THE CHARGING STATION

THE OFFICIAL NEWSLETTER OF A²ZERO AND THE ANN ARBOR OFFICE OF SUSTAINABILITY AND INNOVATIONS

A²ZERO
EQUITABLE • SUSTAINABLE • TRANSFORMATIVE

IN THIS ISSUE:

ABOUT THE EDITOR

Joe Lange (he/him) focuses on residential decarbonization programs with OSI. He currently leads initiatives investigating the feasibility of district geothermal and improving the energy efficiency of Ann Arbor's rental housing. He also serves as the staff liaison to the Ann Arbor Energy Commission.

Reach out to Joe at jlange@a2gov.org to learn more.

Home insulation is an important component of any energy waste reduction strategy and is the second most impactful step for increasing the energy efficiency of any building.

WELCOME

Welcome from the City of Ann Arbor's Office of Sustainability and Innovations (OSI). In this issue of the Charging Station, OSI is delighted to share details about energy efficiency, one of the most cost-effective ways to improve the performance of your home, business, house of worship, or community center. If you are interested in learning more about any of the organizations featured in this issue and how you can get involved, more detail can be found on our website: www.a2gov.org/sustainability. As always, thank you for your interest in sustainability activities in Ann Arbor!

LAND ACKNOWLEDGEMENT

Equity and justice are at the center of A²ZERO and staff in OSI are continuing to ground our work in these critical principles. In that light, we'd like to take a moment to honor the geographic and historic space we share. We acknowledge that the land the City of Ann Arbor occupies is the ancestral, traditional, and contemporary lands of the Anishinaabe and Wyandot peoples. We further acknowledge that our city stands, like almost all property in the United States, on lands obtained, generally in unconscionable ways, from indigenous peoples. The taking of this land was formalized by the Treaty of Detroit in 1807. Knowing where we live, work, study, and recreate does not change the past, but a thorough understanding of the ongoing consequences of this past can empower us in our work to create a future that supports human flourishing and justice for all individuals.

ENERGY EFFICIENCY 101

WHAT DOES IT MEAN?

Energy efficiency is often thought of as the peas and carrots of home improvements. Improving the energy efficiency of a home or building can create dramatic improvements in comfort, utility bill savings, and reductions in greenhouse gas emissions, but the upgrades are not as commonly considered because their benefits are not visible upon entering a dwelling. While energy efficiency may not be as flashy as a kitchen remodel or adding solar, it can have substantial impacts on how the building operates, both in terms of utility costs and greenhouse gas emissions. With the new Home Energy Rating Disclosure (HERD) Ordinance in place, energy efficiency upgrades can also increase the resale value of a home.

The cleanest and least expensive energy is that which is never used.

So, what is energy efficiency, exactly? The easiest way to think about it is anything that reduces how much energy is being used. One of the first places to start is preventing the outside air from getting inside and the conditioned air from getting out – or as my parents used to say, "Stop heating the outside!" By sealing and insulating the home, it keeps the indoor temperature closer to the desired temperature setting and prevents the heating and cooling systems from having to work harder to maintain that temperature. It also means that when heating and cooling appliances need to be installed, they won't have to be oversized to try to keep up, saving money on the installation and on utility bills.

A blower door that is used in a home to conduct an energy assessment.

Another way to advance a building's efficiency is by understanding all the devices and appliances that use energy, taking an inventory of each device for both efficiency and age of the appliance, and working out a replacement plan to upgrade to ones that use less energy. The simplest demonstration of what a difference this can make is to look at a furnace. Consider an older furnace that has an 80% efficiency rating and a newer furnace that has a 95% efficiency rating. The difference between efficiency ratings will result in 15% less energy needed to heat the home. That energy efficiency gain is even more significant with a heat pump which can have a 200-300% efficiency rating! This concept of upgrading to more efficient appliances goes for all appliances in your home or business that use energy.

