

Sustainability Advisory Board

Agenda

July 19, 2023

**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.*

The Board will accommodate public comments during the meeting. Anyone may also email comments to the Board prior to the meeting at KBetzold@LouisvilleCO.gov.

- I. Call to Order
 - Lev is July secretary.
- II. Roll Call
- III. Approval of Agenda
- IV. Approval of Minutes
- V. Public Comments on Items Not on the Agenda – 10 minutes
 - 3 minutes per comment
- VI. Staff Updates – 10 minutes

Persons planning to attend the meeting who need sign language interpretation, translation services, assisted listening systems, Braille, taped material, or special transportation, should contact the City Clerk's Office at 303.335-4536 or MeredythM@LouisvilleCO.gov. A forty-eight-hour notice is requested.

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.

VII. Discussion Item: Residential Energy Efficiency & Electrification Rebates – 30 minutes

- Chair Presentation – Todd Budin
- Public Comment (3 minutes per comment)
- LSAB Discussion and Recommendation

VIII. Discussion Item: Internal Decarbonization Plan Draft Memo – 15 minutes

- Draft Memo Overview – Josh Cooperman
- Public Comment (3 minutes per comment)
- LSAB Discussion and Approval

IX. Discussion Item: Lawn Equipment Electrification Memo – 15 minutes

- Staff Update
- Public Comment (3 minutes per comment)
- LSAB Discussion and Direction
 - i. Does LSAB want to write a memo to Council? If so, outline content and appoint member to write memo.

X. Sub-Committee and Board Member Updates

XI. Administrative Tasks

- Staff to write next Spotlight, due August 15.
- Determine writers for remaining 2023 Spotlights
- Dan is August secretary

XII. Discussion Items for Next Meeting

- LSAB outreach plan
- Neighborhood engagement strategies
- 2023 LSAB Work Plan

XIII. Adjourn

Sustainability Advisory Board

Meeting Minutes

June 21, 2023
Louisville Public Library, Second Floor Board Room
951 Spruce Street
6:30 PM

Call to Order – Chairperson Todd Budin called the meeting to order at 6:36 pm.

Roll Call was taken and the following members were present:

Board Members Present: Tiffany Boyd, Todd Budin, Josh Cooperman,
John Cowley and Lev Szentkiralyi

Board Members Absent: Dan Mellish, Megan Ottesen

Staff Members Present: Kayla Betzold, Hannah Miller

Approval of Agenda –

Josh moved to approve the agenda; Lev seconded the motion. The agenda was approved by all members.

Approval of Meeting Minutes –

Lev moved to approve last meeting's minutes; Josh seconded the motion. The minutes from the May 17, 2023 meeting were approved as written.

Public Comments –

RJ Harrington: RJ wondered about the differences between the Internal Decarbonization Plan and Community Decarbonization Plan.

Staff Update –

Kayla clarified that the Internal Decarbonization Plan is the municipal plan and the Partners in Energy plan is the Xcel Energy Community Decarbonization Plan. Kayla welcomed Hannah Miller, the City's new Sustainability Specialist. Kayla and Hannah are now the Sustainability division within the City Manager's Office. Hannah introduced herself to the board and explained that she's from Wisconsin and has a degree in Urban Resilience and Sustainability. She previously worked at ICLEI USA managing Midwest states, including GHG inventories, risk assessments, and decarbonization efforts. Kayla explained that Hannah will be focusing on the Sustainability Spotlight and other communications, disposable bag tax, Green Business Program and other commercial programs (including PACE partner). She will also help with events and program coordination. Hannah said her favorite color is olive green and asked the board to include their favorite colors in the meeting minutes. John – burgundy, Lev – forest green, Josh – true orange, Todd – navy blue, Kayla – forest green, RJ – sun yellow, Mary – okra Kayla mentioned that the Electrify Your Ride event is on Tuesday, June 27 and includes an EV and e-bike ride and drive.

Todd asked about Marshall Fire recovery. Kayla responded that the current Xcel rebate data may be lower than the end result, as many qualifying residents have not completed rebate applications.

Lev asked if Republic data about contaminated compost can be included in the next month's staff update. Kayla said yes, she can include that information.

