



University of Illinois Campus Sustainability

Morgan B. White
Facilities & Services (F&S)

March 7, 2025

Facilities & Services (F&S)

Facilities & Services (F&S) provides all physical plant, operational, and essential services for sustaining an environment that fosters the research, teaching, and public engagement activities at Illinois.



Facilities & Services
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Inspiration • Innovation • Leadership • Perseverance • Agility



We shepherd innovative, interdisciplinary, inclusive solutions through collaboration, cutting-edge science, and stakeholder partnerships to help transition society to sustainable energy, agriculture, resource, and infrastructure systems while mitigating and adapting to climate change



We offer hands-on learning experiences for the next generation of sustainability leaders, advocates, communicators, and professionals — and outreach that blends research, policy, and advocacy to guide sustainability discussions and develop consensus solutions

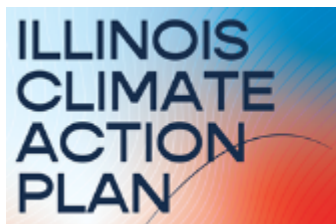
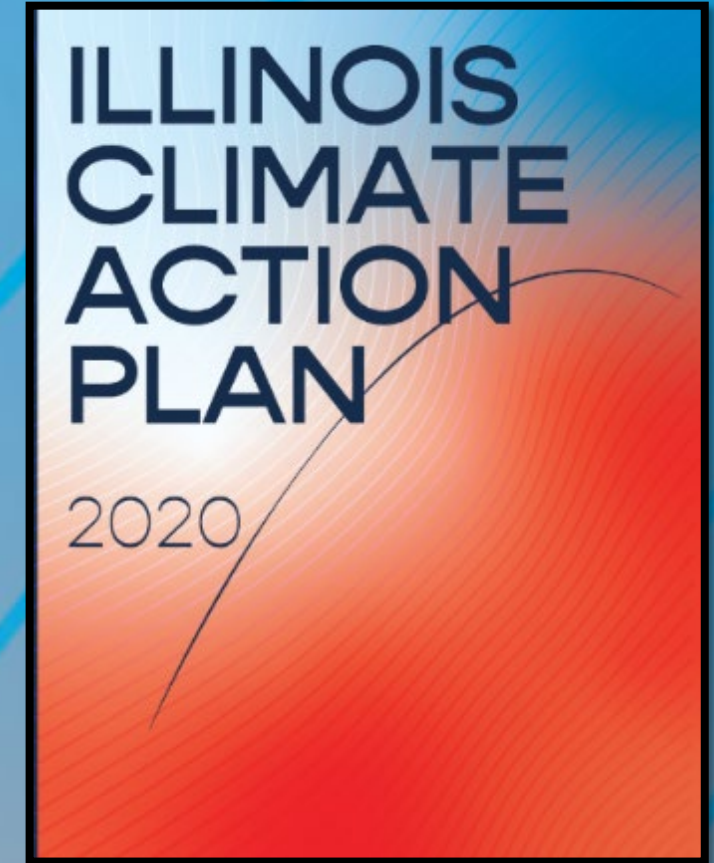


As a worldwide model for sustainability, we coalesce the aspirations of students, faculty, staff, and leadership to chart a united path to carbon neutrality, zero waste, and climate resilience — and we use campus as a living lab to test innovative, equitable solutions with global applications



Illinois Climate Action Plan (iCAP) 2020

- The iCAP is our strategic plan for meeting the Climate Leadership Commitments
- SMART objectives for each theme, tracked on iCAP Portal (<http://icap.sustainability.illinois.edu>)



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Climate Leadership Commitments



- Signed by 500+ leading American higher education presidents and chancellors
- 2008: signed the Carbon Commitment, pledging to be carbon neutral as soon as possible and no later than 2050
- 2016: signed the Resilience Commitment, pledging to build resilience to climate change with our local community

iCAP Portal

iCAP Portal
Illinois Climate Action Plan (iCAP)
University of Illinois Urbana-Champaign

MENU THEMES SEARCH

Welcome to the iCAP Portal

The Illinois Climate Action Plan (iCAP) is the strategic framework for meeting our Climate Leadership Commitments to be carbon-neutral by 2050 and build resilience with our local community.

[Learn about the iCAP](#)



[View more videos »](#)

Featured Updates

Education iCAP Team March 2025 Meeting 3/5/2025

[Sustainability at Career Fairs](#), [Sustainability Tracking, Assessment & Rating System™ \(STARS\)](#), [Sustainability Gen-Ed Requirement](#), [Sustainability Literacy Assessment](#), [Sustainability Internship Program](#)

The iCAP Education team met on teams from 4-5 pm on Monday March 3rd. First, we recapped the Green Career Forum and the Green Career Panel. Then we discussed updates on the collection of data for the AASHE Stars report, integrating sustainability...

Transportation Team Meeting 3/4/2025

[Transportation iCAP Team](#)

Great meeting for the Transportation Team, discussing future projects and EV infrastructure possibilities on campus.

