

Oberlin College

Carbon Neutrality Resource Master Plan

Engagement Strategies

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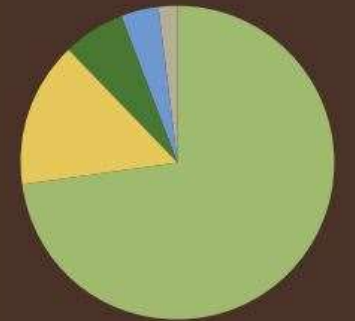


Demographics

- City of Oberlin: located in Lorain County, 30 miles west of Cleveland.
- City & College were founded at the same time in **1833**.
- Oberlin College: residential liberal arts campus w/ **2,900** students .
- 2,500,000 SF, 85+ buildings.
- Oberlin College is the largest employer in the City.
- Oberlin Municipal Light & Power Service .

Oberlin: A Model Community

8,286
PEOPLE



73% white 14.8% African American 6.5% two or more races
4% Asian American 1.7% other

\$47,334
median household income

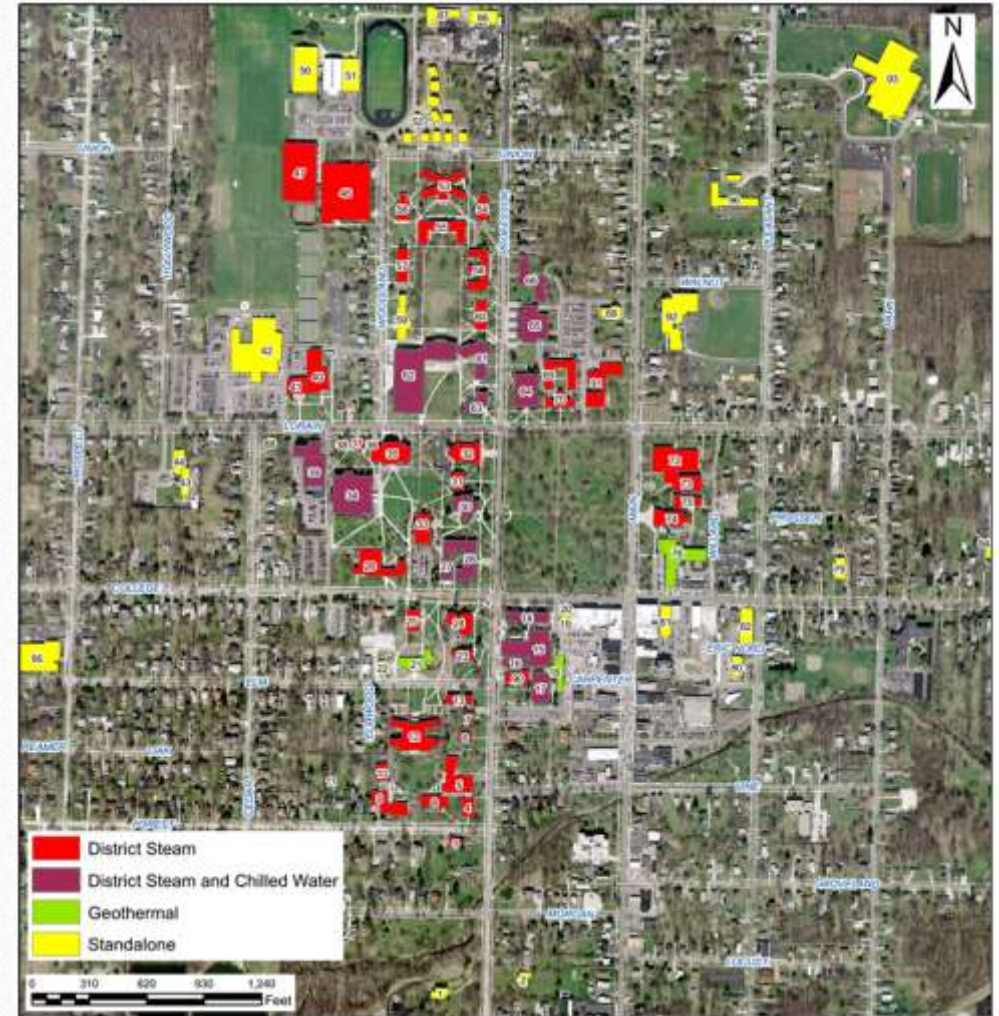
24% of Oberlinians live at or below the poverty level

