

LOS ALAMOS CLIMATE ACTION PLAN



2024

LOS ALAMOS



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Acknowledgments

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Letter from the County Manager

Los Alamos County is committed to environmental stewardship, a core value that guides our community. Through the 2024 Los Alamos County Strategic Leadership Plan, we have deepened our efforts to protect our natural resources, build resilience, and adapt to an ever-changing climate. Responding to concerns from residents and the County Council, we developed our first-ever Climate Action Plan, marking a milestone in taking strategic climate action.

Our community has experienced first-hand impacts of climate change: rising temperatures, prolonged droughts and increased risk of wildfires. More frequent and intense heat waves are affecting vulnerable populations, while our natural ecosystems including plants and wildlife, are suffering. Drought and heat stress on species have led to shifts in biodiversity and increased tree mortality of our local forests.

Therefore, to protect the health of our community and environment, we've developed the Climate Action Plan to guide our collective efforts to continue expanding renewable energy, improving energy efficiency in buildings, enhancing water conservation efforts, promoting sustainable transportation options and implementing adaptation strategies to make Los Alamos more resilient.

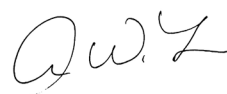
What's exciting is this Climate Action Plan will further the work the County has started, including:

- **Atomic City Transit:** Providing safe, accessible, and equitable public transportation for the community.
- **Expanding Electric Vehicles (EVs):** Increasing the number of EVs in the County fleet and expanding EV charging infrastructure for public and County use.
- **Renewable Energy Projects:** 26 MW coming from the County's two hydroelectric facilities and contracting for 170 MW of solar power and 80 MW of battery storage at Foxtail Flats to grow the County's renewable energy portfolio.
- **Water Conservation:** Implementing the Long Range Water Supply Plan and educational programs to promote sustainable water use.

- **Energy-Efficient Buildings:** In 2006 committed to LEED Silver certification for new buildings over 500 sq ft and retrofitting existing County buildings for greater energy and water efficiency.
- **Bee City USA Designation:** Protecting pollinators by becoming a designated Bee City USA affiliate and supporting native species.
- **Bear-Resistant Trash Program:** Launched a bear resistant trash cart initiative to reduce human-bear interactions.
- **Waste Diversion Programs:** Expanding recycling, mulching, reuse centers, and food composting to reduce waste.
- **Wildfire Mitigation:** Actively implementing strategies like forest management, fuel reduction, and community education to minimize wildfire risks.
- **Emergency Management Plan:** Strengthening preparedness through a robust plan to handle emergencies.
- **Urban Forest Stewardship:** Promoting tree preservation and urban forest management and implementation of the tree replacement program.
- **Public Outreach:** Continuous efforts to educate the community on climate action, sustainability, and water and energy conservation.

While Los Alamos may not single-handedly solve the global climate crisis, pursuing this Climate Action Plan benefits the community today and lays the groundwork for a sustainable future. This plan is our commitment to improving our local quality of life, environmental resilience, and setting a leadership example that can inspire broader change. Our aim is to leave a sustainable and beautiful Los Alamos for future generations.

Sincerely,



Anne Laurent, County Manager
September 2024





Key Terms and Abbreviations

Key terms

Carbon neutrality: A balance between the greenhouse gases emitted into the atmosphere and those removed or offset, resulting in no net increase in atmospheric carbon dioxide and other greenhouse gases.

Circular economy: A model where products are designed to be reused or recycled, which avoids consumption of new raw materials and reduces waste, pollution, and greenhouse gas emissions.

Climate change: The long-term change in climate patterns due to increased levels of atmospheric carbon dioxide and other greenhouse gases, primarily produced by human activities.

Electrification: The transition away from using natural gas and other fossil fuels to electricity (typically generated from renewable energy sources like solar and wind) to power buildings and vehicles.

Multimodal transportation: Accessible transportation through various travel modes beyond single-occupancy vehicles, including pedestrian, bicycle, and public transit.

Sector-based emissions inventory: A type of greenhouse gas emissions inventory that identifies and quantifies emissions within Los Alamos' geographic boundary across different sectors such as transportation and building energy.

Urban forest: An area in a city with dense vegetation, which may include parks, nature preserves, landscaped boulevards, gardens, greenways, river corridors, and other wooded areas.

Abbreviations

CO₂	Carbon dioxide is a greenhouse gas produced by burning fossil fuels and other processes, which contributes to climate change.
CTR	Commute trip reduction programs promote alternatives to driving alone to improve sustainability and reduce traffic congestion. Common elements of CTR programs include transportation demand management strategies like bicycle amenities, carpool and vanpool incentives, transit fare subsidies, and flexible work schedules.
CBEI	Consumption-based emission inventories are a type of greenhouse gas emissions inventory that identifies and quantifies emissions occurring both locally and globally, associated with all items, goods, and services consumed by households in a community.
EV	Electric vehicles derive power from an electric motor rather than a fuel-powered internal combustion engine.
GHG	Greenhouse gas emissions are heat-trapping gases that warm the atmosphere and cause climate change, such as carbon dioxide (CO ₂), methane (CH ₄), and nitrous oxide (N ₂ O).
GSI	Green stormwater infrastructure systems use vegetation, soil, and natural processes to filter, slow, and treat stormwater runoff, such as permeable pavement and rain gardens.
MTCO₂e	Metric tons of carbon dioxide equivalent is a unit of measurement that represents an amount of a greenhouse gas whose impact on climate change has been standardized to that of one unit of carbon dioxide (CO ₂), based on the global warming potential (GWP) of the gas.
NPV	Net present value is the difference between the present value of money coming in and money going out, often used to measure how profitable an investment or project is.
PV	Present value is the value today of a sum of money or cash flow that will be received in the future, adjusted for the time value of money.
TOD	Transit-oriented Development is walkable, pedestrian-oriented, and densely compacted mixed-use (commercial, residential, entertainment) development centered around or located near public transit stations.
VMT	Vehicle miles traveled are the total miles of vehicle travel in a geographic area over a given time.



Executive Summary

Why a Climate Action Plan?

The impacts of climate change—including hotter temperatures, reduced precipitation, and increasing intensity of wildfires—are being experienced in Los Alamos County and beyond. While the County has been working on sustainability initiatives for decades, a more formalized and focused effort began in December 2020, when a group of concerned Los Alamos County residents submitted a petition to the County Council requesting action on climate change. This petition led to the formation of the Los Alamos Resiliency, Energy, and Sustainability (LARES) Task Force and a County Council initiative to address climate change.

This Los Alamos County Climate Action Plan (CAP) represents the next step in implementing this initiative by outlining a vision and roadmap for reducing greenhouse gas emissions and increasing climate resilience in Los Alamos County.



How Did It Come Together?

This CAP is built on several key steps and analyses, including a baseline policy assessment, greenhouse gas inventories, strategy and action development and refinement, GHG and action modeling, cost modeling, and target setting. Throughout the process, community engagement helped to shape the CAP's priorities and actions.

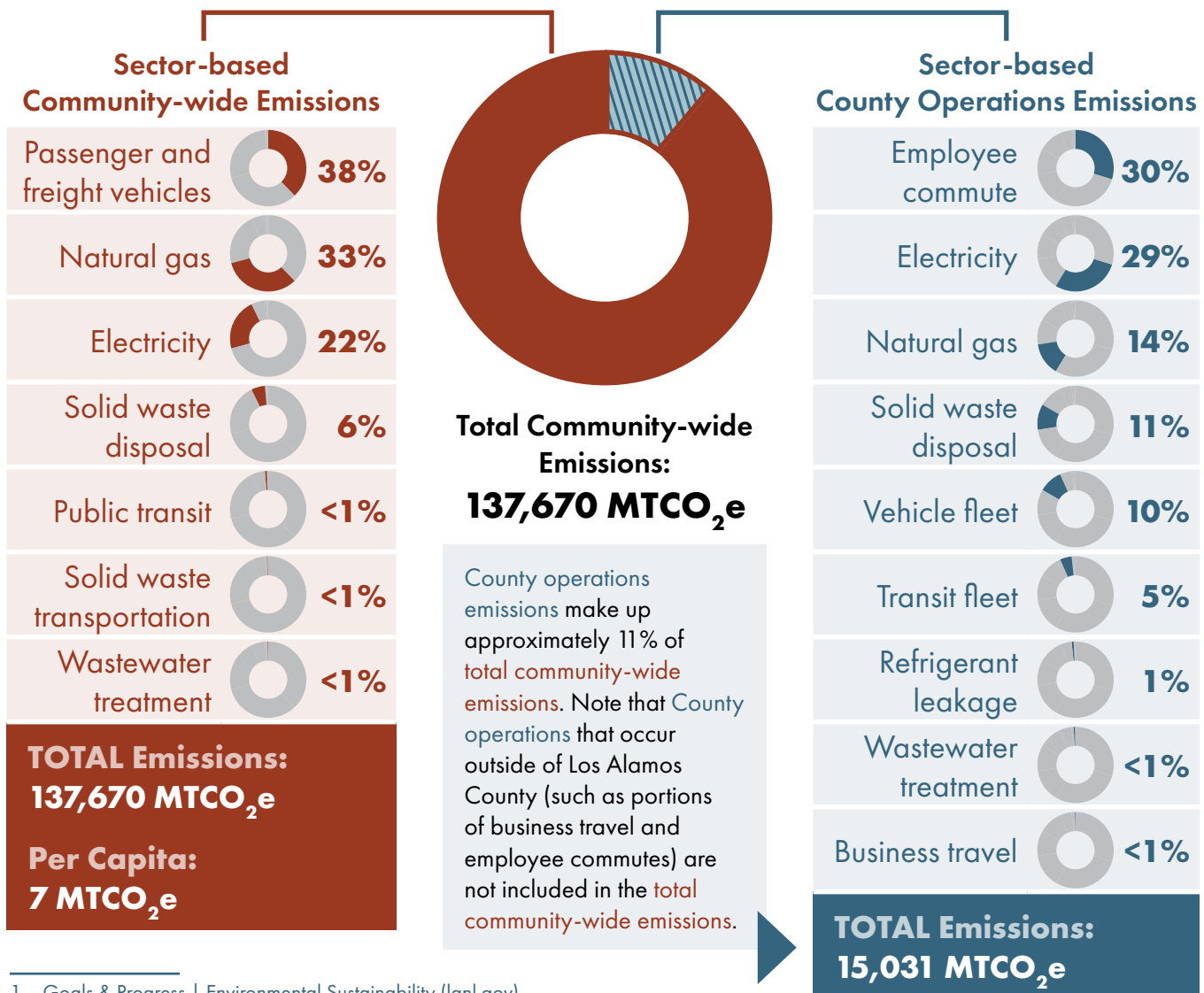
Key themes heard through community engagement included support for transitioning to carbon free energy sources, improving energy efficiency in buildings, expanding and protecting green spaces and natural ecosystems, prioritizing education and engagement, supporting economic development, promoting sustainable transportation options, and practicing water conservation and sustainable waste management. Community members shared their concerns about the cost of climate action and potential financial impacts on community members.

Where Do Our Emissions Come From?

Greenhouse gas (GHG) inventories quantify a jurisdiction or entity’s GHG emissions. Different types of GHG emissions inventories apply different lenses to emission sources, thus measuring overlapping but slightly different sources of GHG emissions. Los Alamos County conducted three GHG emissions inventories as part of the CAP process. Understanding the sources and magnitude of our GHG emissions helps us to more effectively plan to reduce those emissions.

The **sector-based community-wide emissions inventory** accounts for emissions produced by residents, visitors, schools, County operations, and businesses within the county’s geographic bounds. As much as possible, Los Alamos National Laboratory’s (LANL) emissions are not included in the community-wide total, but its emissions impact on the community is considered for informational purposes within the study. In 2022, LANL reported emitting approximately 405,186 MTCO₂e.¹

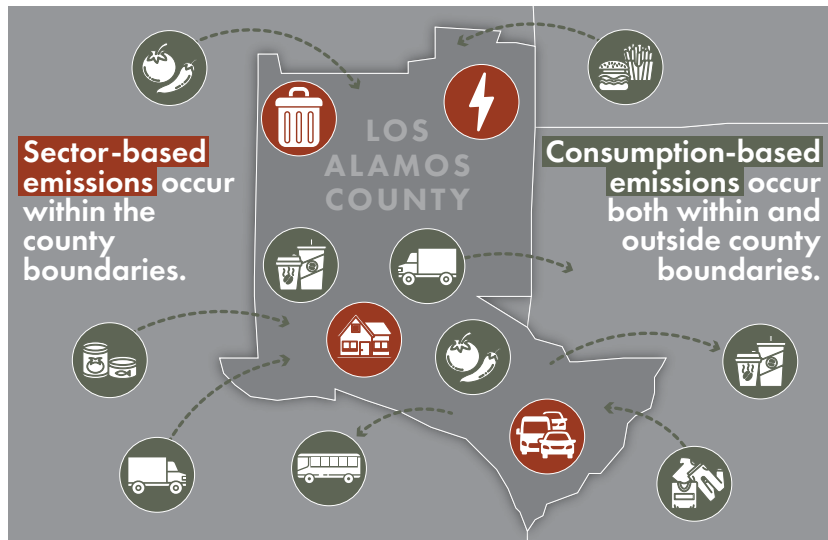
The **County operations emissions inventory** accounts for emissions that are produced by County-owned and -operated facilities and activities and are largely produced within the county’s geographic boundary. Note that these County operations emissions are also included as part of the sector-based community-wide emissions total.



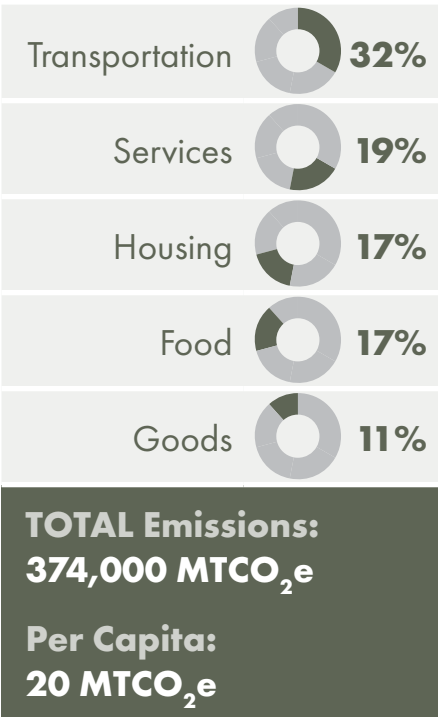
¹ [Goals & Progress | Environmental Sustainability \(lanl.gov\)](#)

Consumption-based Emissions

The **consumption-based emissions inventory** estimates the emissions associated with the household consumption of all residents, including upstream emissions—emissions produced during the production and transportation stages of a product or service. These emissions occur both within and outside of county boundaries.



Consumption-based Community-wide Emissions

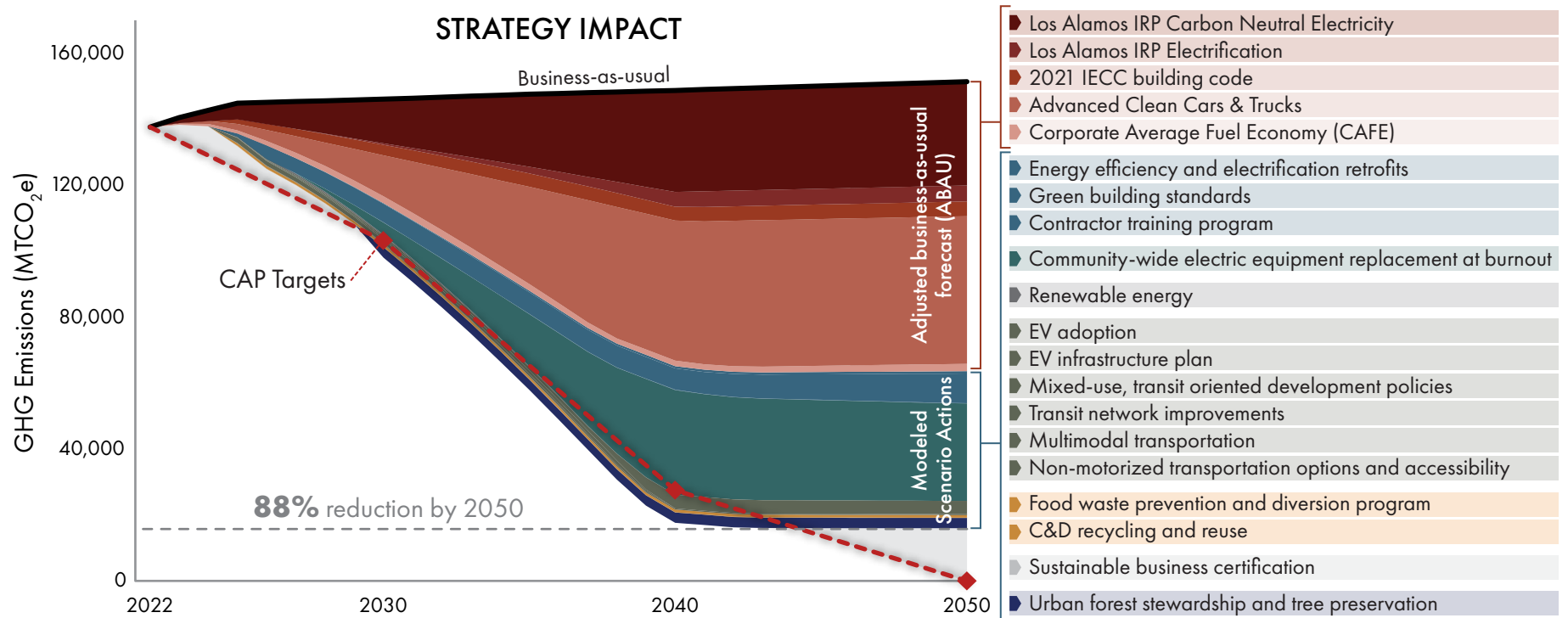


What Would It Take?




