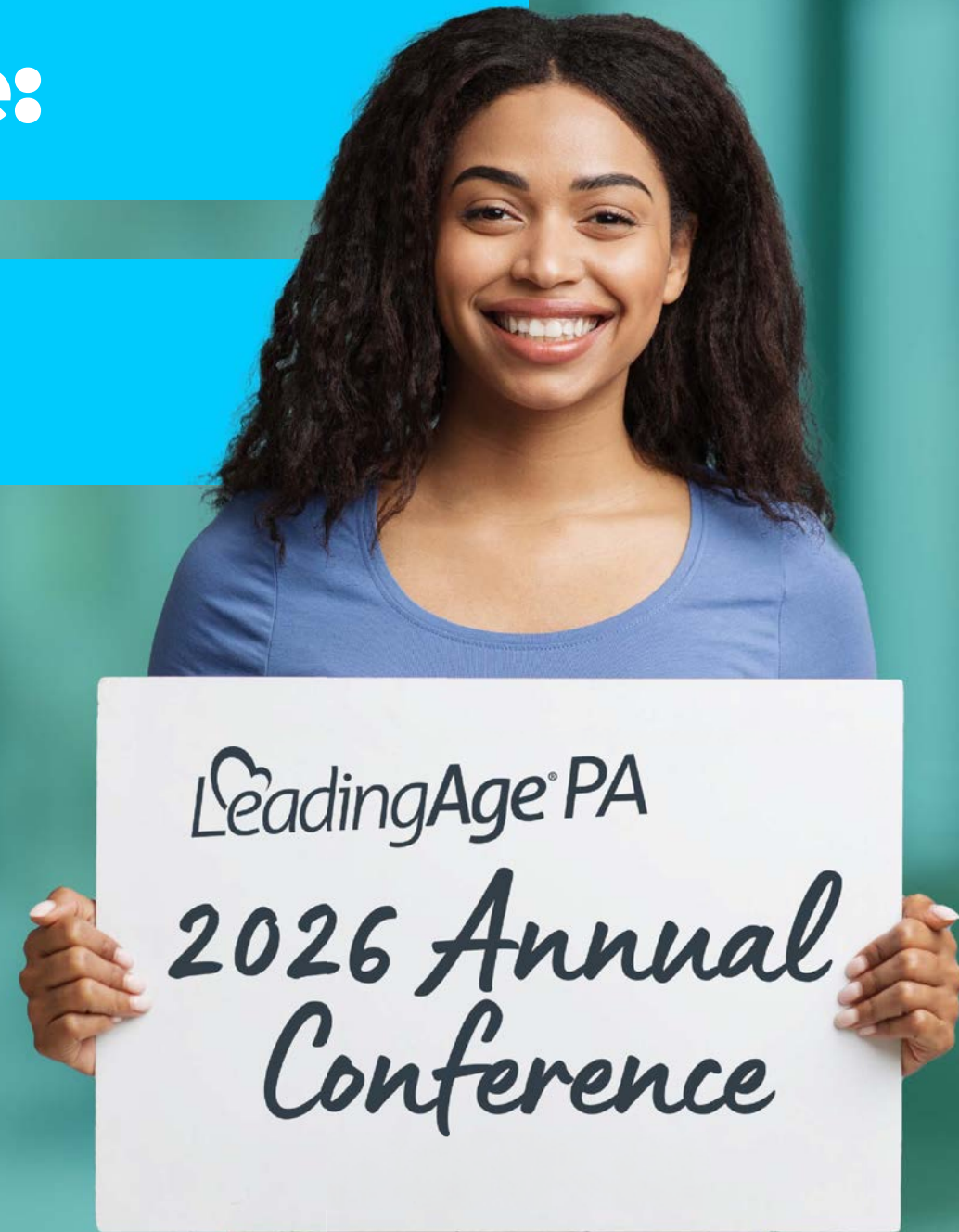


The Sustainability Edge:

A Drive for Distinction



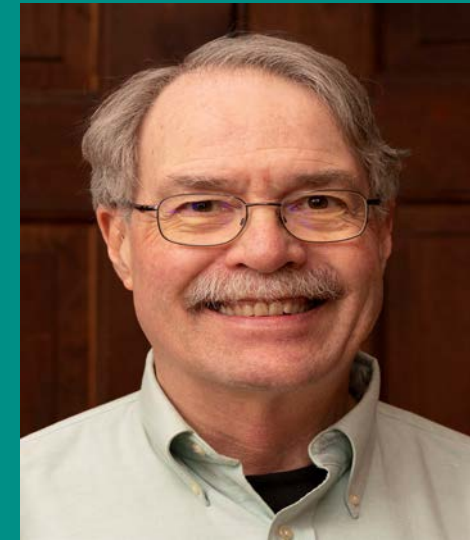
Panelists



Jim Weber
*Vice President of
Preconstruction*
Wagman Construction
jbweber@wagman.com



Ken Shultes
Senior Advisor
The Stone House Group
Shultes@theshg.com



George Alexander
Kendal Resident
galex49@gmail.com

Why Is This Important?

Learning Objectives



1. Attain and improve literacy in the areas of sustainability, sustainable buildings, and sustainable operations.
2. Illustrate the strategic advantages of sustainable buildings and programs.
3. Demonstrate how to leverage resident leadership to amplify sustainability efforts.

Why Is This Important?



Ken Shultes

Senior Advisor

The Stone House Group

shultes@theshg.com

THE STONE HOUSE GROUP

BUILDING STEWARDSHIP

25
YEARS

Who We Are

Strengthening the mission and distinctive needs of academic, not-for-profit, and corporate institutions.

1999 Year Founded

550+ Clients

4 Countries

15+ States

100+ FCAs

85+ LEED Projects

Bethlehem, PA | Washington, D.C.



Check out our
website





Learn more about
B Corp



“When the history of this period is written, one of the standout developments will be our understanding, at long last, that economic well-being and environmental well-being are two sides of the same coin.”