*based on the 2010 census

Campus Energy Profile

- 56 buildings on central steam
- 15 buildings on central cooling
- Peak plant steam load ~65 MMBtu/hour**
- Peak campus load ~80 MMBtu/hour**
- 2.27 MW PV Solar Array
- ~200kW of PV Roof and Parking lot Canopy Solar Arrays
- 4 geothermal building systems

**2009 PSI study



Oberlin College Commitment:

Carbon Neutral by 2025

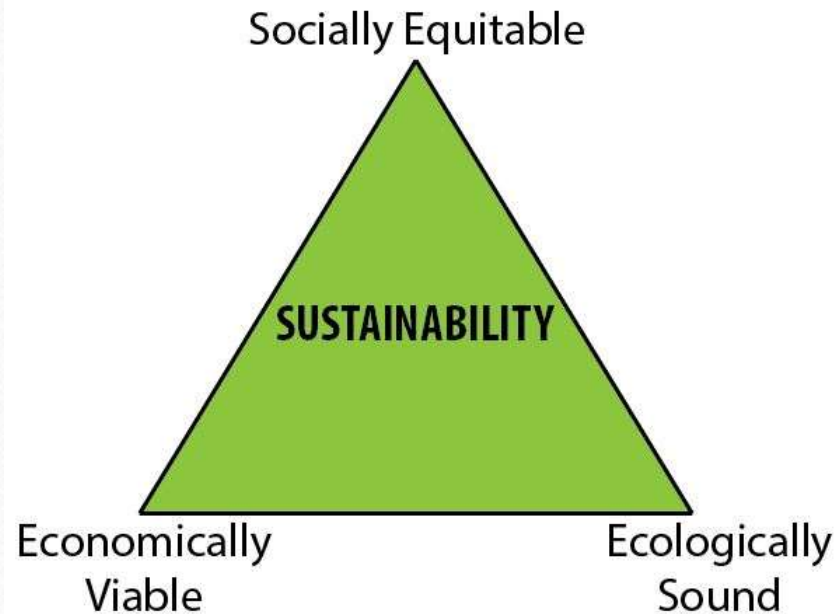


Motivations & Priorities

- Carbon Neutral Campus
- Education and scholarship
- Progressive Leader
- Social justice, equity, and inclusion
- Environmental sustainability
- Transformational Change
- Financial Responsibility