This Climate Action Plan lays out a roadmap for achieving the community’s vision of a resilient and sustainable Los Alamos, with the goal of reaching carbon neutrality by 2050, with interim targets of 30% GHG reduction by 2030 and 80% reduction by 2040 (compared to 2022 sector-based community-wide baseline emissions). The CAP strategies and actions contribute to this vision through two primary pathways:

- **Mitigation:** Reducing greenhouse gas emissions from Los Alamos County government and community member activities (100% by 2050 (carbon neutral)).
- **Adaptation & Resilience:** Increasing Los Alamos County government and community resilience to climate change impacts such as drought, flooding, wildfire, and extreme heat.

To achieve these targets, both the County government and community members would need to take ambitious strides to reduce our carbon footprint through the strategies like those shown below. The actions modeled below would reduce community-wide emissions by an estimated 88% by 2050 compared to 2022 emission levels—and would require 100% elimination of natural gas from buildings and 100% adoption of electric passenger vehicles. The remaining 12% reduction would rely on additional federal and state action, technological innovations, regular evaluation of Los Alamos’ progress, and consideration of other tools and options beyond actions discussed in this CAP, such as researching and purchasing carbon offsets or implementing regulatory measures.



The Climate Action Plan is organized into six primary focus areas, which each contain key strategies and actions to achieve the County’s emission reduction and resilience goals:

	FOCUS AREA & STRATEGIES	EXAMPLE ACTIONS
	<p>Buildings & Energy</p> <ul style="list-style-type: none"> • Increase building efficiency and decarbonization • Increase renewable energy generation 	<ul style="list-style-type: none"> • Encourage energy efficiency and electrification retrofits • Expand electric energy resiliency
	<p>Transportation & Land Use</p> <ul style="list-style-type: none"> • Expand EV infrastructure and adoption • Expand and promote multi-modal connectivity and sustainable land use planning 	<ul style="list-style-type: none"> • Develop EV infrastructure plan • Expand mixed-use, transit-oriented development policies • Encourage multimodal transportation
	<p>Materials & Consumption</p> <ul style="list-style-type: none"> • Maximize waste diversion 	<ul style="list-style-type: none"> • Expand and refine waste data tracking, reporting, and goals
	<p>Natural Systems & Water</p> <ul style="list-style-type: none"> • Increase urban green space • Conserve water resources 	<ul style="list-style-type: none"> • Promote urban forest stewardship and tree preservation • Provide greywater reuse education
	<p>Community Resilience, Adaptation, & Wellbeing</p> <ul style="list-style-type: none"> • Enhance community understanding of climate change • Prepare the community for climate impacts 	<ul style="list-style-type: none"> • Invest in public climate education campaigns • Encourage adaptation upgrades
	<p>Cross-cutting <i>(actions that focus on outreach, engagement, partnership, and leadership across sectors)</i></p> <ul style="list-style-type: none"> • Encourage sustainable businesses • Promote climate education outreach 	<ul style="list-style-type: none"> • Develop a sustainable business certification • Expand community partnerships

This CAP aims to distribute benefits and burdens equitably across the community, ensuring that more vulnerable groups receive greater benefits and bear fewer burdens than other groups as a result of CAP actions. As part of this goal, the County will explore opportunities to address financial barriers for community members, build and strengthen inclusive and equitable partnerships, and incorporate diverse perspectives in decision-making.

Implementing the CAP will be an ambitious and ongoing effort by the County and community. As part of this effort, the County should regularly assess and report on progress toward targets and goals, allowing for adjustments and pivots as needed. The County is excited to lead this important work, in collaboration with community members and other partners, to reduce greenhouse gas emissions and increase climate resilience to make Los Alamos County a more sustainable and resilient community.

Introduction

Why a climate action plan?

The impacts of climate change—including hotter temperatures, reduced precipitation, and increasing intensity of wildfires—are being experienced in Los Alamos County and beyond. While the County has been working on sustainability initiatives for decades, a more formalized and focused effort began in December 2020, when a group of concerned Los Alamos County residents submitted a petition to the County Council requesting action on climate change. This petition led to the formation of the Los Alamos Resiliency, Energy, and Sustainability (LARES) Task Force and a County Council initiative to address climate change. In its final report,² LARES Task Force wrote:

“Climate change represents an existential threat to our community and the world, with impacts becoming evident at an accelerating rate: hotter temperatures, reduced precipitation, increasing intensity and frequency of wildfires, and more animals seeking food near our homes.”

This Los Alamos County Climate Action Plan (CAP) represents the next step in implementing this initiative by outlining a vision and roadmap for reducing greenhouse gas emissions, promoting adaptation, and increasing climate resilience in Los Alamos County.

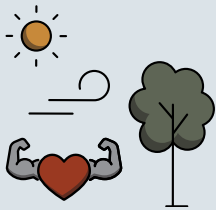
² [Los Alamos Resiliency, Energy and Sustainability Task Force Final Report \(2022\)](#)



Benefits of Climate Action

Taking action on climate change can bring benefits for Los Alamos County ecosystems, residents, and businesses. By doing our part, we can protect our local ecosystems and enhance our quality of life.

Improved quality of life & public health



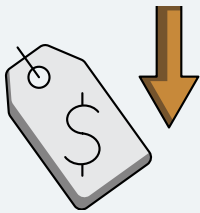
Climate action can contribute to our collective health and wellbeing through clean air, clean water, and a healthy environment.

Resilient community



Climate action can enhance our community's ability to withstand and recover from environmental challenges by adopting sustainable practices.

Cost savings



Climate action can save money by reducing waste, being smart with energy and water use, planting native landscapes, and driving less.

Environmental preservation



Climate action can help protect our local ecosystems, wildlife habitats, and natural beauty by conserving resources and reducing pollution.








Global Benefits

The benefits of local climate action and adaptation go beyond the Los Alamos community, and can have a positive impact across the globe. Our emissions may be a small percentage globally, but being a leader in climate action can make a big difference. By doing our part and taking action, we can show other communities what's possible, and encourage them to do the same!

Building on Existing Work

This Climate Action Plan builds on notable work and accomplishments already underway and completed by the County and community. The 2024 Los Alamos Strategic Leadership Plan includes “environmental stewardship” as one of its five goals, which prioritizes natural resource protection, greenhouse gas reduction, carbon-neutral energy supply, water conservation, and waste management—all of which play a role in the CAP strategies and actions in this document.

↓		The County provided free public transportation; launched recycling and reuse programs; began pursuing carbon-free power and water and energy conservation campaigns; set a goal to be a carbon neutral electric provider by 2040; and committed investments in multi-use trails.
2020		A group of concerned residents submitted a petition to County Council requesting action on climate change.
2022		The LARES Task Force was created and developed recommendations for climate action, including developing a greenhouse gas inventory and CAP and hiring designated staff.
		The County hired dedicated Sustainability manager.
2023		The County committed funds to develop an initial CAP and greenhouse gas inventory.

This CAP covers a wide range of environmental and climate-related topics and will require collaboration across County departments and groups. Existing plans and initiatives that this work will build on and interact with include the following:

- Los Alamos County Comprehensive Plan (2016)
- Los Alamos Long-Range Water Supply Plan (LRWSP) (2018)
- Los Alamos Integrated Resource Plan (IRP) (2022)
- Los Alamos Resiliency, Energy, And Sustainability (LARES) Report (2022)
- Los Alamos Energy & Water Conservation Plan (2022)
- Los Alamos Strategic Leadership Plan (2023/2024)
- Los Alamos Short-Range Transit Plan (2023)

Focus Areas and Goals

This Climate Action Plan lays out a roadmap for achieving the community’s climate goals. Specifically, the strategies and actions contribute to this vision through two primary pathways:

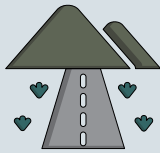
- **Mitigation:** Reducing greenhouse gas emissions from Los Alamos County government and community member activities (carbon neutral electricity provider by 2040 and carbon neutral community by 2050).
- **Adaptation & Resilience:** Increasing Los Alamos County government and community resilience to climate change impacts such as drought, flooding, wildfire, and extreme heat.

The Climate Action Plan is organized into six primary focus areas, which each aim to support one or both of the primary pathways described above:



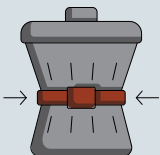
Buildings & Energy

Reduce greenhouse gas emissions from buildings through energy efficiency, electrification, and transitioning to renewable energy sources.



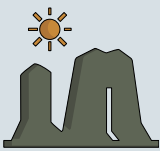
Transportation & Land Use

Reduce greenhouse gas emissions from transportation and improve community mobility through sustainable land use planning, accessible multimodal transportation options, improved cycling and pedestrian networks, and expanded electric vehicle infrastructure.



Materials & Consumption

Reduce community waste generation and the greenhouse gas emissions associated with the consumption and disposal of goods and materials.



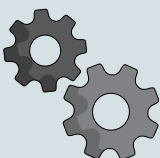
Natural Systems & Water Resources

Conserve water resources and increase urban green space to improve climate resiliency, protect vital habitats, ecosystems, and natural resources, improve local carbon sequestration, and enhance community green spaces.



Climate Resilience, Adaptation, & Wellbeing

Ensure that residents are prepared for climate impacts and enhance climate action education and programs.



Cross-Cutting

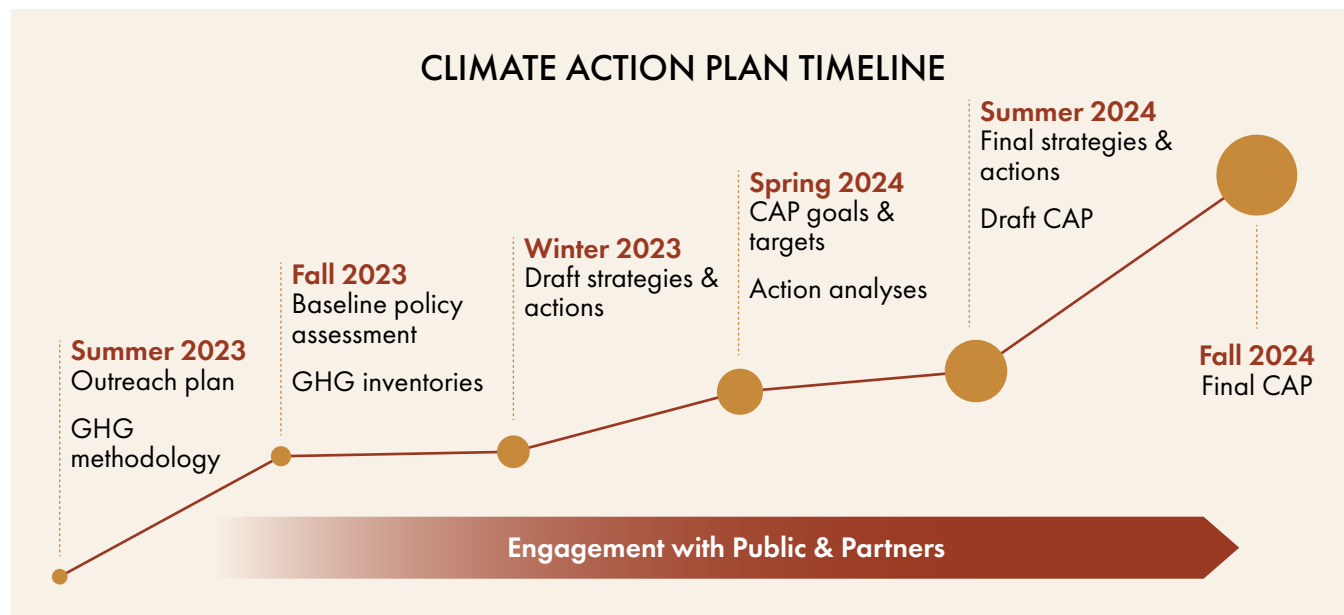
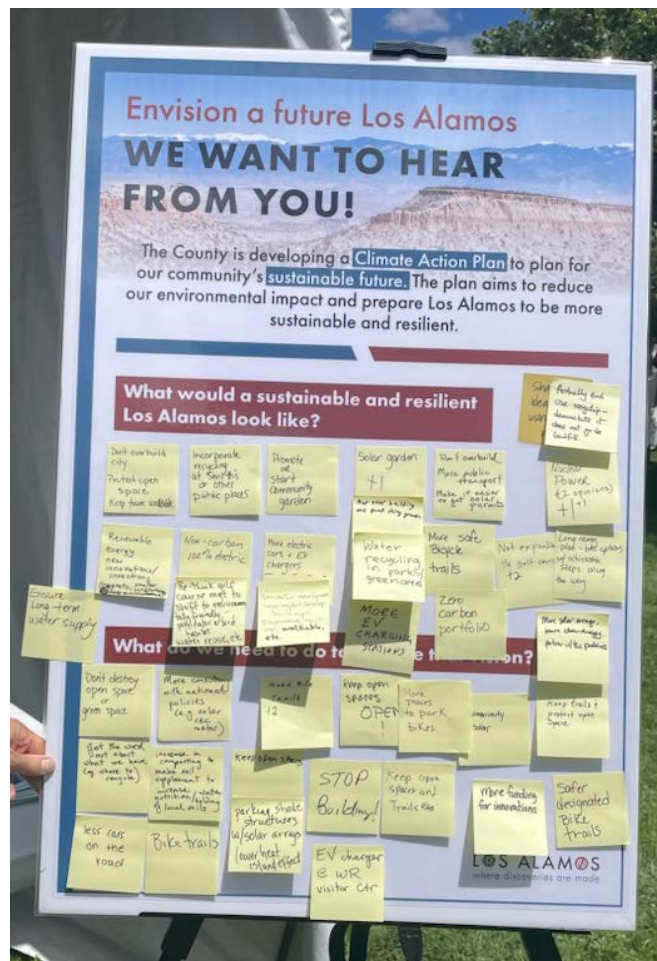
Reduce community-wide greenhouse gas emissions and inspire climate action through outreach, engagement, partnership, and leadership.

How it Came Together

This CAP is built on several key steps and analyses, including:

- A baseline policy assessment
- Greenhouse gas inventories strategy and action development and refinement
- Greenhouse gas (GHG) and action modeling
- Target setting

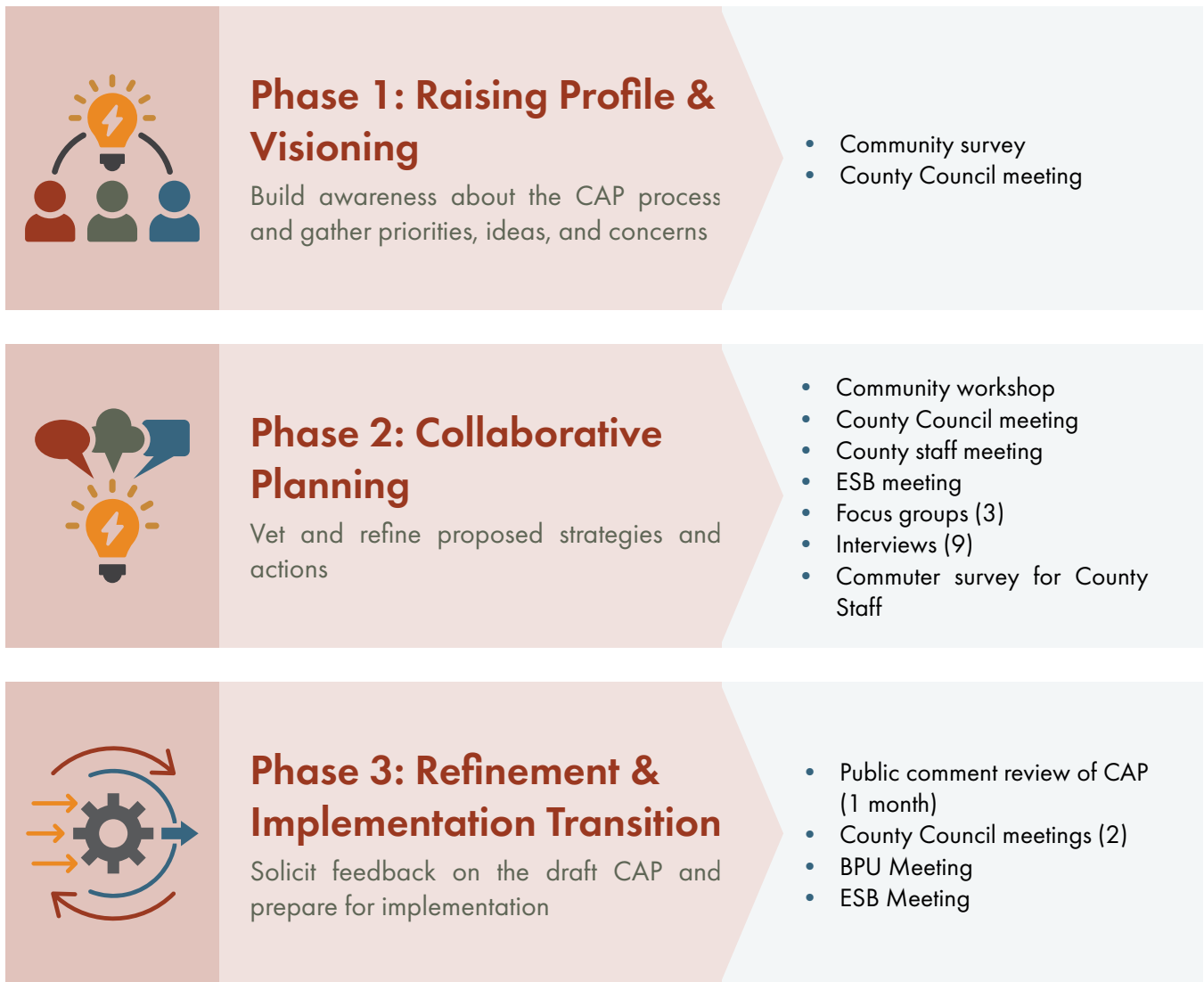
Throughout the process, community engagement helped to shape the CAP’s priorities and actions.



