

LEADING THE WAY **CampusEnergy**2022

Feb. 15-18 | Westin Boston Seaport District Hotel | Boston, Mass.



Decarbonizing Oberlin College: Discoveries from Phase I of Program Implementation

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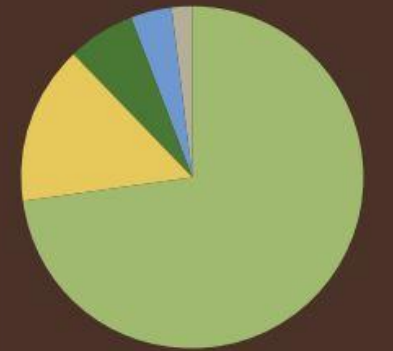
Campus & City Background

- Northeast Ohio, 30 miles west of Cleveland
- City and college were founded at the same time in 1833
- Residential liberal arts campus w/ 2,900 students
- 2,500,000 SF, 85+ buildings
- Oberlin Municipal Light & Power Service
- District heating and cooling systems



Oberlin: A Model Community

8,286
PEOPLE



\$47,334
median household income

24% of Oberlinians
live at or below
the poverty level

*based on the 2010 census

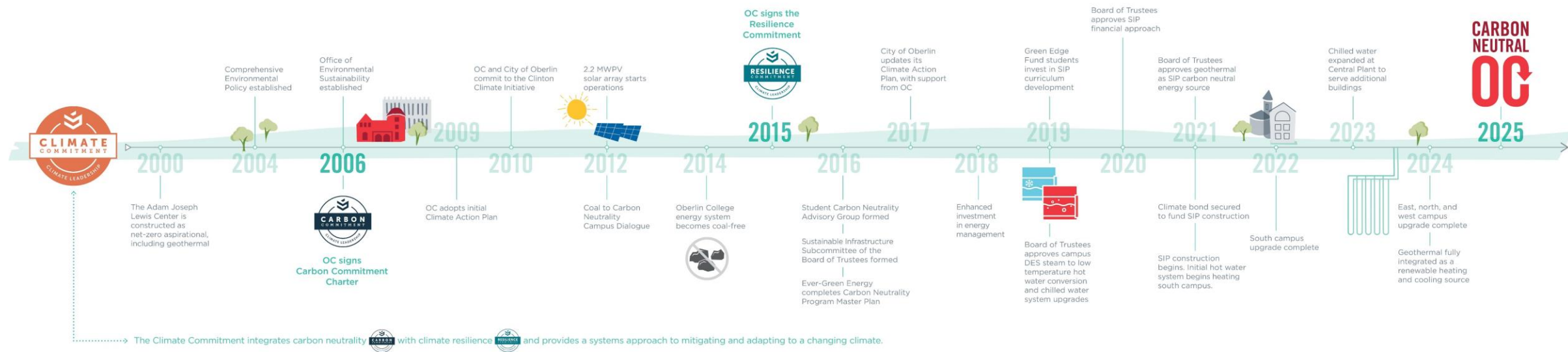
College Commitment & Culture



- **Our Commitments:** Oberlin College has established a very aggressive climate action plan with greenhouse gas reduction targets of 100% by 2025.
- **Our Environmental Policy:** The policy states, “The core mission of Oberlin College is the education of its students. One aspect of such education is the demonstration by its actions of the College's concern for, and protection of, its physical environment.”
- ***One Oberlin Strategic Effort:*** Develop a roadmap to financial resiliency.

