

City of Ann Arbor

A²ZERO ANNUAL REPORT



2021 –
2022





A²ZERO is Ann Arbor's plan for achieving a just transition to community-wide carbon neutrality by 2030. Adopted by City Council in June of 2020, A²ZERO is an audacious and essential plan, framework, and series of programs that will help improve health, safety, and comfort, all while helping our community achieve deep decarbonization. A²ZERO is a living plan, meaning that it's important to regularly reflect on what is working, what needs to be adjusted, and what needs to be added. This document presents one such reflection - looking back on the second year of A²ZERO, the accomplishments, the shortcomings, and the next steps.



More details about the initiatives outlined in these pages, as well as ways to get involved in A²ZERO, can be found at www.a2gov.org/sustainability.

2021 – 2022 Annual Report

Strategy 1: Power our electric grid with 100% renewable energy

In Year 2, we¹:

- Installed an additional **1.7MW of new residential solar**, bringing our total through the Ann Arbor Solarize program to over 3MW in two years! This represents over \$1.5 million in upfront cost savings and \$15 million in energy savings over the life of installed systems for our residents, and over 430 households that have now obtained solar through the program.
- Introduced residents to electrification and energy efficiency while deepening their connection to their energy usage and production through the **Solarize program**.
- Initiated design of a pilot **commercial Solarize program** to support businesses with accessing solar, in collaboration with the 2030 District.
- Advanced work on the **Wheeler Center Solar Park**, including finalizing the design of the 20MW solar field at the former Ann Arbor landfill and surrounding areas.
- **Designed 4MW of solar systems for City buildings**, including at the water treatment, water recovery, multiple city parks, and more. Installations to begin in the summer of 2022
- **Developed a proposal for a Sustainable Energy Utility** that would provide 100% clean, reliable, publicly owned electricity to Ann Arbor via local solar and battery storage systems.

DIVE DEEPER into the SUSTAINABLE ENERGY

UTILITY: The City is exploring the creation of a Sustainable Energy Utility (SEU), which would be a community-owned energy utility that provides electricity from local solar and battery storage systems installed on homes and businesses throughout the city. The SEU, as conceptualized, would provide 100% clean, reliable, locally built, and affordable electricity; built by the community for the community. To learn more or to register your thoughts about the SEU, see www.a2gov.org/a2seu.



¹ For more information on activities to support Strategy 1, please contact Missy Stults (mstults@a2gov.org).

- Intervened in and secured a settlement in utility case U-20713 to: 1) **create the first community solar offering** in DTE's service territory at the Wheeler Center Solar Park; 2) launch a working group to explore creation of carbon reduction offerings such as a Virtual Power Reduction Agreement and 24/7 renewable power offerings; and 3) reduce rates for those enrolling in the MIGreenPower program.
- Intervened in utility case U-20836 to **challenge DTE's proposed rate increase** and proposed compensation changes for those with solar systems.
- **Developed a Solarize Toolkit** for the Great Lakes Renewable Energy Association (GLREA) to guide implementation of the Solarize model beyond Washtenaw County.
- **Launched Ann Arbor Solar Stories** with the GLREA to enable Ann Arbor residents to spread the word about the value of residential solar.
- Joined **World Resources Institute** working group with peers around the nation to **advance 24/7 renewable energy offerings to achieve our clean energy goals**.



Strategy 2: Switch our appliances and vehicles from fossil fuels to electric

In Year Two, we²:

- Launched the [Electrification Contractor Training and Badging program](#) to ensure contractors are knowledgeable about electrification opportunities in Michigan and to connect residents with qualified professionals to assist in the transition to home electrification. Find your contractor on the Michigan Saves [Locator](#).
- **Facilitated multiple resident-facing educational workshops** on heat pumps and electrification.
- Joined an [RMI](#) cohort of cities and front-line organizations across the country **working collaboratively on electrification campaigns**.
- Partnered with IBEW/NECA, the local Electrical Workers Union, to **launch a joint campaign entitled “The Future is Electric”** to bolster electrification readiness among residents.
- Currently planning an [Electrification Expo on July 15th from 5-9pm at the Farmer’s Market](#), with vendors, local businesses, live music, and food trucks gathering in support of electrification.
- **Drafted a Green Rental Housing program**, which includes appliance electrification.
- Currently collaborating with community partners to co-design a **one-on-one Energy Concierge service** which would help residents design prescriptive maps towards home improvements and decarbonization, gearing up to test in year 3.
- **Expanded public EV charging infrastructure**, including the installation of 40 dual port chargers in Downtown Development Authority garages and 4 Direct Current Fast Chargers at City Hall.
- **Updated our permitting system** to measure how many households are transitioning to electric (e.g., vehicles, heat pumps, stoves).
- **Won awards to bring two (2) electric refuse trucks** into the City’s fleet!
- **Achieved a 20% fleet electrification rate** for municipal vehicles.
- **Developed a whole-home decarbonization assessment**, which includes guidance on energy waste reduction, electrification, and renewable energy installation opportunities. Testing in the Bryant neighborhood with the goal of expanding city-wide in year 3.

DIVE DEEPER into GREEN RENTAL HOUSING: Expanding on Ann Arbor’s existing rental inspection program, the Green Rental Housing (GRH) initiative would add certain standards for rentals designed to promote the safety, comfort, health, and efficiency of rentals citywide. In year 2, staff examined model cities, participated in regional cohorts, and facilitated a task force of tenants, landlords, engineers, architects, and low income representatives to develop requirements tailored for Ann Arbor. In addition to lowering carbon emissions from rentals, GRH will standardize quality expectations and lower energy costs for tenants while providing resources for landlords. The draft initiative is currently in review and expected to proceed to Council later in Year 3.

² For more information on activities to support Strategy 2, please contact Julie Roth (jroth@a2gov.org).

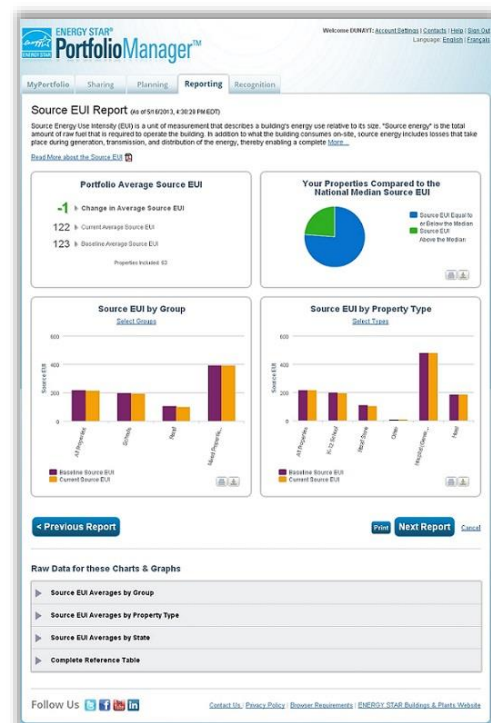
Strategy 3: Significantly improve the energy efficiency in our buildings

In Year Two, we³:

- **Passed Michigan’s first commercial benchmarking ordinance**, requiring large commercial and multifamily buildings throughout Ann Arbor to track and report on building energy and water performance.
- Facilitated analysis and feedback sessions with community partners, service providers, and program participants to **co-design a successful model for Aging in Place Efficiently**.
- Served 19 older, income-qualified residents through a combination of **energy efficiency, mobility, and home safety improvements** through our Aging in Place Efficiently program.
- **Conducted energy audits of 4 City facilities and developing a plan to fully decarbonize these buildings.**
- **Integrated multiple sustainability projects into the City’s Capital Improvements Plan.**
- Advanced a draft of a **Home Energy Rating Disclosure program**, which is expected to be considered by Council in Year 3.
- **Joined a national coalition of cities**, organized by the White House, to advance building energy and water performance.
- Applied for federal grant to **support neighborhood climate action in Bryant.**

