

APRIL 11, 2024



COALITION

ENERGY SUSTAINABILITY PROGRAM



AGENDA



Background

Meet the ESP Team

About the Energy Sustainability Program (ESP)

Case Study: Spelman College

Questions & Answers, Program Resources

The Coalition ESP

Drivers to Launch



- ✓ *The Coalition* targets large-expense line items – **Energy Expenditure is in the top 5**
- ✓ More comprehensive strategies → greater results
- ✓ *The Coalition + First American* identified opportunities for a comprehensive approach to campus energy needs
- ✓ Needed technical experts for the best possible outcome – *SFS + Ecosystem*



Meet the ESP Team

An Experienced Team Dedicated to Serving Member Schools

Introductions

Meet the ESP Team



Lyen Crews

The Coalition for College Cost Savings

Chad Wiedenhofer

First American Education Finance

Annie Pike

Jean-Philippe (JP) Drouin

Bob Mancini

Ecosystem

YOUR TEAM



First American Education Finance



- **Exclusive Education Focus** - Working with more than **800 schools** nationwide, FAEF is a financial services company dedicated exclusively to serving **Higher Education**
- **Financial Strength** – An **RBC/City National Bank** company
- **Specialty Financing** – Customized financing solutions to solve schools' greatest challenges - from equipment management to complex school projects and energy initiatives
- **Innovative Technology** – Digital tools that make project management easy
- **Concierge Service Model** - A dedicated project manager exclusively serves the Higher Education industry, so they know the ins and outs when it comes to working with schools

Program Scope

FAEF: \$150MM Capital Target by 2025

First American is committed to helping our clients progress toward a carbon neutral/low-carbon campus.

Qualifying Projects*

- Energy Efficiency
- Renewable Energy
- Clean Transportation

Customized Structures

- Improved Rates
- Enhanced Terms
- Leases and Loans
- PPAs and ESAs
- 5-20 Year Terms – Maximize ROI

Independent Capital

- Attractive Alternative to ESCO Financing
- Vendor & Tech Agnostic
- Support Sustainability Plan
- Ability to address other Deferred Maintenance Needs

**Financing subject to bank underwriting requirements and project diligence*



Program Scope

Grant Funding for Strategic Assessments

5 Launch Grants

Benefit to Coalition Members

- **5** Coalition Energy Program Launch Grants sponsored by First American
- Launch Grants covered the cost of a strategic assessment
- Available to Coalition member schools interested in performing campus strategic assessments and/or have an outdated assessment



Recipients

Launch Grants
& Strategic Assessment



Lewis & Clark College
Portland, OR

Marquette University
Milwaukee, WI

Morehouse College
Atlanta, GA

Spelman College
Atlanta, GA

The New School
New York, NY

Polling Question #1

How far along is your campus in meeting its energy conservation and decarbonization goals?

Polling Question #2

Which of these is the greatest challenge to achieving your energy conservation and decarbonization goals?



Energy Sustainability Program

Goals & Strategies

Program Goals



Help member schools assess, build, and advance their Energy & Sustainability Program (ESP) by addressing:

- ✓ Decarbonization
- ✓ Energy operating expenses
- ✓ Resiliency/business continuity
- ✓ Asset renewal and deferred maintenance

ESP Services



1 Planning

2 Projects
*Development, Implementation &
Financing*

ESP Services

Develop campus-specific energy and sustainability programs

1. Planning

- Stakeholder Engagement
- Strategic project-oriented assessment
- Master plan / Peer Review
- Processes and tools for max value
 - Project development approach
 - Project delivery method
 - Project analysis – LCC

2. Projects

- Design, build, finance
 - Heating Electrification
 - Heat Recovery
 - Asset Renewal/Deferred Maintenance
 - Solar Energy
 - Improving Resiliency and Comfort
 - Steam to hot water conversion
 - EUI Reduction



Program Commitment Overview

Who will benefit from this program?

Group 1:

Have always wanted a
strategic assessment

Group 2:

Have a strategic assessment
but are stalled

Group 3:

Ready to begin
implementing projects

Why Ecosystem



- Integrated planning, design, and construction = single point of contact
- Deep expertise in energy and decarbonization on campuses
- Accountability for delivering outstanding results