Looking forward to the Green Globes and Bike to Earth event!

Bus, Bike, and Hike Week: Urbana's initiative for alternative transportation 3/2/2025

[Community Bicycle Events and Rides](#)

Attached is a news article titled Urbana's Feet Hit the Streets, 1977, covering Urbana's "Bus, Bike, and Hike Week." This was among the initial initiatives promoting alternative transportation to reduce traffic, pollution, and...

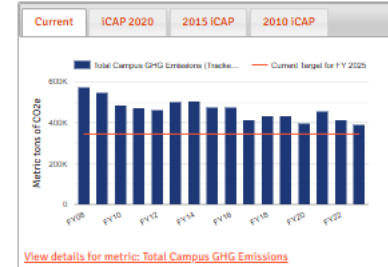
[View all updates »](#)

Objectives Dashboard

Our Objectives Dashboard links iCAP Objectives to key performance metrics tracking our progress toward achieving the Climate Leadership Commitments.

[View Objectives Dashboard](#)

Total Campus GHG Emissions



[View details for metric: Total Campus GHG Emissions](#)

Highlights

[iCAP Project Map](#)

[iCAP Working Group \(iWG\)](#)

[Student Sustainability Committee](#)

Sustainability Themes

iCAP Projects are organized into ten themes to help you find the projects of interest to you: Energy, Transportation, Water, Zero Waste, Land, Reporting, Outreach, Education, Research, and Funding.

[View Projects by Theme](#)

Image Gallery

Many projects have associated image galleries. You can see the images for a project by visiting the project page or view the site-wide image gallery:

[View Image Gallery](#)



Our Numbers

6,789

PROJECT UPDATES
showing project histories

961

PROJECTS
in the iCAP Portal

155

METRICS
demonstrating progress

Suggestions?

If you have an idea to share or know of an existing project not listed here, we want to know about it! All the iCAP Projects began as someone's suggestion.

[Send us your suggestions](#)



[Illini Lights Out](#) began as a student suggestion!



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Institute for Sustainability, Energy, and Environment (iSEE)



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ILLINOIS
CLIMATE
ACTION
PLAN



