

# THE CHARGING STATION

THE OFFICIAL NEWSLETTER OF A<sup>2</sup>ZERO AND  
THE ANN ARBOR OFFICE OF SUSTAINABILITY AND INNOVATIONS



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## ABOUT THE EDITOR



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*Ann Arbor home generating its own clean energy via solar panels.*

## 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 dig into the resources available to help make our residences more comfortable, healthy and efficient. 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](http://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 A<sup>2</sup>ZERO 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.

# DECARBONIZING OUR HOMES

## WHAT IT MEANS FOR THE CLIMATE AND OURSELVES

### What is Decarbonization?

When we talk about “decarbonizing” our homes and buildings, we are talking about reducing or eliminating emissions from burning fossil fuels and limiting the negative impact of our homes on our changing climate. And as we make our living spaces more sustainable, we also realize immediate benefits to the people living in these homes.

### The Health and Comfort Benefits

Do you have areas of your home that are colder or warmer than others? Drafty places you don't like to sit? Condensation on the windows? High energy bills?

The majority of Ann Arbor's residential buildings – our houses, apartments, condos, town homes and co-ops -- were built before there were any building or energy codes whatsoever! The first building and energy codes in Michigan were enacted in 1972. That means things like insulation, types of materials, and construction used was simply up to the builder. Even newer homes have significant room for improvement in energy efficiency and comfort.

Much of the energy used on a daily basis is wasted – heat escaping through small gaps in our building envelopes, HVAC systems working hard to compensate for poor insulation. The air quality in homes can also leave much to be desired, with air coming in through gaps filled with insulation and debris, gas-burning appliances releasing harmful chemicals, moisture and mold issues, and more.

Gas burning appliances (furnaces, boilers, water heaters, dryers, stoves and ovens) produce pollutants including nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), fine particulate matter (PM<sub>2.5</sub>), ultrafine particles (UFPs) and formaldehyde (CH<sub>2</sub>O), which are linked to a variety of health impacts (see graphic on page 2). Stoves and ovens are most impactful regarding air quality due to the fact that ventilation to the exterior is not required in the current building codes in most cases.

In the home, appliances that burn fossil fuels, such as water heaters, furnaces, stoves/ovens, clothes dryers, and gas fireplaces emit several health-harming pollutants. It is well-documented that exposure to these pollutants over both the short and long term can have serious health impacts.



Overview of health impacts from exposure to pollutants from fossil fuel combustion. [Source.](#)

Decarbonizing our homes means limiting wasted energy, tightening up our envelopes, ventilating with fresh air if needed, controlling moisture, and reducing negative health and comfort issues.

### The Climate Benefits

In Ann Arbor, buildings make up approximately 69% of our carbon emissions. What does that mean?

Our buildings contribute to our emissions in two primary ways: electricity (called “scope 2” emissions) and burning gas on-site (referred to as “scope 1” emissions). When we turn on the lights, this draws electricity from power plants far from Ann Arbor, largely burning fossil fuels like coal and fossil gas, and that power is transmitted through the electric grid to our homes. These are considered Scope 2 emissions. Scope 1 emissions are created right in the buildings themselves: we burn fossil gas with our furnaces, water heaters, stoves and dryers. Fossil gas releases methane into our atmosphere, a potent environmental threat. 60% of our building emissions come from electricity, and 40% from on-site combustion.

# DECARBONIZING OUR HOMES

## WHAT IT MEANS FOR THE CLIMATE AND OURSELVES

In order to slow climate change we must stop burning fossil fuels. And the only way to stop burning fossil fuels.... is to stop burning fossil fuels! We are transitioning the electricity we use to clean renewable sources. And we need to electrify our buildings -- transitioning our homes away from burning fossil gas to clean electricity for heating, cooking, and drying our clothes. We also need to work on using less overall – making our homes more efficient so they waste less energy.

So.... What can we do, as residents? As it turns out, quite a bit! Read on to learn about our Home Energy Advisor program, a great starting point to obtain your personal, customized “Path To Zero” for your own dwelling. Also find information about financial rebates and incentives to help make improvements, and organizations in our community helping to make the home decarbonization process easier and more straightforward.