280

Projects

1,760

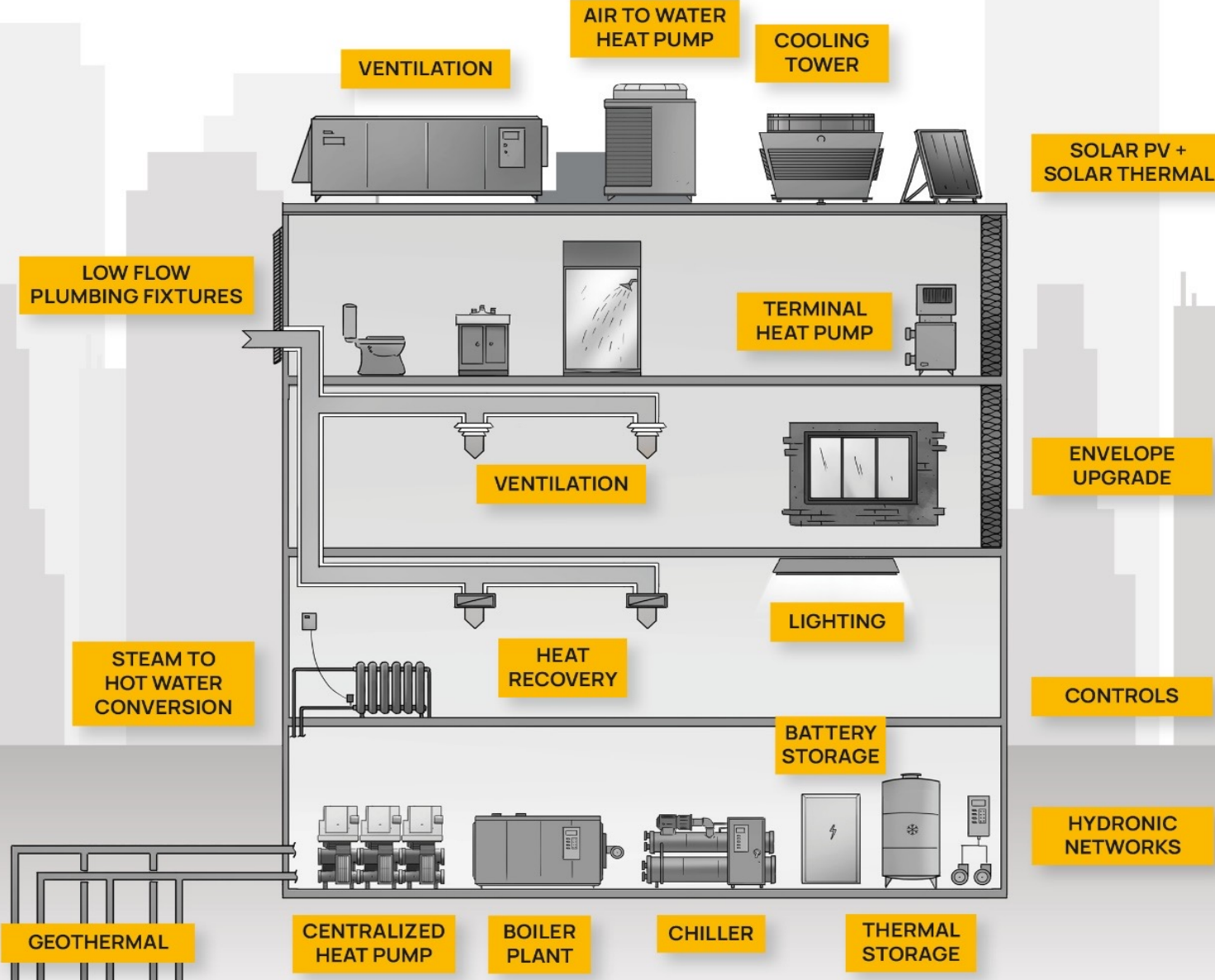
Buildings

\$1.1BN

Worth

HOLISTIC APPROACH

Your campus as an energy ecosystem





CO-DEVELOPED SOLUTION



Gather key
stakeholders



Framing goals
sessions to define
key outcomes



Develop
project options

We focus on the most important outcomes:



Modernize
Equipment



Meet/Exceed
Environmental
Targets



Enhance
Student
Experience



Secure
Resiliency



Maximize
Financial
Performance



Maximize
Energy
Performance



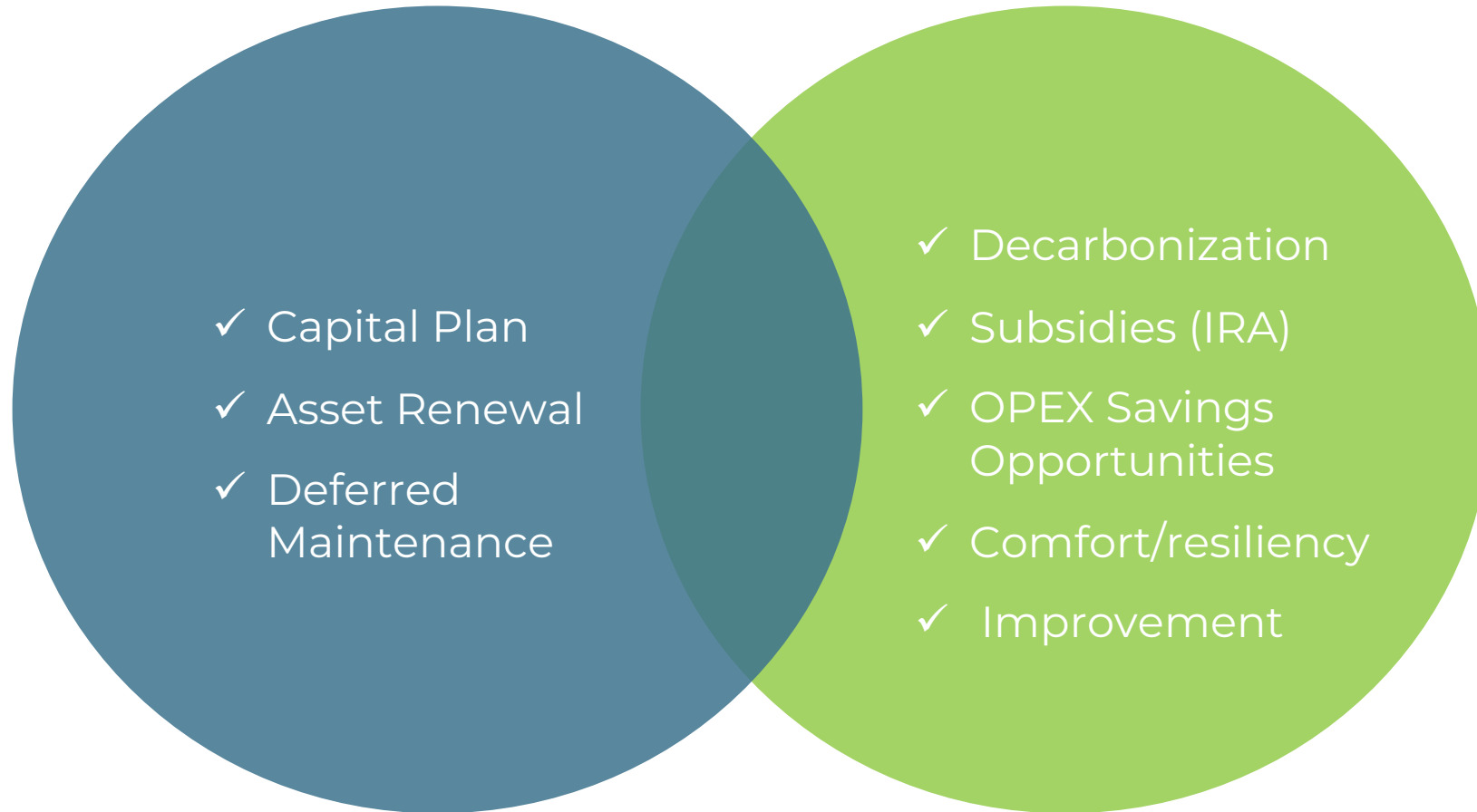
Simplify
Operations &
Maintenance



Improve
Comfort



Capital Plan Overlap with Other Goals





Strategic Assessment

Education & Process

Polling Question #3

Have you completed some level of strategic assessment for energy conservation and decarbonization on your campus?



Strategic Assessment for Decision Makers

- ✓ Engagement / Alignment
- ✓ Education
- ✓ Clarity
- ✓ Actionable Roadmap

Strategic Assessment Process



1. Stakeholders Framing Goals Meeting
2. Energy & Sustainability Diagnostic
3. Identify Potential Strategies and Pathways, with High-Level Financial and Performance Estimates
4. Determine Best Path



Spelman College

Case Study



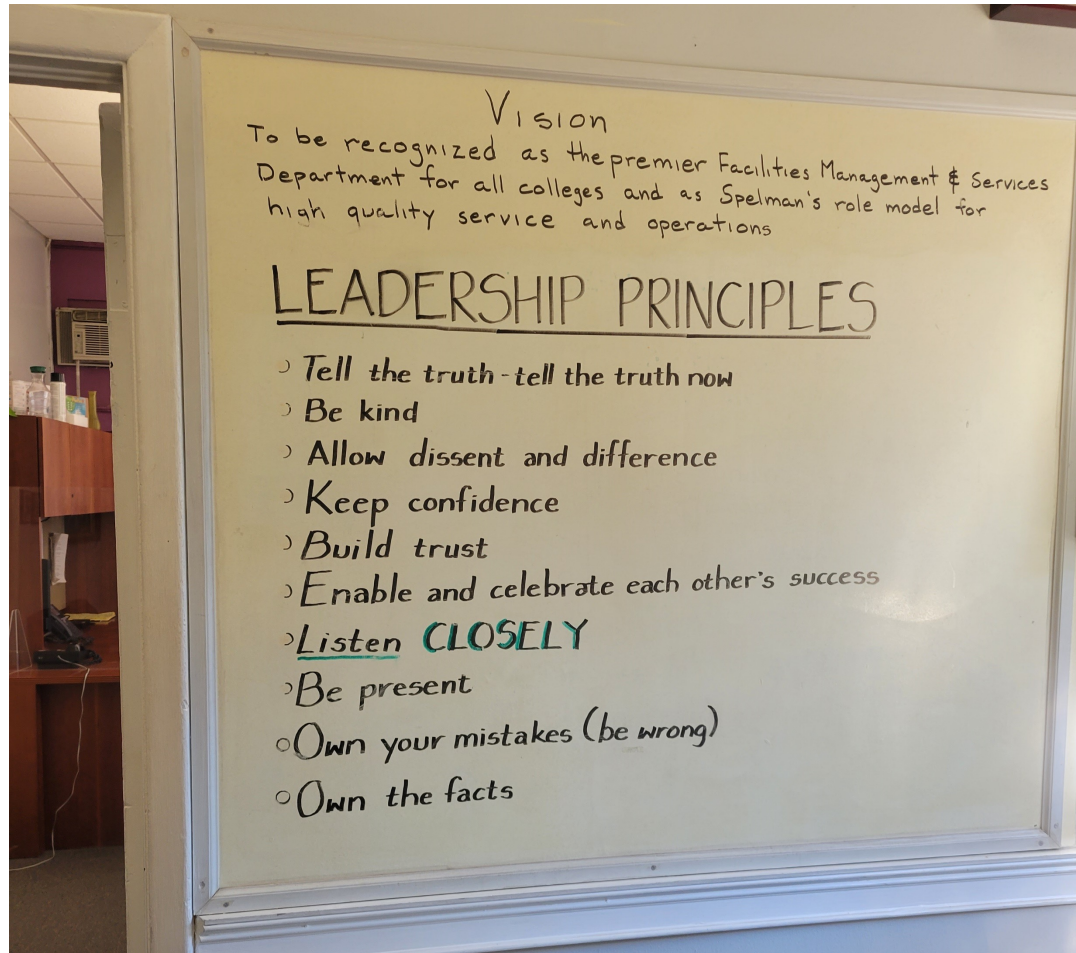
Spelman College

- ✓ Historically black women's liberal arts college in Atlanta, Georgia
- ✓ 2,400 students
- ✓ 25 buildings: average age of 70 years
- ✓ Campus steam, hot water, and chilled water networks
- ✓ Partial ownership of central plant





Getting to Know Spelman



Their champion:

- ✓ Arthur Frazier - Director of Facilities Management and Services, Campus Architect, Sustainable Spelman Co-chair



