



# Sustainability in Ann Arbor

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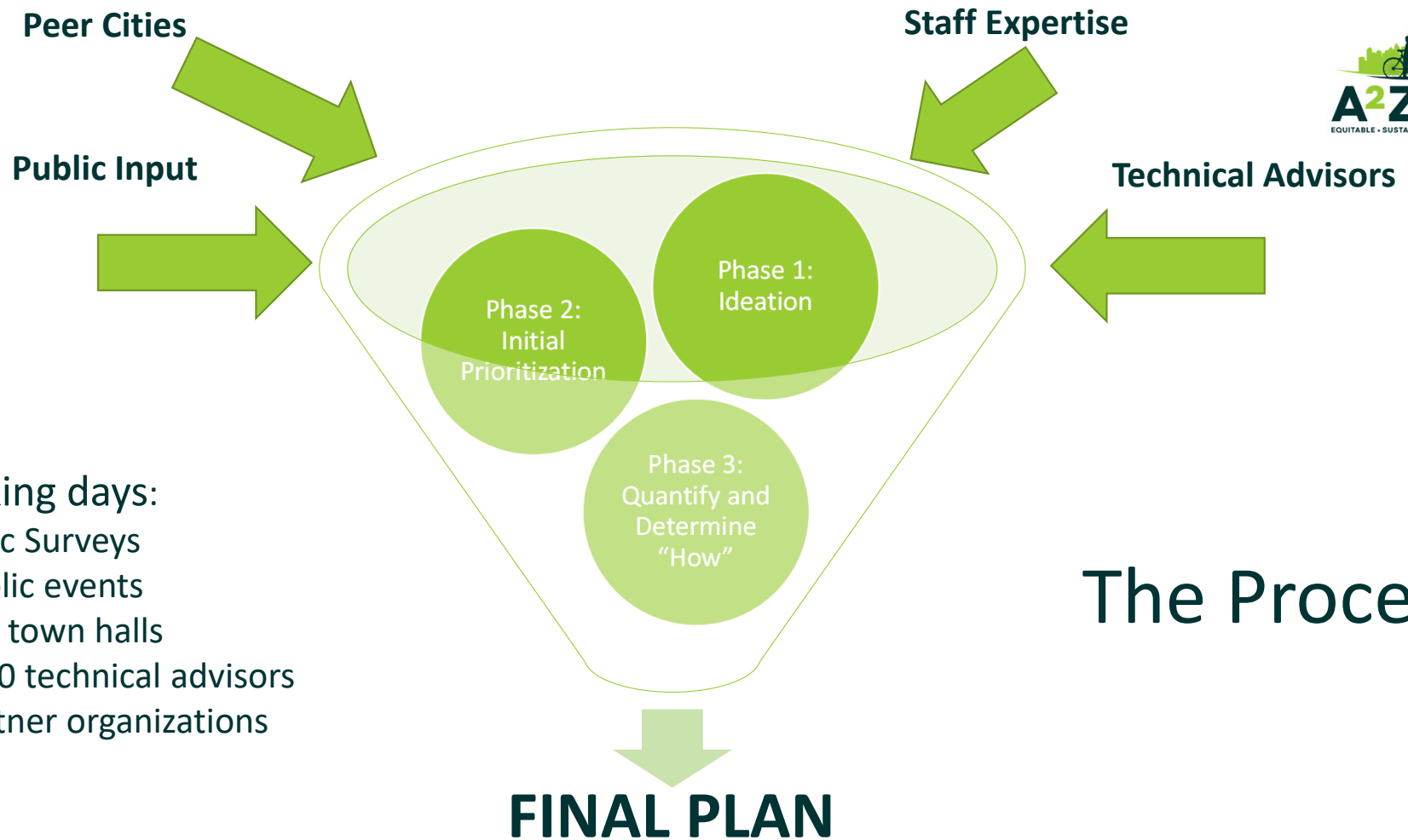
City of Ann Arbor

