



# Building a Low Carbon 21<sup>st</sup> Century Public University Campus

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Kelly Hayes McAlonie  
Bruce Buerger



# Hello



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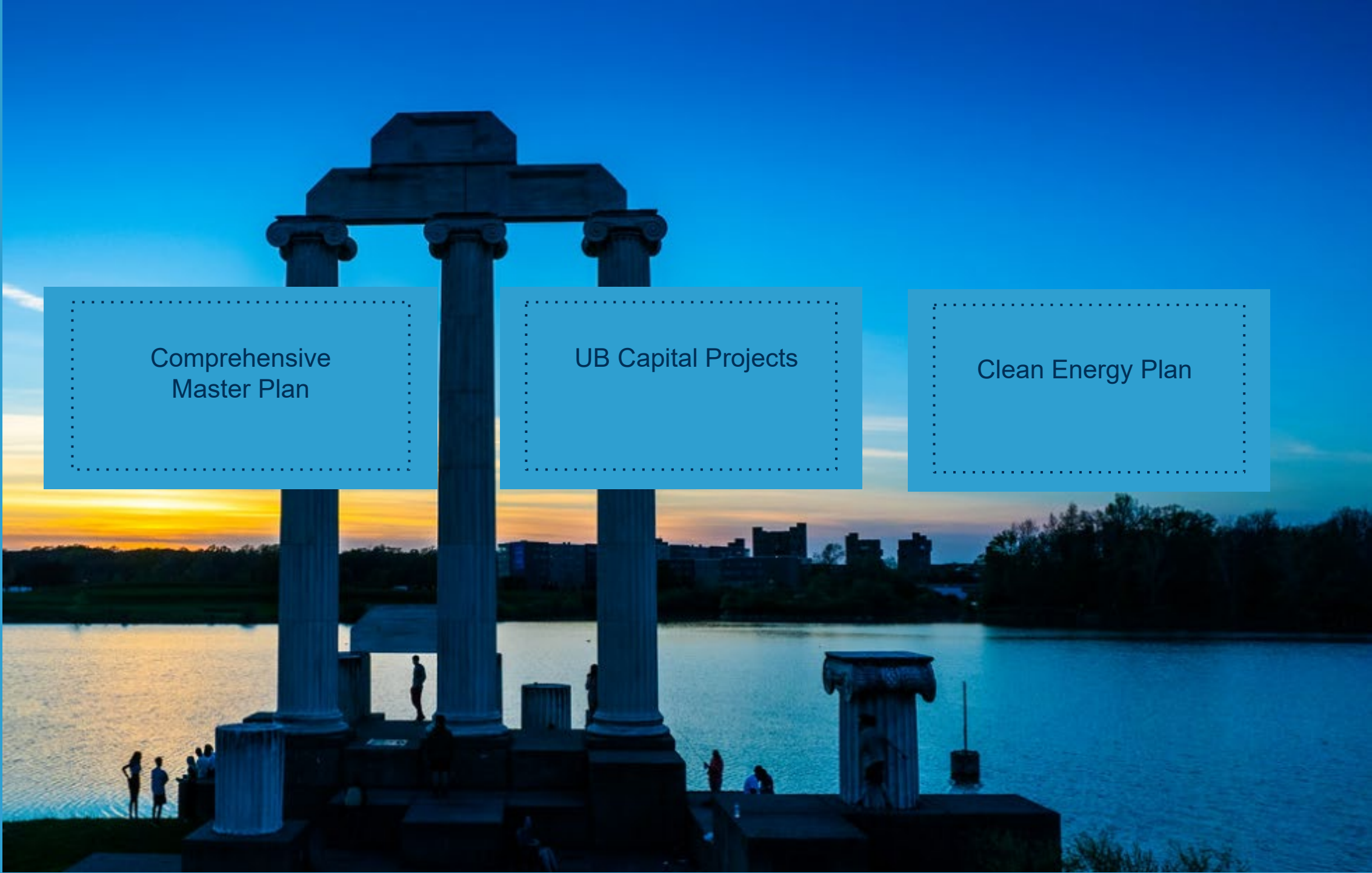