Sustainability



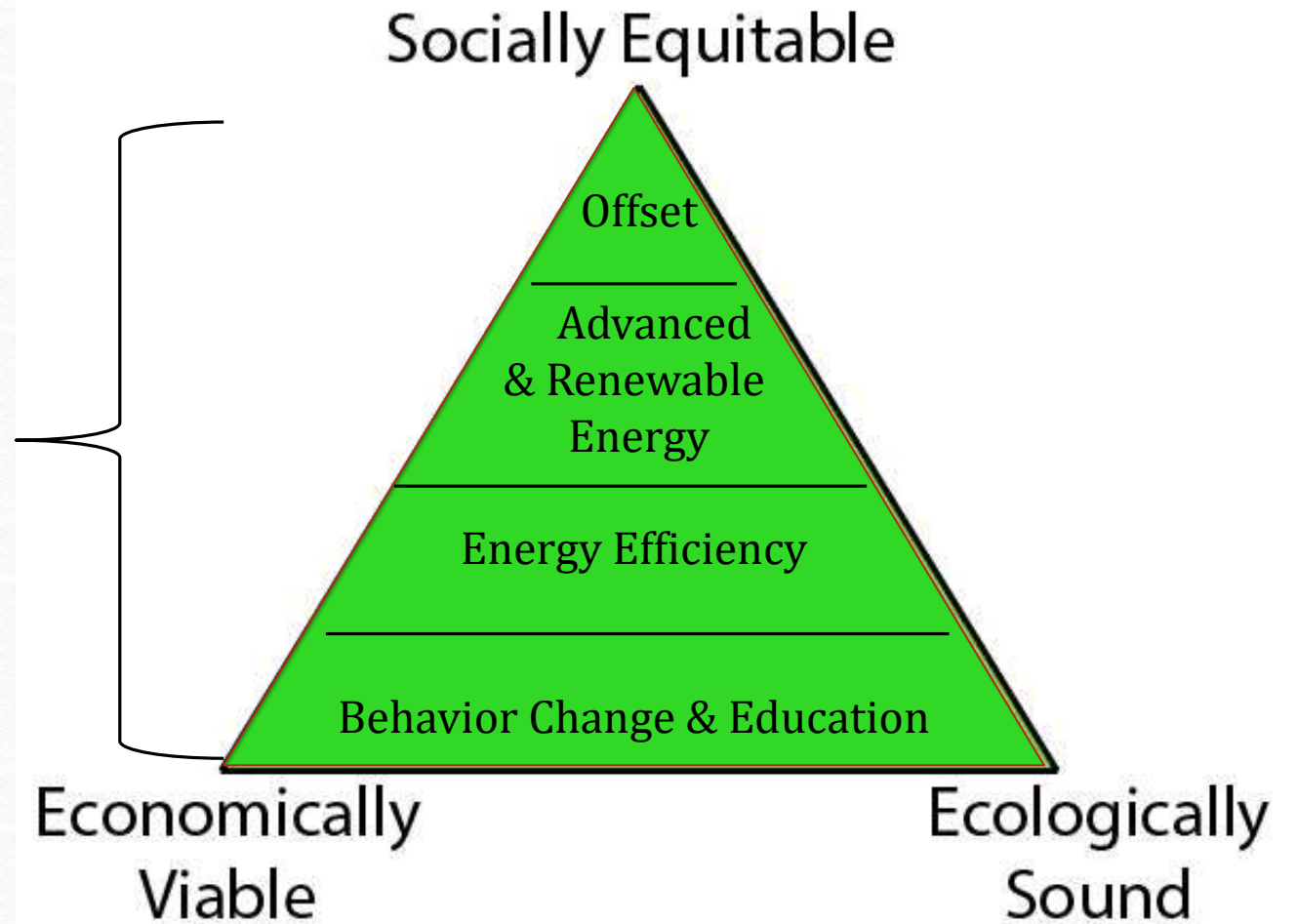
Oberlin College culture and expectations

- Long history and tradition of **sustainability**
- Long history and tradition of **equity and inclusion**

Reflected in:

- **Our Culture!**
- **Environmental Policy**, 2004
- Key direction of **Strategic Plan**, 2005
- **ACUPCC** charter signatory, 2006
- Charter **STARS** participant
- Environmental Policy **Implementation Plan**, 2015
- Newest **Strategic Plan**, 2016

Sustainability as the Platform for Campus Energy Strategy⁹



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Where are we now?

