CITY OF LONGMONT | Public Works & Natural Resources

Implementation Status of the Climate Action Recommendations Report

September 10, 2020

Review and Implementation

On August 25, City Council reviewed the Climate Action Recommendations Report that is detailed below. The Council received input from City Advisory Boards on the recommendations put forward and discussed the next steps in response to the report. City Council directed City Staff to evaluate all 27 recommendations against a set of criteria including cost-benefit analysis, GHG reduction potential, ease of implementation, and community and equity analysis and report back to City Council with the results of such analysis for City Council review.

Advisory Board Feedback

Below is feedback from the Sustainability Advisory Board, Transportation Advisory Board, Water Board, Parks and Recreations Advisory Board, and Longmont Downtown Development Authority on the relevant Climate Action Recommendations Report recommendations to the board's purview.

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Climate Action Report Feedback

Downtown Development Authority

Recommendation		Comments
Land Use and Waste Management	LW.3) Downtown Pay for Parking	The LDDA Board has discussed the option of paid parking for years. As outlined below, there is critical data about how or when to approach this. We support the work of the Climate Action Task Force and feel that paid parking would be a long-term strategy. Our hope is that in the future, once we have adequately recovered from COVID-19 and see numbers more close to the demand listed in our parking studies, we can consider this option more closely. We have outlined some other strategies that will make paid parking an easier option – as well as encourage less driving in the short term, including more investment into infrastructure that makes alternate modes of transportation an easy option. Until there is considerable demand and toll taken on existing spaces, charging for parking too early can have a strong, negative impact on business owners. We have done two parking studies, 2016 & 2019 looking at the utilization of our parking system throughout Downtown. Right now, it hovers around 56 – 59%. Paid parking works when you hit around 80%. Those studies can be found here: 2016 - https://www.downtownlongmont.com/_files/docs/gic-parking-management-plan_final-dec-2016-(1).pdf 2019 - https://www.downtownlongmont.com/_files/docs/-final-parking-update-tech-memo(reducedforweb).pdf We still do not have adequate bike lanes, bus routes or other transit options to make lack of cars feasible. In my mind, a better strategy is an "All Trails/ Roads lead Downtown" – connecting all parts of Longmont into

		Downtown. With Downtown being the hub – you are also connecting all neighborhoods to each other. This would create a very robust alternate transportation route – for pedestrians, bikes, scooters. This could greatly reduce the demand for parking spaces – without waiting on RTD, etc. With this, a mode shift can come. To have paid parking, you would need a robust infrastructure. I am not sure that $500,000 would cover it – and that would take a very long time to pay off, even with fees and fines. Looking at some kind of shuttle / circulator could be done. But, from my experiences and talking to colleagues throughout country, these are extremely expensive and don't see the ridership anyone ever thinks it will. I urge this group to get more information. Impacts of COVID-19 and recovery will take years. One other thing – for the short term, we are using spaces on Main St. for curbside pick-up. We will monitor this as it moves forward. We are also advocating with the state to allow restaurants to extend liquor licenses and be able to use alleys, parking lots, etc. This will be very important as we navigate openings at diminished capacity, etc.
Any other comments?		

Climate Action Report Comments

Parks and Recreation Advisory Board – 8.10.2020

Recommendation		Voting	Comments
Adaptation and Resilience	AR.1) Public Health	6 Approve as written 1 Approved with noted consideration	A consideration of nature based solutions such as tree planting over hard structure solutions, would make this more complete. Air conditioning would seem to exacerbate the problem.
	AR.2) Water Conservation	7 Approved with noted consideration	The 35% reduction goal does not appear to have the data behind it to support it. How would we get to 35% reduction when Parks and Open Space is already using the most drought resistant/tolerant turf available? More research is required. Balancing act between users: city v's residential. How much would actually need to be reduced in Parks and Open Space? Asking residents to reduce water use while possibly charging more for water seems conflicting.
Land Use and Waste Management	LW.1) Extending Agricultural Zoning	2 Approve as written 5 Approved with noted consideration	Interesting concept lacking details on how it would be implemented and the different impacts.

			Idle land transition, not much for PRAB to consider as it does not address recreational land.
Transportation	T.3) Connected Bikeways	7 Approve as written Approved with noted consideration	
Any other comments?			

Climate Action Report High-Level Comments

Comments from individual board members and were not voted on by the full board.

	High-Level Comments
Climate Action Task Force	Increased protection of Open Space and adaptation strategy. Balancing Act, green islands. Further discussion on how we can balance the residents use and the city's use.
JTP Committee Equity Recommendations	
General Comments?	

Climate Action Report Feedback

Sustainability Advisory Board – 7.15.20

Recommendation		Voting	Comments
Governance		**4 Approve as written**	
Adaptation and Resilience	AR.1) Public Health	**3 Approve as written** 1 Approve with noted considerations	Do we have examples of municipalities that have similar goals that are meeting the goals? Would like to see how that is being accomplished.
	AR.2) Water Conservation	1 Approve as written **3 Approve with noted considerations**	Goal seems arbitrary, fully in support of programs that reduce water consumption, but am not sure that a 40% reduction by 2025 will create workable strategies that are well accepted and sustainable. Goal is unachievable. Will be very supportive of greywater. Very difficult to achieve with a marketplace where other cities are not making this ambitious goals. Need an educated populace that will stay put and not move to other cities. Would like to see an example of a similar City that is achieving the goal and know the techniques. Put greywater back on the table.

	AR.3) Flooding Mitigation and Preparedness Education	1 Approve as written **3 Approve with noted considerations**	No clear prioritization or framework to link all of the goals together. There are more achievable or ambitious goals for City to focus on. There is already education about flooding at parks on Resilient St. Vrain. Commercial realtors and developers should already know and have funding to educate themselves; the City should not pay for that. Matter of priority, because of the 2013 flood, already a heightened awareness of flooding. Should focus on other recommendations first. Does not seem to be on the same scale as public health and water conservation. Why is flood education listed on the same level?
Building Energy Use	BE.1) Building Codes	1 Approve as written **2 Approve with noted considerations** 1 Do not approve	Do not have problem with solar ready provisions and EnergySmart appliances. Have a problem with transitioning to electric heaters and hot water heaters. This policy has worked well in places without winters but is unrealistic here, right now. Could save similar amounts of GHG emissions with other approaches that are less expensive – like efficiency. What is the capacity of the power capacity and the impact of blocks going down because of a stressed

			grid? Does put a burden on builders. Do not approve: Do not want to transition to electric when the City is making its electricity using coal. Equity issue when requiring the consumer to go to all electric. Stress on businesses, especially small businesses. Agree with above comments as well.
	BE.2) Electrification	**3 Approve as written** 1 Approve with noted considerations	Electrification as a goal is not a fair goal when the City is still using coal. Would be more in favor, if the recommendation were more focused on considering if electrification is an option. Comment from a different Board Member: Should be looked at with context of 100% RE goal, we are 50% there.
	BE.3) Commercial Building Benchmarking	**4 Approve as written**	What are we doing to bring education to developers?
	BE.4) Commercial Efficiency and Rebates	**4 Approve as written**	
	BE.5) Increase Residential Efficiency Works™ Program Utilization	**3 Approve as written** 1 Approve with noted considerations	Need targets that are more aggressive.
	BE.6) Expand Low-Income Residential Energy Efficiency Program	**4 Approve as written**	

	BE.7) Climate Action Fund Program & Staff	**3 Approve as written** 1 Approve with noted considerations	Equity issues of mandated electrification.
Education and Outreach	EO.1) Comprehensive Workforce Development	**4 Approve as written**	Reword to assess marketplace need and market to bring people here. Need to assess a market need for the jobs. See this as Front Range Community College offering more courses on green job training. Or opportunities to transition those currently in oil and gas. If implement all of the climate action recommendations, will need more trained workers.
	EO.2) "Big Picture" Climate Lecture Series	**2 Approve as written** **2 Approve with noted considerations**	Echo chamber activities. Are not going to reach who we want to reach. Agree with the above, but it can also be done better. Concern about just focusing predominately on carbon and no other parts of climate change. Virtue signaling is not detrimental. This recommendation is positive because it targets young people in Longmont.
	EO.3) Climate Change Article Series	**3 Approve as written** 1 Approve with noted considerations	Echo chamber activities. Are not going to reach whom we are trying to reach.

	EO.4) Longmont Museum Teaching Exhibit	**3 Approve as written** 1 Approve with noted considerations	Include other topics besides just carbon.
	EO.5) Community Sustainability Liaison Program	**3 Approve as written** 1 Approve with noted considerations	Feel more positive about this because more one-on-one interaction. Do not have a problem with the idea, but do not think it will have a far reach.
Land Use and Waste Management	LW.1) Extending Agricultural Zoning	1 Approve with noted considerations **3 Do not approve**	It is a positive and useful to encourage people to grow their own food, but needs to be tied into greywater and education. Want it to be stronger and include a section on preserving farms as farms. Need to expand allowing residents to put veggies in their front yard. Do not approve comments: Not a solution to address hunger or an efficient way to address local food issues. Rather encourage local farms. This recommendation is a band-aid solution on a deeply structural problem of removing agricultural land in Longmont.
	LW.2) Commercial & Residential Composting	**3 Approve as written** 1 Approve with noted considerations	Need to start with commercial recycling before composting. 75% seems high.
	LW.3) Downtown Pay for Parking	**4 Do not approve**	Municipal parking spots for downtown employees where they can park all day.

Renewable Energy	RE.1) Smart Meters	**3 Approve as written** 1 Do not approve	Need a hardwired option. And bring in an expert to discuss local lawsuits around data security and health issues.
	RE.2) Home Energy Management Systems	**4 Approve with noted considerations**	Ways to try to save energy that require expensive equipment. Better to spend money on insulation and better windows. Agree with above. Agree with above. Expensive improvement. Agree with above.
	RE.3) Energy Savings Program	**4 Approve with noted considerations**	Ways to try to save energy that require expensive equipment. Better to spend money on insulation and better windows. Same comments as above. Notification on their phone would be useful and helpful. But needs to be simple.
	RE.4) Carbon-Intensity Signaling Protocols	**4 Approve as written**	Opportunity to get kids involved. Simple opportunity to learn.
	RE.5) Distributed Energy Resources (small scale renewable power generation & storage)	**4 Approve as written**	
Transportation	T.1) Increase effectiveness of public transit system: Checkpoint /	**4 Approve as written**	

	Flexible Bus Services		
	T.2) Electric Vehicle Charging Infrastructure	**2 Approve as written** **2 Do not approve**	Do we have that many electric cars yet? Bikeways and public transportation are better options than assuming everyone is going to afford an electric car. Hate to lose parking spots. Government does not provide gas stations so we should not provide electric charging stations. Equity issues: why are we subsidizing those who can afford electric vehicles? This is creating expensive infrastructure and it is a bad investment. Would like more research on this.
	T.3) Connected Bikeways	**4 Approve as written**	Safe, not near cars. Available to not just bikes: rollerblades, skateboards, scooters.
	T.4) Alternative Work Schedules	**4 Approve as written**	Great for wildlife and air quality.
Any other comments?		1 Board Member had this comment for all recommendations: Do we have examples of municipalities that have similar goals that are meeting the goals? Would like to see how that is being accomplished.	

Climate Action Report High-Level Comments

Comments from individual board members and were not voted on by the full board.

	High-Level Comments
JTP Committee Equity Recommendations	Great recommendations. Who will ask the questions moving forward? The community should be involved in answering

	the questions. Agree with continuing to work with the JTP Committee. Equity is always good.
Community Engagement?	Community engagement and outreach: focus on high school and junior high age Longmont residents. Focus on receptive groups. Better headlines and outreach on information included in the bill. Maybe more condensed. Reach out to faith groups more. Give restaurants and incentive to put something on a menu.
General Comments?	Can SAB see any revisions to the proposed climate action recommendations? Just Transition Plan is the reason that the Sustainability Plan is worth it and is the key that could make things work. Good job doing it in 6 months. Understand that the recommendations are initial brainstorming and found it to be comprehensive. There are good ideas.

Climate Action Report Feedback

Transportation Advisory Board – 7.13.20

Recommendation		Voting	Comments
Adaptation and Resilience	AR.2) Water Conservation	**Approve as written**	
Land Use and Waste Management	LW.3) Downtown Pay for Parking	**3 Approve as written** 2 Approve with noted considerations	Support the goal but it depends on the timeline. The impact to business owners right now is significant. Down the road would be in agreement with the recommendation, after the impacts of the pandemic have resided.
Transportation	T.1) Increase effectiveness of public transit system: Checkpoint / Flexible Bus Services	**4 Approve as written** 1 Approve with noted considerations	Does not seem like there is a solid plan for implementation. Need to factor in ADA and Call-N-Ride requirements.
	T.2) Electric Vehicle Charging Infrastructure	**5 Approve as written**	Businesses that are supporting the presence of the charging infrastructure should be part of it. The City should not pay for free charging. Twenty charging stations seems low

			(unless each charging station has multiple charging ports).
	T.3) Connected Bikeways	**5 Approve as written**	
	T.4) Alternative Work Schedules	**5 Approve as written**	If possible, would like to see this address people who live in Longmont but work elsewhere, for example, incentives/support to work from home.
Any other comments?		Questions for further consideration: • AR.2: What would this look like for landscapes? Would shutting off water to City parks and golf courses meet this goal? • LW.3: This timeline should align with T.1; Do studies from other cities address impact to low-income households and does it reduce parking; adjust timeline because of COVID • T.3: Does the timeline align with staff vision? • T.4: Has COVID impacted working from home?	

Climate Action Report Feedback

Water Board – 7.20.20

Recommendation		Voting	Comments
Adaptation and Resilience	AR.2) Water Conservation	**4 Do not approve**	The Water Board is not in support of the CATF goal because it believes the water conservation goal is unattainable within the stated timeframe without extreme impacts to the residents of Longmont and that this level of conservation is unnecessary given the design of Longmont's raw water system and existing conservation plans. In addition, the Water Board believes analysis of the environmental, economic, and social impacts of extreme conservation measures designed to reach very high levels of demand reduction would need to be determined. The Water Board is concerned about the impact of extreme conservation measures to economic development, water rates (especially for low-income households), the local environment (e.g. trees and parks), local agriculture (e.g. large scale and residential scale), downstream water rights, return flows, and the overall quality of life for Longmont residents. The Water Board supports evaluating increased water conservation levels beyond current planning levels and has been in support of the Water Efficiency Master Plan and Drought Management Plan that has prepared the community for drought in the past. The City of Longmont has a history of reliable water supply; and since the passing of the first water conservation plan in 1996, has decreased water usage even as the population has increased. During the 2002 drought, the City stayed within a Level 1 drought

			response until August of that year and only went to a Level 2 drought response for a short time. Conversely, other cities had much more serious shortages based upon different water supplies. The City also has already factored in the impacts of climate change into future water supply planning and is basing its water programs to meet future uncertainty and drought. Evaluation of a more ambitious water conservation and drought response goal, if necessary, will require the City to perform an extensive technical analysis and public input process. This analysis should focus on the impacts of future drought and the environmental, social equity, quality of life, and economic impacts of different proposed solutions. If City Council votes to pursue a more ambitious water conservation goal, Water Board proposes that staff complete an analysis within 12-18 months of City Council direction. Until then, the City should follow the goals stated in the Water Efficiency Master Plan and Water Supply and Drought Management Plan.
Any other comments?			

Climate Action Recommendations Report

CITY OF
LONGMONT
COLORADO

June 2020

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Letter to City Council

June 18, 2020

Dear Longmont City Council:

Last year Colorado registered its highest temperature in the state's recorded history (115 degrees on July 20). A year later, 2020 is on track to become one of the hottest years on record, both locally and globally. Given the seriousness of our Climate Emergency, the City's **Climate Action Task Force** is pleased to report to the City Council on our six months of hard work. As requested, the attached report contains recommendations for prompt future actions that can assist Longmont in addressing our worsening climate dilemma before it is too late. These specific recommendations are numerous and varied. All point in the same necessary direction, and we feel all are practical and realistic. We hope they will help the Council to move forward rapidly.

Our Task Force is large and diverse, and we have all learned from working with each other. We come away with the strong conviction that Longmont's ongoing efforts are already bearing fruit, and that the next set of challenges can be met effectively through collective effort. While researching and discussing viable suggestions, three things in particular have strengthened our deliberations. First, the steady engagement of facilitators and members of City government has been invaluable. Second, we benefitted greatly from the community feedback generated by the outreach efforts of the Longmont City Staff and the Institute for the Built Environment. So our report includes details on this outreach activity and the Climate Action Questionnaire.

Third, Longmont's Just Transition Plan (JTP) Committee has provided invaluable input. We thank the JTP Committee for its engagement and cooperation, heightening our attentiveness of the constant need to address climate equity. To encourage greater awareness, we are pleased to include the JTP Committee's recommendations on the importance of equity in climate action. It is integral to our report in numerous ways. Working with the JTP Committee has strengthened our belief that mitigating climate change must be viewed through an "equity lens" so that disadvantaged groups and communities can contribute to positive change and benefit from it, rather than being ignored or penalized. Also, local business owners have been set back hard by the current pandemic. We urge the City to be sure they do not feel unduly burdened or left out as the City shapes future climate-change plans.

When we began our work in January, no one knew our efforts would be interrupted by the spread of the novel coronavirus. Our entire community has felt its disruptive impact, and our Task Force was no exception. Still, we redoubled our efforts. After all, once the pandemic is finally behind us, the much larger and more intractable challenge of global climate change will still be staring us in the face. The clock has not stopped ticking, but we can learn useful lessons from our COVID predicament. *In crises, decisive action is best when it is early and coordinated, even where it imposes short-term hardships. Also, some groups are set back more than others, so sharing present burdens and future benefits equitably becomes vital. Concerted local action, therefore, is crucial, even when the challenge is global. Planning based on community discussion and sound science can be key to long-term success.* Now is the time to put these lessons to use.

We thank the Council for the chance to assist in addressing our largest challenge, and we look forward to helping Longmont move toward a healthier and more sustainable environment.

Sincerely, All the Members of the Longmont City Council's **Climate Action Task Force**

Executive Summary

Climate Resolution Overview

The Longmont City Council passed a resolution on October 8, 2019, declaring Longmont's intent to take immediate and accelerated action to address the climate emergency locally. The resolution was resident-initiated and approved by a unanimous vote. The resolution challenges not only the municipal government of Longmont, but also its residents, to take action to stop and reverse climate change. The resolution supports and advances the goals and strategies identified in the Longmont Sustainability Plan, as well as the resolution passed by City Council in January of 2018 committing to the goal of reaching a 100% renewable energy supply for electricity by 2030.

The Climate Emergency Resolution called for the creation of a working group composed of City staff, other subject matter experts, partners, concerned residents, including those most vulnerable to the impacts of climate change (dubbed the *Climate Action Task Force)*. Convened in December 2019, the Climate Action Task Force was tasked with developing and submitting a report to the Longmont City Council within 120 days of its first meeting outlining further steps the City should take to promote a carbon-free, sustainable city. Due to COVID-19 (2019 novel coronavirus), the due date was extended beyond April 8.

Climate Action Topic Areas & Recommendation Format

The Climate Action Task Force identified six topic areas to focus on for developing climate action recommendations; a total of 28 recommendations are included in this report. The topic areas are as follows:

- Adaptation and Resilience
- Building Energy Use
- Education and Outreach
- Land Use and Waste Management
- Renewable Energy
- Transportation

In addition, the Climate Action Task Force identified equity as a critical component and determined that rather than being a standalone topic area with specific recommendations, that it be integrated throughout all recommendations.

Within each of the topic areas, the Climate Action Task Force developed recommendations that included the following components:

- Goal/Objective – the desired outcome of the recommendation
- Recommendation Summary
- Measurement – the metrics that will be used to measure progress toward achieving the goal/objective
- Achievability – conditions, skills and resources needed to make achieving the goal realistic
- Relevance – aligning the goal with mitigating and adapting to climate change
- Timeframe – timeframe and key milestones for accomplishing the goal
- Social and Economic Impacts - who might be impacted and how (benefits, barriers, negative outcomes), including suggestions for how to mitigate any potential negative outcomes

Based on the information provided above, a SMART Goal Summary (see Glossary) was developed for each recommendation to provide a high-level overview of the recommendations (see Recommendations by Topic Area).

To ensure accountability and oversight of the implementation of the recommendations contained in this report, the Climate Action Task Force discussed multiple options for an appropriate and effective governance structure. The Climate Action Task Force determined that oversight of the recommendations should be incorporated into the Sustainability Advisory Board, and that ad-hoc volunteer technical communities should be formed to support the implementation of specific recommendations as needed. In addition, the Climate Action Task Force recommends incorporating the climate action recommendations into the Council Work Plan (see Governance for more information).

Equity & the Just Transition Plan

In addition to the Climate Action Task Force, the City convened the Just Transition Plan Committee (JTP Committee) to focus specifically on how best to integrate and evaluate equity in climate action efforts. The JTP Committee met concurrently during the same period as the Climate Action Task Force. The committee developed 1) a definition of climate equity, 2) an equity analysis tool to aid in evaluating climate action recommendations for equity, and 3) a set of recommendations for how to continue to integrate equity into climate action efforts.

The impetus of the JTP Committee initially came out of the City's commitment to the transition to 100% renewable energy by 2030, per Resolution 2018-05. The Resolution states that with regards to the transition to 100% renewable energy "it is critically important to be economically responsible, so that Longmont can continue providing affordable energy to our most vulnerable residents, those on fixed incomes, including the elderly and working families," and that the City "shall consider the needs of lower income residents and help minimize the impacts of any needed future energy rate adjustments."

In addition, the City's 2018 Greenhouse Gas Report identified a Just Transition Plan as one of the top strategies toward equitably achieving the City's greenhouse gas reduction targets. The scope of the JTP

Committee was expanded to include equitable climate action after the passing of the Climate Emergency Resolution, which stated, “frontline communities have historically borne the brunt of longstanding environmental injustice including fossil-fuel created degradation and it is acknowledged that these communities must actively participate in the planning, decision making, and implementation of climate action.”

The development of the Just Transition Plan began in 2018. Since that time, City staff determined that instead of being a standalone plan, including equity and just transition best practices in other foundational city plans would be most effective toward realizing the City’s equity and just transition goals. For this report, the JTP Committee and Climate Action Task Force decided to integrate the JTP Committee’s report within the Climate Action Recommendations Report.

Community Engagement & Questionnaire

The City conducted outreach efforts focused on engaging and informing the community about the Climate Emergency Resolution and potential climate actions. Outreach and engagement efforts included presentations and conversations with community groups, poster displays at the City Civic Center, the Longmont Public Library, and the St. Vrain Memorial Building, as well as a community questionnaire that was shared at events, through the posters, and distributed via email distribution lists. A total of 352 residents and 20 businesses participated in the questionnaire. The results of the questionnaire were shared with the Climate Action Task Force to help inform the development of climate action recommendations.

While many individuals, groups, organizations, and businesses were reached, the community engagement process was significantly interrupted due to COVID-19. City staff recommends that the community engagement process, especially engaging frontline communities (see Glossary) and businesses, be reinitiated when finalizing and implementing Climate Action Task Force recommendations.

Climate Action Task Force Process

Climate Action Task Force Composition

Following its unanimous October 8, 2019 vote to pass a resolution declaring a climate emergency and establishing Longmont's intent to take immediate and accelerated action to address the climate crisis, City staff worked to develop a proposed composition of the Climate Action Task Force that would meet the intent and duties defined in the resolution. In the October 15, 2019 session, Longmont City Council approved the following proposed composition of the Climate Action Task Force:

- One City Council member
- Three staff members (from Sustainability, Longmont Power & Communications, and Planning divisions)
- Eight Longmont residents
- Four community partners including
    - Business community; Education community; Affordable housing community; and Non-profit/human services community
- Two technical advisors (non-voting):
    - Platte River Power Authority (Platte River) and Just Transition/climate justice

Climate Action Task Force Formation

City Council directed a selection committee comprised of Lisa Knoblauch – Sustainability Program Manager, David Hornbacher – Director of Electric Services, and Council Member Marcia Martin, to develop and review the Climate Action Task Force applications and recommend final applicants to City Council for approval. The selection committee developed an assessment tool to evaluate topical expertise and other characteristics deemed beneficial for the Climate Action Task Force to help achieve the purpose of the group as stated in the resolution.

The City received 53 Climate Action Task Force applications. Upon review and discussion of all applicants, the selection committee determined the need to expand the resident openings from eight to ten in order to gain the breadth of expertise and perspective needed for the Climate Action Task Force to effectively determine climate action strategies and recommendations appropriate for Longmont. In addition, staff determined the need to include two staff from Planning and Development Services to include both buildings and transportation.

On December 3, 2019, City Council approved the following recommended applicants to serve on the Climate Action Task Force:

- One City Council member: Marcia Martin
- Four staff members
    - Sustainability: Lisa Knoblauch

    - Longmont Power and Communications: Anne Lutz
    - Planning: Blas Hernandez and Phil Greenwald
- Ten Longmont residents
    - Karen Dike; Alessandro Franchin; Diana Gonzales; Thomas Gregg; Tyler Jones; Michelle Mendieta; Lynette McClain; Silvana Munro; Amy Schmidt; and Peter Wood.
- Four community partners
    - Business community: Del Rae Heiser, LDDA
    - Education community: Laurel Mattrey, SVVSD
    - Affordable housing community: Ocean Fredriksen, Boulder County Housing Authority
    - Non-profit/human services community: Joni Lynch, OUR Center
- Two technical advisors (non-voting):
    - Platte River Power Authority (Platte River): Andy Butcher
    - Just Transition/climate justice: TBD

City Council also approved that City staff hire a consultant to facilitate the Climate Action Task Force, Just Transition Plan Committee, and community engagement process.

After the December 3 meeting, Magnolia Landa-Posas agreed to serve in the Just Transition/Climate Justice technical advisor role. In addition, Diana Gonzalez informed staff that she was no longer able to participate, and Laurel Mattrey stepped down from her position at St. Vrain Valley School District shortly after the Climate Action Task Force convened. Jessica Pearson assumed her position and subsequent Climate Action Task Force role beginning in April 2020.

Climate Action Task Force Meeting Overview

The Climate Action Task Force convened for their first meeting on December 18, 2019. At that meeting, they determined the meeting schedule over the next 120 days and identified six topic areas for developing climate action recommendations: Adaptation and Resilience, Building Energy Use, Education and Outreach, Land Use and Waste Management, Renewable Energy, and Transportation. The group first prioritized the areas of Building Energy Use, Renewable Energy, and Transportation, as those areas comprise the majority of Longmont's greenhouse gas emissions. They formed topic area subgroups to develop and refine recommendations using a topic area template and SMART goals policy template (Appendix A: Guiding Documents). Staff provided information on related existing and planned efforts, as well as other background information and resources (Resources), and additional technical expertise. Once the Climate Action Task Force completed draft recommendations on the first three topic areas, they transitioned to focus on developing recommendations for Adaptation and Resilience, Education and Outreach, and Land Use and Waste Management.

Climate Action Task Force members went through a review process of all recommendations and provided comments and feedback for working groups to consider when finalizing recommendations. At the February 27, 2020 meeting, members reviewed and discussed each recommendation under the

Building Energy Use, Renewable Energy, and Transportation recommendations and voted on whether to advance them to the final Climate Action Recommendations Report (Recommendations Report). At the June 1, 2020 meeting, the Climate Action Task Force went through the same approval process for recommendations in the topic areas of Adaptation and Resilience, Education and Outreach, and Land Use and Waste Management. Meeting agendas and summaries for all Climate Action Task Force meetings can be found on the City's website at www.longmontcolorado.gov/sustainability, under "Climate Action Task Force."

One of the in-person Climate Action Task Force meetings was a joint meeting with the Just Transition Plan Committee (JTP Committee) on March 4, 2020, to discuss how to best integrate equity into climate action recommendations. The JTP Committee developed a definition of climate equity (see Importance of Equity) and an equity analysis tool (see Equity Lens) that served as the foundation for that discussion. The groups collectively reviewed four draft climate action recommendations to brainstorm how to make the recommendations more accessible to all members of the community. A meeting summary for the joint meeting was provided to the Climate Action Task Force to revise recommendations based on JTP Committee feedback. JTP Committee recommendations for continuing to integrate equity into climate action efforts are included in JTP Committee Equity Recommendations.

The Climate Action Task Force met a total of eight times. Between December 18, 2019, and March 4, 2020, the Climate Action Task Force met six times, at which time the COVID-19 crisis emerged, resulting in a shutdown of City facilities and the canceling of all in-person meetings and events through the end of May. At that time, staff worked with the Climate Action Task Force and the Institute for the Built Environment (IBE), the consultant supporting the Climate Action Task Force and JTP Committee, to transition efforts to complete the Recommendations Report to email and virtual communications. Meetings resumed in June 2020.

Prior to the final meeting on June 11, 2020, the Climate Action Task Force had the opportunity for a final review of all draft recommendations and any remaining comments from Climate Action Task Force members and staff. Topic area subgroups finalized all recommendations, and the full draft report was presented to the Climate Action Task Force for review and approval on June 11. The Climate Action Task Force then finalized the full Recommendations Report and submitted it to staff to submit to City Council on June 18, 2020.

Equitable Climate Action

Importance of Equity

In Longmont, integrating equity into sustainability has always been part of the foundation of the Longmont Sustainability Program. During the planning process for the Sustainability Plan, extensive community engagement took place to understand existing work and community needs related to sustainability. Many of the top priorities identified were largely pertaining to affordability of housing and other living expenses in Longmont, accessibility to community assets and resources, including a healthy and safe environment, and more meaningful community engagement. Based on that feedback, as well as best practices from the sustainability field, the Sustainability Program strives to ensure that all projects, programs, and policies prioritize equity issues, along with environmental health and economic vitality. Sustainability staff work closely with the Community Services department, in particular Community and Neighborhood Resources, to advance equity and build long-term community capacity and resilience through sustainability efforts. This partnership has been critical in making progress toward achieving the vision laid out in the Sustainability Plan of becoming an *engaged community that promotes environmental stewardship, economic vitality, and social equity to create a sustainable and thriving future for all.*

Building off of that foundation, Resolution R-2019-105: Declaring a Climate Emergency, states:

"WHEREAS, throughout the United States, frontline communities have historically borne the brunt of longstanding environmental injustice including fossil-fuel created degradation and it is acknowledged that these communities must actively participate in the planning, decision making, and implementation of climate action and must benefit equally from a just transition to a sustainable and equitable economy."

Communities around the United States have seen the benefits of strategically engaging frontline community members in climate action and sustainability work. Providence, RI, San Diego, CA, and Detroit, MI are just a few examples of cities that are integrating climate and environmental justice and equity into their action plans to make them more equitable and create opportunities to more effectively implement climate action.

At its first meeting, the Climate Action Task Force identified equity as a critical component in determining climate action recommendations and determined that equity should be integrated throughout the recommendations and Recommendations Report. To do that, the Climate Action Task Force did the following:

1. Included "equity" as a component of the Focus Area Template (see Appendix A: Guiding Documents). The Template helped each Climate Action Task Force subgroup narrow down and identify actions that have both high climate and equity impacts.
2. Received feedback from the broader community on draft recommendation proposals (see Community Engagement and Feedback), although this process was interrupted due to COVID-19.
3. Held a joint meeting with the Just Transition Plan Committee to learn more about the importance of equitable climate action and apply an equity lens to four proposed climate action recommendations.

According to the "Fourth National Climate Assessment" summary, "[p]eople who are already vulnerable, including lower-income and other marginalized communities, have lower capacity to prepare for and cope with extreme weather and climate-related events."[1] In Longmont, there are already communities that have a lower capacity to meet current needs. A 2019 Just Transition Survey that targeted households making less than $50,000 per year, found that 54% of the respondents kept their home at a very uncomfortable temperature to afford their utility bill (see Just Transition Plan Survey and Listening Sessions). Because of this existing burden, it is important to engage frontline communities to understand how to implement climate action without causing a negative financial impact on members of the community.

Just Transition Plan Committee

During the climate action planning process, the primary way that frontline communities were engaged was through the Just Transition Plan Committee (JTP Committee). The JTP Committee consisted of eight residents and three staff.

- Residents: Garrett Chappell; Osvaldo Jane Gómez; Erick Prieto; Iris J Prieto; Alma Martinez; Elli Newton; Andy Read; Rachel Zelaya.
- City Staff:
    - Community and Neighborhood Resources: Carmen Ramirez
    - Longmont Power & Communications: Anne Lutz
    - Sustainability: Francie Jaffe

The members were selected based on their passion related to equity and climate action, and connection to different frontline communities in Longmont. The primary goal of the group during the climate action planning process was to help further the climate action recommendations by providing complementary recommendations that can expand the benefits and minimize the potential negative impacts of climate action for all members of the community.

Similar to the Climate Action Task Force, the JTP Committee held eight meetings, including a joint meeting with the Climate Action Task Force, to develop the following:

[1] U.S. Global Change Research Program (2018). Fourth National Climate Assessment. Volume II: Impacts, Risks, and Adaptation in the United States.

1) An equitable climate action definition:
    a. *Equitable climate action refers to local policy and personal habits that reduce climate pollution and increase community resilience in ways that do no harm, and that support all communities according to their needs.*[2]
2) An equity lens to be applied to climate action recommendations; and
3) A set of recommendations on how to integrate equity into climate action.

The JTP Committee Equitable Climate Action Recommendations are included in the JTP Committee Equity Recommendations section of this report and more information on the JTP Committee process, results and recommendations are in Appendix C: JTP Committee Report.

To ensure that equity is integrated into climate action work as the Climate Action Task Force recommendations are implemented, frontline communities should continue to be actively engaged in the planning and decision-making process.

[2] Just Transition Plan Committee, 2020

Recommendations by Topic Area

Below are the summaries of each climate action recommendation by topic area. For the full text of each proposed recommendation, see Appendix B: Climate Action Task Force Full Recommendations.