- Larry Summers

Our Services

FACILITIES / PROJECT MANAGEMENT

Facilities Benchmarking
Facilities Condition Assessment (FCA)
Facilities Operations Assessment (FOA)
Greenhouse Gas (GHG) Inventory
Master Planning Support
Owner's Representative
Space Utilization
Facilities Staff Recruitment



ENERGY MANAGEMENT

Energy Audits
Energy Benchmarking
Energy Modeling
Grants, Incentives, and Funding
Energy Procurement
Renewable Energy Feasibility Study
Utility Master Planning



SUSTAINABILITY

Sustainable Design Consulting
Climate Action Planning (CAP)
Embodied Carbon Study
Grants, Incentives, & Funding
LEED Administration
Net Zero Buildings
Renewable Energy Feasibility Study
Decarbonization Consulting
Sustainable Operations Consulting



BUILDING COMMISSIONING

New Construction Commissioning (Cx)
Building Enclosure Commissioning (BECx)
Continuous Commissioning (CCx)
LEED Fundamental & Enhanced Cx
Indoor Environmental Quality (IEQ)
Retro-Commissioning (RCx)
Testing, Adjusting, & Balancing (TAB)
Utility Master Planning



Our Clients

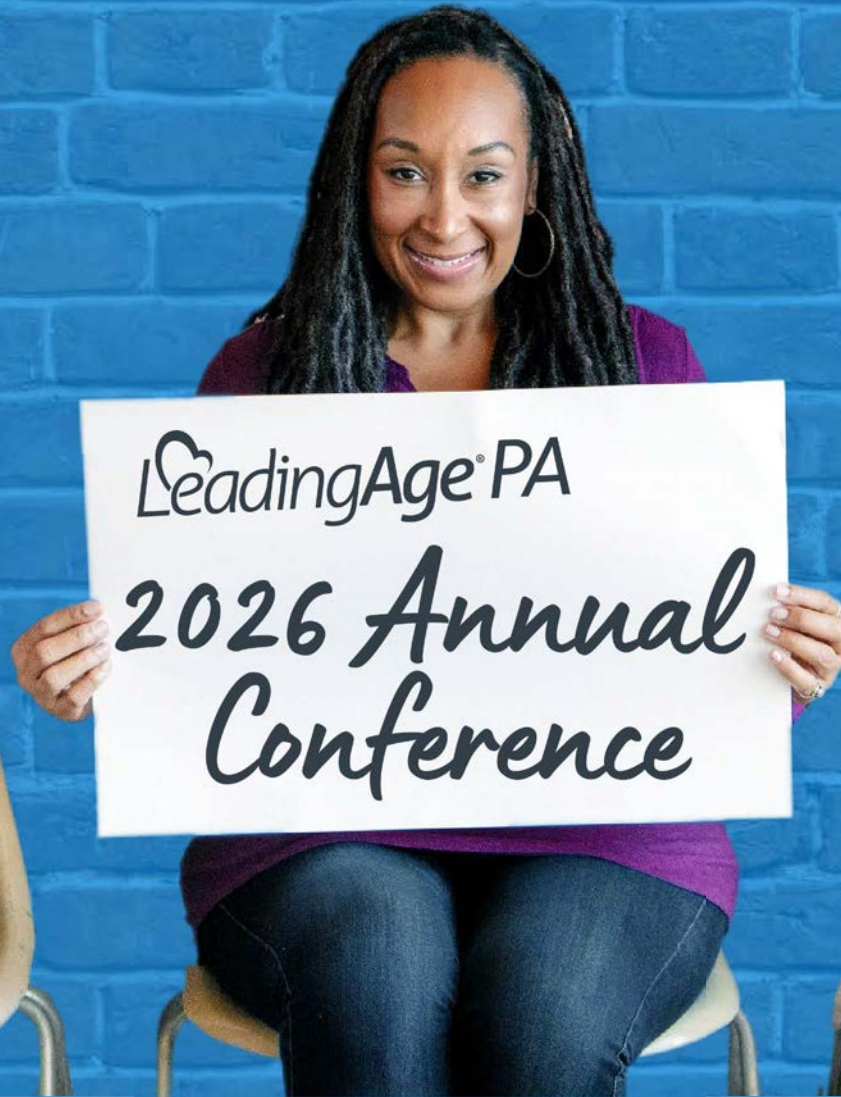


ESSEX LANDING

@ SAUGUS



Campus Operations Are Our Specialty



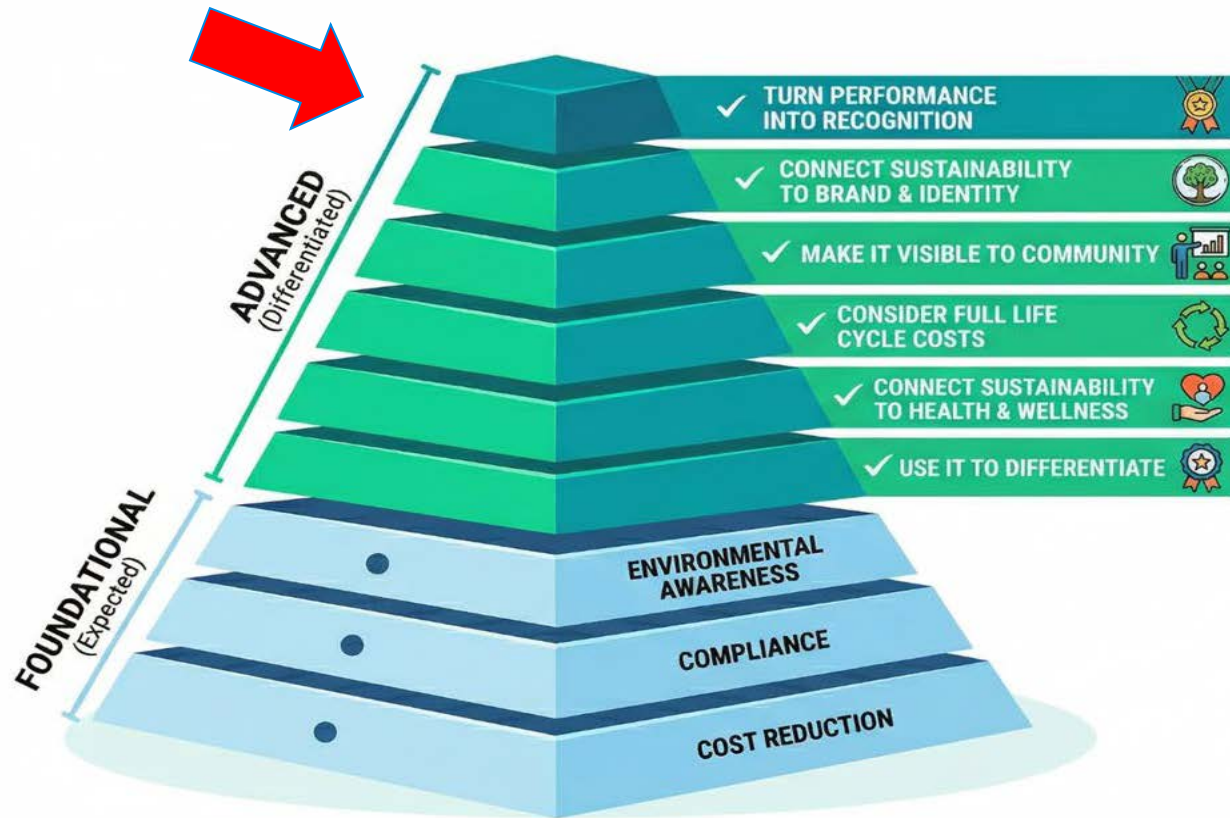
Campus-Scale Opportunity

- Campus-scale systems require a different approach and provide unique opportunities
- District energy systems create opportunities for efficiency, resilience, renewable energy, and decarbonization at scale
- Campus communities resemble a town, with food service, mail rooms, pools, movie theatres, stores, diverse landscapes, and more



The Sustainability Advantage

we want to get you here!



