


# A<sup>2</sup>ZERO TOP IDEAS

#	Idea
ADAPT-1	<p><b>Conduct a Needs Mapping of Neighborhoods Based on Specific Support Residents Require</b></p> <p>Includes working with neighborhoods to identify what assets and needs exist in the area and then creating a plan to leverage the assets to fill the needs. Assumes that the exercise will lead to the identification of safe gathering points in neighborhoods when events happen such as power outages and natural disasters. Also assumes that some physical spaces, such as homes, might be activated as shelters during necessary times.</p>
ADAPT-2	<p><b>Assist in Preparing and Distributing Emergency Preparedness Kits</b></p> <p>Includes education and physical events where we work with residents to create emergency preparedness kits.</p>
ADAPT-3	<p><b>Implement/Leverage Sensors and Data to Monitor Heat, Air Quality, Waterways, and Flooding</b></p> <p>Focuses on collecting data and using sensors to proactively understand risks and mitigate vulnerabilities. Includes the usage of drones and sensors to collect data and to respond, when necessary.</p>
ADAPT-4	<p><b>Reduce Impervious Surfaces</b></p> <p>Fully implementing the City's green streets policy, encourage use of pervious pavements and materials, and increase penalties for impervious surfaces. Also includes designing roads with greater flexibility so that highly networked active and public transit is prioritized and that street trees and stormwater management are the emphasis. This also includes ensuring our design standards are integrating projections of future rainfall and temperature.</p>
ADAPT-5	<p><b>Design for Increased Urban Density and Walk/Bike-Ability</b></p> <p>Includes updating the zoning code to allow for greater density in key corridors. A few strategies to achieve this goal are identified in the mobility sector.</p>
ADAPT-6	<p><b>Increase Affordable Housing Near Employment Hubs/Transit Corridors</b></p> <p>Develop transit corridors and prioritize the placement of new affordable housing units in these areas. Also includes redeveloping vacant land so that is supports housing, community centers, and green spaces. Somewhat covered in mobility.</p>
ADAPT-7	<p><b>Carbon Sequestration – Specifically Understanding the Value of, Preserving, and Enhancing Local Tree Canopy</b></p> <p>Includes conducting an analysis of sharing/inventory/update of master plan; incentivizing private tree planting; lowering the cost of tree planting; selecting resilient tree species; safely placing trees away from power lines; and capturing the greenhouse gas sequestration potential of existing and future trees</p>
ADAPT-8	<p><b>Youth Ambassador Program</b></p> <p>Working with youth through education, engagement, and an ambassador program to elevate their voices and ownership of the work</p>
MOB-1	<p><b>Significantly Increase EV Charging Infrastructure:</b></p> <p>Significantly increase electric vehicle charging infrastructure at: Parking lots / street parking / parking garages (public); Park and ride lots; Ride hailing locations (which includes creating new ride hailing spots with fast chargers); and at city facilities</p>
MOB-2	<p><b>Increased Public Transit Service</b></p>