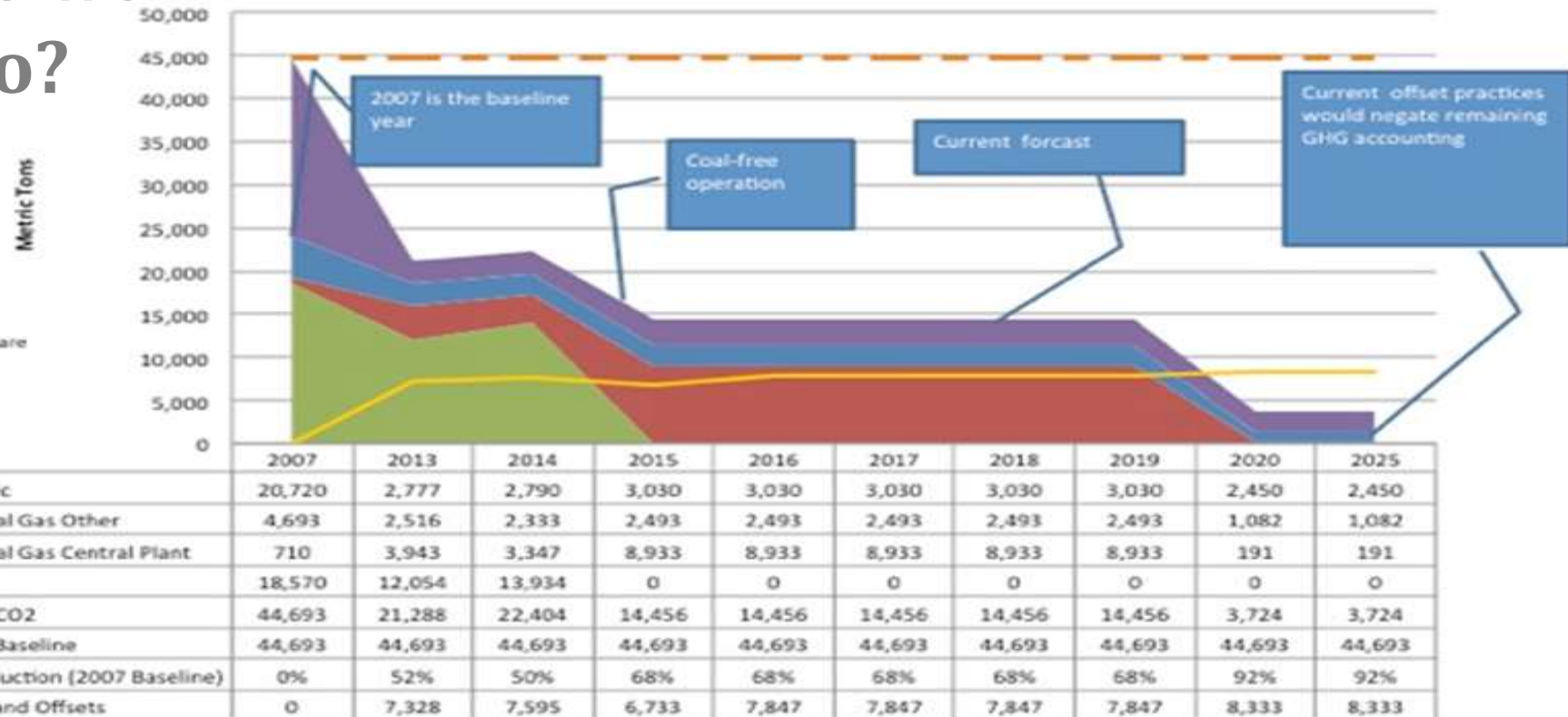
Campus Scope 1 and 2 Carbon Emissions (Metric Tons)		
Source	2007	2015
Thermal production	23,973	11,426
Electricity	20,720	3,030
Total	44,693	14,456

Baseline Utility Consumption ³						
Heating System Type	Area (SF)	Natural Gas ¹ (MMBtu/yr)	Electric (KWH/yr)	Water (gals/yr)	Sewer ² (gals/yr)	EUI (kBtu/sf)
Stand alone	272,750	15,032	1,579,348	5,027,971	5,033,058	75
District	2,099,903	188,059	22,723,939	39,734,957	33,336,792	131
Geothermal	130,900	2,148	1,581,873	3,491,086	3,008,301	58
Totals	2,500,000	210,000	26,000,000	48,000,000	41,000,000	
Notes						
1. Includes coal consumption in 2013 and 2014, converted to MMBtu.						
2. Sewer utility data shows larger consumption values than water on several buildings.						
3. Total of all utilities consumed by buildings classified by heating system type.						