ADVANCED (Differentiated)

Leading institutions take it further:

- ✓ They turn performance into recognition
- ✓ They connect sustainability to brand and identity
- ✓ They make it visible to their community
- ✓ They consider full life cycle costs
- ✓ They connect sustainability to health and wellness
- ✓ They use it to differentiate

FOUNDATIONAL (Expected)

Most organizations approach sustainability as:

- Cost reduction
- Compliance
- Environmental awareness

Higher Ed Differentiators

THE STONE HOUSE GROUP
BUILDING STEWARDSHIP

25
YEARS



Member of
Decarbonization
Academy



Climate Action Partners in Higher
Education

Climate Neutral

Bates

Dickinson

HAVERFORD
COLLEGE

LAFAYETTE
COLLEGE



SWARTHMORE



Attracting and Retaining
Students...

Engaging their local and
extended communities...

Relating to Donors...

by making Sustainability a part
of their brand.

Have a plan...

“The two most powerful warriors are patience and time.”

Leo Tolstoy

If you fail to plan, you are planning to fail.”



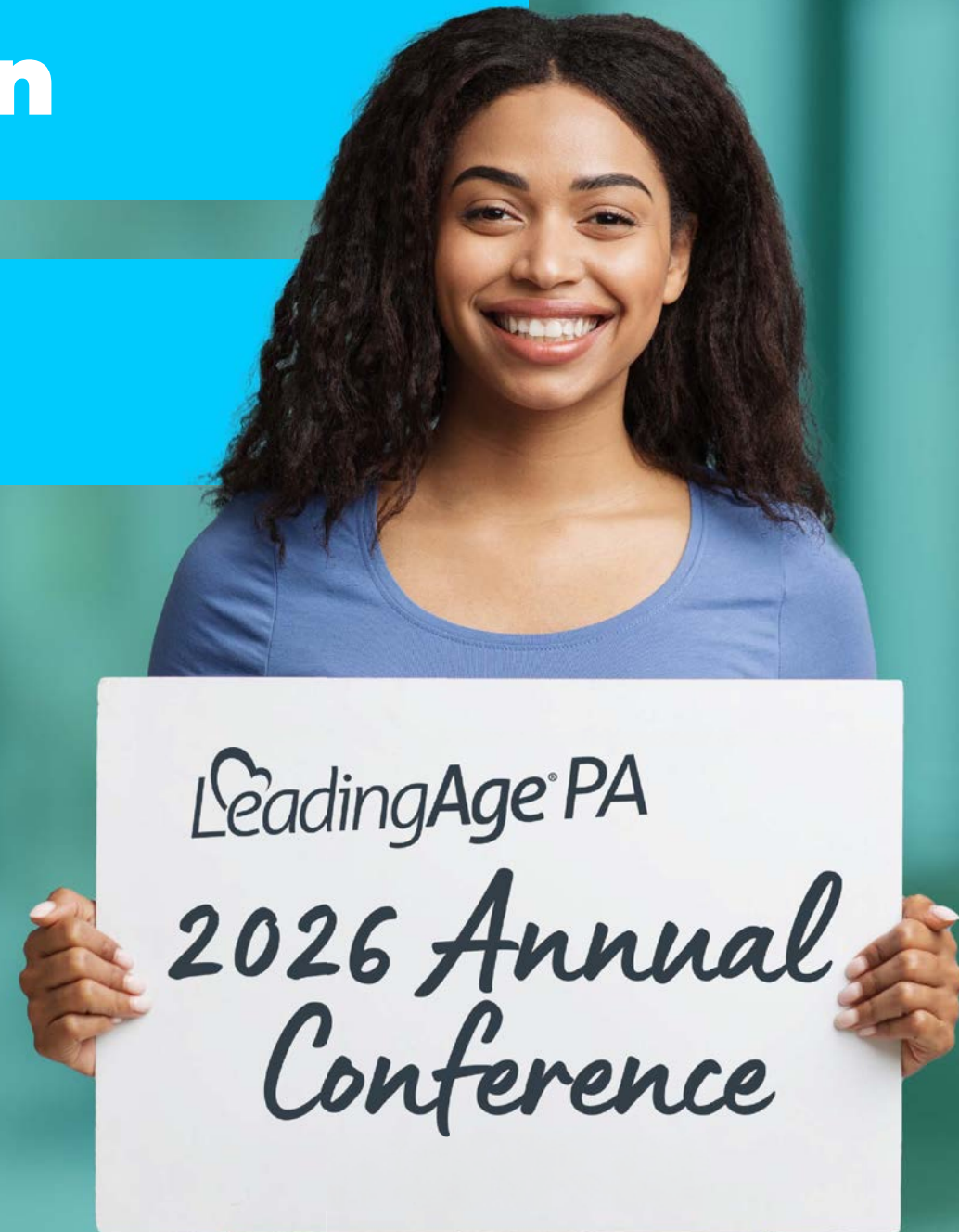
“You can’t manage what you don’t measure.”

The Stone House Group

The Literacy Foundation

History

Key Definitions & Concepts



Green Building Certifications

<h2>Regenerative</h2>	<ul style="list-style-type: none"> • LBC - Full Certification • LBC - Petal Certification • Core Green Building Certification (Core) 	 <p>LIVING BUILDING CHALLENGE</p>	 <p>CORE GREEN BUILDING CERTIFICATION</p>	
<h2>Restorative</h2>	<ul style="list-style-type: none"> • LEED Zero • Zero Energy Certification • Zero Carbon Certification 			
<h2>Sustainable</h2>	<ul style="list-style-type: none"> • LEED • BREEAM • WELL 			
<h2>Green</h2>	<ul style="list-style-type: none"> • SITES • Green Globes • Fitwel 			
<h2>Conventional</h2>	<ul style="list-style-type: none"> • ENERGY STAR • ASHRAE • ICC 			

