

PARTNERS IN ENERGY

Louisville Decarbonization Planning Workshop 2 Agenda

September 7, 2023

12:30 - 2:30 PM

Louisville Library, First Floor Meeting Room

951 Spruce St, Louisville, CO 80027

Participants

Name	Organization
Jennie Geiger	Stakeholder Team
Eric Lund	Stakeholder Team
Marina La Grave	Stakeholder Team
Jenny Lewis	Stakeholder Team
Audrey Debarros	Stakeholder Team
Todd Budin	Stakeholder Team
Elizabeth French	Stakeholder Team
Scott Reichenberg	Stakeholder Team
Kayla Betzold	City of Louisville
Hannah Miller	City of Louisville
Joe Limone	Xcel Energy
Terry Hatfield	Partners in Energy
Sarah Kaye	Partners in Energy

Agenda

Time	Agenda
12:30 - 12:40 PM	Welcome & Updates
12:40 - 12:50 PM	Vision Feedback
12:50 - 1:25 PM	Goal Setting & Scenario Modeling
1:25 - 2:25 PM	Strategy Brainstorming & Prioritization
2:25 - 2:30 PM	Wrap-up & Next Steps

Notes

Welcome & Updates

- Round Table Introductions
- Stakeholder Expectations
 - Please actively engage with us during this workshop and all future workshops
 - Educate us, the group, and yourselves on topics. Be an eye for the community.
 - Represent the community
 - Be a critical eye for the plan
- Planning timeline
 - Workshop 2 today
 - Completing a 50% council presentation later this month
 - Will do two more workshops in October and December
 - Community engagement will be done this month to help inform future workshops as well

Vision Feedback

- The vision statement should reflect the community as a whole, from an energy perspective
- Serves as the North Star for the plan framework
- Reviewing the initial draft of the vision statement, feedback during the meeting was:
 - It is too lengthy, and should be more concise
 - What is the percentage of underserved communities in Louisville, Colorado?
 - Depends on how this is defined.
 - Follow up about the demographics and underserved percentage of Louisville
 - The vision statement should focus more on equity
 - One person likes the vision components as written
 - The vision should be shorter
 - How is the vision statement being used? It should be short, memorable
 - It is a high-level intro to a much longer plan
 - Elements that could be taken out from the vision include drawing down carbon, and specifying sectors
 - The vision should set the stage for what the plan will accomplish, but leave certain details out such that the plan elaborates further
 - Is there a vision statement for the Louisville Sustainability Action Plan? Perhaps use this, or take inspiration from it to help craft a revised version of the vision statement
- We will take the feedback today and craft a revised version of the vision statement
 - Reference the City's vision
 - Build in feedback
 - Make sure that impacts to the environment and community are being reflected
 - One example could be "Louisville will take a balanced, equity-focused approach to drawing down community carbon emissions"

Goal Setting & Scenario Modeling

- Based on feedback from Workshop 1 – saw some alignment around aligning with Superior
- What are we modeling
 - Building efficiency and electrification, as measured through participation in Xcel Energy programs (e.g., increased participation in heat pump programs)
 - Transportation electrification, as measured through EV adoption utilizing DMV data
 - Energy supply as measured through on-site systems plus subscriptions
- What will we answer today
 - How much energy is being used in Louisville today? How will it change and in which sectors?
 - What is the current state of renewable energy in the community?
 - What are current EV adoption rates?
 - What is the current state of Xcel Energy program participation in Louisville?
- How energy utility data get used through Partners in Energy
 - Important to identify data-driven targets to support tracking in implementation – to understand our impact
 - Data privacy is paramount – any single sector must have at least 15 customers and no more than one customer can have more than 15% of total energy use for that sector
 - A premise does not equal one customer
- Community growth
 - Premises can be a proxy for community size and community growth – 5% of growth in premises in the last three years. This is driven by mostly residential premises, although the commercial sector is growing much faster
 - **Stakeholder Question:** 11 mobile home parks in the area, and one in the City of Louisville – how is that energy use captured? Double or tripling of utility bills due to poor insulation
 - From a premise perspective, likely an undercount because they are centrally metered, but energy use is accurate for users
 - Need to acknowledge that “one size doesn’t fit all” and some subsectors need different messaging and support
 - Stakeholder update: there is only 1 mobile home park in Louisville, still a good opportunity to target
- Energy use
 - Natural gas is uncharacteristically evenly split between residential and commercial sector (typically natural gas use is driven by residential sector)
 - Commercial use is driven by process uses, industrial uses, space heating and cooling
 - Electricity use is primarily commercial driven – likely related to a high number of commercial properties with high demands
 - HVAC drives both electricity and natural gas use – good opportunity for energy retrofits
 - **Stakeholder Question:** Was there a recent state bill requiring buildings to maintain a certain level of energy efficiency?