Oberlin's March Toward Carbon Neutrality

OBERLIN COLLEGE CARBON NEUTRALITY TIMELINE



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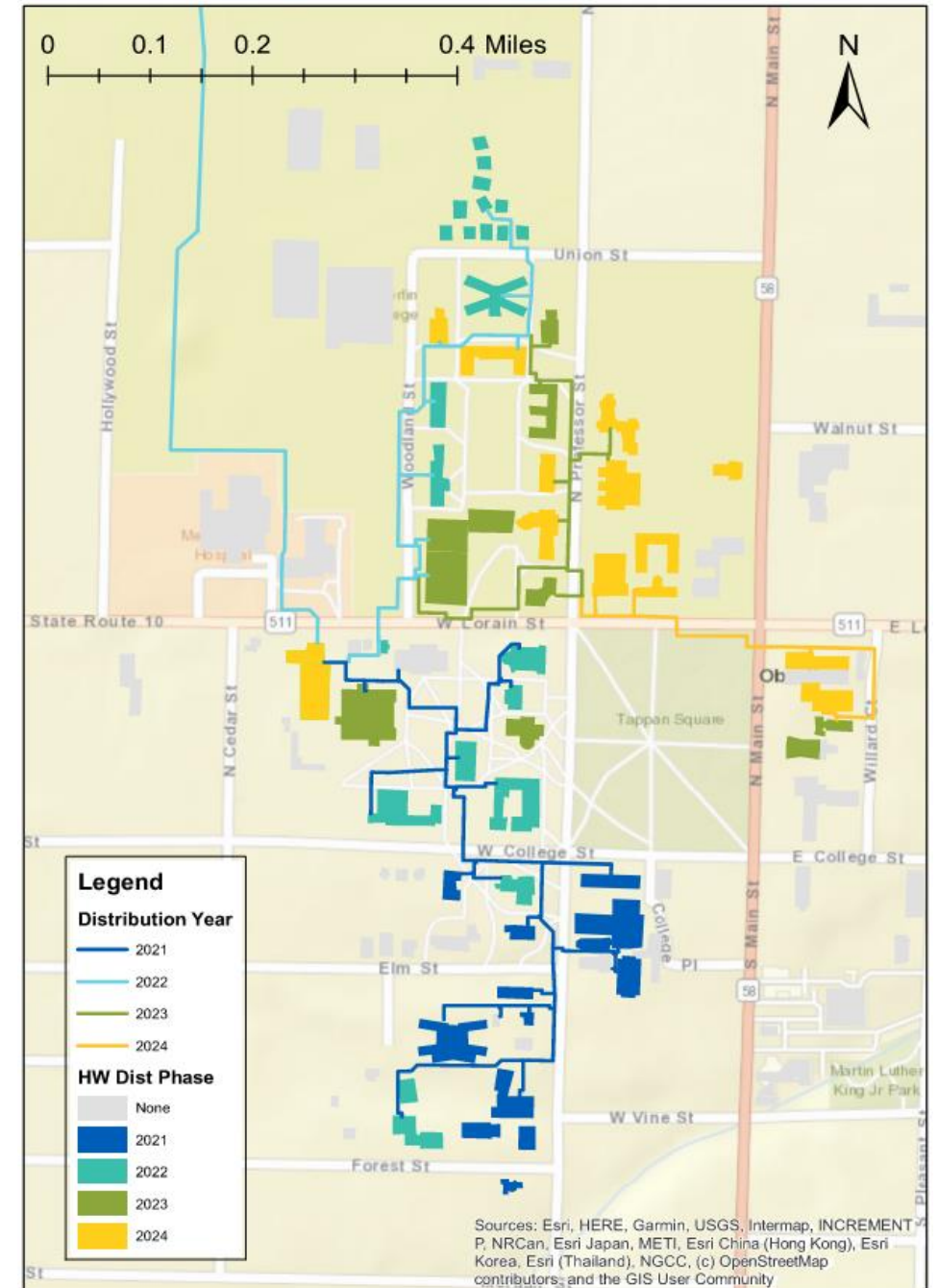
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Some Unique Approaches

- Always Focus on the “WHY”
 - Moves Oberlin College within 13% of the Carbon Neutral by 2025 goal (further decarbonization planning in progress)
 - Improve energy efficiency by more than 30%
 - Reduce water use by over 5 million gallons per year
 - Reduce sewer discharge by over 4 million gallons per year
- Unified Project Front
 - Internal (Facilities, Operations, Sustainability, Environmental, Finance) & External (Architects, Engineers, Construction Team, Commissioning Team)
 - And beyond into other campus capital projects
- Metrics beyond First Costs
- Symbiotic Community & College Relationship

Oberlin's Sustainable Infrastructure Program

- \$140 million Program
- Four construction phases 2021 - 2024
- Primary work during summer breaks
- Geothermal integration in 2023 and 2024
- Future growth into the community



Oberlin's Sustainable Infrastructure Program

- Heating system conversion from steam to 140 °F hot water
- Chilled water system replacement and expansion
- Electrical systems rehabilitation
- Fire protection systems expanded
- Water systems upgrade
- Fiber network expanded throughout campus
- Central plant modified to simultaneously deliver steam and hot water