# Contents

Comprehensive  
Master Plan

UB Capital Projects

Clean Energy Plan







**CREATE** Downtown Campus by moving the JSMBS from South Campus



**REVITALIZE** South Campus as a Professional Studies Campus



**REIMAGINE** North Campus as an Undergraduate and Research Center



**IMPROVE** the campus life experience at all three centers

# Comprehensive Master Plan



**REDUCE** deferred maintenance and address priority infrastructure



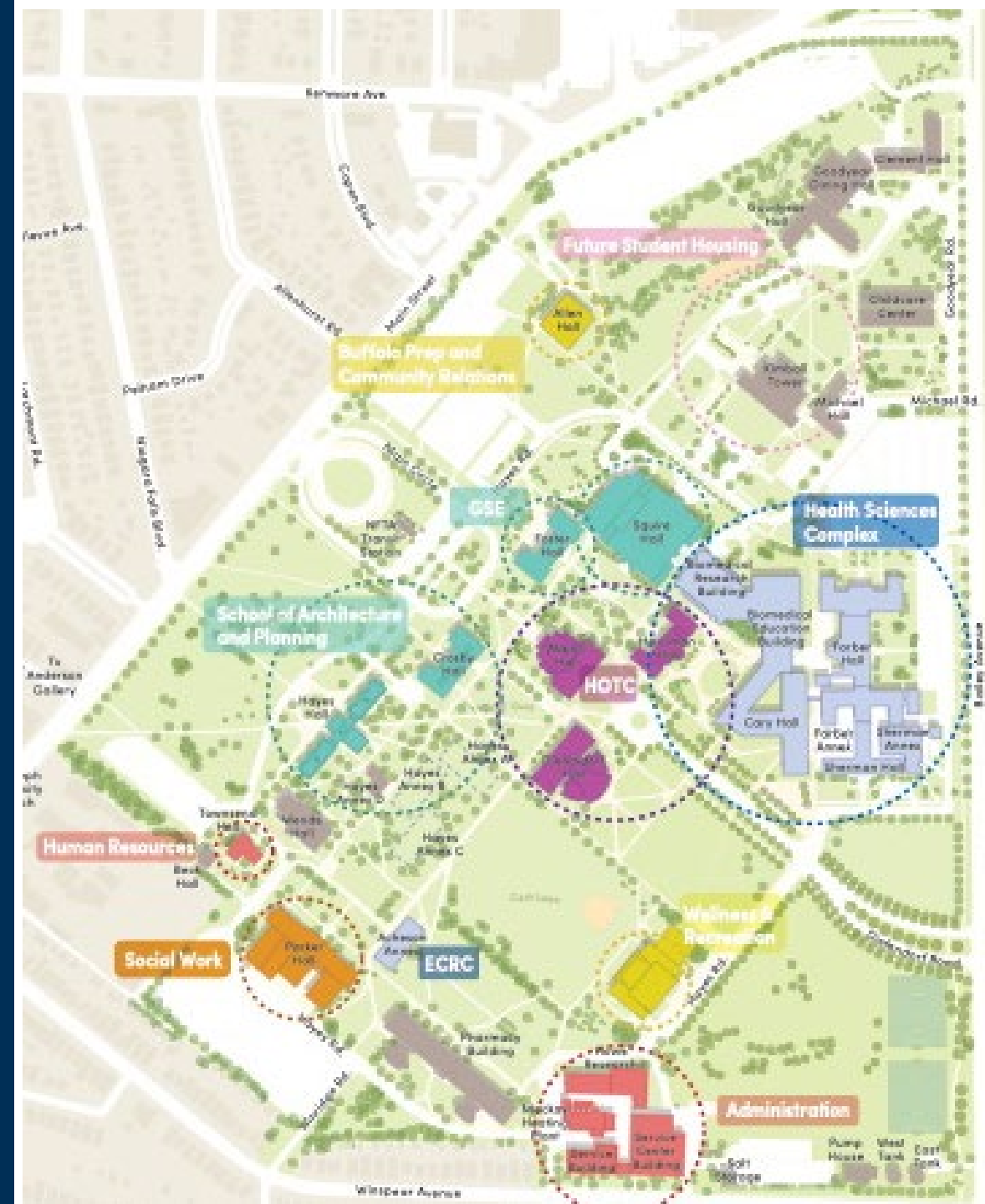
# South Campus Revitalization Plan

Architectural (Restore E.B. Green Historic Plan):

- Restore Main Street landscape
- Connect campus along historic corridor
- Preserve quads and lawns
- Complete Hayes Loop
- Build with Hayes Loop
- Create a primary Bailey Ave. entrance
- Provide access to recreation
- Improve Bailey Ave landscape

Programmatic:

- Move Schools of Social Work (SW) and Graduate Schools of Education (GSE)
- Move administrative offices
- Address space needs of growing schools
- Demolish temporary and vacant buildings



# Reimagine North Campus Plan

## Campus Planning:

### Realize Sasaki 1970 Plan

- Strengthen Spine
- Develop Lee Road
- Celebrate Lake LaSalle

## Architectural | Landscape Architectural:

- Wellness & Recreation Center
- Renovate Brutalist buildings w/ SHPO standards
- Rejuvenate the Promenade
- Rethink Mary Talbert Way
- Create Student Oval
- Connect Pathways to Baird Point
- Rethink Greenspaces and Parking Lots

## Programmatic:

- Create HOTC
- Consolidate and Strengthen University Libraries
- Grow CAS | SEAS | SOM | Law
- Modernize Athletics Facilities





# Criteria for Prioritizing Capital Projects



Is it consistent with our  
Comprehensive Master Plan?



How does it advance our  
Strategic Goals?



How does it advance our  
goal of Top 25??



Does it impact retention and our  
Campus Experience?