Adaptation and Resilience

AR.1) Public Health	**Collaborate with the Boulder County Health Department and the CDPHE to develop a coalition to create a climate adaptation and health plan by January 2022, or sooner based on the timeline of the COVID-19 pandemic.** Develop a coalition focused on identifying issues and solutions for a warming climate, with a specific focus on the needs of low-income households and residents experiencing homelessness. Topics may include addressing heatwaves and other severe weather events, air quality issues, detection, surveillance and treatment of diseases.
AR.2) Water Conservation	**Expand and create new programs and initiatives to achieve a 35%-40% reduction in overall water consumption below a 2019 baseline by 2025.** Prepare the City for potential sustained drought conditions and changes in temperature and precipitation through policies, demonstration projects, and direct education and resources for residents and businesses to reduce indoor and outdoor water use.
AR.3) Flooding Mitigation and Preparedness Education	**Enhance Longmont's preparedness regarding flooding through a public awareness campaign launched in early 2021.** Launch a public education and outreach campaign that targets residents and commercial realtors to help inform residents of the dangers of flooding and the value of investing in flood mitigation projects. The campaign can be achieved through in-person events, brochures, direct mailings to property owners, and other media platforms. The campaign should include launching a Flood Awareness Week with articles published through local media outlets and information posted at the Longmont Library and other public venues.

Building Energy Use

BE.1) Building Codes	**Expand the adoption of the 2021 International Energy Conservation Code (IECC) by adding 1) solar-ready provisions, 2) EnergyStar rated appliances and 3) electric heaters and hot water heaters by the end of 2022.**

	Energy codes are an effective way for cities and local governments to cut carbon emissions, eliminate energy waste, improve comfort and health for building occupants, and increase long-term housing affordability by reducing the ongoing energy burden for owners and renters. In December 2019, voting results on the 2021 IECC had approved proposals estimated to deliver 10% or more efficiency improvement for both residential and commercial buildings that follow the IECC across the United States.
BE.2) Electrification	**Create an eight-person Electrification Feasibility Committee to oversee an 18-month- effort to research and develop a phased electrification plan by November 1, 2021.** Beneficial electrification helps communities develop economically, provide better transportation options and innovative technologies across a broad spectrum of community infrastructure and services. Research scope may include all proposed beneficial electrification actions defined for renewable energy, transportation, building energy use, and workforce development. The plan will include medium-term (completed by 2025) as well as long-term (completed by 2030) objectives and will be sensitive to crucial equity and justice issues.
BE.3) Commercial Building Benchmarking	**Implement a commercial energy benchmarking program by 2022 to encourage owners and tenants to improve energy efficiency and reduce commercial energy consumption by 7% by 2025.** Benchmarking is the process of measuring a building's energy use over a one-year period and comparing that energy use to similar buildings' energy use, as well as to local and national targets. It includes analysis of all energy sources and use-types. Several commercial benchmarking programs already exist, such as CBECS, ENERGY STAR, and others. Identification of the best-fit program will involve input from local building owners and tenants.
BE.4) Commercial Efficiency and Rebates	**Expand the Efficiency Works™ Commercial program to achieve commercial energy savings of 2% per year by 2025 (currently 1% per year).** The use of rebates, retrofitting and performance programs will help alleviate the cost of energy efficiency improvements for small, medium, and large commercial buildings. Target areas may include lighting, cooling, building envelope, variable frequency drives, new construction and retro-commissioning. Commercial opportunities will rely on the Efficiency Works™ regional energy efficiency program, where administration, contracts, and rebate processing will be performed by the Platte River Power Authority (Platte River).

BE.5) Increase Residential Efficiency Works™ Program Utilization	**Expand the Efficiency Works™ Homes audit program from 100 homes per year to 400 homes per year by 2023 and add home energy reports in 2021.** The availability of residential energy rebates will alleviate the cost of energy-saving home improvements, reducing both utility bills and greenhouse gas emissions. Home energy reports will incentivize households to participate in the audit program. Program expansion may include coordination with service providers, preferred providers, and expanded marketing.
BE.6) Expand Low-Income Residential Energy Efficiency Program	**Increase the low-income residential energy efficiency program from 40 homes per year to 400 single-family homes per year by 2025.** Program expansion may consider participation from all sub-groups classified as low-income residencies. The program may include a focus on free energy audit, insulation, air sealing, high efficient furnaces (if required for safety reasons) and refrigerators (if required because of age) to make qualified Longmont homes more efficient, as well as a focus on expanding outreach and increasing funding.
BE.7) Climate Action Fund Program & Staff	**Establish a fund to assist low-to-middle income building owners, both residential and commercial, in the transition to meet the City's mandated electrification/renewable energy goals by spring 2021.** Participation in and success of the above measures depends greatly on an ability to accommodate individuals, businesses, and families to avoid undue economic burden. The fund may consider participation in existing public-private resources such as C-PACE. The Fund should be established through a mix of public and private funds, as well as fees and taxes, and the City should leverage those funds to bring additional resources to the table.

Education and Outreach

EO.1) Comprehensive Workforce Development	**Develop a comprehensive green jobs training program that results in a diverse skilled workforce who is capable of helping the City meet its climate action goals by 2023.** A Comprehensive Workforce Development Program will be key to the success of other climate action recommendations. The program would focus on increasing training and incentives in the public and private sectors to expand and improve Longmont's climate action workforce. The program would be established through a series of actions over the next three years, including developing a Green Business Employer Council (GBEC) by 2020 to help administer a Comprehensive Workforce Development Program. This program will have three main goals, 1) offering career ladders, stable employment and a livable wage, 2)

	expanding the number of green energy professionals, and 3) build a diverse and inclusive workforce.
EO.2) "Big Picture" Climate Lecture Series	**Develop and deliver a climate lecture series starting in early 2021 and running through at least 2025.** In addressing climate change, awareness among an informed public is crucial. Community understanding is central to the success of shared policy ideas. Moreover, deeper historical and cultural understanding is crucial to public awareness. This series is intended to foster wider public awareness and discussion among all ages. The initial series, entitled "Our Climate—The Big Picture," will offer five well-publicized free presentations and discussions, to take place on Sunday afternoons in the Longmont Museum's Stewart Auditorium. Over time the program will reevaluate topics and data to stay relevant with changing science and may involve the local schools by requesting their science department to collect relevant data with students.
EO.3) Climate Change Article Series	**Develop and publish a series of 10-12 articles by the spring of 2021 highlighting historically relevant stories coupled with current climate information.** A series of public interest essays will draw on history and science to help Longmont residents see and discuss the current Climate Emergency in a broader context. It will make abstract issues more relevant and accessible by tying them to specific changes regarding energy use that have occurred in our area over time. The series will dramatize the so-called "hockey stick effect" by showing how here, as elsewhere, human energy consumption has changed and expanded exponentially over time.
EO.4) Longmont Museum Teaching Exhibit	**Leverage and enhance the "Front Range Rising" exhibit at the Longmont Museum to incorporate additional insights toward sustainability by 2022.** Before creating expensive new tools to support climate change education, it makes sense to take full advantage of excellent resources that already exist, such as "Front Range Rising," the rich and compact local history exhibition at the Longmont Museum. This recommendation is to leverage and enhance existing resources to create interactive experiences that emphasize sustainable lessons learned from past actions, emphasizing scientific and technical solutions.
EO.5) Community Sustainability Liaison Program	**Establish a peer-to-peer Community Sustainability Liaison Program by the end of 2020.** Identify and provide resources to trusted members of neighborhoods to serve as liaisons to educate their peers on sustainability, renewable energy, and other relevant matters to address the climate emergency. These liaisons will talk to

	their neighbors and peers about items such as programs offered through Longmont, the benefits of renewable energy, how to save energy at home and work, and ways to reduce waste. They will also advise people about using composting, obtaining rebates, and connecting to educational resources.

Land Use and Waste Management

LW.1) Extending Agricultural Zoning	**Establish code changes to allow for residential agriculture, and develop ongoing programs that incentivize the public to participate in growing and selling their own food by 2023.** Establish a culture of local food production by change residential zoning to allow for residential agriculture to be grown and sold on the local market; engage the St. Vrain Valley School District (SVVSD) to incentivize students in middle and high school to participate in local gardening and food production efforts; and helping to establish local co-ops for sale of resident grown produce. By converting idle land into food production, the local economy would benefit by creating additional income opportunities for resident growers, while increasing community resiliency through new and diversified local food sources. Environmental benefits include reducing the need and fossil fuel consumption for long-distance shipping, decreasing outdoor water use for lawns, and increasing habitat for pollinators.
LW.2) Commercial & Residential Composting	**Increase participation in residential and commercial composting to 75% of all homes and businesses by 2025.** Improve the ease and effectiveness of the City's existing composting program through right-sizing composting and yard waste bins, establishing curbside composting as an opt out instead of an opt in service, increase education programs and require certain high-organic waste businesses to participate in composting. Within the next year, establish a system to count participating households and businesses so that the City can track progress toward the goal.
LW.3) Downtown Pay for Parking	**Implement pay to park requirements in Longmont's downtown by 2023 in a way that encourages alternative modes of transportation and improves the experience and enjoyment of people downtown.** Establish a pay-to-park requirement downtown that disincentives car travel in the city center. The program would ultimately target a reduction in the land area needed for car parking and vehicle miles traveled to downtown, while creating select car-free streets and opening up areas currently dedicated to parking for higher use. The program would reduce paved and impervious surfaces, encourage alternative modes, and ultimately reduce greenhouse gas production. A portion of the money generated from the pay-to-park parking spaces to fund

	repaving initiatives that focus on permeable surfaces. The lack of parking can be offset by a more efficient public transportation system.

Renewable Energy

RE.1) Smart Meters	**Install smart meters that enable two-way communication between utility and meter on residential buildings in the City of Longmont by the end of 2022.** An Advanced Metering Infrastructure (AMI or smart meters) will gather fine-grained data (15-minute intervals) on electricity consumption citywide. By providing real-time data about electricity consumption, smart meters help the city match supply and demand. We can design rates that benefit all consumers, keep electric bills low and lower Longmont's carbon footprint. AMI is an essential first step towards an energy-responsible city, furthering the goal of achieving 100% renewable energy by 2030, while keeping our energy supply reliable during the transition from a predominately-fossil fuel based economy to a carbon-free one.
RE.2) Home Energy Management Systems	**Begin education, feasibility analysis, and piloting of Home Energy Management Systems (HEMS) in 2021 with a five-year target for a pilot completion in 2026, and over 75% of Longmont customers utilizing HEMS by 2030.** An energy management system (EMS) is a technology platform comprising both hardware and software that allows the utility company to monitor energy usage and production, and to control and/or automate the use of energy within a household. It communicates with Home Energy Management Systems (HEMS) to optimize energy management across a pilot area or the entire city. A feasibility analysis may include comparison of available technologies and cost, and a study of the amount of demand shifting which can be accomplished by this means.
RE.3) Energy Savings Program	**In conjunction with Platte River Power Authority and/or Longmont Power & Communications, by 2023 provide options and incentives for electric utility customers to participate in a demand response program that manages electricity use in the home to reduce peak demand, shift the peak load, or absorb excess production.** Demand response programs enable energy consumers to receive money back or lower rates for reducing their energy demand, at the utility's request, during peak periods of high demand and under-supply. In addition to customer savings, demand management has the co-benefit of reducing pollution associated with electricity production.

RE.4) Carbon-Intensity Signaling Protocols	**Provide electric utility customers with real-time information on the carbon-intensity of power production by 2025, in conjunction with Platte River, to help align energy demand and renewable energy availability on the grid.** Carbon-intensity signaling aims to empower consumers by offering information that allows them to choose to actively reduce their personal carbon footprint and increase demand for renewable energy. Public education and resource development depend on information provided by the electric utility regarding renewable portfolio composition.
RE.5) Distributed Energy Resources (small scale renewable power generation & storage)	**Design, by 2021, a five-year pilot program and 10-year development plan for creating an inventory of managed Distributed Energy Resources that reduces electric peak loads and absorbs surplus energy production.** The Distributed Energy Resources (DERs) plan will include community solar, rooftop solar, group-buy programs on electric vehicles, electric vehicle charging stations, and a beneficial electrification pilot. DERs help mitigate the risk of area-wide low renewable production by distributing generation facilities widely. The program would raise or lower Longmont's demand for energy, shifting demand from one time of day to another, thus reducing demand charges that Longmont pays to Platte River and passes on to ratepayers. At the end of the pilot phase, the DERs pilot programs will collectively demonstrate their ability to reduce or increase demand or supply, accordingly. The outcome of the pilots can then be used to set goals for 2030 that will feed into an Integrated Resource Plan that achieves the goal of 100% renewable energy by 2030.

Transportation

T.1) Increase effectiveness of public transit system: Checkpoint / Flexible Bus Services	**Expand public transit coverage and availability by developing and implementing a checkpoint bus service line with a lower cost per rider than FlexRide by 2025.** This type of service is a hybrid between fixed route (the 300-series of local RTD routes) and subscription or call-ahead services (i.e. Via or RTD's FlexRide). Program effectiveness depends on coordination with the local transportation agency. Indicators of success include increased use levels by Longmont's elderly population and may incorporate transitioning to electric vehicle fleets.
T.2) Electric Vehicle Charging Infrastructure	**Install 20 new Level Two electric vehicle charging stations in preferred Downtown Longmont parking lots in the next 10 years.**

	Incorporate more electric only charging parking spaces in public parking lot locations in high density areas, such as Downtown Longmont. Offer prime parking locations for electric vehicles where people can charge their vehicle while visiting Downtown. More visible charging stations raises awareness and encourages usage by people who own electric vehicles. The parking time limit would still need to be adhered to, therefore, Level Two charging stations are encouraged where charging can be completed within two hours.
T.3) Connected Bikeways	**Create a plan for safe and complete Longmont bikeways that interconnect all major nodes, neighborhoods, and community service centers without crossing major roads/highways and construct a majority of the system within the next 10 years, with full completion in 20 years.** Highly interconnected, complete and safe (fully lit, above grade, limited-to-no traffic) bikeways encourages increased use of bike transportation supporting public health and vehicle emissions reduction goals. Major nodes in the community includes bus stops, grocery stores, primary community services, and parks. Planning for increased bikeway connectedness should occur in conjunction with land-use planning.
T.4) Alternative Work Schedules	**Conduct an education campaign by 2022 for employers and employees about ways to reduce commuting congestion in peak periods by 20% over the next 10 years.** Strategies that support alternative work schedules may include compressed workweeks or workdays, telecommuting, video meeting policies, expanded work-from-home policies, common window scheduling, or do-it-yourself paid time off policies. Reduced employee trips will be calculated using employer surveys. Reduced commuting congestion will reduce stress, greenhouse gas emissions, and air pollution.

JTP Committee Equity Recommendations

The following recommendations are divided into a) equity assessment recommendations, and b) overarching equitable climate action recommendations.

Equity Assessment

EA.1) Capacity Building	**Provide a foundation on equity and climate action.** Before applying the "equity assessment" or interpreting the results of an equity assessment, provide baseline information on climate action, equity, and equitable climate action to policymakers, city staff, stakeholders, or community members involved in this process. The objective of capacity building is to support consistent knowledge and information about equitable climate action.
EA.2) Equity Lens	**Apply an "Equity Lens" to proposed climate action.** To systematically assess the multiple dimensions of climate action, apply an equity lens when developing the climate action recommendation (see Equity Lens). The equity lens helps analyze the impact of climate action on benefited and harmed groups, develop climate action improvements, and identify equity data/information, communication strategies and financial sustainability.
EA.3) Frontline Communities	**Focus on frontline communities most impacted by climate change.** Frontline communities are those groups most likely to be affected by crises of ecology, economy and democracy, but historically receiving the fewest benefits. This includes low- to medium-income communities, communities of color, those who speak languages other than English, people with disabilities, older adults, young children, people with criminal records, LQBTQ+, and refugees and immigrants. It is important to focus on frontline communities in climate action outreach and program development to ensure equitable and inclusive climate action.

Overarching Equitable Climate Action Recommendations

Note about the Novel Coronavirus (COVID-19) Crisis: The following recommendations were developed primarily before Stay at Home orders due to COVID-19. Due to COVID-19, the JTP Committee would like to add the following considerations:

- Priorities of the community may have shifted due to the crisis.
- Low-income residents are going to be more impacted by COVID-19 and inequities might be even higher after the crisis. It is important to consider the economic impacts, trauma, and other health impacts resulting from the crisis when developing climate action programs.
- Social distancing and other COVID-19 mitigation strategies can make it difficult to market and outreach to frontline communities. To develop the best communication strategies, staff should learn from cultural brokers and community navigators who have continued the process of engaging their communities throughout the crisis.

The below suggestions are relevant not only to COVID-19 but to any significant disaster or crisis in our community.

ECA.1) Marketing and Outreach	**Engage cultural brokers and community navigators.** It is important to engage cultural brokers and set up a system of community navigators that assist communities in understanding and navigating new systems and programs. Often these individuals already exist in their community and already are distributing resources and sharing information (e.g. Suma Latina). Considerations: • Ambassadors/Navigators must be from the community. • Consider providing an incentive for Ambassadors/Navigators (e.g. gift card, discount).
	Build non-profit and business partnerships. Identify businesses, locations, non-profits, schools (K-12 and Front Range Community College), and places of worship (e.g. churches) to partner with in disseminating information. Attend meetings, post flyers, and create centralized distribution centers for information and resources.
	Develop culturally relevant messaging.

	Campaign messaging should be easy to understand and culturally relevant: • What type of messaging inspires the group? Focus on positive messages and highlight that action does not increase burden. • Avoid direct messaging translation and prioritize more culturally appropriate translation. • Address stigma associated with the action.
	Create targeted outreach. Start with communities with the most needs (e.g. youth, older adults, mobile home, people with disabilities, immigrants, families with young children, and people experiencing homelessness) and communities identified as low-to-medium income. Example outreach methods (should consider the audience): • Targeted Social Media (e.g. demographic or geographic targeting). • Radio and TV ads (e.g. wider audience, especially older adults). • City Communications channel (e.g. utility bills, e-newsletters). • Targeted door-to-door canvasing and neighborhood events with small giveaways (some neighborhoods may prefer a scheduled event rather than someone knocking on their door and vice versa). • Design outreach to the specific audience (e.g. design outreach that specifically targets youth and their families, instead of just general outreach for everyone). • Incentives for frequent users. • City employees should participate and promote climate action initiatives.
ECA.2) Data and Research	**Use data and research to further understand frontline communities.** Before developing climate action, it is important to understand the communities' attitudes, interests, motivations, access to resources, and how they interconnect with the climate action. To do this requires identifying and investing in available and new data sources and engaging frontline communities to identify impacts, needs, gaps and inequities of current and future climate actions.

ECA.3) Program Access	**Identify barriers and increase program access.** When evaluating a climate action program, engage frontline communities and think through different scenarios of how individuals will use a service to identify potential barriers to program access. Considering the following potential barriers: • Access to the internet, phones, and apps (i.e. the digital divide). • Citizenship status and lack of documentation. • Language barriers (e.g. different language, vision impaired, too technical, etc.). • Situational differences (e.g. medical devices that must run all day long, a night job, etc.). • Economic barriers. • Geographic barriers (e.g. access and costs to transport options). • Are there any other barriers faced by frontline communities? Review the recommendations in the Marketing and Outreach section. Program access can also be impacted by situational differences, consider the following: • What are different scenarios that an individual may use the program (e.g. how might someone use a bus for transportation and what will they need)? • What if an emergency happens? Consider non-business as usual situations. Lastly, it is also important to consider the different motivations for participations and how that impacts program access: • Why might someone want to participate in the program (e.g. level of concern about climate change, desire to save money, etc.)? • How might the climate action be adjusted to better meet the motivations of more residents and/or businesses? • Are there more important priorities in the residents' life (e.g. access to affordable housing) that take precedent over the climate action? • Can the climate action support the more important priority (e.g. is there a connection between the climate action and emergency assistance for families without housing)?

ECA.4) Equitable Access to Jobs	**Create a just transition for impacted workers.** There will be industries and workers who are negatively impacted by climate action. When evaluating a climate action, identify and engage impacted workers (e.g. oil and gas workers, car dealerships, etc.) and identify job and training opportunities for displaced workers.
	Job training and workforce development programs. Internships, certificates, and other workforce development programs need to be accessible to all. Consider the following: • Partner with local organizations (e.g. Boulder County Workforce), schools, and vocational programs. • Engage frontline communities and impacted workers. • Long-term development paths to support long-term growth and skill development. • Identify barriers to completing and participating in certificate programs (e.g. access to healthcare, childcare, citizenship status, disability, etc.). • Applications that are simple and accessible to those with any educational level.
ECA.5) Health and Safety	**Understand and improve safety.** Speaking with participants and researching data (e.g. crime statistics, respiratory hospitalizations) can help identify safety and health issues. Perceived safety and health are important components of any climate action. If a transportation route, home, business, or other area is not perceived to be safe and healthy, then participants are not going to want to participate in the climate action. Ability to improve health and safety is also important. Rental unit tenants do not always have the ability or access to improve the health and safety of their home.
ECA.6) Address Cost-Burdens	**Understand the financial burdens of low-income households.** Work with frontline communities and low-income households to understand if high upfront costs or current high bills and other important expenses are barriers to participate in climate action. Consider the following:

	• Are there assistance programs or other programs that this climate action can partner with? • Are there programs that should be implemented first to reduce the cost-burden (e.g. Focus on energy efficiency upgrades before electrification)? • How will the cost-burden pass from landlords to renters? • Is the cost of the program a barrier?
ECA.7) Community-based Programs	**Build self-reliance and access to resources within communities and neighborhoods.** Local, state, and federal government programs can have limitations and access to funding. To increase equitable access to resources (e.g. Food), develop and support non-governmental programs that support community reliance on a family or neighborhood level. For example, community gardens can support more equitable access to food.
ECA.8) Funding Mechanisms	**Identify alternative funding mechanisms for climate action.** Here is a list of alternative funding mechanisms when a program has access to limited funding: • First, focus on those in the most need and provide service to them first. • Apply for grant funding and partner with local businesses and foundations. • Resident/business helping resident/business donation program (products or financial). • “pay as you can” or “adopt a…” programs. • Optional fees for programs on the utility bill.

Governance

In order to ensure accountability and oversight of the implementation of the recommendations contained in this report, the Climate Action Task Force discussed multiple options for an appropriate and effective governance structure. The structure that was decided upon includes three primary elements:

1) To integrate oversight of climate action recommendations into the existing Sustainability Advisory Board;
2) To form ad-hoc technical committees as needed to support the implementation of specific climate action recommendations;
3) To incorporate climate action recommendations into existing plans such as the Council Work Plan.

The Climate Action Task Force recommends that the Sustainability Advisory Board oversee quarterly reports documenting the progress of recommendation implementation, as well as appoint volunteer "champions" to follow and report on progress of specific priority recommendations. Members of the Climate Action Task Force are encouraged to attend Sustainability Advisory Board meetings as members of the public.

In addition to the role of the Sustainability Advisory Board, the Climate Action Task Force recommends that ad-hoc technical committees be formed as-needed in the early stages of the implementation phase. This will provide additional capacity for staff throughout all stages of the recommendation's implementation, including planning, monitoring, and evaluation.

Community Engagement and Feedback

Longmont City Staff and the Institute for the Built Environment (IBE) developed a community engagement plan to receive feedback to inform the community about the Climate Emergency Resolution and provide the Climate Action Task Force with input on community priorities, potential negative impacts of climate action, and opportunities to strengthen recommendations. The community engagement process focused on receiving feedback through a residential and business questionnaire, tabling at events, presentations, and focus groups throughout March.

Due to the COVID-19 crisis, community engagement efforts intended to gather feedback on draft climate action recommendations were significantly interrupted. Prior to closures and event cancellations, staff and IBE were able to conduct three tabling events and three presentations to multiple stakeholder groups including the Senior Citizens Advisory Board, Longmont Multi-Cultural Action Committee, and the Longmont Landlord Alliance. In addition, a climate action questionnaire was developed for both residents and businesses, in both English and Spanish. However, a number of planned engagement opportunities were not completed. These included additional tabling events and presentations, a lunch-n-learn with developers and contractors, and discussions with other community partners and stakeholders. The results and findings from community engagement efforts were shared with the Climate Action Task Force to inform the development and refinement of draft recommendations, and are included in Appendix D: Community Engagement Reports.

Key Outreach Findings

There were three in-person tabling and three presentation outreach efforts. Participants at these events were encouraged to complete the questionnaire, although in-person feedback was also collected. Due to limited time and capacity, the in-person feedback was not integrated into the questionnaire report and it is only included in an outreach activity report. City staff also received feedback over email from some residents and business owners expressing concern regarding the stakeholder engagement process and potential negative impacts as a result of climate action. The final questionnaire report, the outreach activity report, and feedback given via email are included in Appendix D: Community Engagement Reports.

Climate Action Questionnaire

The climate action questionnaire was distributed at events, through posters, displays at the City Civic Center, the Longmont Public Library, and the St. Vrain Memorial Building Civic and distributed via email distribution lists. The residential questionnaire received 352 responses (347 English, five Spanish) and the business questionnaire received twenty responses (nineteen English, one Spanish).

Affirmative responses to the climate actions outweighed negative responses, though strong opposition positions were expressed in the questionnaire responses. There were three distinct ideologies that were represented in the report:

- Respondents who were generally amicable to changes, incentives, and climate actions.
- Respondents who expressed concern that the government should not raise taxes or subsidize climate action, giving preference to market-based solutions.
- Respondents who generally expressed interest in increasing services and benefits for low-income communities, while minimizing negative impacts (e.g., affordability).

Limitations

The questionnaire is not a statistically significant survey and was not designed or vetted for statistical significance. It is important to note that the questionnaire was set up as a forced choice ranking, and respondents were unable to select that they did not prefer any of the climate action recommendations proposed. This could have impacted the number of affirmative and negative responses. As such, the results from the questionnaires will help inform further climate action but should be only considered as a starting point for understanding the community's thoughts on climate action.

The questionnaire results and overarching themes could also be missing impacts and opportunities in key Longmont communities. Out of those who responded to the residential questionnaire, the following populations were underrepresented:

1. Youth (<25 years old)
2. Lower-income households (< $50,000 annual household income)
3. Hispanic/Latino respondents

The underrepresentation of these groups are important to highlight because these groups in the United States are often more likely to experience the negative impacts of climate change[3] and including all voices, particularly frontline communities, is an important part of creating the most effective climate action recommendations. This underrepresentation could have been due to canceled in-person presentations and tabling at the following locations:

1. Tabling at Front Range Community College
2. Tabling at the OUR Center (only one of three scheduled tabling sessions were completed)
3. Presentation at the Neighborhood Group Leaders Association
4. Presentation at the monthly Latino Coalition Meeting

Demographics were not tracked in the business questionnaire and there was a low response rate so limitations regarding representation are not noted.

[3] United States Environmental Protection Agency. (2016). Climate Impacts on Society.

Resources

The following resources were provided to the Climate Action Task Force by City Staff when developing their recommendations. The resources are sorted by topic area.

Provided to All Subgroups

- Topic Area Template, Appendix A: Guiding Documents
- SMART Goals Policy Template, Appendix A: Guiding Documents
- 2019 Longmont Community Profile
- Envision Longmont
- Longmont Sustainability Plan and Longmont Indicators – Sustainability Plan Metrics
- JTP Survey and Listening Session One-Page Summary
- Greenhouse Gas Inventory Report
- Updates on the Platte River Integrated Resource Plan Progress
- C40 Cities Inclusive Planning Executive Guide and C40 Cities Report
- Project Drawdown Top 10

Adaptation and Resiliency

- Adaptation and Resiliency Topic Synopsis
- Boulder County Climate Impacts Study and One-page summary
- Boulder County Hazard Mitigation Plan and 2016-2021 plan
- Colorado Climate Change Vulnerability Study
- Current Flood Plan Outreach Table
- Developing a Program for Public Information for Credit under the Community Rating System of the National Flood Insurance Program
- Killer Heat Report
- Office of Emergency Management and Be Ready Longmont
- Raw Water Master Plan
- Resilient St. Vrain Plan
- Resiliency for All
- Water Efficiency Master Plan: Current Water Rebates and Resource Central programs

Building Energy Use

- Building Energy Use Topic Synopsis
- American Council for Energy-Efficient Economy (ACEEE): 2019 Report on energy efficiency, zero energy buildings, etc.
- Architecture 2030
- Clean Jobs Colorado
- Equitable Building Electrification Report
- Rocky Mountain Institute Research and Initiatives

Education and Outreach

- Education and Outreach topic synopsis
- 2020 Conservation and Your Wallet Campaign Overview, Internal City Document
- 2020 Sustainability Communications Work plan, Internal City Document
- 50 Ways to Deliver Your Message
- JTP Survey and Listening Session In-depth Results, Internal City Document
- Longmont Sustainable Business Program Marketing Strategy, Internal City Document
- Path to Positive Communities - Climate Messaging
- A Municipal Policy Blueprint for a More Inclusive Path to Prosperity
- Clean Energy Will Make Longmont More Resilient and Economic Secure, Internal City Document
- Clean Jobs Colorado Report
- Defining the Green Economy: A Primer on Green Economic Development
- Making Green Work
- Inclusive and Green Report from CU Boulder group "Just Transition Collaborative"
- Small Business Development Center
- State Just Transitions Advisory Committee website
- Workforce Boulder

Land Use and Waste Management

- Land Use and Waste Management Topic Synopsis
- Carbon Sequestration Pilot Feasibility Study

Renewable Energy

- Renewable Energy Topic Synopsis
- Clean Jobs Colorado

Transportation

- Transportation Topic Synopsis
- American Council for Energy-Efficient Economy (ACEEE)
- Vehicles & System Efficiency
- 2019 City of Longmont Staff Commuter Survey
- Electric Vehicle Charging Stations – Google Map
- Longmont Missing Sidewalks Maps

Glossary

Climate: Climate is the weather of a place averaged over a long period of time (several decades). Scientific research indicates that impacts, such as extreme temperatures, drought, and wildfires are continuing to escalate.

Climate Change: Climate change occurs when there is a long-term change in the average weather patterns at either local, regional, or global scales. Climate change in the 20th and 21st century is primarily caused by human activity, in particular by the increase in greenhouse gas emissions from burning fossil fuels. Natural forces (e.g. cyclic ocean patterns and volcanic activity) also impact climate change.[4]

Climate Emergency Resolution: On October 8, 2019, the Longmont City Council passed a resolution declaring a climate emergency establishing Longmont's intent to take immediate and accelerated action to address the climate crisis.

Climate Action Task Force: A Climate Action Task Force composed of residents, including those most vulnerable to the impacts of climate change; other subject matter experts; partners; and City staff; was convened on Dec. 18, 2019 to discuss further steps the City should take to promote a carbon-free, sustainable city, with the goal of creating and submitting a report outlining such steps within 120 days of this resolution and quarterly thereafter.

Climate Adaptation: Adaptation refers to making adjustments in order to limit the negative effects of climate change, while working to become a more resilient and stronger community.[5] Adaptation measures are encompassed in the recommendations of the Climate Action Task Force.

Climate Mitigation: Mitigation refers to reducing or preventing the emission of greenhouse gases or taking actions that reduce the rate of climate change.[6] Mitigation efforts are expected to be the primary focus of the Climate Action Task Force's recommendations.

Energy Efficiency: Accomplishing the same tasks while using less electricity, such as by making improvements to a home or business or replacing appliances.

Equity: Equity is, "[t]he absence of avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically."[7]

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[4] NASA. (May 2020). Overview: Weather, Global Warming and Climate Change.
[5] University of California, Davis, Science & Climate Definitions, accessed June 2019.
[6] IPCC. Working Group II: Mitigation of Climate Change.
[7] C40, 2019

Equitable Climate Action: Equitable climate action refers to local policy and personal habits that reduce climate pollution and increase community resilience in ways that do no harm, and that support all communities according to their needs.[8]

Frontline Communities: Frontline communities are those groups most likely to be affected by crises of ecology, economy and democracy, but historically receiving the fewest benefits. This includes low- to medium-income communities, communities of color, those who speak languages other than English, people with disabilities, older adults, young children, people with criminal records, LQBTQ+, and refugees and immigrants. It is important to focus on frontline communities in climate action outreach and program development to ensure that any efforts are equitable and inclusive.

Greenhouse Gases: Greenhouse gases are gases that heat the atmosphere by absorbing infrared (longwave) light and 'trapping' it in the lower atmosphere. Direct sunlight (shortwave light, i.e., UV and visible) reaches the Earth's surface unimpeded because greenhouse gases are transparent for shortwave light. Once shortwave light reaches the Earth's surface it is reradiated to the atmosphere as longwave (infrared) light. Greenhouse gases absorb this energy, heating the lower atmosphere. While gases such as carbon dioxide occur naturally in the atmosphere, human activity has increased atmospheric concentrations.[9]

Just Transition Plan (JTP) Committee: The JTP Committee serves to expand the climate action conversation to include the perspectives of frontline communities. This group complements the work done by the Climate Action Task Force.

Renewable Energy: Energy that naturally refills and does not deplete (i.e. wind, solar).

Resilience: Resilience for Longmont means increasing the capability of the City and its partners to anticipate risk, limit impact and bounce forward rapidly by adapting and learning in the face of disruptive shocks and stresses.[10]

SMART Goal: SMART is an acronym that stands for Specific, Measurable, Achievable, Realistic, and Timely. A SMART goal is a goal that integrates all of these components into one single goal.[11]

Weather: Weather is the day-to-day state of the atmosphere and its short-term variation in minutes to weeks. People generally think of weather as the combination of temperature, humidity, precipitation, cloudiness, visibility, and wind.

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[8] JTP Committee group definition, 2020
[9] National Oceanic and Atmospheric Administration, What are greenhouse gases? Accessed August 2019.
[10] Envision Longmont, 2016
[11] Mind Tools. SMART Goals: How to Make Your Goals Achievable.

Appendix A: Guiding Documents

Focus Area Template

Focus Area:

1) Long List Potential Policies and Solutions

Based on subject matter expertise identify policy and solutions to address climate change and place them in the boxes below. Remember to identify solutions that solve for equity and are oriented toward actions the City can take.

2) Sort for Equity – New Ideas allowed!

Place identified solutions from the long list into the four boxes below. Equity concerns for Longmont include: cost of living, rent, utilities, food; Job opportunities & workforce development / training; Ease, accessibility, and safety of transportation (esp. bike, bus, & pedestrian); Housing security, especially mobile home parks; Child care and youth activities; Health, access to health care; keeping families together.

High climate impact, negative or neutral impact for equity (how might we make these solutions more equitable)?	**High climate impact, High positive equity impact** (great solutions)
Low climate impact, negative or neutral equity impact (poor solutions)	**Low climate impact, high positive equity impact** (how might we increase beneficial climate impact from these solutions)?

1) Short List of Policies and Solutions **Identify 5-10 policy and solution recommendations.**		2) What is the City already doing	3) What are the gaps
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
?			