DIVE DEEPER into COMMERCIAL BENCHMARKING FOR ANN ARBOR BUILDINGS:

This year, Michigan’s first commercial benchmarking ordinance was passed, which requires large commercial and multifamily buildings throughout Ann Arbor to track and report on the energy and water performance of their building. The first deadline for reporting was June 1, and the reporting that emerges will lead to increased awareness and practice of energy and water efficiency by those who operate and occupy our largest buildings. Benchmarking and transparency is anticipated to lead to average energy savings of 2-3% each year. [Find out more](#) on our website.



³ For more information on activities to support Strategy 3, please contact Zach Waas Smith (zwaassmith@a2gov.org)



- Assisted in the **design of the State’s first carbon neutral fire station**. Actively working with the fire department to find funding to operationalize design.
- Actively working with stakeholders across the State to get Michigan to **adopt the 2021 international model building code**, which will significantly improve the efficiency, comfort, and performance of buildings in the state.
- Worked with colleagues at the Ann Arbor Housing Commission to **secure \$2.5 million in grant funding to transition numerous affordable housing sites to net zero energy**, thereby improving comfort, affordability, and sustainability.
- Supported Ann Arbor Housing Commission with securing bids to **install solar at multiple affordable housing sites**.
- Currently collaborating with community partners to **co-design a one-on-one Energy Concierge service** which would help residents design prescriptive maps towards home improvements and decarbonization, gearing up to test in year 3.
- **Incorporated a Sustainability Review into the city’s plan review process** to gauge new proposed projects against the actions outlined in the A²ZERO plan.

Strategy 4: Reduce the miles we travel in our vehicles by at least 50%

In Year Two, we⁴:

- Launched a collaboration with colleagues in the Planning Department to **integrate A²ZERO into the Unified Development Code.**
- **Supported expansion of protected bike lanes.**
- Continued **bicycle discount program with local vendors.**
- **Initiated co-development of a “carbon calculator”,** using transportation metrics to inform the plan review process.
- The Planning Department **removed parking minimums from plan review requirements.**



⁴ For more information on activities to support Strategy 4, please contact Simi Barr (sbarr@a2gov.org).

Strategy 5: Change the way we use, reuse, and dispose of materials

In Year Two, we⁵:

- **Launched a zero-waste takeout program** that offers returnable containers for takeout orders at Zingerman’s Next Door Café, Ginger Deli, and El Harissa Market Café (read more in our Dive Deeper section) (A2R3).
- **Moved to year-round residential composting.**
- Set up Saturday service for **downtown commercial recycling** to begin July 1, 2022.
- Sent recommendations for a **sustainable food purchasing policy that applies to all City purchases** of food items on February 1st, 2022 which were incorporated in the [City Council’s resolution](#) passed on March 21st, 2022. Currently working to implement.
- **Launched a sustainable food working group** to help advance sustainable food practices and support in the community.
- **Launched a Resident Race to Zero, week-long zero waste challenge** that occurs three times per year. 829 households have participated in a Zero Waste Challenge to date.
- **Published an academic article titled “Envisioning a Circular Economy: The Journey of One Mid-Sized Midwestern City”** (2021) in the journal *Sustainability*.
- **Launched a circular economy working group to create a circular economy plan** for the City and region as well as metrics with which to measure it.

DIVE DEEPER into ANN ARBOR REDUCE, REUSE, RETURN (A2R3): US-made, USDA-approved, microwave-, freezer-, and dishwasher-safe reusable containers are available for takeout orders at Zingerman’s Next Door Café, Ginger Deli, and El Harissa Market Café. Containers can be returned to any of the participating businesses to be cleaned and reused, reducing single-use container waste and building Ann Arbor’s circular economy. Additional businesses will be added to the program continually. Visit Live Zero Waste to stay up to date with the program and to check out a container when you visit a participating business!



