

# A Brief Introduction to A<sup>2</sup>ZERO and Opportunities for Pittsfield Village

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City of Ann Arbor, Office of Sustainability and Innovations

# Agenda

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- Introduction to A<sup>2</sup>ZERO
  - History and development of the plan
  - Action structure
  - Highlights of the work so far
- A<sup>2</sup>ZERO / OSI resources and opportunities for Pittsfield Village
  - Energy related programs
  - Climate and sustainability programs
- Questions and discussion
  - What programs are you most interested in and excited about?
  - What would you like to see as next steps?

A BRIEF HISTORY OF SUSTAINABILITY ACTIVITIES IN ANN ARBOR

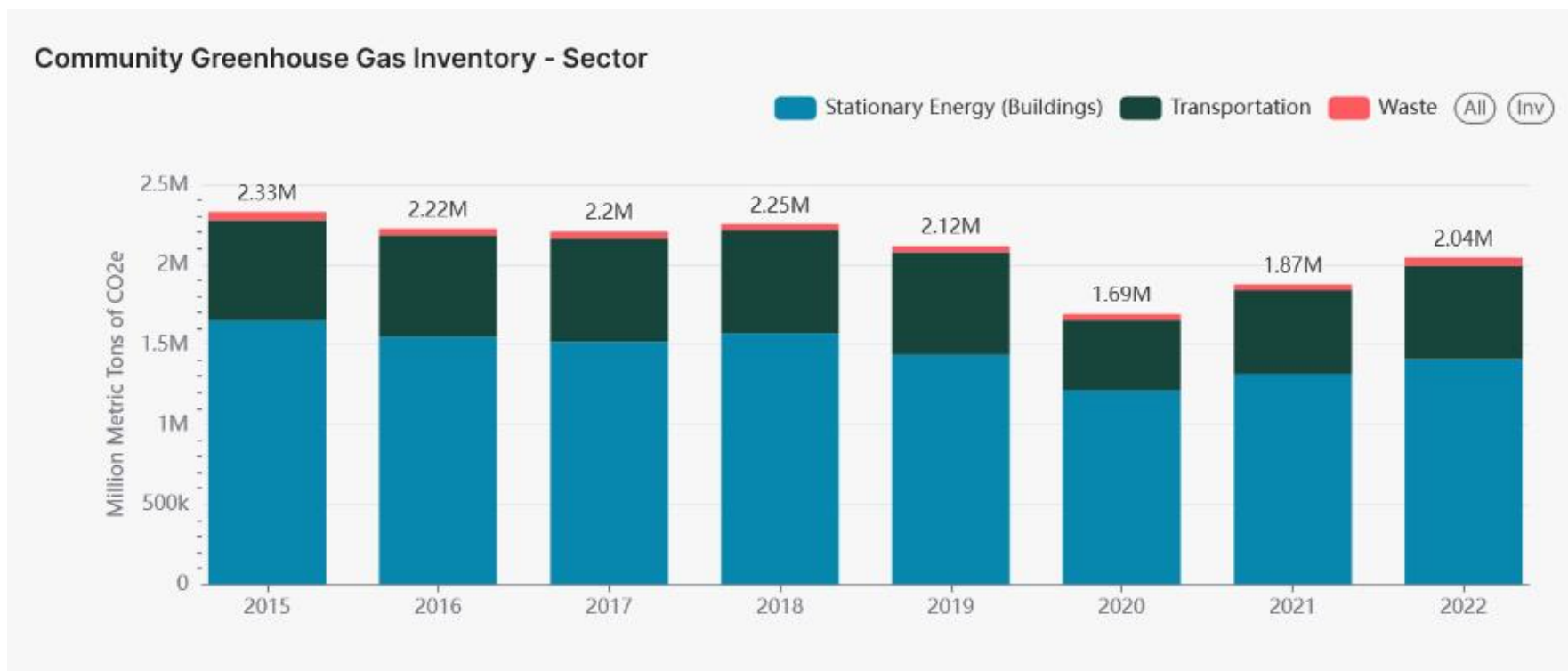


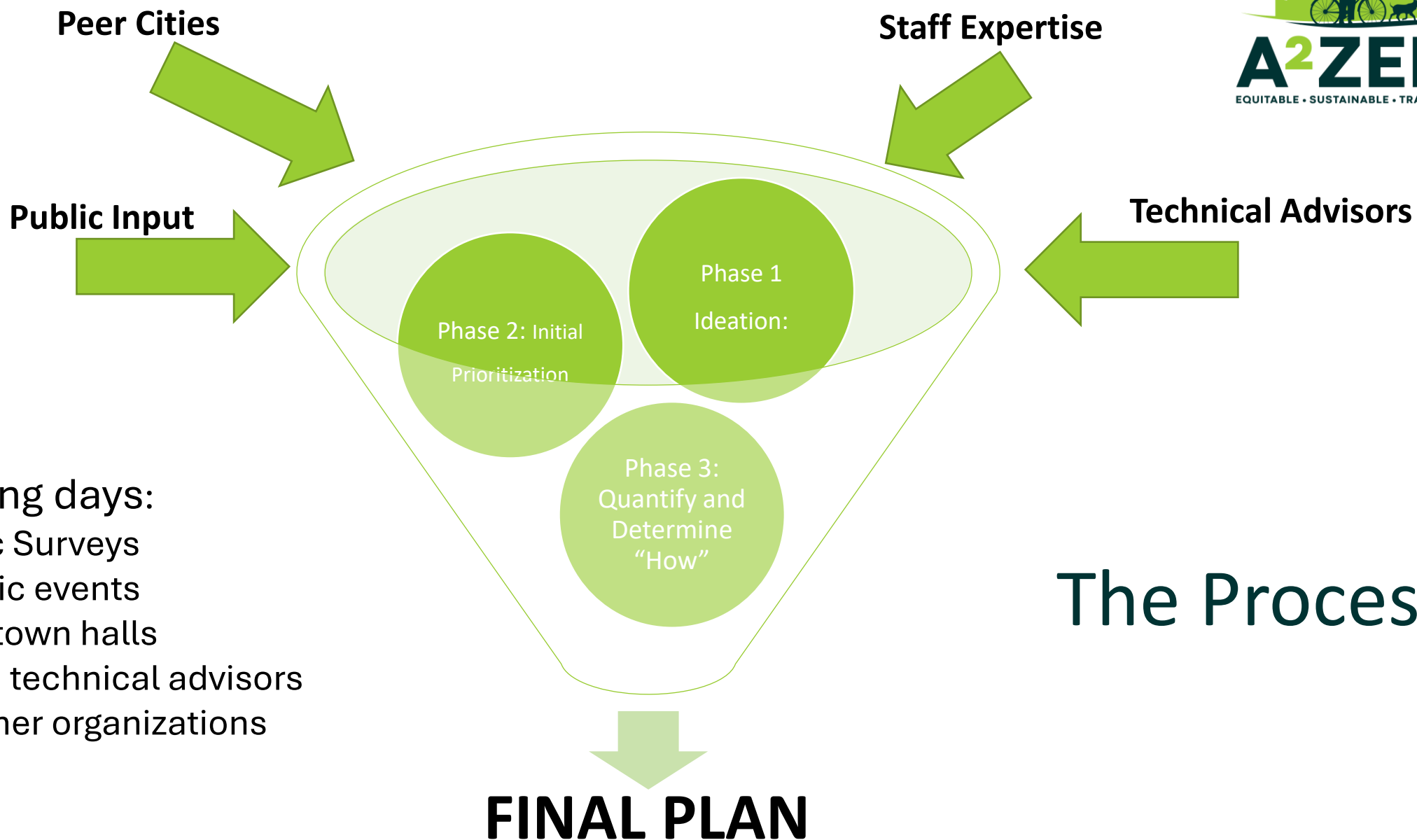
# History and Development

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# Emissions Snapshot

Visit OSI's [Dashboard](#) to explore Ann Arbor's GHG Inventory





82 working days:

- 3 Public Surveys
- 68 public events
- 2 large town halls
- Over 80 technical advisors
- 66 partner organizations

