Sustainability Council, Spring 2025

Madhu Khanna

Alvin H. Baum Family Fund Chair & Director

iSEE

Institute for Sustainability, Energy, and Environment

Council Membership

Members of Council

- **Chair:** Robert J. Jones, Chancellor, University of Illinois Urbana-Champaign
- **Vice Chair:** Madhu Khanna, Director of iSEE
- Jeffrey Angiel, Associate Vice Chancellor & Executive Director, Facilities & Services
- Rashid Bashir, Dean, Grainger College of Engineering
- Barry Benson, Vice Chancellor for Advancement
- Germán Bollero, Dean, College of Agricultural, Consumer, and Environmental Sciences
- Danita Brown Young, Vice Chancellor for Student Affairs
- Brian Bundren, Assistant Provost for Capital Planning
- Katherine Bruce, Co-Chair Student Sustainability Leadership Council (SSLC)
- John Coleman, Executive Vice Chancellor for Academic Affairs & Provost

Members of Council, cont'd

- Jim Hintz, Associate Vice Chancellor for Student Success, Inclusion and Belonging, Acting Associate Vice Chancellor for Auxiliaries Health and Wellbeing
- Jon Hale, Senate Chair
- Claire Keating, Chair, Student Sustainability Committee (SSC)
- Gabi DalSanto, President, Illinois Student Council (ISC)
- Susan Martinis, Vice Chancellor for Research & Innovation
- Lowa Mwilambwe, Interim Vice Chancellor for Administration and Operations
- Venetria Patton, Dean, College of Liberal Arts & Sciences
- Eunice Santos, School of Information Sciences
- Josh Whitman, Director of Athletics (Tim Knox, delegate)

Non-Voting Members

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

Invited Attendees

- Marty Kaufmann, Executive Senior Associate Director of Athletics, Revenue Operations
- Tim Knox, Associate Director of Athletics, Facilities & Capital Projects
- Sylvia McIvor, Associate Director, Energy Performance Contracting
- Amber Perfetti, Engineering Specialist
- Rob Roman, Director of Utilities & Energy Services
- Anthony Spurlock, Associate Director of Utilities and Budget Resources Planning

iSEE Institute for Sustainability, Energy, and Environment

Agenda for Today

- iCAP 2025
  - DIA-specific targets
  - Updating energy targets
- Student perspectives
- ACES Energy Performance Contract

iCAP 2025 – DIA-specific Objectives

Rationale

- We are partnering with DIA on sustainability initiatives, which began with discussions about our Coca-Cola contract and waste reduction.

- As one of the most visible entities on campus, DIA has an opportunity to use their platform to support and elevate sustainability efforts within their division, across campus, in the community and beyond.

- Developing and committing to sustainability goals will put DIA on equal footing with athletic departments at peer institutions.

- iSEE proposes incorporating new, DIA-specific objectives into the next iCAP.

A growing commitment to sustainability within collegiate athletics

- Athletic departments with stand-alone sustainability master plans
  - University of North Carolina, 2016
  - Texas A & M, 2023

- Athletic departments with active sustainability programs
  - University of Florida
  - Ohio State University
  - University of Michigan
  - Penn State University
  - University of Washington
  - University of Colorado
  - Arizona State University
  - Duke University
  - Stanford University
  - University of California
  - University of Oregon
  - Colorado State University
  - University of Minnesota
  - North Carolina State

A growing commitment to sustainability within collegiate athletics

- Features of sustainability programs led by athletics divisions at peer institutions
  - Dedicated sustainability officers within athletics
  - LEED-certified facilities
  - Facility-specific energy efficiency and sustainability measures
  - Zero waste events and programming
  - Sustainable landscaping
  - Carbon offsets

Proposed objectives for DIA

Energy

- Assess energy use intensity (EUI) for each athletic facility and develop tailored plans for decreasing EUI by investing in energy-efficient measures.
- Prioritize sustainable design features for new construction and renovations.

Transportation

- Develop a plan to transition the DIA fleet (including utility vehicles) to lower emission, higher efficiency vehicles.

Engagement

- Raise the visibility of the university's and DIA's commitment to sustainability by developing and implementing a comprehensive communications strategy for sustainability initiatives.

Proposed objectives for DIA

Land and Water

- Reduce water demand by installing native, drought-tolerant plantings.
- Improve rainwater management by increasing water recapture infrastructure (e.g., permeable pavers, raingardens).

Zero Waste

- Reduce landfilled waste at athletic events by increasing the number of recycling bins and water refill stations and support their use through marketing, outreach, and education.
- Develop sustainable procurement guidelines for equipment, tools, and contracted services.