Notes:

4) Indicators

1) Identify indicators of progress in your topic area	2) Prioritize a short list of Indicators for your focus area	3) What monitoring or tracking system is needed to evaluate and report progress over time?

5) Investment Opportunities, Needs & Considerations

Policy or Solution	Level of funding needed to implement proposed policies and solutions	Potential revenue sources to fill funding gaps

6) Policy / Solution Matrix

Strategy (Policy or Solution informed by science and equity)	Objective (big picture description of desired outcomes)	Timeframe (short, medium, long)	Target (SMART) – specific, measureable, achievable, relevant, time bound	Potential Impacts – who might be impacted and how (benefits, barriers, negative outcomes)	Financial Summary (from step 7)	Marketing, training, and incentives needed to enable passage of equitable policies and solutions

SMART Goals Policy Template

[Subgroup Area]

[Recommendation Title]

Goal/Objective
In one sentence, describe the overall goal (desired outcome) of the recommendation.

Recommendation Summary (Specific)
Describe policy or solution recommendation informed by science and equity. Three to five sentences, no more than two-three paragraphs.

Specific: What will be accomplished? What actions will you take? Who is involved, what are you trying to accomplish (more detail offered in relevance), general timeframe (more detail offered in the Time-Bound section), where does the action take place.

Measurement
Describe how we will measure progress for this specific goal/recommendation? What metrics are we going to use to if/how well we are meeting the goal? What is the source of the metrics?

Achievability
Under what conditions is achieving the goal realistic? What are the necessary skills and resources?

> *Financial Summary: Informed from step 7 from template – what are the funding needs and possible sources of funds?*
>
> *Marketing, Training and Incentives – List actions needed to enable passage and/or successful implementation of the policy/solution.*

Relevance
How does the goal align with mitigating and adapting to climate change? Why is the result important? Consider both hard and soft benefits (e.g. expected to address 5% of total GHG reduction goals over five years, reduces utility burden on low-income households, improves public health, etc.).

Time-Bound
What is the time frame to accomplish the goal? What are the key milestones?

Social and Economic Impacts
Describe who might be impacted and how (benefits, barriers, negative outcomes). Include suggestions for how to mitigate any potential negative outcomes.

Appendix B: Climate Action Task Force Full Recommendations

Adaptation and Resilience

AR.1) Public Health in a Warming Climate

Goal/Objective
Longmont will prepare for the threats to public health from a warmer, changed climate.

Recommendation Summary
Longmont should develop strong collaborative efforts with Boulder County Health and Colorado Department of Public Health & Environment (CDPHE) to formulate a set of issues and solutions for a warming climate. This needs to include the needs of low-income residents and residents who are experiencing homelessness who have not only less access to health care, but also to an environment that is protective during periods of extreme heat and/or poor air quality. In addition, the plan should include methods to meet the mental health requirements of people. Another facet of the plan will be assisting residents with mitigation of air pollution from smoke and other pollutants. The plan must also be ready to implement methods of detection, surveillance and treatment of diseases that may flourish in warmer Longmont. Workers who labor in an outdoor setting also need training and protection from heat. Meetings with Boulder County and CDPHE could occur this summer. ***The group should have a plan outlined within 1 and a half years (by January 2022) or sooner based on the timeline of the COVID-19 pandemic.***

Target

Specific:
The City of Longmont, Boulder County Health and CDPHE should develop a plan to address public health from a warmer, changed climate by January 2022 at the latest.

Measurable:
The plan should be carefully developed and ready for implementation. The plan should include indicators and metrics to measure progress. Potential Plan examples are:

- Provide shelter for people experiencing homelessness any time daytime temperatures are over 100° F and nighttime temperatures are over 80° F.
- Air conditioners made available to lower-income residents.
- Cooling centers and water play areas.
- Alerts with expected actions for days with high pollution.

- Plan for health emergencies for novel diseases.

Achievable:
Funding for implementation will need to be part of the planning process and become available for implementation.

Once the plan is developed, residents need to be aware of resources such as wading pools and access to creek wading areas to cool off on high heat days. Health care providers will need to be aware of the plan and how/when to access that plan if they see a new public health threat not previously seen in the community.

Relevant:
The goal is to mitigate effects on public health by carefully planning and being ready to implement solutions.

Time-bound:
Meetings with Boulder County and CDPHE could start this summer or fall of 2020. The group should have a plan outlined within one and a half years (by January 2022) or sooner, depending on the timeline of the COVID-19 pandemic.

Social and Economic Impacts
Failing to implement could have impacts on community health. Those without adequate cooling and/or shelter will be more adversely impacted as will those who have existing health conditions such as asthma, COPD, or heart ailments. The purpose of this goal is to develop a plan that looks at all those potential impacts and provide pathways to lessen those impacts.

AR.2) Water Conservation

Goal/Objective
Prepare the City of Longmont for potential sustained drought conditions from changes in temperature and precipitation.

Recommendation Summary
Water conservation measures and policies should include the promotion of xeriscaping, use of native vegetation in parks and open spaces, city programs that offer support for xeriscaping for residents and businesses (free architectural designs, free pea gravel, mulch, classes and plant giveaways). Educational awareness programs and promotional events offered by the City's Public Works and Natural Resources Department should inform residents about the benefit of carbon sequestration, forest canopies, using native plants, low water use appliances, and xeriscaping. HOA and city

ordinances will offer incentives to promote xeriscaping and low drought gardening. In addition, a plan for water rationing in the event of a prolonged drought will need to be reviewed and updated.

Target

Specific:
Significantly expand the Longmont water conservation program to reduce citywide water usage by 35 to 40% by 2025.

Measurable:
Water consumption should show a decline in use. The Water Efficiency Master Plan can be updated to adopt a measure that tracks excessive use by residences and businesses and charges higher rates for overconsumption.

Achievable:
Financial Summary: An estimation of staff time and landscape transitions need will need to be evaluated and then added to the city budget.

Marketing, Training, and Incentives: Education, training, and promotion will be key to getting resident ownership and participation in conservation efforts.

Relevant:
Water conservation efforts will assist in addressing climate change issues by conserving our water and preparing for potential droughts.

"This climatic change could have a negative effect on agriculture, wildfires, energy and water availability in the area. Additional costs that may be incurred to mitigate the effects of these droughts include increasing water supply from external sources, compensating agricultural operations for reducing water-intensive crops, incentivizing homeowners to change landscape items to be more drought resistant, and increasing fire mitigation procedures to reduce wildfire hazards. Concurrently, the impact on usage from both underground aquifers and reservoirs will need to be examined to determine if traditional usage levels can be continued, or whether usage levels may have to be monitored to ensure long-term availability of water."

Source: Resilient Analytics April 2018 Report on Boulder County Climate

Time-bound:
By 2025, total city water use should decline by 35 to 40% below the 2019 baseline.

Social and Economic Impacts

Water conservation helps to ensure adequate supply for necessary uses in a changing climate with unpredictable impacts to water availability. Golf courses and city parks may change in appearance and functionality to achieve this goal.

AR.3) Flooding Mitigation and Preparedness Education

Goal/Objective

Climate change will produce more severe flooding events in Longmont. An outreach program will help to familiarize the public on current City flood mitigation and the benefits for property owners.

Recommendation Summary

Flood mitigation is a complex process that involves State and local regulations needed to preserve property values and protect the public from damages associated with flooding events. Developers, builders and property owners are not always aware of the complex regulations when building or preserving buildings in 100-year floodplain (areas designated by FEMA prone to flooding with at least 1% chance of a 100-year size flood every year.) More work is needed to make the public aware of how flood regulations work to mitigate the damaging effects of flooding for new and existing buildings. Making the public aware of ongoing processes and changes in floodplain management will help to prepare the city by empowering communities to better understand flood management and how development regulations minimize damages and improves public safety. Public awareness can be improved by providing flood awareness events and information to educate the public on how to prepare for future flooding. Community preparedness is enhanced by understanding how flood waters affect new or existing buildings and informing property owners of construction enhancements that will help protect their buildings from flood damage.

Target

Specific:

Public awareness can be enhanced with outreach activities such as:

- Sending out brochures to residents in flood plains each year.
- Initiating a flood awareness week where the city may publish articles in the local newspapers and provide information at the Longmont Library and other locations or venues.
- Provide information to realtors on how to read flood maps and determine if new buildings or improvements to buildings in flood plains are allowed who in turn communicate this information to clients.

Measurable:

It is not the intent to educate the public on the complex engineered requirements of flood mitigation but rather to inform and educate them on how the City's Emergency Action Plan helps prepare for

flood events and how regulations can help to build or remodel responsibly in the floodplain. New projects are not allowed to be constructed in flood plans. (Flood Insurance Rate Map) show which properties located in a 100-year flood plains that are required to comply with development regulations when building new or improving existing buildings in flood plains. And the NFIP (National Flood Insurance Program) has been established to require insurance coverage to protect structures located in the flood prone areas.

Achievable

Implementation of an awareness campaign is relatively inexpensive and would include printed brochures, a booth in a busy venue, mailings to property owners, media releases during awareness week and updating information on city websites. Requests for more technical information can be provided by City's Floodplain Administrator who is also an engineer in the Public Works and Natural Resources Department will follow-up calls. Necessary skills and resources are minimal for initial contacts with more technical information provided by city staff when a project is proposed. Developing the plan is not complicated and we can model a plan based on what other cities are already providing to their communities.

Relevant

Informing the public about flood plain management will help to mitigate flooding events to best protect public health and property by implementing proven regulations for new and improved buildings.

Time-Bound

Implementation of a public awareness campaign can start now and be ready for roll-out by next year before the building season heats up.

Social and Economic Impacts

Implementing awareness for floodplain management can reassure the public that there are ways to protect buildings and public health by careful preparation. The economic impacts are beneficial to society by promoting improvements to help preserve the quality of life and protect homes and businesses from flooding dangers. All residents will be impacted in many ways as the climate warms. The purpose of this goal is to develop a plan that looks at all those potential impacts and provide pathways to lessen those impacts.

Building Energy Use

BE.1) Building Codes: Improve Building Codes to include energy conservation measures and promote renewable energy.

Recommendation Summary
The City of Longmont should adopt the 2021 International Code Council (ICC) set of codes for both commercial and residential buildings. The Climate Action Task Force also recommends the adoption of new appendices to the code that include provisions to promote renewable energy use and energy conservation:

1. Solar ready wiring for solar PV rooftop or yard installations
2. Car charging ready wiring in garages
3. Energy Star rated appliances
4. Updated codes for electric heaters and electric water heaters option

Objective
Improve building codes to include additional energy conservation measures including solar ready wiring, electric vehicle (EV) charger ready wiring, EnergyStar appliances, and electric heaters and water heaters. Adopt and implement new codes and policies by 2022.

Target
Reduce commercial building energy use, promote all-electric buildings, and encourage residential EV adoption and electrification to lower the city's energy costs and greenhouse gas emissions. Estimates for energy savings for buildings are expected to be as much as 10% for energy costs.

Timeframe
New codes are scheduled to be adopted about one year after they are published. The City has time to analyze the changes before recommending adoption by City Council. The time frame will be approximately January 2022.

Social and Economic Impacts
Homeowners and renters will benefit the most from the new energy conservation codes and standards. Contractors and builders will also benefit by offering homes that are solar ready, car charging ready, and highly efficient homes. These homes can command a higher price on the market due to the long-term savings and efficiency benefits of lower energy costs for the owner.

At the same time, we need to be concerned about the additional complexities and requirements that may make homes less affordable for first time home buyers and disadvantaged community members.

Code and beyond the code changes will need to be balanced with a need for affordable housing for our disadvantaged members of the community.

Financial Summary
The average cost to provide a solar ready and car charging ready homes is the cost of the electrical cable or conduits and the labor to install them. Longmont Power & Communications' (LPC) Energy Strategies and Solutions team can provide estimates of these costs per home to educate both existing homeowners and new home builders.

In addition, we need to bear in mind that affordable housing is a large concern for first time home buyers and disadvantaged community members

Marketing, training, and incentives
The Energy Strategies and Solutions Team at the City of Longmont can develop materials outlining the full costs and benefits of the enhanced building codes the Climate Action Task Force recommends. Public events and interactive displays can be developed to educate the public and create awareness of these measures to promote the benefits of owning a home that is efficient and contributes fewer greenhouse gas emissions.

BE.2) Electrification: Create an eight-person Electrification Feasibility Committee that prioritizes reducing carbon and greenhouse gases (GHG) while keeping housing affordable for the most vulnerable community members.

Recommendation Summary
Longmont needs to develop a workable and comprehensive electrification policy as soon as possible. City policy can leverage best practices and lessons learned through City programs and relevant municipal case studies. The policy should be both ambitious and realistic, offering a reasonable phased action plan for the next ten years. The material must be vetted, documented, and presented in non-technical ways that will allow it to earn City Council approval and broad public buy-in. A view to maintaining and improving the affordability of local housing stock needs to be incorporated.

Objective
Growing awareness of the shared global climate emergency has prompted a sharp increase in the number of American cities considering the shift towards beneficial electrification. In joining this movement, the City's options must be explored carefully, explained clearly, and implemented in phases with care and oversight. Our objective is to use careful, effective, step-by-step planning to drastically reduce Longmont's commercial and domestic consumption of fossil fuels by 2030.

Target

The Climate Action Task Force recommends that the City Council create an eight-person Electrification Feasibility Committee to oversee this research and develop a phased plan, showing advantages and constraints. The committee should consist of the Longmont Power & Communications (LPC) team that is currently addressing this issue along with Sustainability staff, and several community members. It should ensure that priority is given to maintaining affordable housing stock for our most vulnerable residents. Their report should be submitted by Nov. 1, 2021. The long-term target is to drastically reduce fossil fuel use in the City's buildings by 2030.

Timeframe

In 2019, as Longmont expanded its climate research following the 2016 Sustainability Plan, it stressed the need to develop a fair and viable "Building Electrification Strategy." As a next step, the Electrification Feasibility Committee should submit, by November 1, 2021 a full evaluation and phased plan. From Nov. 15, 2021, to Feb. 15, 2022, there should be three months of public discussions and information sessions on the plan's feasibility and social justice implications. By March of 2022, the City Council should take steps to approve and implement the phased plan. Regulations like a moratorium on gas hook-ups in all newly constructed low-rise buildings and homes should be gradual.

Before the end of 2025, the City should conduct follow-up studies to analyze any improvements or bottlenecks as a result of the new strategy. Such careful monitoring can maximize potential co-benefits and minimize undesirable trade-offs.

Social and Economic Impacts

Urban electrification yields benefits such as enhanced productivity, improvements in quality of life and public health, protection of ecosystems, and safeguarding of ecosystem services for future generations. Climate and atmospheric benefits can accrue via the general electrification of energy uses, with additional benefits for fuel costs and human health. However, these benefits are variable depending on factors such as the generation mix of the electricity grid.

Societal barriers, cultural practices, and political preferences will need to be addressed in order to make this initiative successful. For example, many chefs and home cooks prefer natural gas cook tops over induction technologies. Natural gas fireplaces are also popular among residential customers.

Economically, the costs of transition to all-electric buildings are significant: LPC estimates that expanding the capacity of existing substations and, if necessary, siting and creating an additional substation with larger capacity transformers to meet the increased load could cost several million dollars. In terms of end-use technologies, it's unclear how quickly prices will drop. Therefore, all electrification and renewable energy upgrades must be paired with thorough weatherization and energy efficiency improvements.

Financial Summary

The proposed Electrification Feasibility Committee should include a projected multi-year budget for city-wide electrification in its report to the City Council on November 1, 2021. This appraisal will assist

the City Council and Longmont residents in assessing the urgency and feasibility of electrification. The report should address the realities developers, homeowners, and homebuyers will face (such as additional costs and fees for larger transformers, house panels, and energy-efficient appliances) with respect to the creation of new subdivisions of all-electric homes.

This report should also address the costs that LPC will face in increasing city substation capacity. For instance, an initial appraisal by Efficiency Works™ suggests that "Transformer upgrades in areas with overhead electric services will experience difficulties due to pole crowding and excessive weight from the installation of larger transformers." Pole change out, adding more poles to accommodate additional transformers, or conversion to underground facilities will be needed in older neighborhoods. In addition, conversion from overhead facilities to underground can create problems with available space and easements necessary for equipment placement.

Marketing, training, and incentives
The committee's report will include an outline for necessary marketing efforts, training needs, and uptake incentives. Long-term success will depend upon coordinated planning and substantial investment in each of these three areas.

BE.3) Commercial Benchmarking Policy: This program is part of the Longmont Sustainability Plan. Promote the use of Commercial Building Energy Benchmarks to encourage owners and tenants to improve energy efficiency and lower waste

Recommendation Summary
The City of Longmont needs to implement a commercial building benchmarking policy. The policy should engage business and municipal building owners with a positive, transparent cloud-based solution to identify, analyze, & report on inefficient energy usage. The program should start with a comprehensive public business outreach campaign to educate building owners and get community buy-in. The initial launch will apply to buildings over 20,000 square feet. Long term, the City should expand the benchmarking policy to include all nonresidential facilities over 5,000 square feet.

The state may be implementing a building energy benchmarking program in the near future.

Objective
Based on results from other commercial benchmarking programs, the City of Longmont could reduce overall energy consumption in the commercial building sector by 2.4% per year, or about 7% over three years, through a building energy benchmarking mandate. This policy will be piloted by Longmont Power & Communications (LPC) in 2020 and implemented in 2021. The team recommends that the City adopt benchmarking as part of City Code, with penalties for building owners who do not report facility benchmarking.

Target

Launch a building energy benchmarking program to reduce overall energy consumption in nonresidential buildings by 2.4% per year or 7% over three years.

Timeframe
The pilot phase will begin in 2020. An ordinance for this policy will be developed in 2020 and should be adopted by the City Council in 2021.

In 2021, all commercial buildings over 20,000 square feet will be energy benchmarked. The list of energy benchmarking scores should be made publicly available.

In 2022, buildings over 10,000 square feet will be added, as well as multi-family buildings over 20,000 square feet.

In 2023, commercial buildings over 5,000 square feet and multifamily over 10,000 square feet will be added.

In 2024, multifamily over 5,000 square feet will be added.

Social and Economic Impacts
Building owners and commercial tenants will be impacted along with groups serving those customers, such as the Chamber of Commerce and Longmont Economic Development Partnership (LEDP). To ensure buy-in from these groups, the City should start with an "opt-in" pilot to identify any issues with the program process and show other businesses the economic value of monitoring and controlling their facility energy use. LPC will need to reach out to make the energy scoring relatively easy. LPC is working with Xcel Energy's Partners in Energy program to learn from the utility's experience with benchmarking programs in its other service territories.

Financial Summary
LPC will need one person dedicated to introducing this program and helping commercial customers. LPC currently has one staff person introducing the program. Additional funds for updating the website and making the information on benchmarking easily accessible and understandable is needed. Existing personnel can support this with additional funding of $20,000 for developing user-friendly information. Xcel Energy is committing support to this Program for facilitating the gas data use.

Marketing, Training, and Incentives
The City's website needs to be updated with easy-to-read marketing material and a program user guide. There should also be a link to FAQs. Account managers will need to go through a short training so they can discuss the program accurately with their clients. The benchmarking program lead staff member will host virtual and in-person workshops in conjunction with Xcel Energy to help customers learn how to use ENERGY STAR Portfolio Manager®.

BE.4) Commercial Energy Efficiency Improvements and Rebates: Expand existing programs, retrocommissioning and Performance Programs through Commercial Efficiency Works™

Recommendation Summary
Efficiency Works™ is an existing program noted in the Longmont Sustainability Plan. The team recommends that this program be expanded to include additional businesses. The Climate Action Task Force recommends that small, medium and large size commercial buildings in Longmont have increased focus on efficiency with rebates to help alleviate the cost of the improvement. A full listing of the program's current rebates and energy efficiency services is available on the Efficiency Works™ website.

Objective
The City of Longmont has co-developed a robust regional energy efficiency program, called Efficiency Works™, with Platte River Power Authority (Platte River) and the cities of Loveland, Fort Collins and Estes Park. This jointly managed efficiency program provides a wide range of advising, assessment of opportunities and rebates for various energy projects benefiting commercial buildings and businesses. Administration of the programs, contracts and rebate processing is performed by Platte River. Customer engagement is handled with joint marketing efforts and local efforts of Longmont.

Target
We recommend that efforts to reach Longmont commercial customers increase to 2% annual energy savings across the City's commercial building stock by 2025.

Timeframe
Currently the target in the Longmont Sustainability Plan is to achieve 1% energy savings per year. The Climate Action Task Force recommendation is by 2022 expand this target to 1.5% and by 2025 increases to 2% energy savings (kilowatt hours).

Social and Economic Impacts
Commercial customers are positively affected. Businesses of all sizes participate from the smallest to the largest. The rebates oftentimes offset the cost of the improvements by one-third to one-half of the cost. Contractors also benefit from additional work from these efficiency improvements.

Financial Summary
Efficiency Works™ is funded largely by Platte River, with additional Longmont Power & Communication contributions. Through the existing Inter-Governmental Agreement (IGA) with Platte River, Longmont has the ability to add additional funding to direct the work and focus of the programs. Rate increases could provide additional program funding.

Marketing, training, and incentives

The City needs to greatly improve and expand its outreach and promotion of Efficiency Works™. Key account managers need to do more outreach through the largest customers. An additional staff person, or funding for consultants, will be required.

BE.5) Increase Residential Efficiency Works™ Program Utilization

Recommendation Summary
The City Sustainability Plan includes the Efficiency Works™ program. This recommendation seeks to expand the program's effectiveness. The Climate Action Task Force recommends an increased focus on efficiency for Longmont's homes, helping more residents to get rebates that will alleviate the cost of energy-saving home improvements. These include lighting, heating/cooling, insulation, air sealing, windows, heat pumps, evaporative coolers and water heaters. A full list of qualifying improvements and their rebates can be found at https://efficiencyworks.org.

To improve engagement with residential customers, the Climate Action Task Force also recommends the use of home energy reports (such as those used by Fort Collins) to make all residential customers aware of their energy efficiency efforts relative to their neighbors' home of similar size and age in addition to more specific efficiency tips and opportunities. A Home Energy Report typically compares the energy costs of one household to another of similar size and age. It has proven to be quite effective in Fort Collins and Loveland. The Home Energy Report can also provide additional energy saving tips.

Objective
The City of Longmont has co-developed a robust regional energy efficiency program, called Efficiency Works™, with Platte River Power Authority and the cities of Loveland, Fort Collins and Estes Park. This jointly managed efficiency program advises customers, assesses the opportunities available to them, and provides a wide range of rebates for various energy projects benefitting their homes. Platte River administers the programs and contracts and processes the rebates. Customer engagement is handled with joint marketing and local efforts of Longmont.

Target
Longmont currently assists 100 homes per year through this program. The Climate Action Task Force recommends that these efforts increase to 400 homes per year by 2023. We propose to add home energy reports in 2021. The additional cost for this is about $150,000 and will require a full-time person to assist with data collection coordination with the City customer information program and to answer customer questions after implementation. The Climate Action Task Force believes that additional customers will be motivated to seek audits and improve their home efficiency.

Timeframe
For 2020, the goal is to reach 100 homes per year. This will increase to 200 homes per year in 2021, 300 homes per year in 2022 and 400 homes per year in 2023.

Social and Economic Impacts
Efficiency Works™ has a positive impact on residential customers. Participating homes earn generous rebates on helpful improvements that continue to save residents money and energy over the long term. Boulder County used its remaining funds through the ARRA grant to provide a buy down of the loan interest rate at two local banks in Boulder County. This is currently available to all Boulder County residents on energy saving projects. This obviates any need for on the bill financing by Longmont Power & Communications.

Financial Summary
Efficiency Works™ is largely funded by Platte River Power Authority (Platte River) with contributions by Longmont Power & Communications. Through our IGA with Platte River, Longmont can add additional funding to direct the work and focus the programs. The monthly home energy reports which help drive customer engagement at a cost of $6 per home. A customer can opt out of these. Once Advanced Metering Infrastructure is installed, additional depth and clarity of a customer usage will be able to be shared,

Marketing, training, and incentives
Much more effort needs to be made to inform the public of the savings available through improved energy efficiency. We recommend home energy reports (such as those used by Fort Collins) to make all residential customers aware of their energy efficiency efforts relative to their neighbors' home of similar size and age in addition to more specific efficiency tips and opportunities.

BE.6) Expand Low-Income Residential Energy Efficiency Programs

Recommendation Summary
The City of Longmont should expand the existing low-income residential energy efficiency program to 400 households per year. According to City data, an estimated 12,000 households in the City of Longmont have a high utility burden, limiting the residents' financial ability to improve the efficiency of their homes.

Objective: Increase energy efficiency in low-income housing to help the city achieve its renewable energy goals while ensuring social equity. The program should focus on giving each home a free energy audit, insulation, air sealing, a high efficient furnace (if required for safety reasons) and a new refrigerators if the existing unit is over 10 years old. The program should also seek funding for additional measures like electric appliances and smart thermostats. All outreach materials for this program will be in Spanish and English.

Target
In 2019, 32 homes participated in the low-income residential energy efficiency program, and the City is proposing to complete 40 this year. According to the National Renewable Energy Laboratory (NREL),

programs such as this save an estimated 2.65 metric tons of CO_2 per house per year. At 400 homes, this greenhouse gas reduction translates to 1,060 metric tons of CO_2 saved per year.

Timeframe
Beginning with the current level of 40 homes, we would plan to expand the program to 100 homes by 2021, to 150 homes by 2022, and to 200 homes by 2023. The full program capacity of 400 homes would be reached by 2025.

Social and Economic Impacts
The greatest impact will be to Longmont's renters and homeowners, who live in single-family homes, who will have more comfortable homes, greater energy savings, and education on how to focus on energy efficiency and the required home maintenance. This program will need additional contractors, as there is currently only one contractor serving the four communities of Longmont, Loveland, Estes Park and Fort Collins. This in turn will require workers who will be trained on the job, which may provide employment for some residents in this program. In addition, Energy Outreach Colorado will need to increase its staffing in order to process the increased number of applications and coordinate with the local families and Platte River Power Authority (Platte River), while Longmont Power & Communications (LPC) will need to add one employee to serve the expanded program.

Financial Summary
The average cost is $4,000 per renovated home and $2,000 per renovated mobile home. Typically Xcel Energy and Energy Outreach Colorado each pay for about 25% of these costs. LPC through Platte River provides for the other 50% of costs. Growing this from 40 to 400 homes will require all parties to come to the table to confirm that they can continue the same share of funding. If we assume a mix of 90% single-family homes and 10% mobile-homes, the program will require $380,000 for 100 homes, $760,000 for 200 homes, and $1,520,000 for the full 400-home target.

Under the new Boulder County Sustainability tax, county commissioners are expecting that the City of Longmont will provide $2.3 million of revenue. Currently, Boulder County has pledged to fund up to $125,000 for sustainability programs, technically 6% of the total tax revenue to the municipalities, based on population, which for 2020 is about $125,000. The Climate Action Task Force recommends that the City of Longmont engage Boulder County in collaborative talks to secure additional revenues for this program, which will enhance social equity and reduce greenhouse gas generation.

Marketing, training, and incentives
All materials need to be in both English and Spanish. One additional program administrator will be hired at the City of Longmont to handle outreach, education and communication. Some outreach will be done in targeted neighborhoods. The City will continue its current coordination with the Community Services Housing Rehabilitation program.

BE.7) Create a Climate Action Fund: Secure grants, sustainability dollars, and other sources to assist in funding the above programs, paying competitive wages to the program staff, and contract workers.

Recommendation Summary
The City of Longmont should establish a Sustainable Climate Action Fund to assist low- to middle-income building owners, both residential and commercial, in the transition to meet the City's mandated electrification/renewable energy goals.

The Fund should be established through a mix of public and private funds, fees and taxes, and the City should leverage those funds to bring additional resources to the table.

The City should continue to support and expand already-existing rebate programs and incentives for building owners, including Efficiency Works™, Colorado's Affordable Residential Energy (CARE), and the Boulder County Sustainability Tax, into which Longmont residents pay approximately $2.3 million annually.

A full-time permanent grant coordinator should be hired to write environmental sustainability grants and solicit other public and private funds from the State, Federal government, major donors, corporations, private foundations and banks, in order to establish and grow the Fund. At least one other staff person should be hired to examine the feasibility of additional financing/loans for wealthier or larger building owners in Longmont, plus guide the City on investments to funnel dividends into the Fund, and/or research and implement the levying of a new tax for the Fund.

Objective
The aim is to minimize, if not eliminate entirely, the financial burden on lower-to-middle income building owners in the City in the transition to 100% electrification and renewable energy by 2030. Funds can be used to supplement costs not covered by already-existing City programs, or they can help those programs expand in scope.

Target
The Fund shall be researched, planned, staffed, launched and in operation no later than early spring 2021. City staff should make their recommendations on financial targets or goals for the Fund each year between 2021 and 2030, based on projected need.

Timeframe
Conduct research on developing and launching a Climate Action Fund from spring 2020 through mid-August 2020. Using this research, City staff should establish a funding plan for 2021 and beyond by mid-November 2020.

Social and Economic Impacts
The impact of the Fund is positive for residents and commercial building owners alike. Lower-to middle-income homeowners will be able to afford to make the necessary changes to their homes, and successive homebuyers will benefit from the lack of one additional factor to drive real estate prices beyond their reach.

Boulder County renters already are burdened by the cost of housing, and small- to medium-sized businesses are burdened by high commercial rents. The Fund will allow residential and commercial landlords to retrofit and electrify their buildings with minimal cost, so that additional burdens are not imposed upon tenants.

Lastly, the City cannot complete the mandate of 100% renewable energy by 2030 with its associated benefits without additional funding.

Financial Summary
Grants, Efficiency Works™ funds, CARE funds, and income from the Boulder County Sustainability Tax are all potential sources of funding.

Marketing, training, and incentives
The program needs a pre-emptive marketing campaign to inform residents, commercial building owners, and trade allies about what financing or funding mechanisms are available. Transparency is key and this should be a community effort.

One note: due to the low unemployment rate in the region, wages need to increase for workers doing weatherization of existing buildings in Longmont. Either supplement hourly wages via the Fund, or encourage (and provide technical assistance and start-up capital for) the establishment of worker-owned weatherization companies or cooperatives.

Education and Outreach

EO.1) Comprehensive Workforce Development

Goal/Objective
We recommend that the City of Longmont hire a Green Business Employer Council (GBEC) program manager. The GBEC would be a coordinated, green energy workforce development program for the community with three main goals:

1) Develop a comprehensive green jobs training program that includes career ladders for Longmont residents along job pathways offering stable employment and a livable wage.
2) Increase the number of green energy professionals to implement various municipal, commercial, and residential projects in support of Longmont's goal for 100% renewable electricity generation by 2030.
3) In order to build a diverse and inclusive workforce in the green energy sector, a percentage of the workforce training program should equal or exceed the percentage of racial minority communities in Longmont.

Recommendation Summary
To address the long-term climate change emergency in a viable and sustainable way, Longmont must tackle a crucial set of workforce-related challenges that can benefit all involved. This Comprehensive Workforce Development Program will be key to the success of other Climate Action Task Force recommendations. It has the specific goal of using training and incentives in both the public and private sectors to expand and improve Longmont's climate action workforce, addressing home energy and weatherization needs by doubling the number of trained full-time workers and contractors within the next three years. Currently, there is a significant shortage of contractors in this field, and a need for technicians, engineers, electricians, and other relevant types of workers. To address these needs, a timeline is provided below for a phased initiative that starts with hiring a staff person, expands to planning by a core group, and then sets up an ongoing Green Business Employer Council (GBEC) by the end of 2020.

Target

<u>Specific</u>
A Technical Advisory Committee (TAC) made up of active industry professionals will spearhead most GBEC efforts. The TAC will help set standards for instruction for the program, determine participation requirements, identify key skills missing from the local industry, select training locations, and identify possible career paths.

Efforts should be made to build upon already-existing training opportunities, and to determine indicators and measurements of success for the workforce training program. In addition, it will also be

important to connect trainees to industry-wide certification programs such as RESNET's Home Energy Rating System (HERS). *A certified RESNET HERS Rater conducts energy efficiency audits for residential buildings to determine their current efficiency and identify energy savings projects.*

Central to this initiative is a climate justice commitment to give high priority to low-income and unemployed workers and to those local residents who have lost viable jobs due to the economic disruptions of 2020 or to rapid changes in the area's oil and gas industries. Overall, the goal is to develop not only entry-level jobs, but also a wide range of full-time living-wage jobs that support advancement.

Areas of training should include at least the following, with the exact coursework based on each incoming participant's existing education:

Basics

1. General arithmetic, ESL/English literacy; Workplace skills including interpersonal interactions, customer service, and conflict resolution, diversity/sexual harassment training; Career support through interview practice and resume assistance
2. Technology and internet literacy, including basic programming skills and software/hardware troubleshooting
3. Financial literacy training for subjects like credit, savings, assets, budgets, debt, and banking
4. Environmental justice education

Construction industry skills

1. Basic construction skills - welding, vehicle operation, etc.
2. OSHA safety
3. Energy efficient new construction, both nonresidential and residential
4. Code compliance training

Residential contractor skills

1. Residential energy audit/HERS training
2. Residential weatherization, energy efficiency upgrades, and electrification projects
3. Installation/conversion of pipelines and meters to transition to 100% electric infrastructure

Renewable energy industry

1. Training in solar, wind, geothermal, and other renewable energy generation system design and maintenance
2. Installation/conversion of pipelines and meters to transition to 100% electric infrastructure

Advanced/other

1. Electric vehicle mechanics and software
2. Classroom and on-site training in small business operations and entrepreneurship
3. Opportunities to continue education at Front Range, Trade Schools and 4-year colleges

Measurable
Standards of success should include not only program completion, but also industry certifications, job placement, job retention, further education, and career ladder success. Demographics should be collected and measured. The Center for Construction and Research Training has developed a Workforce Sustainability Report (2019) that offers a viable framework for assessing social sustainability in any workforce development industry. For economic impacts, the City can use local statistics on employment, household earnings, and value added in the clean/green industry.

Achievable
Local, state and federal funding sources can and should be leveraged to fund this program. The program should start with existing funding partners like local trade schools, St. Vrain Valley School District (SVVSD) or Front Range Community College (FRCC), or funding through the Workforce Investment Act (WIA), or local Workforce Investment Boards (WIBs).