Community Engagement

For this CAP to be effective, it needs to reflect the values and priorities of the community. Throughout the CAP process, the County engaged with community members and partners to gather input and feedback about the CAP. The process included the following key phases:

Throughout this process, the planning team sought to integrate racial equity and inclusivity. For example, the County



provided a diversity of engagement options, tracked participation demographics, and supported both in-person and virtual attendance to accommodate those with scheduling or transportation limitations.

What We Heard

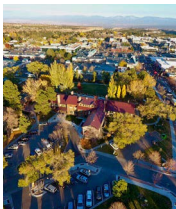
In the community survey, community workshop, focus groups, and individual interviews, residents and community members shared their priorities, support, and concerns about climate action in Los Alamos. The views expressed on this page reflect what we heard during community engagement but do not necessarily reflect the entire community's opinions. Some key themes from this engagement are summarized below.



There are many energy inefficient buildings in the community, both commercial and residential. There is support for improving energy efficiency in buildings, and there is a need for financial assistance for families to reduce energy consumption, especially in older buildings.



Lack of affordable housing in the area is a significant challenge, leading to more commuters and overall transportation challenges. People expressed frustration with traffic and the number of commuters coming into the area, both from a safety and pollution perspective, and supported expanding and promoting sustainable transportation options.



Residents and community members expressed concerns about the cost of climate action, including the worry that CAP actions may not be economically viable and could pose challenges for some families and businesses. People also voiced concern over the feasibility of plan implementation and identified the need for budget and infrastructure improvements to effectively implement CAP actions.



Water scarcity is top of mind for many community members. People expressed support for protecting green spaces and natural ecosystems and practicing water conservation.



The community generally supports a transition to carbon free energy sources.



Community members voiced support for prioritizing education and engagement, supporting economic development, and practicing sustainable waste management.

Ideas, concerns, and feedback gathered through community engagement helped to shape the overarching goals and specific details of CAP actions.

“Decarbonize the electric utility. Quit installing natural gas infrastructure in new construction.”

“Biking is my primary mode of transportation and I would love to be able to explore more of what Los Alamos has to offer with the convenience of my bike.”

“Continue to make the central business district more walkable.”

“I save water in the house from running water to get it hot for dishwasher and shower and use it to water outdoor and indoor plants.”

“We want economically feasible solutions.”

”



Strategy and Action Development

The strategies and actions in this Climate Action Plan aim to address Los Alamos' major emission sources and projected future climate impacts. The following process was used to develop the CAP actions:

- **Develop initial set of actions.**

An initial set of actions was developed based on the GHG inventory results, the county's unique context and staff input, current best practices and best available science, peer jurisdictions, local and regional resources, and community priorities.

- **Refine actions through staff feedback and qualitative analysis.**

The initial action list underwent several rounds of County staff and Environmental Sustainability Board (ESB) member review to vet, revise, and prioritize actions. To further refine the list of actions, actions were evaluated through a multi-criteria analysis based on impact, cost, equity, and co-benefits. This qualitative analysis highlighted the CAP actions that scored well across categories, as well as actions that needed further strengthening. Based on the qualitative analysis and feedback received from the County, approximately 40 actions moved forward for County Council and community member feedback.

- **Conduct quantitative analyses on a short list of actions.**

The County conducted a cost-benefit analysis on eight actions, evaluating implementation and ongoing costs of actions, relying on published scientific literature, case studies, expert opinion, and County staff input to determine approximate costs. This cost-benefit analysis was conducted for both the County and community, which helped to understand the cost savings potential for the community. The team also performed a quantitative GHG impact assessment and wedge analysis, which provided an estimate of the emission reductions associated with key actions to provide a defensible plan for meeting the County's emission reduction goals. Not all actions were modeled, because some were not readily quantifiable, may have resulted in inconsequential GHG emission reductions, or may have more indirect benefits. Results from the cost-benefit analysis and impact assessment are detailed in [Appendix I. GHG Reduction Strategies Quantification Methodology & Findings](#).

- **Finalize actions through Council and community input.**

The Los Alamos community and County Council reviewed the results of the qualitative and quantitative action analyses and provided feedback on the vetted action list through a community workshop and County Council meeting.

What about costs?

Throughout the community engagement process, residents and partners consistently voiced concerns and questions about the costs of climate action. Cost considerations informed the development of strategies, actions, and the overall CAP.

- CAP actions were designed to minimize cost burdens on residents as much as possible. This includes providing resources and education about financial incentives and limiting mandates to ensure community members are not burdened with new costs. As mentioned above, multi-criteria analysis of proposed actions included equity and community costs as criteria, which further supported the CAP’s goal of limiting additional financial burdens for community members.
- To better understand the costs associated with select actions, the County commissioned cost analyses for a subset of proposed climate actions. These analyses considered costs to the community, costs to the County, and potential cost savings. For example, the analysis looked at the construction costs, available tax incentives, and energy cost savings associated with green building standards and found that these standards can result in a net cost savings of more than \$500 per year per home. See [Appendix I. GHG Reduction Strategies Quantification Methodology & Findings](#) for details on these analyses.
- There is substantial funding available for climate action, with a variety of federal and state grants and incentives designed to support building retrofits, EV charging infrastructure, and other climate and sustainability initiatives. For some examples of funding resources, see the [“Funding and Education Resources”](#) section.
- Although climate action can be costly, the costs of inaction can be even greater.^{3,4} These costs—though difficult to quantify precisely—include both economic and social costs, such as from infrastructure and property damages from extreme weather events, rising energy costs due to more extreme temperatures, impacts on food and water security, and impacts on physical and mental health. These impacts disproportionately affect overburdened communities on both a local and global scale; overburdened communities may include people who are Black, Indigenous, Hispanic or Latino, people of color, people with low or no income, unhoused individuals, elders and youth, immigrants, people with disabilities, people with limited English proficiency, and other identities who face current or historic inequities. The costs of climate action need to be discussed alongside the costs, risks, and impacts of inaction.

³ [Climate Policy Initiative: The Cost of Inaction \(2024\)](#)

⁴ [Deloitte research reveals inaction on climate change could cost the world’s economy US\\$178 trillion by 2070 \(2022\)](#)



Cost estimation of select climate actions

To better understand the costs of climate action, the planning team conducted a more detailed quantitative cost analysis of select actions for consideration in the draft Climate Action Plan. The planning team prioritized analysis of actions anticipated to be higher cost, cost-effective to the community, and/or implemented in the near-term. The analysis considered both anticipated costs to the community (residents, businesses) and costs to the County government. Costs and benefits were considered over the full lifetime of action implementation, from 2025 to 2050.

The cost analyses also considered the following:

- Future rates of inflation
- Discount rate (i.e., a dollar received today has more value than a dollar received later)
- County labor costs (i.e., additional County staff needs)
- Energy and fuel costs and savings
- Upfront costs for new infrastructure, equipment, or retrofits
- Available tax incentives and rebates

- Avoided costs of climate damages (using the social cost of carbon, a value representing the cost of long-term damages caused by each ton of CO₂ emitted into the atmosphere)

Costs were summarized in present values (PV) to allow for an apples-to-apples comparison across action implementation timeframes. Findings from the cost analysis, summarized in the table below, suggests that the average net present value (NPV) community cost of implementing select draft CAP actions is equivalent to about \$3 per resident per year (\$68 over the 25-year implementation timeframe). Community costs are largely driven by current and projected electricity and natural gas energy prices. These costs are largely offset by savings from available rebates and incentives and anticipated reductions in energy consumption/costs. Note that, while the values appear precise, they represent estimates with a margin of error and more detailed cost-benefit analysis should be pursued prior to budgeting and implementing an action.

Net costs associated with modeled actions (negative values are shown in parentheses and are net cost savings). Note that many modeled actions are represented in this final CAP, but other actions underwent changes between performing this analysis and finalizing the CAP, so not all modeled actions match with the final CAP actions.

Action	NPV Costs to Gov't	NPV Costs to Community	Total NPV Costs	Public Benefit (PV Avoided Climate Costs)	Net Public Cost (NPV)	Per-Capita NPV Community Costs
Incentivize electrification retrofits	\$166,971	\$25,682,186	\$25,849,157	(\$5,850,484)	\$19,998,673	\$1,294
Adopt green building standards	\$593,664	(\$14,446,531)	(\$13,852,867)	(\$8,298,132)	(\$22,150,999)	(\$728)
Establish an energy benchmarking program for municipal buildings	\$1,402,718	\$0	\$1,402,718	(\$944,586)	\$458,132	\$0
Develop EV infrastructure plan	\$895,346	(\$37,445)	\$857,901	(\$624,417)	\$233,483	(\$2)
Transition County fleet to EVs	(\$1,974,747)	\$0	(\$1,974,747)	(\$3,613,425)	(\$5,588,173)	\$0
Expand non-motorized transportation options and accessibility	\$17,146,368	\$198,802	\$17,345,170	(\$24,477)	\$17,320,693	\$10
Develop a CTR program	\$447,518	\$0	\$447,518	(\$195,949)	\$251,569	\$0
Support the local food system	\$372,931	(\$578,890)	(\$205,959)	\$0	(\$205,959)	(\$29)
Total	\$19,050,768	\$10,818,122	\$29,868,891	(\$19,551,471)	\$10,317,419	\$545
Average	\$2,381,346	\$1,352,265	\$3,733,611	(\$2,443,934)	\$1,289,677	\$68

For more details, contact the county; the analysis workbook in Excel is available upon request.

How Climate Change is Impacting Los Alamos

Los Alamos County—along with communities around the world—is already experiencing the impacts of a changing climate. The state and county have experienced increased frequency and size of wildfires, extreme precipitation and flooding events, and extended drought periods,⁵ which will continue to impact different sectors, including transportation systems, buildings and energy, ecosystems, human health, and the local economy. Climate impacts can threaten the safety, health, and wellbeing of residents, particularly vulnerable populations such as low-income residents, the very young, and the elderly; this CAP aims to build and strengthen resilience to climate impacts.

Wildfire and Air Quality



Higher temperatures and drought are likely to increase the severity, frequency, and extent of wildfires, which could harm property, livelihoods, and human health.



Wildfires are likely to make air quality unhealthy, especially affecting those with asthma and other health complications. Wildfires also impact drinking water supplies through contamination.



Wildfire and higher temperatures will also stress urban forests and expose them to greater risk of disease outbreaks and mortality.

Extreme Precipitation and Flooding



In New Mexico, climate change is likely to reduce precipitation while increasing the intensity of extreme precipitation events and likelihood of rain versus snow. This shift will increase the risk of flooding on soils hardened by drought and altered by wildfires.



Flooding and extreme precipitation events may damage transportation routes, affect energy systems such as power lines, impact ecosystems and groundwater resources, and disrupt emergency response services.

Drought and Water Systems



Climate change is projected to exacerbate drought conditions in the southwest, leading to water scarcity and challenges with providing water services, protecting water quality, and preserving healthy ecosystems.⁶



Projections indicate a 25% decrease in surface water runoff and groundwater recharge over the next 50 years, affecting agriculture and ecosystems across New Mexico.⁷

Extreme Heat



Average temperatures in New Mexico will likely rise, leading to more frequent and extreme heat waves. Annual average temperatures across New Mexico have risen by about 3 degrees F over the last 5 years.⁸



More frequent and intense heat waves in the state will strain electricity systems and increase the demand for energy, which can lead to brownouts and power outages. Existing health conditions may lead to higher susceptibility to heat-related illnesses.

5 [Climate Change and the Los Alamos National Laboratory: The Adaptation Challenge \(2015\)](#)

6 [New Mexico Climate Risk Map](#)

7 [New Mexico Climate Adaptation and Resilience Plan \(2024\)](#)

8 [New Mexico Earth Matters: New Mexico's Climate in the 21st Century: A Great Change is Underway \(2020\)](#)

Greenhouse Gas Emissions

Greenhouse gas emissions inventories quantify a jurisdiction or entity’s GHG emissions within a set period of time (typically a calendar year). Understanding the sources and magnitude of GHG emissions helps jurisdictions more effectively plan to reduce those emissions.

Different types of GHG emissions inventories apply different lenses to emission sources, thus measuring overlapping but slightly different sources of GHG emissions. Los Alamos County conducted three GHG emissions inventories as part of the CAP process:



Community-wide sector-based

Estimates emissions produced by actions from residents, visitors, schools, County operations, and businesses within the county’s geographic bounds.



County operations sector-based

Estimates emissions produced by County-owned and -operated facilities and activities.



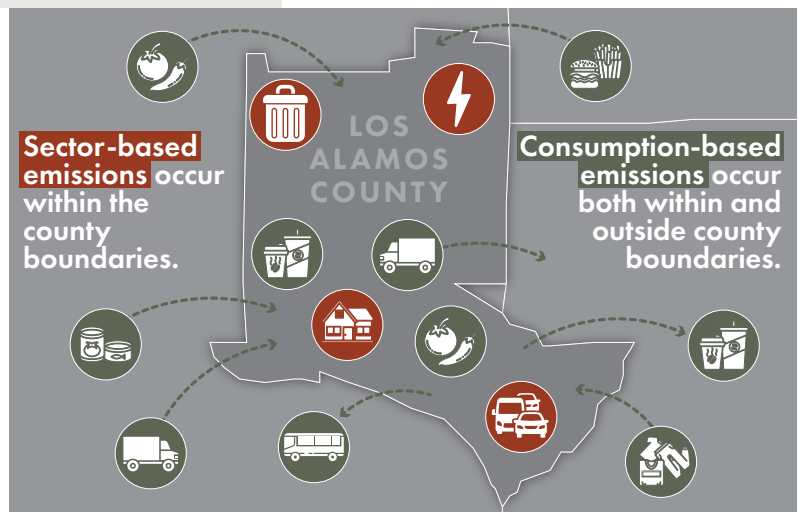
Consumption-based

Estimates emissions associated with the consumption activity of all households of a geographic area.

The County chose to conduct these three inventories to gain a broader understanding of Los Alamos’ emissions. Each inventory estimates slightly different sources or scopes of emissions, with some overlap between inventory types, which are described in the following sections.

Most of the CAP actions aim to address emissions from the community-wide sector-based inventory—emissions that occur within the county’s geographic bounds and over which the County and community have the most direct control. Though the County has less control over the emissions quantified in the consumption-based emissions inventory (CBEI), the CBEI can expand our understanding of our household-level emissions and avenues to reduce them.

The results from the three GHG inventories are summarized in the following sections. For more details on inventory methodologies and results, see [Appendix A. Sector-Based GHG Emissions Inventory Report](#) and [Appendix B. Consumption-Based GHG Emissions Inventory Report](#).

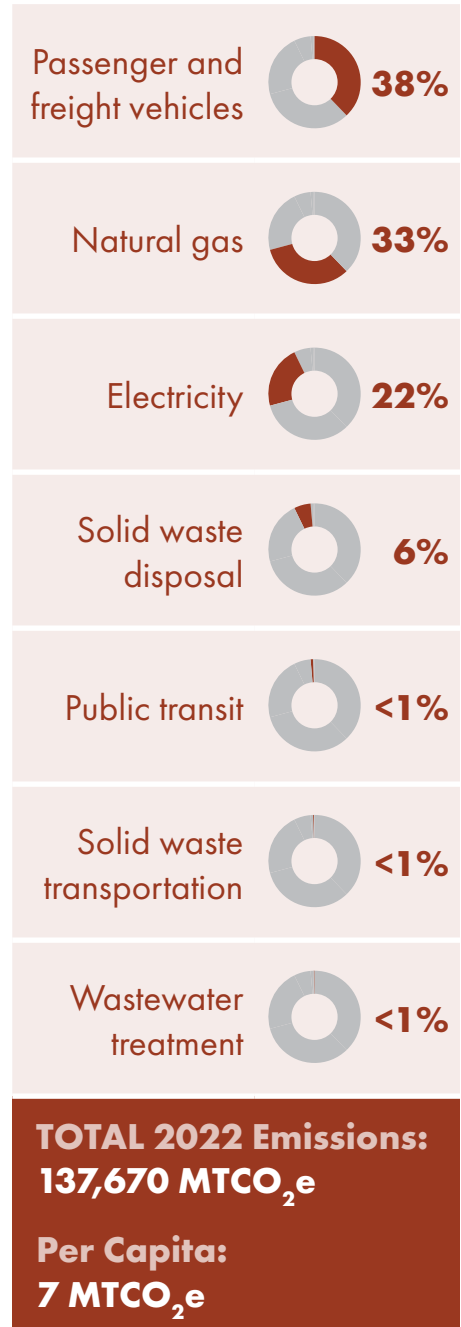


Sector-based Community-wide GHG Emissions

Los Alamos County completed a community-wide greenhouse gas emissions baseline study using a 2022 inventory year to inform development of this Climate Action Plan.

