

# ***Sustainability Advisory Board***

## ***Agenda***

**May 15, 2024**

**Louisville Public Library, Second Floor Board Room  
951 Spruce Street  
6:30 PM**

*Members of the public are welcome to attend and give comments remotely; however, the in-person meeting may continue even if technology issues prevent remote participation.*

- *You can call in to +1 408 638 0968 or 833 548 0282 (Toll Free)  
Meeting ID #829 8194 5389  
Meeting Password # 741017*
- *You can log in via your computer. Please visit the City's website here to link to the meeting: [www.louisvilleco.gov/sustainabilityboard](http://www.louisvilleco.gov/sustainabilityboard).*

*The Board will accommodate public comments during the meeting. Anyone may also email comments to the Board prior to the meeting at [HMiller@LouisvilleCO.gov](mailto:HMiller@LouisvilleCO.gov).*

- I. Call to Order
  - Josh is May secretary
- II. Roll Call
- III. Approval of Agenda
- IV. Approval of Minutes
- V. Public Comments on Items Not on the Agenda
  - 3 minutes per comment
- VI. Sub-Committee and Board Member Updates
- VII. Administrative Tasks

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Si requiere una copia en español de esta publicación o necesita un intérprete durante la reunión, por favor llame a la Ciudad al 303.335.4536 o 303.335.4574.

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### **City of Louisville**

*City Manager's Office 749 Main Street Louisville CO 80027  
303.335.4534 (phone) [www.LouisvilleCO.gov](http://www.LouisvilleCO.gov)*

- Sustainability Spotlight for July, due June 15 from John
- June meeting reschedule

VIII. Staff Updates – 10 minutes

IX. Discussion Item: Bag Tax Funded Programming Update- 10 minutes

- Staff presentation
- Public Comment (3 minutes per comment)
- LSAB Discussion and Direction

X. GoElectric Colorado Presentation- 30 minutes

XI. Discussion Item: Energy Code Memo Approval – 10 minutes

- Staff and LSAB Update
- Public Comment (3 minutes per comment)
- LSAB Discussion and Direction
  - i. Action item - memo amend/approval

XII. Brainstorming- 30 minutes

XIII. Discussion Items for Next Meeting

XIV. Adjourn

***Sustainability Advisory Board  
Meeting Minutes***

**April 17, 2024  
Louisville Public Library, 2nd Floor Board Room  
951 Spruce Street  
6:30 PM**

**Call to Order** – Tiffany Boyd, LSAB Vice Chair called the meeting to order at 6:36 pm.

**Roll Call** was taken and the following members were present:

Board Members Present: Tiffany Boyd, Josh Cooperman, John Cowley, Allison Kay, and Kevin Lombardo.

Board Members Absent: Megan Ottesen, Todd Budin.

Staff Members Present: Hannah Miller, Samma Fox (virtual).

**Approval of Agenda –**

Allison moved to approve the agenda; Kevin seconded the motion.

**Approval of Meeting Minutes –**

Allison moved to approve the meeting minutes; Josh seconded the motion.

**Public Comments –**

There were no public comments.

**Staff Update –**

Staff Updates for this meeting remain as described in the Sustainability Advisory Board packet for this meeting on April 17, 2024.

Josh asked for additional information about the \$4300 Louisville Rebates already submitted; he asked to clarify what the EPA CPRG award is and how the funding would be allocated if the grant was received.

Hannah responded by saying the award is the Climate Pollution Reduction Grant and could cover a variety of sustainability projects including building electrification and training for green jobs; if the DRCOG metropolitan statistical area (MSA) is awarded funding it will be split between programs to cover the region.

John asked if there is data on the amount of carbon dioxide removed as a result of implementing the Louisville Rebates. He suggested it might be something LSAB continues to discuss in the future as he has concerns that Louisville is not currently positioned to meet the CO2 reduction necessary to combat climate change. He wanted to know if there is information on what is the most cost efficient way to decrease carbon dioxide?

Hannah responded by saying she does not currently have that data but she is working with the ICLEI software to hopefully determine the amount of carbon dioxide removed.

Allison asked if the sustainability division or city of Louisville needs help with interviews for the Sustainability Manager position that was posted on 4/5.

Hannah said she had not heard any updates about the interview process.

Josh asked for more information on the Bag-Tax- Funded Sustainability Programs pilot programs.

Hannah responded by saying there are a variety of grant ideas they have received and gave three examples including a regenerative garden program and an organization purchasing multiple gardens in a box.

Tiffany asked about the communication strategy for Bag-Tax- Funded Sustainability Programs; she said she is unsure if people are aware this program exists. She also asked if additional funding for programs is available or if it has all been used.

Hannah responded by saying they used a variety of communication channels to advertise the program including posting the information on all city communication channels, sending out information in the newsletter, and trying to reach people through boots on the ground outreach. She said there is still additional funding available.

#### **Discussion Item: Budget Recommendations –**

##### ***Marketing/Programming for Community Decarb Outreach***

Tiffany presented this budget recommendation. She stated the budget recommendation is for \$10,000 per year and would be for additional marketing and programming to specifically support the community decarbonization initiatives. It would provide funding for resources to spur outreach and potentially provide some level of coaching to help make the decarb program more personalized for individuals. It could also provide stipends for neighbor to neighbor outreach. The Marshall fire captains modeled this type of neighbor to neighbor outreach.

John suggested some of this outreach budget could be used to provide lawn signs for people who had participated in a sustainable home upgrade program; he thought this could both help advertise the program and encourage others to ask, and learn more, about the sustainable home upgrade process.

Josh said Xcel Energy is currently working on something similar to this and suggested it might be possible for Xcel to help more with this specific type of outreach. LSAB has worked on this type of outreach in the past, but this funding would be specific to the decarb plan outreach. This has been done this in the past.