# The Values and Vision



## Equitable

**Definition:** Ensuring everyone gets what they need to succeed based on where they are and what they need to go.



## Sustainable

**Definition:** Capable of enduring, able to be sustained in perpetuity. Meeting the needs of the present without jeopardizing the ability of future generations to meet their own needs



## Transformative

**Definition:** Causing a major change to something or someone, especially in a way that makes it or them better.

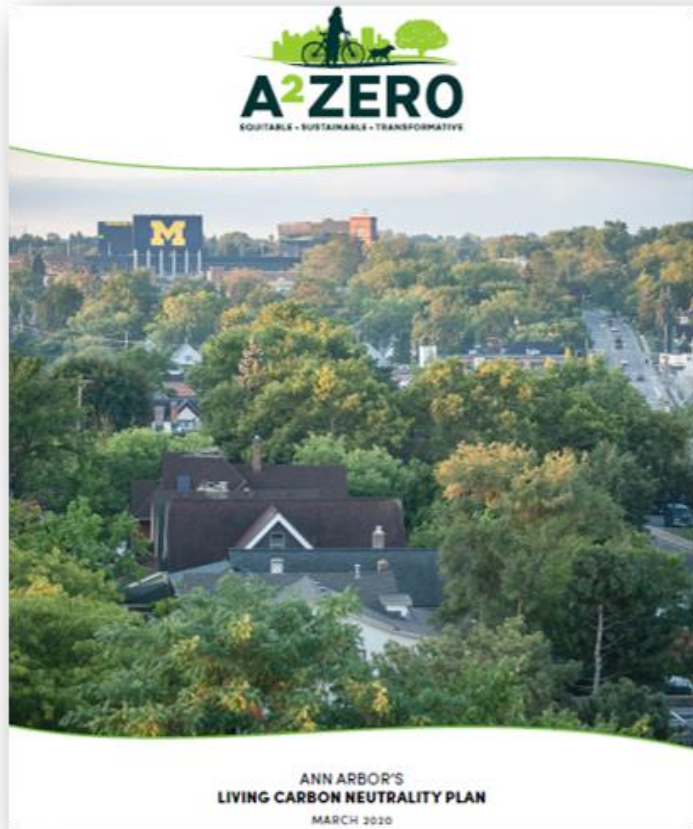
**VISION:** A<sup>2</sup>ZERO strives toward one unifying vision: Together, creating and implementing a just transition to carbon neutrality, community-wide, by the year 2030. This vision guides all things related to A<sup>2</sup>ZERO.