Where do we want to go?

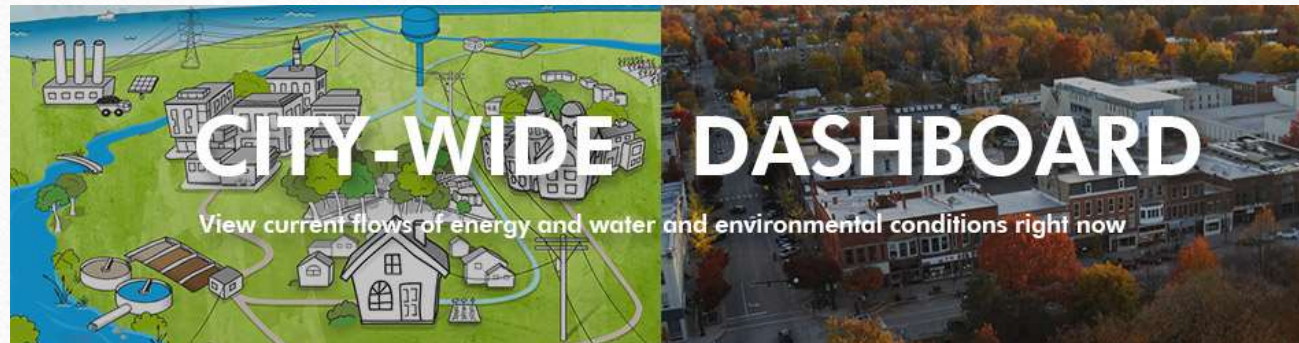
Note: 2016-2025 Emissions are projected. Year is based on calendar.

Carbon Dioxide Emissions
(As Metric Tons CO₂)



How do we get there?

- Board of Trustees Carbon Neutrality Subcommittee
 - Campus Faculty, such as Committee on Environmental Sustainability (CES)
 - Campus Administration, such as Facilities Operations and Financial Planning
 - Students
- 
- City of Oberlin & OMLPS
 - Oberlin Public Schools
 - Public Library
 - Oberlin Community Services
 - Mercy Allen Hospital