### ***Community Decarbonization- Residential Energy Efficiency and Electrification Rebates***

Tiffany presented this budget recommendation. She stated the budget recommendation is for \$50,000 per year and would be for residential energy efficiency and electrification rebates; currently, there are a little less than \$20,000 residential energy efficiency and electrification, so this would increase the amount about \$30,000 next year. Because the 2023 budget of \$16,000 in for residential energy efficiency and electrification rebates was exhausted in 3 months, there appears to be a need for additional rebate funding. This budget recommendation could be paired with the Marketing/Programming for Community Decarb Outreach to ensure everyone knows about the rebates.

John suggested they consider making the residential rebates needs based.

Josh asked if it would be possible to increase the rebates or if the rebates have to stay at the current amount and if the budget recommendation would increase individual rebate amounts or just add additional rebate funding and keep the current rebate amounts as is?

Allison asked if the rebates were meant to drive down overall cost of the energy efficiency and electrification project or if they are meant to target communities that might not be able to afford the upfront cost of an electrification project. This might be worth considering when determining if individual rebates are increased.

Kevin suggested targeting larger homes might reduce emissions more since it is a larger area.

Hannah informed LSAB about the budget process. The budget proposal for 2025 would most likely be presented in June and there is an option to submit a budget amendment for year 2025, as needed.

### ***Community Decarbonization- Business Electrification and Efficiency Rebates***

Tiffany presented this budget recommendation. She stated the budget recommendation is for \$75,000 per year and would be for commercial electrification and efficiency rebates. This could use, and build on, the research the CU-Anschutz graduate students conducted on Louisville's commercial building stock. The City of Louisville might need to work with an organization like PACE to establish or help with this program.

Josh thought it might be possible to use funding from the bag tag to provide grants for this program. He also suggested we consider increasing this budget recommendation to \$100,000.

### ***Speakers' Series***

Allison presented this budget recommendation. She stated the budget recommendation is a range of \$500-\$5,000, depending on if the speakers' series is a virtual event, hybrid event or in-person event. This could build on the 1-2-3 Electrify Workshop Series and allow the sustainability division to cover additional topics not addressed in the 1-2-3 Electrify Workshop Series. She suggested the speakers' series have local speakers, speakers who can focus on

best sustainability practices and speakers that are more specific to the needs of the Louisville community.

### ***Green Jobs Initiative***

Allison presented this budget recommendation. She stated the budget recommendation is a range of \$10,000-\$500,000, depending on the scale of the program and if they work with additional partners on the program. She stated there is concern that environmental goals might not be met if there is not a workforce to help implement these goals. She described a variety of green jobs training programs that already exist in Denver, Boulder, and Los Angeles. She also described the additional funding that might be available through federal grants for green jobs training.

Tiffany added that this might be in line with Boulder Valley School Districts goals and that Monarch High School is right around the corner and might be a partner for something like this.

John asked about existing organizations and programs that already work on this. He suggested Allison also look up Mark Mogle who is currently working on a green jobs initiative in Lafayette.

### ***Sustainable Neighborhoods Network***

Kevin presented this budget recommendation. He stated the budget recommendation is for \$22,500 for year 2025 and \$20,500 for year 2026 and would be for the membership fee, operating budget, and administrative budget for the Sustainable Neighborhoods Network. The Sustainable Neighborhoods Network would leverage sustainability expertise in Louisville; use neighbors to help spread the word about sustainability projects; provide a feedback loop to the city; and empower citizens to start their own sustainability project.

### ***Shared Grant Writer***

Josh presented this budget recommendation. He stated the budget recommendation is for the salary for one 1.00 FTE grant writer. He was unsure of the exact salary that would be appropriate for this position. He suggested this position might be split between multiple divisions within the City of Louisville government so the sustainability division only be responsible for part of this salary. Louisville's outgoing sustainability manager did extensive grant writing during her tenure and implementation of the city's decarbonization plans will require even more grant writing.

Tiffany added this might be a more urgent request as there is currently a lot of sustainability grant funding available and it is unclear if that funding will continue to be available moving forward. It also signals to the Louisville government and community that the sustainability division is dedicated to finding the funding to support aggressive environmental goals.

John asked if the current staff would find this helpful or if there is another position that would find more beneficial to their work? He suggested a grant writer would bring in more money than their salary cost the city.

Allison suggested this position be broadened to a development officer type position and expand the responsibilities to include researching grants, creating annual reports, and developing a strategy for informing the public about the grant programs.

#### ***Intern from CSU Impact MBA Program***

Tiffany presented this budget recommendation. She stated the budget recommendation is for \$8,000 and would be used to pay a Masters of Business Administration Summer Fellowship program participant \$20/hour for 400 hours to intern in Louisville's sustainability division.

John asked if the intern is assigned to the city or if the city would interview and pick an intern.

Tiffany said interns apply and CSU works with the city to match an intern.

Allison asked if an intern would create more work instead of relieving the current workload.

Hannah stated that intern programs can create more work upfront for the sustainability division but they can be beneficial to the division. They would want a clearly defined project for the intern to work on.

Josh suggested LSAB could help determine a project for interns.

#### ***Trees for Community Forest Corps***

Tiffany presented this budget recommendation. She stated the budget recommendation is for \$5,000 for the 2025 program and would support the work of the Community Forest Corps and help provide wages for young adults to plant and maintain trees and learn about natural climate solutions. This program would help create youth climate ambassadors.

John asked if the \$5,000 was sufficient for this type of program.

Tiffany explained the program already exists, and they have some funding, so this funding would be supplemental.

Josh added that the current pilot program is paid for by the county.

#### ***Public Comment***

There were no public comments for this item.

#### ***Board Discussion***

Samma thanked LSAB for their thoughts and suggestions.

Josh gave general thoughts about the budget recommendations, noting some projects and programs had smaller costs and some had larger costs. He asked if we should prioritize a certain budget amount.

Allison asked if there is any information on the overall sustainability budget or if there is any information on how many budget recommendations LSAB should suggest.

Samma noted that they would like to hear LSAB's thoughts on all budget recommendations, but that there is information to suggest the 2025 budget might be tighter than other years.