The community-wide sector-based emissions inventory accounts for emissions that are produced by actions from Los Alamos County residents, visitors, schools, County operations, and businesses. As much as possible, Los Alamos National Laboratory’s (LANL) emissions are not included in the community-wide total, but its emissions impact on the community is considered for informational purposes within the study. In 2022, LANL reported emitting approximately 405,186 MTCO₂e.⁹

In 2022, Los Alamos County’s community produced an estimated 137,670 metric tons of carbon dioxide equivalent (MTCO₂e), equating to approximately 7 MTCO₂e per-capita.¹⁰ The largest contributors to emissions were community building energy consumption and transportation. For comparison, the United States average GHG emissions in 2022 were 19.1 MTCO₂e per capita.¹¹



⁹ [Goals & Progress | Environmental Sustainability \(lanl.gov\)](#)

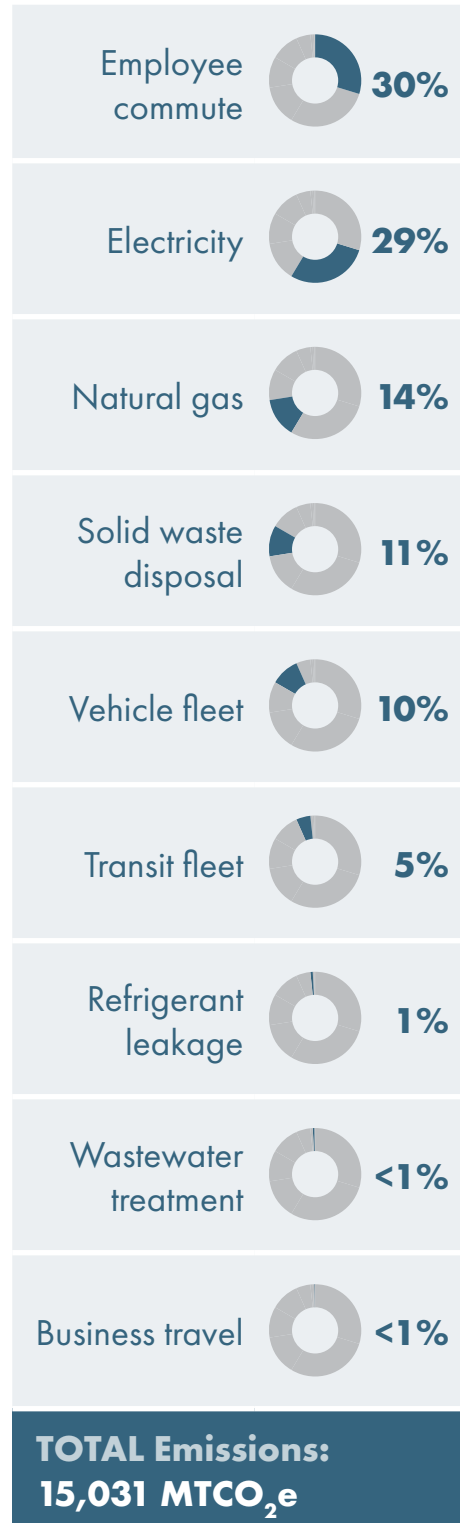
¹⁰ Based on a population of 19,187 (U.S. Census 2022 estimate).

¹¹ “Based on the US EPA Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2022, which indicates total emissions of 6,343.2 MMTCO₂e. The U.S. Census estimates a January 1, 2022 U.S. population of 332,403,650. Note that U.S. GHG inventory may include sectors and emissions sources not included in the Los Alamos County GHG inventory, such as upstream emissions associated with energy production, so this is not an exact apples-to-apples comparison.”

Sector-based County Operations GHG Emissions

Los Alamos County also completed a County operations greenhouse gas emissions baseline study using a 2022 inventory year. The County operations emissions inventory accounts for emissions that are produced by County-owned and -operated facilities and activities.

County operations were responsible for an estimated 15,031 MTCO₂e in 2022. County operations emissions are not in addition to, but part of community-wide emissions, because County buildings, facilities, and activities generally occur within Los Alamos' geographic bounds. The largest contributors to emissions were transportation and County facility building energy consumption.



Consumption-based Community-wide GHG Emissions

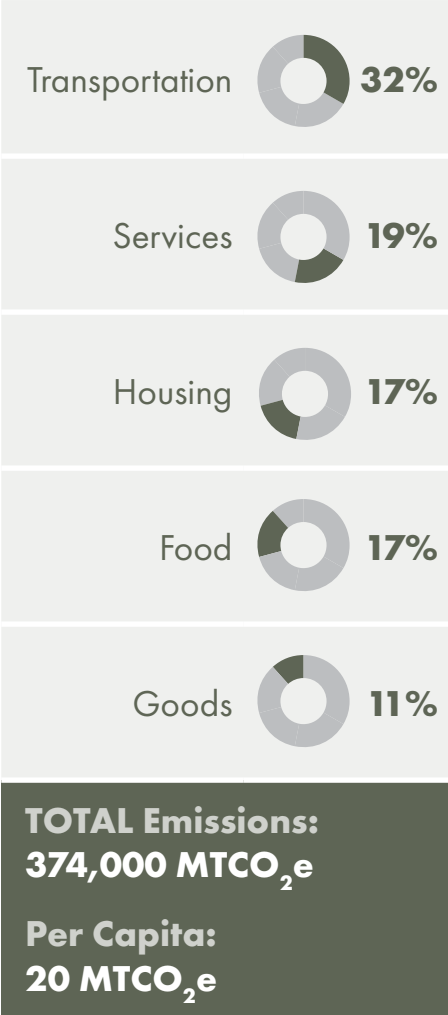
Lastly, Los Alamos County completed a consumption-based emissions inventory (CBEI), estimating the greenhouse gas emissions associated with the household consumption of all residents, including upstream emissions—emissions produced during the production and transportation stages of a product or service.

These emissions are broken out into five categories: transportation (including driving and air travel), housing (including home construction and household energy use from electricity and natural gas), food (including meat, dairy, fruits and vegetables, cereals and bakery products, and other foods), services (including healthcare and education), and goods (including furnishings and appliance and other miscellaneous goods).

In Los Alamos County in 2022, the typical household was responsible for roughly 47 MTCO₂e annually, or about 20 MTCO₂e per person (for comparison, the national average is slightly lower at about 42 MTCO₂e per household annually). With 7,999 households in the county, this is a total of roughly 374 thousand MTCO₂e in 2022 attributable to residents of Los Alamos County. In contrast, the community-wide inventory totaled only 135,997 MTCO₂e. Los Alamos County’s consumption-based emissions are nearly three times greater than its sector-based emissions because the CBEI encompasses upstream emissions, which are not included in sector-based inventories.

Within the categories shown in the figure to the right, the largest sub-categories of gasoline, healthcare, and natural gas comprised nearly 44% of emissions.

Los Alamos County’s household consumption is driven by a variety of factors, including high household income, high vehicle ownership, and high educational attainment. While local data is used to estimate consumption levels, the emissions associated with this consumption are based on national data. For more details about the CBEI methodology and results, see [Appendix B. Consumption-Based GHG Emissions Inventory Report](#).



Emission Reduction Targets

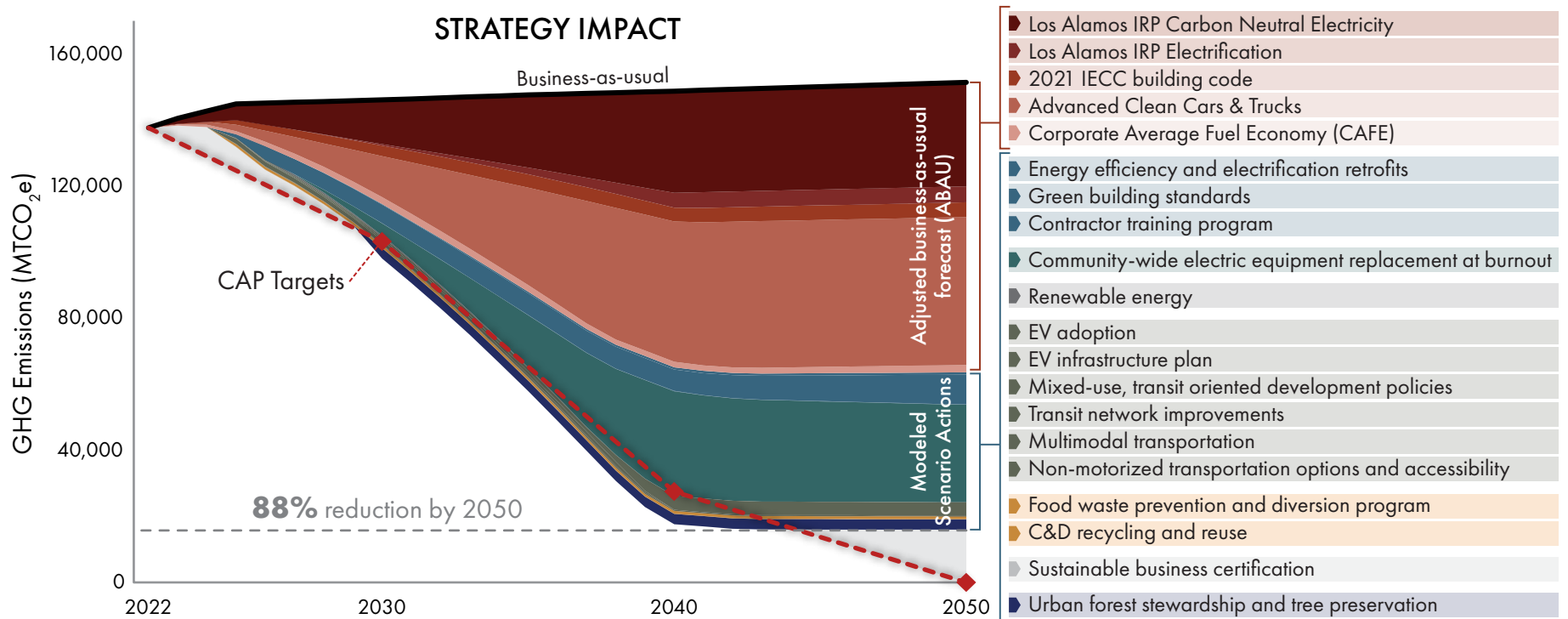
Los Alamos County has established the following GHG emission reduction targets compared to 2022 sector-based community-wide baseline emissions levels:

- 30% reduction by 2030.
- 80% reduction by 2040.
- Carbon neutral by 2050.

These ambitious targets—informed by detailed quantitative analysis, comparison to peer jurisdictions, and consultation with the Los Alamos County community and leadership—are consistent with the Intergovernmental Panel on Climate Change (IPCC) recommendations for avoiding the worst climate change impacts.

What Would It Take?

To achieve these targets, both the County government and community members would need to take ambitious strides to reduce our carbon footprint. The entire community would need to transition away from fossil fuel-heated and -powered buildings and vehicles, reduce overall energy consumption, and divert solid waste away from the landfill, which would require political will, community support, and County investments. During the public engagement process, we heard that the community does not support requirements or mandates and prefers measures that rely on education. Therefore, CAP actions on the following pages are different than those modeled in this analysis. For more details about this chart and accompanying analysis, see [Appendix I. GHG Reduction Strategies Quantification Methodology & Findings](#).



The need for climate action

Based on the community-wide GHG inventory, if no action is taken to address climate change, population and economic growth are anticipated to increase GHG emissions 10% by 2050. However, existing local, state, and federal climate policies are expected to reduce emissions by 54% by 2050 compared to 2022 levels.

Local action is needed to achieve further emission reductions. The actions modeled here would reduce community-wide emissions by 88% by 2050 compared to 2022 emission levels. The remaining 12% reduction would rely on additional federal and state action, technological innovations, regular evaluation of Los Alamos' progress, and consideration of other tools and options beyond actions discussed in this CAP, such as researching and purchasing carbon offsets or implementing regulatory measures.

This Climate Action Plan aims to encourage progress toward our climate goals through programs, partnerships, and other mechanisms, described in the Strategies and Actions section on the following pages.



Strategies and Actions

The strategies and actions on the following pages aim to reduce GHG emissions and increase resilience to climate change impacts. The action list is organized by the following focus areas and strategies:

	<p>Buildings & Energy</p> <ul style="list-style-type: none"> • Increase building efficiency and decarbonization • Increase renewable energy generation
	<p>Transportation & Land Use</p> <ul style="list-style-type: none"> • Expand EV infrastructure and adoption • Expand and promote multi-modal connectivity and sustainable land use planning
	<p>Materials & Consumption</p> <ul style="list-style-type: none"> • Maximize waste diversion • Implement Zero Waste Strategy
	<p>Natural Systems & Water</p> <ul style="list-style-type: none"> • Increase urban green space • Conserve water resources
	<p>Community Resilience, Adaptation, & Wellbeing</p> <ul style="list-style-type: none"> • Enhance community understanding of climate change • Prepare the community for climate impacts
	<p>Cross-cutting</p> <ul style="list-style-type: none"> • Encourage sustainable businesses • Promote climate education outreach

Each focus area section outlines the goal for the focus area, how the actions build on existing work, the strategies, and potential co-benefits. Co-benefits are benefits or positive outcomes that result from action implementation in addition to the primary goals of reducing emissions or building resilience; for example, better air quality would be a co-benefit of reducing gasoline-powered vehicle travel. The County will take the lead on implementing the action, however the scope of the action is identified by the following icons:



Community



County government operations



Both community and County operations



Buildings & Energy

GOAL: Reduce greenhouse gas emissions from buildings through energy efficiency, electrification, and transitioning to renewable energy sources.

Greenhouse gas emissions (2022)



55% of community-wide emissions result from the use of electricity and natural gas

Co-benefits:

- Public health and reduced indoor air pollution
- Quality of life and home comfort
- Energy security and lower energy bills
- Green jobs and local economic development
- Water conservation

Los Alamos Highlights

The County has a strong history of encouraging energy efficiency and building emission reduction. In 2006, Los Alamos County adopted Resolution 06-18, which established High Performance Green Buildings Standards for Los Alamos new construction projects, stating that all new County buildings must meet LEED (Leadership in Energy and Environmental Design) Silver certification. In 2021, the Los Alamos Board of Public Utilities (BPU) set a goal to phase out natural gas by 2070. In addition, the Los Alamos Department of Public Utilities (DPU) is a publicly owned power provider that encourages the community to engage in energy decision-making. DPU has been providing energy and water conservation education and outreach since 2008 and has already implemented several building energy sustainability initiatives in the County, including providing redundancies within the circuit systems and rooftop distributed solar and net meter installation assistance.

CAP actions support LARES’ existing building energy goals to educate property owners on potential energy-saving renovations to their buildings and set a cut-off date for new natural gas hook-ups and new electric resistance heating installations.

The following actions build on existing County, state, and federal incentives and programs to support electrification of new and existing buildings while also increasing energy efficiency and renewable energy generation.

Strategies

BE1. Increase building efficiency and decarbonization



BE2. Increase renewable energy generation.



Strategy BE1: Increase building efficiency and decarbonization



BE1.1: Establish an energy benchmarking program for commercial buildings

Establish benchmarking criteria to track building energy and water performance in commercial buildings, including offices, restaurants, hotels, and other business facilities. Educate building owners on potential cost benefits of efficiency upgrades where necessary. Offer education and promote existing incentives. Encourage commercial customers to share data to promote energy efficiency improvements.



BE1.2: Establish an energy benchmarking program for County-owned buildings

Establish benchmarking criteria to track building energy and water performance in County-owned and -operated buildings using the EPA ENERGY STAR Portfolio Manager Tool. Perform ROIs to build the case for necessary efficiency upgrades in municipal buildings. Earmark recurring funding to support efficiency upgrades of County buildings. Monitor smart meters for gas, water, and electricity currently in place in all relevant County facilities, including buildings and light posts. Create a dashboard to track building performance for all County facilities and consider creating a public dashboard so the community can see improvements in energy efficiency.



BE1.3: Encourage energy efficiency and electrification retrofits

Develop a community-wide energy efficiency and electrification outreach and educational campaign. The campaign should: promote existing incentives and funding sources, especially for low-income households; focus on cost savings and public health benefits for residents, business, and landlords; and provide information about specific retrofits (e.g., weatherization, energy efficient appliances, LED lighting, electric hot water heaters, space heaters, stoves, laundry dryers). As part of the campaign:

- Market DPU's "Induction Cooktop Loaner Program."
- Develop and provide free home energy audits.
- Teach residents how to engage in decision-making regarding the ownership, generation, storage, distribution of, and transition to renewable energy.
- Provide information on available funding for all residents and share what incentives are available to relieve the financial burden for low-income residents. Notify the community when new funding opportunities become available through resources such as the County website, utility bill inserts, and pamphlets and brochures distributed at County events.
- Stay up to date on future clean energy financing options for low-and-moderate income households, such as through the New Mexico Climate Investment Center.

Buildings in Los Alamos County are generally older, which can be less energy efficient than newer buildings. This action would reduce GHG emissions and improve energy efficiency in those older buildings. In addition, New Mexico has one of the highest poverty rates in the country, and low-income households often struggle to pay for utilities and fuels used to power their homes and vehicles; this action—and plan in general—was developed with equity as a top priority. Making energy efficient improvements may reduce energy and cost burdens for residents and businesses.

What We Heard:

The community has many residential and commercial buildings that are energy inefficient. There are opportunities to both educate and incentivize building owners to make buildings more efficient.



BE1.4: Adopt green building standards

Promote fossil fuel infrastructure reduction in new residential, commercial, and municipal construction by adopting a green building performance standard (examples include the Santa Fe County HERS Rating and Seattle Building Energy Performance Standard). Educate the community on the cost and public health benefits this will provide for new buildings such as lower utility bills and improved indoor air quality. Plan to provide technical assistance, educational resources, and outreach during this transition, especially for commercial users of natural gas appliances such as restaurants and community centers.



BE1.5: Develop a training program

Identify, support, and/or develop free training programs and resources for local and regional contractors, design professionals, County staff (i.e., plan reviewers, building inspectors, and project managers), and interested members of the public to learn green building skills such as electrification, energy efficiency, and water efficiency retrofits, especially during low-construction times of year. Potential partners may include UNM-LA, NNMC, and Santa Fe Community College. Consider organizing a quarterly open house with contractors.