What Certifications Really Do

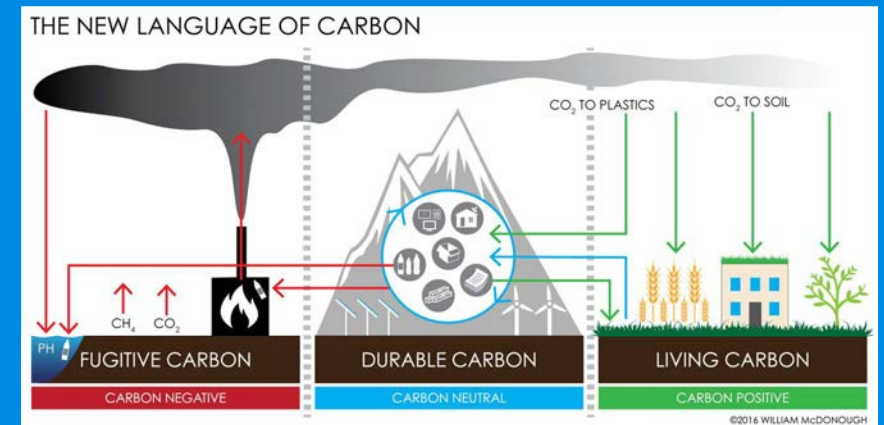
Not labels – tools for building science that:

- ✓ Measure performance
- ✓ Standardize outcomes
- ✓ Provide benchmarks

Decarbonization



- The strategic process of reducing or eliminating carbon dioxide emissions from a building's construction and operations by focusing on efficiency, electrification (e.g., HVAC heat pumps), and clean energy
- **Goal:** To achieve measurable building performance that aligns with global targets, such as Net-Zero, and leverages funding opportunities like the Inflation Reduction Act (IRA) to strengthen long-term growth



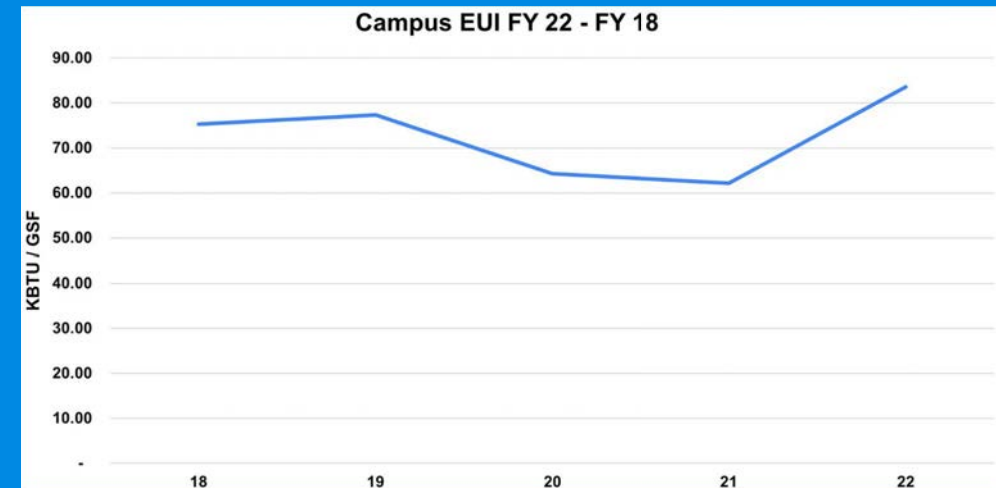
Energy Use Intensity (EUI)

- Measures energy per square foot
- Lower EUI = higher performance



How We Get It:

1. Square footage of building
2. Utility bills from previous years

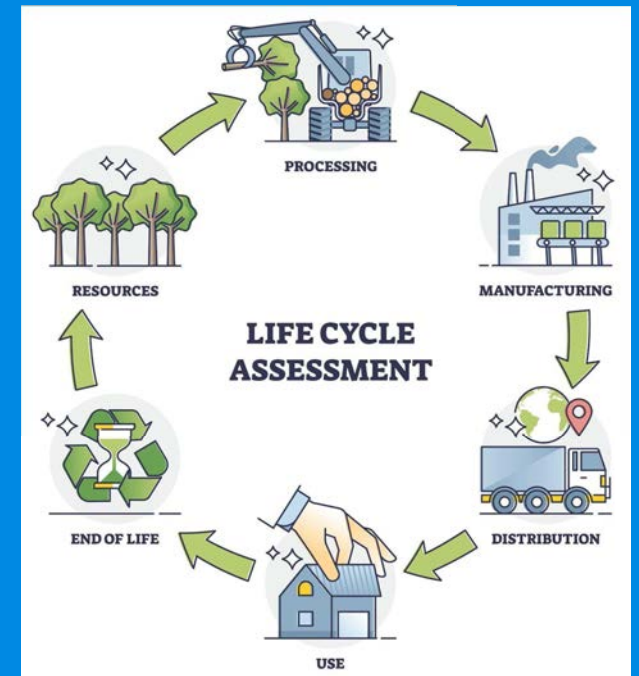


Benchmark buildings and campuses against each other!

Life Cycle Analysis (LCA)

Beyond Recycling

- LCA is a "cradle-to-grave" methodology used to evaluate the total environmental impact of a building throughout its entire lifespan
- **Goal:** To move beyond looking only at the "first cost" of construction and instead prioritize long-term environmental value and performance-driven economics.