Josh thought LSAB should prioritize recommending the Community Decarbonization- Residential Energy Efficiency and Electrification Rebates, the Community Decarbonization- Business Electrification and Efficiency Rebates, and the Shared Grant Writer. He suggested Community Decarbonization- Residential Energy Efficiency and Electrification Rebates budget recommendation be increased to \$75,000 and the Community Decarbonization- Business Electrification and Efficiency Rebates increased to \$100,000. He also wanted additional information on how the Grant Writer position could be split between divisions.

Josh was generally supportive of the Sustainable Neighborhoods Network, Intern from CSU Impact MBA Program, and Trees for Community Forest Corps but thought those should be less of a priority.

Josh thought the Marketing/Programming for Community Decarb Outreach, the Speakers' Series, and Green Jobs Initiative might not be as necessary or feasible at this time.

Hannah noted they might receive funding for workforce development from the CPRG grant, if awarded.

Kevin thought LSAB should prioritize recommending the Community Decarbonization- Residential Energy Efficiency and Electrification Rebates, the Community Decarbonization- Business Electrification and Efficiency Rebates, the Shared Grant Writer, and the Sustainable Neighborhoods Network. He agreed that the Community Decarbonization- Residential Energy Efficiency and Electrification Rebates budget recommendation be increased to \$75,000 and the Community Decarbonization- Business Electrification and Efficiency Rebates increased to \$100,000. He suggested the \$7,500 administrative budget might not be necessary for the Sustainable Neighborhoods Network which could reduce the budget to \$15,000 for 2025.

Kevin liked the idea of pairing the Marketing/Programming for Community Decarb Outreach budget request with the rebates, if possible.

John thought LSAB should prioritize recommending Marketing/Programming for Community Decarb Outreach, Community Decarbonization- Residential Energy Efficiency and Electrification Rebates, the Community Decarbonization- Business Electrification and Efficiency Rebates, and the Shared Grant Writer. He also liked the Speakers' series and thought it should be in-person and limit it to 1-3 speakers.



John thought the Sustainable Neighborhoods Network and Trees for Community Forest Corps might require a larger time commitment from city staff than is currently possible. He thought the Green Jobs Initiative might be hard to get support for.

Allison thought LSAB should prioritize recommending the Shared Grant Writer, some type of Green Jobs Initiative, Community Decarbonization- Residential Energy Efficiency and Electrification Rebates, and the Community Decarbonization- Business Electrification and Efficiency Rebates. She suggested that instead of a Shared Grant Writer, the position could be full time for the sustainability division or 50% time for the sustainability division. She agreed that the Community Decarbonization- Residential Energy Efficiency and Electrification Rebates budget recommendation be increased to \$75,000 and the Community Decarbonization- Business Electrification and Efficiency Rebates increased to \$100,000 if possible.

Allison noted that she has some concerns that if Louisville does not establish some type of green jobs initiative soon, they could be left out of funding for workforce development in the EPA CPRG award. She suggested a low cost event like a green jobs fair might be a reasonable way to start an initiative.

Allison was generally supportive of the Trees for Community Forest Corps, Marketing/Programming for Community Decarb Outreach, and Sustainable Neighborhoods Network. She did mention that people might have neighborhood app overload and might be resistant to participating in another online neighborhood forum like the Sustainable Neighborhoods Network.

Tiffany thought LSAB should prioritize recommending the Shared Grant Writer, Community Decarbonization- Residential Energy Efficiency and Electrification Rebates, and the Community Decarbonization- Business Electrification and Efficiency Rebates. She agreed that instead of a Shared Grant Writer, the position could be full time for the sustainability division or 50% time for the sustainability division. She also thought LSAB should prioritize outreach and a connection with the community. She thought Sustainable Neighborhoods Network could help with that community outreach and connection.

Tiffany suggested the Speakers' Series might be something Louisville could partner with the surrounding cities on.

The Board agreed that their top priorities for budget recommendations are \$75,000 for Community Decarbonization- Residential Energy Efficiency and Electrification Rebates, \$100,000 for Community Decarbonization- Business Electrification and Efficiency Rebates, and a Shared Grant Writer or possible a Full Time Grant Writer/ Development Officer. They also support the budget recommendation for the Sustainable Neighborhoods Network. The board was generally supportive of the other budget recommendations, but did not think they should be prioritized at this time.

**Discussion Item: Front Range Passenger Rail and RTD Peak Study –**

John shared a draft memo to the Louisville City Council Members from LSAB regarding a Front Range Passenger Rail Stop in Louisville. The memo states that LSAB would like Louisville, Lafayette, and Superior to submit a joint request that the Service Development Plan for Front Range Passenger Rail be codified to include a designated Boarding Station in Louisville, CO. Having a train stop in Louisville would reduce emissions while also spurring economic growth in Louisville. He stated this is a more urgent matter as it appears a decision on the Front Range Passenger Rail Stops will be made in late spring.

*Public Comment*

There were no public comments for this item.

*Board Discussion*

John mentioned that he was unsure if city staff are already advocating to get a rail stop in Louisville as he heard conflicting information.

Josh suggested LSAB contact the Lafayette and Superior sustainability board to see if they would sign on to this letter.

Hannah said she could reach out to the Superior and Lafayette sustainability divisions to see if they are currently involved in anything related to the Front Range Passenger Rail Stops.

Tiffany suggested LSAB send the current memo to city council and write a new memo asking Superior and Lafayette to support a designated Boarding Station in Louisville, CO.

Allison moved to approve the memo and send it to city council; Kevin seconded the motion.

**Discussion Item: Energy Code Memo –**

Josh shared a draft memo to the Louisville City Council Members from LSAB regarding Energy Code Amendments. The memo states that LSAB reviewed and discussed the energy code amendments and has some questions and suggestions regarding the amendments. The memo asks for clarity on some of the amendment language; outlines their thoughts on the changes; and provides suggestions for proposed amendments.

*Public Comment*

There were no public comments for this item.

*Board Discussion*

Josh suggested LSAB discuss key areas of the memo and clarify some points. He addressed the various changes to EV charging in the new amendments. He suggested LSAB support more stringent requirements for EV charger infrastructure for new builds and additions. He heard Level 1 charging might be sufficient for multi family housing.