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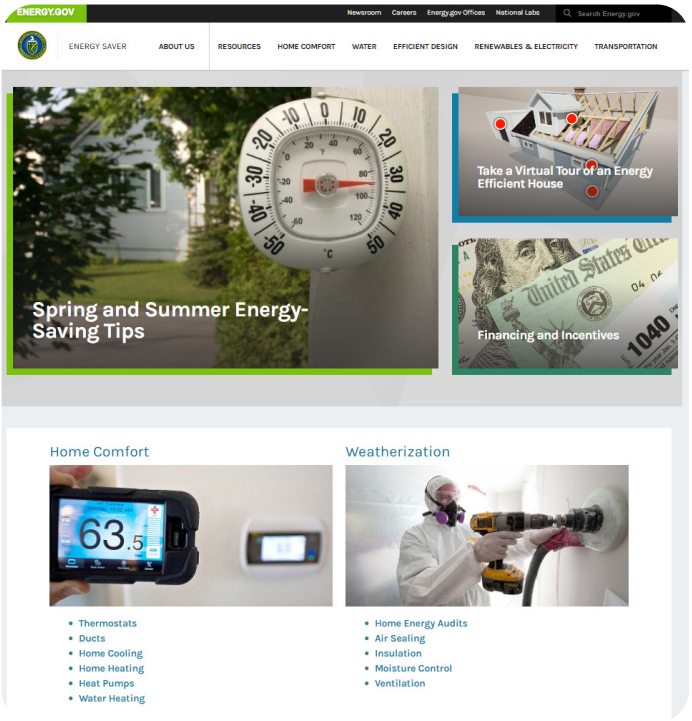
ENERGY EFFICIENCY 101

WHAT DOES IT LOOK LIKE?

There are a lot of ways to make a building more energy efficient, but what is the most impactful? When accounting for what uses the most energy, and what reduces energy usage the most, these are the top five options to save money and energy:

- **Find and seal air leaks:** Air leakages into and out of a home can account for 30% of a home's heating and cooling costs; that's a lot of wasted money. According to Energy Star, sealing and insulating the "envelope" or "shell" of a home – its outer walls, ceiling, windows, doors, and floors – is often the most cost-effective way to improve energy efficiency and comfort.
- **Insulate the attic and basement**: Insulation prevents the transfer of heat between a house and the outside. It keeps heat in and prevents cold drafts during the winter. In the summer months it keeps out the humidity and keeps in the cool air generated by the cooling system.
- **Upgrade heating and cooling appliances:** More than half of the energy used in a home comes from heating and cooling, making heating and cooling systems important areas to tackle to save energy and reduce your utility bills. Simply replacing an old heating unit to a modern one can save 10-15% on heating costs. On the cooling side, savings can be even more dramatic with cooling cost reductions of up to 30%. These numbers can increase even more by switching to a heat pump.
- **Replace appliances with Energy Star versions:** Since 1990, the efficiency of refrigerators has improved by over 60%, dishwashers by over 50%, and laundry machines by over 75%. This can translate to hundreds of dollars in energy savings per year. Look for the blue Energy Star square when buying a new appliance and compare the estimated energy costs on the yellow label.
- **Switch to LED lighting:** Switching incandescent or compact florescent lamp (CFL) bulbs to LEDs can save up to 85% of lighting costs and last as long as 25 years. Manufacturers now offer bulbs in a variety of light profiles, too, making it easier to control the light balance in a room or workspace.

There are a lot of opportunities for increasing the energy efficiency of a building, so it is important to note that not everything needs to be done at once. Rather, as improvements are needed or made, consider opportunities to improve the energy efficiency along the way. For more ideas and information, refer to the Department of Energy's Energy Saver Guide.



The online home page of the Department of Energy's Energy Saver Guide.

OSI's Energy Assessors Steve Christensenn (left) and Jerrell Wylie (right). Through the HERD program, they help home sellers and buyers understand their home's energy usage.

HOW TO GET STARTED WITH ENERGY EFFICIENCY

After learning about the great benefits of energy efficiency, the next question is: how to get started? With all the different options available, it can feel like an overwhelming process to begin, let alone complete. But there is a simple solution to understanding a building's baseline and identify what upgrades make the most sense – a home energy assessment! A home energy assessment, sometimes referred to as a home energy audit, is an opportunity to identify how the home is currently performing and identify the top priorities for reducing the home's energy use.