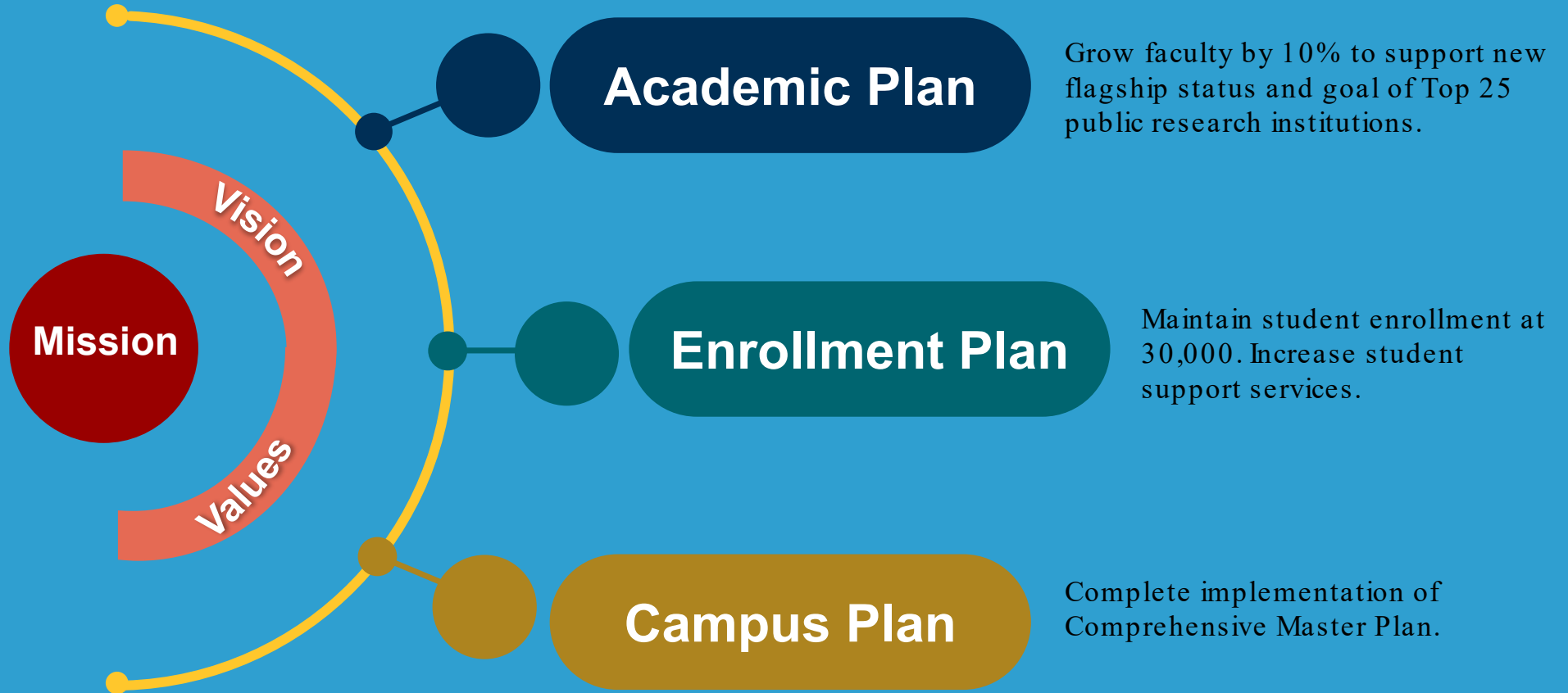


Does it address SUCF's lump  
funding criteria?



Does it reduce deferred  
maintenance?