- State energy code – went into effect July 1, 2023
 - Louisville energy code exceeds state code
 - Building Performance Standard – energy benchmarking requirements for buildings over 50,000 SF (must submit energy use through state software – reductions required by 2026 and 2030) – for existing buildings
- **Stakeholder question** – can we see the median of data? Yes, will provide as part of plan.
- Per premise energy costs for commercial approximately 10x more than residential (on average – acknowledging that there is a huge range of energy use, especially in commercial sector)
- Louisville tends to be lower energy use on residential side compared to regional peers
 - Slightly larger homes in Superior/Lafayette may lead to this difference
 - Higher average use on commercial side – likely due to the types of businesses (industrial/data center, restaurants) – Superior is more retail focused
- Energy savings
 - **Stakeholder Question:** To what extent are all energy savings captured?
 - Savings are largely estimated as “deemed savings” based on participation in Xcel Energy rebate programs
 - Deemed savings are a Louisville average – mostly deemed on a residential side, on the commercial side, projects tend to be calculated in actuality given their larger scale
 - Participation is counted when a customer is filing paperwork for a rebate (e.g., lighting, HVAC)
 - Ex. Window replacements are missed due to lack of a rebate program and data
 - **Stakeholder Question:** How are Marshall fire efficient rebuilds captured? Participation in Energy Star New Homes program
 - Most of natural gas savings occurred on the residential side
 - Natural gas is traditionally hard to reduce on the commercial side, but important to address for decarbonization
 - Big push post Marshall Fire to do air sealing and insulation for residents as well as big uptick in the ENERGY STAR New Homes program
 - **Stakeholder Question:** Can we break out mobile home parks? These are our front line workers and community members – opportunity to treat them as a case study
 - **Opportunity to elevate as a separate strategy** – a number of free resources available to weatherize – opportunity to establish that relationship
 - **Eagle County weatherization and electrification** – occurring through EnergySmart, and Louisville may be able to provide this data
- Renewable Energy
 - Certified Renewable Percentage – renewable energy that’s already on the grid
 - Beyond what’s on the grid, there are programs that we can track above and beyond the grid
 - 2021 renewable energy in Louisville was 42% (7% community driven), and in 2022 it was 50% (8% community driven). Renewable energy on the grid is driving this transition

- By 2030, Xcel Energy anticipates 80% carbon reduction from 2005 and by 2050, 100% carbon free electricity
 - Five available renewable energy programs, and three of them are subscription based – high level of adoption (15% residential, 7% on business side)
 - Residents tend to add on-site solar, businesses tend to subscribe
 - Benchmarked across other communities, Louisville is the middle of the pack for residential demand side management participation, but leading the pack on the commercial side participation
 - Demand Side Management programs includes demand management (e.g., ac controls) and efficiency measures (e.g., HVAC rebates, lighting rebates)
- EV ownership
 - Aligned with Boulder County (3%) of vehicle registrations for battery electric vehicles
 - The total percentage is up to 9% if hybrids/plug-in hybrids are included
 - Public charging stations are fairly well dispersed throughout Louisville
 - Data doesn't include home charging
 - Are we including state programs from energy office?
 - Louisville e-bike program participation, for example, is not included
- What will it take to achieve our established goal of maintaining community emissions below 2016 levels?
 - Given community growth, without interventions, emissions will grow, but grid greening anticipated to draw down emissions over time
 - Louisville's current emissions goal to reduce emissions annually compared to 2016 – projected to meet this without any action
 - At Workshop 1, we received feedback to take a middle-ground approach, aligning with Superior's goal
 - Several activities will result in decarbonization over time
 - Grid renewable electricity
 - Program based renewable energy
 - Transportation electrification
 - Energy efficiency and building electrification
 - Larger gap to address in the long-run, primarily from natural gas
 - Associated targets show what we need to do to achieve our goals on an annual basis through 2050
 - Energy efficiency represents 7% increase in program participation
 - Building electrification – 450 buildings annually need to fully electrify (biggest jump from historical trending, however it is not well understood how many buildings today are fully electrified)
 - **Stakeholder Question:** What would it look like to add in service life and assume that all new replacements are electric?
 - Need to discuss whether this is enforced by a policy or rebate
 - May require training or incentives to installers – can we offer rebates to installers? How many total installers do we have?