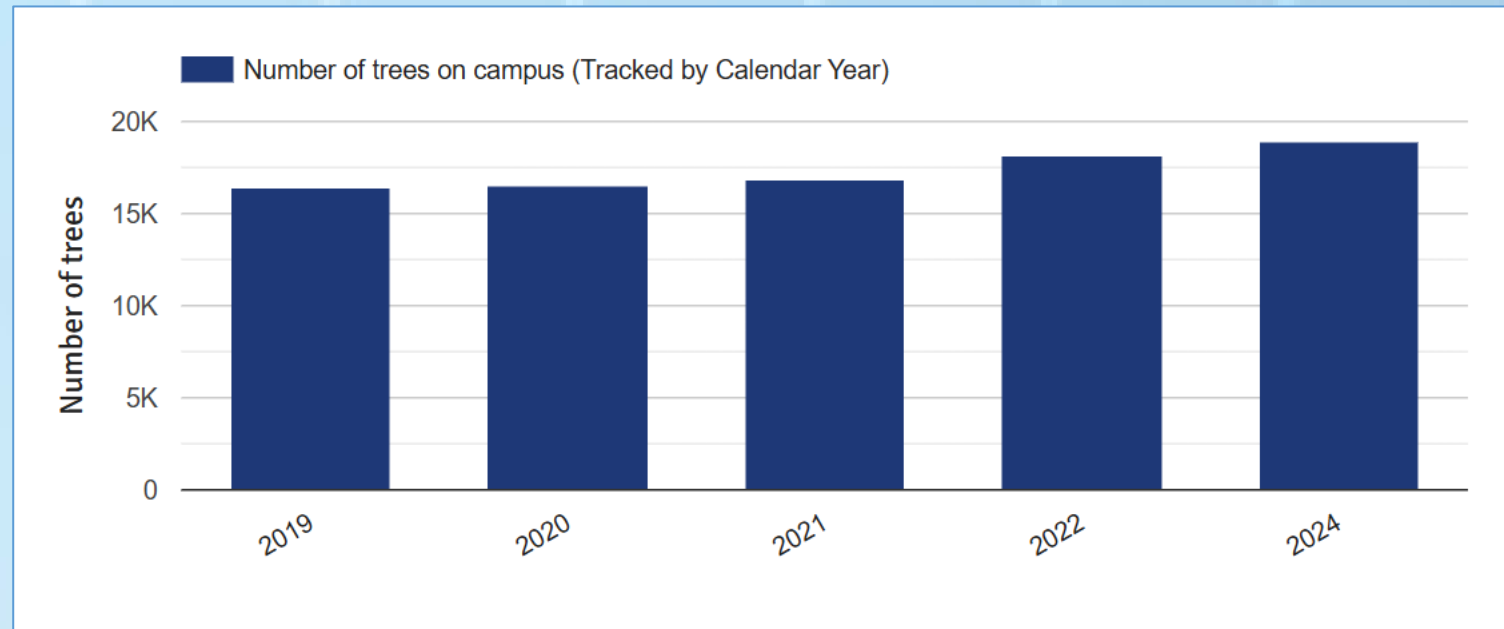
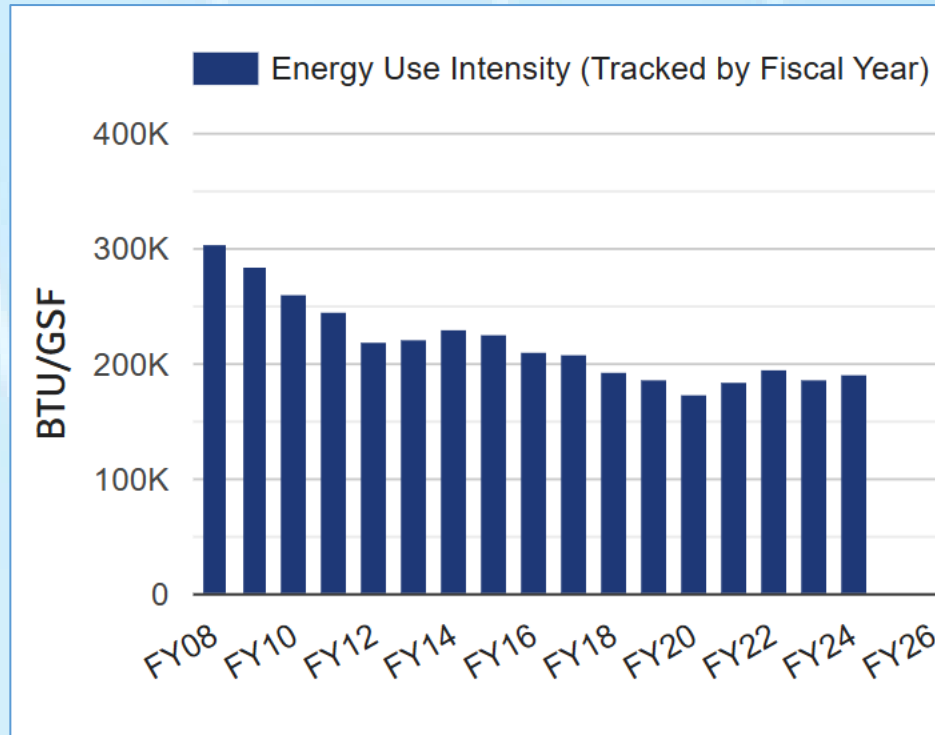
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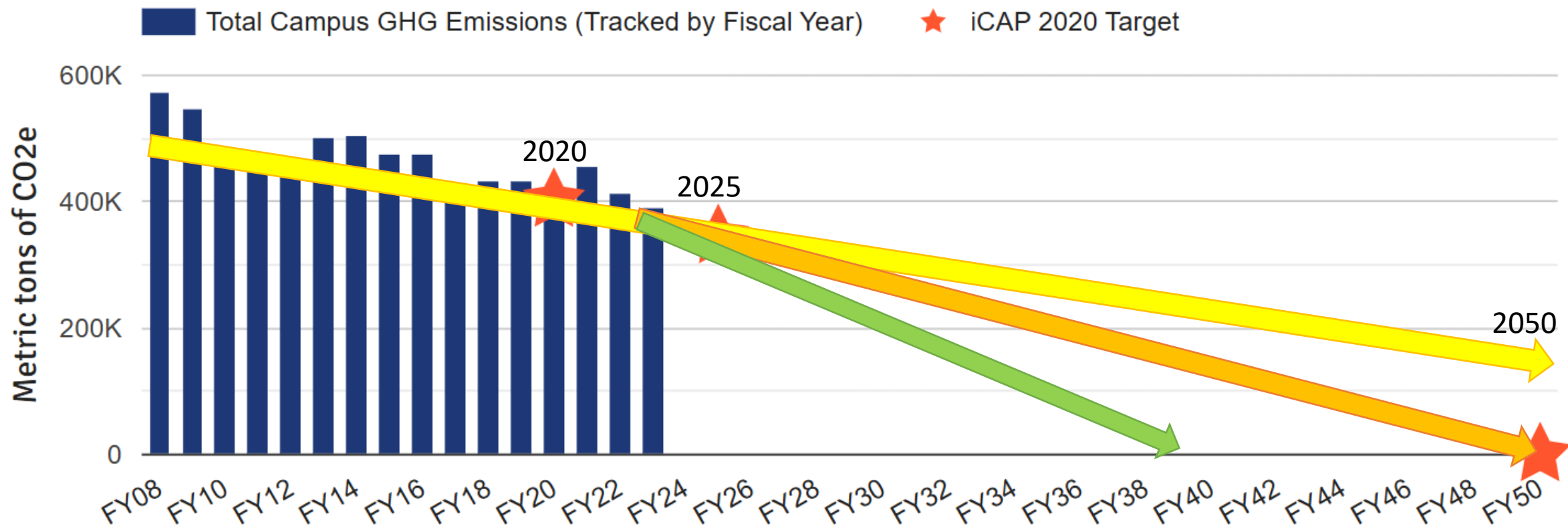
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iCAP Metrics