# Action Structure

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# A<sup>2</sup>ZERO



## Action Summary Table

STRATEGY 1	Total Costs	GHG Reduction	%total emissions	\$/ton	Co-Benefits
Community Choice Aggregation	\$3,245,000	784,000	35.8%	\$4	AIR; \$\$; EQU; SCALE
Bulk Purchase of Renewables	\$605,000	85,000	3.9%	\$7	LOCAL; NRG; AIR; JOBS; RES; \$\$; SCALE
Community Solar Program	\$205,000	11,500	0.5%	\$18	LOCAL; NRG; AIR; JOBS; RES; \$\$; EQU; SCALE
Landfill Solar Project	\$80,000	23,000	1%	\$3.5	LOCAL; NRG; AIR; SCALE
STRATEGY 2	Total Costs	GHG Reduction	%total emissions	\$/ton	Co-Benefits
Home & Business Electrification	\$7,100,000	362,200	16.5%	\$ 20	LOCAL; AIR; JOBS; HEALTH; SCALE
Bus Electrification	\$86,000,000	13,800	0.6%	\$ 5,839	LOCAL; AIR; RES; HEALTH; EQU
Bulk Purchase EVs	\$700,000	122,900	5.6%	\$6	AIR; JOBS; RES; HEALTH; \$\$; SCALE
Private EV Fleets	\$123,000	Not Calculated			AIR; RES; \$\$; HEALTH; SCALE
City EV Fleet	\$4,000,000	1,100	0.05%	\$3,636	AIR; JOBS; RES; HEALTH; \$\$; SCALE
EV Infrastructure	\$42,000,000	Not Calculated			AIR; JOBS; HEALTH; SCALE
STRATEGY 3	Total Costs	GHG Reduction	%total emissions	\$/ton	Co-Benefits
Bulk Purchase of Energy Efficiency	\$950,000	242,500	11.1%	\$ 4	LOCAL; AIR; JOBS; HEALTH; \$\$; EQU; SCALE
Building Code Requirements	\$1,935,000	48,300	2.2%	\$ 40	LOCAL; JOBS; RES; \$\$; EQU; SCALE
LED Lighting	\$3,140,000	2,600	.1%	\$1,208	AIR; \$\$
Benchmarking	\$2,370,000	Not Calculated			JOBS; \$\$; SCALE
Loan Loss Reserve	\$1,578,000	Not Calculated			LOCAL; JOBS; RES; HEALTH; \$\$; EQU; SCALE
Energy Concierge & Community Education	\$820,000	Not Calculated			JOBS; \$\$; EQU; SCALE
Net Zero Energy Affordable Housing	\$800,000	400	0.0%	\$2,000	LOCAL; NRG; AIR; JOBS; RES; HEALTH; \$\$; EQU
Green Rental Housing Program	\$530,000	Not Calculated			LOCAL; AIR; JOBS; RES; HEALTH; \$\$; EQU; SCALE
Green Business Challenge	\$700,000	Not Calculated			LOCAL; NRG; AIR; JOBS; RES; \$\$; SCALE
Aging in Place Efficiently	\$155,000	Not Calculated			LOCAL; JOBS; RES; HEALTH; \$\$; EQU
Weatherization Expansion	\$1,550,000	Not Calculated			LOCAL; JOBS; RES; HEALTH; \$\$; EQU

STRATEGY 4	Total Costs	GHG Reduction	%total emissions	\$/ton	Co-Benefits
Non-Motorized Plan	\$2,400,000	60,400	2.8%	\$40	AIR; RES; HEALTH; \$\$; EQU
Local and Regional Transit	\$656,780,000	93,200	4.3%	\$7047	LOCAL; AIR; JOBS; RES; HEALTH; \$\$; EQU
Park and Ride	\$170,000,000	28,400	1.3%	\$5,986	AIR; EQU; SCALE
Increase Housing Diversity	\$250,000	2,200	0.1%	\$114	LOCAL; AIR; RES; SCALE
Mixed-Use Zoning	\$365,000	Not Calculated			LOCAL; AIR; RES; HEALTH
Parking Rates	\$4,500,000	Not Calculated			LOCAL; AIR
STRATEGY 5	Total Costs	GHG Reduction	%total emissions	\$/ton	Co-Benefits
Year Round Composting	\$26,000,000	400	0.0%	\$65,000	LOCAL; NAT; JOBS; SCALE
Commercial Recycling	\$18,400,000	5,600	0.3%	\$3,286	JOBS; SCALE
Sustainable Material Use and Reuse	\$270,000	Not Calculated			LOCAL; ERS; HEALTH; \$\$; NAT; EQU
Circular Economy	\$270,000	Not Calculated			LOCAL; JOBS; RES; HEALTH; \$\$; NAT
Plant-Based Diets	\$208,400	Not Calculated			HEALTH; NAT
Refrigerant Recycling	\$179,400	Not Calculated			JOBS; HEALTH
STRATEGY 6	Total Costs	GHG Reduction	%total emissions	\$/ton	Co-Benefits
Resilience Hubs	\$5,025,000	2,500	0.1%	\$2,010	LOCAL; NRG; RES; HEALTH; EQU; SCALE
Neighborhood & Youth Ambassadors	\$350,000	Not Calculated			LOCAL; JOBS; RES; HEALTH; EQU; SCALE
Tree Canopy	\$1,160,000	450	0.0%	\$2,578	AIR; RES; HEALTH; NAT; EQU; SCALE
Neighborhood Asset Mapping	\$300,000	Not Calculated			LOCAL; RES; EQU; SCALE
Emergency Kits	\$350,000	Not Calculated			RES; HEALTH; EQU; SCALE
Sensors and Data Monitoring	\$300,000	Not Calculated			RES; HEALTH; \$\$; NAT; EQU; SCALE
STRATEGY 7	Total Costs	GHG Reduction	%total emissions	\$/ton	Co-Benefits
Equity Programs	\$200,000	Not Calculated			LOCAL; RES; EQU
SA2T Grant Program	\$1,000,000	Not Calculated			LOCAL; RES
Internal Carbon Tax	\$75,000	Not Calculated			LOCAL; NRG; RES; \$\$; SCALE
Offsets	\$9,440,000	298,500	13.6%	\$32	SCALE