### Did you know?

Gas stoves produce air pollution well above national and world health guidelines.

### Nitrous Dioxide emissions from gas stoves and ovens

Outdoor standards for NO <sub>2</sub>	1-hr average parts per billion (ppb)
US EPA	100
Canada	60
Indoor guidelines for NO <sub>2</sub>	1-hr average (ppb)
World Health Organization	106
Canada	90
Measured NO <sub>2</sub> from Gas Stoves	Peak (ppb)
Baking cake in oven	230
Roasting meat in oven	296
Frying bacon	104
Boiling water	184
Gas cooktop - no food	82-300
Gas oven - no food	130-546

[Click for source.](#)

## GREEN RENTAL HOUSING

Did you know that 55% of the housing stock in Ann Arbor is rental units? Or that the median year-built for rentals in Ann Arbor is 1964, well before there were any energy efficiency requirements for builders? That’s where the proposed Green Rental Housing program comes in! **The proposed program is designed to promote safe, healthy, comfortable, and efficient rentals in Ann Arbor while reducing their greenhouse gas emissions.**

The Green Rental Housing program is designed to fit into the existing rental inspection process, with an added emphasis on sustainability, resilience, and health and safety. Learn more about the program, including the specifics of how rental units will need to comply, on our [Green Rental Housing page](#).

OSI is working closely to bring the proposed ordinance to City Council in the spring. **In the meantime, landlords who are interested in getting a head start can head to our Landlord Resource Hub to find financial and educational resources to help improve the efficiency of their units. And renters can view our Renter Resource Hub to learn what they can do to reduce their energy costs and improve their comfort.**

For any questions on the Green Rental Housing program, please contact Joe Lange at [jlange@a2gov.org](mailto:jlange@a2gov.org).

## Got an event you’d like to share in the Charging Station?

Email Grace Franke, Communications Coordinator, to share the details at [gfranke@a2gov.org](mailto:gfranke@a2gov.org).

# THE A<sup>2</sup>ZERO HOME ENERGY ADVISOR

GET STARTED ON YOUR PATH TO ZERO EMISSIONS

"I would love to make my home more efficient, healthy and sustainable, and reduce its climate impact. But I have no idea where to even start."

Sound familiar?

The A<sup>2</sup>ZERO Home Energy Advisor was created for this very reason. Navigating the process of decarbonizing a home can be complicated and intimidating, but it doesn't have to be. The Home Energy Advisor provides completely free on-site or virtual whole-home assessments, looking at things like the insulation in your home, how "leaky" your building is, and the age and efficiency of your appliances. Using information from your home assessment and your utility bills, they can understand where you might be wasting energy, and where you have opportunities to improve. And they put all this information into a customized "Path To Zero", showing you what you can do now, and what you can plan for in the future.

For example, you may discover that you are losing a great deal of heat through small gaps around pipes and window trim that could be easily addressed with caulk and foam. Or you may find that your water heater really has only a year or two of useful life left, and there are newer replacement options that would reduce emissions and create a cleaner indoor environment.

"It is generally beneficial to anticipate the decline and failure of your equipment," according to Home Energy Advisor Swen Hendrickson. "When something is allowed to completely fail, you tend to have your back against the wall, stuck with fewer options on equipment selection, contractors, pricing, etc. Especially when it comes to fuel-switching (updating gas appliances to electric alternatives), there is usually some preparatory work involved (e.g. a new 240V circuit, an electric panel upgrade, etc.). So, planning ahead for these upgrades puts you in a position to optimize your choice of equipment which will be in place for the next 10-30 years."

## Who can use the Home Energy Advisor?

- Renters
- Homeowners
- Landlords

## What kinds of dwellings can the Home Energy Advisor help with?

- Houses
- Apartments
- Condos
- Townhouses
- Co-ops

## RESIDENT STORY: IMPROVING HOME COMFORT

As the weather began getting colder and the days darker, Ann Arborite Ruth Kraut scheduled a free consultation call with the new A<sup>2</sup>ZERO Home Energy Advisor. She was curious about whether she had overlooked any ways to cut energy costs in her home, having already completed attic insulation and some new windows, as well as installing solar panels. She knew the City was offering rebates for energy efficiency work as well, and wanted to learn more.

