

# Sustainability Council, November 2024

Madhu Khanna

*Alvin H. Baum Family Fund Chair & Director*



## iSEE

Institute for Sustainability,  
Energy, and Environment



UNIVERSITY OF  
**ILLINOIS**  
URBANA-CHAMPAIGN



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- Elizabeth Murphy, Managing Director, iSEE
- Morgan White, Associate Director of F&S, Sustainability, iWG Co-Chair
- Miriam Keep, Sustainability Programs Coordinator, iSEE





## Agenda for Today

### iCAP 2025 development process

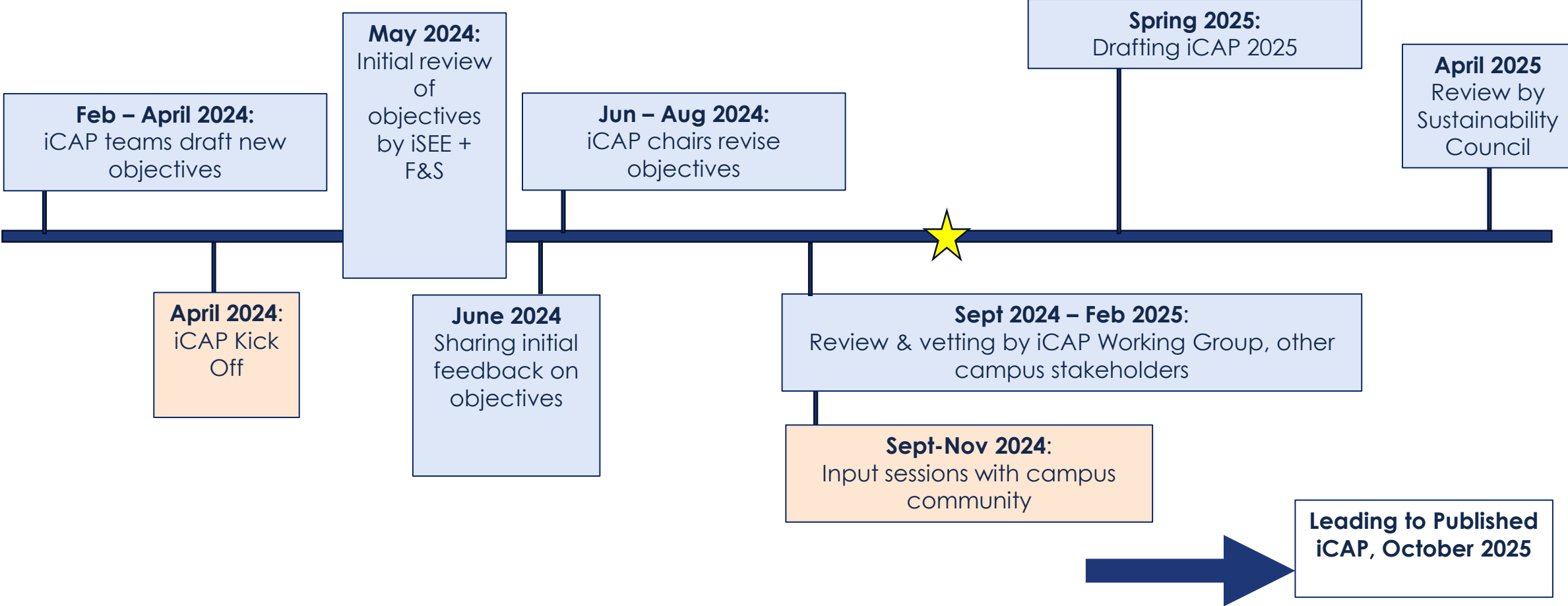
a) Timeline

b) Progress on iCAP 2020 goals

c) Challenges and opportunities  
going forward

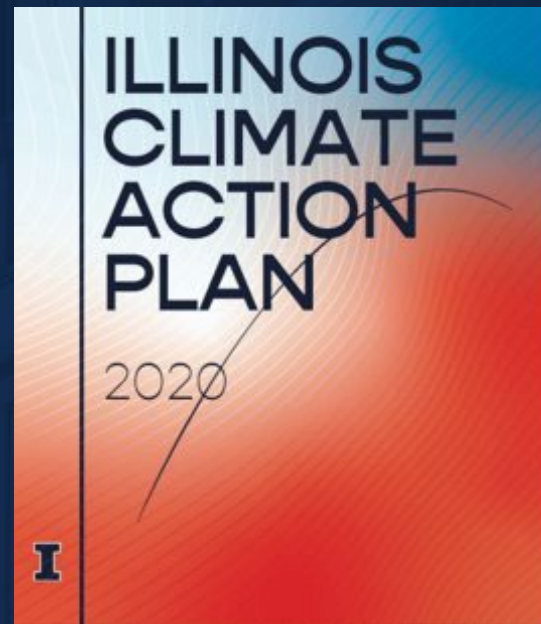
- i. Trends in energy efficiency  
and space
- ii. Funding opportunities
- iii. Dealing with the question  
of divestment
- iv. Resilience