# UB Strategic Plan



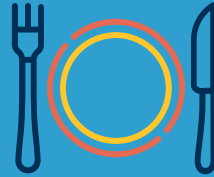


# Campus 2030: Tomorrow's Multi-Modal Campus



**Type 1**

**Holistic Health and  
Wellness Centers**



**Type 2**

**Dining Halls and  
Food Spaces**



**Type 3**

**Modern Student  
Housing**



**Type 7**

**Interdisciplinary  
Research Facilities**



**Type 4**

**Hybrid and Flexible  
Office Spaces**



**Type 5**

**Tech-Enabled  
Classrooms**



**Type 6**

**Libraries and Learning  
Commons**

# 2023: YEAR IN REVIEW



**\$645,000,000**

**Capital Projects Value**

2023:  
Year in Review



**The Landing at Ellicott  
North Campus  
Status: Construction Phase**



**Brittany Murchie Mulla  
Sports Performance Center  
North Campus  
Status: Construction Phase**



**2023:  
Year in Review**  
.....  
**Building Wide Projects**



**Agrusa Hall  
North Campus  
Status: Design Manual**



**2023:  
Year in Review**  
.....  
**Building Wide Projects**



**Clark Hall  
South Campus  
Status: Schematic Design**



**Parker Hall  
South Campus  
Status: Concept Phase**



**2023:  
Year in Review**  
.....  
**Building Wide Projects**



**Crosby Hall  
South Campus  
Status: Completed**



**Foster Hall  
South Campus  
Status: Construction**

**50** approximate

**Small Scale Renovations**

**\$24,000,000**

**Project Value**

2023:  
Year in Review

Rehab Projects



**Silverman Library  
Front Entrance  
Complete: August 2024**



**AI Institute  
Lockwood Library  
Complete: March 2024**



**Baird Hall Classrooms  
Complete: August 2025**



**Capen Northcourt  
Complete: May 2024**



**2023:  
Year in Review**

**Rehab Projects**



**Diefendorf Hall  
Classrooms 6 & 7  
Complete: January 2024**



**Squire Hall  
1<sup>st</sup> Floor Clinics  
Complete: September 2023**



**Student Union  
Universal Restrooms  
Bidding in: Spring 2024**



**Student Union  
1<sup>st</sup> Floor Upgrades  
In Construction**



# 2024: YEAR IN REVIEW

**\$1,266,000,000**

**New Building-Wide Projects Value**

**\$1,533,000,000**

**Capital Projects Value**

2025:  
A Look Ahead  
.....  
Building Wide Projects

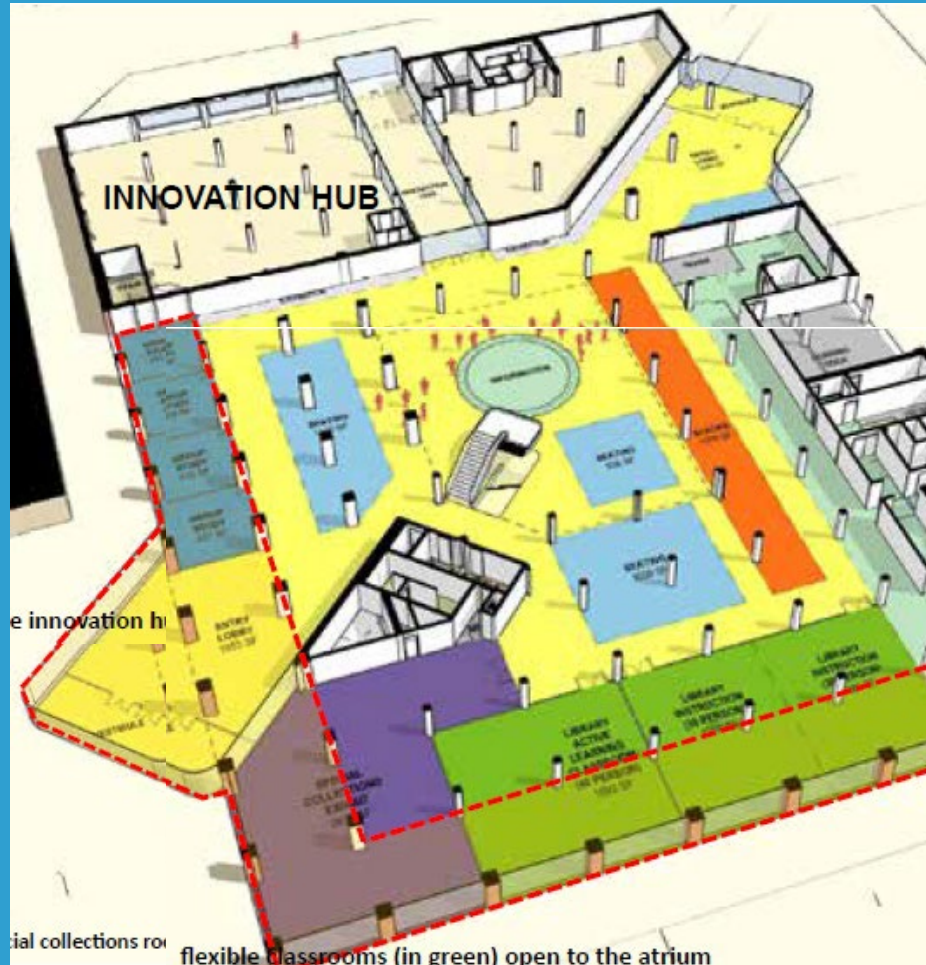


**Lockwood Library  
North Campus  
Program Phase  
\$310M**









**2024:  
A Look Ahead**  
.....  
**Building Wide Projects**



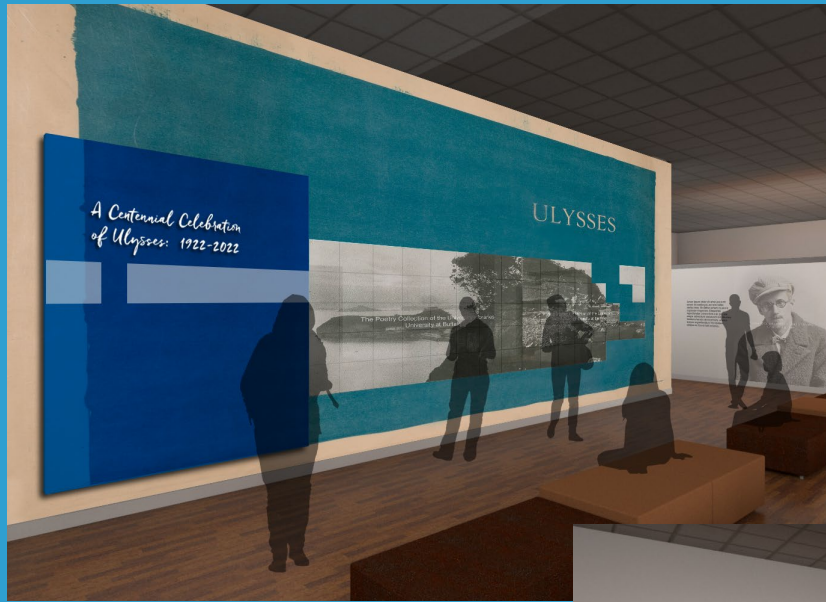
**Computing / Science Education Center  
North Campus  
RFQ Date: April 2024  
\$60M**



2024:

A Look Ahead

Building Wide Projects



Joyce Exhibit at Abbott Library  
South Campus  
Schematic Design  
\$11M

# 2025: LOOK AHEAD



**2025:  
A Look Ahead**  
.....  
**Building Wide Projects**



**Interdisciplinary Research and  
AI & Society Building  
North Campus  
RFQ Date: October 2024**

**2025:  
A Look Ahead**  
Building Wide Projects



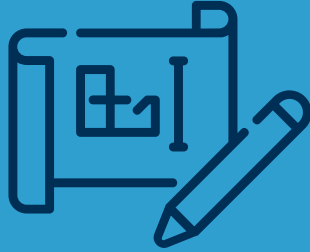
**Health Sciences Complex  
South Campus**



**Cooke Hochstetler  
North Campus**

**2025:  
A Look Ahead**

**Planning Studies**



**Design Standards  
All Campuses**



**Historic Framework:  
1945-1980  
North and South Campuses**



**Mobility  
All Campuses**



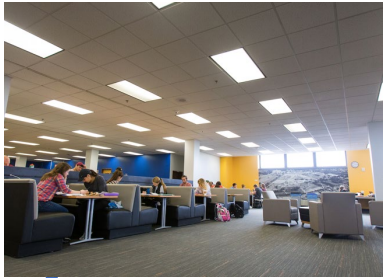
**Open Spaces  
North and South Campuses  
Including Promenade**



# SOUTH CAMPUS REVITALIZATION CAPITAL PROJECTS COMPLETION TIMELINE



Hayes Hall  
2015  
(funded under  
previous plan)



Small Projects  
2015 - 2030



Allen Hall  
2021



Crosby Hall  
2023



HSC Backfill



Parker Hall

Facilities  
Master Plan  
2011



Capital Plan  
Frozen  
2013 - 2015

Townsend Hall  
2020



BRB  
2022



Foster Hall  
2025

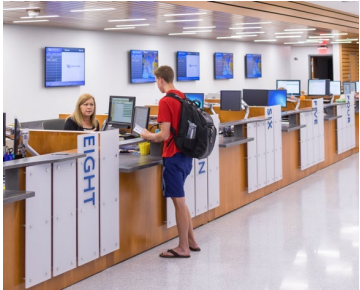
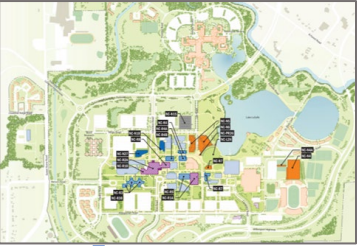