<https://icap.sustainability.illinois.edu/objectives>



Total Campus Greenhouse Gas Emissions



iCAP Teams

Topics

- Energy
- Land and Water
- Transportation
- Zero Waste
- Education
- Resilience
- Engagement

Members

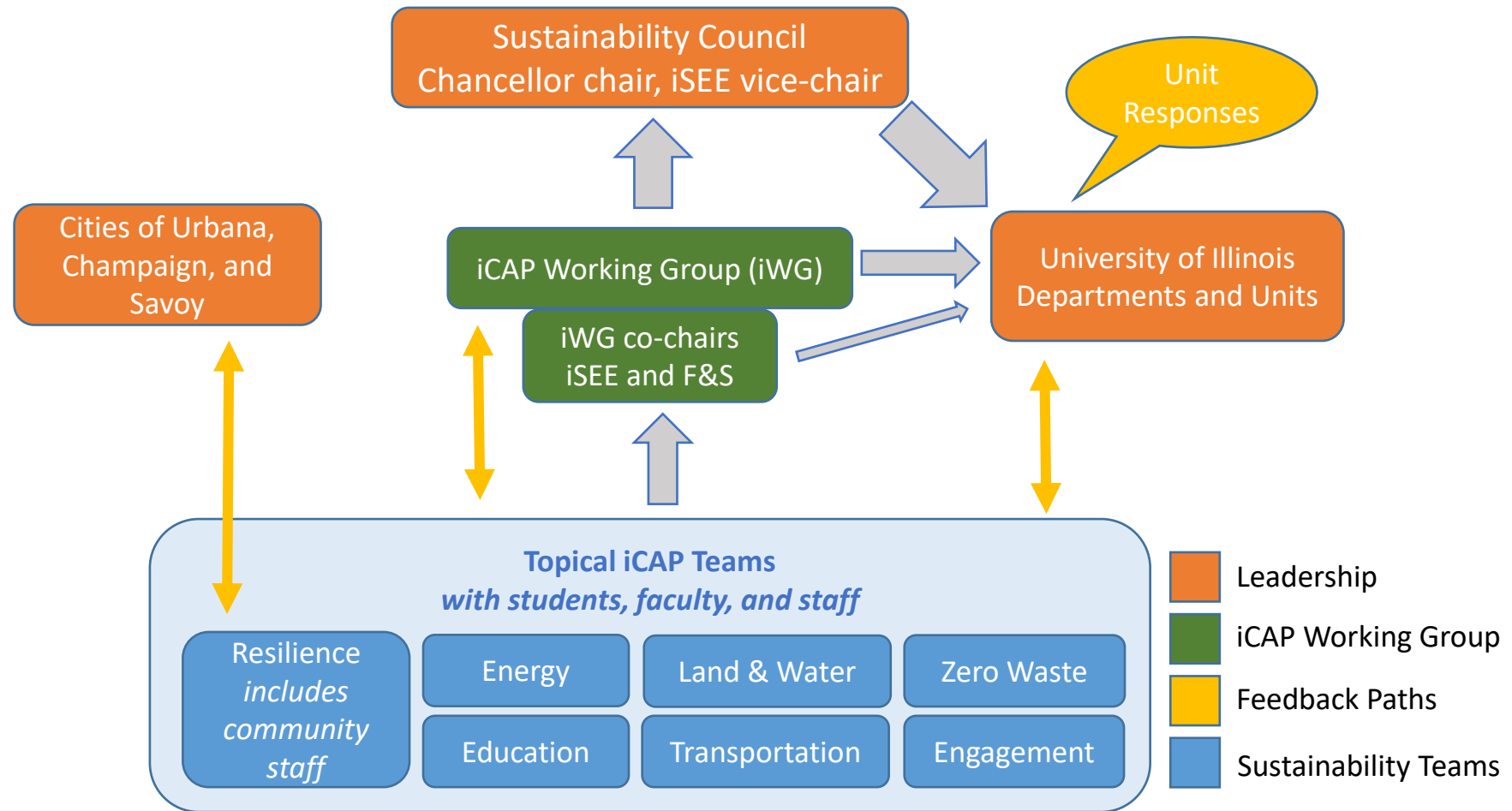
- Students
- Faculty
- Staff

Ex-officio

- Student Clerks
- Consultants



Illinois Climate Action Plan (iCAP) Process



Energy

2.1 Energy Planning Document – F&S

2.2 Increase Energy Efficiency – F&S

2.2.1 Improve Space Utilization – Provost

2.2.2 Reduce Building-level Energy – Units w/F&S

2.3 Clean Energy Sources – F&S

2.3.1 140,000 MWh/year Clean Power – F&S

2.3.2 Clean Thermal Energy – F&S





Clean Power Goals

generate

25,000



**megawatt hours/year
of solar on campus by FY25**

obtain

140,000



**megawatt hours/year
from clean energy by FY25**

**ILLINOIS
CLIMATE
ACTION
PLAN**



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Small and Medium-Scale Solar