Tiffany suggested Level 1 chargers might force people to charge their vehicles all night and they are trying to move away from night charging since it does not utilize as much solar energy.

Josh mentioned the energy code for Colorado does not require any charging for small parking lots. He thought it should be required.

Kevin clarified that he checked and there was a mistake in the energy code amendments. Passive house certification should have been included but was not.

Josh suggested that LSAB include a compromise for remodels and additions. He suggested that remodel and additions be required to replace HVAC systems with electric systems if they are replacing the original system to support the upgrade. He was unsure if there are supply chain issues around electrification projects.

Tiffany suggested the memo might be nit-picking and should be more general.  
Is the feedback accurate

John asked about the payback period for retrofitting HVAC systems in commercial buildings. He suggested that might be worth including in the memo.

Allison asked if PACE worked with any businesses in Louisville that have replaced their HVAC system with a more environmentally friendly option and if they could share that information with LSAB.

Hannah said she would see if any Louisville businesses have replaced their HVAC systems and would like to share their story with the group.

#### **Sub-Committee and Board Member Updates –**

None.

#### **Administrative Tasks –**

Kevin to write the next Sustainability Spotlight, due May 15.

#### **Discussion Items for Next Meeting –**

Hannah said that city council is working on a work plan that focuses on high level policy issues instead of smaller aspects.

John asked about the upcoming 2024 Spring Cleaning Event on April 27th and if they need more volunteers. He also asked where the Introduction to Electrification workshop on May 8th would take place.

Tiffany asked if LSAB could do more to help with outreach for events.

Hannah said they could always use additional volunteers. The May 8th event will take place at Superior Community Center.

**Adjourn –**

Allison made a motion to Adjourn the meeting; John seconded. The meeting was adjourned at 8:37pm.

## Memorandum

**To:** Louisville Sustainability Advisory Board  
**From:** Hannah Miller, Sustainability Specialist  
**Date:** May 15, 2024  
**Re:** Staff Updates

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### *Projects and Programs*

- New program! Residential Building Materials Waste Diversion Pick-up Day. This program is in partnership with Resource Central, specifically the Reuse Division and with Superior's Sustainability Division. Erie has been running this program and has seen success. See attached for Erie's flyer of this program. Metrics from this program include waste diversion rates from building materials.
- PACE rebates and advisor have been approved by Council. We now move forward with implementation of the grad student research and target the CTC and Centennial Valley.
  - I can share this research as an attachment at the next meeting.
- [1-2-3 Electrify workshop](#) series, new date! The June workshop has been moved to June 10 at the Rec Center. Please register if you plan to attend.
  - *July 13 Electrification Expo, call for LSAB tabling. Please, let me know if you are interested in this. Event is 2-5:00 p.m. at the Superior Community Center.*
- Spring Cleaning Event was cancelled on 4/27 due to inclement weather. We're exploring rescheduling or a voucher for registrants.
- Louisville hosted Waterwise Seminar: Defensible Space: First Five Feet happening May 14 from 6:30- 8:00 p.m. online.

### *Council Related Items*

- No change: Energy code amendments on Council's agenda for May 21 (1<sup>st</sup> reading) and June 4 (2<sup>nd</sup> reading).
- Council workplan: Council work plan process is still being refined. Tentatively, still on track for August to refine the work plan. Keep this on your radar, I will be asking for pitches in June and a subsequent memo in July.
- Downtown Vision Plan Open House scheduled for May 23 at the Rec Center from 5:30-7:00 p.m.



# City of Louisville

City Manager's Office

- Reminder for Open Government training on May 22 from 6-7:00 p.m. in Council Chambers.

## *Grants*

- White House Xeriscape project, funded through the Colorado Conservation Board grant is moving into implementation.

## *LSAB (April meeting follow up)*

- Request for a PACE case study showing commercial electrification and pay-off time.
  - Answer: Spoke with PACE, they do not have any case studies as no one has completed installation of electrification equipment, and therefore no pay off time yet. As the program matures, they will be able to track implementation and calculate a pay off time.
- Request to engage with Superior and Lafayette Sustainability Advisory Boards on Front Range Rail project.
  - Answer: I spoke with the Sustainability Managers at Superior and Lafayette, and neither of their boards are not engaged on this topic. Each board, respectively, has other projects/ideas that are taking precedent over the Front Range Rail project.

## *Other*

- The June LSAB meeting is currently scheduled for June 19. This is a City holiday and I will be OOO. Potential reschedule for June 12.
- Manager position interviews are underway, and a new Manager should be selected by next LSAB meeting.



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## **DRAFT** Memorandum

**To:** Louisville City Council Members  
**From:** Louisville Sustainability Advisory Board  
**Date:** May 15, 2024  
**Re:** Energy Code Amendments

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Dear Louisville City Councillors,

The Louisville Sustainability Advisory Board understands that City Council will consider several amendments to the City's building codes at its meeting on 4 June 2024. The Board reviewed and discussed these amendments at its March, April, and May meetings. While City staff provided a thorough report, the Board would have appreciated more information concerning the genesis of the proposed amendments.

We offer some advice on these amendments just below. To frame our advice, we remind City Council that climate change presents humanity with a crisis of unparalleled proportions to which humanity has so far responded inadequately, that the City has set decarbonization goals in an attempt to respond to this crisis, and that the City's latest residential and commercial building codes are integral to achieving these goals. We further remind City Council that the City's latest building codes are not exceptional: several municipalities in Colorado have adopted the 2021 International Energy Conservation Code, and the State of Colorado has essentially mandated widespread adoption; Lafayette and Crested Butte recently adopted building codes with electrification mandates (allowing for certain exemptions), and Boulder is currently considering similar legislation; and the City's commercial building codes were modeled on those of other municipalities including Boulder. We finally remind City Council that the Board wholeheartedly supported adoption of the City's latest building codes, and we again thank City Council for authorizing their adoption.