	95% of residents have access to transit (within a 10 minute walk) with 20 minutes frequencies or better. This leads to residents taking transit for 40% of their journeys to work. Assumes an upgrade to electric buses and improving transit first and most on routes that serve transit-dependent communities.
MOB-3	<b>Electrify All Buses</b> Includes TheRide and UM bus fleets
MOB-4	<b>Implement Non-Motorized Plan</b> Implement the City's non-motorized transportation plan to ensure an interconnected network of options to achieve 25% of in-city trips through non-motorized transit. This strategy assumes more sidewalks, road crossings, separated bike lanes, traffic devices, and lighting upgrades.
MOB-5	<b>Require 50% Fleet Electrification</b> Includes public, commercial, and private fleets (e.g., FedEx, UPS, Ride hailing). Assumes charging infrastructure is powered with renewables.
MOB-6	<b>Reset Parking Fare Structure</b> Have a sliding parking fee structure that dramatically increases the cost to park during peak hours, but has lower rates for EV owners, and low-income residents. Includes eliminating all free on-street parking.
MOB-7	<b>Allow Duplex, Triplexes, and Quadplexes in Residential Zoning</b> Allows for up to 4-unit residential and ADUs by right. Focuses on increasing the walkability and livability of neighborhoods while creating more accessible housing to a wider array of community members
MOB-8	<b>Increase Park and Rides</b> Increase park and rides so that we have 10x (up to 20x more) more parking available, tied with EV charging. Integrate expanded transit services to get people out of cars in the City
MOB-9	<b>Dedicates Bus Lanes with Rapid Transit Technology on High-Throughput Corridors</b> Assumes that 50% of all major arterials provide transit services that are fast and convenient (as convenient if not more than driving a car). Transit operates at a frequency of 20 minutes or less. Services park and rides.
MOB-10	<b>Expand the Demand Management Program (Get Downtown) to City Wide</b> Expand the current Get Downtown program citywide. Require participation for employers above 10 individuals
MOB-11	<b>Consistently Prioritize Pavement Use for Transit, Pedestrian, and Bicycle Users</b> Assumes the full implementation of the Complete Streets Policy with preference given to improvements for public transit and active transit
MOB-12	<b>Invest in Regional Rail</b> Regional rail service to connect surrounding municipalities to Ann Arbor. Specifically focused on connecting Plymouth, Jackson, Detroit, and Brighton to Ann Arbor.
MOB-13	<b>Changing Zoning Laws to Allow for Mixed Use in Neighborhoods</b> Allows for the updating of zoning laws to allow for mixed uses such as bakeries, grocery stores, breweries, coffee shops, etc. in neighborhoods. This increases walkability and reduces vehicular miles
MOB-14	<b>Bulk Buy Purchasing Opportunities for EVs, Charging Infrastructure, and Solar</b> Involves bulk buy with community members to reduce the cost of EVs. Also involves EV low-income car sharing program (and scaling-up current EV car sharing programs).
NRG-1	<b>Community Choice Aggregation:</b>

	Work with state legislators to pass community choice aggregation that allows the City to purchase renewable energy for all residents and businesses. This would be an opt-out program that would help acquire new, (additional) renewable energy resources and retire the RECs from those resources. The renewable energy would need to displace fossil fuel generation.
NRG-2	<b>Bulk Buy / Purchasing of Energy Efficiency Equipment</b> Negotiate and enable bulk/group-buy discounts for residents and commercial entities. This includes education and marketing to the target groups and supporting energy efficiency improvements at scale.
NRG-3	<b>Energy Disclosure/Benchmarking Policies – Rental /Single-family /Commercial/ Institutional</b> Pass ordinances which require energy use disclosure and work towards energy performance standards. <ul style="list-style-type: none"> <li>a. <i>Rental:</i> have an energy efficiency audit requirement for landlords during their inspections and necessitate that all buildings meet a baseline energy performance standard. This is part of the green rental efficiency program</li> <li>b. <i>Residential:</i> Require a Home Energy Audit and associated energy use disclosure at time of sale, creating pressure on buyers to choose homes with lower energy usage. Support the disclosure with targeted programs to help new homebuyers make improvements</li> <li>c. <i>Commercial:</i> Commercial energy disclosure leads to awareness of energy savings in buildings and builds towards a commercial energy performance standard. This work is supported with services (through green business challenge and 2030 district) to help commercial tenants make improvements in their buildings</li> </ul>
NRG-4	<b>New/More Stringent Building Code Requirements – EE/Renewables</b> Work with state to adopt the 2021 building codes and the zero code appendix that would allow the city to require buildings to be net zero energy both for new construction and during larger renovations
NRG-5	<b>Electrification Policies and Support</b> Require all existing appliances and HVAC systems be electrified. Work with vendors to only carry electric appliances and advertise their value to consumers. Educate the public about using electric and the health benefits from switching away from natural gas. Work with weatherization partners to expand programs to include electrification and explore legality of requiring electric appliances and the transition from natural gas (this is a precursor to a requirement)
NRG-6	<b>Bulk Buy / Purchasing With Renewables/Battery Storage</b> Negotiate and enable bulk/group-buy discounts for residents and commercial entities to install solar and geothermal, along with batteries. Includes education and marketing to target groups.
NRG-7	<b>Create Community Solar Program</b> The City, in partnership with our utility, creates and supports a robust community solar program which allows solar installations on public properties as well as some UM properties. This strategy necessitates working with state to create enabling legislation for community solar. The program also has a mechanism to support low-income residents in participating (specific mechanism TBD)
NRG-8	<b>Create Loan Loss Reserve</b> This loan loss reserve opens provides financial backing to low-income residents with accessing the funding needed to invest in energy efficiency improvements and renewable energy installations at their homes
NRG-9	<b>Provide Renewable Energy (Solar, Geothermal) incentives</b> Mostly focuses on legislative changes that would support renewable energy adoption such as changing state legislation to make net metering more attractive; changing state cap to allow more residential solar installations; supporting community choice aggregation legislation, and allowing islanding.
NRG-10	<b>LED Smart Streetlights, Crosswalks, and Outdoor Lighting</b>