- 2009, Business Instructional Facility 43 MWh/year
 - 2014, Building Research Council 25 MWh/year
 - **2015 – goal to reach 5% clean power, RECs purchase 20,000 MWh/year**
 - 2016, Wassaja Residence Hall 43 MWh/year
 - 2019, Electrical & Computer Engineering Building 280 MWh/year
 - 2020, I-Hotel and Conference Center 103 MWh/year
-
- ❖ Uni High Gym, President's Shed, Idea Garden Shed, Allerton Park
 - ❖ Illinois Solar Decathlon Houses on- and off-campus



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Solar Farm 1.0

18,867 Panels
5.87 MW → ~7,000 MWh/year
~ 650 typical homes

SYSTEM SUMMARY

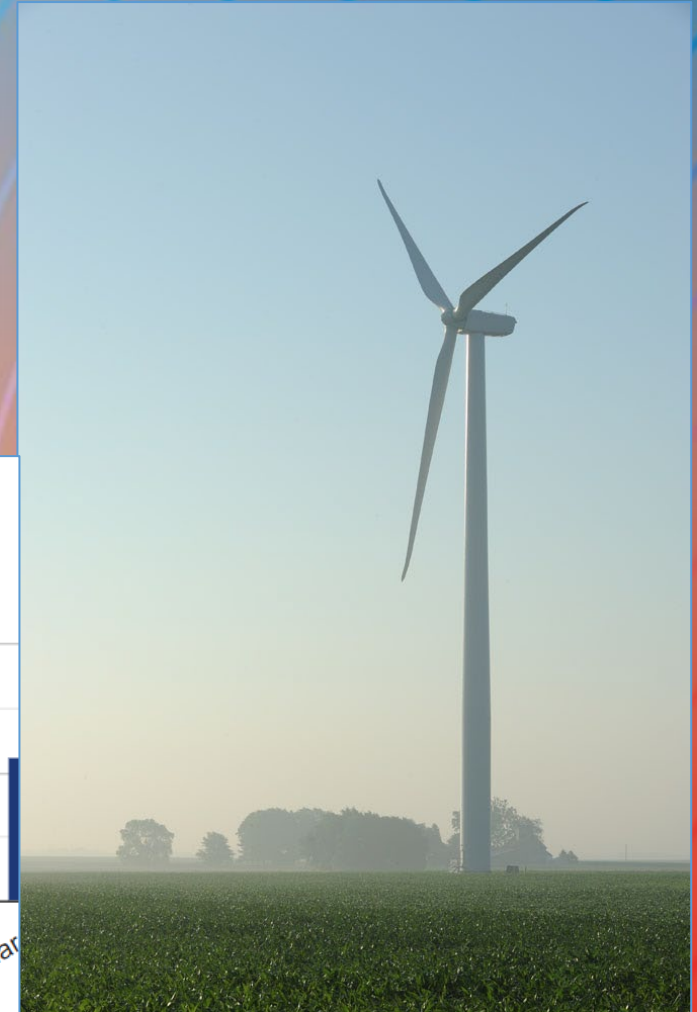
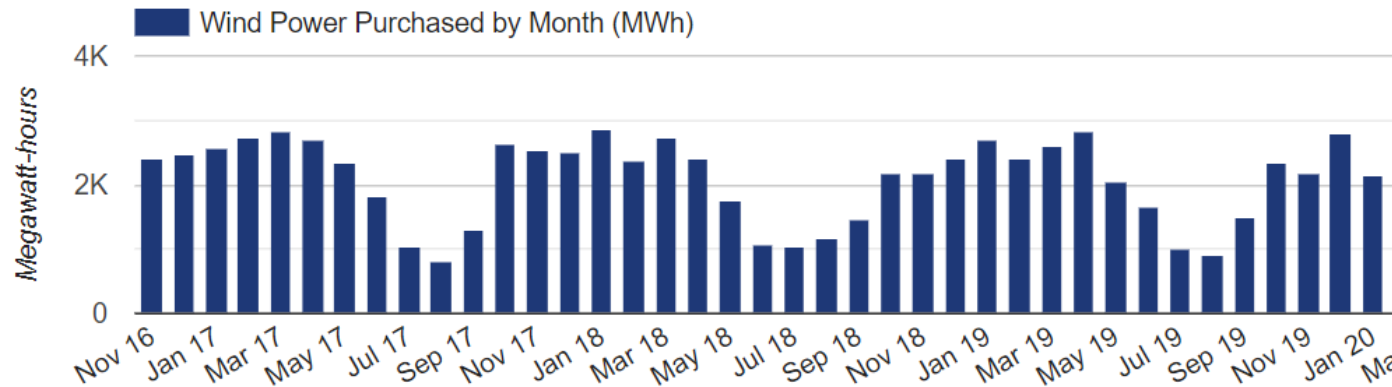
MODULE MODEL	HANWHA Q.PRO L-G3.1 310	HANWHA Q.PRO L-G3.1 315
MODULE STC DC RATING	310W	315W
INVERTER MODEL	ABB ULTRA 1560 TL	
INVERTER STATION(S)	STATION 2 + STATION 3	STATION 1
MODULES PER SOURCE CIRCUIT	19	19
TOTAL MODULE COUNT	12654	6213
TOTAL STC DC SYSTEM SIZE	3.92 MW	1.96 MW
TOTAL AC SYSTEM SIZE	3.12 MW	1.56 MW
DC: AC RATIO	1.237	1.234
RACKING SYSTEM	FIXED TILT	
GROUND COVERAGE RATIO (GCR)	.57	
MODULE TILT	20°	
ARRAY AZIMUTH	180° (DUE SOUTH)	
SITE LATITUDE	40°04'54"N	
RECORD LOW (°C)*	-23°C	
RECORD HIGH (°C)*	33°C	
* DATA FOR UNIVERSITY OF ILLINOIS, CHAMPAIGN, ILLINOIS		