- Front Range Beneficial Electrification Network is leading the way for workforce development
 - Office of Sustainability, Climate Action, and Resilience: workforce development in Boulder County working on it, too
- **Stakeholder Question:** How far ahead do businesses need to be informed of opportunities based on useful life?
 - Do we need to do a full analysis or can we target centers within a certain time frame based on construction or last permit pulled?
 - Could we use permit data from 14 years ago – then reach out and connect with incentives – engage and understand how Louisville can help –
 - Acknowledge getting data can be a challenge
 - Need to know how many businesses own their own equipment and refine our target audience
- Transportation electrification – 100-200% increase in EVs on the road
- Renewable energy – 70% increase in participation, but in line with historic trending of new participation
- **Stakeholder Question:** How can we break down target to understand impact of individual measures?
 - Can we encourage residents and businesses to make common-sense and opportunistic incremental measures?
 - Opportunity to leave natural gas back up – can avoid service and panel upgrades
- Anticipated cost
 - Conducted a literature review to understand per household, per building costs
 - For building efficiency/electrification: includes heat pump, water heater, electrical upgrade upgrades, and deep efficiency retrofits
 - Transportation: includes home charging, commercial level 2 charging and vehicle cost
 - Supply side: includes subscription or rooftop installation
 - Normalized by household/business
 - Range driven by energy efficiency and electrification – scale is lower on transportation electrification and
 - Estimates are previous to incentives/total cost – not just looking at incremental cost of electric vs gas
 - **Stakeholder comments**
 - Add estimated savings column / ROI
 - Add standard cost (like for like)

- Rebates are available to reduce first cost, but may still be a gap – can have a conversation about what can Louisville do to reduce cost further
- Focus on incremental cost

Strategy Brainstorming & Prioritization

- Strategies can include policy, programmatic or funding-based
 - Policy could be a requirement or could include new incentives
 - Programmatic is based in education of available resources, advisement on how to move forward
 - Funding includes financing requirements, additional efforts to entice the marketplace, etc.
- Sustainability Action Plan has a number of strategies included in that would be helpful for this effort in implementation
 - Reviewed the plan for energy and transportation related strategies
- Building Efficiency/Electrification
 - Includes strategies of educating the community, benchmarking energy consumption, advisement/funding strategies to engage property manager in decarbonization
 - One additional strategy that was mentioned at the last workshop was further analysis to understand remaining life of carbon using equipment to help targeting outreach
- Transportation Electrification
 - Installing infrastructure, educating the community about EV adoption, and incentivizing/funding the transition to EV's
- Carbon Free Energy Supply
 - Identify barriers to renewable energy adoption
 - Financing to promote low-interest options
- Other Strategies
 - **Stakeholder Comments:** Lacking engagement strategies
 - Community engagement supports the cause – need bi-lateral engagement, not just education
 - Need to look at community engagement without the power dynamic of education
 - Consider who isn't getting the message? Who isn't at the table?
 - Power in word of mouth
 - Educate is an "obsolete" term, use co-create and utilize community communication
 - City of Louisville does not have an engagement manager on staff for residential community, but some aspect of that exists on the commercial side
 - Prioritize neighborhood engagement strategies
 - City of Louisville has momentum; as engagement has come up in many efforts so far
 - Other strategy ideas
 - Emphasize cost-benefit of upgrades, specifically renewable energy
 - Goal is to take these strategies to build out additional action plans related to them

- Add investigation - Need to gain more information from the community (particularly the commercial side) to understand and then cater engagement to need
 - Could employ a survey to understand what equipment is in the community
 - Could also make the survey required and have a policy that residents/businesses to complete the survey on regular intervals
 - Survey should be physically mailed to reach all businesses
 - Emails are very incomplete to reach the community
 - Looking at hiring a third party to look for feedback on how to do better as a city in the business community
 - Business forums
 - Not currently getting the level of participation needed to reach all businesses
 - Need to reach property owners, not tenants
 - Partner with economic vitality, Boulder County PACE, etc.
 - Consider having cross cutting strategies across all focus areas (engagement, financing, advising)
 - Commercial/Industrial
 - Break this down at a more detailed scale to target high energy users
- Strategy ranking
 - Ranked on fit for Partners in Energy, relative GHG impact, staff impact, financial impact, and equity impact
 - GHG impact was weighted 3x for building electrification, 2x for transportation electrification
 - Highest scoring based on ranking
 - Outreach to facility managers
 - Combine with fact finding/information gathering
 - Promote installation of ev charging stations
 - Need to reflect today's conversation to re-prioritize the strategies
 - Employ cross-cutting strategy approach to combine related strategies
 - Will move prioritization to a survey for the stakeholder team

Wrap-up & Next Steps

- Administer a survey to get feedback on refined strategies
- Develop draft action plans for selected strategies
- Workshop 3 currently slated for late October – will use workshop to fill in details of action plans