	Assumes that the City purchases and owns all streetlights and crosswalks and converts them to 100% LED (or most efficient system on the market). To the fullest extent possible, these streetlights are powered with renewable energy
NRG-11	<b>Offset Programs</b> Assumes that any portion of energy usage not completely reduced will be offset through the investment in renewable energy credits.
NRG-12	<b>Create Carbon Neutral Districts/ Zero-Energy Zones (like 2030 District)</b> These are special zones that are energy efficient, powered with renewable energy, and potentially over-generators of renewables
NRG-13	<b>Landfill Solar</b> Assumes the City develops the landfill and the land in Pittsfield Township as a 24MW solar installation. This installation would provide roughly 22MW of solar for the City of Ann Arbor (roughly 2 MW for Pittsfield Township)
NRG-14	<b>Net Zero Energy Affordable Housing</b> Renovate existing low income housing so it is or approaches net zero and require all new City-affiliated low income housing be net zero.
NRG-15	<b>Energy Concierge</b> Hire City staff/contract service to provide expert consulting services to city residents, property owners, and business owners to navigate the myriad energy opportunities.
NRG-16	<b>Community Education</b> Create information sessions on EE/Electrification/Renewables/EVs for different sectors.
NRG-17	<b>Electrification Requirement for all City Buildings</b> The City passes a requirement that all City buildings become net zero energy by 2030
	
RR-1	<b>Scale Community Garden / Local Food Production</b> Expand all Farmers Markets to year round and enclosed to ensure more residents frequent the markets and encourage/allow growing food on lawns, parks, schools to expose more residents and schools to locally grown food
RR-2	<b>Scale Food Recovery – Create Comprehensive Compost Strategy</b> Focuses on eliminating food waste from going into the landfill by salvaging usable foods and distributing them through food pantries, moving to year round composting, supporting compost application in local farms and gardens and supporting food businesses with a robust composting program.
RR-3	<b>Leverage Partners to Achieve Objectives</b> Partner with WRRMA, UM, WRRRA, NGOs, and others to remove the current ban on banning single use plastics and promote product stewardship in Michigan.
RR-4	<b>Waste Reduction Ordinance</b> Create/enforce purchasing policies, guidelines, and incentives that reduce the amount of waste being generated. Includes organizing a bulk buy campaign and associated program for businesses
RR-5	<b>Expand Commercial Recycling</b> Involves requiring that all commercial enterprises recycle and compost. Enforcement is included in assumptions
RR-6	<b>Require Sustainable Materials in New and Existing Developments</b> Involves implementation of existing, draft City plan for Construction and Demolition waste to ensure 100% of debris is captured and repurposed and is expanded to require sustainable designs in new building approval process

RR-7	<b>Implement City Waste Strategy</b> Focuses on moving towards a circular economy. Includes actions to the right as well as promotion of resource reduction projects, pilots, and initiatives. Also includes working with peer municipalities to create tools that allow for more transparency, traceability, embedded GHGs, etc. for different materials, goods, and services. Includes things such as repair centers for bicycles, appliances, etc. that are promoted as first choice as opposed to replacement; supporting toy, book and tool libraries; supporting thrift stores, and having curbside textile collection.
RR-8	<b>Supporting a Plant Rich Diet</b> Conduct outreach and education, including possibly including a GHG footprint disclosure on food (similar to calorie counts) to help educate the public about the footprint of the food we consume
RR-9	<b>Create Refrigerant Recycling and Reuse Program</b> 90% of refrigerant emissions happen at end of life so effective disposal of those currently in circulation is essential. After being carefully removed and stored, refrigerants can be purified for reuse or transformed into other chemicals that do not contribute to climate change.

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