Incentives should be offered to those businesses willing to be part of the GBEC or TAC, as well as to those businesses willing to hire or provide apprenticeships to program participants. Workforce Boulder County (WBC) has an existing program.

Relevant
The US Department of Energy estimates that every $1 spent on weatherization, results in a $2.73 estimated return on energy and non-energy related benefits to the community. Longmont's growing list of green energy employers can rely on this program, knowing that this training process was performed using an equity lens and that they are hiring properly screened, assessed, trained, and supported workers. This effort will offer stable jobs, speed the reduction of greenhouse gases, and help to build stable and living wage jobs for disadvantaged and displaced workers.

Time-bound
Two complications make the proposed timeline uncertain. The City is currently in a hiring freeze due to COVID-19 and its unclear when hiring will/can resume. And since Longmont budgets out new positions in May the year before, it might not be possible to hire the GBEC coordinator until 2022. Under these assumptions, the Climate Action Task Force presents the following timeline:

- Summer 2021:
    - Hire a staff person to research and convene a small, diverse Green Business Employer Council (GBEC). The employee should have existing knowledge in the green energy sector, connections with key community stakeholders, and an understanding of energy efficiency and green energy workforce shortages/opportunities for growth in Boulder County.
- September through December 2021:
    - The GBEC City staff member will identify and bring in members for the TEC. This group can reach out to get support for the Council from local green energy industry leaders, the

SVVSD, FRCC, Workforce Boulder County, area nonprofit organizations, local/regional trade schools, and relevant labor unions. This combination of the City staff member, TEC board members, and community partners will form the overall GBEC.

- January-August 2022:
    - The GBEC will design and promote a Workforce Development Plan for green energy, recruiting both employers and participants for the program, and arranging sites for a coordinated kick-off in the fall of 2022.
- August-December 2022:
    - The program will begin training the first cohort of participants, focusing on filling spots with Longmont residents who meet one or more of the following criteria: low-income, unemployed/underemployed, previously incarcerated, single parents; without a GED or high school equivalent, speak limited or no English. Given this approach and to make the process equitable, augmenting skills should probably be taught first, before going into very specific/technical skills. Then training will focus on weatherization/auditing/ retrofitting of existing buildings, plus other hard-skills priority areas as listed above.
- January 2022 forward:
    - The program will continue to expand and improve, responding to local needs of the City's businesses, homeowners and job seekers. It should gain momentum as successes mount and word spreads that Longmont is succeeding in expanding its workforce and addressing the Climate Emergency.

Social and Economic Impacts

The jobs available for graduates of this specific workforce program must pay decent/livable wages for Boulder County and offer good benefits. There must be a realistic and flexible career ladder clearly outlined, and sufficient training and certifications must be provided. Through the GBEC, applicants should be able to expect such things as soft skills training; paid training/internships; and relationship-building for future steady employment with local green energy companies.

For maximum social and economic impact, the programs sanctioned by the GBEC must offer support and connections with wrap-around case management assistance such as transportation, English language instruction, substance abuse counseling, mental health services, and/or child care. In addition, provisions will need to be made for job/career-related support once participants "graduate" from the program.

See the Measurable section above to ensure the program is evaluated for both social and economic metrics.

EO.2) “Big Picture” Climate Lecture Series

Goal/Objective
In addressing climate change, public awareness among an informed public is crucial. Community understanding is central to the success of shared policy ideas. Moreover, deeper historical and cultural understanding is crucial to that public awareness. We recommended the City continue to support an ongoing initiative to offer a series of five public lectures/film screenings at the Longmont Museum beginning in early 2021.

Recommendation Summary
This series, entitled “Our Climate—The Big Picture,” will offer five well-publicized free presentations and discussions on Sunday afternoons in the Longmont Museum’s 250-seat Stewart Auditorium. The goal is to raise awareness and foster discussion regarding the climate emergency that faces Longmont and our planet.

The program already has funding for the first five presentations and based on the success of the initial year’s program, the series could become an annual city-funded event. The “Our Climate—Big Picture” Lecture Committee has already started coordinating with the Museum Events Manager Justin Veach. The committee includes two teachers from St. Vrain Valley School District (SVVSD) and Front Range Community College (FRCC), two CU professors who are Longmont residents and members of the Climate Action Task Force, and the senior environmental historian chairing the CU-Boulder History Department. It will also include a member of the City’s sustainability staff, since they oversee Longmont’s climate action efforts and can bring the broader equity and engagement lens, as well. Connections will be made with the Longmont Public Forum, Longmont’s Just Transition Plan (JTP) Committee, and Sustainable Resilient Longmont (SRL) to gain their participation and support.

Target

Specific:
Run an “Our Climate—The Big Picture” series of five well-publicized free presentations and discussions on Sunday afternoons in the Longmont Museum’s 250-seat Stewart Auditorium.

Measurable:
Attendees to each lecture series should be asked to fill out a survey to provide feedback on their experience. The survey should include at least the following:

- Demographic information
- Qualitative questions:
    - How did you hear of the series and how many presentations have you attended?
    - What did you learn tonight, and how will you share this information?
    - How seriously do you take the Climate Emergency, both locally and globally?
    - Should Longmont continue this educational endeavor, and how can we expand it?

Achievable:
The COVID-19 crisis could require large in-person events to be delayed in early 2021. In this situation, Justin Veach, the Museum's Auditorium and Events Manager, can work with the group to plan a small live-audience event with social distancing with an online, live-streaming option via Facebook or Zoom. The event could also be recorded for repeat viewing on the Longmont TV channel or city website.

The program already has $5,000 in funding through an outreach grant from CU-Boulder's Center for Humanities and Arts (CHA), awarded in April 2020 and available for one year. The grant will cover publicity outreach, speaker stipends, event security, lecture handouts, auditorium projectionist, and technical help.

Committee members will focus on presentations that balance broad climate education and themes or topics with particular relevance to Longmont's community, including addressing environmental justice issues that different sectors of the community may face. Drawing a diverse crowd may only be achieved if there is targeted content that has direct relevance to people's lives now.

Potential speakers include James Butler, Head of the Global Monitoring Division at NOAA, who has a presentation called "Carbon Dioxide, Climate Change, and Human Civilization." Other local environmental leaders include Rafael Salgado (CalWood), Irene Velar (Americas for Conservation + the Arts), Carlos Fernandez of the Nature Conservancy, and Joe Salazar, the director of Colorado Rising. Outreach for the series should include diverse organizations such as Native American groups, El Paso, Intercambio, Suma Latina, and others. In addition, the committee will **prepare a list of recent and relevant climate films** (such as *The End of Ice*) that could be integrated into the series and used by local teachers.

Relevant:
Nothing is more crucial to mitigating and responding to climate change, both at the local and the global level, than broad public awareness of the climate emergency we all now face. This program is part of a larger educational effort to increase public engagement and understanding in Longmont and the Front Range region.

Time-bound:
Planning will begin in June, and the first Sunday event will most likely occur in January 2021. (The eventual course of the Covid-19 epidemic may mandate certain changes and adjustments.) By **August 1, 2020** (before the academic year commences), spring 2021 event speakers and titles will be finalized. Plans for the Big Picture Climate Series will appear in the Longmont Museum's Fall and Spring schedules.

Starting in the fall, the Committee should make plans for postering (and using any other promotional vehicles) at Longmont Library, SVVSD, City public facing facilities, and local businesses. Other support

services (both in-person and online) could be tapped in order to reach minority /diverse /underserved communities. Social media and use of bilingual messaging - through the City, the University, the Museum and libraries - will be especially relevant if we continue to follow physical distancing guidelines.

By May 1, 2021, the Committee will prepare a report for the CU grantor on the effectiveness of the program, appraising how the response has been to-date. This submission could lead to a grant renewal.

In addition, if a yearly series appears feasible based on the effectiveness of the initial series, this same analysis of the program in early May 2021, could lead to a request for future Longmont support, (since the City begins budgeting in May of each year), in an effort to expand a meaningful public event.

Social and Economic Impacts
This project is a low-cost initiative designed to have a ripple effect. It will raise public awareness and challenge citizens to become more engaged in Longmont's significant efforts to address the full implications of man-made climate change. Though small, this awareness program will help to build community engagement, conversation, and understanding.

EO.3) Climate Change Article Series

Goal/Objective
The goal of this outreach effort is to develop a series of 10 to 12 short human interest stories from across the long history of energy use on the Front Range to provide the public with relevant historical and scientific perspectives and contexts concerning the Climate Emergency.

Recommendation Summary
These public interest essays will draw on history and science to help Longmont residents see and discuss the current climate emergency in a broader context. It will make abstract issues more relevant and accessible by tying them to specific changes regarding energy use that have occurred in our own area over time. All these changes are connected in intriguing ways to shifts in Longmont's public health, air quality, and transportation patterns. The series will dramatize the so-called "hockey stick effect" by showing how here, as elsewhere, human energy consumption has changed and expanded exponentially, shifting our lives for better or worse.

Target

<u>Specific:</u>
Longmont Museum's historical archive has excellent resources to explore and explain the evolution of energy use in our area. A small committee (involving the collection's Archivist, a Museum staff member, at least one historian from CU and from FRCC) should be able to map a feasible schedule and

a flexible topic list for a dozen articles throwing light on key phases of energy development in the region. All will be illustrated and will stress the local and social side of the story, along with scientific implications. Each piece will relate to the question of how our community and our country got to the place we are in today, where the unforeseen consequences of unprecedented fossil fuel energy use endanger the planet.

Measurable:
Conveying, and the measuring, awareness of the origins and extent of man-made climate change is never easy, but the metrics for measuring the success of this small intervention can be considered in terms of three phases: Creation, Reaction, and Expansion.

Successful *creation* will hinge on forming a committee, executing the research and writing, and placing the series with a widely circulating publication before the end of 2020.

A successful *reaction* will involve measuring the circulation of the series and assessing the public interest and comment that it is able to generate during the first half of 2021.

After that, successful *expansion* will hinge on whether the articles see continuing use in local schools and museums, and whether an ongoing educational series develops.

Achievable:
Costs to implement this recommendation should be minimal, since authors will be volunteers. The work of drafting and editing can be done at home, even if ripple effects from the current pandemic persist. Moreover, significant research materials, both written and visual, are available online.

Possible personnel may include Longmont Museum's archivist, Erik Mason, CU-Boulder historian Peter Wood, and Professor Andy DeRoche who taught American environmental history at Front Range. While the intended audience will be the general English speaking public, a priority involves a Spanish-language version of the series. Efforts will be made to work with Colorado Newspapers in Education, (NIEonline.com) to see that these materials appear in the e-editions of local papers that are made available for use in area classrooms.

Relevant:
Recent social science research confirms that the more informed residents are about climate issues, the more willing and able they are to support well-reasoned large-scale policies for reducing the harsh impact of global warming.

Time-bound:
Interested members of the Climate Action Task Force familiar with Longmont history should take the lead in creating a volunteer drafting committee. Securing a print and on-line outlets will be accomplished during the summer of 2020. These articles will be prepared between September and

December, and they will be placed in new and old Front Range media outlets over the winter and spring of 2021. This endeavor should not be hampered by the course of the COVID-19 pandemic or current instability regarding local media outlets and platforms. The creation and circulation of Spanish-language versions of these should have high priority. Ideally, these well-researched and engaging articles will appear in chronological order at regular intervals (such as every Tuesday), creating an ongoing story of how people in our region have relied on increasingly potent (and problematic) energy sources since the beginnings of the industrial era.

Social and Economic Impacts
This initiative will be scheduled to support and overlap with the "Our Climate – Big Picture" lecture and film series that has been fully funded for the Longmont Museum's Anderson Auditorium (probably on Sunday afternoons in the early spring of 2021). Whether the proposed articles appear before, during, or after that series, they will serve to increase attendance, broaden awareness, and spark discussion. Since the aim is for a thought-provoking and enlightening series, the initial focus will be historical and informative, rather than partisan and present-oriented. Hopefully, this series can be part of a larger effort to assist diverse local constituencies in finding common ground and shared understanding.

Democratic change hinges on broad understanding. As Abraham Lincoln once put it: "Public sentiment is everything. With public sentiment, nothing can fail. Without it, nothing can succeed."

EO.4) Longmont Museum Teaching Exhibit

Goal/Objective
"Front Range Rising," the excellent permanent exhibit at the Longmont Museum covering 15,000 years of local history, is a rich community resource visited by families, plus hundreds of area third-graders each year. It is an existing display that could be used effectively, in the context of our modern Climate Emergency, to introduce residents of all ages to the varied history of energy use in this area over time. This "Longmont Energy Overview" could be integrated with the existing exhibit to provide Museum visitors with more understanding of how we arrived at this Climate Crisis and how we can address it.

Recommendation Summary
Before creating expensive new tools to support climate change education, it makes sense to take full advantage of excellent resources that already exist. A perfect example is "Front Range Rising," the rich and compact local history exhibition at the Longmont Museum, already familiar to many area citizens. This permanent display makes Longmont's story accessible and allows visitors of all ages to consider Front Range History from a variety of angles. Creative museum staffers and volunteer docents have discovered that it provides an excellent and age-appropriate way for St. Vrain Valley School District third graders to get a sense of our community's origins and development over time, starting with this region's earliest inhabitants.

The “Front Range Rising” exhibit, long a highlight of Longmont’s Museum, offers a unique opportunity. The display is both informative and versatile, since it can be explored effectively to highlight a variety of themes—everything from women’s history and cultural diversity to our Longmont’s changing agricultural, commercial, and industrial history. Without changing anything, it therefore also lends itself to a well-organized energy/climate walk-through. Certain current features would come to the fore in chronological order (starting with a discussion of muscle power, water power, wood power and dog power for the first 14,000 years of human habitation in the region). Then comes horse power in the 18th c. (a cultural revolution for the Great Plains), followed in the 19th c. by the industrial revolution, tied to our region by the role (known to few) that buffalo hides played as industrial belts in eastern factories.

Then came steam power allowing for railroads, and electrical power prompting the telegraph, the telephone, and much else. As an energy source, scarce wood gave way to abundant coal, which eventually gave way to the seeming efficiencies of oil, gas and nuclear power. Now water and wind and solar power are with us again in new ways. “Front Range Rising” allows one to explore all this, pitched for any age, within a self-guided or docent-led tour. Whatever the format, consideration will be given to equity/environmental justice issues with reference to indigenous peoples and diverse immigrant groups. A “Longmont Energy Overview” connected to “Front Range Rising” could take many forms, such as an audio track, a pamphlet for self-guided tours, a short video, or a group walk-through with staff or docents. This initiative will begin with a working committee of interested staff and docents discussing and creating a brief narrative plus background sheets with facts and questions for docents and teachers. These discussions could help in the preparation of materials that would help parents and K-12 teachers, and they could also assist in planning for future renovation of the “Front Range Rising” exhibition. This initiative will depend upon Museum engagement, staff interest, and docent volunteer commitment.

If COVID-19 precautions make it difficult for busloads of students to visit for a while, it would be possible to create a fifty-minute, or twenty-minute, video walkthrough that could be used for online learning at school or home. If the exhibit undergoes expansion and renovation in the near future, as discussed, it would be possible to draw added attention to such features as the irrigation display, the horse carving, the buffalo robe, the pioneer push cart, the steam engine, the windmill, the sugar beet factory, the gasoline tractor, and other useful talking points.

Target

Specific:
Create a “Longmont Energy Overview” section in the existing “Front Range Rising” exhibit to provide Museum visitors with more understanding of how we arrived at this Climate Crisis and how we can address it.

Measurable:

The Longmont Museum keeps regular visitor counts and solicits feedback. It also works with schools in several school districts in the area to schedule and track regular on-site visits (in non-quarantine times) by school groups numbering between fifty and one hundred children on any given day. It will be readily possible to keep track of how many people this initiative reaches, and to incorporate useful feedback.

Achievable:
Costs will be kept to a minimum by using docent volunteers and by integrating these ideas with existing plans for updating "Front Range Rising." Discussions with Museum staff and teachers from SVVSD and FRCC are ongoing. The Longmont Museum has a sizeable membership and large mailing list. So it is already well positioned for publicizing its important changing activities and exhibitions. It also has well-oiled procedures for training new docents and for keeping track of individual and group visits and gathering and processing feedback.

An interactive 360 tour of "Front Range Rising" already exists on the Museum website. It is also available in VR headset options, such as "Google Cardboard" (which can run on iPhones 5s and newer, running iOS 9.1 and higher). It would be possible to develop a written or recorded guide for the exhibit focusing on Climate Education. The video at the entrance to "Front Range Rising" could also be used as a take-off point for making a climate-oriented introduction to the sweep of Longmont history.

Relevant:
This modest proposal represents an efficient and cost-effective way to engage with a wide cross-section of Longmont's public in an ongoing manner, particularly with school-age children.

Time-Bound:
As with some other Climate Action Task Force recommendations regarding Education and Outreach, this one does not involve major start-up costs. If sufficient commitment emerges, it could be undertaken mostly from home in the early stages, if quarantine persists, and it could engage Museum staff unable to tackle other tasks at this time. A committee to explore the idea could involve the Museum's experienced Curator of Education; docents familiar with the strengths of "Front Range Rising"; and interested members of the City's sustainability staff. This team should prepare a proposal, taking Museum staff time commitments into account, for the whole Museum staff to discuss and evaluate. Hopefully, if approved, this educational asset could be implemented for the Museum public over the next two years.

Social and Economic Impacts
Besides inevitable fiscal belt-tightening, the current pandemic and quarantine oblige us to think creatively about new ways for teaching traditional knowledge, and look for new opportunities for fresh teaching material and background information most-relevant to current and future generations. Young people are emerging into a changed world where the implications of global warming have been ignored or downplayed by older generations for too long. These rising students are anxious to be equipped with knowledge they will need to address our Climate Emergency effectively.

EO.5) Community Sustainability Liaison Program

Goal/Objective
Members of the community would serve as liaisons to promote sustainability through peer-to-peer awareness within neighborhoods around Longmont.

Recommendation Summary
The City should establish a Community Sustainability Liaison Program (CSLP) that will have trusted members of neighborhoods serve as liaisons to educate their peers on sustainability, renewable energy, and matters that address our Climate Emergency. These liaisons will talk to their neighbors and peers about items such as programs offered through Longmont, the benefits of renewable energy, how to save energy at home and at work, and ways to reduce waste. They will also advise people about using composting, obtaining rebates, and connecting to educational resources.

Liaisons can range from high school students to seniors which will help ensure messaging is gotten out to all communities across the city.

Here and elsewhere, this sort of peer to peer education has already proven effective, due to the fact that people make positive changes in daily activities not only based on what they know, but on the opinions, actions, and suggestions of their close, trusted peers. When liaisons are established, members of the community will know they can go to these people with energy and climate-related questions, or to seek more information regarding sustainability issues.

To maximize outreach and avoid duplicating efforts, Longmont can connect this program with the Sustainable Neighborhood Solution (SNS) and the Sustainable Opportunities, Lifestyles, and Leadership (SOLL) programs already in place in Longmont. This program should also work in conjunction with the Longmont Neighborhood Group Leaders Association (NGLA) to locate community groups already interested in sustainability.

Target

Specific:
The City should establish a Community Sustainability Liaison Program (CSLP) that will have trusted members of neighborhoods serve as liaisons to educate their peers on sustainability, renewable energy, and matters that address our climate emergency.

Measurable:
The City can poll different neighborhoods to see their interest in sustainability, awareness of current programs, and compare before this program is implemented and after. CSLP can ask participants how they heard about programs when they enroll in programs such as Colorado's Affordable Residential

Energy (CARE) or take advantage of rebates such as the ones through Efficiency Works™ to get new high-efficiency toilets.

Achievable:
This recommendation hinges largely on the City's ability to find volunteers to become liaisons in their communities. However, to get the maximum number of volunteers, the CSLP should give the liaisons incentives to join, and it should provide training on relevant topics. The CSLP should arrange networking dinners where liaisons can share with each other what is working in their communities, while also reporting what they need help with, and having their questions answered. To honor accomplishments and build group solidarity, CSLP should fund annual achievement awards.

The program must also work on recruiting a diverse cohort of liaisons from various socio-economic, age, and cultural groups.

Relevant
This undertaking will help educate Longmont residents about relevant climate change and sustainability issues. By informing neighborhood residents about the numerous sustainability initiatives the City is enacting, diverse citizens can become more aware and participate more readily in these programs. This initiative will help Longmont to reduce overall greenhouse gas emissions.

Time-Bound
Based on COVID-19 restrictions, this program could begin in the fall of 2020, when school is potentially back in session and social gatherings can occur again, or whenever that occurs. If effective, it will grow over time and take on a life of its own, linking more people to ideas and programs that help them and their city.

Social and Economic Impacts
This program has the opportunity to engage hard-to-reach communities and spread knowledge about Longmont's multitude of programs focused on reducing utility bills through weatherization, rebates for high efficiency, and energy savings techniques. Likewise, it will be of benefit to non-English speakers. Many such residents may not have been aware of local initiatives, or they may not have realized they could participate. Liaisons will empower residents to take steps to reduce their utility bills and also to become passionate about sustainability.

A successful liaison program can empower city residents with knowledge to make Longmont a more sustainable, equitable, and interconnected community.

Land Use and Waste Management

LW.1) Extending Agricultural Zoning

Recommendation Summary
Change zoning to allow for agricultural enterprises on residential properties. The zoning would allow for a portion of a property to produce food which can be sold locally at farmer's markets, roadside stands, or in any manner consistent with health and safety. Economic benefits include additional income for residents and job creation from implementing the program. Increasing access to local food could displace some current non-local consumption and lower the average carbon-intensity of our food supply through transportation emissions reductions.

Objective
This zoning change could be included with xeriscape transitions. Xeriscape is a landscaping method developed especially for arid and semiarid climates that utilizes water-conserving techniques. Allowing portions of properties to become gardens would reduce water usage by up to 90% if a drip system is required. Residents would be incentivized to move away from a grass yard if they could receive payment for the things they grow. A portion of sales would go to new jobs to verify that the food items are fit to sell to the public. Food tents for local foods could be set up at farmer's markets and other places in the city to sell the food. If widely adopted, this could substantially reduce the amount of fresh produce that is required to be shipped into the city from distant places, reducing emissions. The produce could also be purchased by local restaurants or even groceries. The change would also create a beneficial ecosystem for insects, which are known to be declining. The gardens could also be part of a program to rehabilitate soils. It is likely that neighbors would actually meet each other to trade "tomatoes for lettuce" etc., creating new positive community outcomes.

This goal is for any size property. Code would have to be adopted to determine what percentage of a property can be used for gardening, and where on the property (i.e. away from roads or pathways).

Target

<u>Specific</u>
Transition a significant amount of Longmont's idle land – used primarily for decorative lawns, or "wasted" in easements and right of ways, to productive, sustainably managed micro-agricultural land. This can include private property as well as public. A system for allocating public land will need to be developed. One model that's been suggested is "Adopt-a-plot" which could be administered similar to "Adopt-a-Highway" programs, which must be successful because they are ubiquitous.

<u>Measureable</u>
Success can be measured by adoption numbers and acreage converted, plus yearly yields determined by employees or companies who collect and monitor food quality.

Many people want to grow their own food and sell it for extra money. This model resembles Airbnb for gardening, but with positive outcomes for climate change – local food.

This is partly inspired by Switzerland, where everyone's yard is just one big garden, and everyone trades food and sells the rest. Whole villages are known to have zero incoming food shipments. The city can do it too! The water requirement is alleviated with high-quality drip systems, required to be in the program.

Example: https://www.bettergardens.ch/about-bettergardens.html

Achievable
The City already engages in programs similar to what would be needed to implement this. The code changes needed are within the skill sets of the City planners and the PWNR organization. There is already a desire for this among the residents, as evidenced by usage of Garden-in-a-Box, the popularity of Farmer's Markets, and the prevalence of backyard gardens, etc. In this case we are moving the public in a direction many already choose to go.

Relevant
Benefits relevant to climate change include:

- Reduced water consumption
- Reduced transport that consumes fossil fuels
- Diversification of plant stock providing resilience against catastrophic climate events that may wipe out monoculture crops
- More sustaining environment for pollinators.

Time-bound
Before the end of year two, the necessary regulations should be in place. Regulations need to be expressed in such a way that private landowners inside an HOA may still participate.

By the end of five years, one or more local co-ops should be in operation and providing an example that will inspire more neighborhoods and individuals to participate.

A goal for the end of the third year is to gain St. Vrain Valley School District's (SVVSD) participation, by rewarding middle and high school students' service hours for community gardening, and perhaps in other ways such as giving credit for plant eugenics projects, low-moisture gardening techniques, and the like.

Five years or more is required for this initiative to become part of the culture and for a robust local cooperative to develop. But we have something of a foothold in the popularity of the local Farmer's Market and institutions such as Ollin farms.

Social and Economic Impacts

Benefits – Provides an additional source of income through a low-carbon enterprise. It could increase the consumption of local food. Increase the diversity of plant life in residential areas (residents should be encouraged to grow rare crops) and foster pollinator habitat. Climate events can disrupt food supply, so small-scale gardens can help avoid food disruptions in the future.

Negative – Barriers to participation for multifamily building occupants or smaller lots could have an outsized effect on low-income households. Refer to the Social Justice section below.

Barriers – The cost of water could rise in the future. Drip systems are expensive to install and calibrate. Running a profitable, small-scale farming operation is time-intensive and requires training in agriculture and botany. Making local gardens cost-effective is difficult without training or support. At present, Colorado does not allow a municipality to regulate pesticides, but for this movement to be viable, dangerous pesticides would need to be prohibited where they might impact the community garden or farm.

Social Justice – The City could convert open space around apartment complexes and pocket parks in HOAs into community garden allotments for the property residents. City Sustainability staff or groups such as EforAll can help organize communities into cooperatives.

Financial Summary

Upfront costs include the city staff time needed to draft and implement code updates, engage with local residents to get support, and then launch a city-led initiative to promote the program. There are also large upfront costs for residents to start the program, and making the endeavor cost-effective is not easy.

An educational program and gardening programs should be implemented to teach about opportunities and possibly distribute seeds.

Marketing, training, and incentives

Many residents are already xeriscaping their lawns. As noted above, educational programs to get residents started will need to be funded. Locally viable seed stock will need to be identified and distributed. Conceptually, this is no different than the existing garden-in-a-box program, except that it has wider potential benefits than just reducing water consumption.

A workforce development program may be needed to gradually transform Longmont's lawn-care workers to partners in the community agricultural industry. This could begin with replacing sprinkler systems with lower-consumption drip systems, replacing sod with soil conditioned for agriculture, testing soil for contaminants that would preclude food production, and the like. The best agency for effecting this transformation may be the county extension services.

LW.2) Commercial and Residential Composting Initiative

Goal/Objective
The US Environmental Protection Agency reports that, on average, each ton of compostable material diverted saves about 0.7 metric tons of CO_2 equivalent in greenhouse-gas emissions. Therefore, increasing residential and commercial composting programs can significantly reduce the City of Longmont's carbon emissions.

Recommendation Summary
Currently, 19.36% of the households are subscribed to the City's curbside composting program. The goal is to increase that number to 75% of eligible households over the next 5 years.

The City also needs to find new ways to encourage nonresidential composting, especially in businesses with large composting potential like restaurants, breweries, and food processors. State law preempts the City from requiring these businesses to use municipal services, so to get businesses to compost would require leverage through ordinances that require nonresidential facilities to compost their waste, regardless of their waste management provider.

Specific
The following actions can help drive composting rates across the city:

- Offer the residents of Longmont two options for composting bin size. Currently the city only offers a large size tote for compost. The city needs to offer a small size tote option. This would allow people who do not produce much or have limited space to still have the option to compost.
- In addition to providing two tote sizes, the number of curbside yard waste pickups should be increased during the summer months.
- Provide comprehensive education and information about how to compost properly and its role in reducing household carbon emissions. The end goal would be to increase participation and minimize contaminants entering the compost stream.
- Design a new tote lid to clearly remind residents to minimize contamination with non-compostable waste.
- Make curbside composting opt-out instead of opt-in.
- Work towards the goal of requiring all commercial businesses that produce compostable biomass to compost these items. This is already part of the Sustainability Plan.
- Continue working with Saint Vrain Valley School District to increase diversion of student generated biomass. This is part of the Sustainability Plan.

<u>Measureable</u>
Increase the total number of households and businesses that compost to 75% in 5 years. Residential performance towards this goal can be tracked by the City's Waste Management Division.

Nonresidential performance will require a mix of City Waste Management data and reporting from businesses that use another waste management vendor.

Achievable:
Changing future composting policy to automatically subscribe to composting service unless they opt-out will grow the number of subscribers over time.

Additionally, pricing bundles of services so that residents save money by composting rather than filling up the trash bin will increase adoption among existing residents.

Relevant:
Statistically, 24% of total household waste consists of organic material, usually in the form of food scraps and yard waste. The average American throws away 1.3 pounds of food daily. When all that organic material is buried in a landfill, it breaks down anaerobically, producing methane, a potent greenhouse gas that pound for pound can be up to 85 times more damaging than CO_2 over the same time period.

The immediate benefits would be less organic waste entering the landfills. The long-term benefits would be less methane produced and entering the atmosphere. Compost can be used to generate revenue and help rejuvenate depleted soils. Ways to commercialize compost include:

- Mixing compost with other soils to create rich, commercially salable potting soil
- Pulverizing compost to make a spreadable soil conditioner/lawn fertilizer
- Capturing and using the methane generated by the process as a net-zero fuel

A large body of literature exists on how compost may be commercialized, including this guide: https://smartasset.com/mortgage/the-economics-of-composting.

Time-Bound

- By January 2021: Change compost policy from opt-in to opt-out.
- Require businesses who produce more than 10% organic waste by weight to retain a commercial composting service by January 2021.
- By Summer 2021: Make two composting tote sizes available with a clear easy to read lid.
- By 2025: 75% of total city households are composting.

Financial Summary

- Composting expansion would be funded by fees collected from residents and commercial businesses. Much of the infrastructure is in place to expand composting within city limits.
- Incentives to increase the adoption rate can be met through changes in the pricing structure and pickup frequency for all city waste services. This has already done to some effect with every other week trash pickup. Continuing to look at rates and pickup frequency holistically, the city can encourage residents to minimize trash volume by recycling and trash services to make composting more.

- The City can invest to revamp its education around proper composting practices to minimize contamination and potential rejection of compost collections.
- Explore opportunities for Longmont to reap more of the economic benefits of its compost production. This could include working with the City's composting service provider to sell compost and liquid and powdered compost-based fertilizers locally. Or offer a coupon for free compost for participating residents – again, this reduces short-term revenue but increases adoption.

Social and Economic Impacts
Benefits:
- Less compostable materials end up in the landfills, therefore less methane gas is produced.
- Compost can help rejuvenate soils.
- Organic compost would be available for farmers and gardeners.
- Potential revenue stream to offset the cost of running the program.

Barriers:
- Getting resident and business owner buy-in.
- Findings ways to minimize contamination.
- Financial impact on low-income households. Fees could be offset for a family with financial hardship with revenue generated from the sale of compost.

LW.3) Pay for Parking

Goal/Objective
Implementing a paid parking design for the entire downtown district corridor can reduce the amount of parking spaces required and encourage low-carbon forms of transportation to and from the area, including public transit, biking, and walking.

Recommendation Summary
The recommendation is to charge people to park/store their vehicle in the downtown area. Parking strategies can encourage visitors, employees and residents to park based on need and location, but all revenues generated to the program can go into: repaving with non-impervious pavement, building parking structures with residential and/or retail "wraps" to make better use of the land downtown, and creating car-free areas along parallel corridors to Main Street.

<u>Specific</u>
Parking strategies can encourage visitors, employees and residents to park based on need and location. With the right resources, education and outreach, this program could go into effect relatively quickly (1-3 years).

Strategies would include phased implementation, with paid-parking starting along the high-demand Main Street corridor (from 1st Ave to Longs Peak Ave) to start. The key to success is to have rates and

implementation strategies that ensure parking along Main Street "turns over" enough to always have 15% (industry standard) of the spaces open, per block, for customers. In this way, people who want the convenience of parking at the front door will need to pay to park. People who do not or cannot pay will have options in the Longmont Downtown Development Authority (LDDA) parking lots currently located behind the stores. To provide a level of equity, vouchers or validation could be provided for people without the means to pay, needing the front door parking location.

Pay for parking strategies are meant to:

- Keep a certain number (15%) of parking spaces available full time. This reduces the amount of time of driving around the block or to different blocks to find a parking space, reducing the amount of pollutants released simply waiting for spaces to open up.
- Provide locations for longer-term parking, via permits, for workers in the area. This strategy allows workers to have a reliable parking space for which to park, but not for free. This is critical as many people using the downtown parking permits today live within a short walk or bicycling distance of downtown. Putting a direct cost on the parking resources would require people to prioritize the need for parking with other way of traveling to their downtown work site. This action would directly support the LDDA view of "all roads/trails lead to downtown" and would work to shift mode choice for downtown workers. This would reduce the number of single-occupant motorized vehicles accessing the downtown.
- Provide the necessary resources to maintain the capital program, the labor/enforcement elements, and the enhanced features to better serve people walking or riding to and through downtown.

A strategy to provide free parking to workers, visitors and customers may occur through the use of small (low or no emission) shuttles with high-frequency (less than 10 minute frequencies) during rush hours. These shuttles would encourage workers and long-term visitors to park in outlying existing parking lots outside of the downtown. Riding these shuttles to work and shops reduces both emissions from idling Internal Combustion Engine (ICE) vehicles in the congested downtown and providing a more enticing means of using mass transit and alternative modes of travel. Such shuttles could be free to everyone, through the parking revenues collected through this program.

If residential areas such as the historic neighborhoods are included in the pay-to-park areas, some arrangement for issuing limited parking stickers to residents could be included. These stickers might be free for a limited time, but then a fee would begin to be charged for them.

Measureable

The measures of progress will be:

- The amount of open parking or additional capacity, compared to past measures of occupancy/use.
- Mode share shift from driving to walking/bicycling/transit ridership using count data.
- The reduction in traffic volume and pollution in the downtown due to reduction in car usage.

Achievable
Either the City or LDDA needs to establish a budget of at least $500,000 to establish the program. Going forward, revenue from paid parking will offset the costs of maintaining the program infrastructure and enforcement.

The pay-to-park system will need to include a comprehensive marketing and outreach strategy to explain the program, and its associated benefits, to city residents and visitors to downtown. Relevant City staff will also need training on how to monitor kiosks and enforce the program.