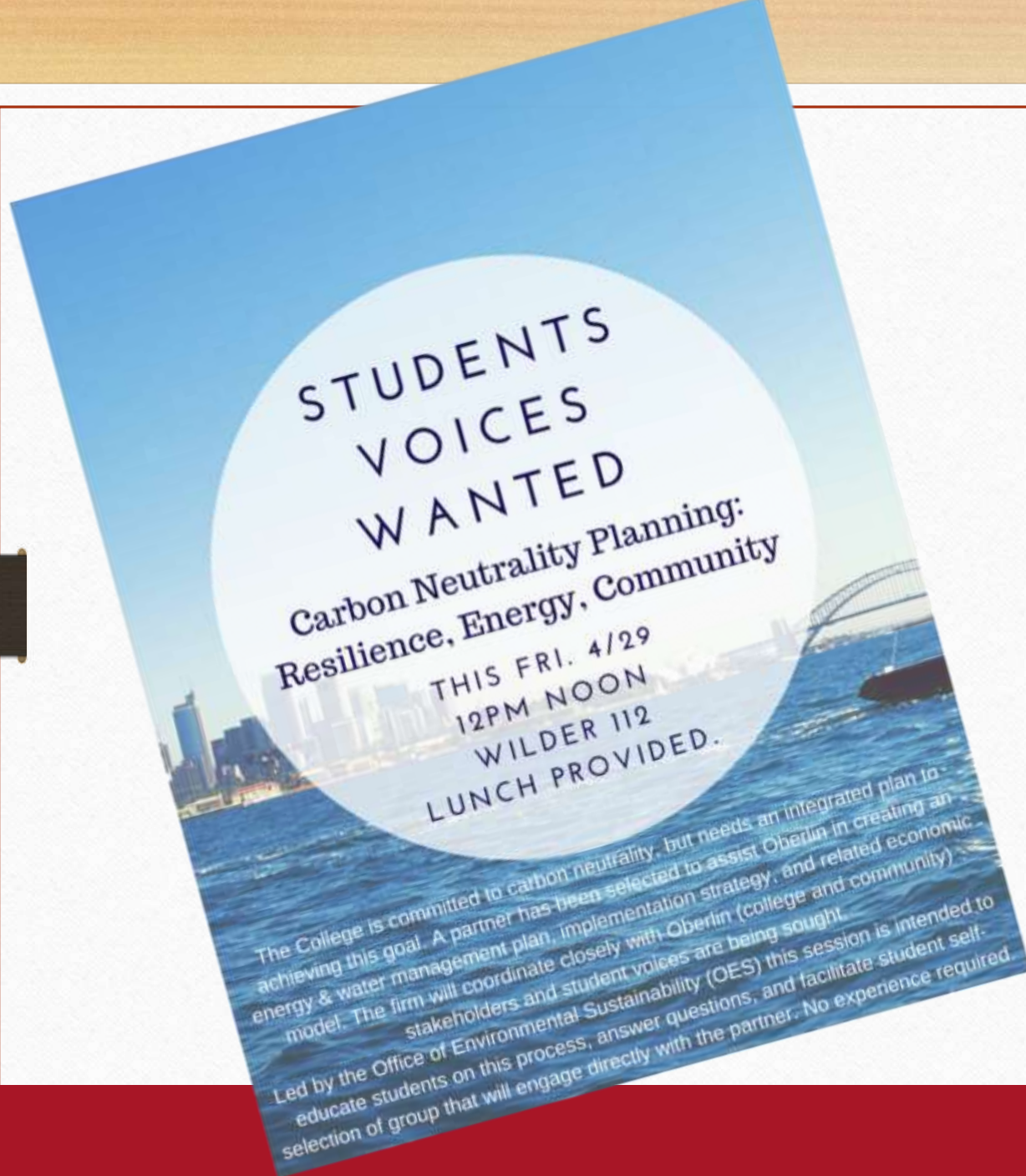


.... But it's
complicated!
Creating a resilient
solution also means
looking for shared
benefits with the
community.





.... and its more complicated! Any investment needs to be budget neutral to the Institution.



.... But its even more complicated!
There is an immediacy to solving social injustices.