# iCAP 2025 Development Timeline





# Progress on iCAP 2020 Goals

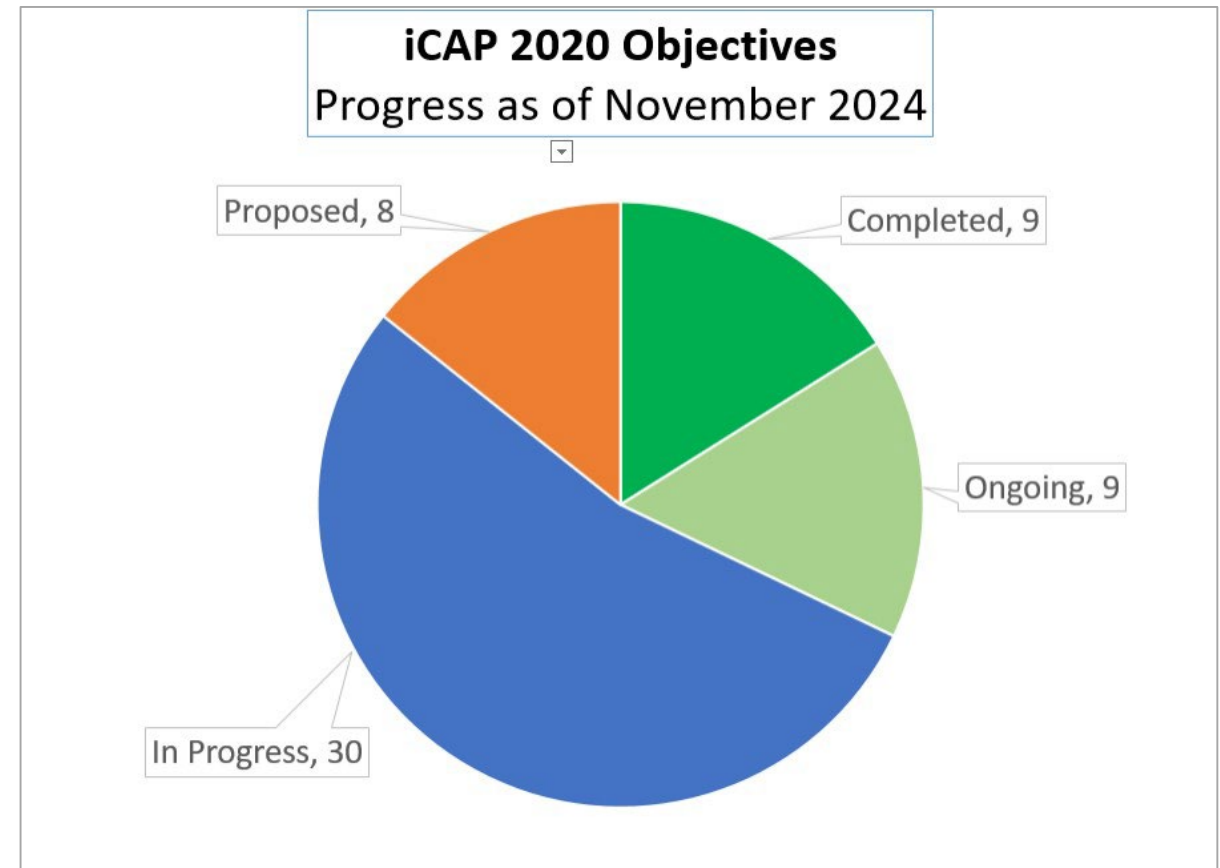






# Illinois Climate Action Plan (iCAP)

- In 2008, the university formally committed to achieving carbon neutrality before 2050; in 2016, the Resilience Commitment was made.
- ICAP 2020 includes 56 objectives across 7 themes: Energy, Transportation, Land & Water, Zero Waste, Education, Engagement, Resilience
- We are making reasonable progress on many of these objectives. iCAP 2025 objectives will not change substantially, except in a few areas.





