



Through over 70 public events, multiple town halls, and 3 surveys we've received a lot of feedback from people in Ann Arbor about carbon neutrality. Below are answers to some of the most common questions we've heard. If you have additional questions, contact us at sustainability@a2gov.org.

More details, including the living A2Zero Carbon Neutrality Plan and recordings of two virtual Town Halls about the Plan can be found at www.a2zero.org.



COVID-19

Q. How does the A2Zero plan interact with COVID-19? Why is A2Zero continuing in this crisis?

A. On November 4th, 2019, the Ann Arbor City Council charged the City with creating a plan to get Ann Arbor to carbon neutrality by 2030. When passing this resolution, City Council mandated that the draft plan be presented to City Council by March 31st, 2020. This charge has not changed since the onset of the pandemic. We recognize that the intense effects of COVID-19 on our community members will impact how everyone, including A2Zero, operates. We will continue to update A2Zero to account for these changing needs and will continue to focus our efforts on enhancing the resilience of our people and place to all types of disturbances, including public health emergencies, natural disasters, and more.

Q. Why does the planning document not provide more comprehensive details?

A. The planning document is a public-facing summary of the work done to date. In addition to the Plan, there is the A2Zero Governance Framework, the Prioritization Framework, and the Investment Plan.

Q. Is the Plan set in stone?

A. The A2Zero Plan is presented along with a Governance Model that outlines how the Plan will be revised. The Governance Model outlines how the community can engage in reviewing and revising the A2Zero Plan. As the Plan is intended to be living, input from stakeholders, lessons learned, and changes in technology will continue to guide the Plan. Each year, residents will have an opportunity to provide feedback, propose changes, and celebrate successes as the community makes progress towards achieving carbon neutrality.

PLAN



FINANCES

Q. How much will this plan cost?

A. The draft plan indicates that it will take \$1 billion in investment over the next ten years to fulfill all the strategies that get us to carbon neutrality. The breakdown in costs can be found in the Plan and the Investment Scenario, accessible on www.a2zero.org.

Q. How will this initiative be funded? Will it raise my taxes?

A. Some actions in the plan already have funding, others will need resources. One possible Investment Plan has been created that outlines how the Plan could be funded. Some potential options are grants, public-private partnerships, innovative financing models, Federal/State funding, reallocating City funds, or millages. We are committed to fundraising and using as many innovative financing tools as possible to limit the financial burden on the plan. We are particularly focused on finding equitable financial practices.

Q. How will financial investments be prioritized in the plan?

A. The Plan centers around 7 overarching strategies, composed of 44 actions. Implementation activities will need to take place in each of the 7 strategy categories in order to achieve carbon neutrality. To support prioritization of actions, a Prioritization Framework was created. Additionally, the Plan lays out both potential timelines for spending, costs for the various actions, along with pertinent co-benefits which help inform which actions to prioritize.

TRANSPORTATION

Q. How will A2Zero's transportation strategies impact my travel?

A. The Plan aims to make it easy and cost-effective for residents to either voluntarily purchase electric vehicles or to use safe and effective public transportation. We will be partnering with AAATA and other local transit options to work towards safer and lower carbon alternatives.

Q. How does A2Zero account for and address emissions from commuters?

A. Ann Arbor's Community-Wide Greenhouse Gas Inventory currently only accounts for on-road transportation that occurs within our city boundary. We know that emissions associated with commuting into and out of the City are significant, and are important to factor into our carbon neutrality work. As such, we are currently working to expand the inventory to include these emissions. As of right now, the plan aims to reduce emissions associated with commuting patterns through regional and local transit improvements, although the greenhouse gas emissions reduction calculated for each strategy only accounts for reductions to in-boundary emissions.



Q. Why does A2Zero include actions for transportation that require capital investments?

A. Transportation is the second largest source of carbon pollution locally (after the electricity and gas we use in our buildings) and without a robust public transportation system, our goal to reduce vehicle miles traveled (VMT) will not be achievable. For these reasons, the City takes into account the AAATA. The estimated impacts of proposed transit actions will need to be further evaluated and more detailed investment plans created when a full work plan is prepared.