"It turns out that we had overlooked something pretty basic – insulating the basement rim joists and our crawl space, which is under two of our bedrooms (including mine). It wasn't very expensive and even less expensive with the federal tax credit and the city rebate.



And then it turns out that DTE also had rebates I didn't know about" says Kraut. She also notes that the income-eligible rebates "have pretty generous cutoffs, and even the standard rebates are quite good."

"But the really amazing thing is that these two bedrooms are now SO much more comfortable, I can't believe we didn't think of it before.... The temperature in those rooms is at least 5 degrees warmer, and I'm sure we'll see some energy savings too! The Advisor also shared lists of contractors which makes it even easier. And it started with a 15-minute 'consultation' phone call."

**Thanks for sharing your story, Ruth!**

# THE A<sup>2</sup>ZERO HOME ENERGY ADVISOR

GET STARTED ON YOUR PATH TO ZERO EMISSIONS

The Home Energy Advisor also offers ongoing support through “Consult Calls.” You can sign up for a consult call at any time, either as a stand-alone service or following a whole-home assessment. The Advisors are fielding calls about project planning, equipment questions, contractor connections, help understanding bids, where to find resources and incentives, referrals to income-qualified programs and more.

“Each resident’s situation is a little bit different given the specifics of each home and its systems, and the goals and resources of the homeowner or renter,” says Hendrickson. “As such, our job is to meet people where they’re at and give them customized guidance and resources to move forward on their interests. It always feels good to help connect the dots for people, and the uniqueness of each resident means that we’re constantly learning things that will serve someone else in the future.”



A<sup>2</sup>ZERO Home Energy Advisors Curtis and Swen.

You can join the hundreds of Ann Arbor residents who have received this help and sign up for a free home assessment or find the number to call with a question on [the A<sup>2</sup>ZERO Home Energy Advisor website](#).

Pages from a sample “Path to Zero” report.

**A<sup>2</sup>ZERO HOME ENERGY ADVISOR**

**YOUR PATH TO ZERO**

**YOUR PATH STARTS HERE**

BELOW ARE THE NEXT STEPS OF YOUR DECARBONIZATION PRESENTED IN THE RECOMMENDED ORDER OF COMPLETION. DETAILS ON EACH NEXT STEP CAN BE FOUND ON THE FOLLOWING PAGES.

- Step 1: Health and Safety**
- Step 2: Energy Efficiency**
- Step 3: Electrification**
- Step 4: Renewables and Resilience**

**STEP 2: ENERGY EFFICIENCY**

ENHANCE HOME PERFORMANCE BY UPGRADING INSULATION AND SWITCHING TO ENERGY STAR APPLIANCES TO REDUCE ENERGY USAGE AND LOWER UTILITY COSTS.

**NEXT STEPS ON YOUR PATH TO ZERO:**

**FOLLOW UP ACTIONS**

1. Have your home professionally air sealed (see section [X] on HDG)
- 2.
- 3.

**WHAT IS ENERGY EFFICIENCY?**

Energy efficiency reduces the energy usage associated with operating a home or building. Improving efficiency through insulation, efficient heating and cooling systems, and energy-saving practices lowers bills, reduces reliance on fossil fuels, and prepares homes for electrification and transition to renewable energy.

**COMMON ENERGY EFFICIENCY IMPROVEMENTS:**

1. Insulating attics, walls, crawlspaces, and other exterior surfaces.
2. “Air Sealing” gaps and cracks that create drafts.
3. Upgrading to ENERGY STAR® appliances like refrigerators, televisions, washing machines, etc.