BE1.6: Require electric equipment replacement at burnout for County

Develop policies and programs that will result in replacement of fossil fuel appliances and equipment at the end of their useful life in County-owned and -operated buildings. Policies and programs should focus on major natural gas uses in County buildings, including space/water heating. As part of this work, the County will identify obstacles that could impede progress on electrification, such as needed infrastructure upgrades, and identify opportunities to address these barriers. Policy options include:

- Requirements for end-of-life replacement of gas-powered equipment in County buildings with efficient, electric equipment.



BE1.7: Encourage electric equipment replacement at burnout for community

Encourage replacement of natural gas appliances with electric before or as they approach the end of their useful life. Educate community members on how to prepare for replacement (e.g., through audits and appliance replacement plans). Educational programs should focus on major natural gas uses in buildings, including space/water heating, clothes drying, and cooking. As part of this work, the County will identify obstacles that could impede progress on electrification, such as needed infrastructure upgrades, and identify opportunities to address these barriers.

Strategy BE2: Increase renewable energy generation



BE2.1: Promote renewable energy

Support local and statewide standards for sourcing renewable energy generation and grid modernization. This may include:

- Continuing to work with DPU as all energy options are explored to best balance demand with public support and feasibility.
- Facilitating dialogue with DPU, solar energy providers, and community members to educate and highlight on the status of DPU's distributive generation program and the benefits of solar + battery and grid modernization moving forward.
- Advocating for the development of regional or statewide standards, policies, or resources that advance grid modernization including incorporating storage solutions to expand solar generation potential or providing financial assistance to offset infrastructure costs.

This action aligns with the County's Integrated Resource Plan, which recommends greatly increasing local solar generation and storage capacity.



BE2.2: Expand electric energy resiliency

Continue to expand electric energy resiliency by investing in a diverse set of renewable energy sources such as wind, solar, geothermal, and nuclear, as well as energy storage. Work with DPU staff to align with existing initiatives and increase energy resiliency for the community through the Integrated Resource Plan (IRP) and by providing redundancies within the circuit systems.





Transportation & Land Use

GOAL: Reduce greenhouse gas emissions from transportation and improve community mobility through sustainable land use planning, accessible multimodal transportation options, improved cycling and pedestrian networks, and expanded electric vehicle infrastructure.

Greenhouse gas emissions (2022)



38% of community-wide emissions

Co-benefits:

- Reduced outdoor air pollution
- Increased opportunities for active transportation
- Mobility options
- Affordable housing and housing security
- Cost savings on gasoline
- Reduced traffic injuries and accidents

Los Alamos Highlights

The County’s 2017 Bicycle Transportation Plan and 2022 “Drive Less Los Alamos” initiative provide resources on the Los Alamos County Trail Network, cycling safety measures, Atomic City Transit routes and schedules, New Mexico Park & Ride operations, and other commuting measures to reduce community-wide driving. The County hosts an annual “Bike to Work” day and is recognized as a bronze level Bicycle Friendly Community. The County recently completed a Transit Center Study to identify priority areas for County transit access, emergency services, and opportunities for regional transit collaboration. Transportation outreach actions will be supported by Atomic City Transit’s existing marketing plan to increase awareness of the transit opportunities available in Los Alamos and retain and attract customers.

Actions in this focus area related to electric vehicles build on the LARES recommendations approved by Council to increase publicly accessible EV charging infrastructure and increase the number of electric vehicles in the County fleet by at least two per year. The County already has several Level 1, 2, and 3 EV chargers in public spaces and businesses, with more installations underway. The County has existing incentives to reduce required parking spaces if a contractor includes EV charging infrastructure and/or bike storage or repair facilities.

Finally, existing County policies aim to maintain and increase housing options for all residents, including affordable housing, by engaging with non-profit service providers who oversee daily operations of housing homeownership, rental, and rehabilitation programs.

Strategies

T1. Expand EV infrastructure and adoption.



T2. Expand and promote multi-modal connectivity and sustainable land use planning.



Strategy T1: Expand EV infrastructure and adoption



T1.1: Promote EV adoption

Encourage EV network expansion by educating the community on available tax incentives and rebates for EV purchases, with a focus on those available to low-income populations. Identify partners such as LANL and the school district to work together on fleet conversions to EVs.



T1.2: Develop EV infrastructure plan

Develop and implement an EV infrastructure plan that prepares the County and community for the transition to EVs by mapping infrastructure needs. Partner with the Los Alamos Department of Public Utilities, NMDOT, LANL, Los Alamos Public School, UNM-LA, and other organizations to develop strategies and identify barriers for EV readiness in key locations, including public spaces, schools, businesses, places of worship, and multifamily homes.

What We Heard: There is an increased interest in purchasing electric vehicles but also concern about not enough charging infrastructure to support growth.



T1.3: Promote EV readiness

Incentivize and educate about EV readiness for new and redeveloped single family homes. Encourage a certain number of EV chargers in multi-family housing, commercial developments, and community gathering spaces, including increased access for affordable housing units. This action builds on the County's existing incentives to reduce required parking spaces if a contractor includes EV charging infrastructure.



T1.4: Transition County fleet to EVs and reduce idling

Work with the County Fleet and Transit Divisions and EV Working Group to transition County vehicle fleet to EVs when replacing a fleet vehicle that has reached the end of its usable life, where feasible. When technology is not available, pursue transition strategies such as right-sizing or hybrid vehicles. Consider aligning with New Mexico state target to achieve a zero-emission vehicle fleet by 2035.

Concurrently, revise and implement a County operations "no idling" policy to reduce GHG emissions and air pollution associated with gasoline-powered vehicles. Develop and implement an educational campaign for County staff.

Strategy T2: Expand and promote multi-modal connectivity and sustainable land use planning



T2.1: Expand mixed-use, transit-oriented development policies

Continue to expand land use zoning standards and codes, such as changes to parking minimums, to promote affordable, transit-oriented, and mixed-use development to reduce urban sprawl. Encourage building within walking distance of essential services, when possible, and promote existing complete streets policies and Public Works Design & Construction Standards. Support existing County policies to maintain and increase housing options for all residents by engaging with non-profit service providers who oversee daily operations of affordable housing homeownership, rental, and rehabilitation programs. Affordable housing policies may include a “rent-to-own” policy, where a portion of rent is set aside as capital towards the down payment of a housing unit.



T2.2: Continue public transit education campaign

Partner with the media to continue education campaigns that educate on how to use public transit options, showcase transit connections to bike and pedestrian ways, and feature bus rider stories in an effort to combat fear and prejudice while highlighting advantages and accessibility. Build on Atomic City Transit’s marketing plan to increase awareness of the transit opportunities that are available in Los Alamos and retain and attract customers. Continue to teach new riders how to use the Atomic City Transit app and bike racks in an effort to raise Atomic Transit ridership, which is currently low in the County.

What We Heard:
Community members support improved public transit systems and options.



T2.3: Advocate and partner regionally to improve transit network

Continue to work with partners such as Atomic City Transit, LANL, Los Alamos Public Schools, North Central Regional Transit District, and NM Park and Ride to advocate and engage in regional opportunities to improve the transit network to (1) ensure there are safe non-motorized connections to transit facilities, addressing first and last mile improvements, (2) expand transit access to neighborhoods that are not currently served by transit and to services, jobs, and activities for seniors, people with disabilities, and low-income residents, and (3) increase bike storage at transit centers. Reference the Transit Center Study to identify priority areas for County transit access, emergency services, and opportunities for regional transit collaboration. Use findings from the Transit Study to increase ridership, implement more micro transit options, provide incentives, and increase route frequency.



T2.4: Encourage multimodal transportation

Provide educational resources for commercial property owners and consider updating land use codes to increase bike storage options, preferred parking for carpools, and shared vehicles to promote multimodal transportation options. This action builds off of the Development Code’s Parking Alternatives and Reductions section, which allows for reducing the parking requirements for commercial properties that have bike storage or repair facilities.



T2.5: Expand non-motorized transportation options and accessibility

Identify and implement projects from the 2017 Bicycle Transportation Plan, Trails and Open Space Management Plan, Bicycle Working Group, and Public Works to expand non-motorized transportation options and infrastructure to support biking, walking, and other means of non-motorized transportation. This includes projects to improve and create bike and walking infrastructure, especially in low-income and older neighborhoods, and invest in County-funded sidewalk improvement for safety and accessibility for all users, with a focus on those with limited mobility.

This action supports efforts currently underway, including the annual “Bike to Work” day, the 2024 Pedestrian Study, and the County’s Bronze level Bicycle Friendly Community award.

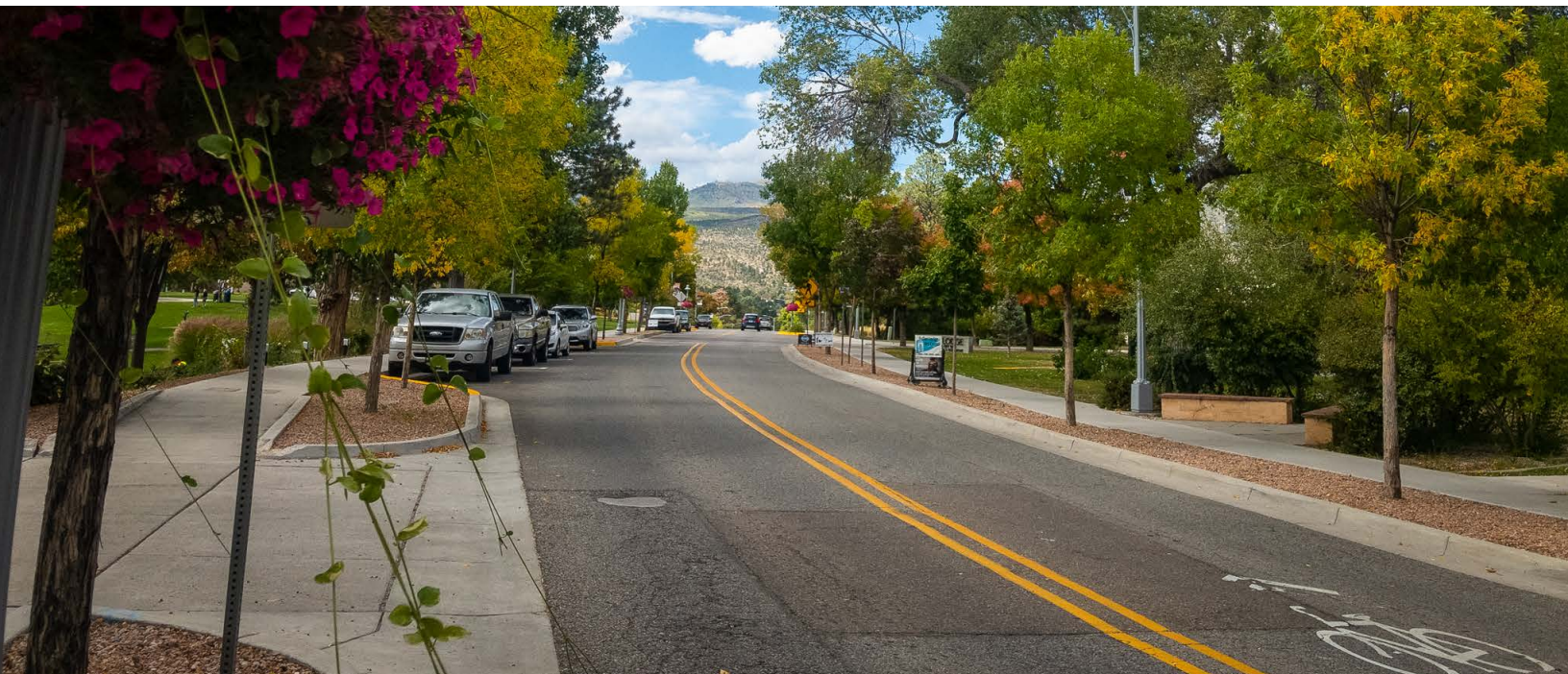
What We Heard: Many community members prefer bicycling to locations in the community. They want additional and better-connected trails, with a focus on safety.



T2.6: Develop a Commute Trip Reduction program

Develop a commute trip reduction (CTR) program for County employees that builds on the “Drive Less Los Alamos” Walk, Bike, Ride, Carpool Initiative, which may include:

- Continuing to provide resources on the Los Alamos County Trail Network, cycling safety measures, Atomic City Transit and Afternoon Express routes and schedules.
- Encouraging employees to utilize alternative modes of transportation when commuting to and from work.
- Continuing to expand flexible work options and remote and hybrid work, for applicable positions, through the Telework and Alternate Work Schedules program, including exploring options such as 4-day work weeks.
- Encouraging local employers to promote CTR, including collaborating with Los Alamos National Laboratory to develop a commuter program and explore flexible work options.

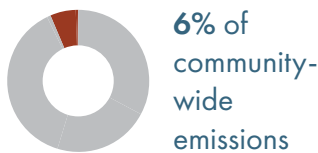




Materials & Consumption

GOAL: Reduce community waste generation and the greenhouse gas emissions associated with the consumption and disposal of goods and materials.

Greenhouse gas emissions (2022)



Co-benefits:

- Natural resource conservation
- Cost savings
- Food security
- Local economic development

Los Alamos Highlights

The County has several existing initiatives aimed at reducing waste, including working to increase local business participation in the recycling program, decreasing the commercial recycling rates to incentivize more commercial recycling, and providing outreach and education to businesses about the benefits of recycling. The County has organized a glass drop-off recycle program since 2012, expanded the list of materials accepted in curbside mixed recycling in 2014, and recently opened a reuse center located at the Eco Station.

Environmental Services Division is set to launch a municipal food composting program for residents to drop off their food scraps for free at the Eco Station and curbside collection for commercial businesses. LARES also recommended several goals related to waste diversion, including strengthening the County’s environmental purchasing policy and reducing consumption-associated greenhouse gas emissions through sustainable purchasing and consumption/disposal of goods and services. Current County waste and consumption goals and progress on goals include:

- Meet or surpass a municipal solid waste (MSW) recycling rate of 40% by 2020. As of 2024, the County recycling rate was 37% (including construction and demolition recycling).
- Achieve 75% diversion of construction and demolition (C&D) materials and debris (waste) by 2020. As of 2024, the County C&D recycling rate was 20%.
- Receive an excellent or good rating from at least 75% of respondents in a survey for quality of residential recycling services. As of 2022, 91% of respondents ranked the services as excellent or good.

Strategies

MC1. Maximize waste diversion



Strategy MC1: Maximize waste diversion



MC1.1: Promote circular economy practices

Promote circular economy practices, programs, and policies. At the County level, implement an environmental purchasing policy—a policy promoting the procurement of products and services with lower environmental impacts—for all County government agencies and departments. As part of this, develop and define purchasing policy criteria and decision-making processes.

At the community level:

- Develop and support community reuse and repair programs, such as fix-it clinics, a community tool library, and local “buy nothing groups.”
- Support existing programs and resources like the Library of Things and the Los Alamos County Eco Station.
- Work in consultation with local businesses to promote local reuse centers and practices.



MC1.2: Expand and refine waste data tracking, reporting, and goals

Building on current work, expand waste data tracking and reporting methods to establish new goals, including new zero waste targets, and a management plan for meeting those targets. This includes:

- Conducting and expanding the scope of future waste characterization studies to include additional sectors (commercial and multifamily) and waste streams (recycling and compost), as well as a more detailed material list for sorting.
- Updating the County’s current waste goals and targets to align with zero waste and source reduction priorities, including outlining specific actions and assessments needed to achieve these targets.

Zero Waste Strategy:

As part of this CAP process, the County conducted a high-level examination of Los Alamos County’s existing solid waste collection programs and services and waste stream tonnage data, including discussing goals with representatives of the County Environmental Services Division (ESD). This assessment resulted in a Zero Waste Pathway to summarize opportunities for the County to reduce waste and increase reuse by exploring zero waste strategies and actions.

A zero waste pathway is an ongoing, evolving set of practices to conserve resources and reduce burdens on communities and the environment by responsibly producing, consuming, reusing, and recovering materials. A zero waste jurisdiction will reduce unnecessary purchases of goods and services, promote reuse and repair markets, and implement strong systems to recover and recycle materials. Working toward zero waste of resources requires that the County both minimize waste generation and maximize waste diversion. To read the full Zero Waste Strategy, see [Appendix D. Zero Waste Strategy](#).





MC1.3: Implement food waste prevention and diversion program

Continue to establish and implement the municipal food composting program. In the short term, prioritize outreach on the new food compost program for high generators of food waste, and in the long-term, look to expand to curbside collection for residents and consider accepting and incentivizing compostable paper and other compostable packaging. Also consider:

- Facilitating a food waste prevention network between businesses, non-profits, and research institutions to develop systems and infrastructure to reduce food waste and foster connections between sources of unwanted food and communities in need.
- Partnering with local businesses, restaurants, grocery stores, and food pantries to raise awareness of edible food recovery programs.
- Building upon existing Zero Waste Los Alamos resources and education campaign that provides food shopping, prep, and storage techniques to reduce spoilage; recipes to reduce food waste; and messages on reducing waste.



MC1.4: Promote C&D recycling and reuse

Provide a construction and demolition (C&D) recycling, salvage, and deconstruction toolkit for construction professionals which includes how-to instructions, contact information for local service providers, and information on low-carbon and recycled building materials. Promote educational resources for building professionals through permit counter brochures, industry events, and industry publications. In the long-term, acknowledging the current limitations of local C&D recycling markets, consider a C&D recycling ordinance which requires that C&D project waste is minimized, reused, or recycled; or evaluate an incentivized approach by offering reduced rates for separating reusable C&D materials.



MC1.5: Conduct recycling and composting outreach and education

Build on existing programs to conduct commercial and residential education and outreach on recycling, composting, and waste management best practices, including identifying opportunities to expand programs. Initiatives may include:

- Commercial, single-family residential, and multifamily residential technical assistance program that offers recycling toolkits, welcome packets, online resources, and in-person outreach to help with waste prevention, recycling, composting, and sustainable purchasing, especially for new community members.
- Standardized waste collection systems for commercial and multifamily properties, including designated colors for collection bins for each waste stream, clear and consistent signage such as posters with “what goes where,” and recommendations for front-of-house or public facing bins.
- Targeted commercial food scrap outreach that provides additional outreach for the largest generators (including hospitals, universities, and other institutions). Outreach should include information about known contamination issues that need to be addressed.