Office of Sustainability and Innovations

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## A BRIEF HISTORY OF SUSTAINABILITY ACTIVITIES IN ANN ARBOR





## 82 working days:

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

## The Process

# A<sup>2</sup>ZERO



ANN ARBOR'S  
LIVING CARBON NEUTRALITY PLAN  
MARCH 2020

## ACTION SUMMARY TABLE

	Total Costs	GHG Reduction	Total emissions	\$/ton	Co-Benefits
<b>Community Choice Aggregation</b>	\$1,146,000	254,000	36.4%	\$4	Cooling Soon
Roll Purchase of Renewables	\$600,000	85,000	3.5%	\$7	
Community Solar Program	\$262,000	7,000	0.4%	\$86	
LocalWatt Solar Project	\$980,000	21,000	1.7%	\$51.5	
<b>Electrification</b>	\$770,000	302,200	36.7%	\$2.50	Cooling Soon
Electricity All Buys	\$603,000,000	10,200	0.0%	\$1,500	
Roll Purchase EVs	\$750,000	121,800	8.4%	\$6	
Private EV Fleets	\$120,000	0	0.0%	\$0	
City EV Fleet	\$420,000	1,500	0.7%	\$6,666	
EV Infrastructure	\$420,000	0	0.0%		
<b>Build Purchase of Energy Efficiency</b>	\$120,000	242,500	16.1%	\$1.4	Cooling Soon
Building Code Requirements	\$102,000,000	40,300	0.6%	\$1.40	
LED Lighting	\$400,000	1,600	0.4%	\$1,250	
Benchmarking	\$120,000	0	0.0%		
Green Lease Incentive	\$42,000,000	0	0.0%		
Energy Concierge & Community Education	\$42,000,000	0	0.0%		
Net Zero Energy Affordable Housing	\$600,000	400	0.0%	\$1,500	
Green Rental Housing Program	\$100,000	0	0.0%		
Green Business Challenge	\$700,000	0	0.0%		
Aging in Place Efficiency	\$100,000	0	0.0%		
Weatherization Expansion	\$100,000	0	0.0%		
<b>Non-Material Plan</b>	\$1,342,000	60,400	2.8%	\$40	Cooling Soon
Expand Local and Regional Transit	\$100,000	10,200	4.7%	\$1,947	
Park and Ride	\$200,000	20,400	1.2%	\$1,946	
Exploit/Tripless/No/No	\$80,000	2,200	0.7%	\$114	
Mixed-Use Zoning	\$300,000	0	0.0%		
Flanking Gates	\$4,400,000	0	0.0%		Cooling Soon
New Round Compacting	\$1,000,000	400	0.7%	\$10,000	
Expand Commercial Recycling	\$18,400,000	1,600	0.3%	\$1,246	
Sustainable Material Use and Reuse	\$200,000	0	0.0%		
Circular Economy	\$200,000	0	0.0%		
Plant-Based Diet	\$200,400	0	0.0%		Cooling Soon
Biogas/Composting	\$79,400	0	0.0%		
Wellness Hubs	\$1,000,000	1,000	0.7%	\$1,000	
Neighborhood and Youth Ambassadors	\$100,000	0	0.0%		
Tree Canopy	\$1,000,000	400	0.0%	\$1,250	
Neighborhood Asset Mapping	\$100,000	0	0.0%		Cooling Soon
Emergency Kit	\$100,000	0	0.0%		
Network and Data Monitoring	\$100,000	0	0.0%		
Equity Programs	\$100,000	0	0.7%		
SAF Grant Program	\$100,000	0	0.0%		
Internal Carbon Tax	\$100,000	0	0.0%		Cooling Soon
Offices	\$1,440,000	296,500	13.6%	\$32	
<b>Total</b>	<b>\$1,024,400,000</b>	<b>6,100,000</b>	<b>166.0%</b>		



Together, creating and implementing a just transition to carbon neutrality by the year **2030.**

