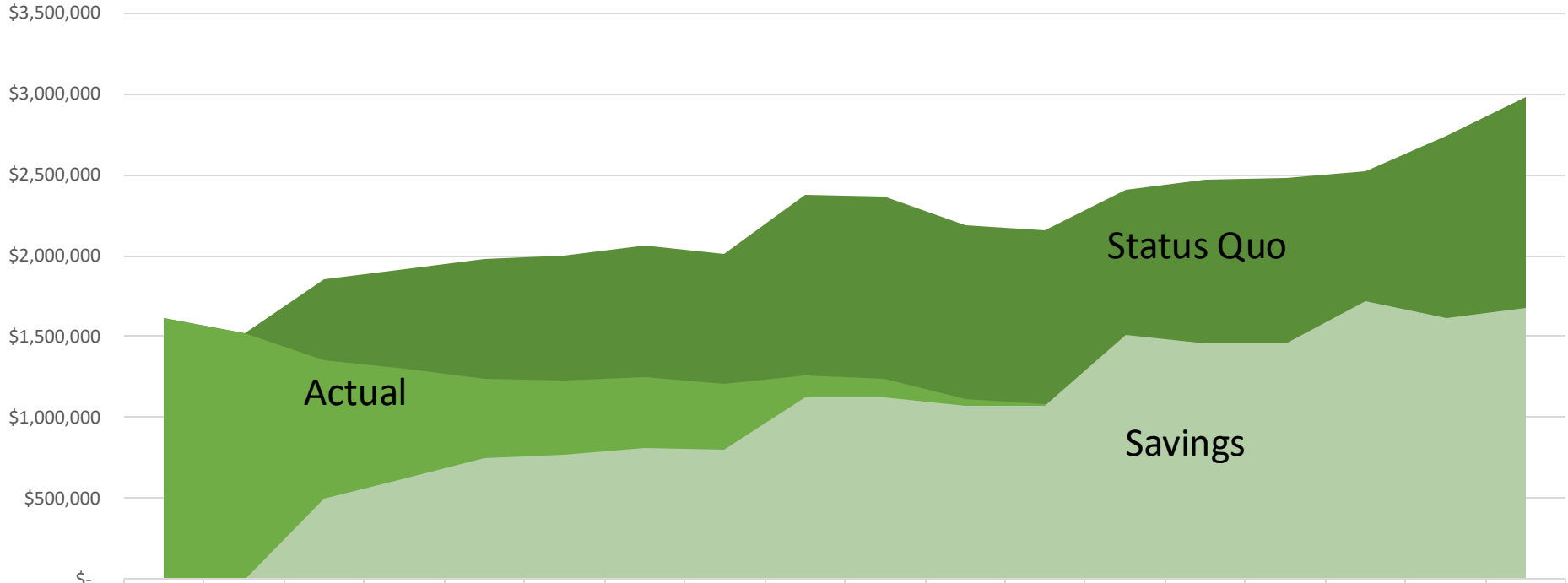








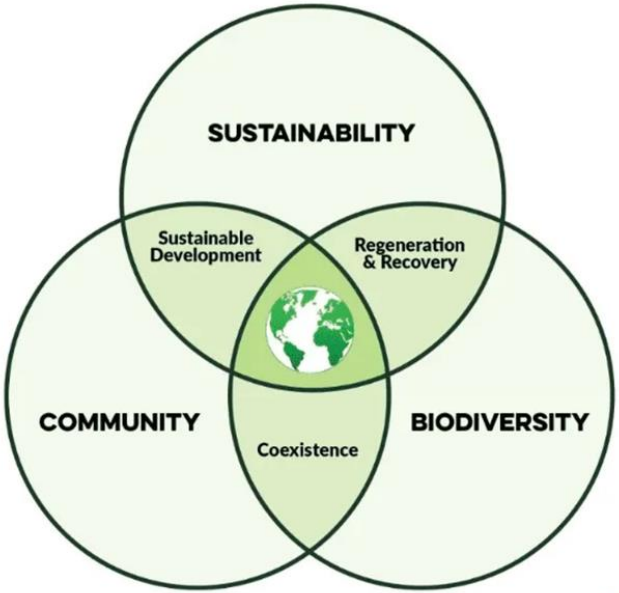
Utility Cost/Savings 2008-2025



	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Status Quo	$1,615,696	$1,520,096	$1,853,673	$1,921,235	$1,982,749	$2,000,078	$2,059,376	$2,011,813	$2,378,134	$2,363,460	$2,192,007	$2,152,873	$2,403,885	$2,465,907	$2,478,552	$2,518,070	$2,742,231	$2,985,100
Actual	$1,615,696	$1,520,096	$1,354,675	$1,296,466	$1,238,833	$1,230,905	$1,253,422	$1,207,515	$1,256,043	$1,238,406	$1,117,675	$1,083,337	$896,043	$1,004,235	$1,026,424	$798,372	$1,125,860	$1,307,577