Relevant
Historical and anticipated population growth in Longmont is highlighting the need to find productive end uses for city land. This plan reduces the space needed for parking in the high-value downtown areas. This will free more space in town for climate-mitigation projects like green space or renewable energy generation.

Limited parking also reduces traffic congestion and the associated greenhouse gas emissions and pollutants. It could also encourage residents to shift to low-carbon transportation methods like electric buses, biking, and walking.

Time-Bound
It should take about one to three years for full implementation of a downtown paid parking system. The COVID-19 crisis might delay the project start time beyond 2021.

Social and Economic Impacts
Insights into potential social impacts of paid parking came out of collaboration between the Climate Action Task Force and the Just Transition Plan Committee. One concern is the potential for increased parking on residential streets near downtown in response to the new program. One solution would be to impose permit parking on those streets for residents. Also, paid parking is a regressive economic tax: the cost of convenient parking decreases as a percentage of a person's overall budget as their wealth increases. Offering more low or no-cost shuttle service to key downtown locations can help make sure that all residents have convenient access to downtown. People with mobility constraints who can't walk or bike downtown could also bear an undue economic burden if they always have to pay to access downtown amenities. One solution would be to set aside a few free parking spaces or parking validation for vehicles with an eligible handicap permit. Making sure that shuttle buses have enough special seating and wheelchair spaces will also help ensure that all citizens can afford to access the downtown area.

Renewable Energy

RE.1) Smart Meters on Every House

Recommendation Summary
The majority of households and all commercial and industrial sites in Longmont need two-way communicating electricity meters (smart meters). A deployment of these meters and the supporting network equipment and software is called Advanced Metering Infrastructure (AMI). AMI is essential if Longmont wants to reach 100% renewable, reliable electricity generation by 2030 cost-effectively.

Smart meters make it possible to monitor the electricity consumption of every house in real time, and transmit that data to both the homeowner and Longmont Power & Communications (LPC). There are numerous software platforms available that can take these data and synthesize them into energy summaries that are easy for customers to understand, and offer customized energy efficiency tips or sources of energy waste within the home. These tools also provide estimates of how much customers can save on their electricity bill by completing these recommendations. LPC will use the same energy-use information, stripped of personal details and bundled appropriately, to balance supply and demand for energy, maintain and improve the distribution grid, and ultimately help turn Longmont into a zero-emissions city.

This committee recommends that the city complete the smart grid rollout as soon as possible.

Objective
Over time, every house will need to have AMI infrastructure and be all-electric (no natural gas appliances) in order for the City to balance electricity supply and demand on a 100% renewable grid [See recommendations RE.2, RE.3 and RE.5].

Smart meters and real-time energy data are the first step along that path. This can all be done by making available the data acquired by the smart meter to the owner or renter of the house via a mobile phone app. The data needs to be easily understandable and presented in a way that incentivizes the user to improve their energy consumption practices. This can include both the economic benefits of energy efficiency, as well as gamification/social norms through home energy reports or high bill alerts.

Target
Roll out smart meter installations by the end of 2020 with a project deadline of 2022. The supporting software installation shall begin as soon as possible. [This may already be under way.] Launch a pilot of installed AMI with the selected software for a subset of the city in the first quarter of 2021. Once any issues are resolved in the pilot, complete a full rollout of both AMI and supporting software by the end of 2022.

Timeframe
Start January 2021 - end December 2022

Social and Economic Impacts
The cost of the AMI network and supporting software (Customer Management System, Meter Data Management) has already been budgeted and incorporated into new rates enacted in February 2020. The tiered rate design is socially responsible, based on user class and consumption. Low consuming households, which typically correspond to low-income households, pay the lowest rates. Similarly, high consuming businesses and households pay higher rates. This not only finances the AMI network, but also encourages responsible consumption.

Features such as prepay, time of use (TOU) rates and other budgeting options should become available to consumers. This will allow all households to limit the unnecessary consumption of energy, time use of electricity to when rates are lower, and therefore spend less. Energy consumption has a low cost in percentage for higher-income households and a higher impact for lower-income households.

Financial Summary
The financial impact of the Advanced Metering Infrastructure was studied in 2019 and resides in Longmont's 2020 budget and the final report from LPC to the City Council. LPC must report on progress of the RFP or procurement process at the earliest possible date. Cost advantages may result from the economic downturn. Recovery grant funding may also become available from the Federal government.

Marketing, training, and incentives
- Train field operation for installation
- Design the pilot
- Education and outreach to the public first to pilot participants and second to the whole city

RE.2) Home Energy Management Systems

Recommendation Summary
Data will be a vital part to any solution to make the city of Longmont more energy efficient and wiser in its use of electricity. Energy Management Systems, coupled with AMI, provide the infrastructure needed for customers to easily manage their building/home energy use.

A Home Energy Management System (HEMS) is a network of communicating end-use technologies. Examples include smart thermostats on HVAC and hot water heaters, EV chargers, smart plugs that can control power or turn off other devices in the home such as lighting and electronics, and smart appliances like dishwashers, laundry equipment, and refrigerators. These technologies can be connected to a home energy hub, which can control each technology through a central software platform/mobile app.

An Energy Management System (EMS) is a municipal area network (over the internet) and software application that aggregates HEMS throughout the city and communicates with them to match supply and demand on the grid.

Objective
Offer incentives to get residents to invest in smart devices and HEMS, and create an opt-in system allowing Longmont Power & Communications (LPC) to manage energy usage at peak times. With the right approach and involvement of residents, Longmont can continue to offer low electrical costs to its residents.

Target
- Enable time-based or supply-based rates for electricity use for all customers.
- Create incentives for LPC customers to invest in HEMS.
- Mandate that (probably by code) all thermostats and water-heaters in new buildings must be smart and able to communicate with LPC.
- Incentivize the adoption of communicating devices in existing homes by favorable rates and group buying programs.
- Study how LPC can collect usage-data from HEMS to understand citywide electricity usage.
- Create an Energy Management System (EMS) pilot in at least one neighborhood by 2022.

Timeframe
- Short (end 2022):
    - Create incentives for adoption of communicating devices
    - Enable time-based rates
    - 5% of LPC customers have HEMS
    - 10% of LPC customers have smart thermostats or water heaters
    - Have at least one EMS-integrated neighborhood
- Medium (end 2025):
    - Adequate understanding of city-wide electricity usage
    - 15% of LPC customers have HEMS
    - 30% of LPC customers have smart thermostats or water heaters
    - Progress to more EMS-integrated neighborhoods based off data from the pilot program
- Long (by 2030):
    - 50% of LPC customers have HEMS
    - >75% of LPC customers have smart thermostats or water heaters
    - Multiple neighborhoods (and individual homes and businesses) fully integrated with a local EMS system.

Social and Economic Impacts
Impacts are likely most felt by low-income customers. With time-based electricity costs, those who either manually adjust their thermostats/water heaters (or those with smart versions) will be able to

reduce their monthly electricity bills relative to those who do not. Most of the technologies that make this process simple for customers are high-cost. Therefore, installations and training on how to use smart thermostats and other smart appliances should be added to LPC's existing low-income weatherization program.

A city-wide Energy Management System for all HEMS acts as a pseudo-battery: customers can specify how willing they are to have their appliances (thermostats, water heaters, EV charging, etc.) controlled during peak energy demand events. Allowing the EMS to cycle power usage directly can help keep rates low for all customers. However, participants could receive an incentive, such as a decrease in their electricity rate.

Financial Summary

The Council can determine whether it is worthwhile to make funds available to reduce the cost of HEMS and smart thermostats for all consumers, or whether giving them to low-income families would produce better results and create social equity. Both programs are worth pursuing, at least as studies.

Pilot programs for EMS integrated neighborhoods can be financed via any number of state, federal, or local instruments including public-private partnerships, tax-based incentives, and grants. Grants introduce more delay in implementation than other mechanisms, but may become plentiful during an all-out effort to restore the now-damaged economy.

Homeowners receive direct benefits from having a HEMS, in the form of convenience and lower rates. The larger EMS also delivers benefits to participating households, but also to all ratepayers. Longmont's ability to manage its electricity demand, lowers costs for the entire city by reducing demand charges from Platte River Power Authority, and making use of electricity when it is cheapest and least carbon-intensive.

Marketing, training, and incentives

- **Outreach and understanding** for all involved is paramount. People need to understand what energy management is, how they participate, and how they will benefit.
- **Train appliances vendors** on how to communicate the benefits to themselves and consumers of communicating devices. Ensure that over time they are working with the city to increase adoption.
- **Develop a workforce** of technicians who can help deploy the new technology. Work with the just transition initiative to ensure that this effort reaches low-income, low-skilled residents.
- **Incentivize adoption** of HEMS in households and encourage HEMS owners to join the city's EMS. Favorable rates and group buy programs will increase interest. The city may also subsidize or give away basic HEMS equipment such as communicating thermostats and water heaters.

RE.3) Energy Savings & Peak Load Reduction Program

High Level
As the City transitions from fossil-based energy sources to renewables, it will be necessary to adjust demand for electricity to align with when renewables are generating that electricity. The more the City can align consumption with renewable generation, the more cost-effective the transition to 100% renewables will be. If the City doesn't align most of our consumption to the renewable supply, the City will need to rely on battery storage capacity or renewable energy from other markets to maintain carbon-neutrality. And if those backup options are not available, fossil fuel generators and other carbon-intensive backups would be the only option to maintain reliability.

The most cost-effective solution to this problem is to create an Energy Savings Program for individual customers to save money on their electricity bill by helping match their demand to meet supply dynamically. In an Energy Savings Program, an individual can decide whether they are willing to have their electricity use adjusted and by how much. They can also decide when to opt out temporarily of this control based on circumstances. Longmont Power & Communications (preferably), Platte River Power Authority, or even a third-party Energy Management Company could run the system.

For program participants the system will:

- Reward those based on savings realized.
- Rotate individuals who benefit so the same individuals are not always selected.
- All information regarding energy use and rewards will be available at any time to the ratepayer.

A "reward" can be in the form of reduced rates or a rebate.

To be able to join this system, the customer would need a Home Energy Management System or one or more energy communicating devices like thermostat, water heater, plug, electric vehicle Charger.

RE.4) Develop Carbon Intensity Signaling Protocols

Recommendation Summary

Transitioning to 100% renewable energy while maintaining equitable rates and reliable power quality will require increased data collection and communication between Platte River Power Authority (Platte River) and the City of Longmont. To shift Longmont's demand for electricity to mirror the supply of renewable resources, and avoid peaking demand when renewable generation is low, we need to develop signaling protocols between the City and Platte River, and within the city itself.

Carbon intensity signaling is a specialized protocol that is sensitive not just to the total energy supply, but also to the carbon penalty associated with that supply. Early studies suggest that this can help shift

demand patterns rapidly during the transition to renewables and adjust to a growing percentage of clean electricity in that supply.

Carbon intensity is one approach to a signaling architecture between the generation and transmission (G&T) utility and the municipal utility. Other, simpler signaling protocols exist, but aren't as sensitive to carbon reduction in an Energy Imbalance Market context. Because our goal remains to achieve 100% non-carbon generation by 2030 or sooner we propose a carbon intensity approach. The four cities may decide on another signaling architecture.

Objective
Platte River needs real-time data on the relative carbon intensity of its generation (Tonnes/MW, etc.). In turn, the City of Longmont needs a signaling protocol to encourage residents to use (demand) electricity during times when the carbon-intensity per kWh of electricity (supply) is lowest. This will improve utilization of renewable energy and give Platte River confidence that increasing the renewable supply is the right investment.

Target

Specific
Develop Platte River-level systems to measure the real-time carbon intensity of its energy supply mix and convey the data to the City of Longmont. Develop city-level signaling protocol(s) to align energy demand with low carbon-intensity generation supply.

Measureable
It's unclear what data/tracking capabilities currently exist at Platte River. (See the letter from Platte River COO Andy Butcher incorporated below.) In the City limits, meter-level consumption data is already available, but not in real-time. AMI deployment is a prerequisite for an effective carbon signaling system.

Achievable
A number of consulting firms in the energy utility industry have software capable of measuring real-time carbon intensity for a given electricity generation mix. If Platte River does not already have internal software, they can enlist the help of one of these groups. At the city level, time-of-use or real-time electricity pricing to incentivize low-carbon electricity consumption and penalize high-carbon electricity consumption will require AMI meters to be most effective. Disaggregation algorithms, while inaccurate, could be used in the interim.

Relevant
Building energy use in 2016 contributed 68% of the City's carbon emissions, or approximately 730,000 metric tonnes. Longmont will need to consume more of its electricity during the times of day when solar and wind generation are highest.

Time-bound
Platte River carbon-intensity tracking and communication protocol with Longmont in two years. Longmont-internal signaling strategy in five years, consistent with other EMS deployment plans.

Timeframe
Platte River carbon-intensity tracking and communication protocol should deploy in Longmont in two years, with Longmont-internal signaling strategy in place within five years.

Social and Economic Impacts
Establishing a carbon-intensity tracking system should not have a significant impact on equity for ratepayers. However, city-level signaling will need to roll out with equity in mind to avoid negative ratepayer effects. Examples of ways to mitigate impacts on certain groups include:

- Short-term: Create cost-neutral time of use rates, or exempt customers with energy subsidies from time-of-use
- Long-term: Use the developing EMS capabilities to maximize use of renewables via load-shifting and similar strategies

Financial Summary
Program funding options include:

- Platte River's DERs partnership program
- Department of Energy Grants and programs
- Boulder County grants
- Rate increases
- Sustainability tax funds
- Other city budget allocation

Marketing, training, and incentives
The City will need to design a residential and business customer education program about new rate schedules. But overall, consumers won't need to understand the intricacies of the protocol itself.

Note From Platte River On Signaling Status Now

Councilwoman Martin,

Thank you for your email and questions. I am happy to have this opportunity to share with you what Platte River is currently doing and what our future plans are regarding distributed energy resources (DER).

Platte River does maintain a projected load forecast that refreshes on a per hour basis. This forecast is accessible to utility staff of the four owner communities through a password protected portal. If you are interested is accessing the portal too, just confirm and I will forward a password and the link.

Presently, no additional systems are in place that would provide a signal to our owner communities when resources change to become available or unavailable, nor when peaking units are deployed to backfill a loss of resources in order to maintain reliable delivery of energy. Platte River does strategically deploy a voltage reduction system with Longmont and can reduce load by up to one percent. The system has an automatic notification system to ensure all parties are aware when this occurs.

Platte River has not yet begun discussing specific technologies to deploy for demand side management. We do know that technology, including communication's technology will be needed to help meet our Resource Diversification Policy. Platte River and its four owner communities have formed a DER strategy committee. We know this is vital to our successful integration of noncarbon resources and our future. We have defined DER to include demand side management, distributed generation, energy efficiency, distributed energy storage and beneficial electrification. We believe that creating a strategy as five utilities is key to implementing and advancing these important technologies and programs successfully. We also believe that customer engagement and buy-in is critical to the success of these efforts and will plan to hold multiple engagement sessions with our owner communities to help us create a DER strategy.

As you may know, we have begun an electric vehicle charging study, which has provided us with valuable information. There are customers from Longmont currently participating. We are continuing to study and have plans for a phase 2 deployment to test how we can call on those electric vehicle customers to charge when optimal to the grid.

We are committed to reaching our resource diversification policy goal and believe many of the programs and technologies you mentioned are key to that goal. I am looking forward to working with you and others as we continue to transition towards our exciting energy future.

Thank you,

Andy

RE.5) Distributed Energy Resources Development Plan

Recommendation Summary
For the purpose of this report, municipal Distributed Energy Resources (DERs) include generation, storage, or load management resources cited on Longmont's municipal grid, on the low-voltage side of Longmont's main substation meter. The benefits of DERs are:

- Mitigate the risk of area-wide low renewable production by distributing generation facilities widely. Longmont is the southernmost point of the Platte River Power Authority (Platte River) service area.
- Create dispatchable means of curtailing or increasing Longmont's demand for energy at a given time and shifting demand from one time of day to another. This reduces the "demand charges" that Longmont pays to Platte River and must pass on to its ratepayers.
- Reduce Platte River's requirement to overinvest in renewables in order to maintain the system's reliability.

Longmont should create and implement a Distributed Energy Resources Development Plan. By the end of 2025, the City should run three to five pilot projects and evaluate their ability to yield demand swings that will materially affect Platte River's capital investment in renewable generation and performance on the energy imbalance market.

Objective
Begin investing in enterprises that produce and subsidize three to five powerful DERs that enable Longmont to take command of its energy management. Create a 5-year pilot program and a 10-year development plan that includes:

1. A battery-backed community solar garden with customer subscriptions.
2. At least one all-electric energy-managed Planned Unit Development (PUD) with optional rooftop solar and a utility-scale battery to remove latency from load-shifting responses.
3. Group-buy programs on EVs, air- and ground-source heat pumps, electric water heaters, and communicating thermostats/HEMS. Market penetration of all these supports and ads to the dispatchable range of the city's internal energy marketplace.
4. Battery-boosted level-3 public or commercial EV charging stations. As solar generation becomes predominant, the batteries can discharge to support supply during nighttime power sags.
5. Beneficial electrification pilot in a pre-2000 neighborhood to assess feasibility, cost, and effective storage yield of doing so.

Target

<u>Specific</u>
Demonstrate Longmont's ability to shave peaks in overall demand and absorb surpluses in the Platte River service area by means of distributed generation, distributed storage, and dispatchable loads.

Measureable
Demand for electricity is measurable. Other critical metrics include response time for Longmont to curtail demand or absorb surplus, how DERs will affect the demand rates Longmont pays compared to the other cities in the Platte River service area, and the reliability of the overall network.

Achievable
Technologies for creating practical DERs are in production or pilot stages today in other communities. The Platte River service area is an ideal test-bed because the climate is neither too mild nor too severe, the area is rich in renewable resources, and the existing service base is low in cost and high in reliability. Longmont can leverage its competent and forward-looking economic development partners who will be eager to invest in this goal.

Relevant
If every city could demonstrate the ability to swing its demand by a factor of 10%, Platte River would not have concerns about how to meet the 2030 zero-carbon goal. The ability to shift energy consumption and production according to the needs of the wider network reduces the need for the G&T authority to over-invest in renewable production capacity. The ability to avoid demand charges is a social benefit to the extent that demand surcharges are now spread across all rate classes. Both of these factors keep rates low for the population as a whole as well as the lowest-income ratepayers, satisfying just transition requirements to a large extent.

Time-bound
The first major demonstration milestone must be set at five years (2025). This allows Longmont to set additional goals for 2030 as well as providing input to Platte River's Integrated Resource Plan (IRP) that will take the service area out to 2030. Platte River will be able to rely best on Longmont's projections for 2025-2030 based on our experience with the 2020-2025 interval. This demonstration milestone is more urgent than ever because Platte River's 2020 proposed IRP scenarios all fall short of the four cities' goals for renewable energy. Longmont's plans and achievements must demonstrate that there is no reason to fall short of the *ownership's* established goals.

Timeframe
Five to fifteen years, with demonstration goals and capacity targets at five and ten years.

Social and Economic Impacts
None of the large-scale programs in our report are likely to be funded solely by energy rates or conventional taxation methods. They need to be conceived and built as public-private partnerships, using unconventional financing methods, or by means of various state and federal subsidies. Grants may increase if there is a downturn and stimulus effort in response to COVID-19.

The existence of DERs in Longmont can drive social equity because it will allow us to achieve rate parity with the other three cities of the service area. Today, we pay a penalty for our lack of ability to curtail or shift peak demand. [12]

Additionally, to the extent that the air quality improves as we move away fossil fuel sources of electricity, everyone will benefit. DERs are a "last mile" technology that puts the Platte River service area over the top in achieving this goal by the year 2030.

Potential negative outcomes, depending on how these programs are funded, include increasing the tax burden on low- and middle-income residents. Some necessary steps tend to benefit upper-income residents disproportionately.

As was done in the recent electric rate restructuring that pays for the AMI rollout and other upgrades to the Longmont Power & Communications (LPC) system, hardware and software, creative rate design can mitigate this disproportion by allocating costs in a "progressive" manner, shifting the burden onto those who can best afford it and minimizing the impact on those who can least do so. Below are suggestions as to how each of the identified project types might affect the city.

1. A battery-backed community solar garden
    - Allows residents who can't afford to deploy local solar on their own property, or can't do so for some other reason such as the nature of their dwelling, to participate in solarization.
    - An energy efficiency "rewards program" could help low-income ratepayers' access shares. Incentivized behaviors could include joining prepay or other budgeting programs, achieving reduction in consumption, and participating in beneficial electrification programs.
    - A study of the economics must come first. Benefits will probably depend on low-cost infrastructure and land financing.[13]
2. At least one all-electric energy-managed PUD with optional rooftop solar and a utility-scale battery to remove latency from load-shifting responses
    - There are five to ten opportunities for new residential/mixed use neighborhoods in Longmont. A 60-acre development with all-electric appliances, uniform/compatible EMS, and small scale, onsite solar or wind (small scale) local generation would offer many of

[12] The cost to Longmont's ratepayers of demand charges from Platte River needs to be quantified. While the City cannot capture this per ratepayer today, the City can capture it at the substation meter over the next three months. Summer-month data will be more important, but not available until after this report is delivered. The Climate Action Task Force respectfully ask LPC to make these data available for study as soon as possible.

[13] Minnesota has a mandated community solar garden program, but there are differences in climate and energy supply there to Longmont. Selection of a CSG as part of Longmont's DER program should start with a cost-benefit study or soliciting commercial investors. http://www.startribune.com/complicated-economics-of-community-solar-gardens-subject-of-debate/503575142/?refresh=true Longmont could consider a land grant to alter the cost-benefit equation for a commercial CSG developer.

the same system benefits as a solar community garden. These include helping the city peak shave with respect to the Platte River interface and having a positive impact on rates citywide and across all rate classes.
    - Residents and commercial property owners in such a development benefit disproportionately compared to residents who live outside such an area. However, an all-electric community pilot program will provide information for Longmont to have a better electrification strategy for the city as a whole.
    - Longmont has many control mechanisms to ensure that such mixed-use developments meet other social needs of the city, such as developing a high-density low-to-middle income inventory of housing stock. Providing this accessible housing inventory is a broad social good.
3. Group-buy programs on electric vehicles, air- and ground-source heat pumps, electric water heaters, and communicating thermostats
    - Spreads the up-front costs of expensive technologies across customers based on their ability to pay.
4. Develop battery-boosted level-3 public or commercial EV solar generated charging stations. As solar generation becomes predominant, the batteries can discharge during nighttime power sags.
    - As a public amenity, this caters mostly to the well-to-do in the short term, though it is also a city feature that encourages visitors, conventions, etc. Could the City negotiate with rental agencies to promote the use of EVs to visitors? Providers and organizations like AAA will map charging opportunities for travelers. Thus, implementing this project would likely have a significant effect on Longmont as a driving destination, and boost the general service economy. Boulder now has a major Tesla “filling station,” but Boulder is less accessible as a travel stop as well as more expensive than Longmont.
    - The social benefit to this is in lowering supply-based rates during periods of low renewable production. Here, all ratepayers benefit equally – though mostly in the out-years as renewables take over as the primary source of production and nighttime becomes subject to higher supply-based variable rates.
5. Pilot the beneficial electrification of an older neighborhood to assess feasibility, cost, and effective storage yield of doing so
    - A beneficial electrification program has the greatest potential for social equity of any of the mentioned approaches. Longmont has many older neighborhoods where infrastructure and home appliances will come due for upgrades. The older the neighborhood (and the smaller the homes) the more likely that upgrading will be a burden to property owners and renters in the area.
    - The steps in a citywide beneficial electrification program would be: 1) do project #2 to learn benefits. The green-fields version of this will be easier; 2) do a pilot overlay project on a relatively age- and spatially- uniform neighborhood like Southmoor Park, to gain experience and identify structural concerns that will have to be addressed.

- After 2025, put together a staged beneficial electrification plan for the whole city. This will need to be a 10-15 year comprehensive plan, and include removing or rendering safe any aging natural-gas delivery infrastructure that become obsolete in the process.

6. Other private business models for solarization exist - such as where the private business installs solar generators on household rooftops, paying for them via selling excess electricity that the household does not use back to the municipal utility. This might become a means for funding battery banks in the city, as larger-scale batteries owned by the business are more economical than home batteries such as the Powerwall.

Financial Summary

Here are suggested approaches to financing each of the proposed DER Pilots, with numbering preserved from section 2 above. Note that these are not the only options.

None of the large-scale programs in our report are likely to be funded solely by energy rates or conventional taxation methods. They need to be conceived and built as public-private partnerships, using unconventional financing methods, or by means of various state and federal subsidies. Grants may increase if there is a downturn and stimulus effort in response to COVID-19.

1. **Community Solar Garden**
   Cost-benefit analysis comes first. After that, seek commercial developers, with land donation or special financing to bring margins into a feasible range for both developers and subscribers. Finally, consider additional value-adds for the project, including agricultural operations of applicable crops.
2. **All-electric developments**
   At least one proposal is already before the city, so this could be an early win. This would mainly rely on private financing. For future projects. A public-private partnership with the city, or granting a mixed-use Metropolitan Taxation District could help properties in the district sell at competitive prices. The experience from a development like this will assist the city in a phased roll-out of a full-scale beneficial electrification program beginning in 2025 or perhaps earlier.
3. **Group-buy Programs**
   Boulder County and Platte River are already doing this, and InterGovernmental Agreements (IGAs) are already in place for cooperation of this kind. State subsidies can be expected and lobbied for. Being ahead of the curve will allow us to reap the most consistent benefits.
4. **Battery-Boosted EV Charging Stations**
   With luck and planning this will occur through commercial enterprises with recruitment, incentives, and public-private partnerships with the city and other major nonprofits. For example, the educational, maker-space, and performing arts/convention center included in the Full STEAM Ahead vision are one example.
5. **Managed Beneficial Electrification Phases**
   The city needs to start a study soon to determine when is the optimal time to begin in each neighborhood and subdivision, as well as what kind of mill levy would be needed to support it. A credit or rebate program of some sort could repay individual businesses and residences who

are “ahead of the curve” and have performed all or part of the infrastructure upgrades on their own.

6. **Grant Opportunities**
7. **Collaborate with Solar Companies**

Marketing, training, and incentives

Several of the projects are incentivized commercial projects, and the commercial investors will probably also have experience marketing the concepts.

Longmont must engage in Workforce Development programs with local businesses and higher education institutions. Trades needed for our transition to renewable energy include:

1. **Electricians:** The demand for workers on the municipal grid, transformer-to-meter service upgrades, and in-home upgrades for beneficial electrification will increase over time.
2. **Gas line technicians:** Workers who will have been working on removing or safely abandoning flow lines and gathering lines may be enlisted in using their skills to safely disable the delivery lines in neighborhoods as they are abandoned. At least some amount of new/re-training will be required.
3. **Outreach experts:** Longmont will need to conduct major outreach efforts to sell the public aspects of this plan to voters as well as early adopters, and will need to focus economic development resources on the commercially-deployed aspects of the plan.

Transportation

T.1) Integrated Transit Services

Recommendation Summary
Expanding public transit coverage and frequency in the next five years requires a better integration of fixed-route bus systems and on-demand services. Public transit needs to become more nimble and flexible than the current system to address climate change, congestion, and the overall efficient movement of people. Beyond a complete revamp of the current public transit operations, a way to accomplish more coverage and availability (not necessarily frequency) of transit is to allow the vehicles to be more flexible in their routing and their fueling. A key combination of routing types that may provide more coverage, availability, and reliability (though not necessarily frequency) would be a Checkpoint service system with electric or Renewable Natural Gas (RNG) vehicles.

Objective
Checkpoint service is a hybrid between fixed route (the 300-series of local RTD routes) and subscription or call-ahead services (i.e. Via or RTD's FlexRide). Fixed route bus service, with higher levels of service or frequency, could provide reliable and consistent service to "high demand" locations around the City at specified times. A Checkpoint service provides service flexibility (similar to Uber/Lyft) between specific locations, or checkpoints. This new model would allow for people who need routine—often people with intellectual disabilities, older people without knowledge or desire to use the internet/Smartphones, and people using English as a second language—to use a more frequent, traditional, fixed route service for key travel corridors; or meet a bus at certain checkpoints. Adding additional service that can deviate from these set routes and pick people up closer to their origins (home)/destinations (work/school/shopping/medical) would serve people who need more flexibility. This micromobility model offers more flexibility, and increases total service area in a more responsive and user-friendly format, than just providing fixed routes with an overlay of FlexRide or call-n-ride services.

Target
In the next year, develop a plan with the Regional Transportation District (RTD) or one of its contractors (i.e. Via Mobility) to establish a low-cost, pilot/test program—possibly with a grant opportunity—for a checkpoint bus service line in Longmont. A measure of success would be achieving a cost per rider lower than the current FlexRide service available throughout Longmont. The goal would be to transition the current FlexRide service to a checkpoint service with more reliability and coverage.

Timeframe
Medium (five years)

Social and Economic Impacts
People with intellectual disabilities, older people without knowledge or desire to use the internet/Smartphones, and people using English as a second language are typically the ones impacted

by a call-n-ride bus system. This system combines call-n-ride with elements of fixed-routes, but there will likely be a "learning curve" of how to use this unique service that may hinder some users. A traditional fixed route bus service would continue to serve as the "backbone" of the public transit system.

Financial Summary
There are funds available through Transportation Demand Management grants that may be applicable for this type of starter service. This recommendation will likely cost $1 million/year.

Marketing, training, and incentives
The implementation of this policy is dependent on actions by the Regional Transportation District and the City working together to change transportation policy over the next 5 years. Current practice is to use a system of free, fixed route buses, funded by the City, and a FlexRide or call-n-ride system overlaying the City to provide a safety net of services. The Checkpoint service is being offered as a supplemental service today for school-aged people, but on a limited basis: it ends during the mid- and late-day services. The goal would be to start the new checkpoint service, integrated with a more frequent "backbone" fixed route service, and the other service providers (i.e. Via transit, Lyft, Uber, TransFort, etc.), to create a fully integrated transit service. This new integration would rely heavily on public education to make sure the public fully understands what is available, when/where it goes, and how to access it.

T.2) Electric Car Charging Stations

Recommendation Summary
Incorporate more electric only charging parking spaces in public parking lot locations in high-density areas, such as Downtown Longmont. Currently, there is one charging station in one public lot in Downtown and it is free to charge a vehicle. There are five additional public lots that could receive charging stations.

Objective
Offer prime parking locations for electric vehicles where people can charge their vehicle while visiting Downtown. More visible charging stations raises awareness and encourages people who own vehicles to consider the electric vehicle option. It also helps support the Downtown community by attracting people who are interested in buying local and supporting the environment instead of traveling out of town for their entertainment needs. There would need to be a parking time limit, so we recommend installing Level Two electric vehicle supply equipment (EVSE), where a 50% battery recharge can be completed within two hours.

Target
Install one to two charging stations each year in the Downtown public parking lots. Prioritize highly used parking lots, with a goal of having the five public parking lots furnished within ten years. All of these lots are located within one block of Main St., in visible locations

Timeframe
Install 20 new charging stations within ten years.

Social and Economic Impacts
People that drive electric or hybrid vehicles will benefit from having more options to charge their vehicle away from home.

Barriers may include a decrease in grant funding or alternative energy program resources. If resources are low, the City may need to reach out to other private or public partnerships to help fund the stations.

People who do not drive electric cars may feel a negative impact in having fewer parking spaces available to them.

Financial Summary
Funding is needed to cover the charging stations, installation, and electric charges and maintenance. The City can partner with the Longmont Downtown Development Authority (LDDA) and Longmont Power & Communications (LPC) to install the charging stations. The City can also apply for state and federal grant funding. Initially, the City should offer free charging. After five to ten years, as EV adoption increases, fees could be applied.

Marketing, training, and incentives
Discussion with the LDDA, City of Longmont, and LPC would need to take place first to discuss current charging stations and how more could be added to the Downtown parking lots. A feasibility study could be implemented first to inspect the lots for suitable charging station locations.

T.3) Connected Bikeways

Recommendation Summary
Widespread, highly-interconnected, and safe (fully lit, above grade, limited-to-no traffic interaction) bikeways are needed to promote personal transport options within the city and allow all major neighborhoods to enter and exit the bikeway without crossing major roads/highways. The Climate Action Task Force recommends a system connecting all major nodes (bus, train, grocery, services, parks), with a focus on serving major neighborhood areas and connecting to major community service centers.

Objective
Make Longmont one of the most bike-friendly, medium-sized cities in the United States by creating a bikeway that circles the city and branches into and out of major nodes and neighborhoods. No biker

should have to cross a major road or highway to access any part of the city. The benefits include decreased carbon emissions from personal vehicles, improved health, and improved safety.

The big takeaway learned from speaking with some City of Boulder planners is that underpasses (dark tunnels) dramatically curb adoption of bikeways. Most people do not feel safe going through dark tunnels at any time of day. Thus the Climate Action Task Force recommends designing architecturally unique overpasses for major roads and highways to create an interconnected bikeway. The other deterrent is proximity to traffic. When Folsom St. in Boulder went from two lanes to one to accommodate a bikeway, the proximity to cars, especially at intersections, actually reduced the amount of cyclists using the road during commuter hours. There must be limited-to-no traffic interactions, essentially creating a separate bikeway from normal roads. People should only have to bike short distances on normal roads from their homes to the bikeway. And the entire route must be well lit in the evening hours.

Timeframe
Ten years to complete the majority of the system, 20 years to complete a totally interconnected bikeway.

Target
(not defined)

Social and Economic Impacts
An interconnected bikeway like the one we are proposing increases biker health through exercise and safety. This feeling of safety can encourage people to bike/scooter/walk more. And it provides better links to underserved areas and people who may not be able to afford a car.

Some increases in bike traffic near people's homes, and any potential road closures or reductions, are potential issues that would need to be addressed in the overall bikeway design. A system with raised bikeways will be more expensive than other options, but should see more use over its lifetime than an underpass-based system.

Financial Summary
This will be a long-term, high-cost effort, requiring very strategic planning to determine the most efficient system of projects to meet the goals. The conceptual planning phase will determine costs and budgeting needs. Final designs will determine specific cost needs. Initial estimates are $10-20 million, or a million per year, to achieve a fully separated system for people riding bicycles, and other active modes of transportation.

Marketing, training, and incentives
There will need to be a significant policy commitment to allocate resources to create this kind of separated bicycle/pedestrian connector network. Much of this effort has been completed in the Enhanced Multi-Use Corridor plan (2018), but will need to continue in a targeted planning/design

approach. Additionally, the plan will need to result in a decrease in total Vehicle Miles Traveled (VMT) and greenhouse gas (GHG) pollutant reduction.