During a home energy assessment, a certified energy assessor can examine the home's insulation, air tightness, heating/cooling systems, and other sources of energy consumption. The energy assessor can perform diagnostic testing to determine the best ways to upgrade the home's energy performance and provide guidance on taking a whole-house approach. The auditor will determine how the home is performing and identify which upgrades will have the most impact. In some cases (such as with the A²ZERO Home Energy Advisor), a home energy assessment can be more holistic, and identify not only energy efficiency opportunities, but also available opportunities to advance beneficial electrification, improve indoor air quality, and embrace renewable energy opportunities.

Ready to get started? In Ann Arbor, there are several options to get a home energy assessment:

A²ZERO Home Energy Advisor: The A²ZERO Home Energy Advisor (HEA) is a free program designed to provide Ann Arbor residents clear and actionable pathways to decarbonize their homes. The program is rooted in an energy assessment where the HEA team will identify opportunities for energy efficiency, electrification, and renewable energy, and develop a personalized Path To Zero report. Most assessments will be conducted virtually via video call, while a portion will be done on-site, ensuring accessibility for all. Schedule a Home Energy Advisor Assessment today (please note the program is currently on a wait list for appointment scheduling).

Home Energy Rating Disclosure (HERD): Recently bought a home in Ann Arbor or looking to buy? Before being listed for sale, all homes in Ann Arbor are required to get a Home Energy Score Assessment and provide the report to home buyers that shows the potential energy uses and costs for the home. This report also includes suggested ways to improve the home's energy efficiency and decrease utility bills.

Weatherization Assistance Program: The Weatherization Assistance Program provides free weatherization services to qualified Washtenaw County residents. The program is implemented through Washtenaw County in partnership with the U.S. Department of Energy and is designed to help residents lower their utility bills. They perform an energy assessment and, based on the results of that audit, provide eligible repairs on the home. The Ann Arbor Office of Sustainability and Innovations is collaborating with this program to offer even greater energy support. Homeowners and renters that meet the eligibility requirements are welcome to learn more and apply.

Michigan Saves: Michigan Saves, Michigan's green bank, maintains a list of contractors who do energy efficiency, electrification, and renewable energy work. Using their contractor finder, enter the address or zip code, select "residential," and select "energy audits" to view a list of contractors who conduct energy assessments. When looking at contractors, look for the Michigan Saves Electrification Badge to see contractors who have completed training developed by Michigan Saves and OSI about electric appliances. Residents getting an energy assessment can get an energy assessment rebate from DTE.

After getting an energy assessment and deciding to pursue energy efficiency upgrades, Ann Arbor residents can access rebates from the City of Ann Arbor as well as from DTE that cover a variety of upgrades, including insulation, air sealing, and more.

COLLABORATOR SPOTLIGHT: HOUSE N2 HOME

CREATING HOMES THROUGH THE CIRCULAR ECONOMY WHERE RESIDENTS CAN THRIVE

This month, we interviewed House N2 Home, an A²ZERO Collaborator. Read about their work below and learn about the Collaborators network at osi.a2gov.org/collaborators.

House N2 Home is a local non-profit who provides furniture and household items for people who are transitioning out of homelessness with the goal of creating a home where people can thrive, which they do almost entirely through donated and reused materials. To learn more about the incredible work House N2 Home is doing, we spoke with Ruth Ann Logue who serves as Co-Director at House N2 Home.

The process begins when House N2 Home receives a referral from one of the 50 community organizations they partner with in Washtenaw County. This organization has identified an individual or family they are assisting and who has recently secured housing after experiencing homelessness. While they may have much-needed housing, most clients lack the resources to furnish it. House N2 Home starts by interviewing the individual or family to figure out what their new house or apartment is like, what they need, and just as importantly, what they want the space to look like. They go through questions like what their favorite colors are, what type of art they like, and what they want to see in their home every day when they walk in – all with the goal of creating a place that truly feels like home.