Getting to Know Spelman

Their priorities:

- ✓ Re-align on sustainability goals
- ✓ Measure and demonstrate impact of sustainability initiatives
- ✓ Water conservation
- ✓ Be smart about asset renewal
- ✓ Take advantage of tax credits, incentives
- ✓ Remain affordable for their student demographic

**President's Climate
Commitment:
Carbon Neutral by 2056**



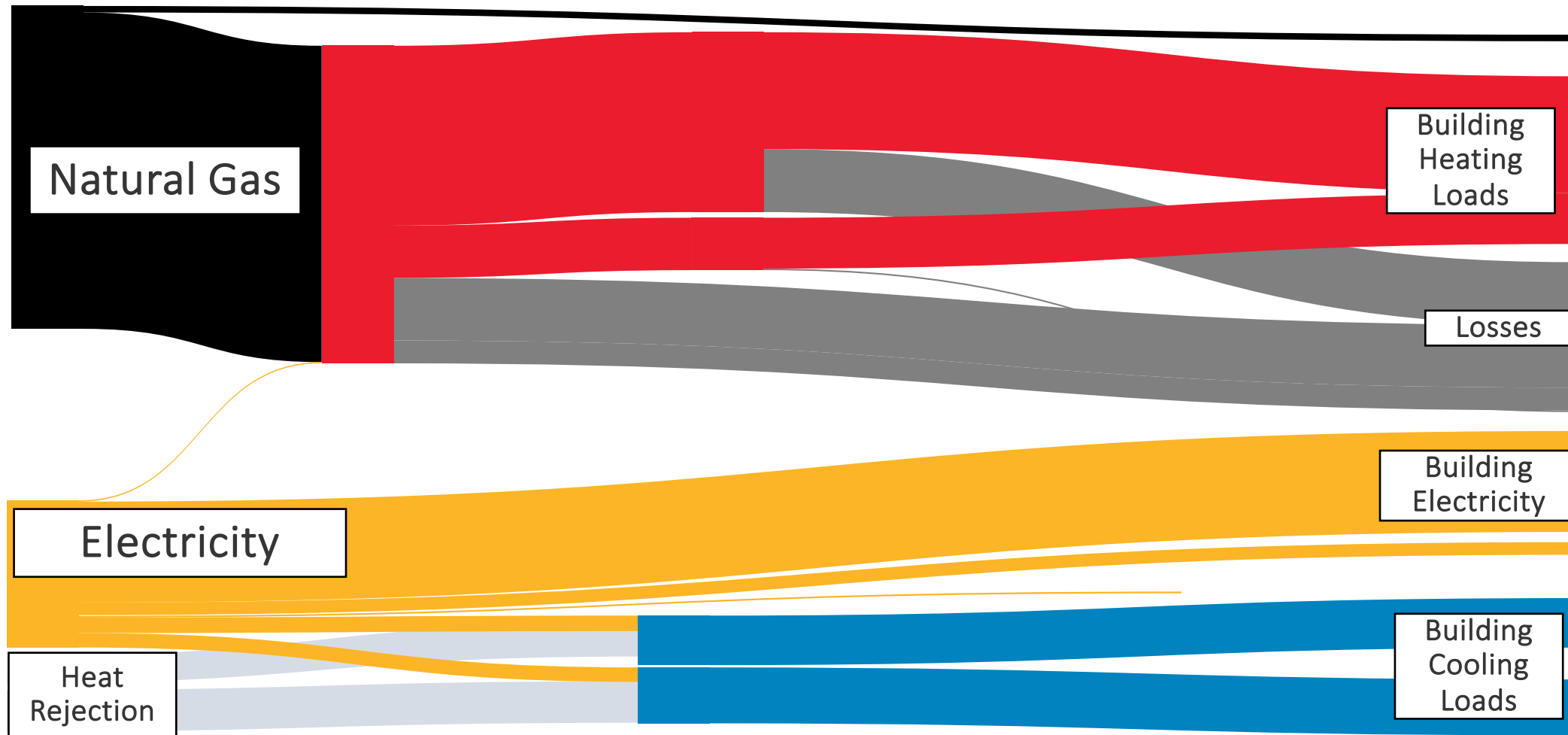
Getting to Know Spelman

Their Infrastructure:

- ✓ Significant deferred maintenance needs
- ✓ Ongoing steam to hot water conversion
- ✓ Chillers in science building at end of life
- ✓ Upcoming construction of two residence halls