# GOING GREEN AT HOME

RESOURCES FOR HOMEOWNERS, RENTERS AND LANDLORDS

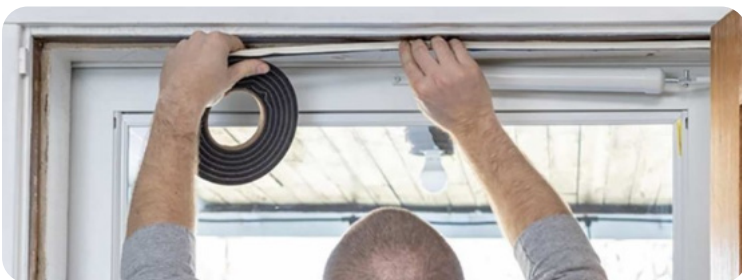
## HOME ENERGY REBATES

The City has updated and refreshed our Home Energy Rebate program, based on learnings from the first 6 months of administration. Rebates have been streamlined, and in many cases dollar amounts significantly increased. NEW rebates are being offered for induction cooktops and ranges, and heat pump dryers. Go to the [Home Energy Rebates](#) page to reserve your money now!

In addition to Ann Arbor's Home Energy Rebates, there are [federal tax credits](#) that can reduce the costs of these measures by up to 30%. The Inflation Reduction Act rebates have been launched in a limited distribution in Michigan, starting in the utility territories of Holland Board of Public Works and the Upper Peninsula Power Company (UPPCO). Michigan's Department of Great Lakes and Energy (EGLE) states that they expect expanded availability to more communities soon. You can keep updated on the status of the IRA Rebate program in Michigan on [EGLE's IRA website](#).

## REBATE AMOUNTS

Rebate	Income Qualified (120% AMI) maximum	Standard Rebate maximum
Battery Storage	\$3500	\$2000
Weatherization	\$8000	\$4500
CC heat pumps	\$5500	\$4000
Duct modification for heat pump	\$2500	\$1500
Heat pump water heater	\$2000	\$1000
Panel upgrades	\$2000	\$1000
E-bikes	\$1000	\$250
Cargo e-bikes	\$1200	\$500
Induction stoves	\$750	\$500
Heat pump dryers	\$500	\$300



## JOIN THE DISCUSSION AT THE SUSTAINABILITY FORUMS

The 2025 annual season of the **Sustainability Forums** has returned to the **Ann Arbor District Library Downtown branch**. These events, taking place at **6 PM on the last Thursday of each month**, are designed to inspire and empower residents to take meaningful steps towards a just and equitable transition to carbon neutrality, community-wide!

Each forum features a panel of community changemakers, sustainability experts, and innovators, offering valuable insights and discussion on each of the below topics. Attendees will learn not only about the work that is being done to fight climate change, but about how they can take action in their own lives.

**“We want the Sustainability Forums to be a place where residents get to both learn and be a part of the conversation,”** said Jordan Larson, Community Engagement Innovator at the Ann Arbor Office of Sustainability and Innovations.

These forums are free, and open to everyone, regardless of prior knowledge or experience with sustainability.

**We hope to see you there!**

**March 27.** A Circular City: Building physical and social infrastructure through A2ZERO's circular economy programs

**April 24.** Local Changemaking: Sustaining Ann Arbor Together (SA2T) Community Grant Program

**May 29.** Ann Arbor's Sustainable Energy Utility (SEU) and You

**Learn more at [osi.a2gov.org/events/](https://osi.a2gov.org/events/)!**

*Application of weatherstripping to door frame.*

# CITIZENS CLIMATE LOBBY

## COLLABORATOR SPOTLIGHT

The Citizens Climate Lobby (CCL) is a national organization working to enact effective climate policy in four different areas: carbon pricing, building electrification and efficiency, permitting reform to support rapid transmission line expansion, and healthy forest initiatives. The Ann Arbor chapter is very active, and is an [A<sup>2</sup>ZERO Community Collaborator](#).

Rich Fein, CCL member and representative on the Michigan Building Decarbonization Coalition, heads up the Action Team focused on building decarbonization. The team has developed workshops called "Save Money & Save the Planet" that they have been presenting to the community.