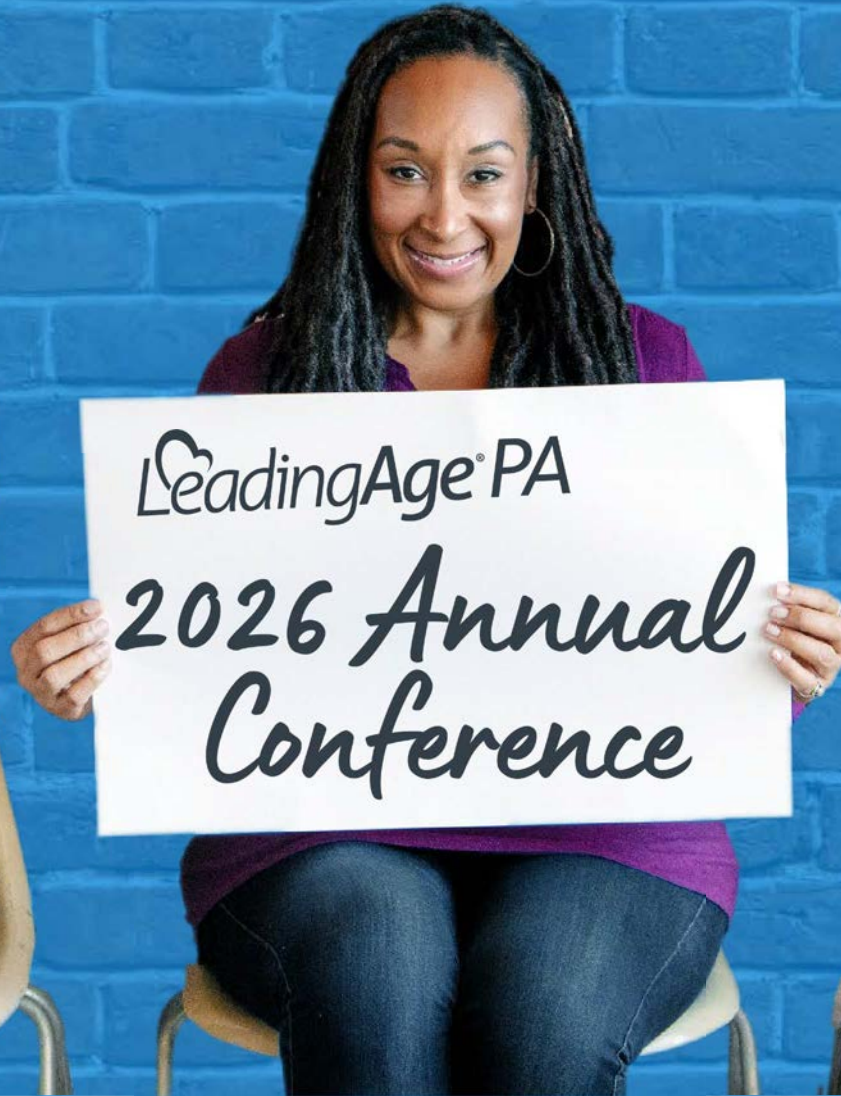


Resilience

- The capacity of a building and its systems to maintain critical functions and ensure resident comfort, health, and safety during and after disruptive events like extreme weather or power outages—reducing risk and providing peace of mind for residents and operators
- **Goal:** To future-proof the physical plant, ensuring it can withstand environmental stressors while maintaining high performance, operational continuity, and enhanced safety through reduced risk and increased resident confidence



Case Study



Case Study: Dickinson College

Achieved carbon neutrality without additional operating funds

- Carbon Neutral in 2020 (first ten!)
- Named # 1 Overall Top Performer among baccalaureate institutions for three years in AASHE's Sustainable Campus Index
- AASHE STARS Gold Rating
- Connections to Curriculum and Brand
- Connections to Student Life: Green Devil, Eco-reps, Contests, T-shirts



ZERO CARBON

ZERO CARBON. THAT'S THE GOAL WE SET IN 2007 AND REACHED IN 2020. In 14 years we cut our net emissions of carbon dioxide and other climate-changing greenhouse gases to zero from over 18,000 metric tons, making Dickinson one of the first 10 carbon-neutral colleges in the nation.

Case Study: Dickinson College

Achieved carbon neutrality without additional operating funds

- Carbon Neutral in 2020 (first ten!)
- Named #1 Overall Top Performer among liberal arts and baccalaureate institutions in AASHE's Green Campus Index
- Ranked #1 in the World for Sustainability Curriculum

Save Money

Reduce Emissions

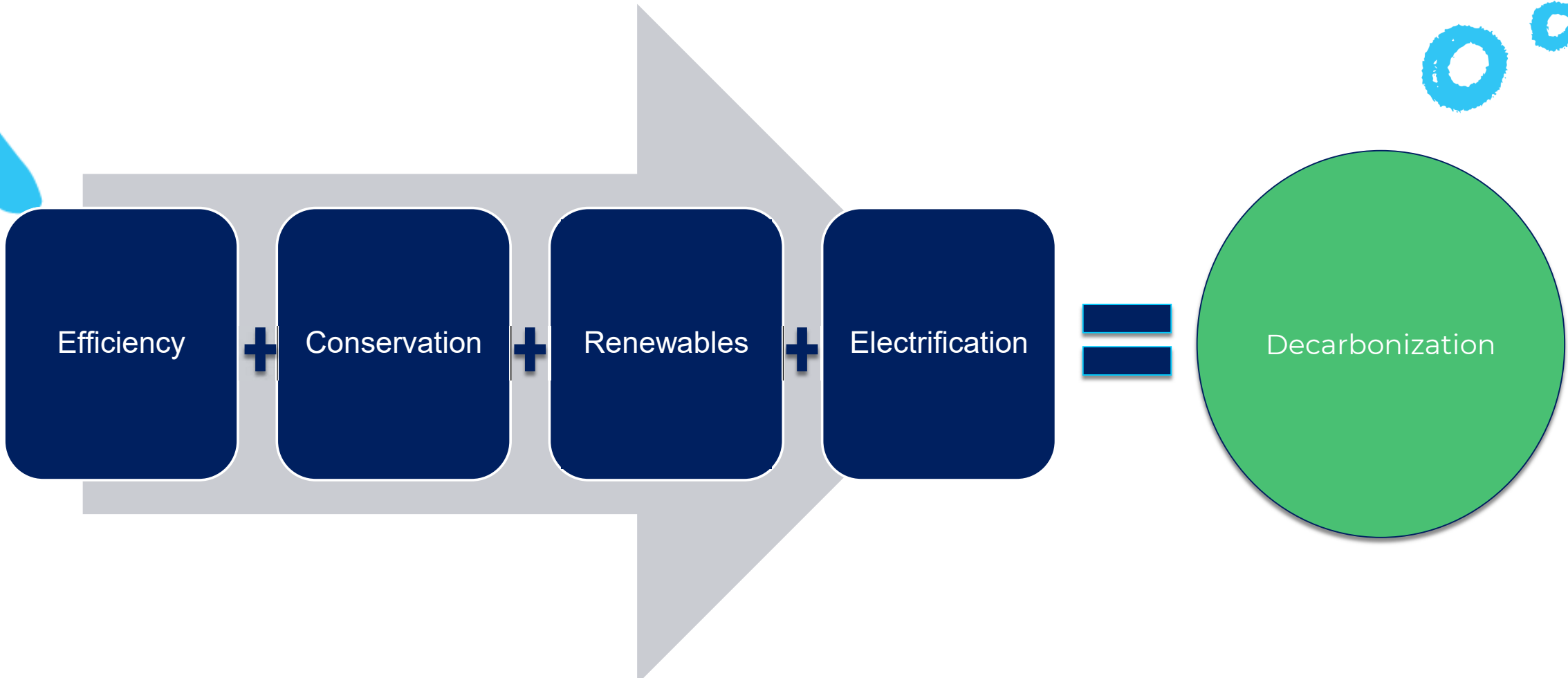
Create Distinction

- Offered a course to Student Leadership: Green Devil, Eco-reps, Contests, T-shirts



ZERO CARBON. THAT'S THE GOAL WE SET IN 2007 AND REACHED IN 2020. In 14 years we cut our net emissions of carbon dioxide and other climate-changing greenhouse gases to zero from over 18,000 metric tons, making Dickinson one of the first 10 carbon-neutral colleges in the nation.