First, we address the proposed amendments to the City's electric vehicle infrastructure code. City staff have proposed that the City replace its current code with the State of Colorado's

recommendations. While the City's code and the State's recommendations are very similar in many respects, and while the Board generally supports regional alignment on such legislation as building codes, we also recognize that Louisville differs from other communities across Colorado and that Louisville has a celebrated history of sustainability leadership. Of relevance in this case, Louisville has higher rates of adoption of electric vehicles than many other communities across Colorado, and Louisville has more aggressive decarbonization goals than the State and many of its other communities. Accordingly, the Board advises City Council to consider a compromise between the City's electric vehicle infrastructure code and the State's recommendations. Specifically, the Board endorses the Planning Commission's recommendations.

Next, we address the proposed amendments to the City's residential and commercial building codes. Several of these amendments are essentially clarifications or corrections; the Board most certainly supports these amendments. The remaining amendments represent weakenings of the City's building codes as far as efficiency and electrification are concerned; the Board recommends that City Council consider compromises between the City's current building codes and the proposed amendments. We provide brief recommendations for each such amendment.

- *All-electric requirements for commercial space and water heating:* The Board recommends retaining the all-electric space and water heating requirements for alterations and additions if existing equipment is replaced or if additional heating units are installed. Accordingly, existing equipment, no matter its power source, may continue to be used for the extent of its useful lifetime.
- *Natural gas backup for commercial space heating:* The Board recommends that natural gas backups for commercial space heating only be permitted if existing natural gas space heating equipment is being retained to serve this function.
- *Post-construction compliance and documentation for new commercial construction:* The Board supports post-construction compliance and documentation, through monitoring and metering, of the energy use intensity standards for new commercial buildings, but we appreciate the burden that such compliance and documentation places on building owners and City staff. Accordingly, we endorse removal of these requirements, but we strongly believe that legislation will mandate monitoring and metering of greenhouse gas emissions in the relatively near future.
- *Minimum heat pump standards:* The Board supports the amended minimum heat pump standards.





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- *Furnace efficiency standards:* The Board recommends maintaining furnace efficiency standards but creating a simple waiver for cases in which products meeting these standards are not readily available.
- *Commercial door U-value standards:* The Board recommends maintaining commercial door U-value standards but creating a simple waiver for cases in which products meeting these standards are not readily available.
- *Electric vehicle infrastructure for altered parking:* The Board recommends that electric vehicle charging standards apply to any added parking but not to any reconfigured parking.
- *Passive house certification:* The Board recommends that the City allow passive house certification from both PHI and PHIUS as an alternative to Appendix RC of the 2021 IECC.

The Board strongly believes that legislation will mandate electrification retrofits of existing residential and commercial buildings in the relatively near future. By electrifying their buildings during construction, alteration, or addition, building owners will likely bear lower costs in the long term.

If the City can offer any assistance to meet or incentives to exceed the current building codes, then the Board would be most supportive of such efforts. The Board has recommended to City staff that the City provide incentives for commercial and residential efficiency and electrification upgrades in the next biennial budget.

Thank you for considering our advice.

Sincerely,  
The Louisville Sustainability Advisory Board

# Donate Building Materials!

Help us keep usable building materials out of the landfill with FREE curbside pick-ups in Erie every Wednesday

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CONSERVATION MADE EASY

## How it Works

Attach photos of your donations to our [pickup form](#) **OR** send photos & address to: [pickup@resourcecentral.org](mailto:pickup@resourcecentral.org)

Once approved, place items on curb by 9 AM on Wednesday morning

## Tax Deductions

Your donations are tax deductible! Resource Central will provide a receipt for your records.

Large donations can yield significant tax savings and may need to be appraised. Ask Resource Central for an appraisal referral.

## Accepted Items

- Working appliances in good condition
- Modern kitchen cabinets sets
- Large loads of landscape stone
- Solid core doors
- Modern vinyl windows
- Working hand and power tools
- Large loads of dimensional lumber
- And more, ask us!

*\*\*All donation inquiries are subject to review & all items must meet established quality and condition guidelines. These will be specified during scheduling.*

## Non-accepted items

- Disassembled cabinets
- Bed frames
- Mattresses
- Upholstered furniture
- Broken appliances
- Single pane windows
- Scrap metal

*\*\*New -build or remodeling? Keep valuable materials out of the landfill! We offer FREE reuse/recycling assessments, ask for details.*



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6400 Arapahoe Rd  
Boulder, CO

# Tips and Pitfalls for Professionals New to Installing Heat Pumps and Heat Pump Hot Water Heaters

*This guide is designed to provide tips and avoidable pitfalls for professionals new to installing heat pumps and heat pump water heaters. This list is not exhaustive, is supplementary to, and does not take the place of proper industry and manufacturer training, specifications, or protocols.*

## Heat Pumps

- Cold climate heat pumps
  - Choosing a cold climate heat pump is the best practice for Colorado's climate zones.
  - While there is different definitions of "cold climate" heat pumps, the term commonly refers to heat pumps that maintain a Coefficient of Performance (COP) of  $\geq 1.75$  @ 5°F, or retain at least 70% of the capacity the unit has at 47°F, or are [ENERGY STAR certified "cold climate."](#)
  - The [Northeast Energy Efficiency Partnership](#) has a great repository of heat pump performance specifications.
  - Not all cold climate heat pumps are the same and some maintain their capacity at lower temperatures better than others. Read the performance specifications carefully before selecting a unit. It is highly recommended to select heat pump models that are capable of providing a tested capacity at -13°F to reduce or eliminate the need for backup heating equipment. If a heat pump is not capable of operating at -13°F, then it is recommended to use gas heating rather than electric resistance for backup heat.
  - Cold climate heat pumps may be sufficient to run without any backup heat or can be paired with electric resistance or gas furnace backup. The decision should be based on homeowner tolerance, the performance specifications of the unit, and the heating load of the home.
- Non-cold climate heat pumps
  - Non-cold climate heat pumps are not recommended for heating in Colorado due to their poor performance at low temperatures.
  - Never install a non-cold climate heat pump without a backup heating system.
  - Installing a non-cold climate heat pump with electric resistance backup can lead to expensive electric bills and should be avoided. While a gas furnace backup is worse for the climate and risks methane leaks in the home, they are cheaper to operate than electric resistance backup.
- A Manual J or other equivalent heating load calculation should always be performed before selecting a heat pump to determine the heating needs of the building. Using the previous furnace or rules of thumb for sizing is not recommended. Heat pumps do not function properly when they are significantly oversized. Significantly oversized heat



pumps are prone to cycling on and off more frequently which can reduce equipment lifespan.