Discussion Item – Internal Decarbonization Plan

A presentation was shown by Ashley and Brian from McKinstry More information about the presentation can be found in the June packet slides. Ashley mentioned that the roadmap will be shown to City staff on July 12 and City Council on August 15. Cohort 1 buildings include the Rec Center, library and police. Cohort 2 buildings include the two water treatment plants and wastewater treatment plan. Cohort 3 buildings include City Services, the golf course, City Hall and the Arts Center. Load reduction is low hanging fruit and will be included in the roadmap. In regards to baseline energy use, 85-90% of energy use is in buildings

and 64% of that is the Recreation Center. In regards to fleet, they are focusing on light duty, then light duty high performance, then heavy duty. After 2030 the City can focus on large heavy duty and non-road equipment. In regards to renewables, they recommend on-site City owned renewables (2.8MW) at a cost of \$12-13M which would offset ~25% of City energy use. Phase 1: 2024-2026, phase 2: 2027-2029, phase 3: 2030-2040. They are recommending the roadmap be extended beyond 2030 as there is equipment in some facilities that will not be at the end of its useful life. As Xcel's grid gets cleaner, the mix of renewables we will need to purchase will change. In regards to full electrification vs. hybrid, the consultants said that site electrical infrastructure will likely need to be upgraded to fully electrify. Hybrid is more cost effective, but is not true decarbonization. In regards to equipment, 80% of equipment is mowers at the golf course. In regards to grants, Kayla is applying for many types of grants to support the implementation of this project.

Public Comment

RJ Harrington: RJ had questions about the baseline electricity and fossil fuel amounts. He felt concerned about the Xcel clean grid assumptions.

LSAB Discussion

LSAB members asked questions including: What is the plan to move past hybrid to full decarbonization? How would the timeline shift? How can LSAB advocate for full decarbonization? If equipment electrification is not included in the roadmap, how is it budgeted? Considering 80% of equipment emission are lawn mowers at the golf course, recommended that policy should be put in place that replacements are electric. LSAB member: Does this sector of emissions include city only or sub-contracted equipment, too? Kayla: City only.

McKinstry: Covered 'Funding and Implementation Strategies' and timeline of remaining project and deliverables. There are capacity constraints and array sizes for renewable portfolio proposals in relation to Xcel guidelines/procedures. At the Rec Center there is still useful life and embodied/embedded carbon in part of the building from an addition placed in 2018. Therefore, it is broken into two phases for decarbonization. LSAB member: 50% offsets were purchased, who

monitors that? McKinstry: What is the utility providing for grid mix/emissions factor and why is that fluctuating? LSAB member: 4x the cost for hybridization and 5x the cost for full decarbonization. McKinstry: Discussed this discrepancy. LSAB member: Was geothermal considered? Rec Center was analyzed and retrofitted. Could be possible at the water treatment plant, and economics will affect this. LSAB member: How does the hybrid best practices impact this plan? McKinstry: Controls for commercial areas are more robust than residential and have more influence. LSAB member: What does pencil out mean in your definition? McKinstry: When payback gets out 30-40 years plus. LSAB member: Cost benefit analysis (CBA) of batteries and the impact of those changes. McKinstry: CBA is taken into consideration. Also, co-benefits are being considered in addition to health benefits as well. LSAB member: Are subcontractors and fleets of neighboring emissions (post offices, airports, fed ex etc) factored in? McKinstry: That is the scope for a community decarb plan, not within the scope of this internal decarb plan project. Kayla: This will provide the framework moving forward on our community plan. 30-40 municipalities are working together on regional electrification. LSAB member: Hybridization vs full decarbonization and will we get to full decarbonization? McKinstry: Hybrid is better at this time considering technology is improving, cost will become lower so let's move as far forward as we can. LSAB member: If gap to get to full decarb is 13 million, how can we get there? McKinstry: Batteries for Rec Center were looked at, but it was greater than 100 year payback. LSAB member: Can we place costs over a timeline showing today's costs vs projected costs? McKinstry: Predicting utility/Xcel costs is difficult. LSAB member: What about a solar farm installation? Can Louisville have them and/or floating solar? McKinstry: Floating solar will be included in the report for further investigation. Community solar has a lot of land use restrictions, 40% is for the municipality. Denver is trying community solar for the municipality but there are a lot of intersecting issues. LSAB member: Considering ground mount solar, what is that land designated for? McKinstry: Wastewater treatment plant is considering an expansion. LSAB member: What is the role or capacity of city lands to sequester carbon? LSAB