# A<sup>2</sup>ZERO Strategies

## STRATEGY 1:

Power Our Electrical Grid with 100% Renewable Energy

## STRATEGY 2:

Switch our Appliances and Vehicles from Gasoline, Diesel, Propane, Coal, and Natural Gas to Electric

## STRATEGY 3:

Significantly Improve the Energy Efficiency in our Homes, Businesses, Schools, Places of Worship, Recreational Sites, and Government Facilities

## STRATEGY 4:

Reduce the Miles we Travel in our Vehicles by at least 50%

## STRATEGY 5:

Change the Way We Use, Reuse, and Dispose of Materials

## STRATEGY 6:

Enhance the Resilience of Our People and Our Place

## OTHER STRATEGIES:

This strategy covers the remaining programs and activities that don't fit into other areas. It also includes greenhouse gas emissions offsets to close out any

# The Actions

1. Community Choice Aggregation
2. On-Site Renewable Energy Generation with Battery Storage (Bulk Buys)
3. Community Solar Program
4. Landfill Solar Project
5. Home and Business Electrification Policies and Support
6. Electrify Buses
7. Support Community Electric Vehicle and Solar Bulk Buys
8. Electrify City Fleet
9. Electrify Private Fleet
10. Expansion of Electric Vehicle Charging Infrastructure
11. Support Transition to More Energy Efficient Homes and Businesses
12. Update Building Codes
13. LED Powered Streetlights and Traffic Signals
14. Energy Disclosure / Benchmarking
15. Loan Loss Reserve

16. Energy Concierge and Community Education
17. Net Zero Energy Affordable Housing
18. Green Business Challenge
19. Green Rental Program
20. Aging in Place
21. ...
22. ...
23. ...
24. Expansion of ...
25. Increase ... and Ensure
26. Increase ...
27. ... Neighborhoods
28. ... Parking Rates
29. Expansion of Composting Program
30. Expansion of Commercial Recycling
31. Require Sustainable Materials in New and Existing Developments

32. Move Toward a Circular Economy
33. Support a Plant Rich Diet
34. Enhance Refrigerant Recycling and Reuse Program
35. Invest in Resilience Hubs
36. Foster Neighborhood and Youth Ambassadors
37. Preserve & Enhance Local Tree Canopy
38. Conduct Asset and Needs Mapping of Neighborhoods
39. Assist in Assembling and Disseminating Emergency Preparedness Kits
40. Implement Sensors to Monitor Heat, Air Quality, Waterways, and Flooding
41. Equity Programs
42. Sustaining Ann Arbor Together Grant Program
43. Internal Carbon Price
44. Greenhouse Gas Emissions Offsets

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# Highlights of the Work

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# Highlights: Renewable Energy

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- Installing >4 MW at city facilities
- Installed >4.5 MW through Solarize Ann Arbor
- Launched Commercial Solar Program
- Exploring paths to 100% renewables
  - SEU, MEU, vPPA, etc
- Advancing 18 MW landfill solar project
- Won grant to design district geothermal system in front-line neighborhood
- Won \$5M for additional solar and storage at city properties and AAHC




# Highlights: Electrification

- Designing whole-home A<sup>2</sup>ZERO assessments
- Contractor training and badging program
- Tripled L2 fast charges in system, utility pole pilot, multi-family charging
- Passed EV readiness ordinance
- Designing residential and commercial rebate programs
- City fleet passed 20% electric; EV refuse trucks and street sweepers