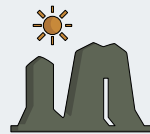
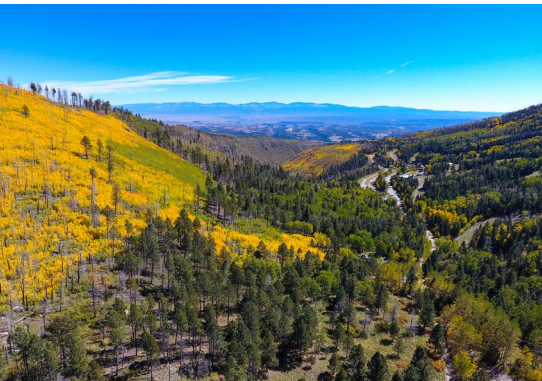


MC1.6: *Implement the zero waste strategy*

Implement all other recommendations outlined in the Zero Waste Strategy (ZWS) to continue to reduce the generation of waste and improve the focus to enhance waste reduction, recycling, and composting. Plan for mid- and long-term strategies and actions outlined in the ZWS which include but are not limited to:

- Promoting and expanding existing recycling services and programs, including evaluating curbside food scrap collection programs and increasing participation in refrigerant recycling programs.
- Investing in long-term programs that promote source reduction and alternatives to landfill, such as education and behavior change programs and research.





Natural Systems & Water Resources

GOAL: Conserve water resources and increase urban green space to improve climate resiliency, protect vital habitats, ecosystems, and natural resources, improve local carbon sequestration, and enhance community green spaces.

Co-benefits:

- Ecosystem health and habitat improvements and increases
- Public health – improved air quality and reduced urban heat
- Water conservation and water quality
- Quality of life and community aesthetics
- Reduced need for chemicals

Los Alamos Highlights

The Los Alamos Long Range Water Supply Plan (2017) and Source Water Protection Plan (2003) provide a foundation for improving water security during prolonged and intense drought periods in the county. The County’s Water and Energy Conservation Program and Water Rule W-8 also aim to reduce potable water use and encourage management of reclaimed water. In addition, stormwater management is a key issue for the County and LANL, and the County has proposed actions to integrate low-impact development, natural systems, and permeable surfaces to reduce and filter stormwater runoff.

Los Alamos County has an internal policy on tree preservation and mitigation. Many of the pine tree species are under threat, necessitating additional measures to restore natural habitats and ecosystems.

Strategies

NS1. Increase urban green space.



NS2. Conserve water resources



Strategy NS1: Increase urban green space



NS1.1: Promote urban forest stewardship and tree preservation

Reduce the effects of extreme heat and promote healthy communities by increasing native, drought-friendly vegetation cover and enforcing the County's existing tree preservation and mitigation policy. Promote urban forest stewardship through an equitable and inclusive community tree planting and preservation program, focusing "greening" in areas with lower tree coverage and higher exposure to extreme heat.

In Los Alamos, many of the pine tree species are under threat from wildfire, drought and invasive pest species exacerbated by climate change, necessitating additional measures to restore and protect natural ecosystems.

Strategy NS2: Conserve water resources



NS2.1: Promote green stormwater infrastructure and low-impact development

Continue to invest in green stormwater infrastructure and incentivize low impact development (LID) projects by streamlining permitting processes, prioritizing vulnerable communities most impacted by extreme weather and climate impacts. Green stormwater infrastructure is nature-based infrastructure to address urban flooding and water quality issues, such as through rain gardens and bioswales. Green infrastructure provides more climate and health co-benefits than conventional "grey" infrastructure systems.

Stormwater management is a key issue for the community and LANL. This action builds on current County actions to integrate low-impact development, natural systems, and permeable surfaces to reduce and filter stormwater runoff.



NS2.2: Develop a water security strategy

Align with the The Los Alamos Long Range Water Supply Plan (2017) and Source Water Protection Plan (2003) to develop a water security strategy and drought preparedness plan to address water shortages and prepare for climate impacts. Promote collaboration and data sharing on water resources with other jurisdictions, and revise land use practices to conserve water in the county. Expand existing water conservation programs which encourage the community to reduce daily water use and educate residents on water sources and supply.

What We Heard:
Residents of Los Alamos know that water is a precious resource and are concerned about water availability in the future.



NS2.3: Encourage sustainable landscaping and water conservation

Reduce water consumption from landscaping by planting native and climate appropriate plants. Work with landscape companies and homeowners to educate drip irrigation and low pesticide management techniques. Support the Water and Energy Conservation Program and Water Rule W-8 to reduce potable water use and encourage management of reclaimed water.



NS2.4: Provide greywater reuse education

Promote greywater systems for residents, including providing free rain barrels to homeowners to capture and reuse rainwater. Develop new educational programs for the community on the environmental and financial benefits of reusing rainwater and greywater. Continue and investigate expansion of greywater programs and uses, building on the County's current programs.



Community Resilience, Adaptation, & Wellbeing

GOAL: Ensure that residents are prepared for climate impacts and enhance climate action education and programs.

Co-benefits:

- Public health and improved air quality
- Quality of life and home comfort
- Ecosystem health
- Water conservation and water quality
- Food security
- Local economic development

Los Alamos Highlights

The County’s community resilience work will build on the County’s 2023 Hazard Mitigation Plan and other external plans, such as the 2022 LANL Climate Change Vulnerability Assessment and Resilience Plan (VARP). These plans include measures to increase energy redundancy, protect critical assets from climate impacts, and promote nature-based solutions for resiliency. Community resiliency actions are also supported by sustainability leadership from businesses and community groups such as the Los Alamos High School EcoClub.

Los Alamos County Adaptation and Resilience Strategies

Los Alamos County is actively working to protect its community and environment from the impacts of climate change. For decades, the County has implemented a variety of adaptation and resilience strategies to ensure the health and well-being of our residents and our environment. This Climate Action Plan builds on existing efforts and establishes a roadmap for future developments.

- 1 Fire Prevention:** Increasing drought conditions and rising temperatures leaves the County at higher risk of forest fires. To adapt to the changes in our environment, the Los Alamos Fire Department has implemented fire protection strategies such as developing a strategic Fire Mitigation Plan, maintaining defensible space around the community and educating the community on fire awareness.
- 2 Renewable Energy:** Los Alamos County Department of Public Utilities (DPU) is striving to become a carbon free power provider by 2040 and recently invested in Foxtail Flats for 170MW of solar power and 80MW of battery storage. This new agreement in combination with our other renewable energy assets will help LAC move towards clean energy. In addition to creating clean energy, it also creates high paying, quality careers for New Mexicans.





Community Resilience, Adaptation, & Wellbeing

3 Water & Energy Conservation: The 2022 DPU Water and Energy Conservation Plan outlines strategic goals.

- 1 Be a carbon neutral electric provider by 2040.
- 2 Provide Class 1A effluent water in Los Alamos County.
- 3 Reduce natural gas usage by 5% per capita per heating degree day by 2030 and support elimination of natural gas by 2070.
- 4 Promote electric efficiency through targeted electric conservation programs.
- 5 Reduce potable water use by 12% per capita per day by 2030.
- 6 Communicate with partners to strengthen existing partnerships and identify new potential mutually beneficial partnering opportunities.

4 Waste Reduction: Los Alamos County promotes responsible consumption of goods and promotes the 3R's: waste reduction, reuse and recycling. The County provides a premier recycle facility, diverting valuable materials from the landfill through robust recycle and reuse program and pursuing a municipal food composting program.

5 Sustainable Transportation: The County operates Atomic City Transit, a free and safe public transportation system, and steadily invests in walking and bicycling infrastructure. Additionally, the County has invested in electric vehicles and charging infrastructure for County and community use.

6 Energy-Efficient Buildings: The County has committed to build all new buildings over 500sq ft with a LEED Silver Certification. Additionally, the County has recently adopted the 2021 IECC building standards that will result in more energy-efficient buildings.

7 Emergency Management: The County has a comprehensive emergency management plan for disaster preparedness, mitigation, response and recovery.

8 Community Engagement: The County is dedicated to providing ongoing education and outreach for the community to enhance awareness and knowledge of climate literacy, waste reduction, water and energy conservation, as well as providing resources and incentives to support climate-friendly actions.

By building on these existing efforts, Los Alamos County is taking practice steps to build a more resilient future for its residents and protect its environment.

Strategies

CR1. Enhance community understanding of climate change



CR2. Prepare the community for climate impacts



Strategy CR1: Enhance community understanding of climate change



CR1.1: Conduct a vulnerability assessment

Conduct a climate hazard vulnerability assessment to understand how extreme weather and other aspects of climate change will impact people, services, and infrastructure, particularly vulnerable populations. Identify vulnerable areas and populations and enhance equity-focused response in emergency planning to extreme temperature events, drought conditions, and wildfires.



CR1.2: Invest in public climate education campaigns

Invest in public education campaigns about climate resilience and mitigation solutions in partnership with Pajarito Environmental Education Center.

- Tailor campaigns to educate and empower vulnerable communities, which often experience the earliest and most acute impacts of climate change, face historic and current inequities, and have limited capacity to adapt.
- Share climate information through targeted community outreach to develop capacity to address sustainability issues.
- Encourage schools to incorporate sustainability related topics and consider partnering with the Los Alamos High School EcoClub.



CR1.3: Support the local food system

Continue to encourage and promote local food systems by:

- Supporting and promoting farmers' markets.
- Supporting and promoting community and backyard gardens through coordinated community education and regional collaboration.
- Collaborating with businesses and organizations such as LA Cares to provide resources and support for food security for all residents.

Strategy CR2: Prepare the community for climate impacts



CR2.1: Encourage adaptation upgrades

Solicit grants to offer rebates and incentives for eligible entities to encourage adaptation upgrades on residential and commercial properties (e.g., reducing paved areas to address runoff and heat, installing green roofs, permeable pavement, air filters, fans).



CR2.2: Embed climate adaptation and resilience in County operations

Embed climate adaptation and resilience across County operations. Review plans, policies, programs and operations with a climate adaptation and resilience lens.



CR2.3: Address and prepare for heat and other climate impacts

Address and prepare for heat and other climate impacts in Los Alamos; this may include:

- Incorporate extreme heat preparedness and response into the County's emergency management plan or consider developing an emergency heat response plan.
- Implement a neighborhood cooling program, including partnering with local nonprofits and organizations to provide resources and check in on vulnerable residents during extreme heat events.
- Implement County cooling centers for the community in collaboration with community partners.
- Based on the findings from the vulnerability assessment (CR1.1), develop and implement additional adaptation and resilience strategies.





Cross-Cutting

GOAL: Reduce community-wide greenhouse gas emissions and inspire climate action through outreach, engagement, partnership, and leadership.

Co-benefits:

- Local economic development
- Quality governance—improved and increased engagement, communication, and relationships

Los Alamos Highlights

This focus area builds on existing cross-cutting climate action. This includes: the Board of Public Utilities’ commitment to becoming a net-zero electricity provider by 2040; the ESB’s 2017 Sustainability Plan; and the County’s hire of a dedicated sustainability manager to facilitate climate action plan development and provide ongoing outreach for the CAP. The LARES Task Force was also convened in 2020 after residents submitted a petition to Council requesting climate action by the County. Actions in this focus area build on the near-term work of the LARES Task Force to encourage forming partnerships with LANL and the Los Alamos Public Schools with the specific intention of collaboration on greenhouse gas reduction.

Strategies

CC1. Encourage sustainable businesses.



CC2. Promote climate education outreach.



Strategy CC1: Encourage sustainable businesses



CC1.1: Develop a sustainable business certification

Collaborate with local businesses and partners to develop and promote a certification program or labeling system that recognizes businesses that adopt sustainability measures such as energy efficiency, waste diversion, sustainable landscaping, and sustainable product sourcing. As part of the certification program development, define sustainability criteria and guidelines. Promote this program in conjunction with Los Alamos County Chamber of Commerce.

Strategy CC2: Promote climate education outreach



CC2.1: Facilitate equitable public participation in planning

In addition to providing robust and equitable education to help prepare vulnerable communities for climate impacts (CR1.2), actively seek input from marginalized or vulnerable populations in climate policy-making processes by expanding ESB membership. In Los Alamos, more vulnerable communities may include communities of color, low-income residents, older adults, and non-English speaking residents.



CC2.2: Monitor and share climate action progress

Consistently monitor CAP implementation progress through an online dashboard or website that provides climate action information and resources to community members, businesses, and partners. Provide annual progress updates to County Council and the ESB.



CC2.3: Collaborate with local Pueblos

Work with local Pueblos to share resources and ideas on climate change issues, and align with relevant plans such as the Pueblo de San Ildefonso Climate Action Plan. Support the County's efforts to build equitable partnerships with local Pueblos through the Progress through Partnering initiative, regional, or one-on-one projects to increase green workforce training offerings, clean energy access, transit, and public safety and wellbeing.



CC2.4: Expand community partnerships

Develop a working group with Los Alamos National Laboratory, local schools, and community-based organizations to encourage technology development and innovative solutions to addressing climate challenges.

What You Can Do

Everyone can contribute to helping solve the climate crisis—and ultimately, our community’s impact will be measured as the sum of individual actions.

Here are some ideas for ways you can help reduce our community’s emissions:



Transportation

Plan on buying an electric car for your next vehicle. In the meantime, explore the opportunities to get around without a car, whether that’s biking, walking, taking the bus, or carpooling.



Housing

If you own your home, look at incentives and rebates for home electrification upgrades, such as heat pumps, induction stoves, and rooftop solar installation. If you’re a renter, consider a portable induction cooktop.



Healthy Living

Eating more plant-based foods—such as fruits, grains, and vegetables—and reducing consumption of meat and dairy products not only helps reduce emissions, but it can often be good for your health, too. Regular exercise, such as walking or biking, can also help improve health while reducing emissions.



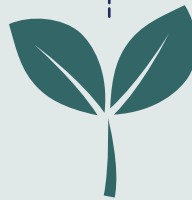
Flying

Air travel is uniquely damaging to the environment due to high-altitude pollution. Consider staying local or driving for your next vacation, or explore Amtrak’s Southwest Chief line from Santa Fe or Albuquerque with service to Los Angeles and Chicago.



Repair & Reuse

Before discarding items, check to see if they can be repaired, donated, or sold. Visit secondhand stores and check local Buy Nothing groups or online marketplaces for items before buying new.



Climate Resilience

Talk with family, friends, and neighbors about climate concerns, priorities, and needs. According to the Yale Program on Climate Change Communications, although 63% of Americans are worried about global warming, only 35% of Americans discuss it. By having open conversations, you can help prepare your community for the effects of climate change.



Get Involved

Engage with your community and help be a local climate action leader! Consider joining the Environmental Sustainability or Transportation board, attending County Council and Board of Public Utility (BPU) meetings, and advocating for climate action implementation in your everyday life.

Implementation

The following implementation considerations are critical for successful implementation of this CAP and meaningful progress toward climate goals.

Community support, partnerships, and collaboration

Continued community support is vital for the successful implementation of the CAP—from building and sustaining buy-in to empowering community members to take a greater role in climate action, the County recognizes the importance of ongoing community engagement. Many of the actions above involve establishing or strengthening partnerships or collaborations, such as with local schools and community-based organizations; some of these key actions include CC2.1, CC2.3, and CC2.4. The County will regularly assess its community engagement efforts and identify opportunities for improvement.



Equity

This CAP aims to distribute benefits and burdens equitably across the community (i.e., ensure that more vulnerable groups receive greater benefits and bear fewer burdens than other groups as a result of CAP actions). As part of this goal, the County will explore opportunities to address financial barriers for community members, build and strengthen inclusive and equitable partnerships, and incorporate diverse perspectives in decision-making.

Leadership and Accountability

Because of the interdisciplinary nature of climate change, the County will work across departments to implement the CAP. Key accountability approaches for implementation of the CAP are summarized below, to ensure that the County is making progress toward CAP goals.

Progress reporting and monitoring

- Report on CAP progress, challenges, and next steps to County Council and the ESB (brief reports and presentations annually; more detailed reports and presentations every 3-5 years). If needed, form new County staff and/or County advisory groups to guide and oversee CAP implementation.
- Share progress with the community (Action CC2.2).
- Update the community-wide sector-based GHG inventory every 3-5 years.

Plan adjustments and updates

- Work with County Council and the ESB to update CAP actions as needed to ensure adequate progress toward emission reduction goals.

Note that this is a strategic plan; as such, it defines goals, tactics and the actions recommended to achieve desired outcomes. While this recommended implementation plan includes actions relating to the proposed focus areas and strategic priorities, it is subject to change. In addition, all actions requiring funding will need to be approved by the County Manager and County Council. The ["Implementation Matrix"](#) on the following pages represents the beginning of an ongoing and evolving implementation plan, which will kick off after CAP adoption.

Phasing

- **Ongoing**
Continuation of County or regional initiatives without significant changes.
- **Immediate**
1-2 YEARS (2025-2026)
Priority actions for meeting the County's emissions reduction goals and foundational actions that pave the way for future work.
- **Near-term**
3-6 YEARS (2027-2030)
Actions that continue moving the needle for Los Alamos to achieve its goals and establish more foundational infrastructure, partnerships, and regulations.
- **Mid-term**
7-11 YEARS (2031-2035)
Actions that require longer-term or more complex planning, coordination, and investments or may be less strongly supported by the community.