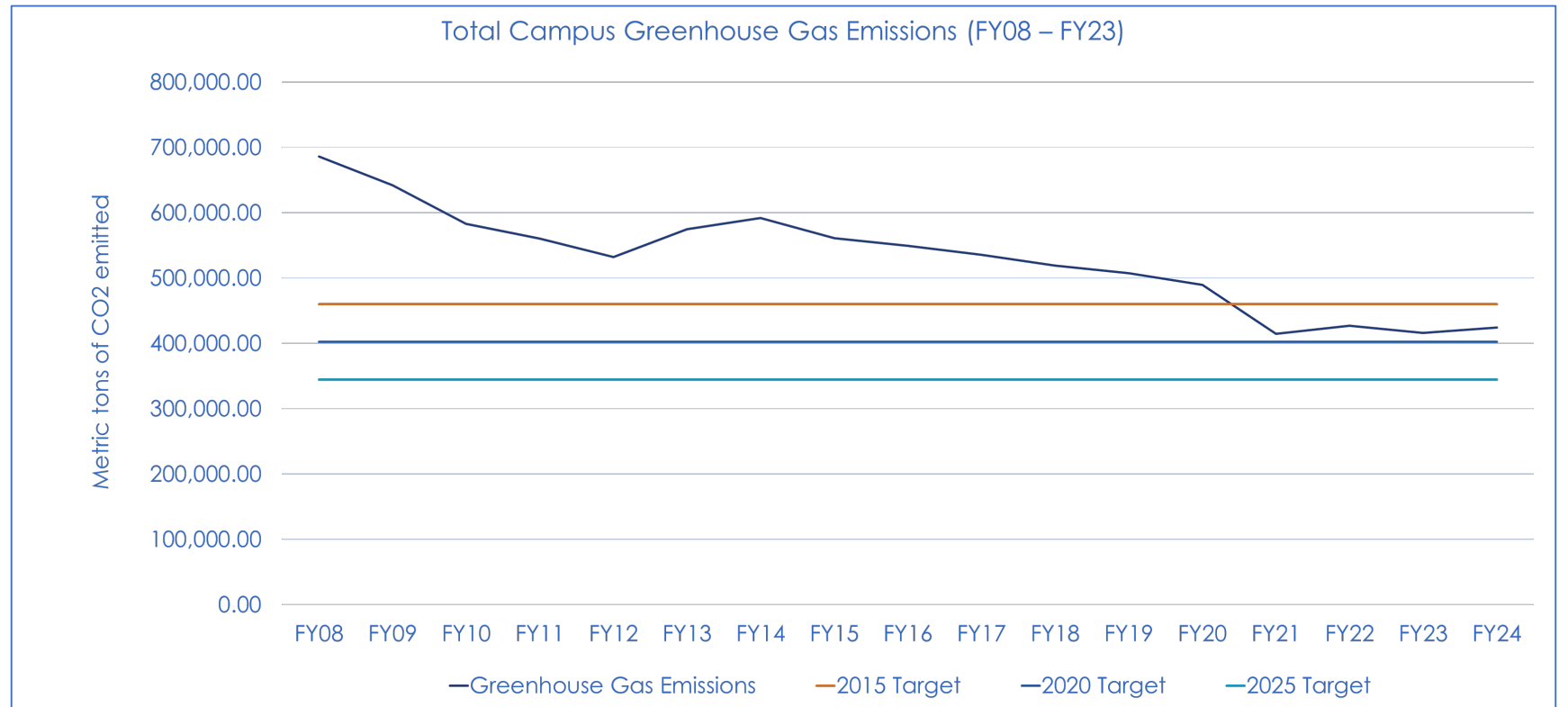
# Illinois Climate Action Plan (iCAP)

- We have received feedback that the current version is too long and not readily penetrable, so the new version will
  - Focus on the objectives and supporting data
  - Create a supplementary document with specific paths to implementation and history.
- We will also write progress reports every other year to share with stakeholders.
- Today we discuss three key topics for ICAP 2025: energy, sustainable investments, and resilience.



# Greenhouse Gas Emissions |

- Emissions have decreased by almost 40% since 2008.