T.4) Alternate Work Schedules – Commuter Trip Reduction

Recommendation Summary
Develop a program that educates employers and employees about ways to reduce congestion, which in turn will reduce stress, greenhouse gas emissions, and air pollution.

Objective
This program, which would be voluntary for employers, would provide a menu of options to reduce single occupancy vehicles during commute periods. It would ask employers to designate one person in their organization as a resource officer for other employees and as a point of contact for the program administrator.

Target
Reduce peak period employee trips by 20%, measured through employer surveys.

Timeframe
Begin education campaign within two years, with 20% reduction of local peak-hour VMT within ten years of beginning the education program.

Social and Economic Impacts
Provides employees with abilities to work from home, take public transit, and/or work flexible hours outside of 8 am – 5 pm. This would reduce greenhouse gases, air pollution, and save employees time and stress.

Financial Summary
The City would need one full-time employee to manage a commuter trip reduction program that could be rolled out to businesses, and combined with existing Transportation Demand Management programs (i.e. Commuting Solutions and Smart Commute Metro North).

Marketing, training, and incentives
The program can rely on marketing/outreach materials developed elsewhere, with some modifications. Training could be done via workshops or existing business assistance programs. If funds are available, consider incentives for business to drive program uptake instead of voluntary programs.

Appendix C: JTP Committee Report Appendices

Just Transition Plan Overview

The passing of the Climate Emergency Resolution impacted the Just Transition Plan (JTP)[14] that was in development since late 2018. The original aim of the JTP was to create an equitable transition to 100% renewable energy by 2030 through inclusive engagement and actions to minimize the impact of the transition on underserved and underrepresented populations. The Climate Emergency Resolution created the opportunity to expand the focus of the JTP to include broader equitable climate action for frontline communities.

The development of the JTP occurred in two phases:

1) **Learn Where We Are Today**

   To learn about the current level of access to electrical energy services and programs, City staff reviewed national and local reports to identify potential lack of access to electric energy services and the interconnection between energy and community health and other basic needs. Next in the summer of 2019, to better understand low-to-medium income residents, the City distributed a survey to 562 residents and held ten listening sessions. A two-page summary of the survey and listening session results are in are listed below.

2) **Develop Policy and Program Recommendations**

   The development of policy and program recommendations started in the Fall of 2019 by holding four Environment & Us Workshops to increase awareness and understanding of the importance of integrating equity into environmental actions and policy. After the workshops were held, the City passed the Climate Emergency Resolution shifting the focus of the policy and program recommendation development from an equitable transition to 100% renewable energy by 2030 to equitable climate action. The final equitable climate action policy and program recommendations were created by a Just Transition Plan (JTP) Committee, as detailed in the JTP Committee Equity Recommendations section of the Climate Action Recommendations Report.

Just Transition Plan Survey and Listening Sessions Summary

[14] The original plan for the JTP was to create a separate plan, as the process has developed, City staff decided that it would be more effective to integrate the JTP into City documents instead of creating a separate plan.

KEY FINDINGS

JUST TRANSITION LISTENING SESSIONS

A survey and listening sessions were conducted by the City of Longmont Sustainability Program to provide a foundational "snapshot" of low-income household affordability and health concerns and how it relates to their electric bills. Households were also asked for recommendations on how the City can improve outreach, ways to save energy and money, and overall recommendations for the future.

Key Items to Highlight

FROM EIGHT RESIDENTIAL LISTENING SESSIONS:

MONTHLY EXPENSES:

1. High expenses for mortgage or rent, electricity, food and medicine/health
2. Households living in all electric homes experience high electric bills in the winter (e.g. $300-$400)

MONTHLY HEALTH & UTILITY CONCERNS:

1. Put off healthcare to pay other bills, including the utility bill
2. Need to purchase additional appliances and get services to improve indoor air quality
3. Expenses, including utilities, impact mental health and cause stress

BARRIERS TO ENERGY ASSISTANCE PROGRAMS:

1. Unaware of energy assistance programs
2. Don't qualify for the program (e.g. income is too high)
3. Too busy or too time consuming to apply

TOP WAYS TO RECEIVE INFORMATION:

1. Schools and Faith organizations
2. Internet
3. Word of mouth/cultural brokers

TOP ENERGY-SAVING METHODS FROM HOUSEHOLDS:

1. Unplug devices that drain energy
2. Wash larger laundry loads in cold water

POLICY AND PROGRAM RECOMMENDATIONS:

1. Improve Outreach
   - Partner with community leaders, schools, and landlords
   - More in-person outreach
2. Expand utility assistance for late bills

No. 1 Take-Away

FROM TWO AFFORDABLE HOUSING PROVIDERS LISTENING SESSIONS:

Providing affordable, energy efficient housing is expensive

RECOMMENDATIONS FOR HOW TO ADDRESS THIS:

1. When providing outreach, go to where people live and build community relationships
2. Adjust programs to fit multi-family buildings (e.g. CAReS for an entire building)

JTP Survey

What else have you worried a lot about, regarding money and paying bills?

MOST COMMON COMMENTS FROM THE SURVEY:

1. Household affordability (i.e. groceries, cars, and home payments)
2. Not having enough money for other bills after paying monthly bill payments
3. Affording personal necessities and medical bills

THRIVE Today and Tomorrow
Creating a Sustainable Longmont

Questions?

CONTACT THE SUSTAINABILITY TEAM!
sustainability@longmontcolorado.gov
303-651-8416

KEY FINDINGS

JUST TRANSITION SURVEY

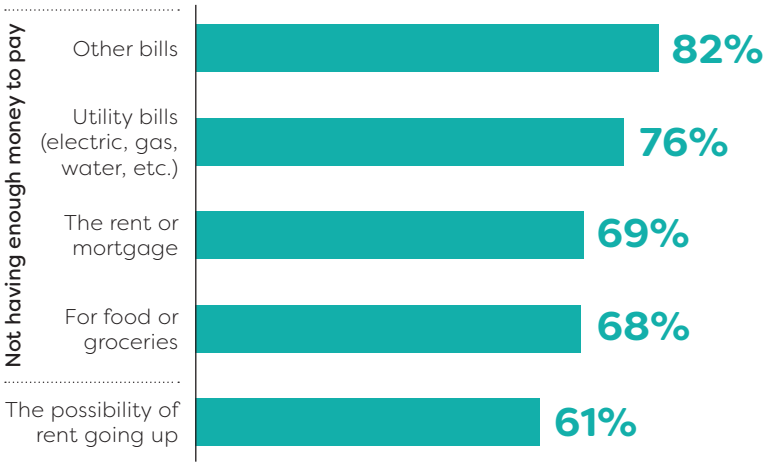
Research conducted by Corona Insights to provide a foundational "snapshot" of how low-income households access energy, engage assistance programs, face barriers to energy service, and express energy concerns.

54%
of respondents kept their home at a very uncomfortable temperature to afford the utility bill

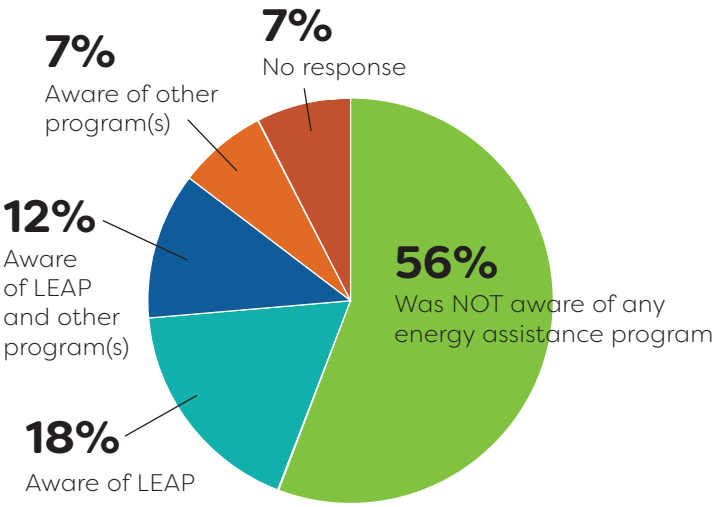
48%
of respondents decreased food or medicine to afford the utility bill

46%
of respondents needed help, or more help, with paying utility bills

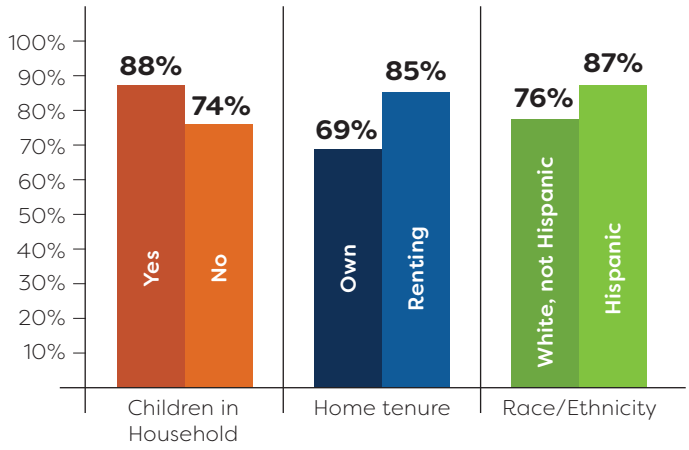
PERCENTAGE OF RESPONDENTS WHO SAID THEY "WORRIED A LOT" ABOUT THE FOLLOWING IN THE LAST YEAR



PERCENTAGE OF RESPONDENTS WHO KNEW OF, OR USED, ENERGY ASSISTANCE PROGRAMS



HOUSEHOLDS WORRIED ABOUT AFFORDING UTILITY BILLS, BY HOUSEHOLD TYPE



MOST FREQUENTLY MENTIONED BARRIERS TO APPLYING FOR ENERGY ASSISTANCE PROGRAMS

- Did not know enough about the programs
- Would not qualify for assistance
- Did not know where or how to apply
- Did not have all the information needed to apply

Equity Lens

Process

1. Benefited groups	**Identify the main groups in the community that benefit from climate action.** Identifying the groups that will benefit from climate action can help determine groups that are missing and need further support. The equity approach in this step should provide support to communities based on their needs and consider that favoring frontline communities could lead to reducing the accessibility gap while also reducing climate change.
2. Harmed groups	**Identify the main groups in the community that are harmed by climate action.** Identifying groups that are harmed by climate action in the community will help avoid or mitigate harmful or unintended consequences. The equity approach in this step should provide pathways to avoid or reduce the negative impacts in community groups, with specific attention to frontline communities. Key characteristics to be considered are access, availability, affordability, distribution, and communication of climate actions.
3. Access and Availability	**Identify differences in climate action access and availability.** Climate action should be designed to address the different barriers that different communities face. Consider the following: • Will all groups in the community have equal access to this climate action? • Will this climate action be available to frontline communities? • What are the barriers and challenges that frontline communities could face in accessing to this climate action? • How can these barriers and challenges be avoided or minimized?
4. Affordability	**Identify differences in climate action affordability.** The City needs to consider how differences in income and economic capabilities in the community affect access to climate action. Consider the following: • Can all groups in the community financially participate in the program? • Will unemployed, undocumented, and other frontline communities financially participate in the program? • Will financial support be available?

	• Will financial support be available to frontline communities? • Will financial support be prioritized to frontline communities?
5. Geographic Distribution	**Identify differences in the geographic distribution of climate action.** Climate action design should consider the geographical distribution of the program and focus on neighborhoods and communities that have less access to infrastructure and essential services. The design should also consider the geographical distribution of communities with a higher risk of climate change impacts. Consider the following questions: • How will this climate action be distributed to all neighborhoods and communities? • Will this climate action be distributed to frontline communities? • Will this climate action or service vary across the city? Should it? • Are there communities or neighborhoods where this climate action should be prioritized? • How can the geographic distribution of this climate action be improved?
6. Data and Information	**Identify and collect equity data and information related to climate action.** The equity assessment should be based on reliable data and information about climate action and frontline communities. Community data such as sociodemographic, diversity, distribution, climate change and health vulnerability, trends, needs, perceptions, climate knowledge, greenhouse gas emissions, and climate impacts, will help identify barriers and opportunities for equity in climate action.
7. Communication	**Support a communication strategy that prioritizes frontline communities.** Climate actions should be accompanied by a clear communication strategy that considers and prioritizes frontline communities. Consider the following: • Communication strategies should identify innovative strategies to reach the focus audience (e.g., social media, influencers). • Multilingual strategies should be considered in communication campaigns. • Translations should prioritize simple and common language. • When possible, before release, the communication campaigns should receive feedback from the community. • The communication plan should consider medium- and long-term campaigns.

Equity Lens tool for Equitable Climate Action Recommendations Review

Recommendation Name:

1. Whom do you see benefiting from this climate action, and how? (e.g., age, migrant status, income)	
2. Whom do you see that may be harmed by this climate action, and how? (e.g., age, migrant status, income)	
3. How could this climate action be improved? • **To enhance positive impacts** • **To reduce negative impacts** • **Who should be targeted?**	
4. What information/data might help in the equity assessment of this climate action? (i.e., data on population, emissions, impacts, city programs, maps)	
5. What do you believe are the key messages that the City of Longmont should communicate on this climate action?	
6. In the case of limited city funds, how do you suggest this climate action should be implemented?	
7. Any additional comments, concerns, or questions?	

Spanish

Revisión de las recomendaciones de acción climática equitativa

Nombre de la recomendación:

1. **¿A quién ve beneficiándose de esta acción climática y cómo?** (por ejemplo, grupos de edad específica, estado migratorio, ingresos)	
2. **¿A quién ves que pueda verse perjudicado por esta acción climática y cómo?** (por ejemplo, grupos de edad específica, estado migratorio, ingresos)	
3. **¿Cómo podría mejorarse esta acción climática?** • Para mejorar los impactos positivos. • Para reducir los impactos negativos. • ¿A quién deberían estar dirigidas estas recomendaciones?	
4. **¿Qué información / datos podrían ayudar en la evaluación de la equidad de esta acción climática?** (por ejemplo, datos sobre la población, emisiones, impactos, programas de la ciudad, mapas)	
5. **¿Cuáles cree que son los mensajes clave que la ciudad de Longmont debe comunicar sobre esta acción climática?**	
6. **En el caso de fondos limitados por parte de la ciudad, ¿cómo sugiere que se implemente esta acción climática?**	
7. **¿Algún comentario adicional, sugerencia o pregunta?**	

Feedback on Climate Action Recommendations

JTP Committee Meeting Four, February 13, 2020

Group Feedback from applying the equity lens to two current City programs.

Current City Program: CARE Program

1. Whom do you see benefiting from this climate action, and how? (e.g., age, migrant status, income)	• Mitigation Action. • Reduces costs for lower-income residents. • Who is benefited? Median-and-lower-income residents primarily, anyone regardless of preexisting status generally
2. Whom do you see that may be harmed by this climate action, and how? (e.g., age, migrant status, income)	• Oil and gas employees, as energy use decreases. • There's an income cap to the program, but it helps a large majority of people. The program also has the potential for job creation.
3. How could this climate action be improved? • **To enhance positive impacts** • **To reduce negative impacts** • **Who should be targeted?**	• Enhance positive impacts: By expanding participation through better marketing, ensuring all materials and communications are translated, utilizing specifically Green Contractors, and increase funding. • Reduce negative impacts: Ensure that job opportunities are available for any oil & gas workers that are displaced. • Target: Start with communities with the most needs (older adults, mobile homes, people with disabilities, and families with young children) and communities identified as lower-income (Spangler Park).
4. What information/data might help in the equity assessment of this climate action? (i.e., data on population, emissions, impacts, city programs, maps)	• Figure out good common areas for marketing opportunities, starting with local Hispanic nonprofits, and lower-income neighborhoods.

5. What do you believe are the key messages that the City of Longmont should communicate on this climate action?	• Extra emphasis on free things and money savings, not the current negative/overly empathetic language. • Door to door canvassing with small giveaways (lightbulbs, aerators, showerheads, etc.). • Communicate to those with the most need. 12,000 homes in Longmont are labeled as high need.
6. In the case of limited city funds, how do you suggest this climate action should be implemented?	• Evaluate the need of the applicants and service those in more need first, apply for grant funding, solicit private donations from business and the community at large, and lastly raise taxes if need be.
7. Any additional comments, concerns, or questions?	• Not Discussed

Current City Program: Ride Free Bus Program

1. Whom do you see benefiting from this climate action, and how? (e.g., age, migrant status, income)	• Mitigation Action. • Reduces geographical and economic inequities. • Who is benefited? Those with low income, students, and those without a car.
2. Whom do you see that may be harmed by this climate action, and how? (e.g., age, migrant status, income)	• Those that are paying taxes and are not using public transportation. Those that believe that using public transport could affect their social status. Projects that are not being funded to fund this program. • It could increase travel times. In case of personal emergencies, if residents are substituting their car by public transport, they may see reduced flexibility to respond to such emergencies. Traffic safety when walking to and from bus stops.
3. How could this climate action be improved? • **To enhance positive impacts** • **To reduce negative impacts** • **Who should be targeted?**	• Enhance positive impacts: By collecting information on how Longmont inhabitants move, focusing on improving better coverage of destinations and understanding travel behaviors. Promoting bus usage. Increase bus frequency. Reduce bus size, to a minibus, to have more buses, frequency, occupancy, and reduced air pollution. Use electric buses. • Reduce negative impacts: Offer access to personal emergency services such as taxi, in case needed. Improve traffic safety in general and specifically

	around bus stops. Understanding transport needs and travel behavior. • Target: By promoting the bus between those that have already access. Improve information at the bus stops. Communicate negative and positive impacts on public transport managers.
4. What information/data might help in the equity assessment of this climate action? (i.e., data on population, emissions, impacts, city programs, maps)	• Longmont updated travel survey. Update and improve bus schedules at bus stops.
5. What do you believe are the key messages that the City of Longmont should communicate on this climate action?	• Add clear and accurate bus schedules. Communicate that trips are free. If city employees, especially the city council, regularly use the bus. Explain why free bus intervention exists. • Media campaign.
6. In the case of limited city funds, how do you suggest this climate action should be implemented?	• Implement a program such as "Adopt the Bus". Asking help to churches, promoting bake sales, donations.
7. Any additional comments, concerns, or questions?	• Not Discussed

Joint Climate Action Task Force and JTP Committee Meeting, March 5, 2020

Group Feedback on four climate action task force recommendations.

Proposed Climate Action: Electrification

Quick Overview of the Discussion:

- Climate Action Task Force provided a summary of beneficial electrification and the need to develop a feasibility committee to analyze the considerations of public health, safety, rate design, and greenhouse gas reduction to develop a more comprehensive plan by November 2020.
- Equity Lens Discussion – Key Takeaways:
    - Start with energy efficiency first before electrification:
        - Help prepare households, especially low-income households, so they do not have significantly higher bills.

        - Helps prepare the electric grid to handle new demand.
    - Focus electrification on equity:
        - Combine with the CARE program – income-qualified energy efficiency upgrades (this program will need to be expanded).
        - Look at other assistance programs.
    - Need to take the time to develop a solid program for electrification to fully understand and address equity issues.

1. Whom do you see benefiting from this climate action, and how? (e.g., age, migrant status, income)	• Combine with CARE program to get energy efficiency/weatherization upgrades for free for income-qualified homes; focus on getting people comfortable in their homes first; if this part is not done and you electrify, bills will be too high. o Limited program so need to expand. o CARE currently costs about $4000/home or $2000/mobile home; approx. $50M would be required to cover 12,000 homes
2. Whom do you see that may be harmed by this climate action, and how? (e.g., age, migrant status, income)	• There are high upfront costs that are a big barrier for lower-income households. • The majority of people who have lower salaries would not be able to access this action. • If landlords are required to make upgrade to electrical service, how much more will renters have to pay?
3. How could this climate action be improved? • **To enhance positive impacts** • **To reduce negative impacts** • **Who should be targeted?**	• Start with energy efficiency first and prepare as many homes as possible for the transition to all electric. • Need sequencing to focus on efficiency first, prepare the electric system to handle new demand, before electrification • Design future home upgrade programs similar to CARE (free, income-qualified program); partner with CARE to connect people who need new appliances with electric appliances. • Create a place for wealthier residents to donate their electric appliances for lower-income residents to purchase those appliances for cheaper/no cost; if need repairs, connect with high school students or other students through vocational programs to fix appliances so they can continue working.

	• Look at assistance programs to mitigate rate increases. • Potentially increase funding for the Longmont CAReS program to provide utility bill assistance to those who might be affected by increasing rates
4. What information/data might help in the equity assessment of this climate action? (i.e., data on population, emissions, impacts, city programs, maps)	• Is there labor currently available to manage expanding current City of Longmont energy efficiency programs to accommodate 12,000 homes and/or other programs?
5. What do you believe are the key messages that the City of Longmont should communicate on this climate action?	• No discussion.
6. In the case of limited city funds, how do you suggest this climate action should be implemented?	• Focus first on energy efficiency.
7. Any additional comments, concerns, or questions?	• Need continued focus on equity, and really keep that at the center. • Need to take the time to develop a solid program.

Proposed Climate Action: Checkpoint/Flexible Bus Service

Quick Overview of the Discussion:

- Climate Action Task Force provided a summary of the current ride free RTD bus system and the proposed recommendation to create a flexible free local RTD bus system that uses fixed check points, but does not have a set route.
- Equity Lens Discussion – Key Takeaways:
    - Advertise the program extensively with door to door outreach, partners, cultural brokers to navigate the system, children accessible communication, etc.
    - Improve communication and access:
        - Bi-lingual operators, culturally relevant messaging in Spanish and other non-English languages.
        - Develop a system for those who cannot access an app.
        - Expand the hours of service.
    - Prioritize this project:
        - Fund the project.
        - Preferred lanes for buses.

- Electric or renewable natural gas buses.

1. Whom do you see benefiting from this climate action, and how? (e.g., age, migrant status, income)	• Low-income residents. • Those who do not have a car or license. • Older adults: This service provides the security of knowing that you can be picked up and dropped off. • People with disabilities. • Families. • Everyone can benefit, the check point service will be free as well. o An Uber-like system might cost $3 each way, it would be harder to provide that service.

2. Whom do you see that may be harmed by this climate action, and how? (e.g., age, migrant status, income)	• Those who are work later hours than the bus is running.
	• Those who are concerned about arriving on time.
	• Car dealerships, auto-mechanics, and their employees, Uber and Lyft drivers, taxis.
	• Taxpayers who are paying for the program.
	• Those who are not aware of the service
	• Those who cannot access an app (don't have a phone, or have a phone that doesn't have access to the internet or apps)
	  o The check-point could help with that, but it loses out on the flexibility.
	  o You can call the driver directly so as long as they can make the check-point on time.

3. How could this climate action be improved?
• **To enhance positive impacts**
• **To reduce negative impacts**
• **Who should be targeted?**
	• Advertising
	  o Door to door canvassing in specific communities.
	  o Radio and television.
	  o Partner with businesses to give out information to their employees.
	  o Partner with places like the Senior Center that provide the information to all the older adults.
	  o Community Foundation raised $100,000 to give to non-profits to hire cultural brokers to do outreach, education, and help navigate the system for the Census, this can be applied to other programs.

	o Incorporate partners like employers, school district, etc. o Create a campaign for a few months, during the campaign have cultural brokers help other navigate the system. o Large advertisements, “Save the world, ride the bus”. Guilt driven messaging. o Create a special launch event, and tie it with an already occurring celebration in the community (e.g. Earth Day, Cinco de Mayo). o Have an annual event to remind people of the service. o Focus on education about the route. • Electric buses or Renewable natural gas buses. • Expand the hours of service. • More bus stops with shelter. o Make it safe for individuals to leave their bikes and shopping carts. ▪ The City is currently working to expand bike racks. • Create different scenarios and think through the needs of the riders: o Going to the doctor. o Going to the grocery store. o Picking up kids from school. • Create incentives, classes, and more to help those being pushed out of jobs transition to bus driving jobs. o RTD does not have enough drivers, but a local route with smaller buses could be different. Retirees might not be as afraid to drive a smaller bus. o Drivers or operator should be bi-lingual, an operator can help people know how to navigate the bus system. o Preferred lanes for buses or managed lanes (bus, carpool, or buy your way in) ▪ Business access transit lanes (buses go straight, but cars have to turn right), could create a designated lane on Hover.

	▪ Why buy into the road? Makes it more expensive and more difficult. ▪ People shouldn't be able to buy into a bus lane. • Develop a service for those in Weld County (RTD cannot serve them). • Create a color code of when the bus system will be crowded. • Who should be targeted? o City Council, so they can support the effort with resources and create a transition plan that includes everyone. ▪ Community members need to advocate to leaders to keep this ride free program possible. o Schools. o Longmont RTD Board member. o Surrounding communities, those who don't live in Longmont but work in Longmont. o Focused social media to a younger age group that might be moving into the new multi-family buildings o Create distribution centers for a City of Longmont Welcome Packet (e.g. churches, schools, community centers).
4. What information/data might help in the equity assessment of this climate action? (i.e., data on population, emissions, impacts, city programs, maps)	• How many drivers are bi-lingual and what are the different languages that are common in the community? • Where do people travel? • When is the bus crowded? • Clear bus stop information/schedules • Where do folks usually go to work? Where are people driving? The City has access to this data already. • Mobility survey for the city, can a survey or gathering data be a component of the Climate Action Task Force recommendation. o How will be use the service? o What times do people want to ride the bus?

5. What do you believe are the key messages that the City of Longmont should communicate on this climate action?	• Key messages in Spanish should not be directly translated from English. Instead a different, culturally relevant message should be developed. Literal translations do not make sense. • Create communication packets that are accessible to children. This can help get family buy-in and help to empower youth and build leadership. • Target outreach to those who might not have access to a vehicle. • Highlight the convenience of the route. • Make the route feel safe, if it doesn't feel safe it doesn't matter if it is safe. • Take away the stigma of riding the bus, make riding cars "not cool".
6. In the case of limited city funds, how do you suggest this climate action should be implemented?	• Get the money back from Fast Track. • City of Mexico implemented a policy that assigns what days different individuals' cars can be used. • Funding through a state grant program. • This program should be prioritized and be funded. • App could handle donations, "pay as you can" program. • Fundraising plans, "We want to raise $X to have an electric vehicle". • Create a matching fund program with a major donor. • Larger employers can incentivize public transportation.
7. Any additional comments, concerns, or questions?	• No Discussion

Proposed Climate Action: Workforce Development

Quick Overview of the Discussion

- The Climate Action Task Force provided an overview of the current thinking around workforce development and its role in the transition to a clean energy economy. A full recommendation on workforce development has not yet been drafted by the Climate Action Task Force.
- Workforce development is both a critical need in the transition, and in addressing current inequities and those that may arise due to the transition. Although there are many opportunities, the Just Transition Plan Committee discussed numerous considerations that need to be addressed in order to ensure that workforce development is done equitably and results in enhancing equity in our community rather than inadvertently perpetuating inequities.

Internships, certificates, etc. are not always accessible to all currently and we need to understand how to embed equity in the workforce development programs.

- Must address opportunities for undocumented residents, who have a strong interest in becoming self-employed, but may need additional support services like helping them pay their taxes, understanding business registration, sales tax, etc.
- Applications need to be simple and accessible, and there needs to be resource navigators to help people move through the process.
- Ensure that there are opportunities beyond entry-level/minimum wage/physical labor by building in training and professional development so people can advance through new employment opportunities.
- Need to understand baseline of who in the community is living at poverty levels and focus first on recruiting and supporting them through these opportunities.

1. Whom do you see benefiting from this climate action, and how? (e.g., age, migrant status, income)	• Undocumented residents:
	  o People really want to learn new things, help people become self-employed and provide support services like helping them pay their taxes, etc.
	  o Maybe there's an opportunity to use visa H2B for ag workers, but provide work permits for this work – would need to be federal change – climate action visa, provide preference to people already living here; should be able to make that case due to coming rapid transition away from coal.

2. Whom do you see that may be harmed by this climate action, and how? (e.g., age, migrant status, income)	• Internships, certificates, etc. are not always accessible to all; need to understand how to embed equity in the workforce development programs.
	  o Need navigators to help access these programs.
	  o Need to have paid jobs lined up for people.
	  o If people don't have healthcare, childcare, etc. it's hard to participate and complete certifications.
	  o People with disabilities.
	• Just the program alone is not sufficient to address income inequality and provide opportunities for those that could benefit the most from new workforce opportunities.

3. How could this climate action be improved? • **To enhance positive impacts** • **To reduce negative impacts** • **Who should be targeted?**	• Make applications simple and accessible, not everyone has the education level to understand a highly technical application. • Offer opportunities for training and professional development so they can build up skills, beyond just physical labor, and gain new employment opportunities. • Worker-owned cooperatives to alleviate income inequality. • Work with Platte River to help workers transition if needed – could those folks move into the AMI installation role? Help move people into a more IT role. • City to set up an internship program and then track them into job opportunities with business partners- assist with professional development programs. o Boulder County Workforce Development does essentially that – but there could be opportunities for improvement. • There needs to be a 10-year training and development path so people can continue to grow and be successful. • Need a long-term path for growth and development.
4. What information/data might help in the equity assessment of this climate action? (i.e., data on population, emissions, impacts, city programs, maps)	• Who and what jobs might be negatively affected by climate action? And track how they can transition • Unemployment rate. • Workforce development program participation rate. • Job placement rate post workforce development program participation. • How well are we recruiting and then sustaining/growing capacity for participants in the workforce development program? o Start with a baseline of who's underemployed now and then look at the connection with those folks to these training opportunities and track if they can sustain themselves.

	• Work with SVVSD to understand how well we are actually preparing people for this type of workforce. • Look at stats of minorities that live at poverty level, try to employ them, and have someone that does outreach to recruit those folks.
5. What do you believe are the key messages that the City of Longmont should communicate on this climate action?	• No discussion.
6. In the case of limited city funds, how do you suggest this climate action should be implemented?	• No discussion.
7. Any additional comments, concerns, or questions?	• No discussion.

Proposed Climate Action: Downtown Paid Parking

Quick Overview of the Discussion:

- Climate Action Task Force provided a summary of four different proposed options for incentivizing alternative modes of transportation: 1) Eco-passes, 2) Parking cash out program, 3) Preferred electric vehicle parking, and 4) Pay-for-parking downtown. This equity lens discussion focusing on 4) Pay-for-parking downtown.
- Equity Lens Discussion, Pay-for-parking – Key Takeaways:
    - Benefits the wealthy you do not care about paying and impacts people with disabilities, older adults, and those who cannot afford to pay.
    - Circulator shuttles to downtown can incentivize individuals to not drive downtown.
    - Analyze business owner impact of this recommendation. How willing are customers to visit downtown businesses? Will customers spend more time downtown?

• **Whom do you see benefiting from this climate action, and how? (e.g., age, migrant status, income)**	• Those who are wealthy and do not care about paying for parking and want better spots from a decrease in competition. • Those who can afford an electric car.

• **Whom do you see that may be harmed by this climate action, and how? (e.g., age, migrant status, income)**	• Downtown businesses. • Those who cannot afford to pay to park. • People with disabilities or older adults (if they cannot park outside a building for free). • Nearby neighborhoods.

• **How could this climate action be improved?**
  • **To enhance positive impacts**
  • **To reduce negative impacts**
  • **Who should be targeted?**
	• Create a menu of alternative transportation options that businesses must pick for their employees, but if a business doesn't want to do anything, they have to pay into a fund. Target larger employers.
	• First hour is free.
	• Free for people with disabilities and older adults. If you are undocumented, how would you be able to access something like this?
	• How would these programs impact schools? There is a private school and some daycares downtown.
	• Where does the revenue that is generated by the parking go? Can it go to the businesses or to develop more alternative modes of transportation?
	• Permit program in the nearby neighborhoods.
	• Parking lots in the outskirts of the City with shuttles to downtown. Boulder County Fairgrounds could be an option.
	• Circulator shuttles. Electric.
	• Expand the bike system to downtown.

• **What information/data might help in the equity assessment of this climate action? (i.e., data on population, emissions, impacts, city programs, maps)**	• Business owner impact, how willing are customers to visit the businesses? Will customers spend more time downtown? • Surveys of downtown. • Parking studies. • Research other communities.
• **What do you believe are the key messages that the City of Longmont should communicate on this climate action?**	• Combine the messaging with messaging for installing free bike racks and more bus routes. • Add information at the bus stops.
• **In the case of limited city funds, how do you suggest this climate action should be implemented?**	• Businesses give out a coupon for those who do not drive a single-occupancy vehicle.

• **Any additional comments, concerns, or questions?**	• Two people expressed that they didn't think that paying for parking is a good intervention.

JTP Committee Meeting Six, March 11, 2020

After the Joint meeting on March 5, the JTP Committee discussed two topic areas in more depth. They did not follow the equity lens for these discussions.

Expanded Discussion: Communication and Outreach

- Use social media, influencers.
- Commercials between 3-6 pm.
- Ads in high traffic areas.
- Remove stigma from using public transportation, make it cool.
- Pay to target advertising in social media, age groups, area, etc.
- Use the business network that is already interested in sustainability to help promote.
- Alliances with local companies that have a good reputation.
- Ads in buses and high traffic events like the farmers market.
- Canvasing with volunteers, strategically going to communities that can benefit more from a recommendation. But some may consider this intrusive. Something like announcing gatherings in the park and have people come willingly. Inform about these events through websites, like Next Door that only announces events for certain neighborhoods. There is a Neighborhood Group Leaders Association, who we could talk to and then they take that information back.
- In April there will be a meeting of "Navigators" who can be informed to take the information to their community.
- Reach out to groups like Walk to Connect and Bicycle Longmont.
    - Distribute flyers to kids in school so that they can take it to their parents or participate in an Assembly or partner with teachers to do activities with the kids (actual, fun, and attractive).
- Reach out to media: Longmont Public Media and The Observer.
- Parents involved in education: a good opportunity to reach out to the Hispanic community.
- Social media is one of the best ways to reach the community (targeted ads and google ads). Campaigns for specific things, for example: Ride the free bus.
- Posters in common areas such as Civic Center, supermarkets, hospital, churches, etc.
- TV ads with partnerships. Channels like Univision and Telemundo.