The Decarbonization Equation



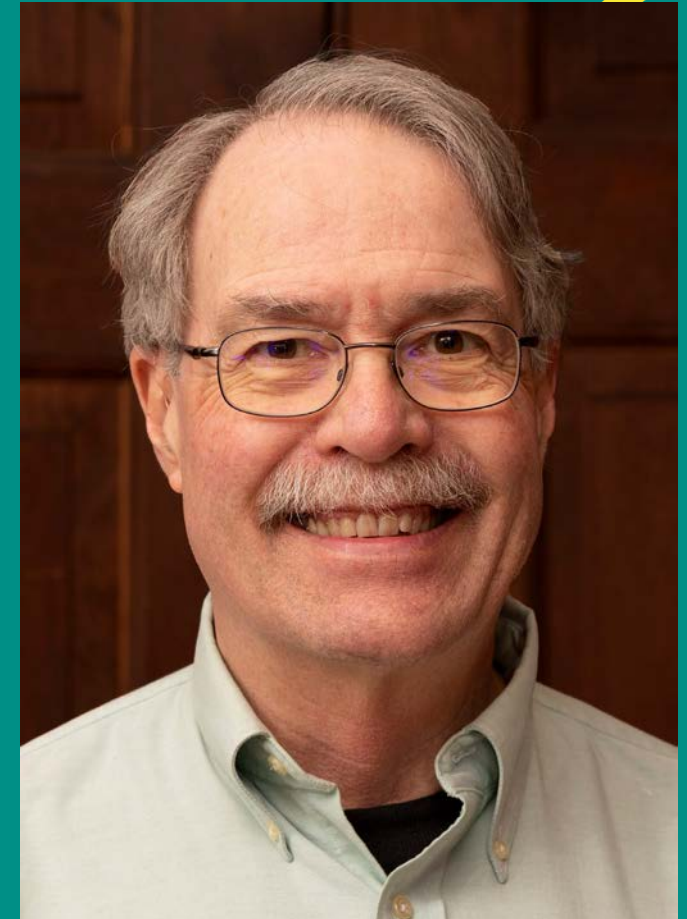
Final Takeaways

Sustainability Builds Better Communities

- Reduce Energy > Reduce Costs > Reduce Carbon Emissions
- Think beyond “Business as Usual”
- Performance Creates a Market Advantage
- “Sustainability Takes Forever”
- Sustainability Promotes Healthier Communities
- Sustainability Creates Distinction
- Sustainable Communities perform better over time
- High performing organizations result in better resident experiences

Why Is This Important?

- George Alexander, resident at Kendal at Longwood since 2019
- Background in journalism and the solar industry
- Founding member of SSAFE
- Serving in various roles on SSAFE's committees
- Creator of a variety of SSAFE presentations and documents
- Chair of Kendal at Longwood Energy Committee



What is SSAFE?

- ✓ Independent
- ✓ Non-profit organization
- ✓ Formed by Kendal residents
- ✓ Created to bring senior living communities from across the country together to work on climate change



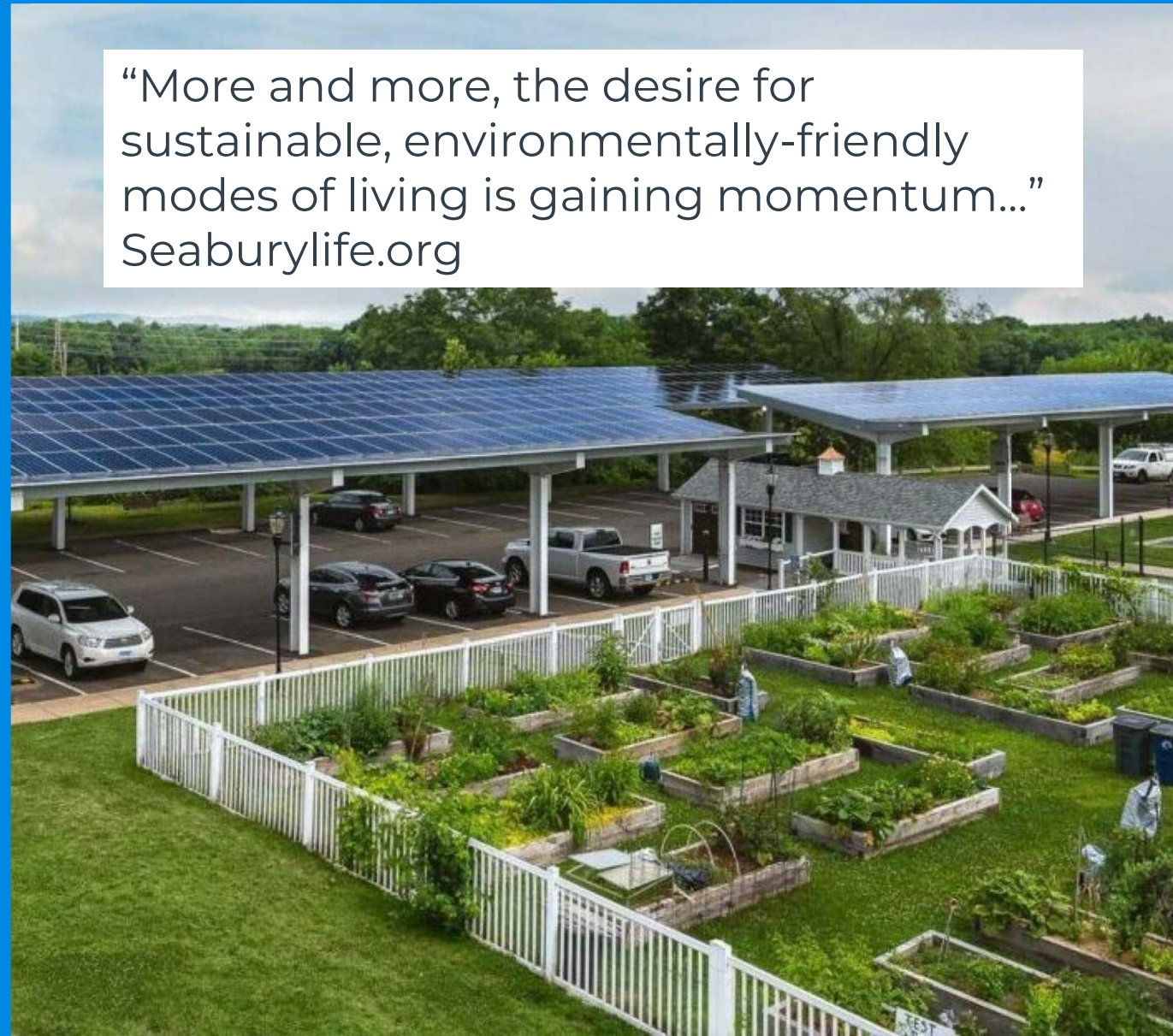
19 Chapters
1100+ members!