For Discussion

- Sustainability Council perspective on including DIA-specific objectives in the iCAP 2025
- Process for engaging DIA in setting, approving, and implementing these objectives

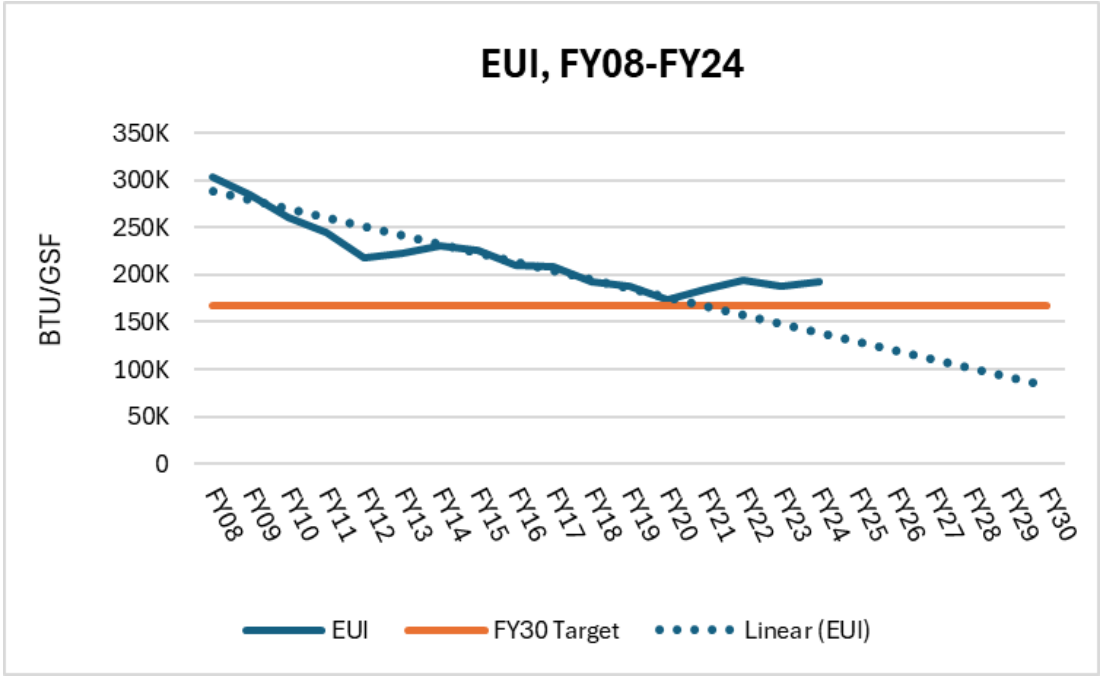
iCAP 2025 – Updating Energy Targets

Energy Use Targets

Targets set in iCAP 2020:

Reduce Energy Use Intensity (EUI) of university facilities from the FY08 baseline by: 45% by FY30, 50% by FY40, and 60% by FY50.

Reduce the total annual energy consumption of each college-level unit by at least 20% from an FY15 baseline by FY35

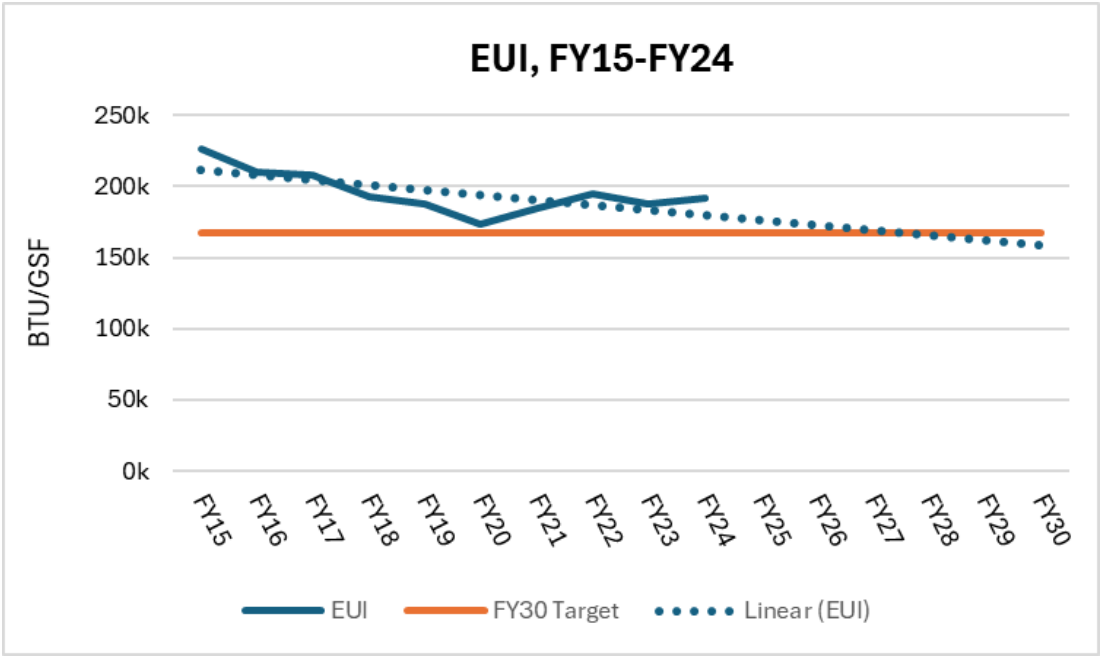


Progress:

- 36% EUI reduction compared to FY08 baseline
- Progress has plateaued since FY20