Taking all the needs, goals, and desires of the individual or family, House N2 Home goes to their storage facility and creates a plan. They pull out furniture and decorations based on the conversation and set them aside for the move. Then, on move-in day, a team of volunteers loads everything up, delivers it to the home, and places the furniture and decorations throughout the home. To ensure the final reveal feels even more like home, every delivery comes with fresh flowers, a home cooked meal, and freshly baked cookies – something House N2 Home has done for all 1200+ moves they've completed to date.

But where does House N2 Home get all the furnishings? Through partnerships and donations, almost everything is reused in a perfect example of the circular economy at work. Items that are still in good, usable condition are collected by House N2 Home and then delivered to the residents, preventing materials from going to the landfill and the avoiding the need to buy new items. One significant source of the furnishings come from the University of Michigan student move-out. Students who are moving out, including those who live off campus, are able to donate the household goods they no longer need, and House N2 Home will pick them up to be reused. During the Spring 2024 student move-out, House N2 Home brought in the equivalent of six semi-truck trailers worth of furnishings – or around 12-13 tons of material – that is able to continue being used by someone who needs it instead of going to a landfill.

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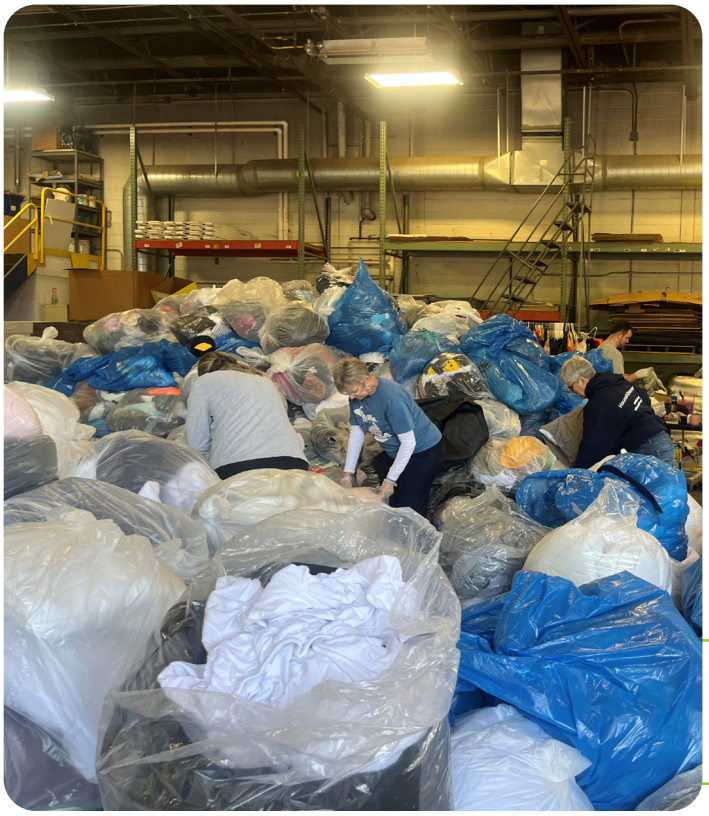

The House N2 Home warehouse where donations are sorted.

COLLABORATOR SPOTLIGHT: HOUSE N2 HOME

CREATING HOMES THROUGH THE CIRCULAR ECONOMY WHERE RESIDENTS CAN THRIVE

CONTINUED FROM PREVIOUS PAGE. House N2 Home takes all the materials, along with donations from the community, to their storage facility where they prepare everything to be re-distributed. They have a group of around 180 volunteers, which includes people who repair and paint any items that might need it to make them look just like new. This process also allows them to donate items that are not commonly able to be reused, such as mattresses. Everything goes through a thorough inspection, and special encasements are provided for each mattress to protect against pest concerns.

To date, House N2 Home has furnished over 1,200 homes, with an average of around five-to-eight moves a week. The clients they have worked with include young adults, single parents, small and large families, veterans, and more. As House N2 Home partners with local affordable housing providers, some of the individuals and families end up living nearby each other. At a recent move-in, at least four families saw the House N2 Home moving truck and came over to say House N2 Home had furnished their home and how much they loved it.