Clark Hall



# NORTH CAMPUS

## REIMAGINING CAPITAL PROJECTS COMPLETION TIMELINE



Facilities  
Master Plan  
2011

HOTC  
Phase 1&2  
2015

HOTC  
Phase 3  
2022

Lockwood

Cooke  
Hochstetter

New Rec &  
Wellness Center

Baldy Hall

Davis Hall  
2012

Cooke & Hoch.  
5th Floor - 2016

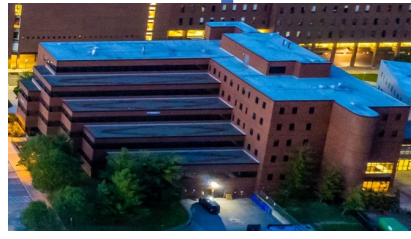
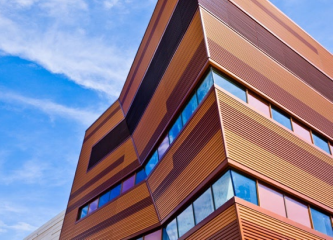
Agrusa  
Hall

New  
Research  
Building

O'Brian  
Hall

HOTC  
Phase 4

Park  
Hall



# CLEAN ENERGY PLAN



## New York State Climate Goals



Achieve Climate Neutrality by 2050 (Climate Leadership Community Protection Act)



Mandate 70% renewable power by 2030



Phased out coal power in 2020



State Agencies to Decarbonize their Investment Funds and Investment in Clean Energy



Phase-out of fossil-fueled vehicles banning sales after 2035 in NYS



Zero Waste Initiatives (compost mandate and phasing out of single use plastics)



# UB 10 in 10





# What is electrification

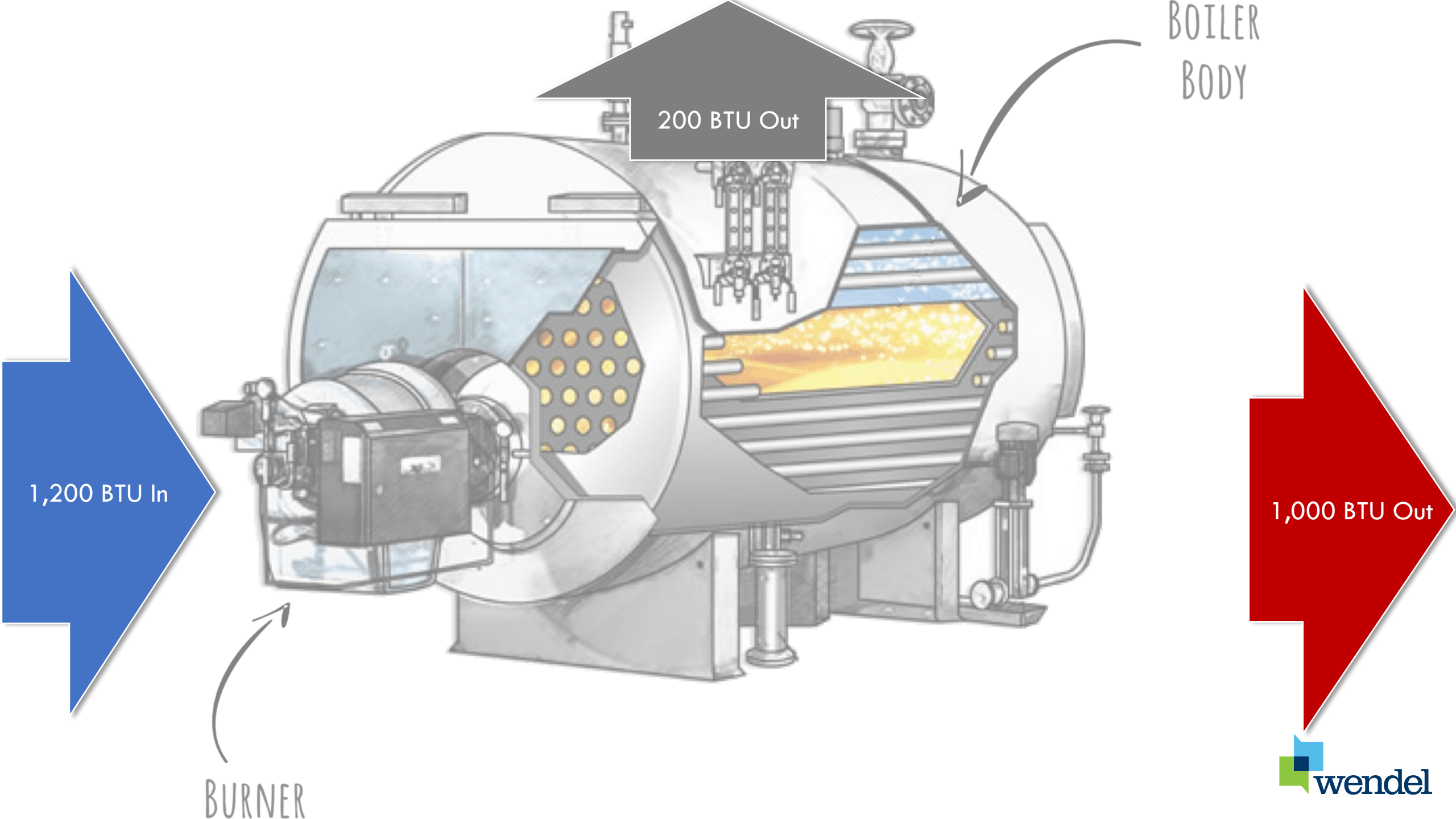
- Shifting source energy from fossil fuels to electric
- Leverage renewable energy generation
- Leverage carbon reductions in the grid
- Path to transformative changes
- Path to carbon neutrality



