

Six Big Moves for Achieving Ames' Climate Action Plan Target

In December 2021, Ames City Council set a target of reducing greenhouse gas (GHG) emissions in the community by 83% below 2018 levels by 2030 and reaching net-zero by 2050. Reaching this target will require ambitious and rapid action across the community.

Specifically, there are six 'Big Moves' that need to be completed in the community to reach the target and to help avoid the most catastrophic impacts of climate change.

These actions will require upfront financial investments from different sectors in the community but their completion will also stimulate local job growth and economic development.

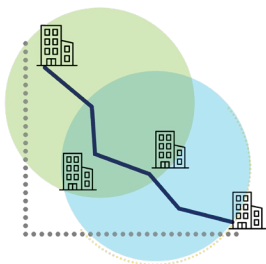
A full low-carbon pathway recommending what needs to be done to achieve these Big Moves and reach Council's the GHG reduction targets will be presented to and considered by Council on April 5th, 2022.

Building Retrofits

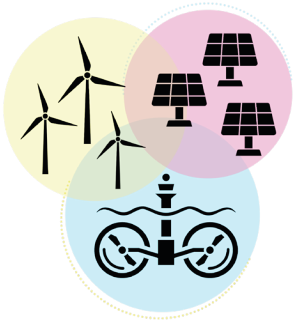


Energy use in buildings accounts for 46% of GHG emissions in Ames. Emissions result from heating and cooling spaces, lighting, and running appliances and equipment in homes, schools, offices, and industrial spaces. To reach net-zero in Ames by 2050, existing buildings in the community need to be retrofit to be more energy-efficient through actions like window and door replacements, increasing insulation, and replacing inefficient heating systems with more efficient technologies, such as heat pumps.

Net-Zero New Construction

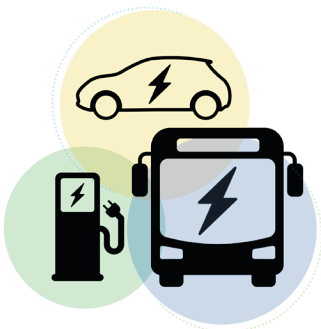


Buildings and the systems within them, such as heating and cooling systems, are long-lasting assets. They can also be significant sources of GHG emissions. Constructing new buildings that do not meet net-zero standards creates an emissions burden now and well into the future, or the need to conduct costly retrofits before the buildings' systems are due to be renewed. Net-zero buildings eliminate that burden, and the upfront capital cost of more efficient construction is typically more than offset by utility savings over time.



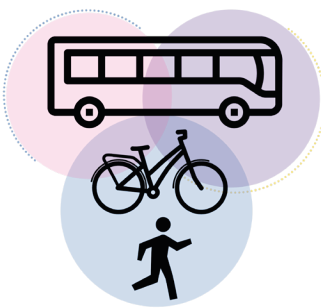
Renewable energy generation

Currently, Ames is mainly powered by electricity from a mix of renewable and non-renewable sources. Overall, grid electricity makes up approximately one-third of emissions in Ames. Adding additional renewable energy, such as wind and solar, can significantly decrease emissions in the community. This means investing in individual and community-scale wind and solar power. This will decrease emissions from homes, and electric vehicles and also maximize the emissions reduction benefits of building retrofits and fuel-switching.



Reducing Vehicle Emissions

In Ames, the transportation sector makes up 27% of community emissions on a yearly basis. Since it would be difficult to avoid all vehicle trips, it is important to shift towards viable alternatives to gasoline and diesel fueled vehicles such as electric vehicles. In addition, car share and carpooling programs can help decrease overall vehicle miles travelled, which will eliminate some emissions from vehicles.



Increasing Active Transportation and Transit Use

Active transportation and transit use can help reduce transportation emissions when single occupancy vehicle trips can be avoided. Well thought out active transportation and transit networks and supportive programming, operations, and maintenance can help decrease congestion, promote active and healthy lifestyles, and complement urban intensification and mixed-use developments while decreasing emissions.



Reducing Waste Emissions

Waste emissions in Ames come from multiple sources including the waste-to-energy system and the landfill. Reducing waste at the source (e.g., in homes through purchases practice and backyard composting) will play a significant role in reducing emissions, as will enhanced recycling and composting programs that will divert waste away from the landfill and waste-to-energy system.