Savings	$-	$-	$498,998	$624,769	$743,916	$769,173	$805,955	$804,298	$1,122,091	$1,125,054	$1,074,333	$1,069,536	$1,507,842	$1,461,671	$1,452,128	$1,719,698	$1,616,372	$1,677,522

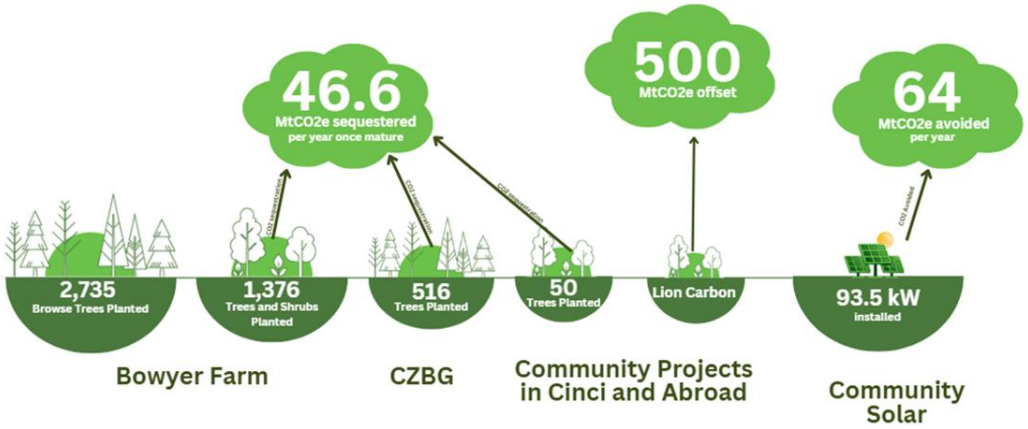
Status Quo Actual Savings

Expanded reach of our positive Impact

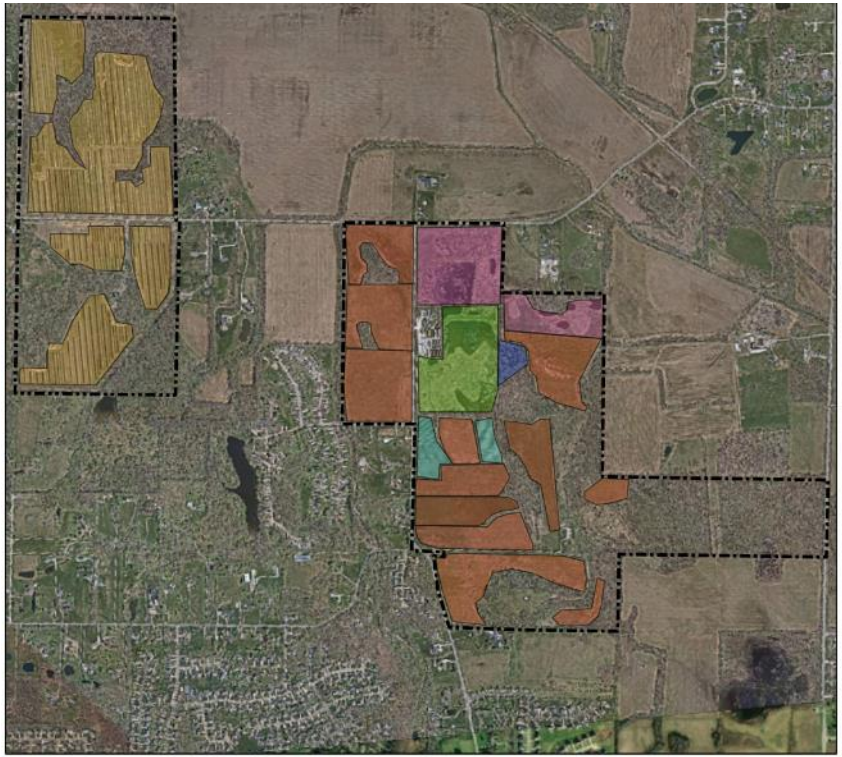


CONSERVATION IMPACT DIAGRAM

A systemic approach to decarbonization, rather than traditional “offsets”