Expanded Discussion: Incentivizing Alternative Transportation

Ideas:

- Raise gasoline prices

- Regulations in terms of license plates, people can only travel on certain dates, people schedule their life around the dates that you can drive
- If you have 7 trees you can have a car
    - What if you don't have land? You can walk. What if you can't walk?
    - People with disabilities, older adults: need to consider people who have different needs when creating regulations.
- Paying for parking can be an incentive to not drive
- Money and convenience are the driving factor, how do we make the alternatives more appealing?
- Can there be some type of recycling of the carbon monoxide from cars?
- Could you volunteer to pay for trees or public transportation on your utility bill?
    - We have programs on the utility bill, low participation
    - Can it be when you do it when you register your car? This is at the State level. County processes but does not control.
- Carbon dioxide taxes on your vehicle emissions, encourage people to no longer idle
    - Will this impact construction workers and landscapers who need trucks?
- Can there be more positive reinforcement? Paying for using less?
- Can there be a point mechanism that can be added to the RTD system? Count boardings, frequent user program that rewards people for riding the bus more with incentives.
- Create an ambassador program, if you refer a certain amount of people for the bus or carpooling, you can an incentive.

Partnerships:

- Partner with the school district
    - This should include charter schools.
    - The City has open enrollment for schools, so students can go to any school but there are not always buses.
    - Boulder County had a program for kids to incentivize them, would be interesting to learn the successes and challenges.
- Partner with major employers

Education:

- Important to provide education on why it is important to educate on why climate action is important
- Challenge:
    - "Watch your car miles drop" campaign
    - Track your walking, carpool trips, etc.
    - Can people use their phones to track their impact and benefit?

    - Can there be a transportation challenge, theme “Walking Wednesdays”, that can be publicized
- Short term and long term, it is about changing behavior
    - Who is going to the education?
    - Phased out incentives
        - Kids get extra credit for walking
    - Need to a plan because people might do it for a bit then stop
    - Needs to be diverse and equitable

Concerns:

- Colorado, there’s rain, lightning, the weather might make it not always easy to walk or bike.
- Carpooling - Lots of logistics.
- There are a lot of different organizations: Way to Go, Communizing Solutions, RTD, Carpooling on the Diagonal - this is confusing instead of a resource.
    - Can there be centralized information (it would have to be regional)?
    - Are they accessible? Language, Disability.
    - Need a live person to help navigate the system.
        - Regular bus users that are ambassadors, that ride the bus.
        - If you referred someone, who got a small gift card or some other incentive.
        - Can this be applied to other forms of transportation? Carpooling?
- When making decisions need to factor in funding for outreach and enforcement. Who is going to enforce the restrictions?
- Bike infrastructure needs more work, safety and getting to where people need to go. Improve comfort and safety for bicycle transportation.
    - Can alleys become walking and bike paths? Add good lighting, better pavement.

What are people the most excited about? (Asked at the end of the discussion)

- School and Major Employers program.
- Challenges and campaign for everything.
    - Focus on how to unite the community.
    - Need to invest in resources.
    - General campaign for everyone.
    - How: Big flyers that people are going to see, tv, radio stations, at grocery stores, bright colors (something that stands out), at bus stops.
    - Use the census to help identify different areas to focus on.
- Humans go through different phases in their life - develop different programs based on the different needs of the different individual and where they are in their life.
    - Kid: motivate to make changes.
    - Adult: decisions are based on needs.

- How do you identify co-benefits to get everyone excited and involved?
- How can a campaign be created that addresses where people are in their life, the different phases, address the different needs, but still have a unifying goal?
    - Unifying goal of creating a stronger community,

Here are the different things you can do to help (and develop different goals around what excites people and connect to way they are.

JTP Committee Optional Activity

There was a break in meetings due to social distancing from COVID-19. The JTP Committee was offered the optional activity of applying an equity lens to one of the Climate Action Task Force recommendations. One member participated, his responses are below.

Recommendation Name: Opt-In Energy Savings Program

1. Who do you see benefiting from this climate action, and how? (e.g. age, migrant status, income)	• Any household that is able to participate should see an economic benefit to this program
2. Who do you see that may be harmed by this climate action, and how? (e.g. age, migrant status, income)	• Depending on when the peak demand window is, some households might night be able to participate. For instance, folks with certain medical devices that are electrically run.
3. How could this climate action be improved? • **To enhance positive impacts** • **To reduce negative impacts** • **Who should be targeted?**	• Positive: Maybe make the incentive proportional to each customer, based on their average electricity consumption, and offer a greater benefit to those using more power, in an effort to get them to use less, as opposed to assuming the burden should fall on everyone equally • Negative: Provide a clear framework for what kind of impact this would have on people's schedules and living situations • Target: High usage households
4. What information/data might help in the equity assessment of this climate action? (i.e. data on population, emissions, impacts, city programs, maps)	• Electricity consumption data & estimated income of households

5. What do you believe are the key messages that the City of Longmont should communicate on this climate action?	• Emphasize the money being given back, and as a secondary note, mention the fact that this is a community unifying action. Everyone is coming together to reduce the demand usage, including the high users.
6. In the case of limited city funds, how do you suggest this climate action should be implemented?	• Either provide credit to those opting in, to be used at a later date to pay off their electric bill, or temporarily reduce the money being given back to the households and give them an option to temporarily withdraw from the program (hopefully in this scenario, most people will have been minimally effected by this action, and can stay on).
7. Any additional comments, concerns, or questions?	• Not at this time

Appendix D: Community Engagement Reports

Climate Action Questionnaire Report

Overview

Questionnaire Goals

As part of broader community outreach and engagement effort, the Climate Action Questionnaire sought to A) raise awareness and inform the general community about climate action at the City of Longmont, B) gain community input on preferences and unintended consequences for possible climate actions beyond the members of the Longmont Climate Action Task Force and the Just Transition Plan Committee, and C) to inform the development of final Climate Action Task Force recommendations that will be presented to the Longmont City Council.

Methodology

Two questionnaires were developed: one aimed toward residents and one aimed toward businesses. Both questionnaires were offered in English and Spanish. The questionnaire was open for 18 days and distributed through various channels including the Longmont Sustainability Coalition, Senior Citizens Advisory Board, Sustainability Advisory Board, Engage Longmont, the OUR Center, the Longmont Multicultural Action Committee, Longmont Chamber, Latino Chamber of Boulder County, Landlord's Alliance, Neighborhood Group Leaders Association, among other local partners.

The resident questionnaire included 19 questions (nine closed-ended questions and ten open-ended questions). The questionnaire was divided into two main sections; the first section focused on feedback related to four main areas of climate action recommendations (building energy use, transportation, renewable energy, and workforce development). Each of these climate action recommendation areas includes one question ranking, from highest priority to lowest priority of a set of predetermined recommendations, based on preliminary discussions held by the Climate Action Task Force, followed by two open-ended questions, to obtain a description of the positive and negative impacts of such recommendations. This format of three questions (ranking, positive, and negative impacts) was replicated to each climate action area (total of four). After this, two questions focused on multiple-choice related to the primary concerns of the climate action recommendations ranked in the four areas and an open-ended question to explain their answer. Finally, the last question of the first section was an open-ended question asking what other actions/programs on climate action the resident wanted to see implemented by the City of Longmont. The second section included three demographic questions (ethnicity/race, income, and age) followed by an open-ended question to provide their email address for receiving updates on the Climate Action Task Force and sustainability activities from the City.

The business questionnaire included 15 questions (five closed-ended questions and ten open-ended questions). The business questionnaire only included one section. Similarly, to the resident questionnaire, the first 12 questions where focused on feedback related to four areas of climate action recommendations (building energy use, transportation, renewable energy, and workforce development). Each of these climate action recommendation areas includes one question ranking, from highest priority to lowest priority of a set of predetermined recommendations, based on preliminary discussions held by the Climate Action Task Force, followed by two open-ended questions, to obtain a description of the positive and negative impacts of such recommendations. The following two questions focused on the primary concerns of the climate action recommendations ranked in the four areas (multiple choice), and an open-ended question to be able to explain their answer. Finally, the last question was an open-ended question asking what other actions/programs on climate action the business wanted to see implemented by the City of Longmont. Businesses were not asked about their demographics.

Analysis

Quantitative (closed-ended ranking questions): the analysis of ranking questions was based on a weighted ranking where a top-ranking was valued higher than a bottom ranking and represented in a ranking graph. A subgroup analysis was made using demographic parameters (ethnicity/race, household income and age), choosing comparison subgroups in each particular demographic, such as ethnicity/race (white vs. non-white), household income (<$50k, $50k-$99k, >$100k), and age (<34y, 35y-64y, >65y).

Qualitative (open-ended questions): the method used to analyze the open-ended questions was a word pattern analysis where all responses were reviewed for common words and themes. The *themes* outlined below were identified by looking for a repetition of ideas in the open-ended questions. An idea was considered a theme if five percent or more of individual responses to a question included the theme, represented by a key word, word cluster, and/or phrase. Total percent of theme occurrence was calculated using Microsoft Excel's COUNTIF function to sum all survey responses containing the identified theme, then a simple percentage was calculated using that sum and the total response rate per question. The analysis also included identification of *outliers,* which were determined by identifying responses that differ significantly from other responses to the question being asked, and that were represented by less than 3% of respondents.

Responses

A total of 352 resident questionnaires were completed (347 English, 5 Spanish), and 20 business questionnaires were completed (19 English, 1 Spanish).

Limitations

Given the concurrent development of recommendations from the Climate Action Task Force and the community outreach and engagement activities, the questionnaire did not include the actual

recommendations from the Task Force. Questions were developed based on an understanding of the anticipated direction of select recommendations as well as relevance to residents and businesses.

Results from the questionnaire should not be considered as statistically significant, as the questionnaire was not designed or vetted for statistical significance.

The questionnaire was set up as a forced choice ranking where respondents had to rank answers from most to least preferred. Respondents were not able to express that they did not prefer any of the options (i.e., a none-of-the-above option), and they were not able to skip the ranking questions. At least two people did not participate in the questionnaire for this reason and expressed their concerns to City Sustainability Staff. Additional respondents to the questionnaire expressed that they did not prefer any of the climate actions.

The appendix of this report includes a quantitative analysis and graphs of the ranking questions for each section and well as a summary of the open-ended questions by question.

KEY FINDINGS / SUMMARY OF RESULTS

The respondent's comparison with the city population showed an underrepresentation of younger groups (<25 years 1% vs. 34% city), low income (<50k annual household income 16% vs. 29% city), Hispanic/Latino (6% vs. 26% city) and similar participation of describing themselves as white respondents (82% vs. 87% city).

Overarching Themes of the Responses: There were three distinct ideologies that were represented in the responses to the questionnaire.

- Respondents who were generally amicable to changes, incentives, and climate actions.
- Respondents who expressed concern that the government should not raise taxes or subsidize climate action, giving preference to market-based solutions.
- Respondents who generally expressed interest in increasing services and benefits for low-income communities, while minimizing negative impacts (e.g., affordability).

Affirmative responses to the climate actions outweighed negative responses, though strong opposition positions were expressed.

Resident Questionnaire

- The questionnaire resulted in substantial participation (352 answers) in a short period (18 days), with a completion rate of 97%.
- On building energy use, expanding incentives for home energy efficiency measures, was ranked as the highest priority. This ranking was consistent between different income, age, and ethnic/racial groups. Residents identified the “incentives and reducing costs” and “increase in home energy efficiency and weatherization” as positive impacts and “increase in costs” and “energy scores” as negative impacts.

- On transportation, improving bus services and bike connectivity were ranked as the highest priority. This ranking was consistent between different income, age, and ethnic/racial groups. Residents identified the "increase in cycling infrastructure and quality," "improving bus coverage and connectivity" and "improving public transport connectivity with Denver metropolitan area" as positive impacts and "cost related to electric vehicles," "bike lanes quality" and "poor coverage and use of the bus network" as negative impacts.
- On renewable energy, providing incentives for residents to install solar electricity panels on homes ranked as the highest priority. This ranking was consistent between different income, age, and ethnic/racial groups. This ranking was consistent between different income, age, and ethnic/racial groups. Residents identified "solar, with emphasis on support for community solar," "energy incentives," "appliance replacements with strong emphasis on support for replacements for low-middle income citizens" and "reduction in renewable energy cost" as positive impacts and "impact on taxes and energy costs" as a negative impact.
- On workforce development, creating and funding programs to train and place workers in clean energy jobs in-home energy efficiency retrofits and weatherization ranked as the highest priority. This ranking was consistent between different income, age, and ethnic/racial groups. Residents identified "training opportunities, with emphasis on training for home retrofits and weatherization" and "job creation, with emphasis on manufacturing for renewable energy systems" as positive impacts and "government involvement" and "related increased taxes" as negative impacts.
- The top two primary concerns related to the climate actions included in the questionnaire were "Added cost to you or your family" and "Negative impacts to housing affordability." These results were consistent between different income, age, and ethnic/racial groups.

Business Questionnaire

Given the number responses to the business questionnaire, the analysis for the business responses focused on the open-ended questions. The questionnaire was responded by 20 business, with a completion rate of 100%.

- For the building energy use recommendations, businesses identified the "increase energy incentives to reduce utility costs" as a positive impact and cost-competitiveness as a negative impact.
- For the transportation recommendations, businesses identified the "incentivize alternative mode of transports" and "invest in passenger trains and RTD" as positive impacts, and "bus pollution and related congestion" and "affordability of electric vehicles" as negative impacts.
- For the renewable energy recommendations, businesses identified the "new buildings without gas," "commercial solar electricity programs" and "solar and wind power incentives and resources for businesses" as positive impacts, and "economic impacts of eliminating natural gas" and "concerns over the practical implementation of renewable energies" as negative impacts.

- For the workforce development recommendations, businesses identified no or low positive impact, and "the harm caused by increased taxes" and "inefficient training and job creation" as negative impacts.
- The primary concerns related to the climate actions included in the business questionnaire were "concern for increased costs, taxes, and overall affordability," "focusing on transportation," "skepticism toward government intervention," and "the concern for the capacity of government and public."

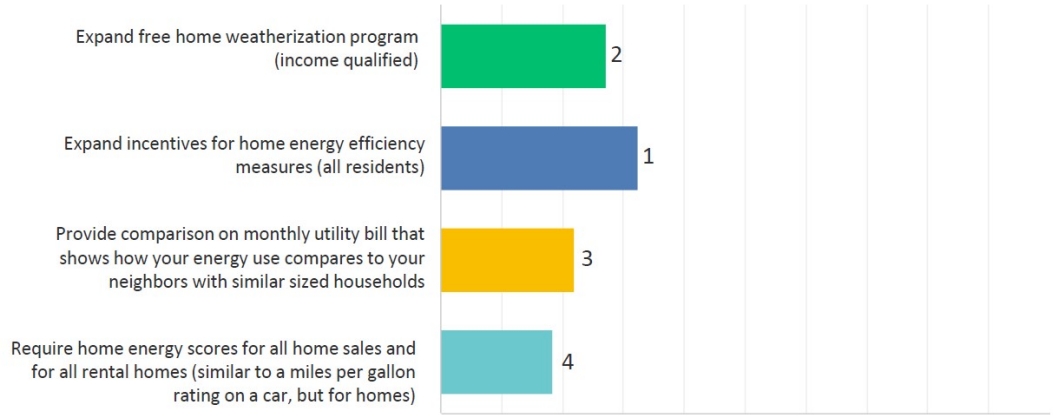
ANALYSIS BY QUESTION

Resident Questionnaire

RQ1 - Resident – Building Energy Use Ranking

Q1: Building Energy Use. These are examples of actions that Longmont is considering to address the climate emergency concerning Building Energy Use.
Rank the recommendations from highest priority (1) to lowest priority (4).

Answered: 352 Skipped: 0



RQ2 - Resident – Building Energy Use Positive

Question. What recommendations do you see as having the most positive impact to you and your community, and why?

Answered/skipped: 280/72

Qualitative / Open-Ended Questions

- Themes
    - Incentives and reducing costs.

    - Increasing home energy efficiency.
    - Increasing home weatherization.
- Outliers
    - None of them will have a positive impact. All of them will hurt the economy.
    - No more regulations or requirements for homeowners trying to rent or sell their home.
- Quotes
    - “Incentives are a great way to get people on board with becoming more sustainable.”
    - “Incentives for increasing home energy efficiency could really improve things.”
    - “Saving energy seems best as it is fast, low cost, and quick to implement.”
    - “Requiring owners of rental houses or companies that manage these properties to implement it in them.”
    - “We need to subsidize the low-income community.”

RQ3 - Resident – Building Energy Use Negative
Question. What recommendations do you see as negatively impacting you or your community, and why?

Answered/skipped: 260/92

Qualitative / Open-Ended Questions

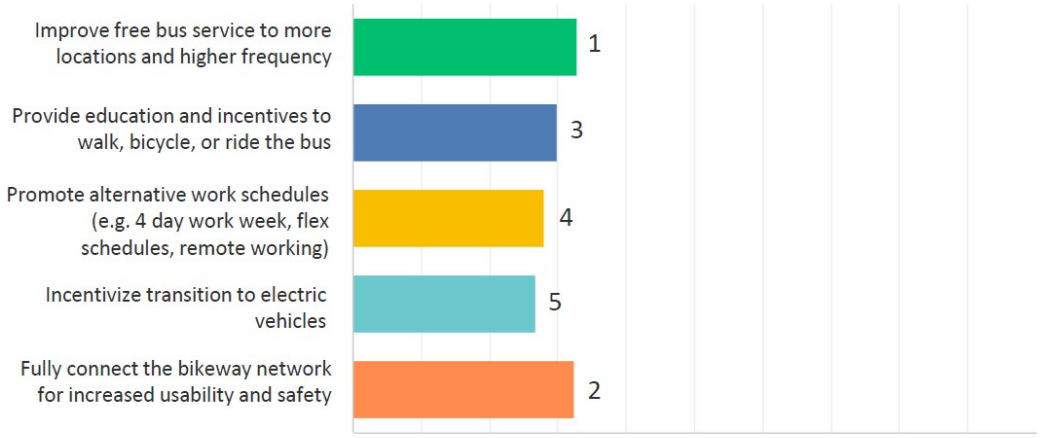
- Themes
    - No negative impacts.
    - Increase in costs for homeowners and renters.
    - Energy scores being ineffective and impacting on costs.
- Outliers
    - None.
- Quotes
    - “I see no negative impacts on changing behaviors to reduce climate changes.”
    - “The cost. Not all homeowners would have the financial resources unless a program was in place for every home to take advantage of. A tax credit as well.”
    - “Forcing homes that can't afford the upgrades, to make the upgrades.”
    - “Energy rating, since it would disproportionately characterize older homes as less efficient.”
    - “The comparatives and ratings are interesting, but do nothing in themselves to help cure the problem of home energy waste.”

- "Worry about accuracy of home energy scores and their effect upon home values."

RQ4 - Resident – Transportation Ranking

Q4: Transportation. These are examples of actions that Longmont is considering to address the climate emergency concerning Transportation.
Rank the recommendations from highest priority (1) to lowest priority (5).

Answered: 352 Skipped: 0



RQ5 - Resident – Transportation Positive
Question. What recommendations do you see as having the most positive impact to you and your community, and why?

Answered/skipped: 277/75

Qualitative / Open-Ended Questions

- Themes
  - Increase cycling infrastructure and quality.
  - Improve bus coverage and connectivity.
  - Improve public transport connectivity with Denver metropolitan area.
- Outliers
  - Increase the tax on gasoline and use the money to fund public transportation services.
  - Limiting housing development.
- Quotes
  - "Making biking easy and accessible will encourage more people to bike."

- "Fully connect the bikeways. There should be north/south and east/west bikeways that are at least mostly non-stop and are continuous."
- "Make Longmont more bike friendly."
- "Providing better access to the bus service into all sections of the community so we may choose to ride a bus instead of driving ourselves."
- "More effective citywide bus service."
- "Downsize the buses - make them more frequent and cleaner."
- "Expand the bus transportation as well as include light rail or rail of some sort to Denver and DIA."

RQ6 - Resident – Transportation Negative

Question. What recommendations do you see as negatively impacting you or your community, and why?

Answered/skipped: 250/102

Qualitative / Open-Ended Questions

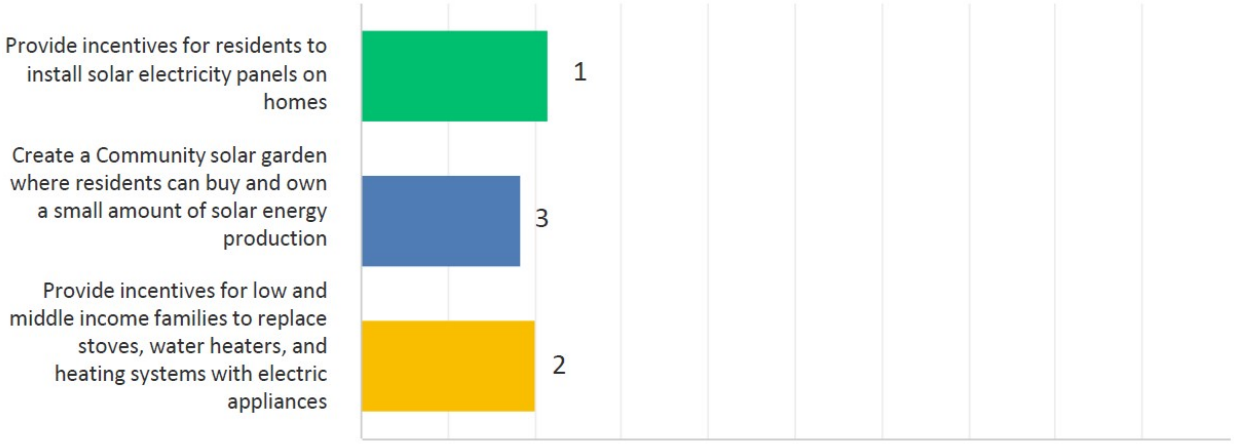
- Themes
  - Electric vehicle costs.
  - Inequities related to electric vehicles.
  - Bike lanes quality.
  - Poor coverage of the bus network.
  - Costly, empty and dirty buses.
- Outliers
  - Increase the tax on gasoline and use the money to fund public transportation services.
  - Not having light rail.
- Quotes
  - "Most people can't afford an electric vehicle."
  - "EVs are so inaccessible still so don't prioritize those yet."
  - "Incentivizing transitions to EVs is really just subsidizing the rich when they buy an EV."
  - "Bike routes need to be safer than white paint on a shared roadway. Too risky! Build dedicated bike paths."
  - "Free buses add a significant cost and rarely go where employed people need them to go."
  - "Buses riding nearly empty, again, increase traffic and emissions."

- “More lanes for more empty busses. How about we do smaller busses?”

RQ7 - Resident –Renewable Energy Ranking

Q7: Renewable Energy. These are examples of actions that Longmont is considering to address the climate emergency concerning Renewable Energy.
Rank the recommendations from highest priority (1) to lowest priority (3).

Answered: 352 Skipped: 0



RQ8 - Resident – Renewable Energy Positive

Question. What recommendations do you see as having the most positive impact to you and your community, and why?

Answered/skipped: 259/93

Qualitative / Open-Ended Questions

- Themes
  - Solar, with emphasis on support for community solar.
  - Energy savings Incentives.
  - Appliance replacements with strong emphasis on support for replacements for low/middle income citizens.
  - Cost and affordability.
- Outliers
  - Public transportation.
  - Education opportunities.

    - Building codes.
    - Residential water use.
    - None (15 responses were opposed to all choices).
- Quotes
    - “Custom solar is only feasible for some households. Community solar would help a lot more people buy into renewables.”
    - “Replacing inefficient appliances will reduce energy usage. Giving help to the poor will make this happen and their appliances are usually not working well. Solar is a good idea, but incentives keep the prices of solar infrastructure too high.”
    - “All of the above. This has to be a multi-pronged approach.”
    - “None of the above. More practical to make sure people are using energy wisely.”

RQ9 - Resident – Renewable Energy Negative
Question. What recommendations do you see as negatively impacting you or your community, and why?

Answered/skipped: 234/118

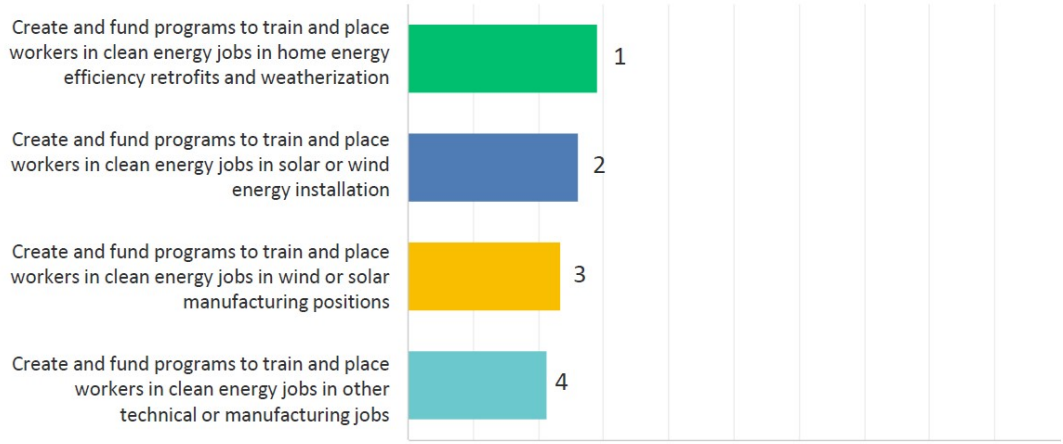
Qualitative / Open-Ended Questions
- Themes
    - Cost, expensive, and increased taxes.
    - Effectiveness.
    - None (37 responses expressed that they identify no negative impacts).
- Outliers
    - Price-based counter incentives (i.e., charge solar collector owners more on their electric service bill).
    - Return on Investment of solar installing is too long.
    - Residents need to have options and the right to choose.
    - Need for low-income housing and equitable pricing.
- Quotes
    - “Increasing electricity usage, when that is not from a renewable source can be counterproductive.”
    - “I know my HOA doesn't like solar panels, so incentivizing them wouldn't help me.”
    - “The cost of heating a home and the high cost of purchasing more energy-efficient heating systems.”
    - “Not sure what owning a part of a community solar garden would mean.”

- "All of them. Tax, tax, and tax some more. That is how incentives are paid."

RQ10 - Resident – Workforce Development Ranking

Q10: Workforce Development. These are examples of actions that Longmont is considering to address the climate emergency concerning Workforce Development.
Rank the recommendations from highest priority (1) to lowest priority (4).

Answered: 352 Skipped: 0



RQ11 - Resident – Workforce Development Positive

Question. What recommendations do you see as having the most positive impact to you and your community, and why?

Answered/skipped: 234/118

Qualitative / Open-Ended Questions

- Themes
  - Training opportunities, with emphasis on training for home retrofits and weatherization.
  - Job creation, with emphasis on manufacturing for renewable energy systems.
  - None (27 of the respondents do not see the benefit of any recommendation).
- Outliers
  - Support for trade schools.
  - Reliance on free-market over government intervention.
- Quotes

- "Retrofitting old homes seems to make the most sense given the historic nature of our city. Manufacturing and installation would be a great skillset for a growing front range."
- "Make this all consolidated so we have a super well trained workforce and our community sets a standard. We have done it with gig and water. It is time to do it with energy."
- "These are all bad ideas-provide incentives so businesses can train the personnel they need. Longmont has no business training people for any of these jobs."

RQ12 - Resident – Workforce Development Negative

Question. What recommendations do you see as negatively impacting you or your community, and why?

Answered/skipped: 213/139

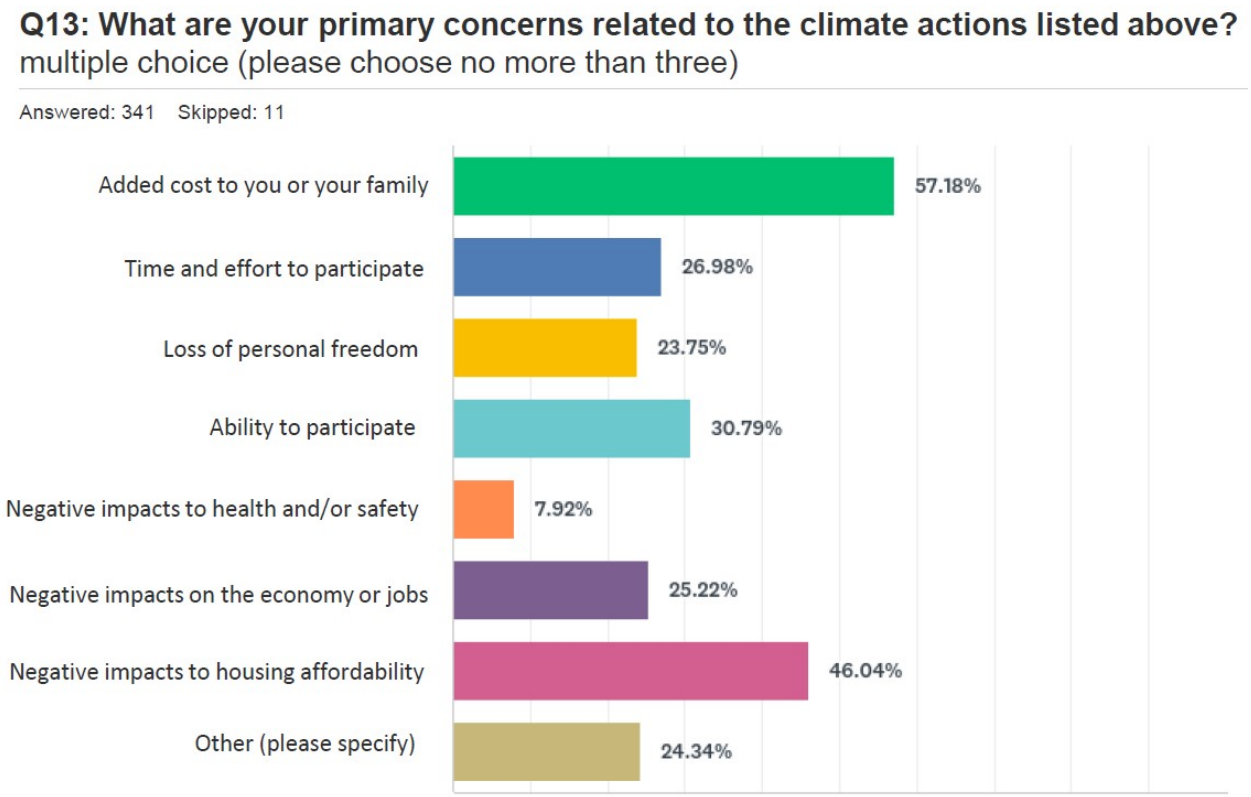
Qualitative / Open-Ended Questions

- Themes
  - Negative opinion toward government involvement (42 respondents express a preference for free-market job creation).
  - Increased taxes/use of tax dollars.
  - None (44 of respondents see no negative effects of these recommendations).
  - Unsure/don't know/ no answer (46 respondents).
- Outliers
  - Length of time required to implement.
  - Getting manufacturers on board.
  - Concern for keeping trained workers in the community.
  - Concern for the size of the clean energy job market (not big enough).
- Quotes
  - "Manufacturing jobs appeal to the greatest variety of people."
  - "We should utilize trade training in the school systems and perhaps add an additional adult ed session rather than recreating the wheel by developing ANOTHER job training center."
  - "I don't really see this as a top priority for funds at this time. If there is an option through public education for adults let the incentive be economic."
  - "Longmont has a long history in high tech manufacturing; and a minor history in service work, such as installation. We will not have to import knowledge and skill. Many

innovations in energy have been created in Longmont and then produced somewhere else. Part of the incentive of having a robust energy industry is keeping that manufacturing here in Longmont. If cheap labor is the reason to leave Longmont - what incentive keeps that labor here?"

- "All of them. Gov't should not be in the business of picking economic winners and losers."

RQ13 - Resident – All Categories Concerns



RQ14 - Resident – All Categories Concerns
Question. Open comment to explain your previews answer.

Answered/skipped: 186/166

Qualitative / Open-Ended Questions

- Themes
  - Concern for added costs and expenses.

    - Concern for reduced housing affordability.
    - Overall concern toward classism and inclusion of the low-income community.
- Outliers
    - All recommendations seem affordable.
    - Concern for aging/elderly population and long-term mobility.
    - Concern for data collection and unethical data sharing of community members.
- Quotes
    - “All changes need to be gradual. Rapid changes can cause unintended negative consequences like loss of jobs, high housing costs, and businesses shutting down.”
    - “Negative comments are a result of declaration of an "emergency" rather that rationally looking at the issue and solving it.”
    - “Families should not be forced to participate in climate related activities, especially if they don't have the resources to participate.”
    - “I'm very excited about Longmont's plans. I do feel that people will be skeptical if individuals and homeowners are asked to pay for upgrades and improvements.”
    - “The implementation of energy audits on homes in Boulder has only made things more expensive, more exclusive to the rich and less accessible to the lower wage earners. If we do that then what happens? Higher taxes to pay for an affordability problem that we created and exasperated.”
    - “Taking actions to address climate change has never been cheap or easy. To make lasting and impactful behavior change, we need to make these things (like renewable energy resources) more affordable and easily accessible.”

RQ15 - Resident – All Categories Additional Actions

Question. What other actions/programs would you want the City of Longmont to implement to address the climate crisis?