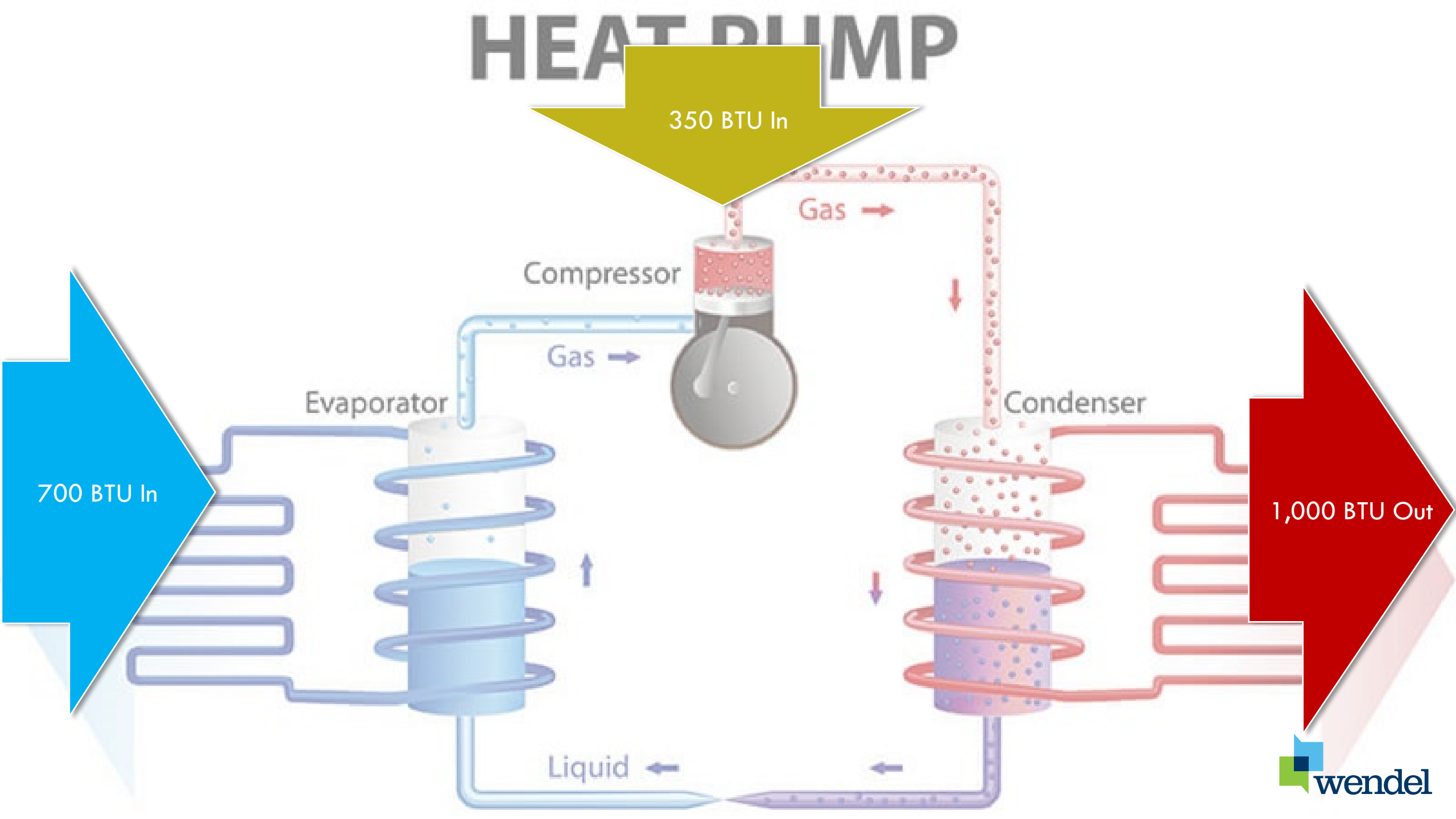




*Why do we keep talking about heat pumps?*



# HEAT PUMP







# South Campus Clean Energy Master Plan





Remove All  
Steam End Uses



Emerging  
Technologies



Utility Grid  
Capacity and  
Rates



Energy  
Efficiency



Energy  
Recovery



Thermal  
Energy

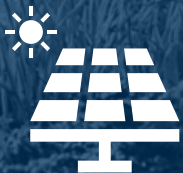


Energy  
Storage



Carbon Neutral  
Energy System

Renewable Energy  
Generation



Operations &  
Maintenance





District Heat Pump | Phase 1

— CHW Piping

■ Heat Pump Plants







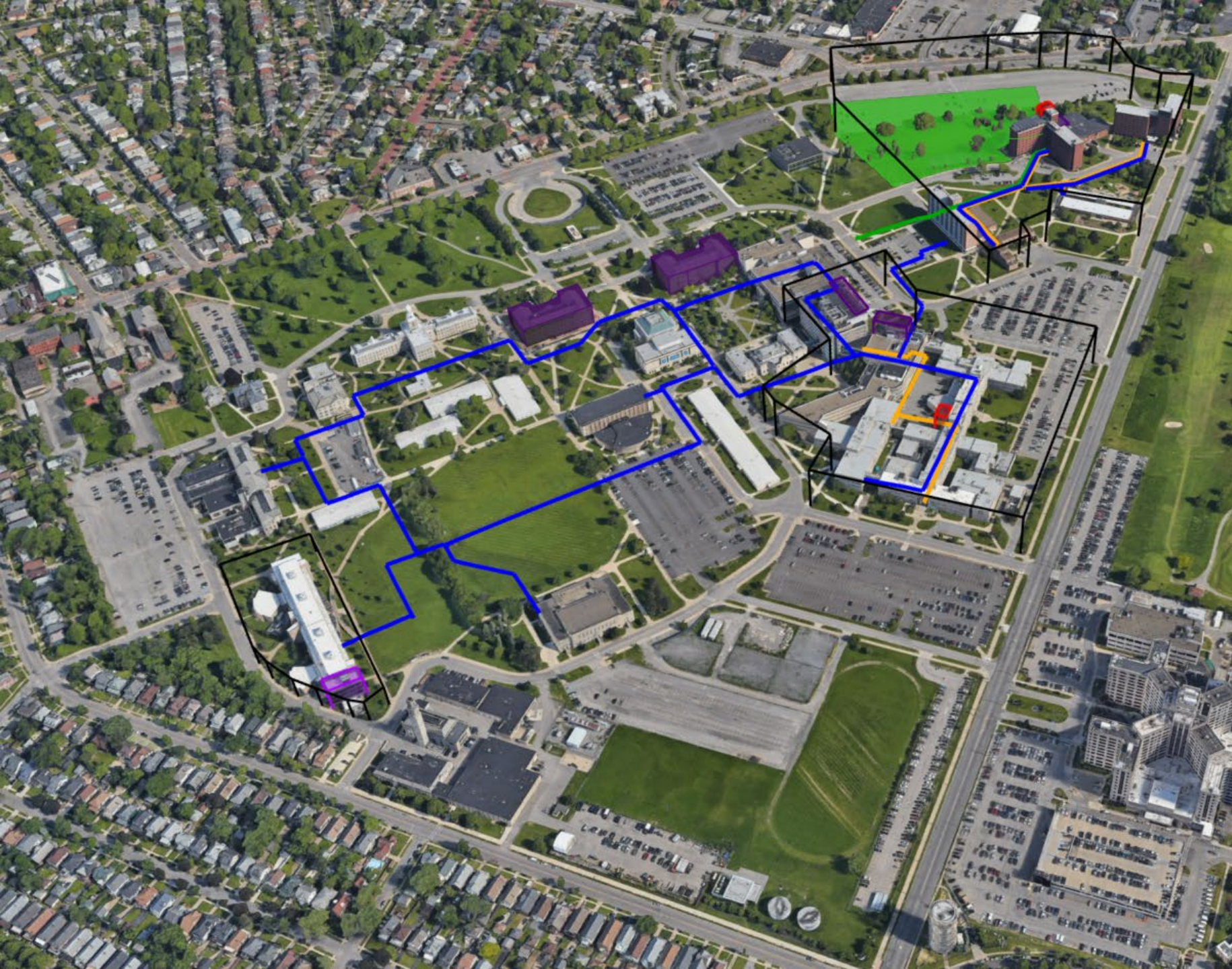
## District Heat Pump | Phase 2

- CHW Piping
- Heat Pump Plants
- New Hot Water Piping