- Ducting needs should be considered with a heat pump in mind. Heat pumps in cold climates sometimes require additional airflow because heating discharge temperatures are lower than a traditional furnace.
  - For any heating system, ductwork should match the system air flow capacity. Inadequate air flow, oversized or undersized ducts can cause a variety of issues like system noise, insufficient heating, or premature equipment failure.
  - Assessing ductwork for new and existing homes should reference ACCA Manual D or other industry standards. These duct design standards will determine duct sizing, static pressures, and other details that deliver design airflow. It is also important that the design airflow be based on correct heating and cooling load calculations such as Manual J room by room loads.
  - Ducts should be well sealed. In a typical house, 20 to 30 percent of the air that moves through the duct system is lost due to leaks, holes, and poorly connected ducts. This lost air significantly degrades the effective capacity of a heating system.
- The performance of the heat pump varies with both the indoor and outdoor units. An outdoor unit may have different capacities with different indoor units and vice versa. Do not assume that one pair of equipment will have the same performance as another pair. When verifying the specifications, make sure you are looking at the correct pairing and derating of the equipment for altitude, temperature, lineset lengths, and other details per manufacturer guidelines.
- Heat pumps perform best in a well insulated and air tight home. Consider recommending insulation and air sealing prior to sizing and installing any new properly sized heating system including heat pumps and gas furnaces.
- Rebates, incentives, and tax credits may all have slightly different criteria and are rarely flexible. Read the program materials and make your equipment choice carefully to avoid missing out on incentives after the fact. Given recent equipment testing and performance standards, it is worth checking with equipment manufacturer resources for updated specifications.
- Setting customer expectations
  - At Colorado's typical utility rates, heat pumps can increase electricity bills compared to using gas for heating. This is because customers are switching from using gas to heat to electricity to heat. Electric bills will also spike during the coldest months of the year, this is normal and expected, just as gas bills spike during the coldest months of the year. Customers should be advised not to judge the operating cost of a heat pump solely on the coldest month of the year and as they often save money in the shoulder and cooling seasons compared to less efficient units. Over the full course of the year, combined electric and gas utility bills may go up, stay the same, or decrease depending on the performance of the system, home characteristics, and utility rates.
  - Heat pumps are designed to produce a steady amount of heat at a lower temperature for a longer time than furnaces, which produce higher amounts of heat in short bursts. Customers may need to adjust to the "system running





continuously a lot” which is really a benefit as it is circulating more filtered warm air which can improve air quality and help reduce uneven temperatures throughout the home.

- At temperatures below freezing heat pumps need to periodically pull heat from the home to defrost the outdoor unit or excessive ice will build up and damage the unit. This can briefly result in cool air coming through the ducts if not paired with backup heat to run simultaneously with the defrost cycle. Customers should be advised of this up front
- A high switchover temperature to backup electric resistance heat can be expensive and should be avoided.
- See [EnergySmart’s ducted and ductless heat pump homeowners guides](#) for additional recommendations for homeowner satisfaction and heat pump management.
- Talk about your favorite benefits of heat pumps with your clients. A homeowner who is more excited about their heat pump and understands what to appreciate about it is likely to be more satisfied with it and treat minor operating differences between heat pumps and furnaces as neutral.

## Heat Pump Water Heaters

- Heat pump water heaters typically require at least 120 square feet of space in the room around them from which to draw heat and are not appropriate for small utility closets without ducted ventilation.
- Heat pump water heaters make some noise, typically 45-55 decibels, which is equivalent to the volume of a dishwasher. Consideration should be made to the placement of the unit in the home regarding homeowner tolerance for audibility of the unit.
- Many heat pump water heaters can operate in heat pump mode down to 37 degrees so unfinished or unconditioned basements make a great location.
- Installing a recirculating pump with a heat pump hot water heater may void the manufacturer’s warranty, cause it to operate only in electric resistance mode, or to run continuously. Read the manual carefully before installing a recirculating pump. For many heat pump water heaters the intake water temp must show a differential of approximately 25 degrees to operate in heat pump mode. A recirculating pump can prevent this from happening. As an alternative,
  - If you are changing the location of the water heater, there may be an opportunity to shorten the piping between the water heater and the most commonly used fixtures. This can accomplish the same benefits as a recirculating pump.
  - Consider installing a point of use electric on demand heater for instant hot water at the fixture that is attached to the hot water line from the heat pump and only operates until the hot water from the heat pump arrives at the fixture.
  - Push button controls for recirculating pumps set on an automatic shutoff timer may also be an effective solution.



- Pairing a heat pump water heater with a mixing valve and raising the temperature of the tank above 120 degrees is a great way to increase the effective capacity of the unit and may be required to earn utility rebates.
- Insulate all accessible hot water supply lines, particularly within the six feet closest to the heat pump water heater.
- Heat pump water heaters use air filters that should be cleaned periodically to ensure efficient operation. Customers should be informed of this and instructions of how to clean which simply involves wiping filter with a damp cloth, rinsing it under running water and letting it dry.
- Don't forget to plan for condensate line draining when planning for the heat pump installation. Existing water heaters may not be located near a drain.
- Heat pump water heaters exhaust air that is cooler than their surroundings unless additional ducting vents are installed. Therefore, careful consideration should be given if installing in rooms that are frequently occupied.
  - The cool air from heat pump water heaters should have a minimal effect. Just as refrigerators do not make the kitchen noticeably warmer, heat pump water heaters do not typically make the room in which they're located noticeably colder