# Challenges and Opportunities





# Trends in Energy Efficiency & Space

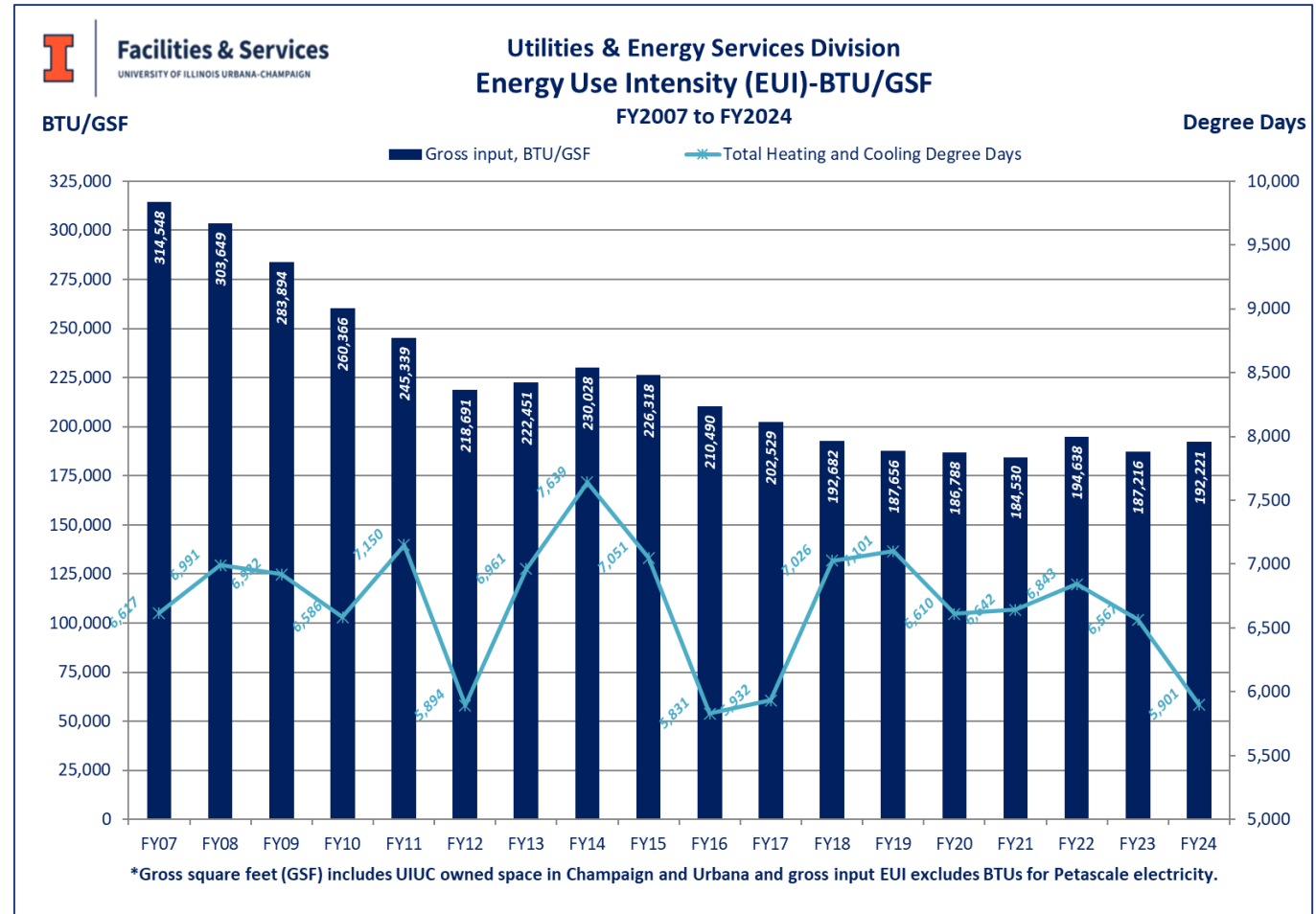






# Worsening Energy Efficiency

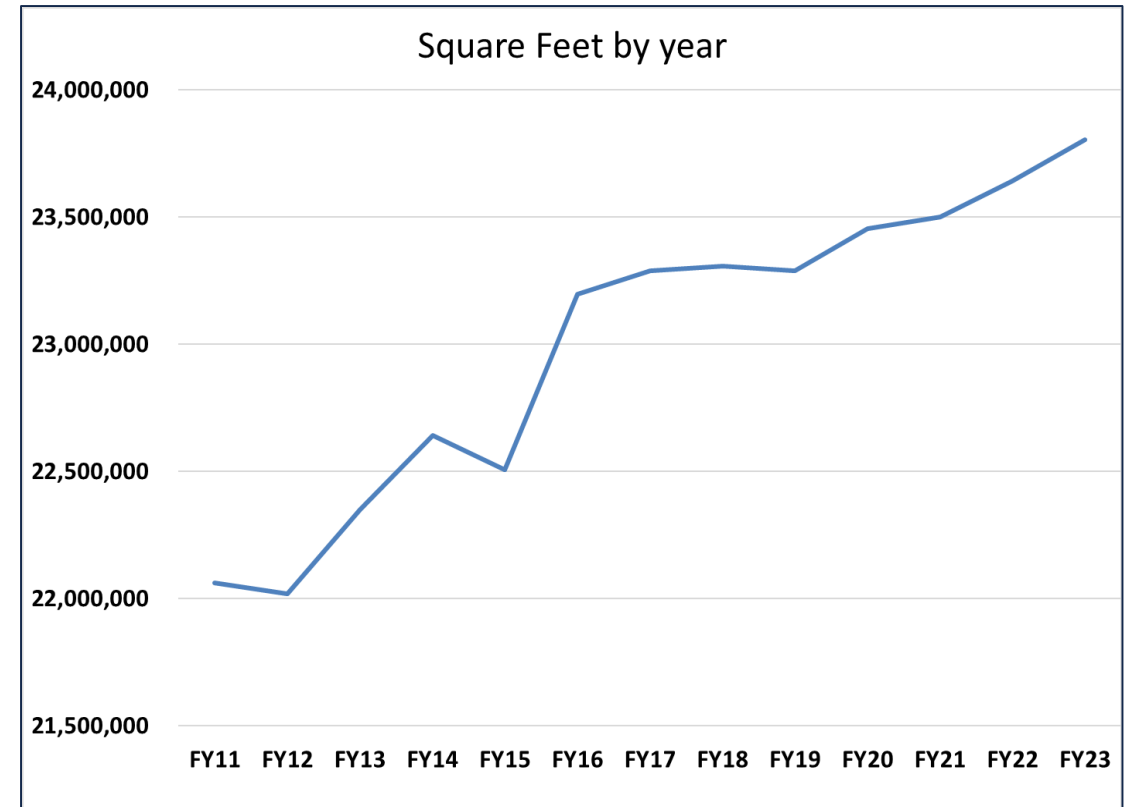
- Energy Use Intensity improved from FY08-FY21
- From FY22-FY24, EUI increased despite fewer heating/cooling days
- Sustainable design features cut in favor of additional space, e.g., DKC
- Expected increase in energy-demanding spaces, e.g., data/tech centers, energy intensive instruments
- Continued campus growth