- Geothermal Wells
- Geothermal Piping



District Heat Pump | Phase 3A

- CHW Piping
- Heat Pump Plants
- New Hot Water Piping
- Geothermal Wells
- Geothermal/Neutral Temp Piping





# District Heat Pump | Phase 3B

- CHW Piping
- Heat Pump Plants
- New Hot Water Piping
- Geothermal Wells
- Geothermal/Neutral Temp Piping





# District Heat Pump | Phase 4

- CHW Piping
- Heat Pump Plants
- New Hot Water Piping
- Geothermal Wells
- Geothermal/Neutral Temp Piping





# District Heat Pump | Phase 5

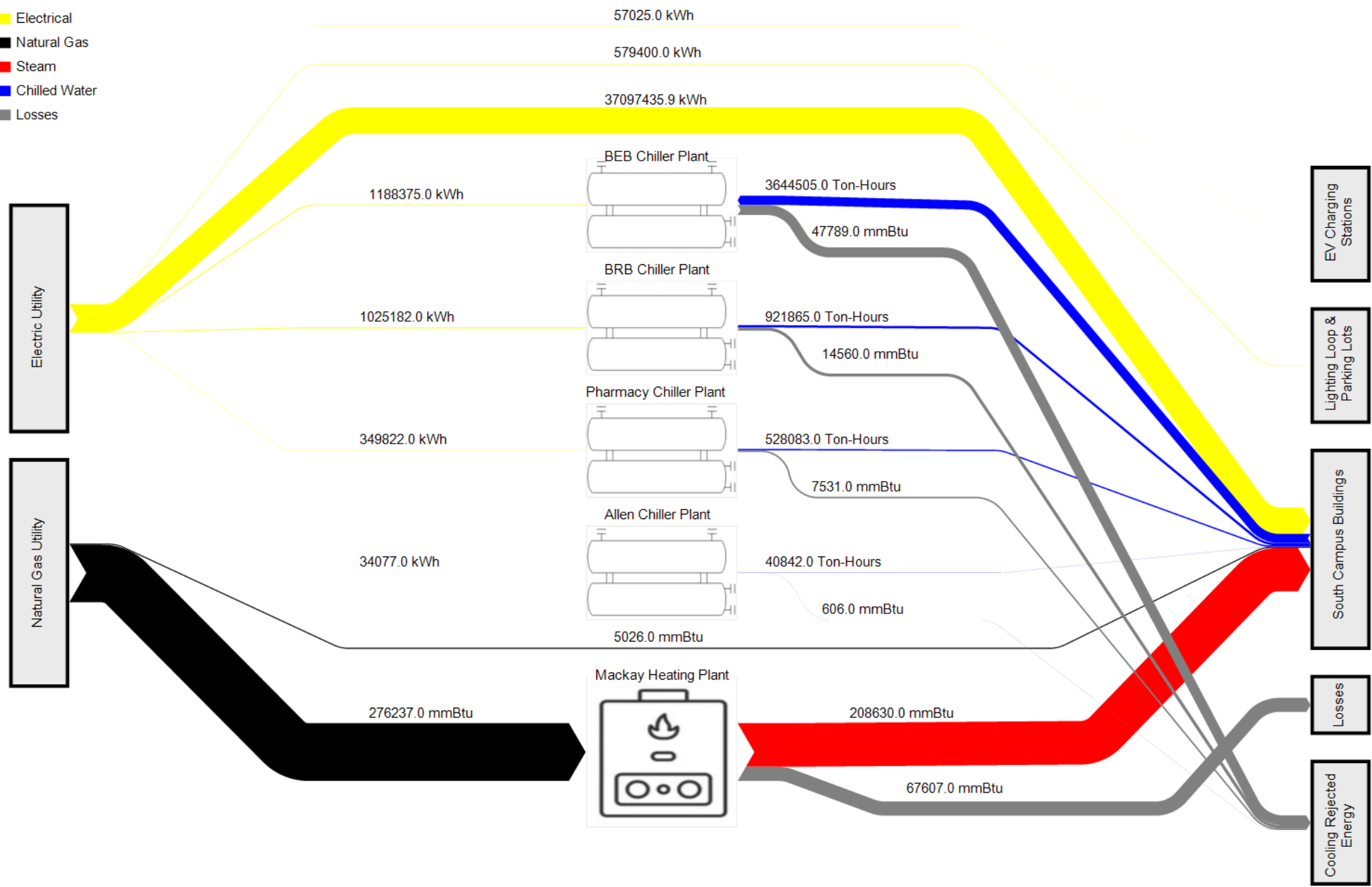
- CHW Piping
- Heat Pump Plants
- New Hot Water Piping
- Geothermal Wells
- Geothermal/Neutral Temp Piping