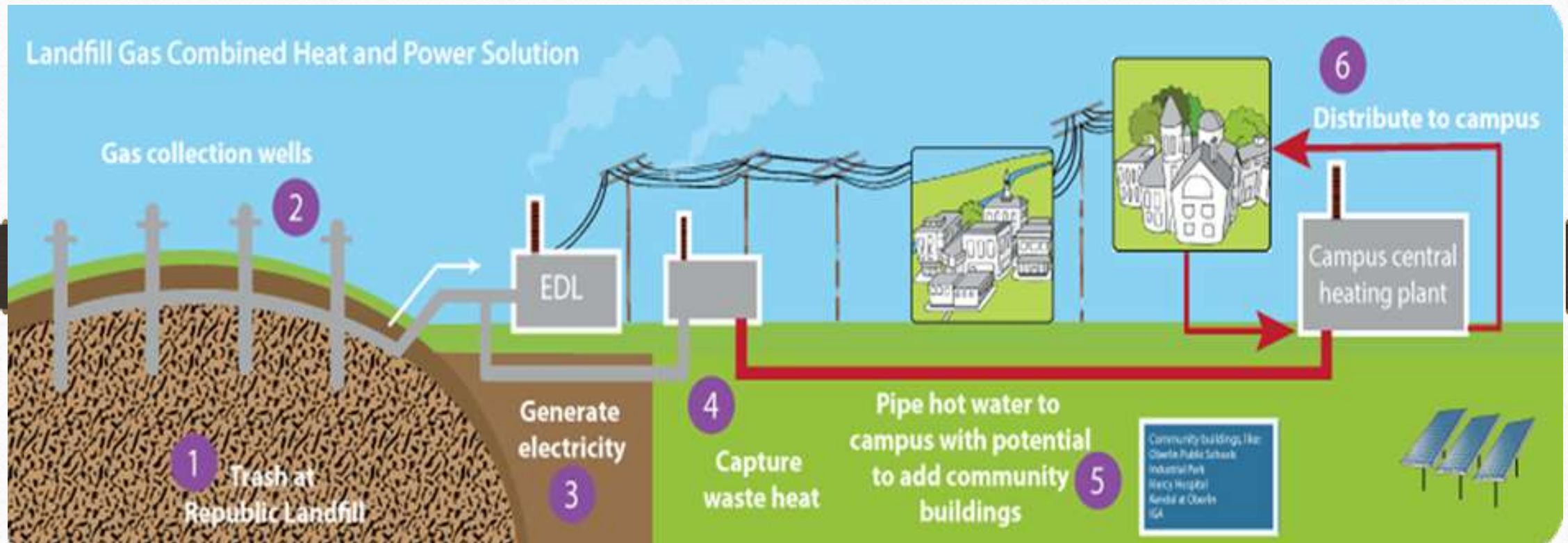


Strategic Plan Vision for the Master Plan



Reaffirm and take tangible action toward meeting Oberlin's commitment to environmental sustainability. This includes creating an actionable and financially feasible plan for achieving Oberlin's commitment to carbon neutrality by 2025

Primary Engineering Solution



**And the Primary Tool to getting this done:
Engagement Strategies that are
strong and meaningful**

Goal: Leverage the power of feedback to motivate and empower social, ecological and economic transformation.

Community Engagement Tactics

- Stakeholder Feedback Loops
 - Final report
- Ongoing meetings with City Public Works
 - implementation
- Campus- Community Resilience Task Force