# Increasing Campus Footprint

- Growth in the last ten years =
  - Auxiliaries: 1,265,749 SF
  - Split space (shared): 140,637 SF
  - State-Supported: 48,067 SF
- Planned new buildings -
  - SSCDSB (Bldg. X): 60,000 SF
  - Illini Hall: 140,000 SF
  - Cancer Center: 100,000 SF
  - Japan House: 4,438 SF
  - IBRL expansion: 37,249 SF
  - DKC IL Extension: 37,500 SF
  - Wymer Hall: 100,000 SF



# Need for New and Continued Investments in Sustainable Energy Production



- More clean energy assets needed to reduce GHG emissions
- New systems will require adding and upgrading existing infrastructure to ensure efficiency and stability
  - Energy storage to retain clean power
  - Upgraded distribution lines to capture and use energy from solar farms





# Solar Farm 3.0 Goals

- **Urbana Goals:** Illinois Climate Action Plan (iCAP 2020) Objective #2.3.1 is to use 140,000 megawatt-hours per year (MWh/yr) of clean power by FY25.
  - There are existing clean energy contracts and installations for 50,000 MWh/year; seeking another 90,000 MWh/year
  - 7,000 MWh/year Solar Farm 1.0 PPA expires in 2025
  - 25,000 MWh/year Wind PPA expires in 2026
- **Chicago Goals:** UIC's Climate Action Implementation Plan (CAIP) is to procure renewable energy equal to 15% of purchased electricity by 2021; increasing 5%/year through 2028; increasing 2.5%/year from 2029-2050. In 2028 this equates to 75,000 MWh. UIC is seeking 80,000 MWh/year.





# Solar Farm 3.0 status update

- ACES Dean is supportive of making land available for Solar Farm 3.0. Exact terms will be discussed further.
- F&S Utilities & Energy Services is evaluating options that could be included in an RFP for the on-campus Solar Farm 3.0.
- Will include an option for thermal and/or electrical energy storage
  - Without storage, a significant amount of the production of the facility would be sold back to the market (especially in the winter months), and we will only keep the RECs
- The addition of another solar farm on South Farms will require significant distribution system upgrades that we expect to cost approximately \$20,000,000, not including the cost of construction of the solar farm
- We will be asking AVCED Angiel to approve a conceptual study for electrical distribution upgrades necessary to support the installation of SF3 to be completed by one of our retainer engineering firms once the firms have their contracts in place.







# Funding Opportunities





# Potential funding programs

- Inflation Reduction Act (IRA)
  - Tax credits range from 6-30%, and could be as high as 50% of the cost of the energy property
  - Cannot earn IRA credits without upfront funding allocations or financing approval(s)
  - Time-sensitive: some opportunities expire as soon as Dec 31, 2024
  - Successful projects: Underground Thermal Battery Storage anticipates receiving ~\$50k; Wymer Hall geothermal anticipates receiving \$2.5M
- Other IRA and BIL funding opportunities, such as the Title 17 Clean Energy Financing Program, which can finance projects in the U.S. that support clean energy deployment and energy infrastructure reinvestment to reduce greenhouse gas emissions and air pollution





# Potential funding programs

- **Commercial Property Assessed Clean Energy (C-PACE) Financing**
  - Property owners can obtain up to 100% long-term, fixed-rate financing for energy efficiency, renewable energy, resiliency, water use and electric vehicle charging building improvements, through using a lien secured against the property
  - Non-profit owners can typically qualify if they are able to receive special assessments on their property tax bills
- **Ameren Efficiency Program: \$1,652,335 since Jan. 2023**
- **Illinois Climate Pollution Reduction Grant (CPRG)**
  - State awarded \$430M to implement emissions reduction measures including community geothermal, fleet electrification, community-based livestock-waste to energy conversion via biodigestion
  - Competitive grant program expected Q1 of 2026





# Potential funding programs

- Illinois Climate Bank
  - Over \$340M in federal awards distributed through multiple programs for grant funding and financing to public-private partnerships for energy, climate, and equity
  - Private activity bonds finance capital projects – environmental projects are one category
  - University of Chicago received \$30M in financing in 2024 for projects including clean energy projects
  - National Clean Investment Fund will provide \$100M+ in financing for energy projects including electric vehicle fleets and associated infrastructure, carbon-free schools, and building electrification
  - State Revolving Loan Fund will provide \$14M in "bridge loans" for IRA-eligible projects to finance upfront costs