# UB South | Plant [Existing]

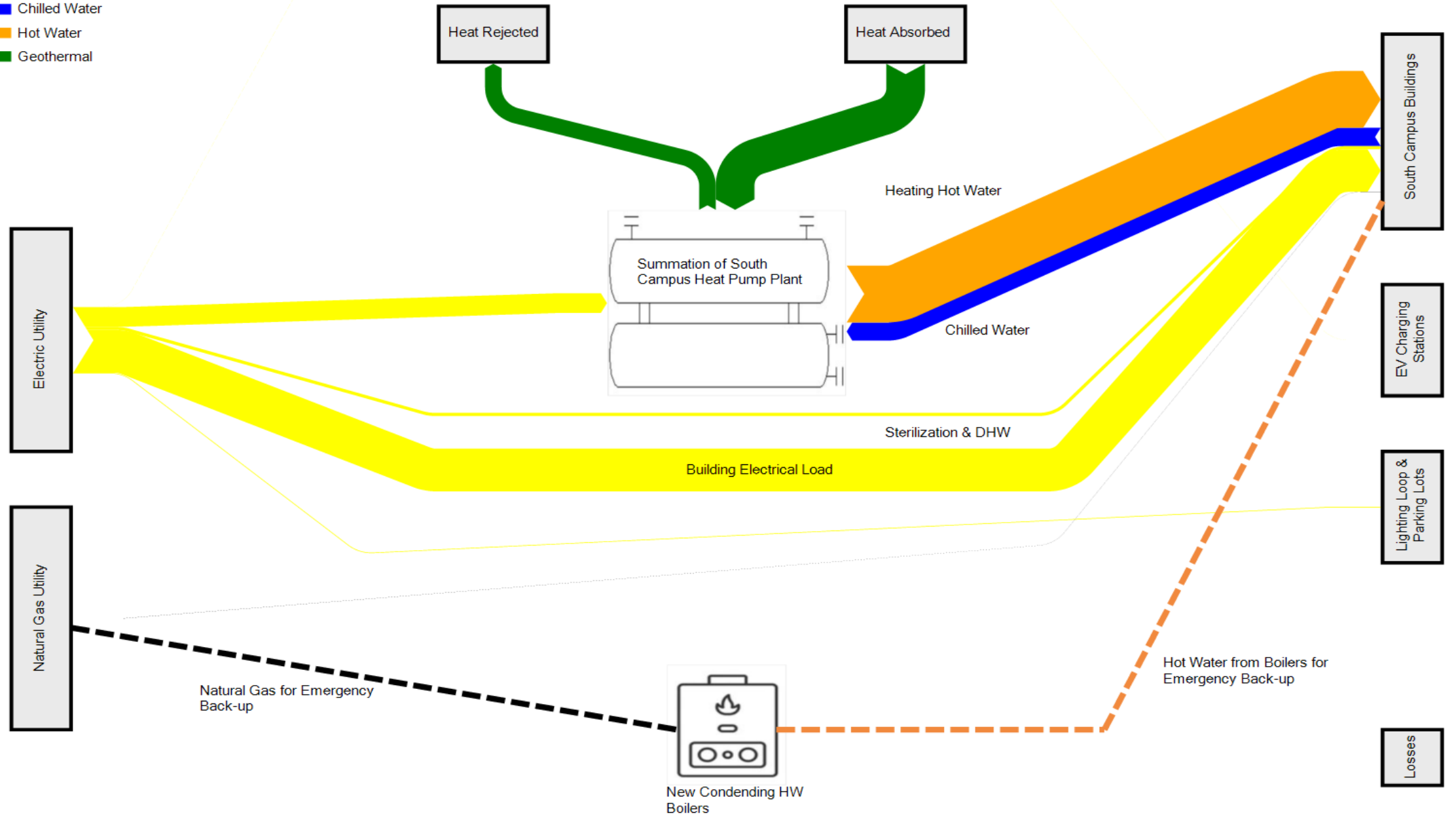
- █ Electrical
- █ Natural Gas
- █ Steam
- █ Chilled Water
- █ Losses





# UB South | Plant [Proposed]

- Electrical
- Natural Gas
- Chilled Water
- Hot Water
- Geothermal





# North Campus Clean Energy Plan Underway







Thank You!