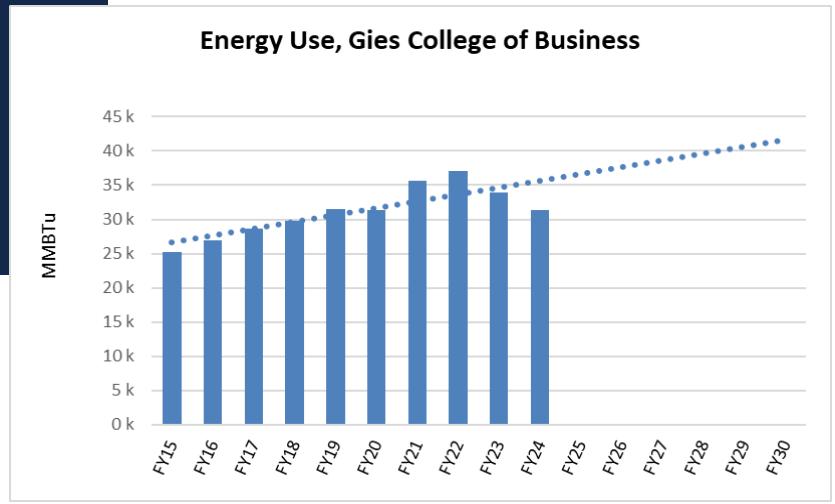
Contributing factors

- Increase in energy-demanding space and deferred maintenance
- Few sustainable design features
- Low-cost changes have already been made



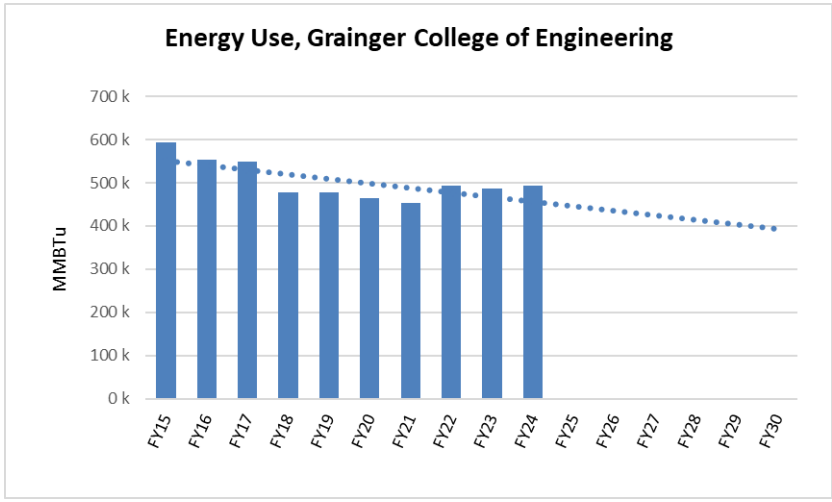
College-Level Energy Consumption Targets

- Progress in reducing total energy consumption varies by college.



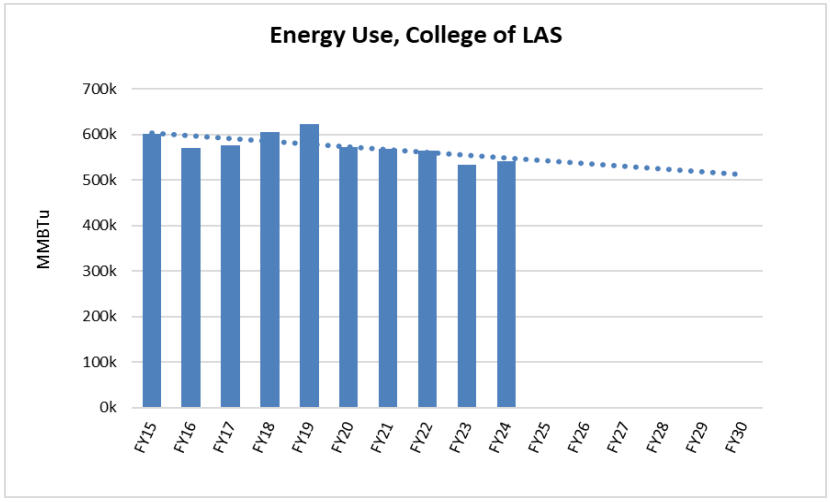
FY24 Results: +24.5%

FY30 Projection: +65.3%



FY24 Results: -16.9%

FY30 Projection: -33.9%



FY24 Results: -9.9%

FY30 Projection: -14.9%

Proposed Changes to Energy Use Targets and Approach

The Sustainability Subcouncil supports removing the objective about college-level energy use and removing numeric targets from the EUI objective

- Propose engaging college leadership, F&S and Provost's Office in setting appropriate targets and identifying paths to achieving them, completing this process by FY28.

Upcoming Campus Master Plan update provides an opportunity to set viable goals for energy use reduction at the college level.

- Propose adding a sustainability representative to the committee developing the new Campus Master Plan.