Why do Seniors Care About Sustainability?

- We want a **healthier world** today
- We want to leave a **better world for future generations**
- We want to **live our values**

Seabury Active Life Plan Community, newer SSAFE chapter, features extensive solar, geothermal, green restaurant, and resident gardens.

“More and more, the desire for sustainable, environmentally-friendly modes of living is gaining momentum...”
Seaburylife.org



The Senior Living Equation

1000's of Communities

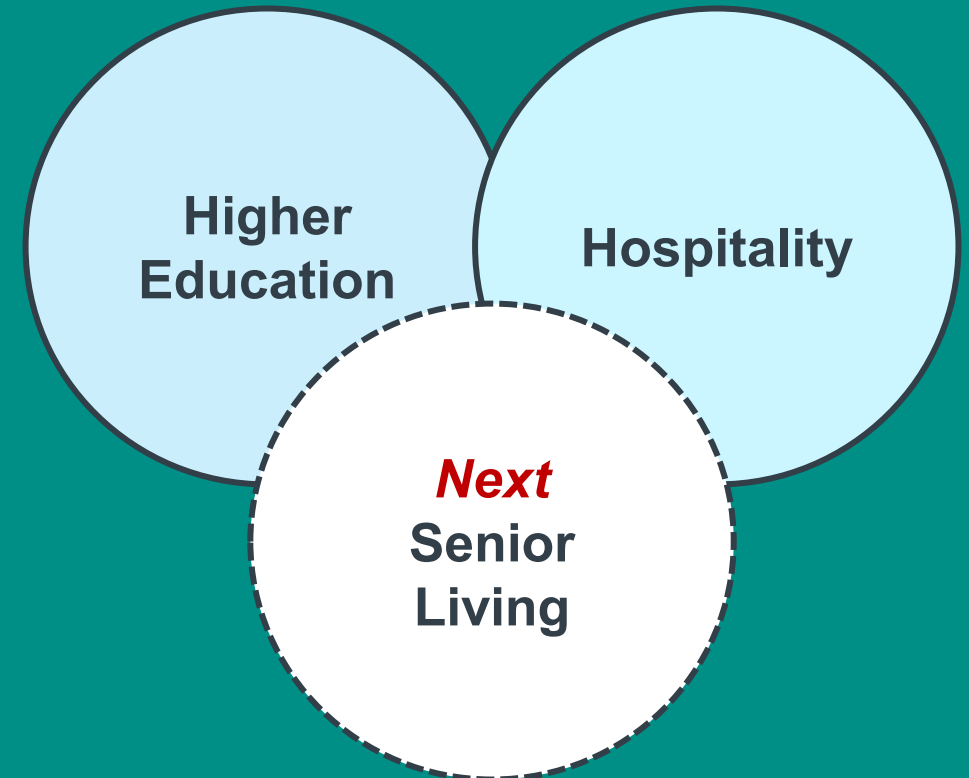
1M+ Residents

Shared Infrastructure

Centrally Managed

= Collective Impact

Similar Industries With Strong Sustainability Networks





senior living net zero



All

Images

Shopping

Videos

Forums

News

More ▾

Tools ▾



Senior Stewards Acting for the Environment

<https://ssafe.org/pathway/what-does-net-zero-mean-i...>

What Does “Net Zero” Mean in a Senior Living Context?

Achieving net zero GHG emissions by 2050 is an ambitious goal, but a critical one! In the US, there are about 2,000 Continuing Care Retirement Communities ...

SSAFE is the *only* network focused on sustainability in senior living communities. Increasingly, communities look to SSAFE for resources, ideas, and practical guidance.

SSAFE empowers seniors to lead their communities, and advance clean energy and environmental stewardship.

[New Members – Start Here](#)

[Advocacy Actions](#)

[Chapter Sustainability Tracker](#)

[Newsletter](#)

[Case Studies](#)

[SSAFE Presentation Videos](#)

[Sustainability Project Funding](#)

[Films](#)

[Books](#)

[Earth Day](#)

[ASK SSAFE Listserv](#)



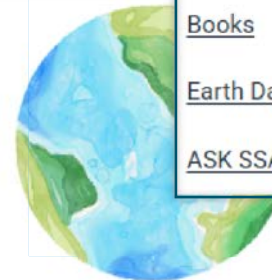
Senior Stewards
Acting For the Environment

SSAFE.org is filled with valuable resources



SSAFE Earth Day T-Shirt Fundraiser!

Show your pride in being part of the Senior Stewards Acting for the Environment

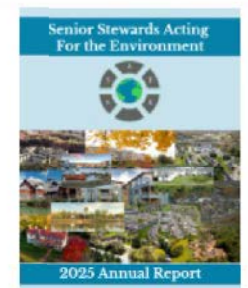


Join us! Earth Day Idea Exchange: Growing Our Efforts Together, Session 2

Join SSAFE for session 2 of



April General Meeting: 04/02 at 11 AM ET: Kathleen Dean Moore, Reweave an



The 2025 SSAFE Annual Report is Here!

We are pleased to share the 2025 SSAFE Annual Report.