# Highlights: Energy Efficiency

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- Implementing energy and water benchmarking ordinance
  - Rental Efficiency Standard initiated
  - Home Energy Reporting Disclosure (HERD) Passed, implementing March 2024
  - Piloted a home Energy Advisor service
  - Pushing for adoption of updated Building and Energy Codes
  - Collaboration with 2030 District to support Commercial properties
  - Decarbonization assessments for 6 city buildings underway
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- Designing pathway to make Bryant Community Center net negative
  - Annual contractor convenings
  - Piloted Aging in Place Efficiently Program
  - Designing Green Business Challenge with SPARK



# Highlights: Circular Economy

- Returnable container program – developing a plan to expand community-wide
  - Moved to year-round composting
  - Saturday downtown commercial recycling
  - Sustainable Food events – Plant-Based Challenge and Local Food Festival
  - Launched sustainable food working group with food systems stakeholders
  - Zero Waste events - Resident Race to Zero and Swap Days
  - Working on CE strategic plan
  - Researching tools to reduce refrigerant emissions
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- Exploring carbon labeling model at restaurants, with the launch of a Sustainable Food Business Coalition
  - Initiated contracts with ZeroWaste.Org and VegMichigan, local non-profits, to move forward CE and Sustainable Food work



# Highlights: Resilience

- Distributed over **5,500** trees through FreeTree Giveaways and Community Tree Plantings
- Awarded \$1M from the USFS for Urban and Community Forestry work
- Installed air quality monitors at Kerrytown, Bryant, Vets Park, and downtown
- Created first two resilience hubs – working on design for 3rd and 4th
- Won \$1M EJ award from EPA for resilience network & infrastructure
- Pilot Nourishing Neighborhoods Program launched
- Initiated resilience assessment with Avalon
- Completed 5th cohort of Ambassadors – 99 people trained



- Distributed over 230 emergency preparedness kits
- Developed soil carbon calculator
- Launched the Pollinator Aware Yard Care program, with over 300 participating residences

# Highlights: Other

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- Collaborating with Planning to integrate climate change into Unified Development Code and Comp Plan updates
  - Supported expansion of protected bike lanes
  - Designing bicycle discount program
  - Distributed \$60,000 in grants to community sustainability projects
  - A2ZERO Collaborators network now over 120 organizations strong
  - Continued work to create the first fully decarbonized neighborhood in the US – Bryant
- Hosted over 120 community events
  - Continued fundraising to support work in community
  - Preparing IRA Support Services



# Climate Action Millage

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- On November 8th 2022, 71% of Ann Arbor voters passed a 20-year 1-mill millage to fund local climate action
- Funds began accruing in July 2023
- Estimated to generate \$7M / year

# Opportunities for Pittsfield Village

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Notable entry points for your community to get  
Involved In climate and sustainability action



# Energy: Efficiency, Decarbonization, Solar

- Home Energy Advisor Program (launching 2024)
  - Home energy assessments
  - Pathway to decarbonization
  - Connecting resources, funding/financing
- Residential Rebates (launching 2024)
  - Direct rebate savings funded by climate millage
  - Solarize program
  - Savings on bulk solar / battery installations
  - Community
- EV charger expansion
  - Potential for savings from bulk purchasing
- Host energy efficiency/weatherization workshop



# Climate and Sustainability Broadly

- Circular Economy
  - Host a community swap day
- 10,000 Trees Initiative
  - FreeTree giveaway days
  - Community tree planting
- Plant raingardens
  - Reduce flooding
  - Savings available from stormwater credit
- Sustaining Ann Arbor Together grants
  - Neighborhood grants up to \$10,000
- Become an A<sup>2</sup>ZERO Ambassador
  - 12 week deep-dive on climate action and projects!





# Keep Informed

**Sustainability and Innovations**

Carbon Neutrality - A2ZERO

About

Adaptation & Resilience

Newsletter & Events

Sustainability & Me

Sustainability & Natural Resources

Sustainability Stories

COVID-19 Resources

**Sustainability & Innovations Home**


[Home](#) • [Departments](#) • [Sustainability and Innovations](#)

Welcome to the Ann Arbor Office of Sustainability and Innovations! Click the links below or on the side to learn more about sustainability-related activities and engagement opportunities taking place in our community. And check out our [A2ZERO Climate Action Plan](#) to learn more about what we are doing, together, to achieve a just transition to community-wide carbon neutrality by 2050.