"Our strategy is to engage folks who are concerned about climate change, and want to take action, but don't know what to do," says Fein. They have done 4 workshops so far, and have several more in the planning stages. "The reception has been great, with lots of questions and good conversation," states Fein. Workshops thus far have been hosted by Temple Beth Emeth's Dayenu Circle, Argus Farm Stop / Lower Burns Park, the Westgate Library, and Ann Arbor area's Cohousing communities. CCL is working with several other houses of worship and with neighborhood and community groups to bring the presentation to their members as well.

The workshops are full of practical information, including topics such as what incentives and rebates are available and for whom, the financial realities of heat pumps and how to reduce costs, simple low-cost improvements, selecting contractors, and more.

In addition to their work on building electrification and efficiency, Ann Arbor's CCL chapter has established a "pocket forest" in Buhr Park, and is currently working on a second one at County Farm. Ginny Rogers is co-leader of the Ann Arbor CCL chapter, and notes "The Buhr Park pocket forest was a special project completed in collaboration with the City Parks Department, Wild Ones, Childrens' Wet Meadow and other community partners. It encompasses a 50x50 foot plot with around 400 native trees and shrubs." The pocket forests align with CCL's forestation focus.



**Citizens' Climate Lobby**  
Ann Arbor, MI



Ann Arbor CCL chapter, and notes "The Buhr Park pocket forest was a special project completed in collaboration with the City Parks Department, Wild Ones, Childrens' Wet Meadow and other community partners. It encompasses a 50x50 foot plot with around 400 native trees and shrubs." The pocket forests align with CCL's forestation focus.

Any individual or group who would like to learn more about CCL can visit their website at [AnnArborCCL.org](http://AnnArborCCL.org). To learn more about hosting a "Save Money & Save the Planet" workshop, go directly to [Bit.ly/ccl-ee-show](http://Bit.ly/ccl-ee-show).

*CCL "Save Money & Save the Planet" workshop at Westgate Library*

# ANNOUNCEMENTS

**The Office of Sustainability and Innovations is hiring a Management Assistant!** This position will be tasked with performing a variety of highly responsible, confidential and complex administrative duties with minimal supervision. Learn more and apply at [a2gov.org/jobs](https://a2gov.org/jobs).

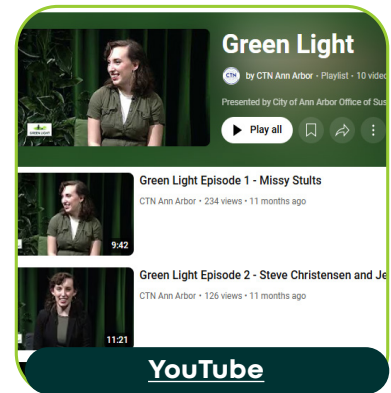
**New energy rebates available:** OSI is pleased to announce an expansion to our home energy rebate program and our home energy advisor service to provide more money to more residents, with a streamlined process to make the application even easier. To learn more, visit [osi.a2gov.org/rebates](https://osi.a2gov.org/rebates).

**Electric lawn care equipment discount program and electric leaf blower rebates:** Designed to help lower the cost of transitioning from gas to electric leaf blowers, in accordance with Ann Arbor's new leaf blower ordinance, discounts and rebates for electric lawn care equipment will be available March 1 – May 31 of this year, or until funding is expended. For more information, including rebate and discount amount as well as eligibility, visit [osi.a2gov.org/leafblowers](https://osi.a2gov.org/leafblowers).

**Join the Ann Arbor Sustainable Energy Utility waitlist:** The city is currently registering interest in the Ann Arbor Sustainable Energy Utility. If you are interested in enrolling or getting more information as it becomes available, [please fill out this form to join the waitlist](#).

## CONNECT WITH A<sup>2</sup>ZERO

Click the tiles below to see the latest updates, events, and more!