member: Rec. Center rooftop hot water heaters. McKinstry: Some of these topic areas are challenging from a longevity perspective. This plan (IDP) can and should be revisited in 5-7 years for a refresh and reevaluate if hybridization is still the pathway forward or if full decarbonization is better at that time. Considering retiring HVAC systems early has to take into account embodied carbon vs electricity not being clean and having natural gas as a back-up. City is currently 4% of total community-wide emissions. LSAB member: Only one EV charger at the golf course? Can we get more? Apt. buildings can use the charger/s at the golf course. McKinstry: There will be 8 spots total and the electrical charging is being looked at. There is no established follow-up to ensure this happens. Staff support and especially Public Works support. Breaking the IDP into 3 phases will help with accountability and much of this outlined and people/depts will be identified for next steps pending Council approval. LSAB Direction: Outline for memo includes: endorsing the schedule, emphasize the commitment to accountability (adoption is different than implementation), hybridization vs full decarbonization recommendation w/ recommendation to revisit plan in 5-7 years (LSAB member: Hybrid is more fiscally responsible), recommendation for goal past 2030, City-owned solar vs continuing to rely on Xcel, and recommendation to fully investigate grant options.

Discussion Item – Dark Sky Lighting Draft Memo

Josh provided the board with a draft Dark Sky Lighting memo for review and approval.

Public Comment

None.

LSAB Discussion

The board agreed to support the draft memo as written. Tiffany made a motion to approve the memo. Todd seconded the motion. The memo was approved by all members in attendance.

Sub-Committee and Board Member Updates –

None

Administrative Tasks –

Staff will write the July Sustainability Spotlight. Lev is the July secretary.

Discussion Items for Next Meeting –

Kayla said that the July meeting would include a discussion about the Internal Decarbonization Plan draft memo and residential energy efficiency and electrification rebates. Kayla will talk to Hannah about presenting neighborhood engagement programs in July.

Adjourn –

Josh moved to adjourn the meeting and Tiffany seconded the motion. The meeting was adjourned at 8:41 p.m.

Memorandum

To: Louisville Sustainability Advisory Board

From: Kayla Betzold, Sustainability Manager

Date: July 19, 2023

Re: Staff Updates

Events

- The Ice Box Challenge will be coming to Louisville July 27 through August 13 and will be located at the John Breaux park across from the Louisville Public Library.
- The City will be hosting a Commercial Energy Code Implementation meeting to educate business owners about the new commercial energy code on Tuesday, August 29 from 6-8 p.m. at the Louisville Recreation Center.
- Ecotoberfest will be in Louisville at Community Park on Saturday, October 7 from 2-6 p.m. and will feature live music, sustainability-themed vendors, an EV and e-bike showcase, food trucks and kids activities.
 - Vendor recruitment is happening now. Reach out to Hannah Miller (hmill@louisvilleco.gov) with names of organizations/companies that would be a good fit for the festival.

Projects and Programs

- The Green Business Program is now open to new businesses and re-certification for existing businesses. The applications will be open through September 30, 2023.
- Staff is currently developing the bag tax funded commercial waste reduction programs, which will be ready to implement in fall 2023.
- Boulder County and municipalities are moving forward with the Solar United Neighbors solar co-op, which will launch on Monday, September 18 at the Lafayette Public Library from 6-8 p.m.
- The Renewable Energy Portfolio will be included in the August LSAB packet and will be advertised to community members in the Fall Community Update.
 - A disclaimer will be added to the portfolio that encourages residents to work with their solar developers and Xcel Energy to evaluate potential infrastructure costs associated with onsite PV arrays.



City of Louisville

City Manager's Office

- Information about the solar co-op will be included in the portfolio.
- Information about the US Solar community solar subscriptions will be included in the portfolio.