Student Perspectives

STUDENT PERSPECTIVES ON SUSTAINABILITY

ILLINOIS

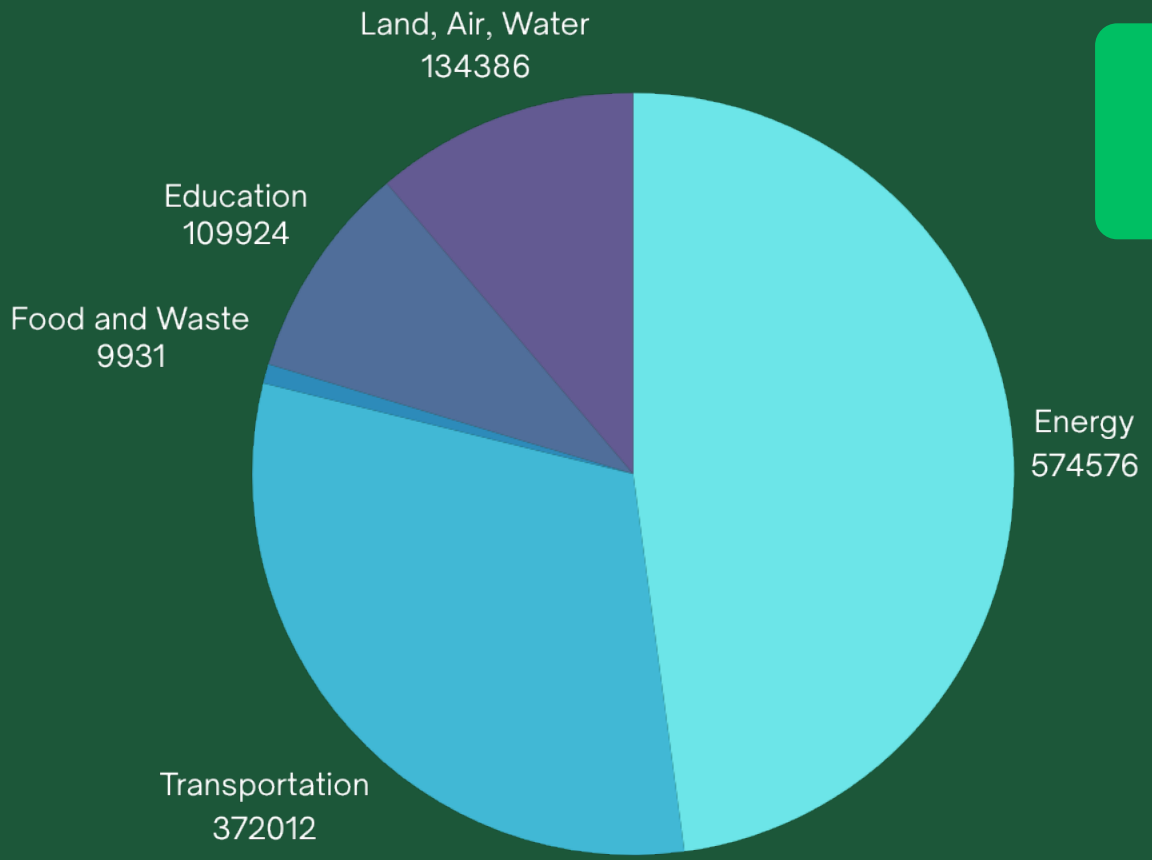
STUDENT SUSTAINABILITY LEADERSHIP COUNCIL SSLC

ILLINOIS GREEN FUND STUDENT SUSTAINABILITY COMMITTEE

ISC ILLINOIS STUDENT COUNCIL


STUDENT
SUSTAINABILITY
COMMITEE
ILLINOIS GREEN FUND
STUDENT SUSTAINABILITY COMMITTEE

Total Allocated Funds 24-25



$1,200,672.84

ILLINOIS GREEN FUND
STUDENT SUSTAINABILITY COMMITTEE

ILLINOIS GREEN FUND
STUDENT SUSTAINABILITY COMMITTEE

Future goals

- Increase in student-informed/led projects
- Expanded sustainable programming
- University-wide financial commitment to sustainable infrastrucutre

STUDENT SUSTAINABILITY LEADERSHIP COUNCIL

SSLC's Mission

The Student Sustainability Leadership is an RSO with the goal of helping to foster deeper connections between campus leadership and student environmental leaders.

We do this by...

- Hosting monthly meetings to connect with leaders of green affiliated RSOs
- Planning large scale campus wide events (Green Quad Day, Sustainapalooza, Green Globes)