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# Sustainable Investment





# Overview

- Divestment from fossil fuels has been an issue that students have been rallying around for 16 years and divestment was included as an objective in the 2020 iCAP.
- iSEE hosted a meeting of sustainability student leaders from SSC, SSLC, and SECS and the UI System investment leadership to discuss sustainable investment
- Students presented their concerns that investing in fossil fuels is not consistent with U of I being a leader within public research universities or with “assessing both the fiscal and the environmental implications and outcomes of what we do”
- Paul Ellinger and Geri Melchiore presented an overview of the UI System sustainable investment strategy which has been in place since 2019



# Student proposal

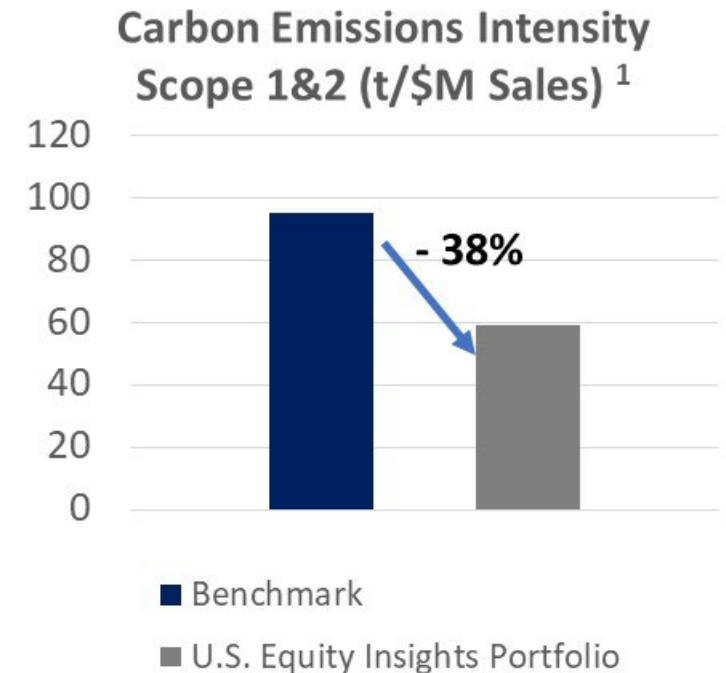
- Graduated 5 year energy divestment plan - indirect and direct assets
- Accountability and transparency in our fossil fuel-exposed investments
- Work with the University System to create more opportunities for meaningful student engagement in sustainable investments
- Provide FY to FY reporting of our full inventory of Energy companies
- Codify a restriction in the Investment Policy Statement for no new bonds or equity purchases that would be exposed to fossil fuel companies



# UI System sustainable investment approach\*

- Direct holdings of fossil fuel companies decreased in asset size by 70% from \$44M in 2019 to \$13M (0.27% of total assets) while increasing in quality from an average MSCI environmental score of BBB to A.
- MSCI environmental scores indicate that the inclusion of fossil fuel companies in our portfolios provides an uplift to our environmental rating.
- A second ESG Insights strategy was launched with BlackRock in FY23, increasing invested assets by 181% from \$160M at inception to \$451M, further amplifying our voice as a shareholder.

## Responsible Investing impact: U.S. Equity Insights Portfolio



\*Numbers as of October 11, 2024



# Outcomes & Recommended Next Steps

- Meeting was constructive and respectful, but disconnect remains between investment approach and student divestment proposal.
- Proposed statements to include in iCAP 2025
  - Divestment is not directly tied to our Climate Commitment for this campus and it is not within the campus decision authority.
  - Therefore it is not included as a specific iCAP 2025 objective.
  - The iCAP 2025 could still contain language about the sustainable investment approach taken by the UI System, with an emphasis on transparency and facilitating dialogue with stakeholders.

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# Resilience



# Background

- In 2016, Interim Chancellor Barbara Wilson signed Second Nature's Resilience Commitment, pledging to build resilience to climate change with our local community
- In 2017-2018, Champaign County Climate Resilience Task Force identified initial "indicators of resilience" - social equity and governance, health & wellness
- In 2018, joint proclamation with Urbana, Champaign, Savoy, affirming partnership for building climate resilience
- iCAP Resilience Team
  - Comprised of university faculty, staff, and students, and sustainability staff from Champaign, Urbana, Savoy
  - IL Extension led Obj 8.1 - Urban Biodiversity Plan
  - Other objectives not actionable and not clearly linked to indicators of resilience; limited progress





# Current Situation

- Second Nature's Resilience Commitment has changed
  - Emphasizes climate resilience *on campus*: identifying vulnerabilities and climate adaptation and mitigation measures to ensure the campus is prepared to respond to a changing climate (campus is already doing this)
- Other campus and community groups are working on social equity and governance, health & wellness, and sustainability
  - Climate Jobs Institute in Labor, Employment & Relations - focuses on economic development and environment justice in clean-energy sector
  - Campus-Community Compact - focuses on accessible technology; community health, wellness & resilience; community relations; economic development; inclusive education; and workforce development
  - Illinois Extension Climate Steward program
  - Carle Health Sustainability and Environmental Stewardship Council