Council Work Plan Items

- The Community Decarbonization Plan project has begun. Workshop 1 focused on an introduction to the topic and a discussion around the vision for the project goals, targets and strategies.
- The Internal Decarbonization Plan final report will go to Council on August 15 for potential adoption. If adopted, the City will move into the implementation phase of the project and will evaluate implementation strategies such as Energy Performance Contracting through the Colorado Energy Office.
- The City's Comprehensive Plan project has begun. Public engagement for this project will begin in fall 2023.

Grants

- The City is applying for \$5M in DOLA Climate Resiliency funds for Recreation Center decarbonization.
- The City is applying for \$1M in Colorado Energy Office funds for Library decarbonization.
- The City will soon be applying for Charge Ahead Colorado funding for publicly available EV charging at City facilities.
- The City is waiting to hear about the submitted funding request of \$2.2M through Congressionally Directed Spending.

Compost Contamination

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total Tons
Contaminated Compost			3.05	82.49	99.79	0	185.33
Compost	64.32	47.41	84.46	12.97	79.36	192.89	481.41
Trash	241.19	209.7	231.95	246.89	270.08	355.24	1555.05
Recycling	108.24	96.35	95.14	94.21	108.79	129.81	632.54
Diverted	41.7%	40.7%	43.3%	24.6%	33.7%	47.6%	39.03%



Sustainability Advisory Board

July 2023

Kayla Betzold, Sustainability Manager

Discussion Item: Residential Energy Efficiency & Electrification Rebates

Overview

- Todd Budin, LSAB Chair

Public Comment

- 3 minutes/comment

LSAB Discussion and Recommendation

- What recommendation does LSAB want to make?

Louisville Rebates

Overview and Discussion

Residential Fossil Fuel Direct Use (Louisville home)

Device	Fuel Type	Fuel Used per Yr	CO2 lbs equivalence	Annual Co2 emitted (lbs)	Annual Co2 Tons
Furnace	Nat Gas/Therms	600	13.4	8040	3.65
Hot Water Heater	Nat Gas/Therms	156	13.4	2090.4	0.95
Gas Stove	Nat Gas/Therms	6	13.4	80.4	0.04
Vehicle (1)	Gasoline/Gallons	571	20	11420	5.19
Lawn equip	Gasoline/Gallons	3	250	750	0.34
				Total Metric Tons	10.17

Note: Colorado avg: 21mpg, 12,000 miles per year

Transition Costs (Louisville home)

Car Charger + wiring	50 amp service	\$750
Attic Insulation	R-45 =>R-60 with air sealing	\$2,200
Panel upgrade	200 amp service	\$2,500
Line for HW Heater		\$400
Heat Pump HW Heater*	Rheem 60 gallon hybrid installed	\$2,000
Lennox Ducted Heat Pump Retrofit*	Existing gas furnace engages at 5 degrees	\$7,400
Induction Stove	Wiring already existed	\$2,200
		\$17,450

Heat Pump had the Most Incentives

Up Front Cost	\$16,000
Xcel Cold Climate HP rebates	-2000
Costco Lennox promotion	-2,700
Boulder County	-\$300
CO State Tax Credit 10%	-\$1,600
Federal Tax Credit - 30%, Max. \$2k	-2000
Cost after incentives	\$7,400

Lennox 4 Ton, 21 SEER, 11.6 HSPF

Recommended Louisville Rebates

Upgrade	Rebate
Cold climate heat pump	\$400
- Additional if removing gas furnace	\$500
Non-cold climate HP	\$250
HP water heater (replace electric water heater)	\$250
HP water heater (replace gas water heater)	\$500
Attic, wall insulation	\$250
Replacing gas stove with electric	\$150

Scenarios	
Full Electrification (\$1,800)	11
Partial (\$900)	22
Total Projects	33

- Administered by EnergySmart BoCo
- Consistent with City of Boulder
- No program/admin fee being charged
- 3rd party check processing fee
- 23/24 budget is \$40,000

Discussion Item: Internal Decarbonization Plan Draft Memo

Overview - Josh Cooperman

Public Comment

- 3 minutes/comment

LSAB Discussion and Approval

- Draft memo changes, comments, discussion
 - Motion
 - Seconded motion
 - LSAB vote
 - Record vote

Discussion Item: Lawn Equipment Electrification Memo

Staff Update

Public Comment

- 3 minutes/comment

LSAB Discussion and Direction

- Does LSAB want to draft a memo to Council? If so, outline content and appoint member to write memo.