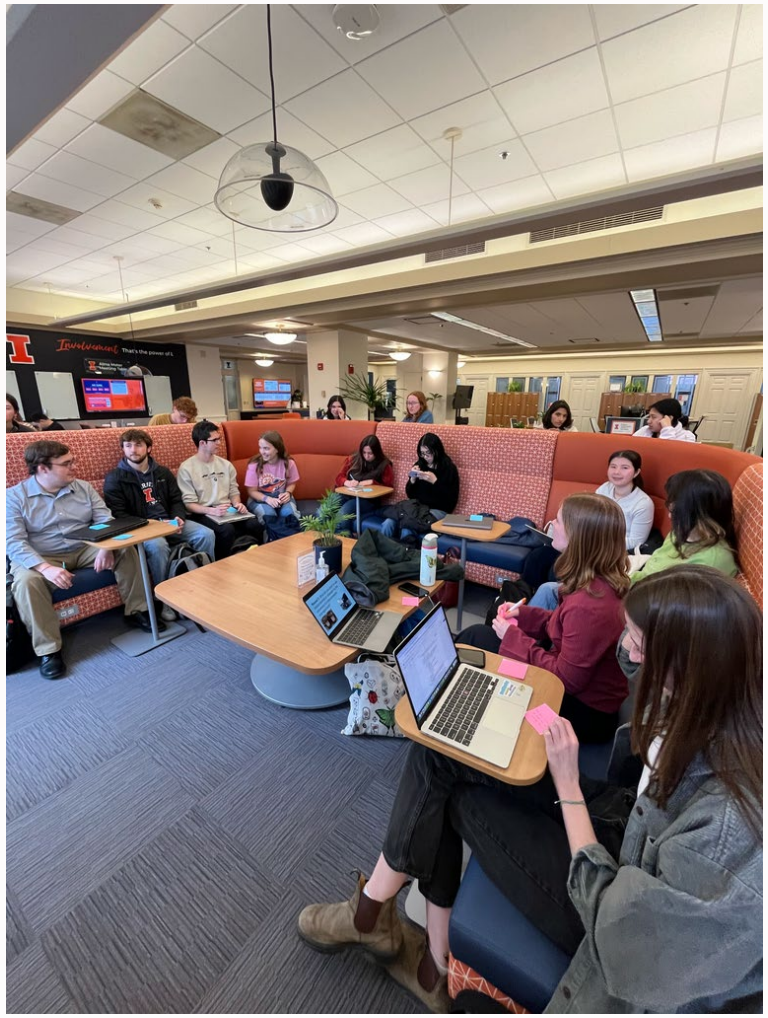
GAUGING STUDENT INTEREST

1. General Meetings

2. Green Globes ICAP Reception

3. Sustainapalooza

Gauging Student Interest



COMPOST INITIATIVES

- Student interest in compost is there- we need support in implementation process
- Must address current infrastructure issues
- Need for consistent research on compost implementation

NATIVE PLANT INITIATIVES

- Current native plants are off campus and not accessible to students
- Need to revise campus landscaping plan to allow for more native plants centralized to the Quad
- Labelling native plant areas with specific plant species and QR codes for identification and education purposes


ILLINIOIS
STUDENT
COUNCIL
ISC
ILLINOIS
STUDENT
COUNCIL

Specialized Recycling

- Helps reduce tech waste
- Reduces the amount of recycling and trash contamination
- Prioritizes a campus culture of low waste and informed waste disposal habits
- Teracycle is a possible option we have looked into before - there are possible controversies, but this should be an attainable goal
  - Our goals are to have this implimented with the help of SSC and SSLC and to have drop off points in Grainger and the Union

Divestment

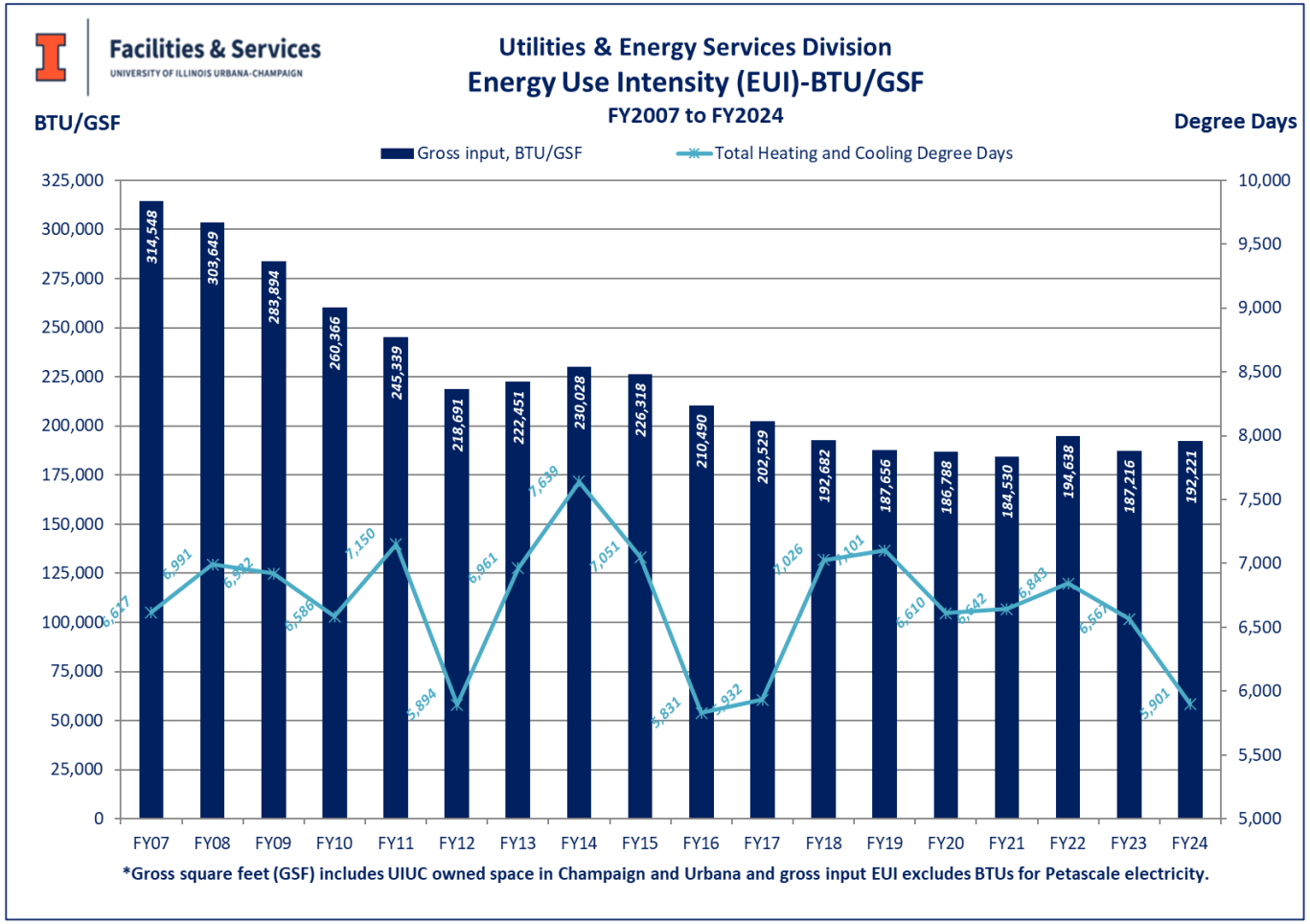
- Campaign promise of my administration
- Every representative that ran in a competitive sector had divestment as part of their platform
- Students voted an astounding 72.94% in favor of fossil fuel divestment. In 2019, students voted at similar rates.
- Divestment was part of the 2020 iCAP - it is upsetting to see the University going back on it’s promises
- Many of you heard my remarks at the last BOT - but as we go into this next year I want to reaffirm our commitment to divestment