# Recommended Next Steps

- Remove the Resilience chapter and develop resilience objectives that are better integrated with the objectives in other themes to meet our Resilience Commitment
  - This aligns with the approach Second Nature is currently advocating
  - Resilience considerations are already built into the iCAP, but could be more effectively highlighted
- Establish a climate resilience coalition with local sustainability staff and community groups
  - Share information about climate action plans, sustainability initiatives, identify opportunities for collaboration, identify shared priorities
  - Greater relevance for non-university staff, strengthen university partnerships with community groups



# THANK YOU











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Facilities & Services

- Energy conservation programs and policies have contributed to 35% reduction, but Energy Use Intensity has increased over past 3 years
- Currently at 14% clean power use - Solar Farm 3 would allow us to meet the 2030 target
- Net Zero Space Growth Policy is in place, but variances are approved regularly - no significant progress in limiting growth









 <b>ENERGY</b>   iCAP UPDATE	
<b>Objective 2.1</b> Develop a planning document with a detailed strategy for net zero emissions by 2050.	 <b>In Progress</b>
<b>Objective 2.2</b> Reduce the annual energy consumption of each college-level unit by at least 20% from a 2015 baseline	 <b>In Progress</b>
<b>Objective 2.2</b> Reduce Energy Use Intensity from a 2008 baseline by: 45% by 2030, 50% by 2040, and 60% by 2050.	 <b>On Schedule</b>
<b>Objective 2.3</b> Use clean energy sources for 15% of total campus energy demand by 2030	 <b>In Progress</b>
<b>Objective 2.2.1</b> Improve space use efficiency by minimizing square footage per person and updating the Space Policy in the Campus Administrative Manual.	 <b>In Progress</b> Sub-committee of Illinois Space Advisory Committee is working on an update
<b>Objective 2.3.1</b> Use at least 140,000 MWh/year of clean power by 2025	 <b>Behind Schedule</b>
<b>Objective 2.3.2</b> Use at least 150,000 MMBTU/year of clean thermal energy by 2030	 <b>Behind Schedule</b>



- Development of a sustainability General Education Requirement is under way
- Sustainability Course Repository allows students to search for sustainability courses
- Environmental Leadership Program (ELP) now in third year
- Sustainability training videos provide informal education









 <b>EDUCATION</b>   iCAP UPDATE	
<b>Objective 6.1</b> Broadening the availability of sustainability education	 <b>On Schedule</b>
<b>Objective 6.2</b> Establishing a sustainability course repository	 <b>In Progress</b>
<b>Objective 6.3</b> Launching the Environmental Leadership Program	 <b>Completed</b>
<b>Objective 6.4</b> Developing a local sustainability internship program	 <b>On Hold</b>
<b>Objective 6.5</b> Helping students explore sustainability careers (with The Career Center)	 <b>On Hold</b>
<b>Objective 6.6</b> Offer a graduate certificate in sustainability by 2024	 <b>Behind Schedule</b>

- Water use declined by 41% from 2008-2023; usage ticked up in the past two years
- Campus is planting 300 trees/year, has 45 pollinator plantings, and will reach goal of 49 green infrastructure projects this year
- Campus Landscape Plan was completed in 2022; Rainwater Management Plan in progress
- Limited funding to implement Campus Landscape Master Plan

 <b>LAND &amp; WATER</b>   iCAP UPDATE	
<b>Objective 4.1</b> Reduce potable water consumption to 721,500 kgal/year by 2024	 <b>On Schedule</b>
<b>Objective 4.2</b> Implement the Resilient Landscape Strategy recommendations by 2024	 <b>On Schedule</b>
<b>Objective 4.2.1</b> Increase the number of trees on campus by 1,500 by 2024	 <b>On Schedule</b>
<b>Objective 4.2.2</b> Increase number of pollinator-friendly landscapes by 50% by April 2024	 <b>Complete</b>
<b>Objective 4.2.3</b> Double number of green infrastructure installations to 48 by 2024	 <b>Complete</b>
<b>Objective 4.3</b> Use cover crops on 20% of the South Farms by 2024	 <b>Behind Schedule</b>
<b>Objective 4.4</b> Monitor soil health for all South Farms land parcels by 2024 <i>*A research project on campus is currently assessing South Farms soil health</i>	 <b>In Progress</b>



- F&S introduced EVs & hybrids into carpool and has sustainable fleet plan, but no policy exists for other units
- Campus has established telecommuting policies
- Campus continues to implement Campus Bike Plan to improve safety and mobility for cyclists - updated Campus Bike Plan 2024 is in final stages of development