7/21/2026

1:22,500

0 0.15 0.3 0.6 mi

0 0.23 0.45 0.9 km

Vantor

Simple Bowyer Map view

- Crop Production (Soy or Hay)
- Crop Production (Browse)
- Solar and Sheep Grazing
- Plant Propagation
- Conservation Area (CRP)
- Conservation Area (EQIP)
- Other Uses (Maple Syrup Production)

Bowyer Exterior Boundaries Polygons view

- Main Property
- Solar Farm

Bowyer_20260322_24in

- Red: Band_1
- Green: Band_2
- Blue: Band_3





Community Solar Resiliency Program













Talbert House

Building a Stronger Community...
One Life at a Time.



Talbert House
Hamilton County Crisis Center
2026, 50kW

Klekamp Family Veteran Residences	Details
System Size	45kW
Number of Panels	79
Projected Savings over Lifetime of Array (25 years)	$214,279.33
Annual Energy Production	54,000 kWh
Annual Emissions Avoided	47.6 Metric Tons CO_2 equivalent
Equivalent to CO_2 Emissions From:	
Gasoline consumed	5,356 gallons
Smartphones Charged	2,933,116
Propane cylinders used for home barbeques	2,186
Equivalent to Greenhouse Gas Emissions Avoided By:	
Waste recycled instead of landfilled	4,046 trash bags
Equivalent to Carbon Sequestered By:	
Acres of U.S. forests in one year	47.7

Carthage Flats	Details
System Size	54kW
Number of Panels	94
Projected Savings over Lifetime of Array (25 years)	$238,088.14
Annual Energy Production	60,000 kWh
Annual Emissions Avoided	59.2 Metric Tons CO_2 equivalent
Equivalent to CO_2 Emissions From:	
Gasoline consumed	5,951 gallons
Smartphones Charged	3,259,018
Propane cylinders used for home barbeques	2,429
Equivalent to Greenhouse Gas Emissions Avoided By:	
Waste recycled instead of landfilled	4,495 trash bags
Equivalent to Carbon Sequestered By:	
Acres of U.S. forests in one year	53

CINCINNATI ZOO & BOTANICAL GARDEN



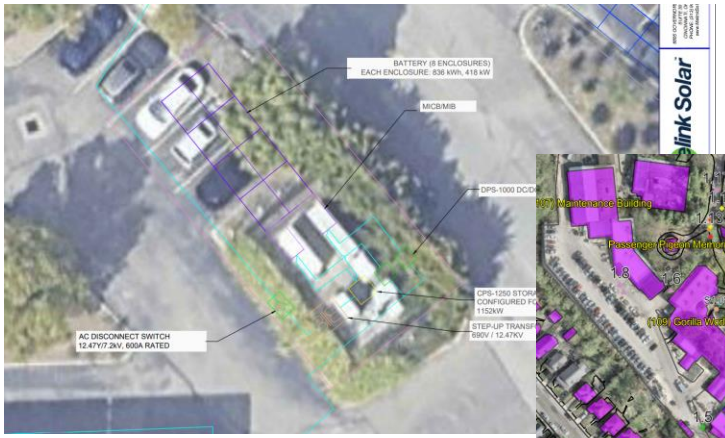




What's next?

Comprehensive planning for next capital campaign

Continue connecting capital growth with infrastructure needs and priorities, integrated across the Zoo







Takeaways

A useful starting point for your institution:

1. Connect the next capital project to operating performance and long-term utility needs.

2. Evaluate campus, community, and land projects using the outcomes each can deliver.

3. “Be ready” – have project ideas and designs ready for when the right conditions are cultivated

PHIPPS Duke Farms

Discussion and questions