

Resolution in support of accelerated action on an ordinance to ban natural gas connections in new construction and major renovations and in support of devising and implementing interim measures to incentivize all-electric construction March 14, 2023

Font key:

Black: original Energy Commission version

Red: Environmental Commission version

Blue: Additional recommended changes

WHEREAS, gas combustion in Ann Arbor's buildings generated 520,000 metric tons CO2 equivalent emissions in 2021, which represents 28 percent of the city's total emissions that year, according to the city's 2022 greenhouse gas inventory report;

WHEREAS, Strategy 2, Action 1 of the A2 ZERO plan, "Promote home and business electrification," includes the following assumption: " All new residential and commercial buildings are designed and built to operate without the use of natural gas, reducing the increased cost associated with retrofitting existing systems;

WHEREAS, Strategy 3, Action 2, "Update building codes," includes the following assumption: "All new construction from 2022 through 2030 (and beyond) is built to net zero energy standards, which includes no natural gas consumption."

WHEREAS, as of February, 2023, approximately 50 cities and counties nationwide had adopted ordinances banning or restricting natural gas connections in new construction;

WHEREAS, the ZERO Code Appendix to the 2021 International Energy Conservation Code® (IECC) requires that commercial, institutional, and medium- to high-rise residential buildings achieve net zero energy use, either with on-site or off-site energy generation;

WHEREAS, the A2 ZERO plan, strategy 3, action 2 assumes adoption by the state of the ZERO Code Appendix in 2021, enabling subsequent adoption by the city;

WHEREAS, the state Bureau of Construction Codes will not adopt the ZERO Code Appendix in the current revision cycle;

WHEREAS, Ann Arbor is undergoing a building boom that is already adding substantially to the city's inventory of gas-burning buildings;

WHEREAS, as of February 1, 2023, thirty separate development projects in the city that will burn gas for heat were under construction or in advanced planning, which when complete will produce almost 24,000 metric tons additional CO2 equivalent emissions annually just from gas combustion;

WHEREAS, these new emissions will represent roughly four times the annual emissions which will be prevented by city and resident investment in new solar installations, including the Solarize residential initiative and the pending Solar at City Facilities (Enerlogics) and parks (Homeland Solar) projects, when complete;

~~WHEREAS, gas appliances like stoves and ovens are sources of volatile organic chemicals known to be toxic, as well as nitrous oxide, which impairs neurological and cognitive function, and ozone and small particulate matter, which lead to asthma exacerbation, heart attacks, airway irritation, difficulty breathing, coughing, and premature deaths for those with heart or lung-related conditions;~~

WHEREAS, gas appliances, including stoves and ovens, through incomplete combustion, produce nitrogen oxides (where Nitrogen Dioxide is an EPA Criteria Air Pollutant), which can impair neurological, cognitive and lung function, and formaldehyde and small particulate matter (another EPA Criteria Air Pollutant), which can trigger asthma attacks and cause airway irritation and breathing difficulties. They can also contribute to premature deaths of individuals with heart- or unrelated conditions.

WHEREAS, incorporating all-electric appliances, including heat pumps, is cost effective in new construction, according to the Rocky Mountain Institute 2020 report, "The New Economics of Electrifying Buildings," which analyzed heat pump versus gas 15-year appliance life cycle costs in seven markets, including Minneapolis;

~~WHEREAS, a high efficiency air source heat pump rated at 10.3 HSPF is more than twice as efficient at 5 degrees Fahrenheit as a modern high efficiency gas furnace, ensuring reliable all-electric space heating and minimizing any difference in operating cost between gas and electric, especially when combined with well-insulated and sealed building envelopes that meet or exceed the 2021 IECC;~~

WHEREAS, high efficiency cold climate heat pumps provide a seasonal heating efficiency more than twice that of a modern high efficiency gas furnace, ensuring reliable all-electric space heating and minimizing any operating cost difference between gas and electric, especially when combined with well-insulated and -sealed building envelopes that meet or exceed the 2021 International Energy Conservation Code (IECC).

WHEREAS, Gas stoves and other appliances release natural gas even when turned off, so that they constantly emit methane, a potent greenhouse gas;

WHEREAS, Gas stoves and other appliances can produce carbon monoxide (another EPA Criteria Air Pollutant), which at high concentrations can cause carbon monoxide poisoning, which can lead to serious tissue damage or death.

WHEREAS, City Council on November 4, 2019 approved a resolution declaring a climate emergency and setting a target year of 2030 to achieve citywide carbon neutrality (R-19-498);

WHEREAS, City Council on June 1, 2020 approved the Living A2ZERO Ann Arbor Carbon Neutrality Plan (R-20-193);

WHEREAS, the 2022 Inflation Reduction Act provides substantial new financial incentives for electrification and heat pump installation;

WHEREAS, the city has approved seven all-electric development projects since 2020, demonstrating the feasibility of all-electric new construction;

WHEREAS, on multiple occasions City Council members have expressed the need to require all-electric construction as a universal requirement in code as opposed to requiring it for some projects and not others;

WHEREAS, under the Michigan Home Rule City Act (Act 279 of 1909, as amended), Michigan municipalities have substantial leeway to enact ordinances for the health, safety, and general welfare of their residents;

THEREFORE BE IT RESOLVED, that the Ann Arbor Energy ~~Environmental~~ Commission urges the City Council to ask the City Administrator to work with the City Planning Commission to draft and pass, with the great urgency fitting a declared emergency, an ordinance banning natural gas connections, with extremely limited exceptions, for all new construction, as well as major renovations and additions, for Council's consideration; and

THEREFORE BE IT RESOLVED, that the Ann Arbor Energy ~~Environmenta~~ Commission urges the City Council to ask the City Administrator and the City Planning Commission to draft and pass, with equal urgency, a set of recommended ~~interim~~ "carrot and stick" measures that City Council and the City Administration could implement, for example the restructuring of fees, priority processing and using greater discretion when providing incentives such as tax credits, and helpful guidance in order to promote all-electric, sustainable, healthy, reliable, and affordable construction in addition to other measures, until such time that a permanent natural gas ban ordinance and other measures, such as the new an updated State of Michigan Energy Code and ZERO Code appendix, can take full effect.