**Sustainability and Me**

**Sustainability in the Ann Arbor Community**

**Sustainability and Our Natural Resources**



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OCTOBER 2023 | ISSUE NO. 15: SUSTAINABLE TRANSPORTATION

## THE CHARGING STATION

THE OFFICIAL NEWSLETTER OF A2ZERO AND THE ANN ARBOR OFFICE OF SUSTAINABILITY AND INNOVATIONS



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- EVENTS & ANNOUNCEMENTS.....

**ABOUT THE AUTHOR:**



The lead author for this month's feature articles is Sean Reynolds, Senior Analyst, Municipal Operations. Sean's work with OSI primarily focuses on decarbonizing municipal operations and supporting the adoption of Electric Vehicles in Ann Arbor.



**WELCOME**

Welcome from the City of Ann Arbor's Office of Sustainability and Innovations (OSI)! This month's issue of *The Charging Station* focuses on how the community is working to advance sustainable modes of transportation and reduce transportation related greenhouse gas emissions. If you are interested in learning more about A2ZERO and our carbon neutrality work, more detail can be found on our website: [www.a2gov.org/sustainability](http://www.a2gov.org/sustainability). And as always, thank you for your interest in sustainability activities in Ann Arbor!

**LAND ACKNOWLEDGEMENT**

Equity and justice are at the center of A2ZERO and staff in OSI are continuing to ground our work in these critical principles. In that light, we'd like to take a moment to honor the geographic and historic space we share. We acknowledge that the land the City of Ann Arbor occupies is the ancestral, traditional, and contemporary lands of the Anishinaabe and Wyandot peoples. We further acknowledge that our city stands, like almost all property in the United States, on lands obtained, generally in unconscionable ways, from Indigenous peoples. The taking of this land was formalized by the Treaty of Detroit in 1807. Knowing where we live, work, study, and recreate does not change the past, but a thorough understanding of the ongoing consequences of this past can empower us in our work to create a future that supports human flourishing and justice for all individuals.

## COMMUNITY TREE PLANTINGS

GETTING TREES WHERE THEY'RE NEEDED MOST

Our FreeTree Giveaway program (see "The 10,000 Trees Give" on page 2) is a great way to reach a wide audience and plant a lot of trees at once. OSI recognizes that there is a need for tree planting efforts in areas of our community with low tree canopy cover – especially as these areas are often home to populations who are disproportionately bearing the brunt of climate change impacts, and therefore could benefit the most from the resiliency benefits that a healthy tree canopy provides. To address this need, the 10,000 Trees Initiative has launched a Community Tree Planting program. Through this program, City staff and a group of volunteers gather to plant trees in a neighborhood, apartment complex, on the property of a house of worship, or other community areas - at no cost to residents or property owners. Prior to the planting event, OSI staff work one-on-one with interested community members to determine what species of tree best fit their needs and their space. The City then works with nurseries to purchase these trees and have them delivered the day of the volunteer planting event. Organization of each Community Tree Planting event is in collaboration with members of the community, as well as a local community-based organization, such as a community center or house of worship.



The Community Tree Planting program was piloted in the Bryant neighborhood, in conjunction with the Bryant Community Center, which is run by Community Action Network. More than 20 volunteers and City staff helped plant 32 trees in the yards of 13 households across the neighborhood. "We contributed to our city's green infrastructure – helping to reduce flooding and stormwater runoff, mitigate air pollution, and cool our homes and streets. Every resident can help us achieve these benefits by planting trees, and this program makes it easier than ever for our residents to get involved," said Ann Arbor's Mayor Christopher Taylor. "Working with the City [...] was fun and simple. It all started with an email from Coordinator Sean Reynolds. What really impressed me is that Sean guided me in identifying a tree that met my needs and also met the needs of the initiative. I am blown away by this program—it is such an easy way to have an impact," added Bryant neighborhood resident Marc Anthony Brigolin.