# **Sustainability Advisory Board**

May 2024

Hannah Miller, Sustainability Specialist

# Discussion Item: Bag Tax Funded Programming Update

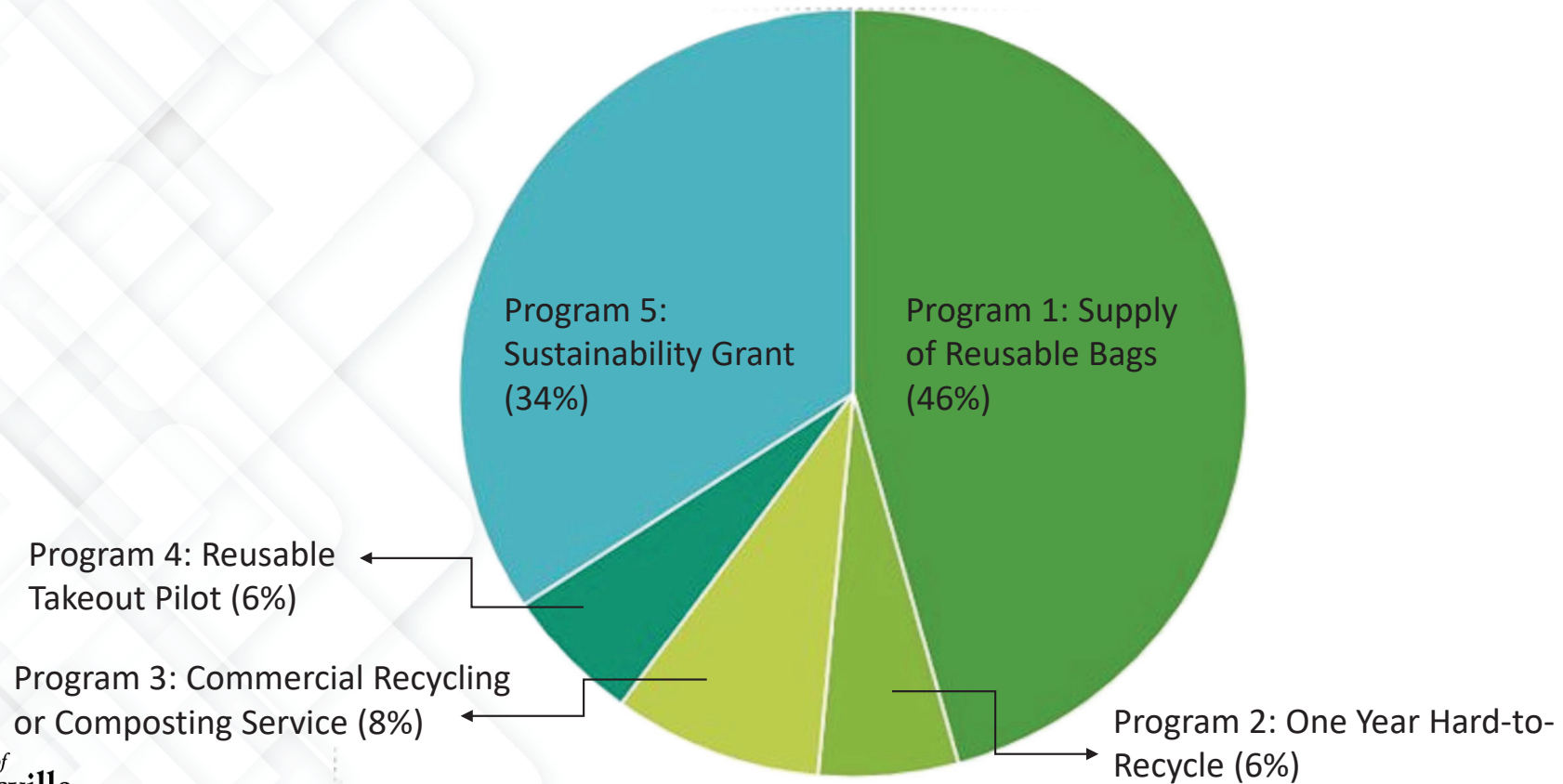
- Staff presentation
  - Current bag-tax commercial programs
  - Residential program
- Public comment (3 minutes per comment)
- LSAB discussion and direction
  - What does the board think of this plan?
  - Gaps for PDZ program? What else is needed to make it successful?



# Bag Tax Funded Programming Update

- Following Council direction, staff created five programs tailored for the commercial sector, outlined below. All programs are equally valued at \$1,000.
  - Program 1: Supply of Reusable Bags
  - Program 2: One Year Hard-to-Recycle Pick-Up Services
  - Program 3: Establish Commercial Recycling or Composting Service
  - Program 4: Reusable Takeout Pilot
  - Program 5: Sustainability Grant

# Commercial Program Enrollment



# Permanent Program Structure

- In 2024, transition commercial bag tax programs to a permanent structure
- 'Bundle' programs under the name 'Commercial Sustainability Grant'
- This bundling strategy allows staff to leverage their learnings, promote a unified program, and encourage greater business participation.
- Staff will update the webpage and launch a new communication campaign in the summer of 2024.
  - Currently working with Comms to rebrand the programs.



# Residential Program

- Equity centered, no-cost, hard-to-recycle and waste diversion event at Louisville's mobile home park, Parco Dello Zingaro (PDZ).
- Partners: Eco-Cycle, Republic Services, Boulder County Hazardous Waste Management Facility, Ace Hardware, local tire recycling, moving companies, food truck, water truck, live music.
- Resources available on the event day will include financial information, energy efficiency rebates, incentives and City program information.
- Working with Climate Justice Corps and Partners in Energy to provide a stipend to an engaged resident to help spread the word about the event and consult on communications.
- Costs and impacts of the event will be evaluated, with plans to expand programming to Kestrel and other neighborhoods in Louisville or to organize a citywide event as budget allows.

# AN INTRODUCTION TO GO ELECTRIC COLORADO



**GO ELECTRIC**  
C O L O R A D O

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Julia Moravcsik  
[julia@goelectriccolorado.org](mailto:julia@goelectriccolorado.org)

# GO ELECTRIC COLORADO

*Go Electric Colorado's* mission is to protect people and their planet by transitioning our homes and commutes to cleaner, more economical electric appliances and vehicles

# HOME ELECTRIFICATION ADVISORS

Provide free home electrification consultations

- Remote or in-home
- Followup report

Provide ongoing guidance

- Can text or email with additional questions, advice

Working with municipalities

- Send us homeowners who need advice





# SCOPE

Homeowners contact us because:

- Heat pump interest
- Want to reduce carbon emissions
- High energy bills / Uncomfortable house
- Other technology
- Clarification on contractor bids or recommendations
- Etc.