Funding and Education Resources

As Los Alamos County moves forward on identifying priority areas of implementation in its Climate Action Plan, it is imperative that the County identify potential partners, information, and funding resources and examine examples of other successful programs. Below is a list of some of the state and federal resources available, as well as examples of existing and previous climate programs.

Renewable Energy & Grid Resilience

- [New Mexico Solar Market Renewable Energy Production Tax Credit \(updated in 2024\)](#)
- [New Mexico Grid Resilience Grant Program](#)
- [Geothermal Resource Assistance](#)
- [Commercial Property Assessed Clean Energy Program](#)
- [Federal Solar Tax Credit](#)
- [USDA Rural Energy for American Program Energy Audit & Renewable Energy Development Assistance Grants](#)
- [USDA Rural Energy for America Program Renewable Energy Systems and Energy Efficiency Improvement Guaranteed Loans and Grants](#)

Energy Efficiency & Electrification

- [NMSU Program for business energy efficiency \(no fee service\)](#)
- [New Mexico Community Energy Efficiency Development Grant Program](#)
- [New Mexico Sustainable Building Tax Credit \(Residential and Commercial\)](#)
 - [Sustainable Building Tax Credit \(SBTC\)](#)
 - [Energy Conserving Products](#)
- [New Mexico Energy Savings Performance Contracts](#)
- [New Mexico Mortgage Finance Authority Low Income Energy Efficiency Program \(federal LIHEAP funds\)](#)
- [USDA Rural Energy for American Program Energy Audit & Renewable Energy Development Assistance Grants](#)
- [USDA Rural Energy for America Program Renewable Energy Systems and Energy Efficiency Improvement Guaranteed Loans and Grants](#)
- [Federal Tax Incentives for Residential Energy Efficiency](#)
- [Federal Tax Incentives for Business Energy Efficiency](#)
- [Commercial Property Assessed Clean Energy Program](#)
- [City of Albuquerque Business Energy Challenge](#)

Electric Vehicles and Electric Vehicle Infrastructure

- [National Electric Vehicle Infrastructure Act \(NEVI\)](#) (federal funds available through NM Department of Transportation)
- Federal tax credits for EV vehicles and infrastructure
 - [Tax Incentives](#)
 - [New and Used Clean Vehicle Tax Credits](#)
- [New Mexico State Clean Car Tax Credit](#) (recently announced, site still being finalized)
- Examples of Utility EV education and rebate programs
 - [PNM](#)
 - [El Paso Electric Company](#)
 - Xcel Energy
 - [Easy Electric Vehicle Charging at Home](#)
 - [Save Money on Charging](#)
 - [Tri-State Generation and Transmission Association](#) (rural cooperatives)

Water Resources

- [State of NM Clean Water Revolving Loan Fund](#)
- Examples of Municipal Rebate Programs
 - [Albuquerque/Bernalillo County Water Utility Authority](#)
 - [City of Santa Fe](#)

Tree Planting and Stewardship

- [Tree Planting and Stewardship, Tree New Mexico](#)
- [Recycling, New Mexico Recycling Association](#)

Future Financing Options for Communities, Residents and Businesses

- [New Mexico Climate Investment Center](#)
- Suggestion: Los Alamos County could seek advice and counsel from other counties and experts in New Mexico regarding the anti-donation clause. Interpretation of the law can vary but programs that are for the community common good are often considered lawful. Professor Gabe Pacyniak at the University of New Mexico School of Law is an expert on the anti-donation clause and can serve as a resource for ongoing questions and interpretation.

Implementation Matrix

The implementation matrix is a living document that will continue to evolve after CAP adoption. The following tables are organized by timeframe and summarize key implementation considerations such as lead department or agency, potential funding sources, and immediate next steps.

Legend:

Timeframe:	= Ongoing	= Immediate (1-2 yrs)	= Near-term (3-6 yrs)	= Mid-term (7-11 yrs)
Relative cost: Each action includes its relative cost, considering direct costs to the County and community, as well as cost savings. "Not estimated" means that the action was added or changed after the initial analysis.	= Low	= Moderate	= High	
Relative impact: Each action includes its relative GHG reduction or climate resilience impact, considering the needs it addresses and the scope and likelihood of impact. "Not estimated" means that the action was added or changed after the initial analysis.	= Low	= Moderate	= High	
Scope of each action:	= Community	= County government operations	= Both community and County operations	

Lead:




CDD: Community Development Department	CSD: Community Services District	PD: Police Department
CMO: County Manager's Office	DPU: Department of Public Utilities	PW: Public Works

Funding:


ATTAIN: Advanced Transportation and Innovation	CMAQ: Congestion, Mitigation, and Air Quality Improvement Program	HMGP: Hazard Mitigation Grant Program	NMED: New Mexico Environment Department
BIL: Bipartisan Infrastructure Law	DOE EECBG: Department of Energy Efficiency and Conservation Block Grants	IJA: Infrastructure Investment and Jobs Act	PPRF: Public Project Revolving Fund
BRIC: Building Resilient Infrastructure and Communities	DOE WARP: Department of Energy Weatherization Assistance Program	IRA: Inflation Reduction Act	TAP: Transportation Alternatives Program
CDBG: Community Development Block Grant	EMNRD: Energy, Minerals, and Natural Resources Department	LEDA: Local Economic Development Act	
CIG: Conservation Innovation Grants	HEEHRA: High-Efficiency Electric Home Rebate Act	NEVI: National Electric Vehicle Infrastructure	




Buildings & Energy


Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
BE1.1: Establish an energy benchmarking program for commercial buildings					
▶▶▶	Lead: DPU Support: CMO; CDD; partner with Chamber or Housing partners	<ul style="list-style-type: none"> IRA LEDA 	 		<ul style="list-style-type: none"> Identify necessary staff time to devote to program development Establish benchmarking criteria to track building energy and water performance in commercial buildings, including offices, restaurants, hotels, and other business facilities Develop benchmarking criteria through research of similar programs and discussions with partners Identify and compile list of existing incentives Offer education and promote existing incentives Encourage commercial customers to share data to promote energy efficiency improvements Identify and formalize relationships with community partners, such as the Los Alamos Chamber of Commerce, to help develop and promote a program Develop education program, including developing promotional/educational materials and identifying priority businesses and buildings Educate building owners on potential cost benefits of efficiency upgrades where necessary Consult the business energy efficiency program through NM State University as a resource





Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
BE1.2: Establish an energy benchmarking program for County-owned buildings					
▶▶	Lead: PW - Capital Projects and Facilities Support: CMO Sustainability Manager	• IRA	 		<ul style="list-style-type: none"> • Identify necessary staff time to devote to program development; secure funding for assessments, upgrades, monitoring, and maintenance • Establish benchmarking criteria to track building energy and water performance in County-owned and operated buildings using the EPA Energy STAR Portfolio Manager Tool • Perform ROI assessments to build the case for necessary upgrades in municipal buildings; identify all relevant County-owned buildings, evaluate energy and water use data, develop strategic plan for building retrofits and/or upgrades • Earmark recurring funding to support efficiency upgrades of County buildings • Monitor smart meters for gas, water, and electricity currently in place in all relevant County facilities, including buildings and light posts • Develop or purchase software for building performance dashboard to track building performance for all County facilities • Share the dashboard with the community to highlight and communicate improvements in energy efficiency • Explore resources from the ENERGY STAR® Portfolio Manager®

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
BE1.3: Encourage community energy efficiency and electrification retrofits					
▶	Lead: DPU Support: CMO Sustainability Manager	<ul style="list-style-type: none"> IRA New Mexico Clean Energy Grants 	 		<ul style="list-style-type: none"> Identify necessary staff time to devote to program development; secure funding for delivering free energy audits Develop community-wide efficiency and electrification outreach and educational campaign program, including developing promotional/educational materials, reaching out to community organizations and leaders to understand best avenues for engagement (e.g., in-person workshops, tabling at events, social media posts) Identify potential partners and gaps to supplement existing County programming Educate property owners on potential energy-saving renovations to their buildings; focus on cost savings and public health benefits for residents, business, and landlords Identify and compile list of existing incentives, funding sources, resources, and information; promote existing incentives and funding sources, especially for low-income households; focus on cost savings and public health benefits for residents, business, and landlords Develop energy audit program, starting with a pilot program if appropriate; purchase additional DIY energy audit tools such as thermal cameras; provide free home energy audits Provide information about specific retrofits (e.g., weatherization, energy efficient appliances, LED lighting, electric hot water heaters, space heaters, stoves, laundry dryers) Market DPU's "Induction Cooktop Loaner Program" Teach residents how to engage in decision-making regarding the ownership, generation, storage, distribution of, and transition to renewable energy Provide information on available funding for all residents and share what incentives are available to relieve the financial burden for low-income residents. Notify the community when new funding opportunities become available through resources such as the County website, utility bill inserts, and pamphlets and brochures distributed at County events Stay up to date on future clean energy financing options for low-and-moderate income households, such as through the New Mexico Climate Investment Center




Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
BE1.4: Adopt green building standards					
	Lead: CDD Support: CMO Sustainability Manager	<ul style="list-style-type: none"> Green Building tax incentives IRA 			<ul style="list-style-type: none"> Identify necessary staff time to devote to implementation of action Promote fossil fuel infrastructure reduction in new residential, commercial, and municipal construction by adopting a green building performance standard (examples include the Santa Fe County HERS Rating and Seattle Building Energy Performance Standard) Research and decide on standards to adopt, based on noted examples, conversations with partners and County staff, and Council direction Develop education program, including developing promotional/educational materials Educate the community on the cost and public health benefits this will provide for new buildings such as lower utility bills and improved indoor air quality Consider combining outreach and education efforts with BE1.1 and BE1.3, as appropriate Plan to provide technical assistance, educational resources, and outreach during this transition, especially for commercial users of natural gas appliances such as restaurants and community centers Identify technical assistance needs (could be identified as part of outreach program from BE1.3 or contractor training program development from BE1.5) and develop plan for providing technical assistance Research reflective roofing materials to reflect heat Continue monitoring recent federal case law which determined that local governments are prohibited from banning new natural gas hook-ups

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
BE1.5: Develop a training program					
▶▶	Lead: CDD Support: CMO and DPU	<ul style="list-style-type: none"> Green Building tax incentives IRA 	 		<ul style="list-style-type: none"> Identify necessary staff time to devote to program development Develop training priorities and program content, based on needs identified by partners, relevant parties, and local contractors Identify, support, and/or develop free training programs and resources for local and regional contractors, design professionals, County staff (i.e., plan reviewers, building inspectors, and project managers), and interested members of the public to learn green building skills such as electrification, energy efficiency, and water efficiency retrofits, especially during low-construction times of year Reach out to potential partners to understand training needs and partners' interest in collaborating on the program development or implementation; potential partners may include UNM-LA, NNMC, and Santa Fe Community College; connect with them for information on existing programs Consider organizing a quarterly open house with contractors Consider combining outreach and education efforts with BE1.1 and BE1.3, as appropriate
BE1.6: Require electric equipment replacement at burnout for County					
▶▶	CDD	<ul style="list-style-type: none"> IRA 	Not estimated		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Develop policies and programs that will result in replacement of fossil fuel appliances and equipment at the end of their useful life in County-owned and -operated buildings. Policies and programs should focus on major natural gas uses in County buildings, including space/water heating Identify obstacles that could impede progress on electrification, such as needed infrastructure upgrades, and identify opportunities to address these barriers Educate County staff on preparing for replacement before burnout (e.g., through audits and appliance replacement plans) Develop requirements for end-of-life replacement of gas-powered equipment in County buildings with efficient, electric equipment Consult with contractors and building owners on replacing natural gas equipment with electric




Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
BE1.7: Encourage electric equipment replacement at burnout for community					
▶▶	Lead: CDD	• IRA	Not estimated		<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Encourage replacement of natural gas appliances with electric before or as they approach the end of their useful life • Educate community members on how to prepare for replacement (e.g., through audits and appliance replacement plans). Educational programs should focus on major natural gas uses in buildings, including space/water heating, clothes drying, and cooking • As part of this work, the County will identify obstacles that could impede progress on electrification, such as needed infrastructure upgrades, and identify opportunities to address these barriers • Conduct peer city research on similar natural gas equipment replacement programs • Consult with contractors and building owners on replacing natural gas equipment with electric • Educate the public on the benefits of electrification through informational handouts, technical assistance, and workshops • Advocate for change or clarification of the NM Anti-Donation Clause to allow local governments to provide incentives for energy reduction projects • Identify potential partners and advocates for anti-donation clause to allow local governments to provide incentives for energy reduction projects • Begin discussions with our state legislative delegation to identify advocates for amendment • Explore using sustainability criteria in Metropolitan Redevelopment Area plans • Explore how other municipalities are using LEDA and HUD to provide incentives for energy reduction projects

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
BE2.1: Promote renewable energy					
▶▶	Lead: DPU Support: CMO	<ul style="list-style-type: none"> • HEEHRA • IRA • Solar Market Development Tax Credit • EMNRD Renewable Energy Production Tax Credit • New Mexico Clean Energy Grants 	 		<ul style="list-style-type: none"> • Determine staff time and capacity needed to promote this action • Support local and statewide standards for sourcing renewable energy generation and grid modernization • Continue to work with DPU as all energy options are explored to best balance demand with public support and feasibility • Facilitate dialogue with DPU, solar energy providers, and community members to educate and highlight on the status of DPU's distributive generation program and the benefits of solar + battery and grid modernization moving forward • Review results of the DPU Distribution System analysis, which is being conducted to prioritize grid modernization based on current and estimated load distribution • Evaluate effective and viable methods to expand DPU's distributive generation resources in a balanced and equitable manner • Identify existing grants, loans, and financial assistance programs to incentivize carbon-neutral power supplies • Advocate for the development of regional or statewide standards, policies, or resources that advance grid modernization including incorporating storage solutions to expand solar generation potential or providing financial assistance to offset infrastructure costs
BE2.2: Expand electric energy resiliency					
↻	DPU	<ul style="list-style-type: none"> • IRA • IJJA • House Bill 233, Energy Grid Modernization Roadmap 	 		<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Continue to expand electric energy resiliency by investing in a diverse set of renewable energy sources such as wind, solar, geothermal, and nuclear, as well as energy storage • Work with DPU staff to align with existing initiatives and increase energy resiliency for the community through the Integrated Resource Plan (IRP) and by providing redundancies within the circuit systems • Research options, steps, and potential challenges to increase battery storage usage so that energy from renewables can be stored and used during peak hours • Explore establishment of microgrids within the systems for energy redundancy and security

Transportation & Land Use





Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
T1.1: Promote EV adoption					
▶	CMO	<ul style="list-style-type: none"> NEVI Formula Program IRA New Clean Vehicle Tax Credit 	 		<ul style="list-style-type: none"> Identify necessary staff time to devote to implementation of action Encourage EV network expansion by educating the community on available tax incentives and rebates for EV purchases, with a focus on those available to low-income populations Identify and compile list of existing incentives, rebates, funding sources, resources, and information about EV purchases, prioritizing those that prioritize low-income communities Develop education program, including developing promotional/educational materials and brainstorming a variety of education avenues (e.g., in-person workshops, tabling at events, social media posts, information on County website) Convert municipal small engines, lawn/garden equipment, and golf carts, to be fossil fuel free within ten years Continue pilot for municipal small engine and lawn garden equipment to determine pros and cons Develop policy to procure municipal small engine and lawn garden equipment. Policy should consider performance and economics with a strong preference for electric items Develop transition plan for municipal small engines to be fossil free within ten years Identify partners such as LANL and the school district to work together on fleet conversions to EVs Currently in design phase for infrastructure needs to charge and store 60+ electric golf carts. Golf carts estimated delivery is 2025




Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
T1.2: Develop EV infrastructure plan					
▶	CMO/PW	<ul style="list-style-type: none"> • NEVI Formula Program • IRA Charging and Fueling Infrastructure Grant Program 	 		<ul style="list-style-type: none"> • Identify necessary staff time to devote to implementation of action, including determining if there is in-house capacity to develop a plan. If not, hire a consultant • Develop and implement an EV infrastructure plan that prepares the County and community for the transition to EVs by mapping infrastructure needs • Partner with the Los Alamos Department of Public Utility, NMDOT, Los Alamos Public School, UNM-LA, and other organizations to develop strategies and identify barriers for EV readiness in key locations, including public spaces, schools, businesses, places of worship, and multifamily homes • Explore funding opportunities, such as federal grants and state incentives to support the planning and installation of EV infrastructure • Build and formalize partnerships with key partners including the Los Alamos Electric Utility, NMDOT, schools, businesses, and community organizations • Map existing EV charging stations and areas that should be prioritized for EV chargers • Establish an EV working group to accelerate the development of charging infrastructure and a robust transition plan • Investigate shaded parking as part of EV infrastructure i.e. solar powered EV chargers
T1.3: Promote EV readiness					
▶▶▶	CDD	<ul style="list-style-type: none"> • NEVI Formula Program • IRA • Charging and Fueling Infrastructure Grant Program 	Not estimated		<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Incentivize and educate about EV readiness for new and redeveloped single family homes. Encourage a certain number of EV chargers in multi-family housing, commercial developments, and community gathering spaces, including increased access for affordable housing units • Collaborate with relevant partners, including developing and distributing guidelines and resources for contractors and developers to encourage EV readiness and charging infrastructure • Determine proportion of EV chargers to units needed per multi-family development and commercial builds