THANK YOU

ACES Energy Performance Contract

Reminder: 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



Deep Issues

DEFERRED CAPITAL MAINTENANCE (DCM)

Deferred capital maintenance refers to the practice of postponing necessary repairs, upgrades, or replacements of infrastructure or equipment, often due to budget constraints or other priorities, which can lead to increased energy costs and potential safety issues in the long run.

EXAMPLE: TURNER HALL NEWEST AIR HANDLING UNIT (AHU) IS FROM 1975

This process will be painful!

We are battling against a large backlog of DCM

Deferred Maintenance Burden as per the Facility Condition Assessment (FCA)

Estimated Cost in 2025 Dollars = $4.8 Billion

We can't reduce operating expenses until we address the backlog of work

Energy Performance Contracts are a mechanism to address DCM using the funds saved from energy and operating expenses

Benefits of EPC at Urbana since 2008

Transfer of Risk

Performance and financial risks shift from university to ESCO

$109,720,000

Invested in EPCs

Deferred Maintenance

Infrastructure is upgraded in compliance w/current safety and energy codes

$67,000,000

Deferred Maintenance Addressed

Sustainability

Carbon emissions are reduced in support of environmental commitments and iCAP goals

24,860 Mt

Carbon Emissions Saved Annually

Savings

Operating and utility costs decrease as a result of increased efficiencies

$212,250,000

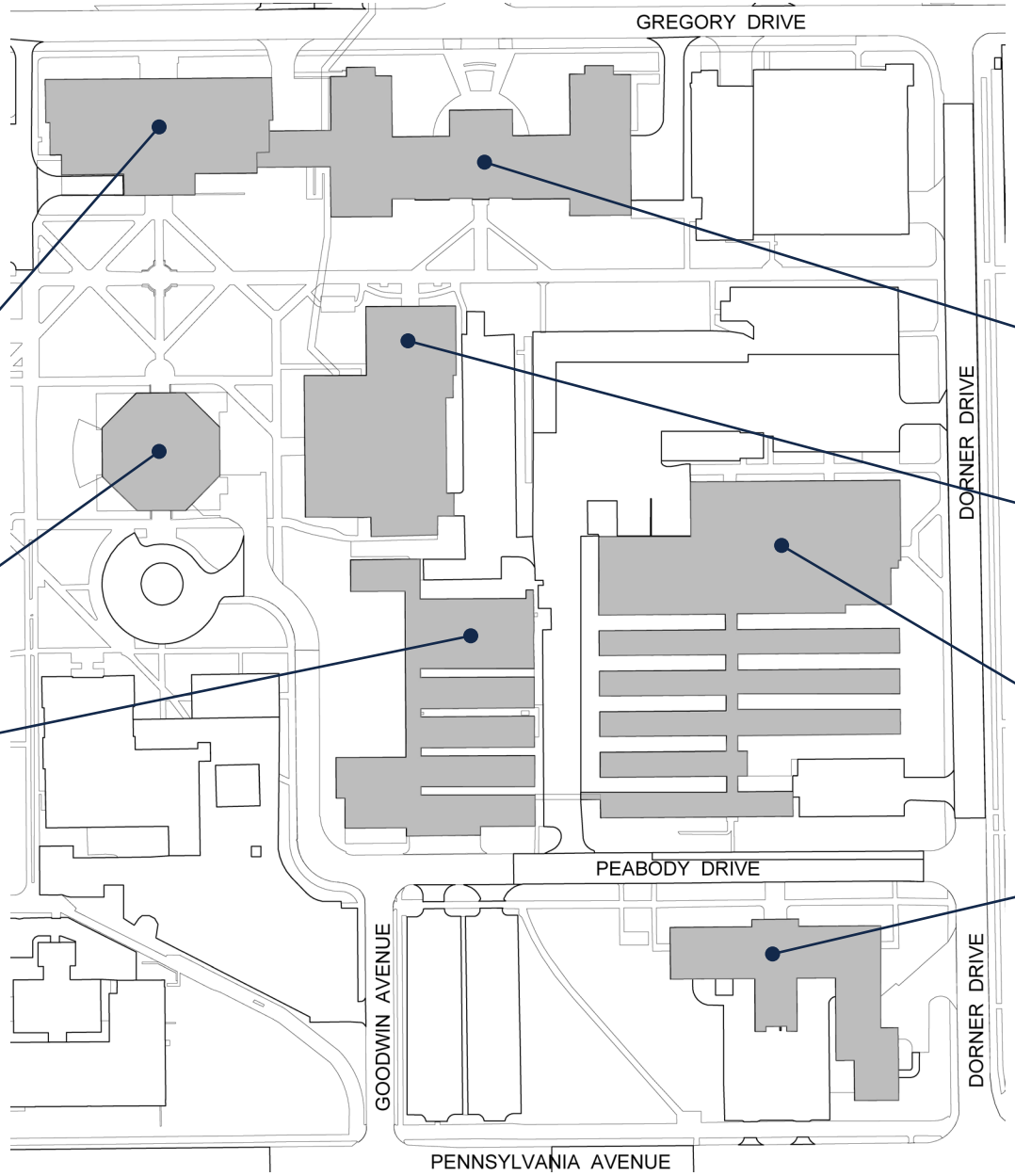
Guaranteed Utility Savings (20 Years)