Want to get involved and help House N2 Home with their goal of creating homes where people can thrive? Here's how:

- Donate items: Furniture and household items in good, usable conditions can be donated during scheduled drop-off times or by requesting a pickup for any large items. Learn more about how to donate, including items accepted, drop-off times, and pickup requests.
- Volunteer: Over 180 volunteers help across all the different aspects of the work House N2 Home does, including organizing donations, refurbishing furniture, cooking meals and baking cookies, assisting move-ins, and so much more. Anyone who is interested in volunteering will meet with House N2 Home to talk about what they are interested in, take a tour of the facility, and choose an option that they are most excited about. Learn more about volunteering.

To learn more about House N2 Home, visit their website, follow them on Facebook and Instagram, or send an email to: ContactUs@HouseN2Home.org.

The van loaded with donations.

A living room furnished with donated furniture.

ANNOUNCEMENTS & UPCOMING EVENTS

A NEW EPISODE OF GREEN LIGHT: Decarbonizing the Bryant Neighborhood with Jordan Larson, Community Engagement Innovator at OSI, and Krystal Steward, Community Outreach Director at CAN – celebrating a grant they were just awarded.

CINEMA AND SUSTAINABILITY SERIES - COOKED: SURVIVAL BY ZIP CODE | *Wednesday, Aug. 14, 7:30 PM* | *Michigan Theater*
This event will include the screening of Cooked: Survival by Zip Code and a short post-screening discussion about the film's topics (additional post-screening talk details coming soon). Tickets are available through the Michigan Theater event page.

SUSTAINABLE ENERGY UTILITY (SEU) WEBINAR | *Wednesday, Aug. 21, 6 – 7 PM* | *Virtual*
Join us for a special webinar to learn more about Ann Arbor's proposed Sustainable Energy Utility, an optional, supplemental community-owned energy utility that would provide 100% renewable energy from local solar and battery storage systems and networked geothermal at participating homes and business in the City. This virtual event presents an opportunity to learn more about the proposed SEU, discover what benefits the SEU could provide, ask questions, and find out what voters will be asked to consider on November 5, 2024. This event is free but registration is required.

AIR QUALITY MONITORING | *Friday, Sept. 13, 6 – 7:30 PM* | *Ann Arbor District Library, Westgate branch*
Join staff from the City of Ann Arbor's Office of Sustainability and Innovations and Office of Information Technology to learn about Ann Arbor's air quality monitoring work. Learn more about our air quality monitoring work and register for the forum.

CLIMATE ACTION IN ACTION IN TÜBINGEN, GERMANY - WHAT WE CAN LEARN FROM ANN ARBOR'S SISTER CITY
Wednesday Sept. 18, 6 – 7:30 PM | *Ann Arbor District Library, Downtown Branch*
Hear from Lord Mayor Palmer of Tübingen, Germany as he shares what Ann Arbor's Sister City is doing to equitably address the climate crisis and how it can help shape Ann Arbor's A²ZERO initiative. This interactive session provides a truly unique opportunity to hear directly from representatives from one of Ann Arbor's Sister Cities about their work to make Tübingen one of the most sustainable cities in the world.

A²ZERO GREEN FAIR | *Friday, Sept. 20, 2024* | *Main Street, Ann Arbor*
Green Fair is coming back to downtown Ann Arbor this fall! This annual event highlights the incredible community of stakeholders working to achieve our shared vision of a just transition to community-wide carbon neutrality by 2030. If your organization is interested in tabling at Green Fair, applications are now open at a2gov.org/greenfair.

LOCAL FOOD FESTIVAL | *Thursday, Sept. 26, 5 – 8 PM* | *Ann Arbor Farmers Market*
A community celebration of the beauty and bounty of local food & farming. Sample local foods, exchange your gently used cookbooks, purchase a meal or treat from one of our vendors, enjoy live music, play games, and connect with others in the community. Plus, enter for a chance to win prizes from local businesses! Free to attend.

For more information on our upcoming events, please visit www.a2gov.org/sustainability/events.