SSAFE Chapters

SSAFE Cross-Campus Sustainability Tracker

	Admiral, IL	Collington, MD	Crosslands, PA	Enso Village, CA	Harrover, NH	Ithaca, NY	Lathrop E, MA	Lathrop N, MA	Lexington, VA	Longwood, PA	Oberlin, OH	Otterbein Granville, OH	Pilgrim Place	Piper Shores, ME	Riverwoods Durham, NH	RoseVilla, OR	Seabury, CT	Wake Robin, VT
Campus Sustainability Plan	✓	IP	IP	IP	IP	IP	IP		IP	✓	✓	IP	✓		IP	IP		
Campus Net Zero Plan		IP		IP	IP				IP	IP			✓		✓			
Sustainability Staff Role													✓					✓
Sustainability Fund		IP	✓			✓			✓		IP	✓						✓
Climate Resiliency Plan								IP							✓			
ESG Community Investing																IP		✓
Clean Energy (Purchased)		IP		IP	✓				IP				✓	✓	✓	✓		
Carbon Footprint Calculation (2)	✓	IP		✓	IP				✓	✓			✓	IP				✓
Energy/GHG Audit		IP	IP	✓	✓	IP	IP	IP	IP	IP				✓				
Energy Monitoring		IP	IP	✓	✓			✓	IP	✓			✓		IP			✓
EV Campus Fleet			IP	IP		IP	IP	IP	✓	IP	IP		✓	IP	IP	✓		✓
EV Chargers (Levels 1, 2, 3)		1	1,2	1,2	2	4	1,2	1,2	2	1,2	1,2	1	1,2	1,2	2	1,2	1,2,3	2
Onsite Solar			✓	✓				✓		✓	✓	IP				✓	✓	
Onsite Geothermal																	✓	
Outdated Lighting Replacement	IP	IP	✓	NA	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Peak Energy Shaving Project		✓	✓		✓		IP	IP	✓	✓								✓
Arboretum Level		1	1							1	2	1	1				1	
Composting - Central Kitchen		IP	IP	IP	✓	✓	✓			IP	✓		✓	✓	✓	✓	✓	✓
Composting - Resident	✓	✓	✓	✓	✓	✓	✓	✓	IP	✓	✓		✓	✓	✓	✓	IP	✓
Invasive Removal		✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	IP	✓	IP	✓
Land Conservation			✓				✓	✓		✓			✓				✓	✓
Resident Food Gardens	✓	✓	✓	✓	✓	✓	✓	✓		✓	IP		✓	✓	✓	✓	✓	✓
Native Plant Projects		✓	✓	IP	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	IP	✓	✓	✓
Recycling		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Recycling - Speciality Recycling	✓	✓	✓	IP	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Reuse & Repurpose			✓		✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sustainable Food Projects		✓	✓	IP		✓	IP	IP		✓		✓	✓	✓	IP		✓	✓
Water Conservation Plan		IP					IP	IP	✓			✓		✓	IP			

KEY	
Yes	✓
In Progress or In Planning	IP
L= Level (replace with number)	1, 2, 3
Discontinued	DC
No or unknown	empty
Planning Projects	blue
Energy-related Projects	yellow
Sustainability Projects	green
See the definitions document for clarification of each category.	



SSAFE tracks sustainability progress at each chapter community.

The SSAFE Pathway to Net Zero Knowledgebase

Introduction

- Executive Summary
- Welcome!
- What is Net Zero?
- Why Focus on GHGs?
- What Does "Net Zero" Mean in a Senior Living Context?
- Making the Case for Net Zero
- Creating a Pathway

Measuring & Auditing

- The Community Carbon Footprint
- Understanding Scope 1, 2, and 3 Emissions.
- Calculating Your Carbon Footprint
- DIY Spreadsheet Calculation
- Online Calculation Tools
- The Greenhouse Gas & Energy Audit
- Compensating for What You Can't Eliminate
- Terminology You May Come Across

Support & Planning

- Introduction
- Gaining Support from Residents
- Gaining Support from Administration and Staff
- Making the Financial Case
- Funding Sources
- Long Term Planning: The Campus Sustainability Plan

Specific Emission Reduction Opportunities

- Start with the Core: On-Site Fossil Fuel Uses
- Buildings and Construction
- Special Systems
- Standards and Materials
- Electrification and the Grid
- On-Site and Off-Site Green Electricity
- Resilience and Backup Power
- Cost Reduction Opportunities

Beyond Energy: Other Opportunities

- Beyond Energy: Other Opportunities

Resources & Tools

- Glossary of Key Terms
- Resources

Coming soon:
Scope 3 topics!



SSAFE.org/pathway

SSAFE Is Much More Than a Website



Resident/Administration Relationships

- Collaboration between residents and administration is essential
- Some activities can be led directly by residents
- Initiatives that involve funding require administrative support and participation.



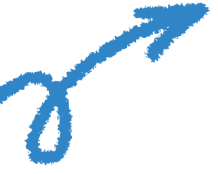
Resident-Run LED Light Replacement Program

What You Can Do



- **Identify and connect with resident-led sustainability or environmental committees.** Let them know about SSAFE and the resources available to support their efforts.
- **You may find residents with strong sustainability expertise.** Do not hesitate to invite their input—they are often delighted to help!
- **Invite residents to support your sustainability initiatives.** Their enthusiasm can help build momentum and ease concerns from others in the community.
- **Make use of available resources.** Explore *The Pathway to Net Zero for Senior Living Communities*, along with guides, templates, and educational materials at SSAFE.org.

Senior Stewards
Acting
For the
Environment



Senior Stewards
Acting For the Environment

SSAFE.org
info@ssafe.org

WAGMAN

General Construction | Heavy Civil | Geotechnical

INTEGRITY
MUTUAL RESPECT
SAFETY
INNOVATION
SENSE OF URGENCY
COMMUNITY



INNOVATION



Sustainability = a Tangible Promise



Resident Recruitment & Occupancy

What residents and prospects value:

- Health, comfort, and reliability
- Meaningful engagement and shared purpose
- Confidence their community is prepared for the future

Resident Recruitment & Occupancy – real world proof

Collington Peak Energy Use Pilot

- **Action:** Residents voluntarily reduced energy use during peak-demand alerts
- **Outcome:** Demonstrated resident engagement + grid resilience planning
- **Marketing translation:** “A community where residents actively protect comfort, reliability, and shared resources.”

<https://ssafe.org/case-study/?category=peak-energy-shaving>

Resident Recruitment & Occupancy - on a larger scale



Rose Villa – Portland, OR

- Net-zero neighborhoods
- ROSIE - gray water reclamation system
- RosePorts – part of their Resiliency Action Plan



www.rosevilla.org

Staff Recruitment & Retention

What staff care about:

- Day-to-day working conditions
- Mission & meaning – purpose driven culture (especially Gen Z and Gen Alpha)
- Pride in their workplace
- Leadership that invests in modern, people-centered operations – employees stay where leadership “walks the talk”

Staff Recruitment & Retention – real world proof

Kendal at Longwood - Electric Lawn Care Equipment

- **Action:** Replaced gas-powered tools with electric alternatives
- **Outcome:**
 - Quieter campus
 - Lower operating costs
 - Workers preferred the equipment
 - 3.3-year payback identified
- **Marketing translation:** “A healthier, quieter workplace that respects staff experience.”
- <https://ssafe.org/case-studies/lawn-care-equipment-case-study/>

Moving Forward

Start where you are  Build momentum  Lead with purpose

- ✓ Establish a baseline
- ✓ Create a realistic, phased plan
- ✓ Look for early wins that reduce cost and risk
- ✓ Engage residents and staff partners
- ✓ Use sustainability to tell a compelling story about your community

Thank You!