RESIDENTS

Q. How will A²Zero affect me?

A. A²Zero has several plans to address carbon reduction in our community. Through bulk buys and expanding current financing programs we aim to make attaining lower-carbon residences feasible for as many people as possible. We also are developing a Time of Marketing Ordinance and a Green Rental Housing program to ensure homeowners and renters know about the efficiency of their homes before they buy/rent. Moreover, many strategies incentivize actions that would result in energy savings

Q. How can I get engaged in personal carbon neutrality?

A. One way to start is calculating your carbon usage, using a tool like the [EPA's carbon calculator](#). You can also replace gas appliances with electric, put more insulation in your house, or use public transit to reach your destinations. If you are able, you can also explore solar on your home or business and participate in a community bulk buy for solar or electric vehicles (learn more at www.a2gov.org/sustainability). As A²Zero moves forward, more resident actions will become necessary for implementation. You can also talk to your friends, family, and coworkers to share A²Zero's goals and get them involved - consider using our [engagement toolkit](#) on www.a2zero.org to help.

RENEWABLE ENERGY

Q. Do I have to install rooftop solar?

A: No. The plan includes a strategy to secure Community Choice Aggregation as well as Community Solar to procure renewable energy for our community. Community Choice Aggregation can be designed in many ways to serve many purposes. Through outreach with the public, a clear preference emerged for a Community Choice Aggregation program for Ann Arbor that focuses on: 1) additionality, meaning that whatever we invested in would not have happened without our investment; 2) displacing fossil fuels; 3) an investment, ideally, in communities disproportionately burdened by the fossil fuel extractive economy, and 4) that is 100% renewable energy. If you are interested in rooftop solar, check out our Solarize program which is helping make solar more affordable.



Q. Aren't there programs to voluntarily purchase renewable energy now?

A: There are. Because these programs require residents and businesses to opt-in, it would be challenging to create a significant impact. Current voluntary green power purchase programs charge a premium for electricity, which is not financially feasible to some households nor in line with the cost of electricity for renewable energy. Community Choice Aggregation uses an opt-out system to combine our collective purchasing power to secure renewable energy at the same or lower rate than we currently pay for electricity, while achieving a significant reduction to our electricity emissions.

Q. Can we reach our carbon neutrality goals with local rooftop solar or wind?

A: A²Zero includes a significant amount of rooftop solar installations, over 30 times more than our community has in place now. Still, this does not match our community's energy demand so we will need to incorporate other actions. While some regions of Michigan have significant potential for wind power, Ann Arbor does not have adequate wind potential.



ELECTRIFICATION

Q. In Ann Arbor requiring a conversion to all-electric?

A: No. The A²Zero Plan focuses on voluntary electrification. The Plan proposes actions that support all new buildings being electric (as well as more efficient), working with homeowners, businesses, and building managers to support voluntary conversion to electric when appliances are being replaced; providing incentives to support the transition to electric; bundling energy efficiency with electrification and on-site renewable energy installations; and investing in renewable energy at scale so as to drive down the cost of electric.

Q. Will I have to pay more for electric appliances than gas equivalents?

Per unit of energy, electricity is more expensive in Michigan than natural gas; however, these prices are expected to drop over time. In addition, technology such as heat pumps provide more efficient heating AND cooling compared to natural gas systems, all while eliminating the need for a separate cooling appliance, reducing upfront and maintenance costs, and improving indoor air quality. The A²Zero Plan focuses on pairing energy efficiency with electrification and onsite renewable energy generation (where possible) in order to lower costs. Collaborative efforts are beginning in Ann Arbor to implement electric appliance and energy efficiency bulk buy programs. If you're interested in being involved, send a note to sustainability@a2gov.org.

Q. Will it cost more to operate electric appliances?

Currently, the price of gas is such that heating with gas is often a cheaper alternative to using electricity from the grid. However, gas prices are volatile, and expected to rise in the future. On the other hand, the prices of renewable technologies are dropping. By pairing electrification with energy efficiency programs, customers will experience less impact to their monthly bills, as savings from increased energy efficiency can make up for the increased electric load from appliances. Additionally, technologies such as heat pumps provide efficient heating AND cooling, and the operating cost of heat pumps tend to be lower than traditional AC units. Though operating costs of gas heating are currently lower than heating with electricity, this does not include the social cost of carbon which is released upon combustion, the significant amount of methane leakage that occurs in gas production and distribution, or the significant air quality impacts associated with combustion. A long-term transition away from gas will save some money for consumers who no longer want to invest in costly gas infrastructure.