# UPCOMING EVENTS

## **PLANT-BASED LUNCH MEETUP** | *March 9, 1 – 3 PM | Red Lotus, Ann Arbor*

Looking for an elegant, yet casual full-service dining experience? Join VegMichigan at Red Lotus, a recently opened companion restaurant to Taste Kitchen, in downtown Ann Arbor with a plant-based seasonal menu offering a fusion of international influences. [Learn more and sign up to attend online.](#)

## **BEYOND THE BRIDGE: A SOLUTION TO HOMELESSNESS FILM SCREENING** | *March 11, 6 PM | Michigan Theater*

This free event features a powerful new documentary that examines the root causes of homelessness and explores comprehensive solutions. The screening will be followed by an engaging panel co-moderated by School of Social Work Dean Beth Angell and City of Ann Arbor Mayor Christopher Taylor. Prior to the event, University of Michigan faculty research on poverty and homelessness will be featured in the lobby. See the panelists and RSVP at [bit.ly/BeyondTheBridgeA2](https://bit.ly/BeyondTheBridgeA2).

## **EXCLUSIVE SCREENING OF PBS'S "50 STATES OF SUSTAINABILITY: VERIDIAN AT COUNTY FARM"** | *March 17th, 6 PM | Michigan Theater Screening Room*

This special screening offers a unique opportunity to see the episode before it airs, meet climate and sustainability rockstars involved in the project, and discuss the future of sustainable communities. Learn more at [marquee-arts.org](https://marquee-arts.org).

## **SUSTAINABILITY & INNOVATION COFFEE MEETUP: KLA'S MICHIGAN STORY AND SUSTAINABILITY JOURNEY**

*March 19, 8 – 9:30 AM | Bamboo Ann Arbor, 200 1st St, Ann Arbor*

Hear from KLA's first Ann Arbor employee about the company's growth to over 650 employees in Michigan and our sustainability journey and global impact. [Click here to register.](#)

## **SUSTAINABILITY IN HOUSES OF WORSHIP** | *March 20, 6 PM | Election Center*

Join the A<sup>2</sup>ZERO Program and the Washtenaw/Ann Arbor 2030 District at an interactive evening to learn about and take action to promote "Sustainability in Houses of Worship." Hosts: leaders from the Ann Arbor / Washtenaw 2030 District House of Worship Green Team and Missy Stults, Director, Sustainability & Innovations for the City of Ann Arbor. Free. [Click here to register.](#)

## **SUSTAINABILITY FORUM - A CIRCULAR CITY: BUILDING PHYSICAL & SOCIAL INFRASTRUCTURE THROUGH A<sup>2</sup>ZERO'S CIRCULAR ECONOMY PROGRAMS** | *March 27, 6 – 7:30 PM | Ann Arbor District Library, Downtown branch*

Moving away from an unsustainable linear system that focuses on "take, make, and waste" requires rethinking the social and physical infrastructure that drive material flow throughout our society. Please join us in the third session of the 2025 Sustainability Forum series and learn about circular economy initiatives, their role in the City of Ann Arbor's circular economy efforts, and how you can get involved! [Attend in-person or virtually.](#)

## **FREETREE GIVEAWAY: 2025 FREETREE GIVEAWAY** | *April 19, 11 AM - 4 PM | Allen Elementary School*

Reserve a time slot to pick up 1-4 free tree seedlings to take home and plant yourself! Registration is required and opens on March 15th at <https://osi.a2gov.org/FreeTree25>. All trees will be small, bare root seedlings that will fit easily inside your vehicle - you can even arrive on bike! Additional information is available at [www.a2gov.org/10ktrees](https://www.a2gov.org/10ktrees). Tree planting and care information will be provided with every tree. Volunteers are welcome! Those interested in volunteering can learn more about the opportunity and sign up at <https://osi.a2gov.org/FreeTreeVolunteer>.

## **SAVE THE DATE: A<sup>2</sup>ZERO WEEK** | *June 1 – 7, 2025*

Coming soon: a week celebrating Ann Arbor's commitment and progress towards a just transition to carbon neutrality, community-wide, by the year 2030. If you've got an idea for a sustainability event, email us at [sustainability@a2gov.org!](mailto:sustainability@a2gov.org)

## **SAVE THE DATE: GREEN FAIR** | *September 19, 2025*

Save the date for Ann Arbor's Green Fair, bringing hundreds of people together with sustainability organizations in our beautiful downtown Ann Arbor.

**For more information on our upcoming events, please visit [www.a2gov.org/sustainability/events](https://www.a2gov.org/sustainability/events).**