Wind PPA

- Ten Year Power Purchase Agreement (PPA)
- Lincoln, Illinois, Rail Splitter Wind Farm, LLC
- Approximately 25,000 MWh/year
- Physical power and RECs, as the wind blows

Wind Power Purchased by Month (MWh) (Tracked by Month)



Solar Farm 2.0

- Capacity 12.3 Megawatts (direct current)
- Four inverters with 98.8% efficiency
- 31,122 bi-facial monocrystalline panels
- 399 rows of solar panels
- Zero waste construction
- North-south, self-powered tracking system
- Pollinator-friendly plants
- Landscape Buffer along Curtis Road
 - with funding from Student Sustainability Committee (SSC)



Transportation

- 3.1 Fleet Replacement Plans – Fleet Managers w/F&S**
- 3.2 Increase Pavement Condition Index – F&S**
- 3.3 Electric Vehicle Task Force - Parking**
- 3.4 Reduce Driving on Campus – F&S**
 - 3.4.1 Develop a Commuter Program – Parking w/F&S**
 - 3.4.2 Implement Campus Bike Plan – F&S**
 - 3.4.3 Telecommuting Policies – F&S w/IHR**
- 3.5 Offset Air Travel Emissions - iSEE**

**Give your feedback about bike programs,
infrastructure, and education at
go.fs.illinois.edu/BikePlanPublicInput**



2023-2027

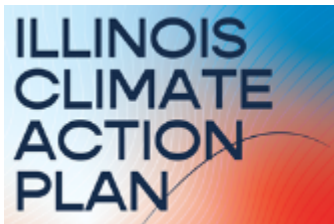
THE LEAGUE

OF AMERICAN BICYCLISTS



EV Charging Station Research

- Funding support through Institute for Sustainability, Energy, and Environment
- Research faculty team working with F&S and Parking
- Studying EV charging usage with Type 1 and Type 2 chargers
- Varying rates and restrictions to evaluate policy options



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Zero Waste

5.1 Sustainable Procurement Reports - Purchasing

5.2 Reduce Landfilled Waste – F&S

5.2.1 Install Appropriate Infrastructure – F&S

5.3 Establish a Culture of Reuse – F&S w/Provost

5.3.1 Zero Waste Messaging Campaign – F&S

5.4 Reduce Food Scraps – F&S

5.5 Plan for Organic Waste – F&S

5.6 Use Local Food - Housing

5.6.1 Food Literacy Project – Housing

5.7 Green Cleaning Program – F&S



Zero Waste



Launched Tailgate Recycling

- Expanded recycling-oriented events to address both basketball & tailgate waste.
- Coordinated 4 tailgate events over 2 football seasons: 40+ volunteers engaged.

Exploring Sustainable Procurement

- Identifying challenges & opportunities for an environmentally preferable procurement (EPP) guide.

Completed Waste Characterization

- Illinois Sustainable Technology Center audited 8 campus facilities over a week-long period in October 2023.
- Report identifies 39+ recommendations to inform waste diversion efforts going forward.