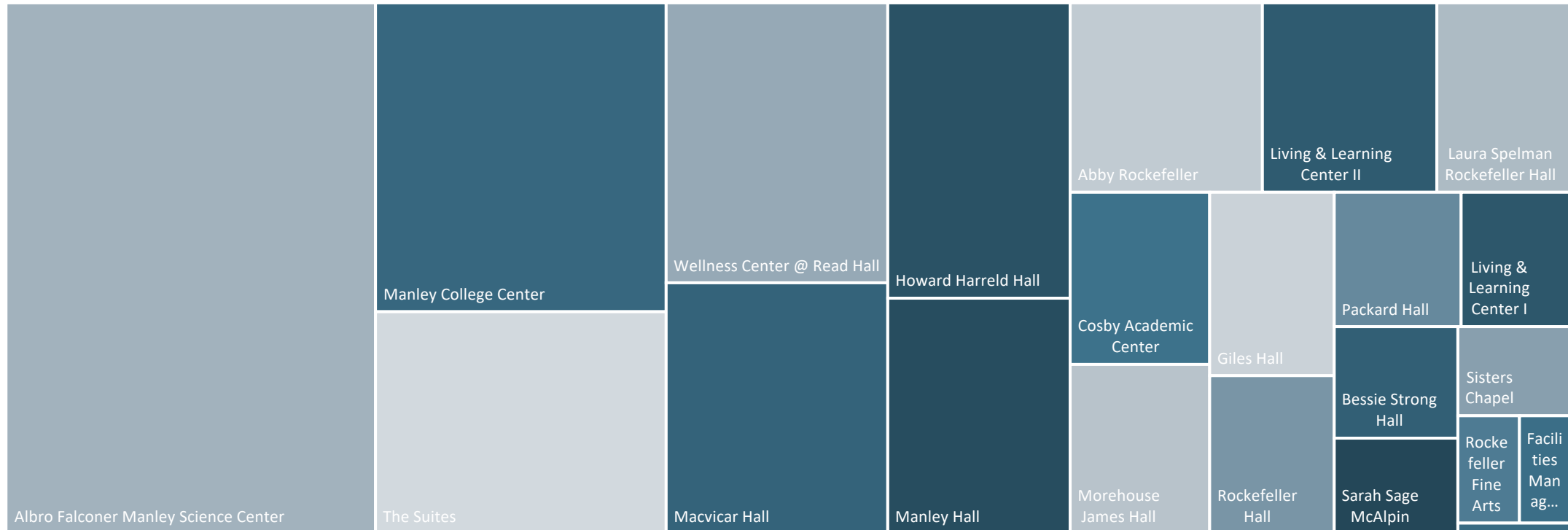
Energy Diagnostic



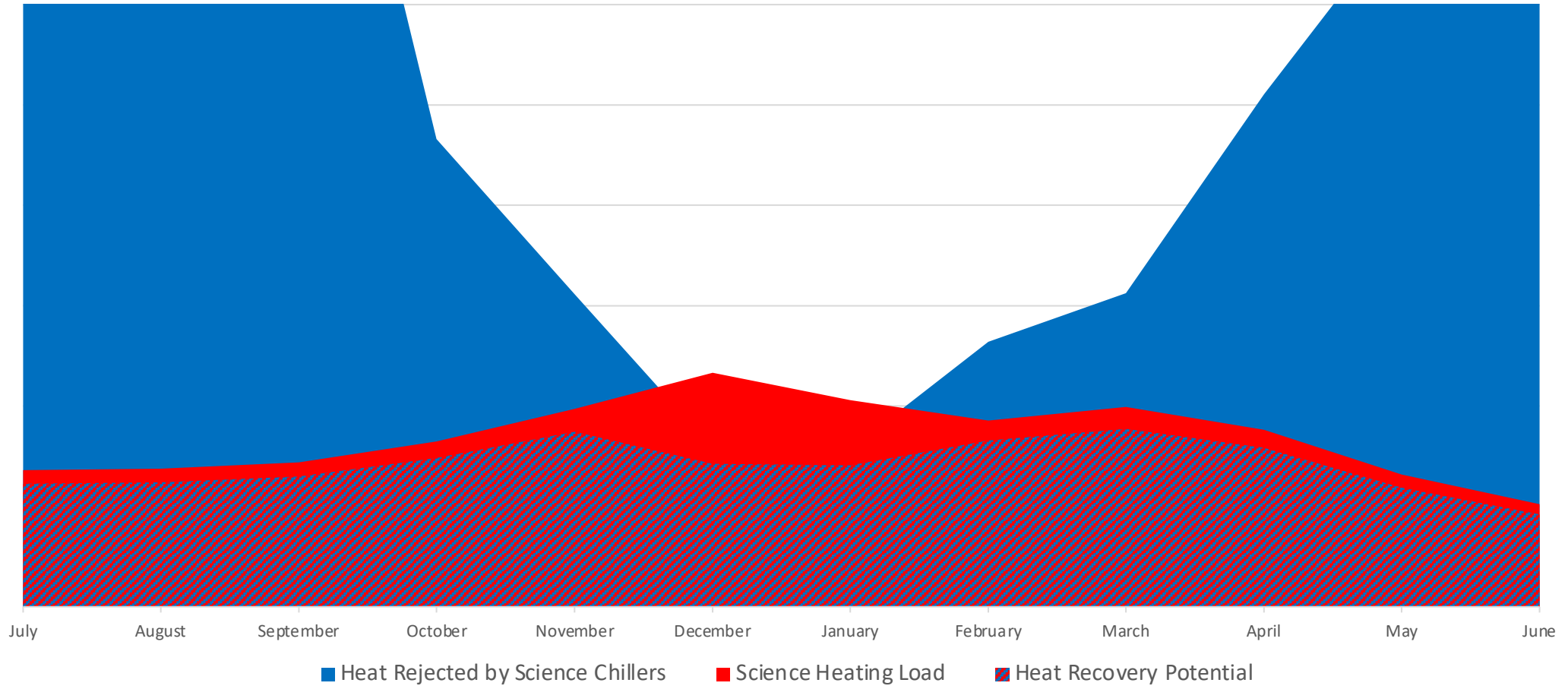
Energy Diagnostic



Emission Reduction Potential



Energy Diagnostic



Recommendations

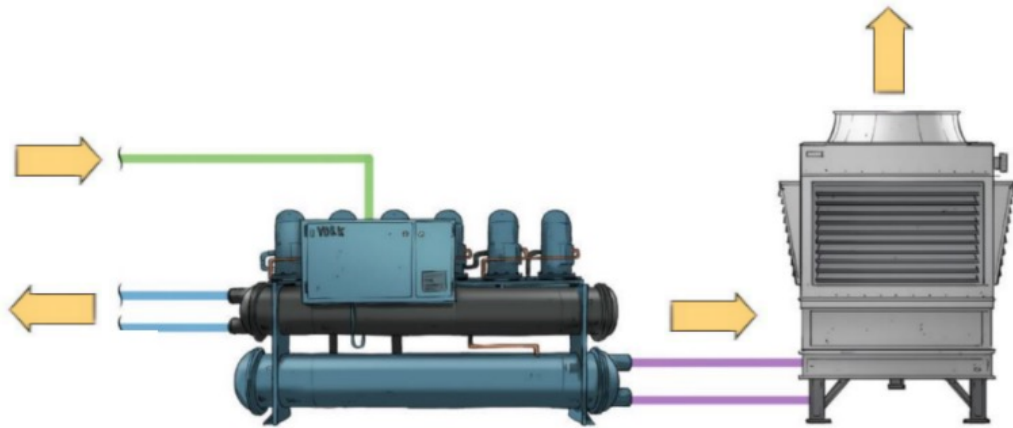


- ✓ **Steam to hot water conversion – prioritize lowering HW temperature**
 - ✓ Opportunities for immediate savings (no CAPEX investment)
 - ✓ Considerations for new buildings and pipe infrastructure
- ✓ **Building EUI (energy use intensity) Reduction Program**
 - ✓ Holistic assessment of building energy systems
 - ✓ Use deferred maintenance budgets strategically
 - ✓ Cost of decarbonization metric



Recommendations

Smart Asset Renewal: Science Center Chiller



One-for-one replacement:

- Heat rejected to environment
- Evaporation losses



Heat recovery chiller:

- Heat rejected to heating loop
- Closed system



Outcomes

- ✓ 22% GHG emissions reduction
- ✓ Understanding of decarbonization investment

	Water Savings	Deferred Maintenance	Improve Resiliency	Improve Occupants Comfort/Safety	Future Proofing, Enables Decarbonization
Heating EUI Reduction Program	X	X		X	
Steam to Hot Water Conversion	X	X		X	X
Science Heat Recovery Chiller	X	X	X		



Actions

Pursuing funding to include a heat recovery chiller in the science building chilled water hub upgrade.

Reviewing design hot water temperature for upcoming construction.

Exploring plant hot water temperature reduction.

Next Steps:

Upcoming Educational Webinars or Direct Meetings

1. Planning

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2. Projects

