



# Project Sustainability Guidelines

## Background

On November 4, 2019, Ann Arbor City Council declared a climate emergency in response to the mounting evidence that burning fossil fuels has drastic negative effects on our climate and poses many severe threats for humans. Accompanying Council's climate emergency declaration was a directive for city staff to create a plan for a just transition to community-wide carbon neutrality by 2030. The plan is formally known as A<sup>2</sup>ZERO and it was unanimously adopted by City Council on June 1, 2020. The OSI is tasked with upholding the strategies outlined in the plan and encourages full project alignment between A<sup>2</sup>ZERO and all projects within city limits.

In Ann Arbor, 66% of our community-wide greenhouse gas emissions stem from the energy consumed by buildings. This presents great opportunity to drastically reduce our overall emissions simply by improving how we construct and operate our buildings of all typologies, from single family to multifamily residential, to commercial retail and high-rise structures, and so on. In pursuit of these goals, the OSI offers the following targets for all projects to achieve.

## Project Guidelines

For all project submissions that require site plans, please include a "Sustainability Narrative" on the cover sheet of the site plan. This narrative should clearly indicate which of the recommendations in the table below are achieved in the project and provide an explanation as to why the project team chose to exclude any item that is *not* included in your project. The information may be provided as a separate memo provided directly to planning staff where inclusion on site plans is infeasible.

For more information, please visit [www.a2gov.org/sustainability](http://www.a2gov.org/sustainability) or email [sustainability@a2gov.org](mailto:sustainability@a2gov.org)

Recommendations	<a href="#">A<sup>2</sup>ZERO strategy alignment</a>
<p><b>Include on-site solar.</b> Rooftop solar is an attractive and effective way to reduce carbon emissions related to electrical building operations. To achieve 100% renewable energy in accordance with A<sup>2</sup>ZERO Strategy 1, maximize on-site solar and consider installing off-site solar arrays to fully generate the total expected annual electrical needs for this project. Please specify expected output of proposed solar array.</p> <p><b>Pair on-site solar with on-site energy storage.</b> To build energy resiliency, install enough on-site battery storage to, at a minimum, support peak loading on the grid and, where possible, provide backup power during outages. Reserve enough space in the main electrical service panel(s) for cable connections and pathways for cable routing to support future expansion of the battery storage system.</p>	<p>Strategy 1: Power Electrical Grid with 100% Renewable Energy;</p> <p>Support Onsite Renewable Energy Generation with Battery Storage</p>
<p><b>Achieve full building electrification.</b> The use of fossil fuels in any capacity go against the goals of A<sup>2</sup>ZERO. We encourage the petitioner to follow suit with the countless other projects by achieving full building electrification including no on-site gas hookups and capping any existing gas lines.</p>	<p>Strategy 2: Switch our Appliances and Vehicles from Gasoline, Diesel, Propane, Coal, and Natural Gas to All Electric;</p> <p>Promote Home Electrification</p>
<p><b>Please specify all-electric heating sources.</b> Not specified in plans. Provide technoeconomic feasibility comparison for all-electric heating options including installation of ground source geothermal during foundation construction and air source heat pump alternatives.</p>	<p>Strategy 3: Significantly Improve the Energy Efficiency in our Homes and Buildings Transition to More Energy Efficient Homes</p>
<p><b>Use only high-efficiency appliances and interior lighting.</b> Utilize only Energy Star rated appliances and LED lighting throughout the building.</p>	<p>Strategy 3: Significantly Improve the Energy Efficiency in our Homes and Buildings Transition to More Energy Efficient Homes</p>
<p><b>Achieve net zero energy performance or a green building certification</b> In pursuit of carbon neutrality, all projects in Ann Arbor should ideally achieve net zero energy performance and/or achieve either Passive House certification (preferred), Living Building Challenge certification, LEED Zero in each LEED Zero category: Carbon, Energy, Water, and Waste, or other comparable certification. Suggested resources: <a href="http://www.ashrae.org">www.ashrae.org</a>; <a href="http://multifamily.phius.org">multifamily.phius.org</a>; <a href="http://living-future.org/lbc">living-future.org/lbc</a></p>	<p>Strategy 3: Significantly Improve the Energy Efficiency in our Homes and Buildings; Transition to More Energy Efficient Homes and Businesses</p>
<p><b>Consult an Aging in Place (AIP) specialist (for residential projects)</b> Aging in Place allows our more senior residents to continue living in a place of their choosing for longer by including physical and energy efficiency components in their homes. Seek design guidance from an AIP specialist.</p>	<p>Strategy 3: Significantly Improve the Energy Efficiency in our Homes and Buildings; Support Aging in Place Efficiently</p>

<p>This also supports increased diversity of housing in Strategy 4.</p>	
<p><b>Include compost waste bin designations.</b> Provide designated compost bin locations so that residents/tenants have access to divert compostables from landfills.</p>	<p>Strategy 5: Change the Way We Use, Reuse, and Dispose of Materials Expand Composting Program</p>
<p><b>Consider materials use throughout structure</b> Building materials can be responsible for many adverse environmental issues. To support a healthy built environment, we encourage the use of responsibly sourced materials with low embodied carbon and end-of-life options. For example, use products that are Cradle-to-Cradle certified. For a list of materials to avoid, consider the Living Building Challenge’s <a href="#">Red List</a>.</p>	<p>Strategy 5: Change the Way We Use, Reuse, and Dispose of Materials Require Sustainable Materials in New and Existing Developments</p>
<p><b>Provide building life cycle assessment.</b> To provide a deeper evaluation of the long-term impacts of the building, provide a life cycle assessment of the building. Suggested resources: <a href="http://www.aia.org">www.aia.org</a>, <a href="http://mit.edu">mit.edu</a></p>	<p>Strategy 5: Change the Way We Use, Reuse, and Dispose of Materials</p>
<p><b>Implement a construction and demolition waste management plan.</b> Provide a demolition waste management plan to the OSI. The plan should include at least the following information: Waste recycling, salvage, or reuse goals. (<b>Achieve at least 90% landfill diversion of all waste materials</b> or less than 2.5 pounds per square foot of the building’s floor area.) An estimate of types and quantities of materials or waste generated from the project site Intended methods of waste disposal and intended procedures for materials/waste handling Detailed instructions for the subcontractors and laborers on how to separate or collect the materials at the job site Suggested Resources: <a href="http://www.epa.gov">www.epa.gov</a>, <a href="http://www.usgbc.org">www.usgbc.org</a></p>	<p>Strategy 5: Change the Way We Use, Reuse, and Dispose of Materials Move Toward a Circular Economy</p>