Land & Water

4.1 Reduce Water Consumption – F&S

4.2 Implement Resilient Landscape Strategy – F&S

4.2.1 Increase Number of Trees – F&S

4.2.2 Increase Pollinator-Friendly Areas – F&S

4.2.3 Double Green Infrastructure Installations – F&S

4.3 Cover Crops on South Farms – ACES

4.4 Monitor Soil Health - ACES

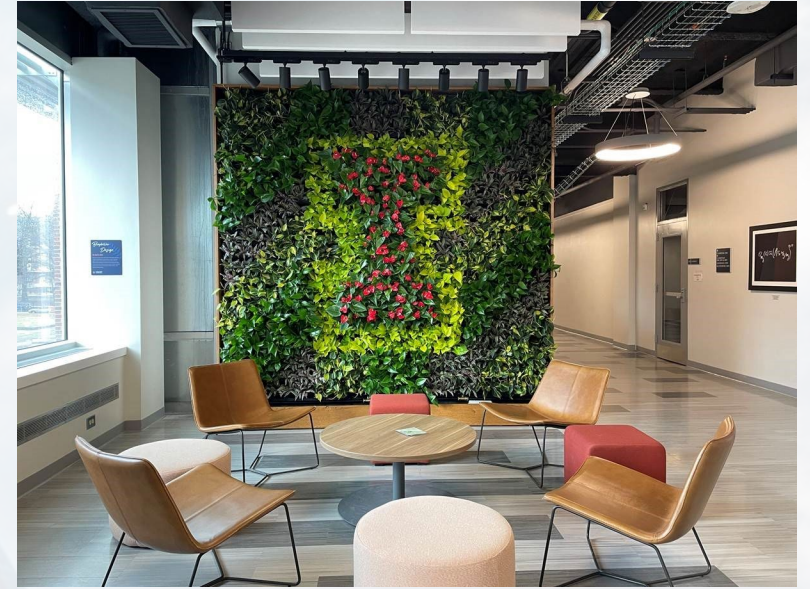


Resilient Landscape Strategy

- 1. Develop a Landscape Master Plan**
- 2. Establish a Landscapes Department in F&S**
- 3. Achieve exemplary rainwater management**
- 4. Revise staffing and training at F&S Grounds**
- 5. Allocate \$1M/year to Landscape Improvements**
- 6. Create a Rainwater Utility Fee in UES Enterprise**