# A<sup>2</sup>ZERO



## STRATEGY 1:

Power Our Electrical Grid with 100% Renewable Energy

## STRATEGY 3:

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

## STRATEGY 5:

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



## STRATEGY 2:

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

## STRATEGY 4:

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

## 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 remaining emissions.

# A<sup>2</sup>ZERO



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 Housing Program
20. Aging in Place Program
21. Expansion of Transportation Program
22. Implement a Green Building Plan
23. Move Toward a Circular Economy
24. Support a Plant Rich Diet
25. Enhance Refrigerant Recycling and Reuse Program
26. Invest in Resilience Hubs
27. Foster Neighborhood and Youth Ambassadors
28. Preserve & Enhance Local Tree Canopy
29. Conduct Asset and Needs Mapping of Neighborhoods
30. Assist in Assembling and Disseminating Emergency Preparedness Kits
31. Implement Sensors to Monitor Heat, Air Quality, Waterways, and Flooding
32. Equity Programs
33. Sustaining Ann Arbor Together Grant Program
34. Internal Carbon Price
35. Greenhouse Gas Emissions Offsets
36. Increase Green Building and Transit
37. Mix of Housing Types
38. Tie In Green Spaces
39. Expand Composting
40. Expansion of Commercial Recycling
41. Require Sustainable Materials in New and Existing Developments

90+

# Addressing Barriers - Energy



- Addressing Complexity – What we heard:
  - Who do I call?
  - Who do I trust?
  - Where do I start?
  - What are my options?
  - What are the incentives?
- Addressing Costs – What we heard:
  - I need help bringing the costs down to help make changes
  - Those who would benefit the most from improvements are the least able to finance them
- Addressing Familiarity – What we heard:
  - My contractor does not know about this equipment
  - I have always done it this way

A<sup>2</sup>ZERO Home Energy  
Advisor

Ann Arbor Home Energy  
Rebates

Home Electrification Expo

HERD

Solarize Ann Arbor

SEU (Sustainable  
Energy Utility)

Green Rental Housing



Sustainability in Ann Arbor



# Highlights: Circular Economy



- Returnable container program – developing a plan to expand community-wide
- Moved to year-round composting
- Sustainable Food events – Plant-Based Challenge and Local Food Festival
- Sustainable Food Business Coalition, carbon labeling
- Zero Waste events - Swap Days and Food Waste Challenge
- Researching tools to reduce refrigerant emissions
- Electronics take-back event



# Highlights: Resilience



- Distributed over **10,000** trees through FreeTree Giveaways and Community Tree Plantings
- Awarded \$1M from the USFS for Urban and Community Forestry work
- Continued installation of air quality monitors throughout the city
- Created first two resilience hubs – working on 3rd and 4th
- Pilot Nourishing Neighborhoods Program launched
- Completed 5th cohort of Ambassadors – 117 people trained



- Distributed over 230 emergency preparedness kits
- Launched the Pollinator Aware Yard Care program, with over 440 participating residences

# Community Climate Action Millage



- On November 8<sup>th</sup>, 2022, 71% of Ann Arbor voters said yes to a 1-mil, 20-year property tax to fund A<sup>2</sup>ZERO
- That funding began accruing in July of 2023
- Generates over \$7 million per year for local climate action