Answered/skipped: 234/118

Qualitative / Open-Ended Questions

- Themes
    - Improved waste infrastructure (recycling, compost, etc.).
    - Public education initiatives.
    - Improved transportation, with emphasis on EV’s, EV charging stations, and bikeways.
- Outliers

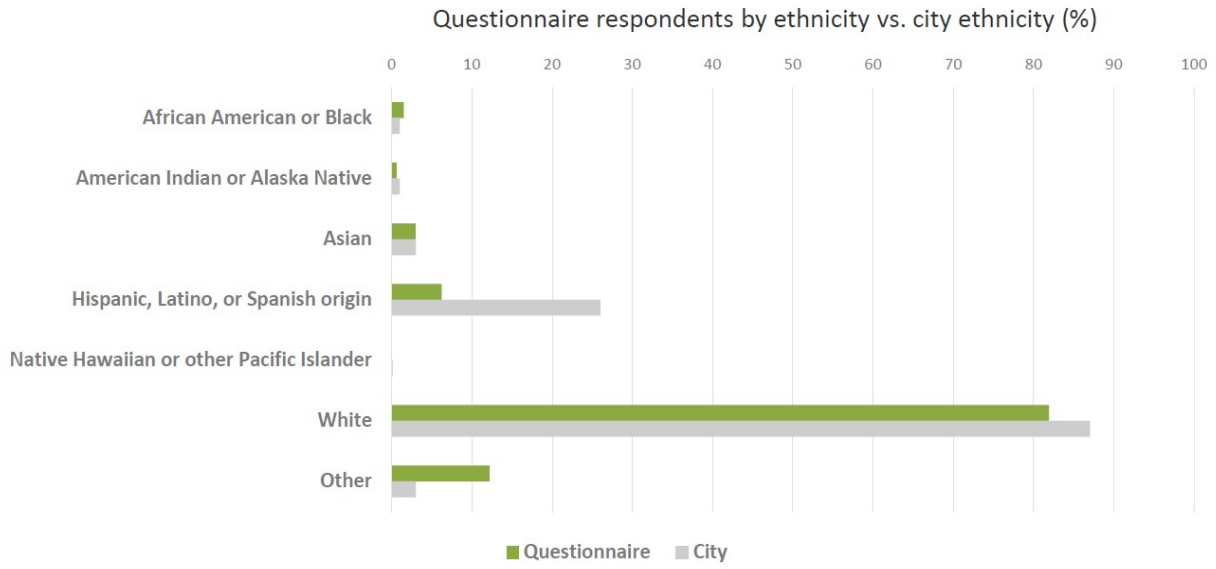
- Water – both use reduction and quality of lakes and rivers.
- Plastics reduction.
- Efficient bus services to schools.
- Support for local food.
- Wild space and outdoor access.
- Focus on greenways over bike paths.
- Better utilization of public space parcels (plant trees, urban woods, trails, recreation center).
- Force local car dealers to increase access to EVs.
- Fracking ban.
- Support for homeless population.
- Sustainable / regenerative agriculture.
- Smart metering.
- Encourage state and federal government to do more.

- Quotes
  - "The thing I have not thought of is how to switch to Wind/Solar from the City. If there was something like a Credit Union for Power that I could invest in and be a part of, that would be even better."
  - "Continue on this path as it will open discussion in our community and education is invaluable."
  - "None. I would like the City to take care of what has traditionally been viewed as City business. Street maintenance, law enforcement, parks, etc... I would like to see the St. Vrain watershed protected by vigorous elimination of transient encampments."
  - "Water quality and possible pollution sources as we grow as a manufacturing economy."

RQ16 - Resident – Ethnicity

Q16: Which category or categories describes you? (Check all that apply)

Answered: 337 Skipped: 15



RQ17 - Resident – Household Income

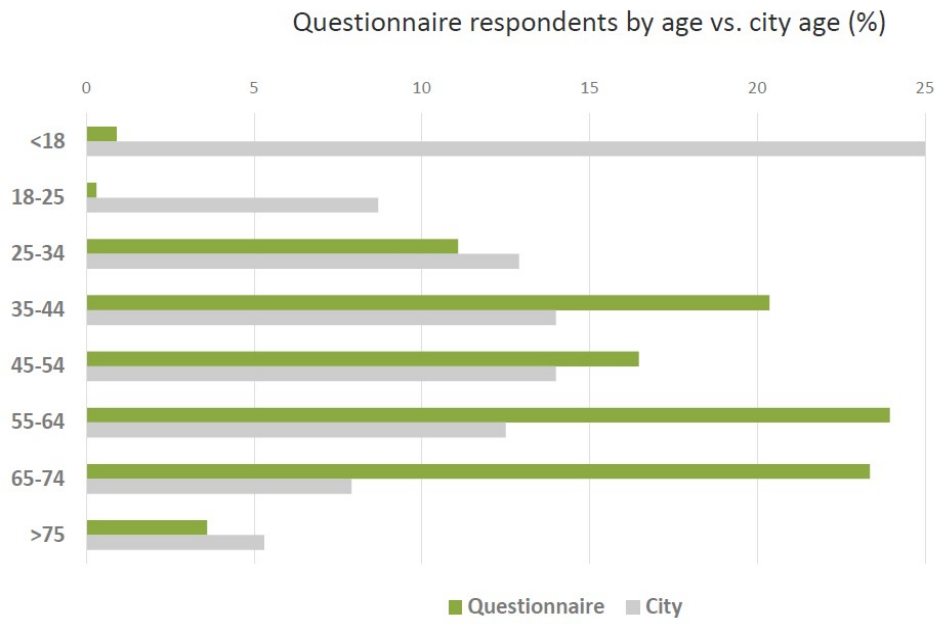
Q17: Which of the following categories best describes your household income? Please add up all income from all people living in your home. (Check one)

Answered: 313 Skipped: 39

RQ18 - Resident – Age

Q18: Which of the following categories best describes your age? (Check one)

Answered: 334 Skipped: 18



Resident - Subgroup Analysis

Q1: Building Energy Use.
These are examples of actions that Longmont is considering to address the climate emergency concerning Building Energy Use. Rank the recommendations from highest priority (1) to lowest priority (4).

Group / # answers

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Group / # answers

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Group / # answers

Q4: Transportation.
These are examples of actions that Longmont is considering to address the climate emergency concerning Transportation. Rank the recommendations from highest priority (1) to lowest priority (5).

Group / # answers

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Group / # answers

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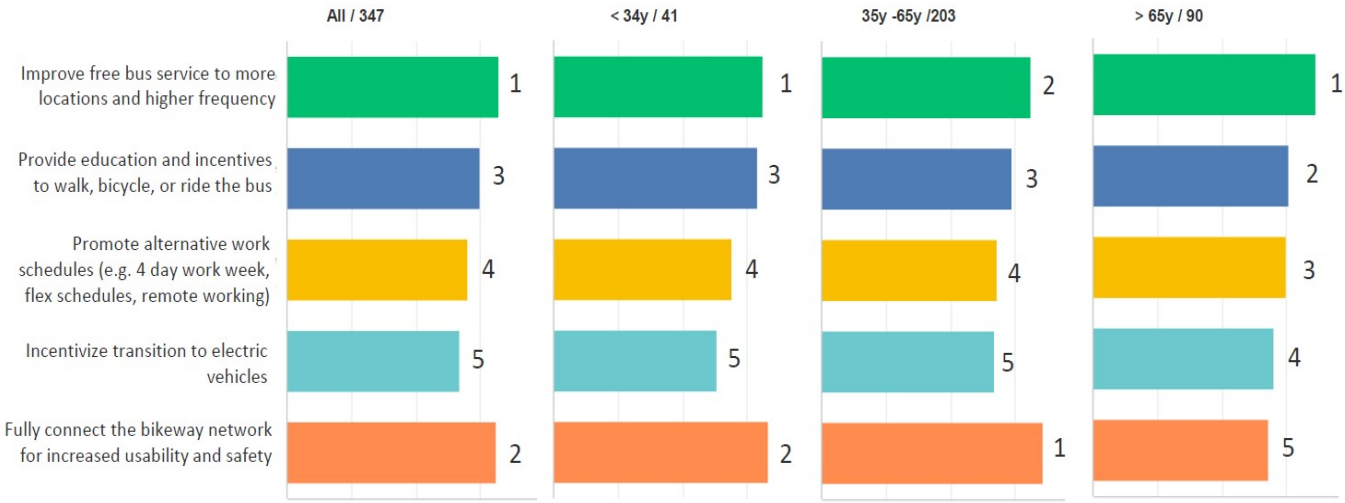
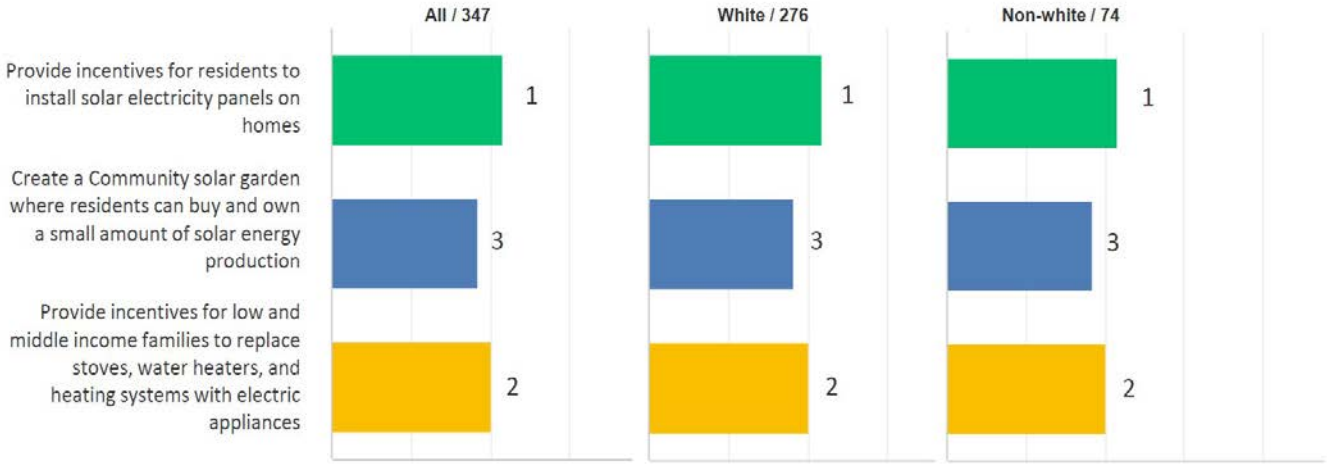
Group / # answers



Q7: Renewable Energy.
These are examples of actions that Longmont is considering to address the climate emergency concerning Renewable Energy. Rank the recommendations from highest priority (1) to lowest priority (3).

Group / # answers



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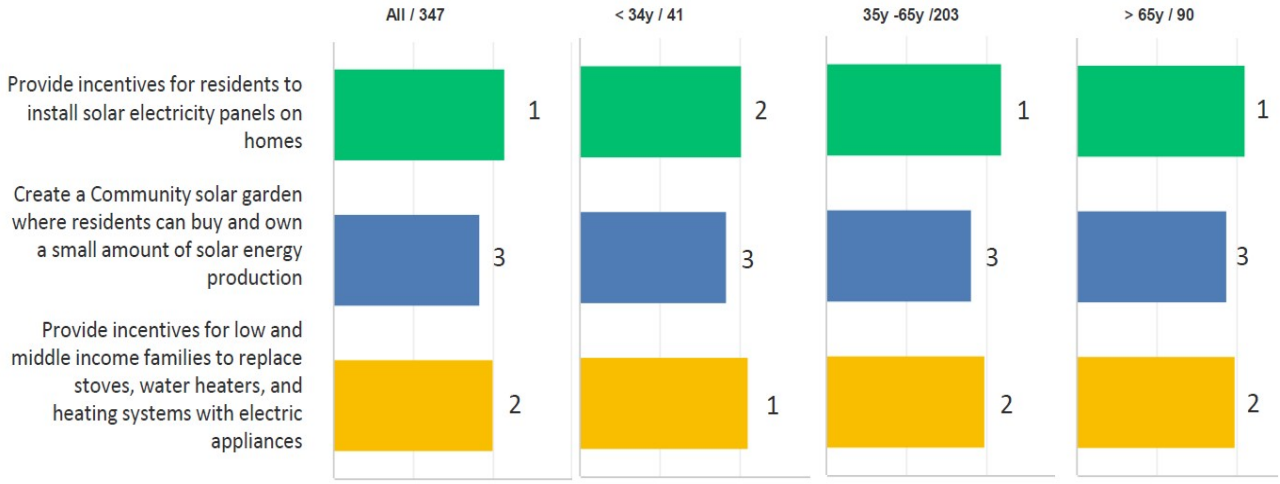

Q10: Workforce Development.
These are examples of actions that Longmont is considering to address the climate emergency concerning Workforce Development. Rank the recommendations from highest priority (1) to lowest priority (4).

Group / # answers

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These are examples of actions that Longmont is considering to address the climate emergency concerning Workforce Development. Rank the recommendations from highest priority (1) to lowest priority (4).

Group / # answers

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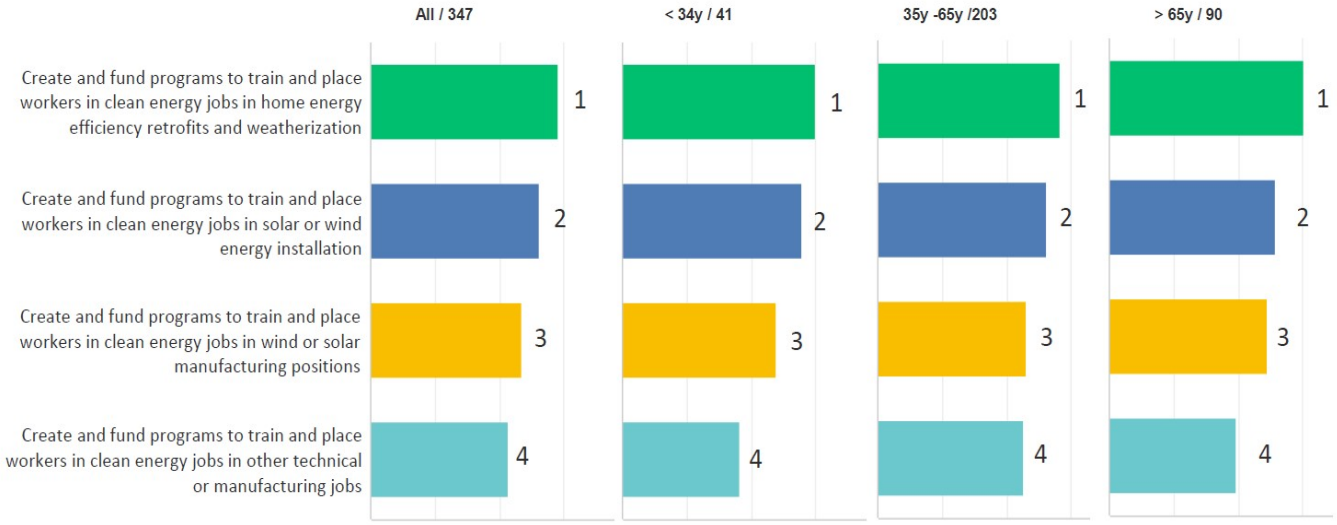
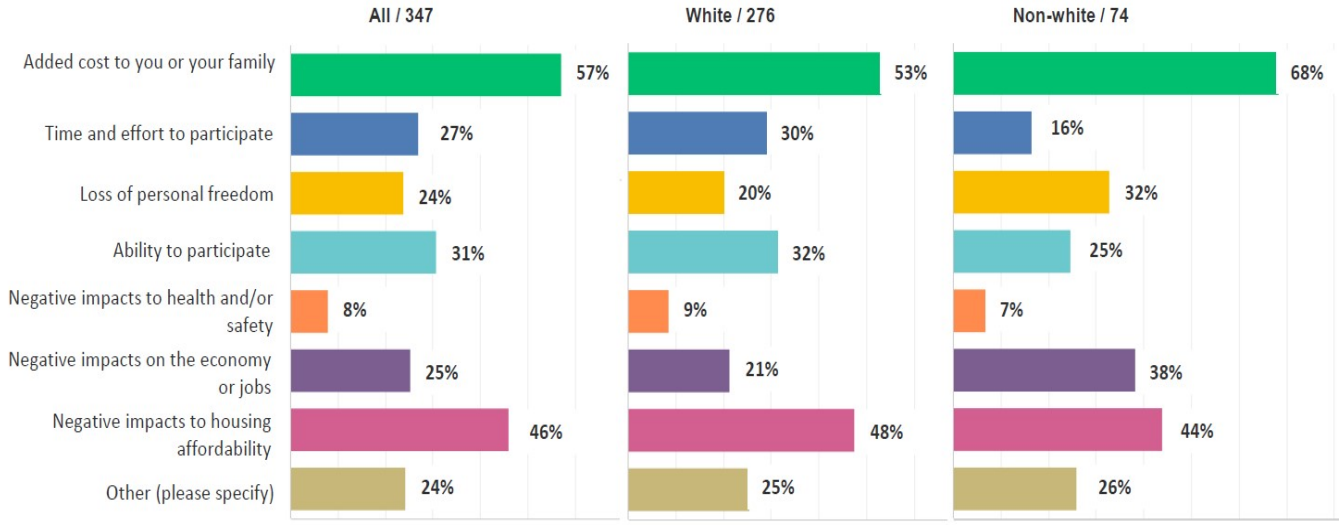
Group / # answers



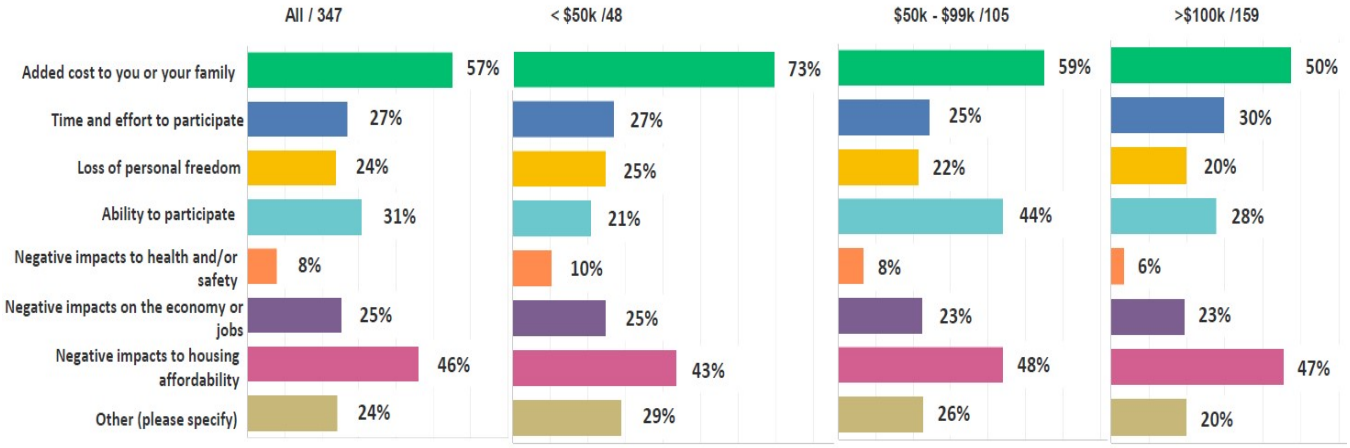
Q13: What are your primary concerns related to the climate actions listed above? – multiple choice (please choose no more than three)

Group / # answers



Q13: What are your primary concerns related to the climate actions listed above? – multiple choice (please choose no more than three)

Group / # answers



Business Questionnaire

BQ2 - Business – Building Energy Use Positive

Question. What do you see as having the **most positive impact** to your business or organization, and why?

Answered/skipped: 17/3

Qualitative / Open-Ended Questions

- Themes
  - Increase energy incentives.
  - Less utility cost.
- Outliers
  - Government program that wastes tax dollars.
- Quotes
  - "Most of the carbon emissions in the US come from commercial and industry sources, so incentivizing businesses to take a more focused look at energy efficiency would be a good step forward."
  - "As a Roofing Contractor, we always want to be aware of how we can do business differently and eco-friendlier. If we can convince commercial building owners to increase energy efficiency like applying ENERGY STAR commercial roof products that reflect most of the UV to keep A/C costs down, we help tremendously, and the building owners save money. Restoring roofs instead of replacing also cuts down on landfill use."

BQ3 - Business – Building Energy Use Negative

Question. What concerns do you see as **negatively impacting** your business or organization and why?

Answered/skipped: 16/4

Qualitative / Open-Ended Questions

- Themes
  - Reducing cost-competitiveness of Longmont compared with alternative locations.
  - Industry produces much more greenhouse gases compared to households.
- Outliers
  - Traffic and bad roads due to government doing unnecessary programs.
- Quotes

- “Making a business or home more efficient requires an enormous amount of materials, labor and transportation. The "embodied energy" of making more efficient buildings is just a tax on those that can afford it and in the long run makes the housing market unattainable for those lower- and middle-class families. Just look at Boulder....there's your future.”
- “People getting confused or not aware on how to use energy efficiency programs can make it difficult for us as contractors to explain.”
- “As one flies over the cities, one can see that businesses use many thousands of lights/energy at night by comparison to the residents! We in the business community need to be aware of our wasted energy and do something about it. If we do not measure and control our energy, we will continue to waste energy.”

BQ5 - Business – Transportation Positive

Question. What do you see as having the **most positive impact** to your business or organization, and why?

Answered/skipped: 15/5

Qualitative / Open-Ended Questions

- Themes
  - Incentivize alternative modes of transport (walking and cycling).
  - Invest in passenger trains and RTD
- Outliers
  - None of these would really have much of an impact on my business either positively or negatively.
- Quotes
  - “Safe walkways and bikeways.”
  - “Bikeway to improve employee health.”
  - “Trains are the most efficient way of transportation. We should work hard to get RTD and other organizations to bring the commuter trains to Longmont before 2030.”

BQ6 - Business – Transportation Negative

Question. What concerns do you see as **negatively impacting** your business or organization and why?

Answered/skipped: 14/6

Qualitative / Open-Ended Questions

- Themes
  - Perception that buses pollute more than a car and favor congestion.
  - Affordability of electric vehicles.
- Outliers
  - Don't believe e-cars are the solution.
- Quotes
  - "Increase in truck routes, if people are not educated about the use of the bus, this alternative would not work in any way, otherwise, it would be more contaminated by the use of trucks that do not carry any passenger."

BQ8 - Business – Renewable Energy Positive

Question. What do you see as having the **most positive impact** to your business or organization, and why?

Answered/skipped: 15/5

Qualitative / Open-Ended Questions

- Themes
  - New buildings without gas.
  - Commercial solar electricity program.
  - Solar and wind power incentives and resources for businesses.
- Outliers
  - None of these would really have much of an impact on my business either positively or negatively.
- Quotes
  - New construction without gas, if you are thinking of transcending the Project, it is better that the new homes are already adequately equipped for future needs and do not generate extra expenses later. The same as helping to put solar panels on existing homes.
  - What about creating a commercial solar electricity program? Commercial buildings have much larger roof areas to tap for solar panels, and it's nearly all unused!

BQ9 - Business – Renewable Energy Negative

Question. What concerns do see as negatively impacting your business or organization and why?

Answered/skipped: 14/6

Qualitative / Open-Ended Questions

- Themes
  - Economic impacts of eliminating natural gas: increased energy cost, decreased job competitiveness, disparate property value.
  - Concern over practical implementation: those with older infrastructure will face higher switching costs.
- Outliers
  - Work for NG customers will be impacted.
- Quotes
  - "Don't outlaw natural gas or disincentivize it! It's a low cost, very efficient, clean fuel. When electric rates increase in the future (as is guaranteed to happen if now-gas loads transition to all electric) the high cost of utilities will become a hardship on businesses and citizens compared with locations that haven't outlawed gas. Don't become the Berkeley California of Colorado."
  - "…the houses with pure electricity would have a higher value than those houses that do not have the renovation, updating an electrical system is expensive, between panels and appliances, the prices are lower than what the community can sustain."

BQ11 - Business – Workforce Development Positive

Question. What do you see as having the most positive impact to your business or organization, and why?

Answered/skipped: 14/6

Qualitative / Open-Ended Questions

- Themes
  - No/low impact.
  - No need for government involvement.
  - Possibility of long-term job security.
- Outliers
  - None.
- Quotes

- "Other cities funded universities, and the educated people left for other communities, even out of states. It is best to create the jobs first, then add or pay for educational endeavors."
- "Nothing of the above is positive. Let the market economy work. Leave people and businesses alone!"
- "I do not know the labor issue, but I would care that they were not jobs that only lasted the 10 years of transition, but rather that they had a source of employment after finishing the project."

BQ12 - Business – Workforce Development Negative
Question. What concerns do see as negatively impacting your business or organization and why?

Answered/skipped: 11/9

Qualitative / Open-Ended Questions

- Themes
  - Harm caused by increased taxes.
  - Inefficient training and job creation.
- Outliers
  - Lack of resources.
- Quotes
  - "Government 'help' almost always causes dislocations and is very inefficient. If you want to help local businesses train people CUT OUR TAX RATES, because we are vastly more efficient than government at identifying and training people as needed for relevant jobs."
  - "Government creating funds and becoming Boulder."
  - "Assessing or extracting dollars to create and fund programs is a negative impact."

BQ14 - Business – All Categories Concerns
Question. Open comment to explain your previews answer.

Answered/skipped: 13/7

Qualitative / Open-Ended Questions

- Themes
  - Concern for increased costs, taxes, and overall affordability.
  - Focus on transportation.

    - Skepticism toward government intervention.
    - Concern for capacity of government and public.
- Outliers
    - Building stock will become more valuable.
    - Work on the homeless problem.
- Quotes
    - "The buses that RTD provides are giant, polluting diesel beasts that NO ONE rides, unless they are riding for free, which tends to be pretty much everyone...unless you have a job and are a responsible citizen. You could reduce the pollution and CO2 emissions of the City by a greater effect, just by using smaller, maybe electric, vans for local transport. You could get us the commuter rail. You could look at the major inefficiencies of Longmont's Ice Pavilion, Sandstone Ranch (light pollution) or public works buildings. So many ways to ACTUALLY make change happen....but I guess it's just easier to impose a tax on everyone...Yay!"
    - "People are so busy just trying to work enough to pay their bills that educational programs, participation, etc. may be difficult to gather enough support to have any significant impact."

BQ15 - Business – All Categories Additional Actions
Question. What other actions/programs would you want the City of Longmont to implement to address the climate crisis?

Answered/skipped: 12/8

Qualitative / Open-Ended Questions
- Themes
    - None.
    - Need for education.
- Outliers
    - Divest from fossil fuels.
    - Water usage (residential and agricultural).
    - Reporting and promotion of climate action, while encouraging the market to act.
    - Recycling program for asphalt shingles.
    - Free or low-cost windshield covers to decrease vehicle warmup time.
    - Promote "engine off" while waiting for trains to clear crossings.
    - Eliminate fracking.

    - Reforestation.
    - Lower school temperatures.
    - Remove cooling systems in the summer.
- Quotes
    - “Remember the sixties when litter was common place? Government lead campaigns were successful in greatly reducing the bad habit, similar results can be accomplished for reducing carbon monoxide, saving petroleum products (gasoline, engine oil), etc.”
    - “NONE! And please reconsider the actions you're already planning. They extend way beyond the reasonable scope of local government. Or, spend your personal money to go to China and appeal to Xi to reduce his CO_2 emissions.”

Outreach Activity Report

Summary of in-person outreach activities related to Climate Action

Tabling at the Senior Center

Location: Senior Center
Date: 2/21/2020
Time & Duration: 3-5 pm
Number of attendees: ~32
Type of audience (e.g., general public, Latino, elderly, advisory board)**:** Older adults
Type of activity (e.g., table, session)**:** Table at the Senior Center during their Trip Registration day. Question on a flipchart, participants could rank the importance of transportation that is accessible, affordable, safe, has non-car options, and is good for the environment.
Aim: Inform about the Climate Action Task Force and learn more about the most important transportation element for older adults.

Summary of Outcomes:

	Very Important	Somewhat Important	Not Important	Total Responses
Accessible	25	3	0	28
Affordable	19	7	2	28
Safe	30	0	1	31
Non-car options	14	7	6	27
Good for the environment	29	2	1	32

Transportation Feedback:

- Only one BOLT bus goes to Boulder every hour.
- Saw an empty bus going between 8th and Coffman and 23rd and main, but it wasn't picking up passengers.
- There are not many RTD options.
- RTD should be accessible for people who don't own cars.
- RTD is not good, it is inconvenient, inaccessible and it doesn't ride on Sundays to Denver.
- Saturdays are not good either. They keep cutting down routes.
- RTD is expensive for seniors. $10 round trip to Denver. Seniors should get discounts.
- RTD cut the middle of the day schedule.
- Two people complained about there not yet being a train to Longmont.
- General Public Transportation Feedback:
- People should be able to get to Denver without driving a car.
- Make simple maps for bus routes.
- Build more bike paths between Longmont Hospital and Longmont High School.

- Buses are not practical because older adults can't carry many things.
- Transportation is bad in Longmont. Accessibility for seniors is ridiculous (this individual was very passionate about their dislike of local transportation).

Electric Vehicle Comments:

- Old cars are affordable. Electric vehicles are too expensive. Do not demonize cars since they enable independence for older adults.

General Comments:

- Low-income people care about the environment too.
- Multiple respondents mentioned that their primary mode of transportation was a car.

Senior Citizens Advisory Board

Location: Senior Center
Date: 3/4/2020
Time & Duration: 10:30 – 11:00 am
Number of attendees: ~9
Type of audience (e.g., general public, Latino, elderly, advisory board)**:** Elderly
Type of activity (e.g., table, session)**:** Presentation
Aim: Inform about the Climate Action Task Force, inform about Questionnaire, in-person feedback.

Summary of Outcomes:
Transportation Feedback:

- Improve RTD quality and connectivity
- Improve bus stop information and space
- Increase information about free bus routes
- Modify bus to electric to reduce emissions and reduce bus size to favor frequency and increase occupancy
- Electric cars are not a priority for elderly
- Increase traffic safety form the pedestrian and cyclist perspective

Sent the questionnaire and PowerPoint to Michele to send out to the entire group.

Tabling at Linking Longmont

Location: Longmont Museum
Date: 3/4/2020
Time & Duration: 5-7 pm
Number of attendees: ~100
Type of audience (e.g., general public, Latino, elderly, advisory board)**:** General public, Transportation

Type of activity (e.g., table, session)**:** Table, Set feedback on Climate Action Recommendations that was based on the questionnaire.
Aim: Inform about the Climate Action Task Force, inform about Questionnaire, collect emails, and in-person feedback.

Summary of Outcomes:

- Cycling infrastructure, quality and investment should be a priority
- Teleworking have a greater impact, but government have low capacity to influence private workplaces
- Support active transport promotion and attractiveness
- Electric vehicle less relevant priority

Longmont Multi-Cultural Action Committee Presentation

Location: Civic Center
Date: 3/9/2020
Time & Duration: 12 – 1:30 pm
Number of attendees: ~30
Type of audience (e.g., general public, Latino, elderly, advisory board)**:** Multi-cultural residents, Action Committee
Type of activity (e.g., table, session)**:** Presentation
Aim: Inform about the Climate Action Task Force, inform about Questionnaire, in-person feedback.

Summary of Outcomes:
Transportation Feedback:

- Need to work with RTD
- Connect with businesses to educate employees, incentives for employees
- Two incentives that Sister Cities did:
    - Already happening: $10,000 any employees to buy a house in Longmont, if business here. Two employees did, two employees did not.
    - Incentives don't always work.
- Smart Growth, Boulder County
- Bus coach that can help teach people how to use the bus
- RTD in Longmont needs a lot of improvement, their system is incredibly complicated
- Coordinate with Weld County
- FRCC - engage the college, businesses that survey (Get Carla's information)
- Trains go 400 miles/gallon. Taxes for a train since 2000, push from 2030 to 2040. Help Mayor push for 2030, increase taxes if it could be done earlier.
- Handicapped woman, 1 hour wait, takes awhile
- School district runs buses, those within 5 miles of the school can use the free bus, don't run a double bus system

General: Work with Silvercreek Sustainability Group

Sent the questionnaire and PowerPoint to Adriana to send out to the entire group.

Tabling at OUR center

Location: OUR center
Date: 3/11/2020
Time & Duration: 12-1:30 pm
Number of attendees: ~10
Type of audience (e.g., general public, Latino, elderly, advisory board)**:** General public, low income, and Latino.
Type of activity (e.g., table, session)**:** Table, applying paper questionnaire, collect emails, and set feedback on Climate Action Recommendations using posters.
Aim: Inform about the Climate Action Task Force, inform about Questionnaire, in-person feedback.

Summary of Outcomes:

- Public transport should be a priority
- Increase bus route and frequency
- Improve sidewalks
- Increase cycling infrastructure in term of quality and safety
- Increase green jobs and training
- Reduce cost related to renewable energies
- Work with landlords to increase renewable energy implementation

Longmont Landlord Alliance

Location: Senior Center
Date: 3/11/2020
Time & Duration: 6:35 – 6:50 pm
Number of attendees: ~30
Type of audience (e.g., general public, Latino, elderly, advisory board)**:** landlords
Type of activity (e.g., table, session)**:** Short presentation with Q&A
Aim: Inform about the Climate Action Task Force, inform about Questionnaire

Summary of Outcomes:
Nearly all people in the audience took a postcard to participate in the online questionnaire.

Additional Community Feedback

The Longmont Sustainability Program received three emails expressing concerns with regards to the questionnaire and the stakeholder engagement process.

Comments:

- "I tried to take your questionnaire/survey. It is flawed. The way it asks for responses (ranking) indicates that you are in support of the items listed when you may not be in favor of any. There should be an allowed response that says none of the above. If you do not respond to the ranking it does not allow you to submit the survey."
- "I was recently asked to complete the City of Longmont Climate Action Questionnaire. It is not a questionnaire. It is a "push poll" (definition from https://www.lexico.com/definition/push_poll: "an ostensible opinion poll in which the true objective is to sway voters using loaded or manipulative questions"). Specifically, it assumes there are only three or four answers to each question that require ranking. There could be more answers, ranging from "do nothing" to "implement the Green New Deal." Important policy decisions are going to be made based on this push poll and cited as desires of the residents. As distributed, this "survey" is embarrassing and does not well represent the city or its leadership (both elected and administrative). Please withdraw this "survey" and issue a more representative and reliable one."
- "[Our company] is opposed to the programs that you are proposing. I want to make sure that our thoughts are represented accurately. Your survey does not allow for this. It requires you to rank several ideas about programs without the option to say "none of the above". Without that option it gives the false impression that we are in favor of them – we are not. We strongly suspect that the cost of the programs you are proposing will borne on the backs of businesses in Longmont and specifically by developers and home builders. This is not fair. I suspect that city council knows that they will not be able to fund their climate emergency projects with a tax increase so they will stick it on builders and ultimately consumers of new homes. Housing affordability is already a problem – do not make it worse."
- "I am very concerned that the Climate Action Plan is being rushed through without all stakeholder involvement. The contractor lunch and learn has been cancelled. Why couldn't this have been done via Skype or other? To eliminate business input is reprehensible. In addition, the survey that was sent out was improper - it forced a respondent to rank the ideas without an option of "none of the above". This gives the impression that you were in favor of the ideas when that may not have been the case at all! It also made no mention of how these "ideas" were going to be paid for. I'm sure it won't be through tax increases because that would never pass. The next likely source is fees to businesses - probably housing. So much for affordable housing.

  Please don't Boulder my Longmont!!!"