TRANSPORTATION		iCAP UPDATE	
<b>Objective 3.1</b> Establish written replacement plans for at least 80% of campus fleets by 2024	 On Schedule	<b>Objective 3.4.1</b> Develop a Commuter Program and register 100 people by 2024	 In Progress
<b>Objective 3.2</b> Increase the Pavement Condition Index (PCI) for university-owned roads so the average PCI score is at least 65 by 2025 <small>* A new PCI Index will be available later this year</small>	 Complete	<b>Objective 3.4.2</b> Continue to implement the 2014 Campus Bike Plan	 Complete
<b>Objective 3.3</b> Establish an Electric Vehicle Task Force by FY22	 Complete	<b>Objective 3.4.2</b> Establish telecommuting policies for the campus by 2024	 Complete
<b>Objective 3.4</b> Reduce driving on campus and the percentage of staff trips with single-occupancy vehicles from 60% to 50% by FY25	 On Schedule	<b>Objective 3.5</b> Reduce net air travel emissions from FY14 baseline: 50% by FY24 and 100% by FY30	 Behind Schedule

- From FY 22-24, volunteers recycled more than 4,060 lb of bottles and cans at 6 zero-waste sporting events
- At FY25 Convocation lunch, no plastic bottled water was provided. Municipal drinking was offered, and students were encouraged to bring reusable bottle
- Grind2Energy system converts food scraps into fertilizer and energy - but only for dining halls








 <b>ZERO WASTE</b>		iCAP UPDATE	
<b>Objective 5.1</b> Create sustainable procurement reporting guidelines, 100% compliance by 2024 <i>*New procurement plan in development</i>	 <b>In Progress*</b>	<b>Objective 5.4</b> Reduce food waste through a behavior change campaign and tracking/ recovering surplus food, with five new areas reporting food waste by 2022	 <b>Behind Schedule</b>
<b>Objective 5.2</b> Reduce campus waste by at least 10% to 4,544 tons by 2024	 <b>Behind Schedule</b>	<b>Objective 5.5</b> Develop a plan to sustainably dispose of organic waste by 2024	 <b>Complete</b>
<b>Objective 5.2.1</b> Place new indoor bins in at least 150 buildings by 2024. <i>*64 campus buildings have at least one</i>	 <b>In Progress*</b>	<b>Objectives 5.6, 5.6.1</b> Increase use of local food to 35% by FY30 <i>*Establishing standard definition of "local"; Sustainable Student Farm provides "a majority" of its produce to university dining halls</i>	 <b>In Progress*</b>
<b>Objective 5.3</b> Establish a culture of reuse, with four zero-waste events in 2023	 <b>Complete</b>	Implement Food Literacy Project by tracking environmental footprints of each dining hall by 2024. <i>*University Housing considering third-party company to track data</i>	 <b>Complete</b>
<b>Objective 5.3.1</b> Develop Zero Waste messaging campaign, collect 10,000 Use the Bin pledges by 2024	 <b>Behind Schedule</b>	<b>Objective 5.7</b> Establish a green cleaning program that meets LEED standards by 2024	 <b>On Schedule</b>



- Re-launched Greener Campus programs. Number of green-certified events/chapters/offices 30 in FY24
- The Division of Intercollegiate Athletics is now part of the Green Sports Alliance
- The iCAP portal is regularly updated to report progress

 <b>ENGAGEMENT</b>		iCAP UPDATE	
<b>Objective 7.1</b> Increase the number of Green Campus Program Certifications by 20% every year from 2020-24	 <b>On Schedule</b>	<b>Objective 7.4</b> Use GivePulse tracking system to increase local sustainability collaborations	 <b>On Hold</b>
<b>Objective 7.2</b> 80% of Illini Union Events qualifying as sustainable by 2024	 <b>Completed</b>	<b>Objective 7.5</b> Hold an annual Youth Sustainability Summit	 <b>On Hold</b>
<b>Objective 7.3</b> DIA joining the Green Sports Alliance by 2021	 <b>Completed</b>	<b>Objective 7.6</b> Use the iCAP Portal regularly to report progress	 <b>Completed</b>

- The Resilience Commitment involves setting goals for climate adaptation and building community capacity to deal with a changing climate expected to lead to extreme events.
- Discussions with local governments during the last five years were positive, but resilience objectives in the iCAP are not actionable and not clearly linked to indicators of resilience
- Highlight climate resilience throughout iCAP and establish a coalition with local and community groups

 <b>RESILIENCE</b>   iCAP UPDATE	
<b>Objective 8.1</b> Develop an Urban Biodiversity Master Plan  <b>On Schedule</b>	<b>Objective 8.5</b> Inventory potential for area green jobs <i>*Champaign is searching for sustainability coordinator; room for green jobs expansion with new state legislation</i>  <b>On Schedule*</b>
<b>Objective 8.2</b> Coordinate Rainwater Management Plans  <b>In Progress</b>	<b>Objective 8.6</b> Support the Vision Zero traffic redesign strategy for safe, sustainable transportation <i>*Champaign Urbana Urbanized Transportation Study (CUUATS) passed resolution in favor of Vision Zero for Champaign County in September 2022</i>  <b>Complete*</b>
<b>Objective 8.3</b> Develop an Environmental Justice Plan <i>* Inventoried current environmental justice Resources on campus; plan under discussion</i>  <b>On Hold*</b>	<b>Objective 8.7</b> Establish a local offset program by 2024 <i>* Under discussion</i>  <b>On Hold*</b>