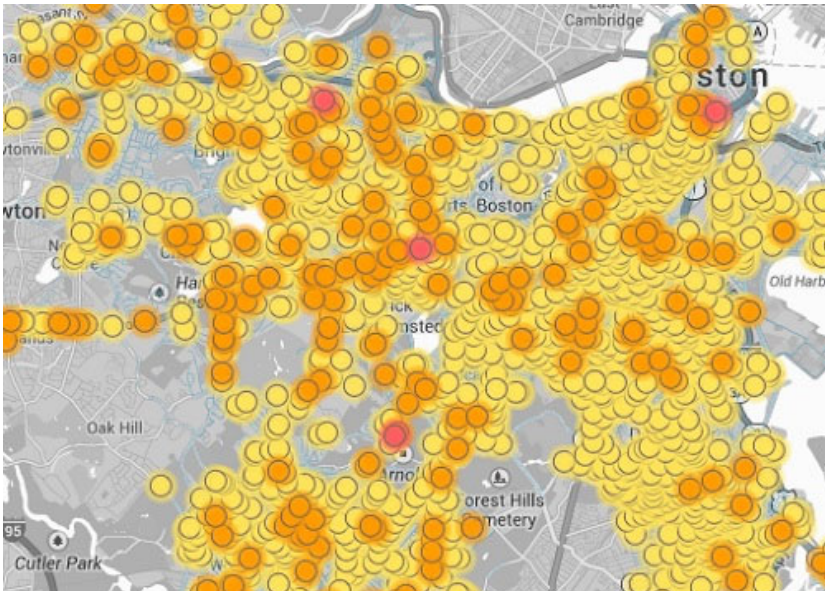
# Education



- Public Events, nearly weekly
- Public data (e.g., air quality)
- Big events: Electrification Expo, Green Fair, Movie series
- Neighborhood meetings
- A<sup>2</sup>ZERO Ambassador program
- Videos
- Storytelling



# Regulatory Intervention



- Regular intervene in electric cases.
- New to gas cases
  - Mapped gas leaks in the City
    - Filing for recovery for all tree deaths
  - Called for “future of gas” proceeding
  - Pushing against hydrogen – e.g., pipe replacement
  - Requested expedited depreciation in A2 for gas assets
  - Called for repair not replacement for non-explosion risk pipes
  - Requested ruling on where to include “risk of obsolescence”