If you are interested in bringing a Community Tree Planting event to your neighborhood, apartment complex, house of worship, school, or other community site, please email Sean Reynolds at [sreynolds@a2gov.org](mailto:sreynolds@a2gov.org). Please include the contact information for a community-based organization that can help us engage with neighbors, if you know of one. And no worries if you don't – we can help find one! Also reach out to Sean if you are interested in volunteering at a tree planting event. You can learn more about the Community Tree Planting program, and the 10,000 Trees initiative as a whole, at [www.a2gov.org/10ktrees](http://www.a2gov.org/10ktrees).

[www.a2gov.org/sustainability](http://www.a2gov.org/sustainability)

# Levels of Engagement

Join listserv, attend events, volunteer





# Levels of Engagement

Join listserv, attend events, volunteer

**Host a community event**




# Levels of Engagement

Join listserv, attend events, volunteer

Host a community event

Share your feedback



The City of Ann Arbor is seeking feedback on the creation of the Ann Arbor

## SUSTAINABLE ENERGY UTILITY (SEU)

A utility designed to provide reliable, 100% clean, affordable, locally built, and community-owned power.

Please provide feedback and learn more at [www.a2gov.org/a2seu](http://www.a2gov.org/a2seu)



Submit Comments by April 15th

## GREEN RENTAL HOUSING

Brought to you by the Ann Arbor Office of Sustainability and Innovations

We want your input on a set of policy recommendations designed to improve the safety, comfort, health, and energy efficiency of rentals in Ann Arbor.

Learn more and submit comments here: [www.a2gov.org/sustainability/GreenRentalHousing](http://www.a2gov.org/sustainability/GreenRentalHousing)

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**Become an A<sup>2</sup>ZERO Ambassador**



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Become an A<sup>2</sup>ZERO Collaborator

**About**

Vision and Mission

Our Team

**A2ZERO Community Collaborators**

Sustainability-Related Boards and Commissions

Employment Opportunities

## A2ZERO Community Collaborators

[Home](#) » [Departments](#) » [Sustainability and Innovations](#) » [About](#) » **A2ZERO Community Collaborators**

To fully realize the A<sup>2</sup>ZERO plan, the Office of Sustainability and Innovations collaborates with organizations and businesses all over town. Our work wouldn't be possible without the help of these important community members. If you are interested in becoming an A<sup>2</sup>ZERO Collaborator, please email us at [sustainability@a2gov.org](mailto:sustainability@a2gov.org).

Residential Neighborhood Groups/Citizens at Large

- [Forest Hills Cooperative](#)
- [Glacier Highlands Neighborhood Association](#)
- [Ann Arbor Community Commons](#)
- [Old Forth Ward Historic Neighborhood Association](#)
- [Ann Arbor Public Power](#)

Student Organizations

- [UM College Democrats](#)
- [Students for Clean Energy](#)
- [Citizen's Climate Lobby - UM Student Chapter](#)
- [Ross Energy Group](#)
- [UM Climate Action Network](#)
- [Environmental Consulting Organization at the University of Michigan](#)
- [StudentSustainability Coalition](#)

City Units

- [City Administrator](#)
- [Communications](#)
- [Parks and Recreation, including NAP, parks planning, Greenbelt](#)
- [Public Works](#)
- [Sustainability and Innovation](#)
- [Systems Planning](#)
- [Transportation](#)



# Levels of Engagement

Join listserv, attend events, volunteer

Host a community event

Share your feedback

Become an A<sup>2</sup>ZERO Ambassador

Become an A<sup>2</sup>ZERO Collaborator

Apply for community-scale grants



# Levels of Engagement

Join listserv, attend events, volunteer

Host a community event

Share your feedback

Become an A<sup>2</sup>ZERO Ambassador

Become an A<sup>2</sup>ZERO Collaborator

Apply for community-scale grants

Join a board, commission, and more



# Questions?

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# Discussion

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- What programs are you most interested in and excited about?
- What would you like to see as next steps in Pittsfield Village?