Discussion Item: Lawn Equipment Electrification Memo

Staff Update

- RAQC has rolled out a commercial electrification program with up to \$3,000/participant. Total budget = \$60,000
- PACE commercial electrification program highly successful. Up to \$15,000/participant. Total budget = \$300,000 (over budget already)
 - Program feedback: lack of commercial equipment, average wait time 4-6 months depending on equipment type and amount
 - AGZA conducting 3rd event with PACE to follow up with current participants and collect/analyze program data
- City of Boulder not moving forward with project/policy currently – they are keeping a pulse on statewide movement/legislation

LSAB July 2023 Meeting

Sub-Committee and Board Member Updates

Administrative Tasks

- Staff to write next Sustainability Spotlight, due August 15
- Determine remaining Spotlight writers
- Dan is August secretary

Discussion Items for Next Meeting

- LSAB outreach plan
- Neighborhood Engagement Strategies

Adjourn

DRAFT Memorandum

To: Louisville City Council Members
From: Louisville Sustainability Advisory Board
Date: August 15, 2023
Re: Internal Decarbonization Plan

Dear Louisville City Councilmembers

The Louisville Sustainability Advisory Board writes you today regarding McKinstry Engineering's plans for decarbonizing the City's buildings and operations. First of all, the Board wishes to commend City Council for recognizing the necessity of and prioritizing the planning for this municipal decarbonization. The Board also appreciates being involved in the planning process. Moreover, the Board applauds City Council's goal of complete municipal decarbonization by 2030. The Board considers municipal decarbonization to be the City's singlemost important sustainability initiative and one of the City's most important initiatives: decarbonization is absolutely crucial to mitigating climate change. The Board also wishes to emphasize the urgency of municipal decarbonization: considerable decarbonization within the next decade is absolutely essential to keeping global warming within livable bounds.

At the Board's June meeting McKinstry presented its latest plans for municipal decarbonization. The Board was impressed with McKinstry's work, and the Board endorses McKinstry's plans, both McKinstry's recommendations for how to achieve municipal decarbonization and McKinstry's timeline for implementation of these recommendations. The Board recognizes that this timeline does not achieve complete municipal decarbonization by 2030, but the Board understands the reasons for and supports extending the timeline. The Board suggests that the City investigate the capacity for City-owned lands to sequester carbon, potentially offsetting the extra carbon emitted over this extended timeline. More specifically, the Board supports McKinstry's plans for increasing the City's own solar



COLORADO • SINCE 1878

energy generation rather than relying on Xcel Energy’s efforts to transition to carbon-free energy sources.

The Board thus recommends that City Council adopt McKinstry’s plans for municipal decarbonization and swiftly pivot to these plans’ implementation. The Board further recommends that City Council establish means to hold the City accountable for achieving its decarbonization goals, for instance, by appropriately forecasting staffing and budgetary needs. The Board recognizes that the City will most likely require supplemental funding to meet these goals; accordingly, the Board strongly encourages the City to explore all possible avenues of funding, ensuring that City staff has the capacity to pursue this funding.

Finally, the Board recommends that the City revisit and revise its municipal decarbonization plans in the next few years. The City may be able to advance more rapidly towards its decarbonization goals by taking advantage of new technologies and methodologies. In particular, if City Council decides not to achieve complete municipal decarbonization by 2030, then the Board recommends that the City make definite plans for achieving complete decarbonization at an appropriate time after 2030.

The City’s decarbonization efforts will set an example for not only the Louisville community, which is about to begin its own decarbonization planning, but also neighboring municipalities and communities. Given the necessity and urgency of decarbonization, the Board hopes that Louisville will become a shining example through its actions.

Thank you for considering our recommendations.

Sincerely,

The Louisville Sustainability Advisory Board