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Program Resources

For Further Questions on Next Steps

Program Web Page:

<https://www.thecoalition.us/energy-sustainability-program>



*Scan this QR
code for the ESP
web page*

Program Contact Information:

Financing-related questions:

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Project-related questions:

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Ecosystem

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THANK YOU

Questions?



Appendix



Common Stakeholder Goals

President, Trustees, Provost

- ▶ Drive greater enrollment
- ▶ Higher quality teaching and learning environment / comfort
- ▶ Provide a hands-on learning experience / Living Lab
- ▶ Mission relevance

Sustainability & Energy

- ▶ Reduce GHG emissions
- ▶ Increase renewable energy
- ▶ Reduce energy consumption / EUI
- ▶ Reduce water usage and waste to landfills

Project Success Criteria

Financial & Procurement

- ▶ Best Long-Term Value
- ▶ Reduce CAPEX on Deferred Maintenance and Capital Plan
- ▶ Maximize Incentives, Grants

Facilities & Operations

- ▶ Renew ageing assets / right timing
- ▶ Reduce deferred maintenance
- ▶ Increase resiliency
- ▶ Improve operations

Prioritized Goals



FACTOR	WEIGHT
Scope 1 and 2 GHG Emission Reductions	25%
Alignment with Electrification Goals	15%
Strategic Integration with Capital Projects and Deferred Maintenance	15%
Safety and Comfort Improvements	15%
Long-term Value and Financial Model Viability	30%
	100%

Metrics Used



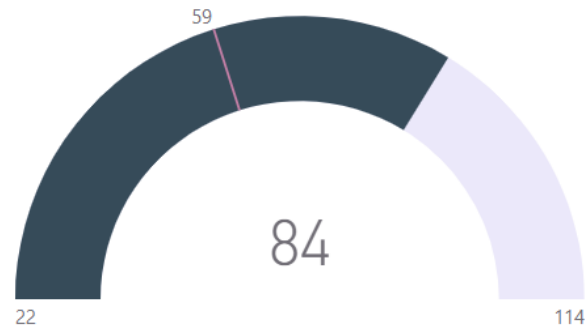
- CAPEX \$ / mTon saved
- CAPEX \$ / bldg gross sq. ft.