Challenging Implementation Schedule

- July 2020 Program planning kickoff
- September 2020 Building conversion engineer secured
- October 2020 Distribution design commencement
- December 2020 Plant conversion engineer secured
- January 2021 Commissioning agent secured
- March/April 2021 Contractors brought on board
- June 2021 Construction commencement
- October 2021 Phase I substantial completion

Phase I Financing

- \$80M of Climate-Certified Green Bonds
- 2nd higher-ed campus in the US to obtain this certification
- 5 basis point savings over non-certified bonds
- 3X oversubscribed
- Lowest cost of capital ever realized by the College

Oberlin College and Conservatory Secures \$80 Million in Certified Climate Bonds for Sustainable Infrastructure Program (SIP)

AUGUST 3, 2021 • Office of Communications



An aerial view of sustainable infrastructure work in Wilder Bowl.
Photo credit: William Bradford

- Bond enables Oberlin to initiate substantive progress on four-year project to build new geothermal energy system for the campus

Outreach and Engagement

- Program website
- Weekly construction updates
- Project tours
- Knowledge sharing
- City and community engagement
- Program videos

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HOME

FAQ

RESOURCES

CONTACT

Oberlin College Carbon Neutrality Program

Oberlin College's Sustainable Infrastructure Program

The Sustainable Infrastructure Program (SIP) is focused on upgrading the century-old heating infrastructure serving campus to a hot water system. This work will enable a large-scale geothermal system, add cooling to buildings, and implement other building improvements that will increase student and faculty comfort year-round. These improvements are the tangible outcomes of Oberlin's earlier commitments to the American College and University Presidents' Carbon Commitment and the 2025 carbon goal.

We celebrate the accomplishments from phase one of the project with the entire Oberlin community. In 2021, construction focused on South Campus where 13 buildings have been upgraded and nearly 25,000 linear feet of new heating and cooling pipe has been installed. Buildings that are fully converted to the new system are expected to be 30 percent more efficient. Additionally, these buildings will have local controls for greater occupancy comfort, expanded fiber networks, expanded fire protection capabilities, and upgraded mechanical and electrical systems. As the project progresses over the next three years, these improvements will extend throughout campus. [View photos](#) from phase one work.



Distribution work begins for phase 1 in Wilder Bowl

OBERLIN COLLEGE AND CONSERVATORY SECURES \$80 MILLION IN CERTIFIED CLIMATE BONDS FOR SUSTAINABLE INFRASTRUCTURE PROGRAM

Exciting news for the SIP initiative, this Bond enables Oberlin to take the next major steps on this four-year project to build the new energy infrastructure and geothermal energy system for the campus. The Certified Climate Bonds status verifies alignment with the goals and targets of the Paris Climate Agreement.

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Becoming Oberlin's Mission

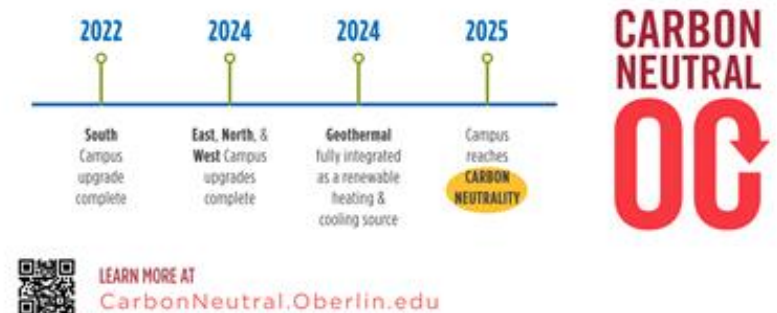
- Curriculum integration
- Internships, research, private readings
- Guest speaking in classes
- Tours: admission & parent weekend
- Diversity Equity Inclusion (DEI)
- Energy Dashboard
- 87.2% recycled construction waste
- Alumni connections
- Financial stewardship

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Bold vision. Big changes.