We provide recommendations based on:

- Utility bills / Energy Audits
- Windows, doors, crawlspace, attic
- HVAC, water heater, stove
- EV charging, EVs
- Fireplace, roof
- Insulation and sealing
- Electrical Panel (100 amp might be ok)
- “Ecosystem” Design of home



# HOME TOURS

Monthly tour of an electrified/green home

- Working with New Energy Colorado
- Owners of electrified and sustainable homes offer to give tours of their homes
- Eventbrite



# WORKFORCE DEVELOPMENT

Problem – not enough workforce

- Not enough contractors
- Contractors don't want to learn new tech
- Not enough young people going into the trades

Work with school districts to make kids aware

Work with job organizations

Work with community college, trade schools



# PUBLIC OUTREACH

- Tabling
- Speaking engagements
- EV shows
- Assisting local governments



# AND MORE...

Our goal is to help reduce bottlenecks in the home electrification process

Many players: Homeowners, contractors, contracting teachers, schools, government, builders, manufacturers, trade organizations, financial institutions, realtors, etc.

| Homeowners                         | Contractors                               | Government                                      | Builders                                 | Manufacturers                         | Trade Orgs                             |
|------------------------------------|---|---|--|---------------------------------------|--|
| Homeowner/buyer Education          | Existing Contractor Training              | Government Incentives                           | Existing Builder Training                | Manufacturers Supply Shortages        | Trade Organizations Website Info       |
| Homeowner Costs / Incentives       | Recruit HS Grads/Untrained Into BI Field  | Government Building Code                        | Recruit HS Grads/Untrained Into BI Field | Manufacturers Better/Cheaper Products | Trade Organizations Classes            |
| Homeowner Guidance Through Project | Contractor Incentives                     | Educating Government Officials                  |  | Manufacturers Provide Education       | Trade Organizations Mentoring          |
|                                    | Building Retrofit Specialist              | Gov More Inspectors & Training Inspectors       |  | Manufacturers Buying Products in Bulk | <b>Financial</b>                       |
|                                    | Contractor Incentive to do more than code | Ordinance for disclosure of energy costs/rating |  | Software For Carbon & Embodied Carbon | Financing                              |
|                                    | Apprenticeships                           | PUC influence                                   |  | Local Reused Recycled Materials       | <b>Realtors</b>                        |
|                                    | Teachers                                  |   |  | Grants to municipalities              | Education                              |
|                                    |   |   |  | Distributors need to have supply      | Energy Efficiency in Real Estate Sites |

# WHO WE ARE

About 35 members

Home Electrification Geeks

But some know little about home electrification

- Marketing
- Workforce Development
- Website
- Education





# OUR ORIGIN STORY

Stuart Cummings and Julia Moravcsik

- EV shows
- How can we do the same thing with building electrification?
- Direct Action vs. Indirect (Legislation etc.) HPWH = 1 ton CO2

Nick Stevens

- Website “Go Electric Colorado”



# OUR FUTURE

2,500,000 homes in Colorado!

- Scale!
- Other Locations
- Get the word out about consultations

Advisors

- Recruit more advisors
- Train advisors

Other volunteers

Recruit other volunteers



City of  
Louisville



# Thank You

**Julia Moravcsik**

**[julia@goelectriccolorado.org](mailto:julia@goelectriccolorado.org)**

**Website: [goelectriccolorado.org](http://goelectriccolorado.org)**



# GoElectric Colorado

- LSAB Discussion
- Public comment (3 minutes per comment)

# Discussion Item: Energy Code Memo

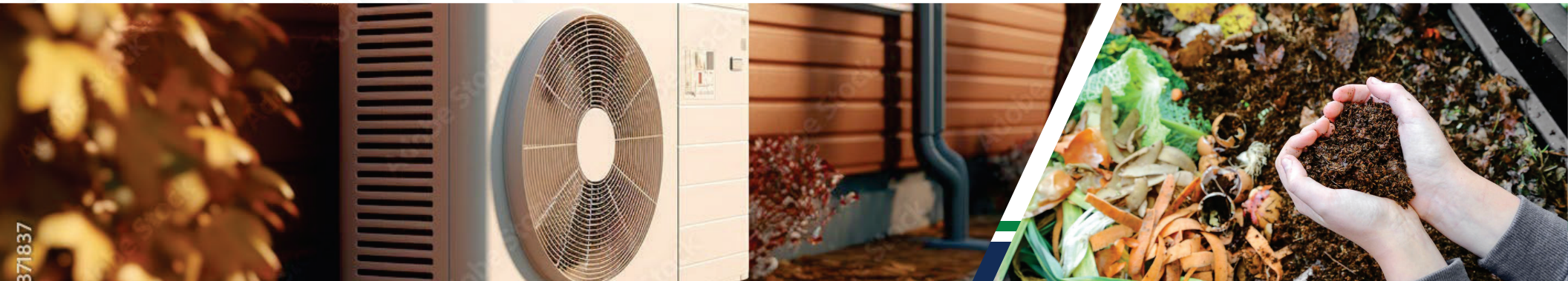
## Approval- 10 minutes

- LSAB presentation
  - Review draft memo
- Public comment (3 minutes per comment)
- LSAB discussion and direction
  - Does LSAB want to approve the memo as written?
    - Motion
    - Seconded motion
    - LSAB vote
    - Record vote



# Brainstorming

Let's get creative!



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# LSAB May 2024 Meeting

## Discussion Items for Next Meeting

- Council 2025 Work Plan Priority Pitches
- City's Property Improvement Programs
  - Austin Brown, Economic Vitality Specialist
- Commercial Decarbonization Strategy (research and advising)
  - Jenn Dingman from PACE

Adjourn