Energy Diagnostic

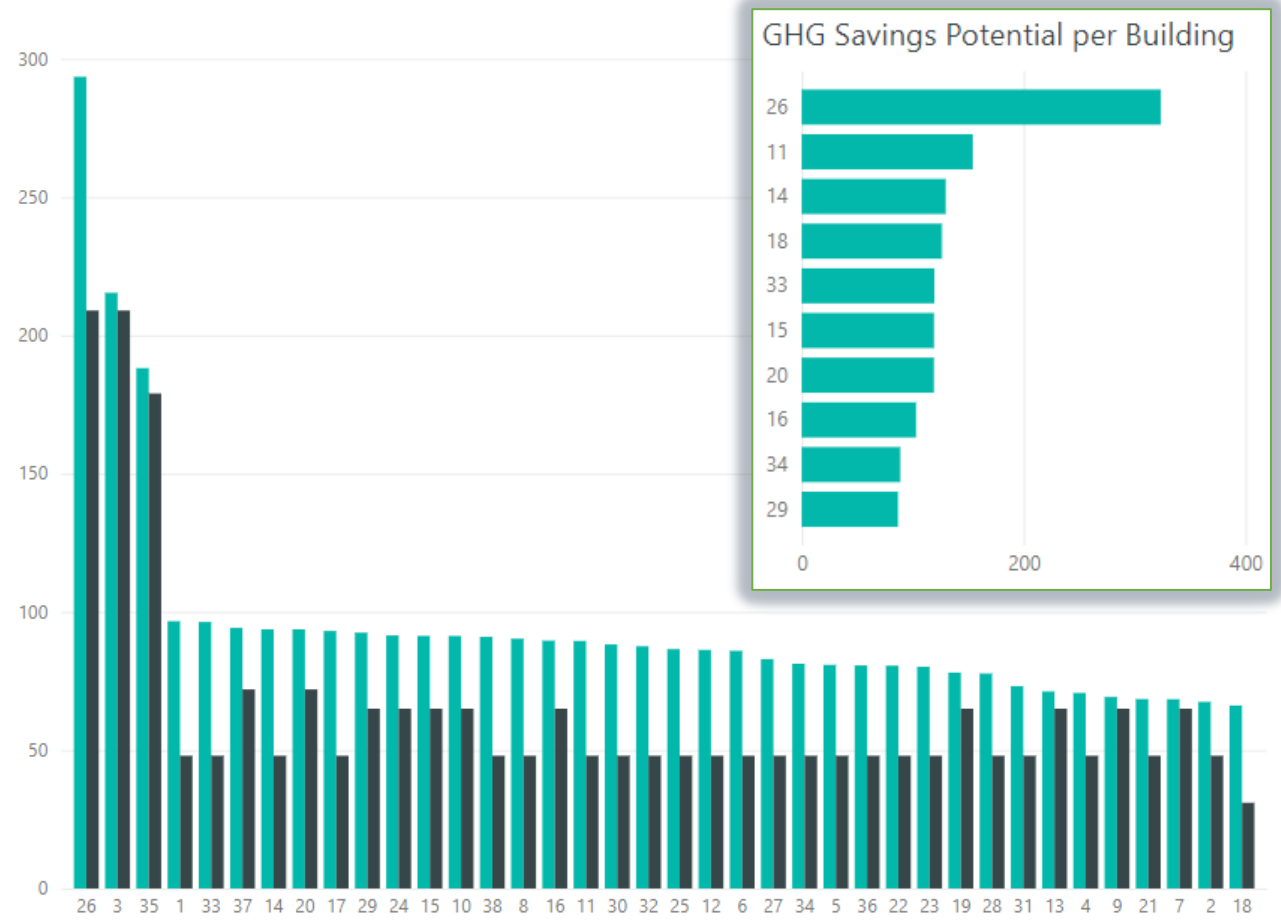


YOUR CAMPUS...

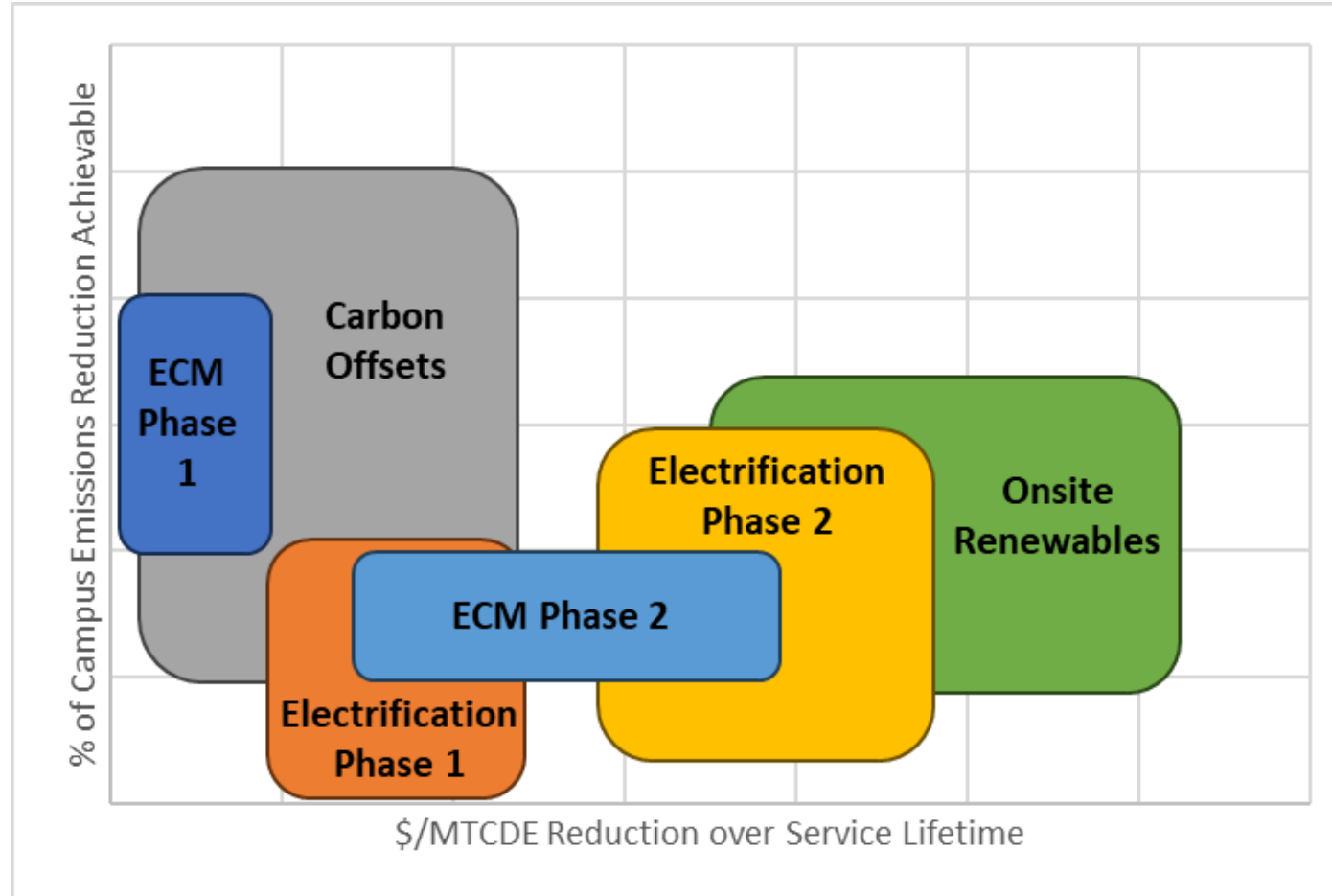
EUI (kbtu/sqft/yr)