Facilities

0165 Animal Sciences Laboratory

0377 ACES Library, Information, and Alumni Center

0131 Turner Hall Greenhouses



0366 Edward R. Madigan Laboratory

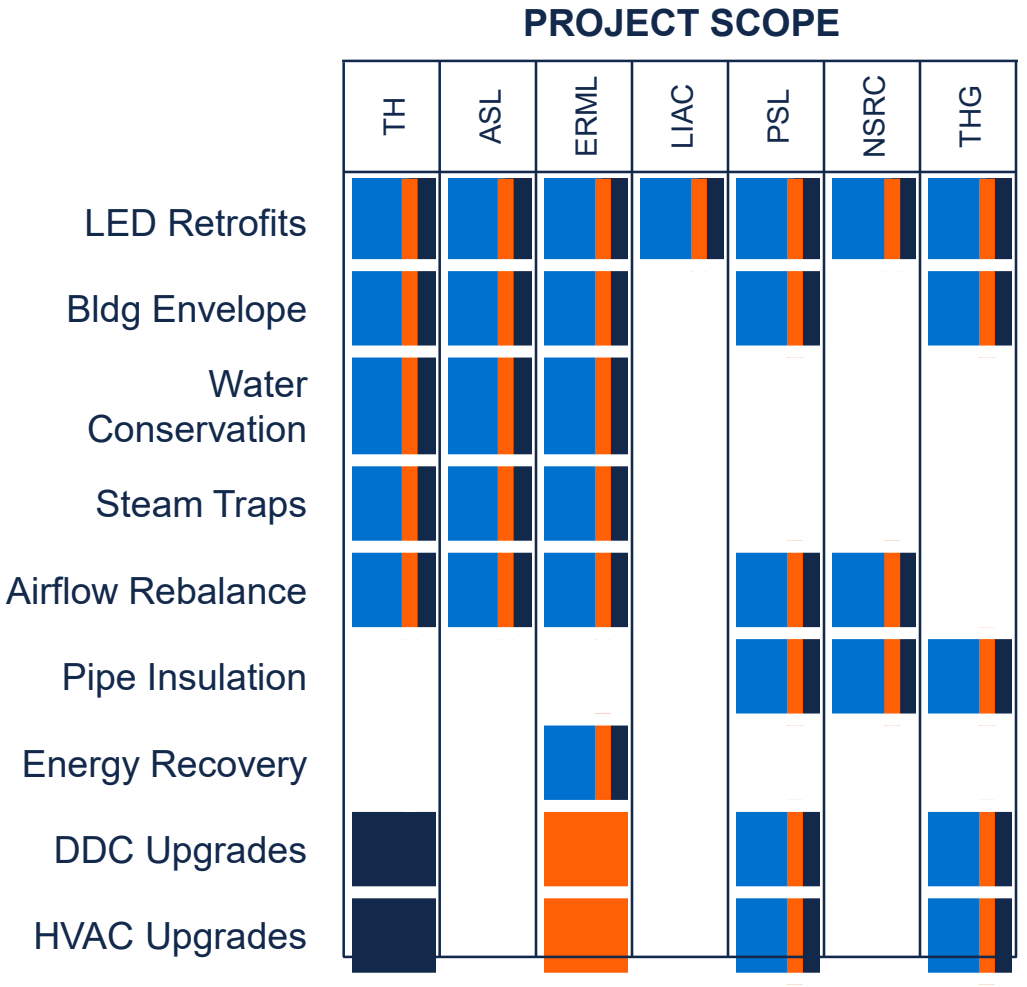
0197 Jonathan Baldwin Turner Hall

0256 Plant Sciences Laboratory

0124 National Soybean Research Center

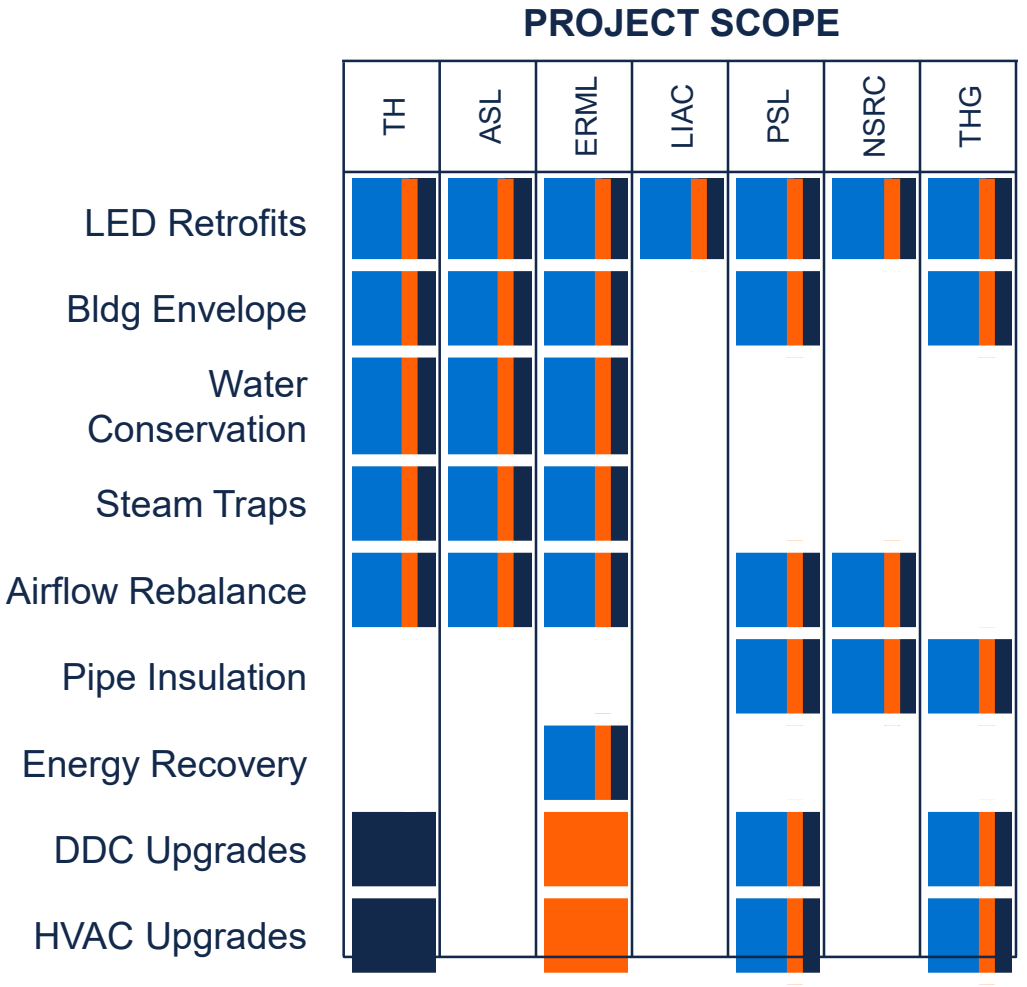
Internally Funded Project Scenarios

	❶ Energy Only	❷ Energy +	❸ Max DM
SCOPE	Base	Base + ERML New DDC, FH Retrofit, Fan Array	Base + Turner 1965 & 1975 HVAC
TOTAL PROJECT $	**$24M**	**$38M**	**$58M**
20-YR SAVINGS	$50M	$57M	$58M
EST. DM ADDRESSED	$56M	$64M	$71M
TOTAL BENEFIT	**$106M**	**$121M**	**$129M**
20-YR GHG	66,600 Mt CO_2	77,208 Mt CO_2	77,575 Mt CO_2



Externally Financed Project Scenarios

	❶ Energy Only	❷ Energy +	❸ Max DM
SCOPE	Base	Base + ERML New DDC, FH Retrofit, Fan Array	Base + Turner 1965 & 1975 HVAC
TOTAL PROJECT $	**$39M**	**$62M**	**$93M**
20-YR SAVINGS	$50M	$57M	$58M
EST. DM ADDRESSED	$56M	$64M	$71M
TOTAL BENEFIT	**$106M**	**$121M**	**$129M**
20-YR GHG	66,600 Mt CO_2	77,208 Mt CO_2	77,575 Mt CO_2



Potential Funding Sources

	Past Contributions EPC 001 – EPC 006	Current Allocations EPC 007
Utilities & Energy Services	$16,520,000	$0
ESCO Five Year Plan Reserve [1]	$35,151,000	$1,500,000
Deferred Maintenance [2]	$27,453,000	$0
Campus	$12,241,000	$0
External Financing	$18,355,000	$0

[1] $40M internal financing allocated in FY2013; $3.1M remaining

[2] AFMFA, UA Reserves, Provost Deferred Maintenance Funding

Net Positive Benefits

✓ Reduces Risk
- $1.5M invested in 100% design — project will be shovel ready
- Project costs locked in — protects from inflationary increases
- ESCO guarantees savings — pays for any shortfall

📈 Protects from Rising Energy Costs
- Locks in energy efficiency today — helps achieve iCAP goals
- Shields budgets from volatile utility rates
- Secures utility incentives while available

□ Addresses Deferred Maintenance Now
- Pays for capital projects with energy savings
- Addresses existing safety issues
- Protects from emergency failures/shutdowns

We need to take action now

1. Every $1 “saved” by deferring capital maintenance, results in $4 in future capital renewal costs
2. We have been borrowing against our assets for too many years
3. Energy Utilization Index (EUI) is worsening and costs are increasing
4. Deferred Capital Maintenance adds to energy use and increases risk

We should seek funding for option 3 to get the most DCM addressed with this EPC project

The $58M cost of option 3 needs to be addressed now or later, so why not include it in this project that will pay for itself?

Thank You

Questions?

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