Q. Will switching to electric appliances reduce greenhouse gas emissions?

The goal of A²Zero is to achieve community-wide carbon neutrality, and switching fuels so that we are no longer burning gas is a key part of success. While our current grid is more carbon intense than gas, our grid is becoming cleaner, and even more so with the actions proposed in A²Zero. In addition to electrifying buildings, the A²Zero Plan focuses on greater building efficiency and demand response. Pairing electrification with these initiatives will decrease the cost of this transition as well as lower both short-term and long-term emissions. In addition to the reductions in greenhouse gases that result from fuel switching, there are also health and safety reasons to electrify. Eliminating the combustion of gas for heat will result in improved air quality and reduced risk of explosion and fire.

Q. Do heat pumps work in our climate? Will I be comfortable and safe?

Modern electric heating equipment is not a new technology and has achieved high rates of adoption in multiple countries. Expanding demand for heat pumps in the Northeast has resulted in specified cold-climate technologies that maintain adequate efficiency to 5 degrees F. While all-electric solutions will only become more cost effective over time, combining electric heat pumps with gas equipment can reduce the amount of gas used while reducing any risks of increased electric bills, power outages, or extreme winter weather events, like the polar vortex of 2019.



LAND USE

Q. A²Zero discusses actions that deal with land use. Will A²Zero change zoning requirements?

The passing of A²Zero by City Council will not change current zoning requirements. Any changes to zoning requirements must go through the Master Plan process and be included in a Master Plan update approved by the Planning Commission and City Council. A²Zero is a directional and malleable plan which can be used as a roadmap for community-wide carbon neutrality.

Q. Will land use-related actions lower emissions?

Diverse moderate density housing types and mixed use neighborhoods are included in the A²Zero Plan for two reasons:

1. The topic came up repeatedly in public engagement and through the technical advisory committees;
2. Studies show that walkability and attached housing units decrease greenhouse gas emissions compared to more spread out land use patterns.

Quantifying these emissions reductions is highly complex and addresses emissions that are currently not included in Ann Arbor's community-wide greenhouse gas emissions baseline. However, these emissions are most certainly occurring. Increasing housing density interacts with many goals, including increasing housing choice and affordability, walkability, improved social connections, addressing historical inequalities, reducing urban sprawl, and decreasing greenhouse gas emissions.



BUSINESSES



Q. How will A²Zero engage with local businesses?

A. Part of A²Zero is the Green Business Challenge which aims to help businesses reach sustainability goals through networking, financing, bulk buys, education, and recognition opportunities. As the effects on businesses of COVID-19 become clear, we will adjust our strategy to fit new needs. We look forward to engaging with any interested businesses on aspects of A²Zero or the Green Business Challenge.

Q. Will I be required to replacement my natural gas lines with electric?

A. No. The A²Zero Plan focuses on voluntary electrification. The Plan proposes actions that support all new buildings being electric, working with homeowners, businesses, and building managers to support voluntary conversion to electric when appliances are being replaced; providing incentives to support the transition to electric; bundling energy efficiency with electrification and on-site renewable energy installations; and investing in renewable energy at scale so as to drive down the cost of electric.

OFFSETS

Q. What will carbon offsets be used for and how will their quality be determined?

A: Carbon offsets will only be used to close emissions gaps that can't be closed through local or regional action. Our current criteria for potential offsets is that they will be additional (wouldn't have happened without our investment), displace fossil fuels, and align with our equity and justice principles.



PARTNERSHIPS & COLLABORATION

Q. How has A²Zero engaged in partnerships in Ann Arbor and between cities?

A: A²Zero has over 60 local and regional partners and engages with them regularly. The University of Michigan is developing its own plan and the Office is represented on the University's Carbon Neutrality Commission. We have also used knowledge from other cities to inform the A²Zero Plan and will continue sharing our lessons learned and promising practices with peers around the nation.

OTHER

Q. Why doesn't Ann Arbor just require all new developments to be net zero energy

A. Municipalities in Michigan are not allowed to set building codes that are more stringent than the state's building code. That is why we have a strategy focused on working with partners and other communities throughout the state to encourage the state to adopt more stringent building codes, including the Zero Code.

Q. Why don't you just do the highest ranked activities in the prioritization framework?

A. Nearly every action proposed in the A²Zero planning process was evaluated through the prioritization framework. The 44 actions included in the final A²Zero Plan are the actions that ranked the highest overall.

Q. How can I get involved or help out?

A. The City is starting a Neighborhood and Youth Ambassador program that will work to engage interested residents in sustainability work in their own neighborhoods with support from the Office of Sustainability and Innovations and other partners. Keep an eye out for these opportunities, and email us at sustainability@a2gov.org if you want to be more involved! Additional opportunities can be found on www.a2zero.org.



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