Planning Lessons Learned

- Periodic planning work sessions are critical for overall program success
- Integrating other College needs with the program
 - Ask early and often
- Leverage the program to initiate other desired campus policy changes
- Have all stakeholder groups define success



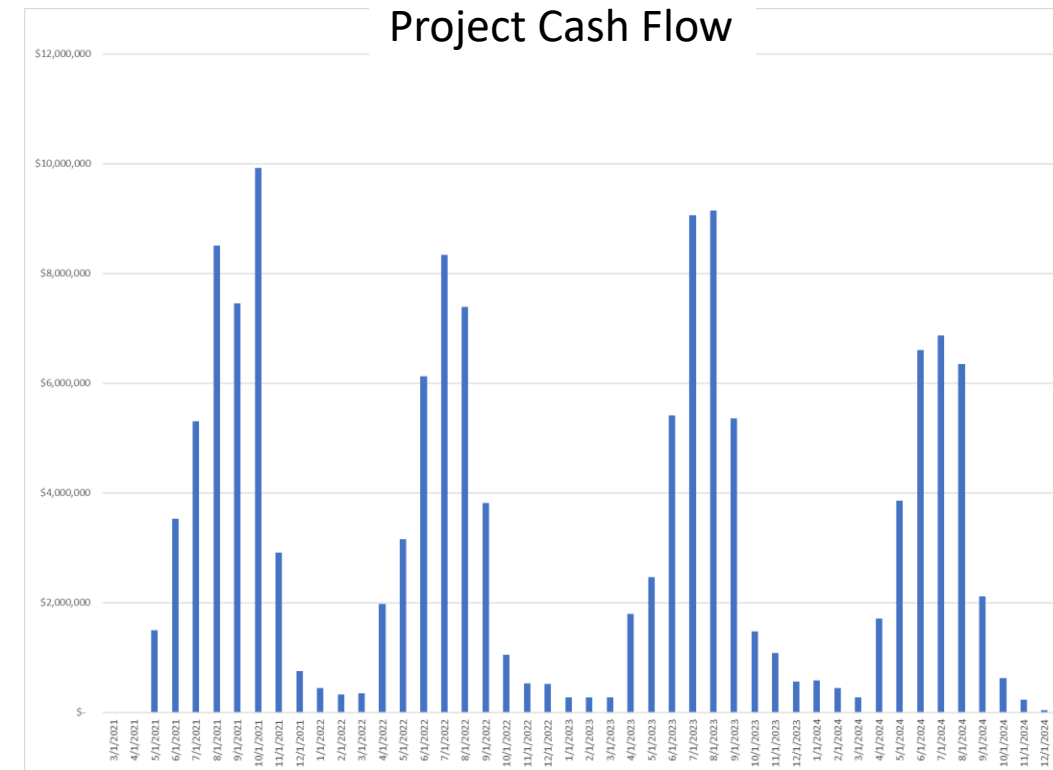
Design and Procurement Lessons Learned

- Parallel design and procurement activities
- Weekly design review meetings with facilities operations
- Commissioning agent involved throughout design
- College procurement of long-lead materials and equipment when necessary
- Bringing contractors on-board at various stages of design



Construction Lessons Learned

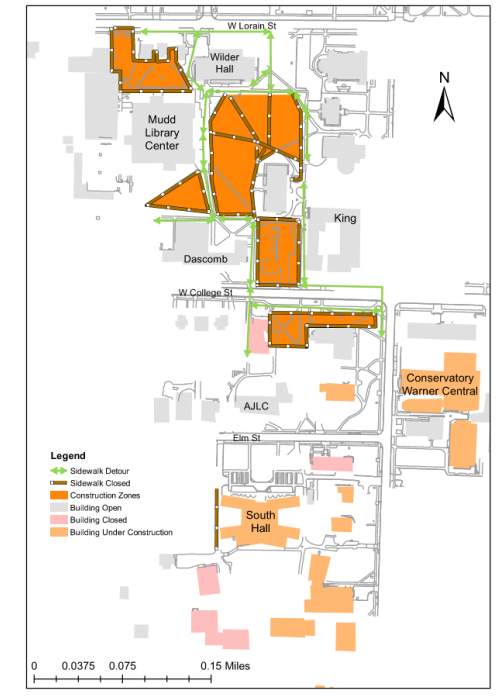
- Pre-construction planning meetings with all program stakeholders
- Sharing contractor resources across multiple buildings
- Temporary solutions to manage supply chain challenges
- Be prescriptive with sensitive work areas
- Commissioning and punch list management on an active campus
- Push the envelope to smooth the construction peaks



Outreach Lessons Learned

- Building stakeholder meetings before, during, and after
- Continuous communications with all stakeholders
 - Don't assume your message is always passed along
- Reach audiences where they are
- Involve the community early and often
- Pay attention to wayfinding
- Include a robust internship program in all aspects of implementation
- Stakeholder surveys

Wayfinding Map - Week of July 26th



Thank you

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