# Neighborhood-Based Work

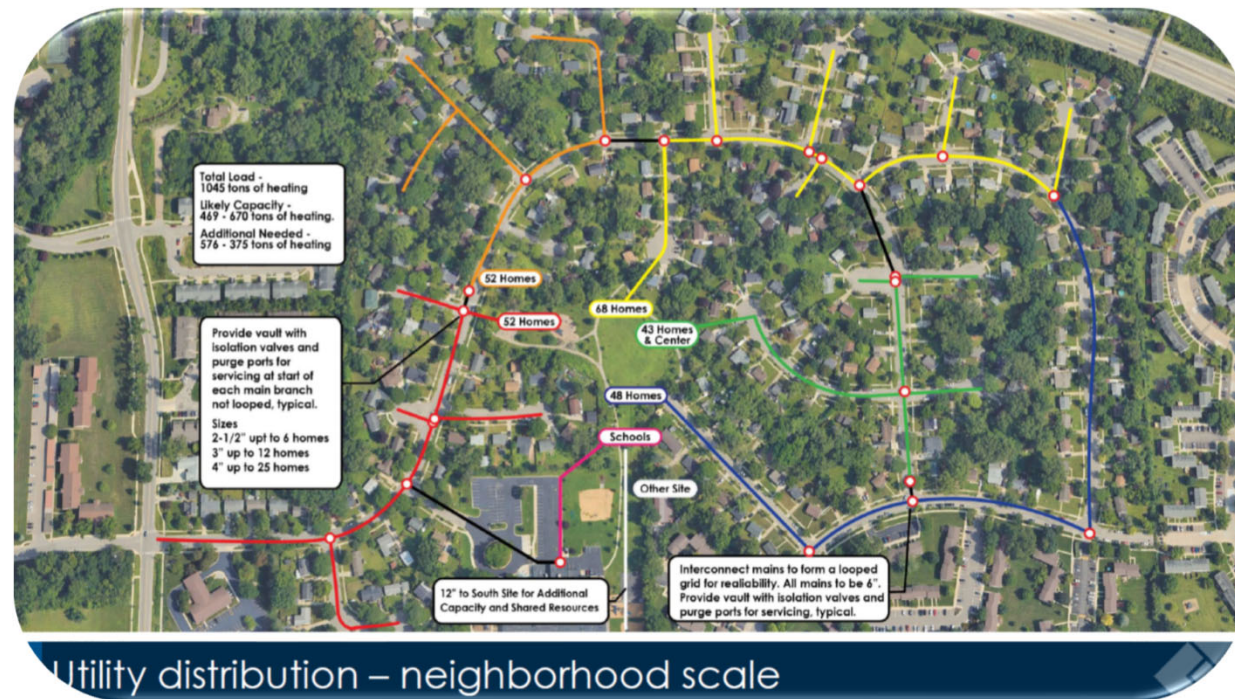


- Goal: First fully decarbonized existing neighborhood in Ann Arbor (Midwest, and possibly US).
- Frontline community with historic under-investment
  - Over 50% POC
  - 75% low-income
  - Ave energy costs \$18-2200/yr.
  - 1/3 classified as "energy cost burdened"
- Completing: energy assessments, improvements, onsite solar, district geothermal planning, resilience hub, tree plantings



# Technology Advancement and Testing

- Networked Geothermal:
- Designed for single neighborhood and deployment grant submitted
- Commissioned city-wide feasibility study
- Publicly exploring additional sites, including with schools and UM
- Looking at City facilities for anchor installations
- Workforce development strategy with trades