Uses 42% more energy per square foot than the median college campus



Decarbonization Efforts

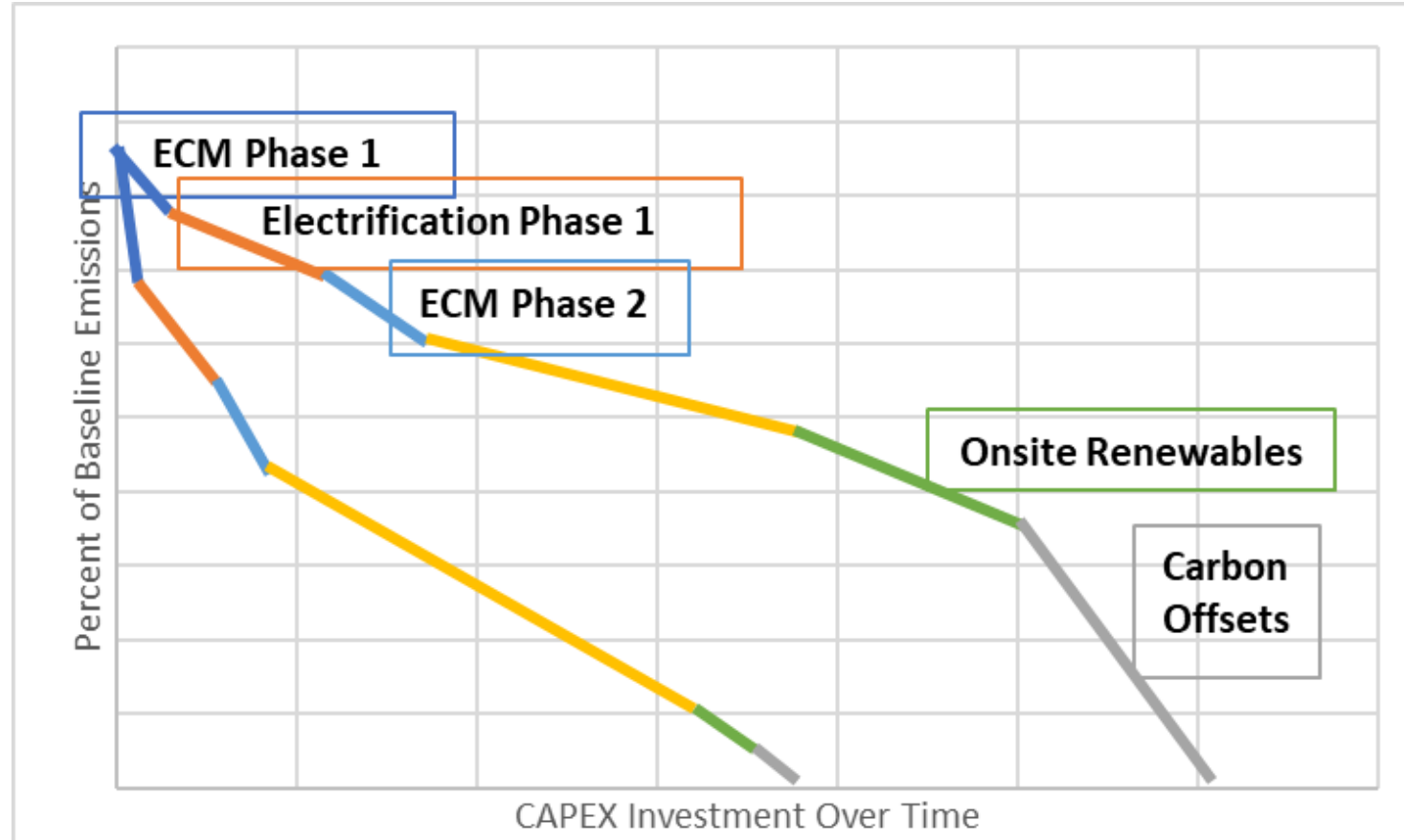


Alignment with Prioritized Goals



	Goal #1	Goal #2	Goal #3	Goal #4	Goal #5
Strategy #1	✓	=	=	✓	✓
Strategy #2	✓	✓	✓	=	=
Strategy #3	✓	✓	=	=	✓
Strategy #4	✓	✓	✓	✓	✗
Strategy #5	✓	✓	=	=	✗

Setting a Direction to Reach Your Goals



Why Ecosystem?

For Strategic Assessments

- Data-driven
- Based on hands-on experience

For Project Implementation

- Turnkey approach
- Commits to results (cost, performance)

For Both

- Very innovative
- Technology agnostic