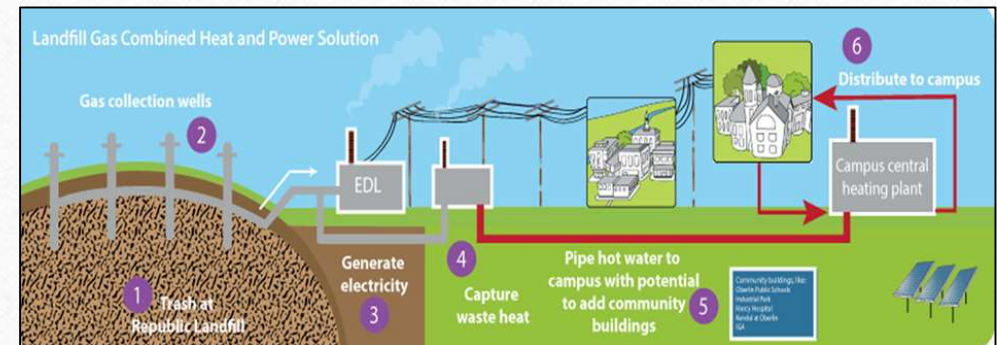
Student Engagement Tactics

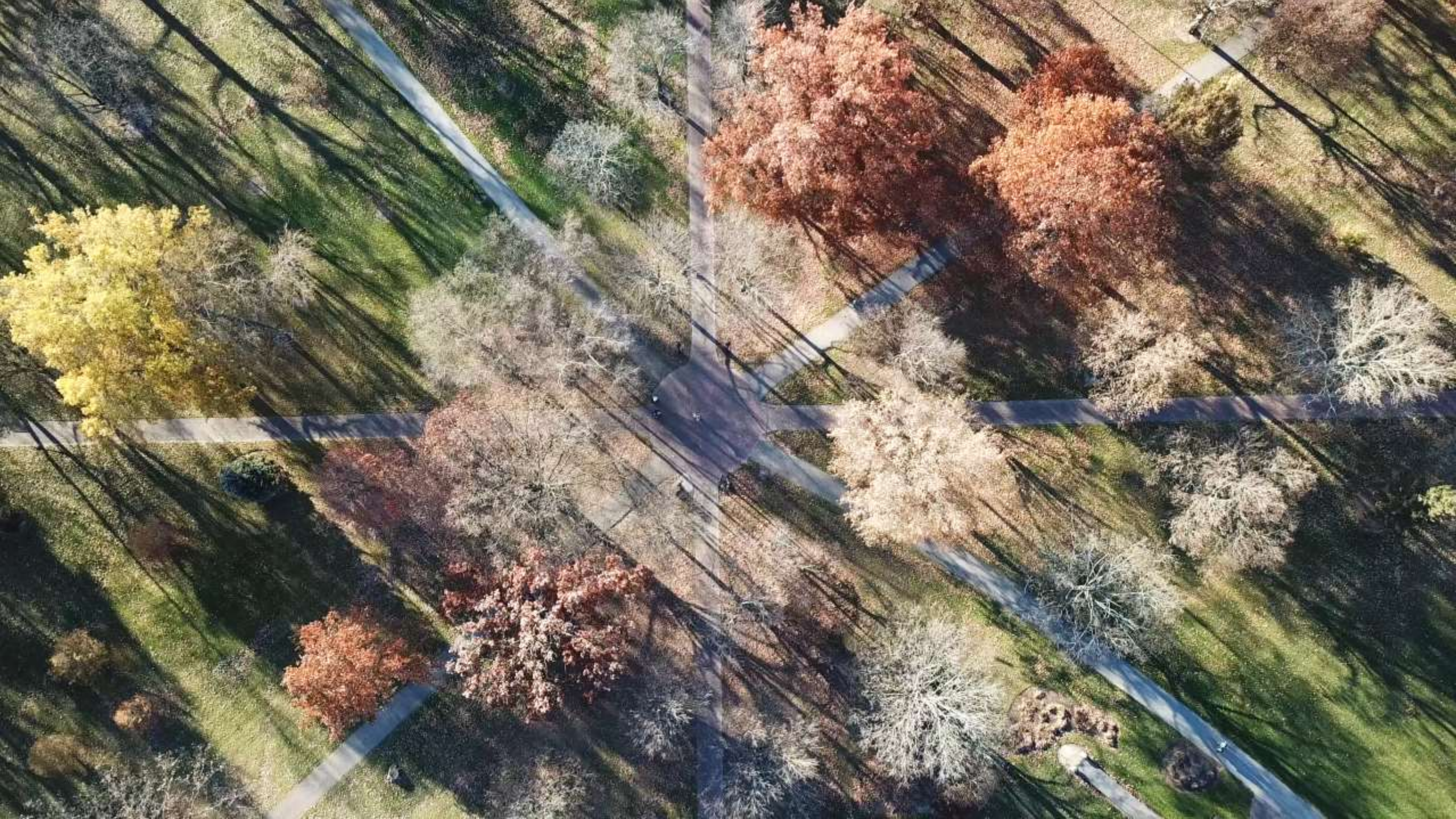
- Student Advisory Group
 - Check-ins throughout preliminary findings and implementation steps
- Student and Community Forum
 - Focus on Energy Literacy
- Carbon Neutral Project Interns
 - GIS Energy Map layer
- Ongoing engagement and updates
 - OES Newsletter, Social Media, Coal 2 Carbon Neutrality Website, Etc.



Decision-Maker Engagement Tactics

- Board of Trustees Carbon Neutrality Subcommittee
 - Check-ins throughout preliminary findings and implementation steps
- Senior Staff ongoing engagement and updates
- Student Video & Story Board
 - Explain technical solution
 - Student developed





Oberlin's Opportunity

Reduce current scope 1 and 2 carbon emissions by 73%, with a 92% reduction from the 2007 baseline.

- Annual water reduction of 7.5 million gallons.
- Annual sewer discharge of 5.8 million gallons.
- Implementable without capital investment from Oberlin.
- Helping City of Oberlin low-income residents decrease their energy consumption.
- Providing district energy options to local businesses.





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