⁵ For more information on activities to support Strategy 5, please contact Hannah Loftis (hloftis@a2gov.org).

- **Created a robust circular economy GIS map** including more than 100 circular businesses and organizations in Ann Arbor, with the opportunity for residents to suggest other circular entities in Ann Arbor.
- **Applied for and became part of the State of Michigan’s NextCycle Intergovernmental Initiative and Public Private Partnership (I2P3)** challenge track to boost the circular economy. This was done in partnership with many local non-profits.
- Conducted interviews with local businesses and other entities to **create a shared understanding of the circular economy** and its various sectors, as well as to **identify gaps and opportunities for the city to assist entities** in participating in the circular economy.
- **Launched a City [circular economy website](#).**
- **Developed a circular economy promotional flier for the initiative**
- Working on **developing promotional videos** that explain what the Circular Economy is in accessible and relatable terms.
- Worked with ICLEI-Local Governments for Sustainability (ICLEI) to **establish a series of Circular Economy metrics** for the City of Ann Arbor.
- **Began looking for refrigerant appliances** (dehumidifiers, air conditioner window units, refrigerators, and freezers) being disposed of when students move on and off campus.
- Began exploring creation of a **solid waste disposal plan for new developments.**



Strategy 6: Enhance the resilience of our people and our place

In Year Two, we⁶:

- **Installed two AQMesh air quality monitors to measure pollutants:** one at the Kerrytown Farmers Market and one at the Bryant Community Center. All data collected will be publicly available on our website. Two more air quality monitors are ordered and ready for installation in Year 3.
- **Distributed almost 2,500 trees through FreeTree Giveaways and Community Tree Plantings** and held two FreeTree Giveaways as part of the 10,000 Trees Initiative (learn more in our Dive Deeper section).
- Working with Emergency Management to **fully integrate climate change and resilience projects into the City's updated multi-hazard mitigation plan.**
- Established and staffed **emergency preparedness shelter** during 5-day power outage in August of 2021.
- **Launched resilience hub at Northside Community Center** and **designed 2nd and 3rd centers** at Bryant Community Center and Ann Arbor Senior Center. These will be implemented in Year 3.

DIVE DEEPER into 10,000 Trees: Since spring 2021, we have distributed almost 2,500 trees through FreeTree Giveaways and Community Tree Plantings. We hold two FreeTree Giveaways each year in celebration of fall and spring growing and are currently investigating funding opportunities to offer more Community Tree Plantings in the fall of 2022. To keep up-to-date on all things 10K Trees, sign up for our [mailing list](#).



- Initiated resilience assessment with Avalon Housing to **support the resilience of affordable housing providers.**
- Undertook Master Rain Gardener training to **support residents with installing green infrastructure.**
- **Completed the 2nd and 3rd cohorts of A²ZERO Ambassadors**, leading to over 50 individuals now trained as A²ZERO Ambassadors.
- **Deployed over 200 emergency preparedness kits to residents.**
- **Developed soil carbon calculator tool** with support from University of Michigan students.
- **Developed tree maintenance and care app** to support those receiving trees through the 10,000 trees initiative.
- **Supported the No Mow May initiative.**

⁶ For more information on activities to support Strategy 6, please contact Sean Reynolds (sreynolds@a2gov.org).

Strategy 7 – Other strategies/accomplishments

In Year Two, we⁷:

- **Granted \$100,000 to community groups** working on sustainability-related activities (see www.a2gov.org/sa2f)
- **Hosted over 100 community events, meetings, presentations, or discussions.**
- **Were recognized by the CDP as one of 95 “A List” communities worldwide** as a result of our transparency of citywide emissions, emissions reduction and renewable energy targets, climate action, and climate risk and vulnerability plans.
- **Were recognized by Michigan Green Communities for a gold level of climate leadership**, one of 22 communities throughout Michigan to receive the recognition.
- **Staff were recognized for their work on sustainability**, including:
 - Simi Barr was recognized by Crains as an electric vehicle champion.
 - Missy Stults was recognized by GRIST as one of the 50 “Fixers” of 2022
 - Sean Reynolds was awarded the Governmental Award for Urban and Community Forestry from the Michigan Urban and Community Forestry Council.
 - Julie Roth was awarded the George Sexton Public Servant of the Earth Award from the Sierra Club.
 - Galen Hardy was appointed to the Board of the Great Lakes Renewable Energy Association
- The **proposed Ann Arbor Sustainable Energy Utility won the project of the year** from the Great Lakes Renewable Energy Association
- Working with peer communities to **advance a national decarbonization coalition.**
- **Working on an anti-idling campaign with Ann Arbor Public Schools**
- **Created a sustainability scavenger hunt** to help daylight sustainability activities unfolding in the community.
- **Expanded the A²ZERO Collaborators network – which is now over 110 organizations strong!**
- Working with collaborators such as Bryant residents, Community Action Network, Elevate, and the University of Michigan to **design and create the first fully decarbonized existing neighborhood in America – in Bryant!**

⁷ For more information on activities to support Strategy 7, please contact Galen Hardy (ghardy@a2gov.org).

- **Continually wrote grants to support community-wide initiatives and our partners' sustainability activities,** including, but not limited to:

- \$25,000 from the U.S. EPA to support work in Bryant
- \$75,000 from the McKnight Foundation to support work in Bryant
- \$4,500,000 from the American Rescue Plan Act to support solar installations and energy saving efforts at City facilities
- \$2,500,000 from the federal government to support energy, comfort, and safety improvements at Ann Arbor Housing Commission sites.
- \$170,000 to support the installation of four (4) electric vehicle fast chargers

- \$270,000 from the American Lung Association to support the purchase of an electric refuse truck.
- \$406,000 from the State of Michigan to support the purchase of another electric refuse truck.
- \$8,500 from EGLE for Contractor education and badging program on electrification
- \$5,000 from Bright Cities to support tree planting in underserved areas
- \$2,500 for electrification expo from State of Michigan
- \$54,000 to support utility-pole EV charging pilot from State of Michigan
- \$25,000 from Solar Moonshot to install solar on 2 homes in Bryant



A²ZERO Year 3 Priorities

Looking ahead, our priorities for the next year of A²ZERO are:

- Achieve **5MW of rooftop solar** through solarize (residential and commercial)
- **Break ground on Wheeler Center Solar Park** (landfill solar project)
- Collaborate with County and other regional stakeholders to **expand County-wide climate action**
- Continue growing the momentum and support for **the Bryant neighborhood decarbonization program**
- Continue investigating pathways to **achieve 100% renewable energy** powering the community, including exploration of Sustainable Energy Utility and traditional municipalization
- Continue **zero waste challenges**, including launching a student-focused challenge
- Create a **plan and begin implementing the decarbonization of four city buildings**
- Create a **sustainable food framework** for Ann Arbor and pilot at City facilities
- **Create a circular economy strategy**
- Create Ann Arbor's second and third **resilience hubs**
- Deepen and sustain **community engagement**
- **Deploy 50 more EV chargers**, in coordination with the University of Michigan, DDA, State of Michigan, and other collaborators
- **Embed A²ZERO in the community's comprehensive land use plan and unified development code**
- **Engage next two rounds of A²ZERO Ambassadors**, bringing total trained through the program to nearly 100
- Expand and unlock greater collaboration opportunities with the **A²ZERO Collaborators Network**
- Finalization of a **green rental housing initiative**
- Finalization of a **home energy rating disclosure initiative**
- Fundraise for **Aging in Place Efficiently and Bryant decarbonization project**
- Install at least four more **air quality monitors through Ann Arbor**
- Install **4MW of solar at City facilities**
- Launch and pilot testing of **electrification campaign**
- Launch and pilot testing of **energy concierge**
- Launch metrics dashboard to **transparently demonstrate progress towards achieving goals**
- **Plant 1,500 more trees** through the 10,000 Trees program