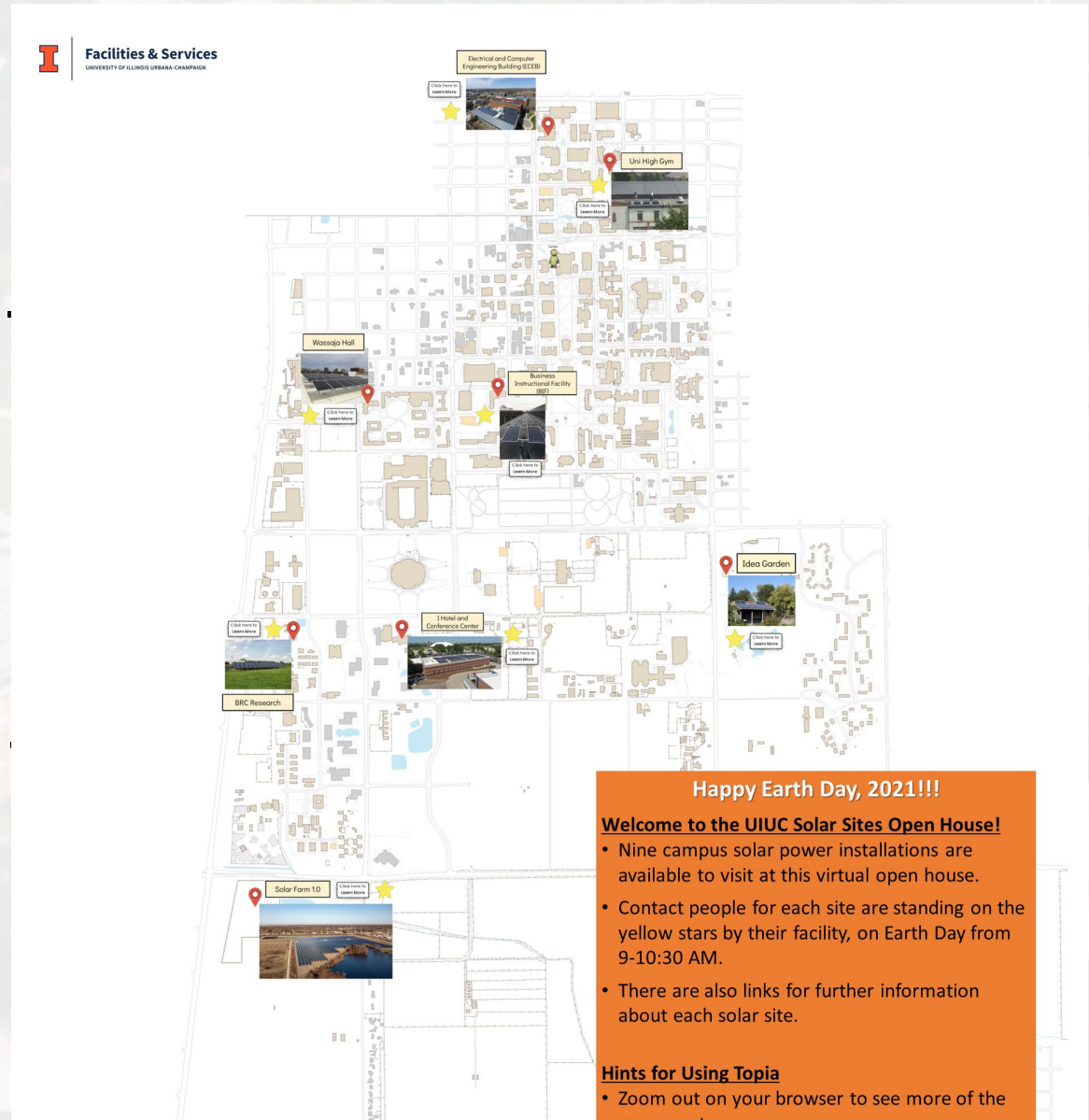
Education

- 6.1 Broaden Sustainability Education - iSEE**
- 6.2 Sustainability Course Catalog – iSEE**
- 6.3 Environmental Leadership Program - iSEE**
- 6.4 Sustainability Internship Program - iSEE**
- 6.5 Sustainability at Career Fairs – Career Center w/iSEE**
- 6.6 Graduate Certificate in Sustainability - iSEE**



Engagement

- 7.1 Green Certifications – iSEE
- 7.2 Sustainable Events Program
- 7.3 Green Sports Alliance – DIA
- 7.4 Local Collaborations – iSEE
- 7.5 Support Youth Sustainability
- 7.6 iCAP Portal Updates – iSEE



Resilience

- 8.1 Urban Biodiversity Master Plan – Extension w/F&S**
- 8.2 Coordinated Rainwater Management – F&S w/Extension**
- 8.3 Environmental Justice Plan - iSEE**
- 8.4 Local Sustainability Issues - iSEE**
- 8.5 Inventory Green Jobs - iSEE**
- 8.6 Vision Zero – F&S**
- 8.7 Local Offsets Program - iSEE**

Recent Achievements

Ranked 9th in Water Category

Lifetime ECIP
Achievement
Award: **Kent
Reifsteck**



2024

Sustainable Campus Index



International Living
Future Institute:
ECE Building

CERTIFIED
**ZERO
ENERGY**

**Carbon Capture
Test Network**

International Carbon Capture Test Network

Abbott Power Plant - international recognition for UIUC



Goal of International Test Center Network : Share knowledge (safety, test execution, technology screening, funding, analytical techniques, data analysis, construction, operation) among member facilities

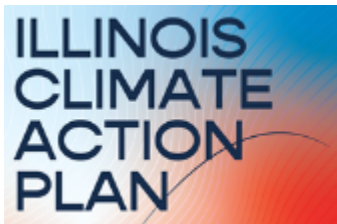
2024 System of the Year Award

International District Energy Association (IDEA)



“This is an incredible honor for the university and a credit to the nonstop dedication and professionalism of our staff. Their operational excellence continues to strengthen on our remarkable legacy of providing dependable heating, power, and cooling to the campus through detailed long-term planning, innovation, and academic collaboration.”

~Rob Roman, F&S
Director of Utilities & Energy Services

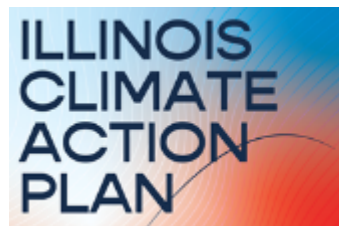
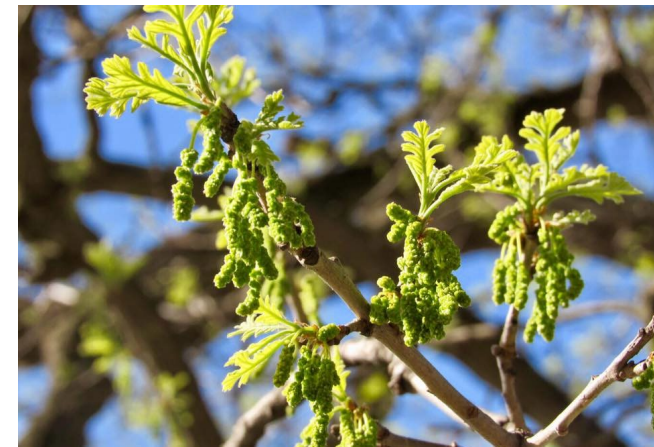
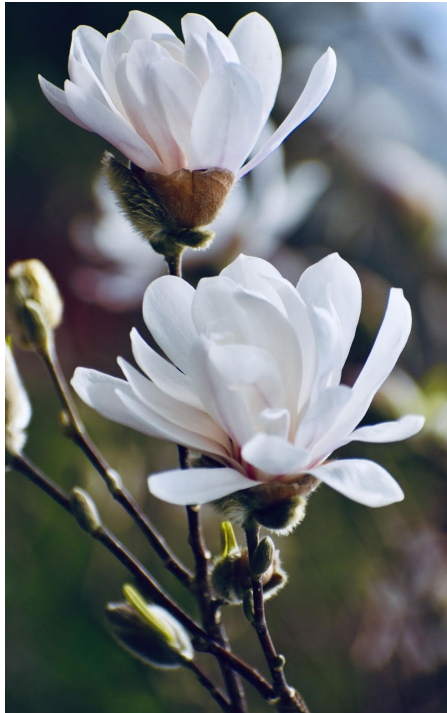


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Thank you!



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