# Sustainable Energy Utility

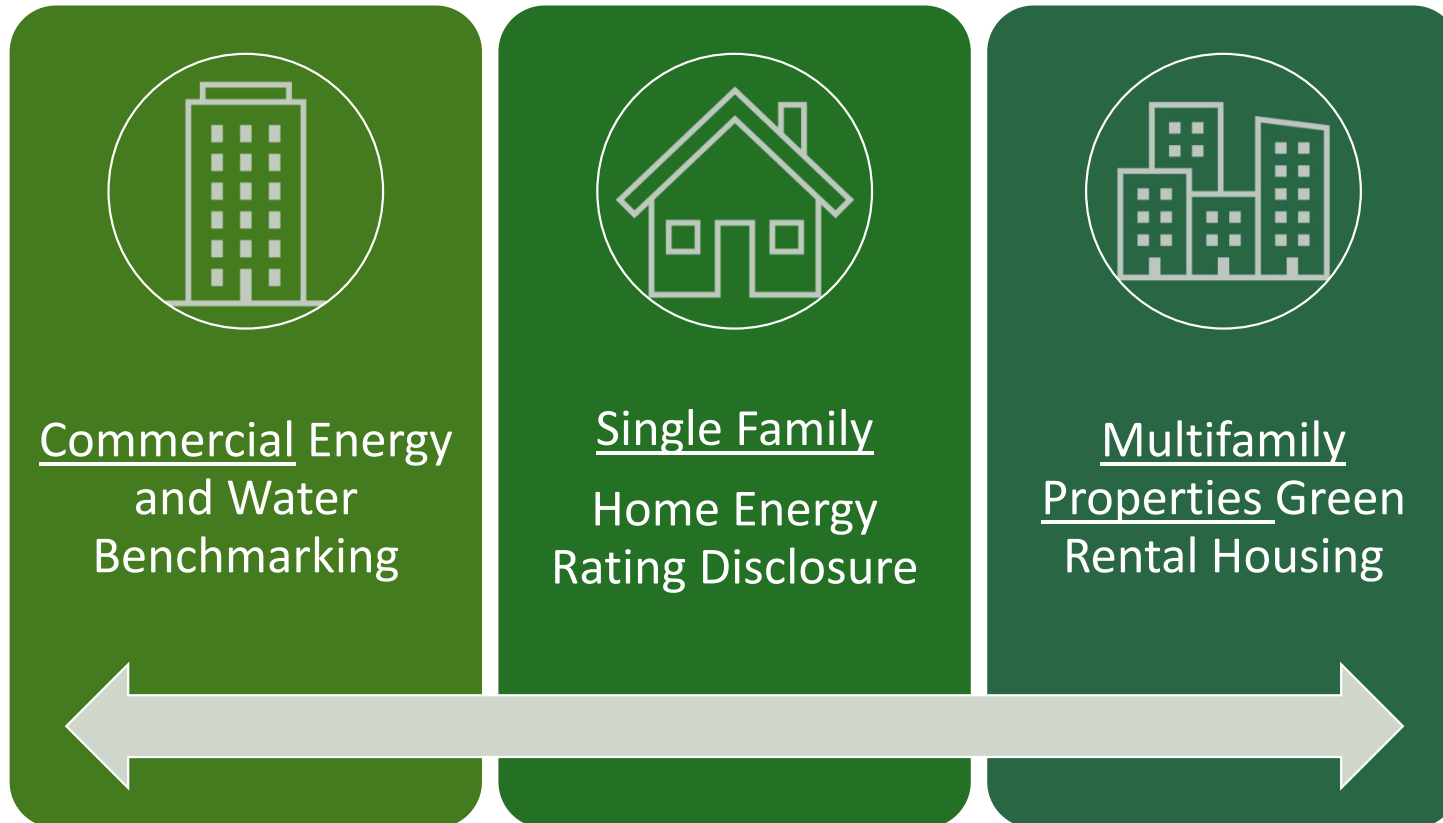


- Community-owned, supplemental utility that deploys solar and storage “underneath” the big grid
- Can include microgrids, networked geothermal, energy efficiency, on-bill financing for electrification
- Passed with nearly 79% of the vote on November 5<sup>th</sup>!



[A2gov.org/a2seu](https://a2gov.org/a2seu)

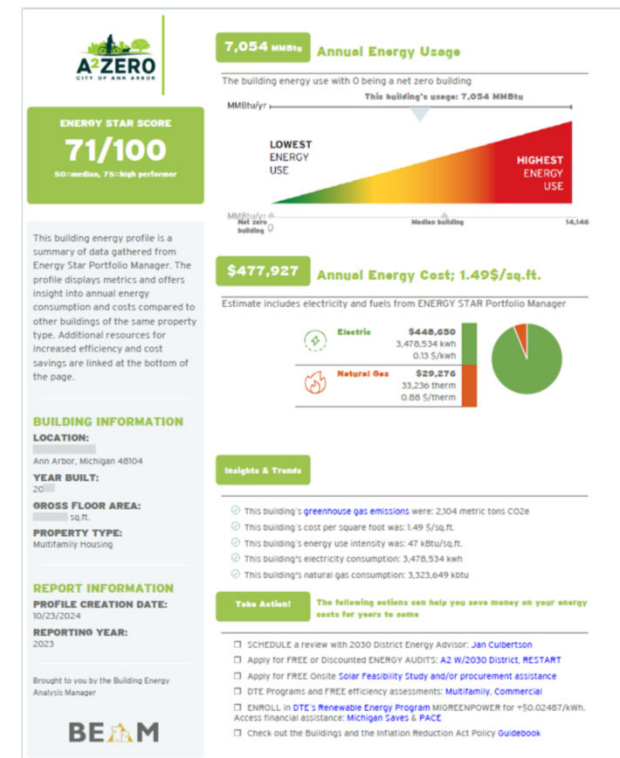
# Regulations



# Energy and Water Benchmarking



- All commercial buildings over 20,000 sq. ft. required to benchmark
- Enables analysis of sectors for targeted improvements by the City
- Summary reports for building owners
- Technical assistance for benchmarking from the 2030 District
- Covered property scorecards and post-reporting engagement
- In development: Connect benchmarked properties with next steps



# Home Energy Rating Disclosure (HERD)



- Ordinance went into effect in 2024
- Prior to listing a home for sale, the seller must:
  - Obtain a Home Energy Score from a HES Assessor (provided for free from the City if desired)
  - Make it available to Real Estate Agent, potential buyers and OSI
  - Publish the score in real estate listing
- New home buyer outreach now starting
  - Connect them with their score, report, and resources to make improvements



# Green Rental Housing



- Set a minimum baseline for health, comfort, and energy efficiency in rental units as we all work towards our carbon neutrality goals
- Sets an energy efficiency target for rentals through two pathways (both include windows)
  - Energy assessment option
  - Checklist option
- Added to the existing inspection process





# THANK YOU

Questions?

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