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
T1.4: Transition County fleet to EVs and reduce idling					
▶▶	PW	<ul style="list-style-type: none"> Clean Heavy-Duty Vehicles Program NEVI Formula Program IRA 	 		<ul style="list-style-type: none"> Work with the County Fleet and Transit Divisions and EV Working Group to transition County vehicle fleet to EVs when replacing a fleet vehicle that has reached the end of its usable life, where feasible When technology is not available, pursue transition strategies such as right-sizing or hybrid vehicles Consider aligning with New Mexico state target to achieve a zero-emission vehicle fleet by 2035 Conduct an inventory of current fleet, if not already available Assess estimated end of life timelines for fleet to identify priority vehicles Follow implementation steps for T1.1, T1.2, and T1.3 to increase availability of EV charging sites and infrastructure to support additional EV vehicles Explore policy options to reduce emissions in current vehicle fleets (e.g., idling policies) Revise and implement a County operations “no idling” policy to reduce GHG emissions and air pollution associated with gasoline-powered vehicles Develop and implement an educational campaign for County staff Consider developing and implementing an educational campaign for community members Staff may have varying comfort levels in working with EVs; consider polling staff on comfort, concerns, and questions and develop protocols for staff training County Fleet and Transit Divisions are developing a scope of work for a Fleet Conversion and Transit Conversion studies to include an evaluation of expanding charging capabilities at County buildings. Fleet to include a funding for a Fleet Conversion Study was received as part of the FY25 budget process

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
T2.1: Expand mixed-use, transit-oriented development policies					
▶	CDD	• TAP	 		<ul style="list-style-type: none"> Identify necessary staff and partners to involve, and determine the staff time needed to implement this action Continue to expand land use zoning standards and codes, such as changes to parking minimums, to promote affordable, transit-oriented, and mixed-use development to reduce urban sprawl Encourage building within walking distance of essential services, when possible, and promote existing complete streets policies and Public Works Design & Construction Standards Support existing County policies to maintain and increase housing options for all residents by engaging with non-profit service providers who oversee daily operations of affordable housing homeownership, rental, and rehabilitation programs. Affordable housing policies may include a “rent-to-own” policy, where a portion of rent is set aside as capital towards the down payment of a housing unit Begin a review of current land use zoning standards, parking minimums, and existing complete streets policies and identify areas for improvement of connectivity and affordability Assess and map prime locations for mixed-development, transit connectivity, and priority intersections Begin exploring additional affordable housing policy and vet with key staff, partners, and the community
T2.2: Continue public transit education campaign					
▶▶	PW/CMO	• CMAQ	 		<ul style="list-style-type: none"> Identify necessary staff time to design and implement educational campaign Partner with the media to continue education campaigns that educate on how to use public transit options, showcase transit connections to bike and pedestrian ways, and feature bus rider stories in an effort to combat fear and prejudice while highlighting advantages and accessibility Build on Atomic City Transit’s marketing plan to increase awareness of the transit opportunities that are available in Los Alamos and retain and attract customers Continue to teach new riders how to use the Atomic City Transit app and bike racks in an effort to raise Atomic Transit ridership, which is currently low in the County Develop, review, and understand key performance metrics for community engagement Partner with Atomic City Transit to develop educational materials such as brochures and videos, to provide through various media channels to ensure the community is informed about the benefits and usage of public transit




Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
T2.3: Advocate and partner regionally to improve transit network					
▶▶	PW	<ul style="list-style-type: none"> IJA 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Continue to work with partners such as Atomic City Transit, LANL, Los Alamos Public Schools, North Central Regional Transit District, and NM Park and Ride to advocate and engage in regional opportunities to improve the transit network to (1) ensure there are safe non-motorized connections to transit facilities, addressing first and last mile improvements, (2) expand transit access to neighborhoods that are not currently served by transit and to services, jobs, and activities for seniors, people with disabilities, and low-income residents, and (3) increase bike storage at transit centers Reference the Transit Center Study to identify priority areas for County transit access, emergency services, and opportunities for regional transit collaboration Use findings from the Transit Study to increase ridership, implement more micro transit options, provide incentives, and increase route frequency Develop and/or maintain regional transit partnerships Assess priority needs for expanded transit service, gaps in transit service, and multi-modal connectivity Advocate to partners for expanded multi-modal transit connections, transit access, and transit stop amenities




Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
T2.4: Encourage multimodal transportation					
▶▶▶	CDD	<ul style="list-style-type: none"> • ATTAIN • IJJA 			<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Provide educational resources for commercial property owners and consider updating land use codes to increase bike storage options, preferred parking for carpools, and shared vehicles to promote multimodal transportation options • Develop and provide educational resources for property owners—which could include flyers, brochures, and webinars—to increase bike storage options, preferred parking for carpools, and shared vehicles to promote multimodal transportation options • Develop outreach campaign plan for providing educational materials and resources to property owners • Consider updating land use codes to increase bike storage options, preferred parking for carpools, and shared vehicles to promote multimodal transportation options • Research peer jurisdiction examples of similar land use codes • Build off of the Development Code’s Parking Alternatives and Reductions section, which allows for reducing the parking requirements for commercial properties that have bike storage or repair facilities
T2.5: Expand non-motorized transportation options and accessibility					
▶▶	PW	<ul style="list-style-type: none"> • DOT Transportation Infrastructure Finance & Assistance • IJJA 			<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Identify and implement projects from the 2017 Bicycle Transportation Plan, Trails and Open Space Management Plan, Bicycle Working Group, and Public Works to expand non-motorized transportation options and infrastructure to support biking, walking, and other means of non-motorized transportation. This includes projects to improve and create bike and walking infrastructure, especially in low-income and older neighborhoods, and invest in County-funded sidewalk improvement for safety and accessibility for all users, with a focus on those with limited mobility • Establish a taskforce/advisory committee with a variety of representatives from the community • Identify priority streets for a complete streets program • Identify gaps in the bicycling and pedestrian network and infrastructure • Solicit public input and community feedback on potential improvements through community workshops and surveys • Consider exploring bike, car and scooter share programs that could be implemented





Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
T2.6: Develop a CTR program					
▶	CMO		 		<ul style="list-style-type: none"> • Develop a commute trip reduction (CTR) program for County employees that builds on the “Drive Less Los Alamos” Walk, Bike, Ride, Carpool Initiative • Continue to provide resources on the Los Alamos County Trail Network, cycling safety measures, Atomic City Transit and Afternoon Express routes and schedules • Encourage employees to utilize alternative modes of transportation when commuting to and from work • Continue to expand flexible work options and remote and hybrid work, for applicable positions, through the Telework and Alternate Work Schedules program, including exploring options such as 4-day work weeks • Encourage local employers to promote CTR, including collaborating with Los Alamos National Laboratory to develop a commuter program and explore flexible work options • Assess County positions to add to the Telework and Alternate Work Schedules program • Assess the recent County commuting survey to better understand commute preferences, challenges, and behavior; design and implement an additional survey if more information is needed • Identify resources to help make sustainable commute choices easier, such as carpool and rideshare programs and partnerships with local employers

Materials & Consumption

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
MC1.1: Promote circular economy practices					
▶▶	Lead: PW – ES Support: CMO	• CPRG	 		<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Promote circular economy practices, programs, and policies. At the County level, implement an environmental purchasing policy—a policy promoting the procurement of products and services with lower environmental impacts—for all County government agencies and departments. As part of this, develop and define purchasing policy criteria and decision-making processes • Develop and vet an environmental purchasing policy for County operations in partnership with key County staff • Develop and support community reuse and repair programs, such as fix-it clinics, a community tool library, and local “buy nothing groups” • Support existing programs and resources like the Library of Things and the Los Alamos County Eco Station • Work in consultation with local businesses to promote local reuse centers and practices • Conduct peer city research on circular economy practices • Assess locations for community resource centers • Purchase and/or run a donation drive to collect resources for community resource centers
MC1.2: Expand and refine waste data tracking, reporting, and goals					
▶▶	Lead: PW Support: CMO		  		<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Building on current work, expand waste data tracking and reporting methods to establish new goals, including new zero waste targets and management plan • Conduct and expand the scope of future waste characterization studies to include additional sectors (commercial and multifamily) and waste streams (recycling and compost), as well as a more detailed material list for sorting • Update the County’s current waste goals and targets to align with zero waste and source reduction priorities, including outlining specific actions and assessments needed to achieve these targets • Assess current waste characterization for gaps in material types and sectors • Develop an updated material list for waste characterization

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
MC1.3: Implement food waste prevention and diversion program					
▶▶	Lead: PW Support: CMO	<ul style="list-style-type: none"> USDA (Food waste reduction program) 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Continue to establish and implement the municipal food composting program. In the short term, prioritize outreach on the new food compost program for high generators of food waste, and in the long-term, look to expand to curbside collection for residents and consider accepting and incentivizing compostable paper and other compostable packaging Facilitate a food waste prevention network between businesses, non-profits, and research institutions to develop systems and infrastructure to reduce food waste and foster connections between sources of unwanted food and communities in need Partner with local businesses, restaurants, grocery stores, and food pantries to raise awareness of edible food recovery programs Build upon existing Zero Waste Los Alamos resources and education campaign that provides food shopping, prep, and storage techniques to reduce spoilage; recipes to reduce food waste; and messages on reducing waste Perform a waste audit to better understand food waste across the community Reach out to local food banks to develop partnerships and co-create strategies to improved food waste prevention and diversion Begin targeted outreach with entities that are high food waste generators




Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
MC1.4: Promote C&D recycling and reuse					
▶▶▶	PW	<ul style="list-style-type: none"> Recycling and Illegal Dumping Grant 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Provide a construction and demolition (C&D) recycling, salvage, and deconstruction toolkit for construction professionals which includes how-to instructions, contact information for local service providers, and information on low-carbon and recycled building materials Promote educational resources for building professionals through permit counter brochures, industry events, and industry publications In the long-term, acknowledging the current limitations of local C&D recycling markets, consider a C&D recycling ordinance which requires that C&D project waste is minimized, reused, or recycled; or evaluate an incentivized approach by offering reduced rates for separating reusable C&D materials Conduct peer city research on successful C&D recycling programs and ordinances Facilitate conversations with construction professionals to understand challenges and priorities and how the toolkit could be most helpful Develop educational resources and toolkit for construction professionals


Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
MC1.5: Conduct recycling and composting outreach and education					
	PW		 		<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action • Build on existing programs to conduct commercial and residential education and outreach on recycling, composting, and waste management best practices, including identifying opportunities to expand programs • Develop commercial, single-family residential, and multifamily residential technical assistance program that offers recycling toolkits, welcome packets, online resources, and in-person outreach to help with waste prevention, recycling, composting, and sustainable purchasing, especially for new community members • Develop standardized waste collection systems for commercial and multifamily properties, including designated colors for collection bins for each waste stream, clear and consistent signage such as posters with “what goes where,” and recommendations for front-of-house or public facing bins • Implement targeted commercial food scrap outreach that provides additional outreach for the largest generators (including hospitals, universities, and other institutions). Outreach should include information about known contamination issues that need to be addressed • Assess the waste stream to identify the largest commercial food waste generators • Design engagement/education campaign plans, including developing toolkits, printed and online resources and materials, and in-person outreach

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
MC1.6: Implement the zero waste strategy					
▶▶▶	PW	<ul style="list-style-type: none"> Recycling and Illegal Dumping Grant 	   		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Implement all other recommendations outlined in the Zero Waste Strategy (ZWS) to continue to reduce the generation of waste and improve the focus to enhance waste reduction, recycling, and composting Plan for mid- and long-term strategies and actions outlined in the ZWS Promote and expand existing recycling services and programs, including evaluating curbside food scrap collection programs and increasing participation in existing programs such as the refrigerant recycling programs Invest in long-term programs that promote source reduction and alternatives to landfill, such as education and behavior change programs and research Develop an implementation plan for the zero waste strategy Evaluate avenues for reducing consumption associated greenhouse gas emissions through sustainable purchasing and consumption/disposal of food, goods, and services Build necessary partnerships for implementation

Natural Systems & Water Resources








Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
NS1.1: Promote urban forest stewardship and tree preservation					
▶▶	CSD	<ul style="list-style-type: none"> Urban & Community Forestry Program 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Reduce the effects of extreme heat and promote healthy communities by increasing native, drought-friendly vegetation cover and enforcing the County’s existing tree preservation and mitigation policy Promote urban forest stewardship through an equitable and inclusive community tree planting and preservation program, focusing “greening” in areas with lower tree coverage and higher exposure to extreme heat Review and update the County’s tree protection ordinance Develop a plan and guiding principles for urban forest stewardship events and educational campaigns Develop an incentive system for landowners to plant and maintain trees on private property
NS2.1: Promote green stormwater infrastructure and low-impact development					
↻	CDD/ PW	<ul style="list-style-type: none"> BIL IJA NMED River Stewardship Program CIG 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Continue to invest in green stormwater infrastructure and incentivize low impact development (LID) projects by streamlining permitting processes, prioritizing vulnerable communities most impacted by extreme weather and climate impacts Evaluate current permitting processes for LID projects and identify opportunities to simplify or streamline to better support LID projects Utilize GIS and tools like iTree to understand the tree canopy coverage within the city to identify priority areas for additional tree canopy or other green stormwater infrastructure project investments such as rain gardens and bioswales Building on current work, develop policies and programs that incentivize water-wise tree planting and work with NGOs to establish tree planting or GSI events Identify ways to reduce concrete and asphalt surfaces in development and encourage addition of permeable surfaces




Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
NS2.2: Develop a water security strategy					
▶▶	DPU	<ul style="list-style-type: none"> The Drinking Water State Revolving Loan Fund IJJA BIL NMED Water Quality Grant Program 			<ul style="list-style-type: none"> Determine staff time and capacity needed to conduct water risk assessment Align with the Los Alamos Long Range Water Supply Plan (2017) and Source Water Protection Plan (2003) to develop a water security strategy and drought preparedness plan to address water shortages and prepare for climate impacts Promote collaboration and data sharing on water resources with other jurisdictions, and revise land use practices to conserve water in the county Expand existing water conservation programs which encourage the community to reduce daily water use and educate residents on water sources and supply Explore peer jurisdictions' water management plans and incorporation of water management into emergency preparedness plans Identify gaps in the County's Long Range Water Supply Plan and Source Water Protection Plan
NS2.3: Encourage sustainable landscaping and water conservation					
▶▶	DPU	<ul style="list-style-type: none"> Native Plant Society of New Mexico CIG NMED River Stewardship Program NMED Water Quality Grant Program 			<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Reduce water consumption from landscaping by planting native and climate appropriate plants Work with landscape companies and homeowners to educate drip irrigation and low pesticide management techniques Support the Water and Energy Conservation Program and Water Rule W-8 to reduce potable water use and encourage management of reclaimed water Develop education on interpreting individual water consumption data to determine general outdoor usage Explore options for rebate programs that provide assistance in water efficiency landscape practices such as replacing grass Align with NS2.2 to determine staff time and capacity needed to develop a long-term county water plan that identifies resources, plans for growth, and outlines a path for conservation Work with partners to begin to identify opportunities to reduce water use at County facilities (e.g., low flow toilets) and recreational areas (e.g., alternative irrigation methods for golf courses)

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
NS2.4: Provide greywater reuse education					
▶▶▶	DPU	• BIL	 		<ul style="list-style-type: none"> • Identify staff time and capacity needed to implement action and identify funding needed for rain barrel purchases • Promote greywater systems for residents, including providing free rain barrels to homeowners to capture and reuse rainwater • Develop new educational programs for the community on the environmental and financial benefits of reusing rainwater and greywater • Continue and investigate expansion of greywater programs and uses, building on the County’s current programs • Collaborate with community groups to share educational materials






Climate Resilience, Adaptation, & Wellbeing

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
CR1.1: Conduct a vulnerability assessment					
▶	CMO/PD (Emergency Management Commander)	<ul style="list-style-type: none"> New Mexico Climate and Conservation Fund Resilient Communities Fund BRIC HMGP PPRF 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to conduct the assessment Conduct a climate hazard vulnerability assessment to understand how extreme weather and other aspects of climate change will impact people, services, and infrastructure, particularly vulnerable populations Identify vulnerable areas and populations and enhance equity-focused response in emergency planning to extreme temperature events, drought conditions, and wildfires Establish a planning team with key County staff and partners to oversee the vulnerability assessment Set clear goals and define the scope of the vulnerability assessment Collect and review relevant climate and demographic data in the County and begin to identify and map vulnerable populations and critical infrastructure/systems Reach out to local organizations to form partnerships and begin gathering input from communities on perceived climate risk and vulnerability (such as through a survey or workshop) Align with Hazard Mitigation Plan Use https://nmclimaterisk.org/ Consider incorporating climate emergency/public health planning into existing plans Research funding mechanism such as Energy Savings Performance Contracts for residential households

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
CR1.2: Invest in public climate education campaigns					
	CMO	<ul style="list-style-type: none"> Resilient Communities Fund BRIC 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Invest in public education campaigns about climate resilience and mitigation solutions in partnership with Pajarito Environmental Education Center Tailor campaigns to educate and empower vulnerable communities, which often experience the earliest and most acute impacts of climate change, face historic and current inequities, and have limited capacity to adapt Share climate information through targeted community outreach to develop capacity to address sustainability issues Encourage schools to incorporate sustainability related topics and consider partnering with the Los Alamos High School EcoClub Form a planning team with key partners, schools, and community groups In collaboration with the planning team, outline the goals of the education campaigns and determine which vulnerable communities and groups will be the focus of the campaigns Develop educational materials and messages that are relevant and accessible to the target audiences Consider partnering with the medical community to educate about the public health impacts from climate change
CR1.3: Support the local food system					
	Lead: CSD Support: CMO	<ul style="list-style-type: none"> Resilient Communities Fund BRIC NMED Environmental Justice Small Grants Program 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Promote the Los Alamos Farmers Market on the County's website and social media and at County events Support and promote community and backyard gardens through coordinated community education and regional collaboration Collaborate with businesses and organizations such as LA Cares to provide resources and support for food security for all residents Connect with existing food banks, urban agriculture and gardening organizations, farmers markets, and food security organizations in the county and region; understand what kind of support would be helpful for initiatives and programs already underway

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
CR2.1: Encourage adaptation upgrades					
▶▶	CMO	<ul style="list-style-type: none"> Resilient Communities Fund BRIC DOE WAP DOE EECBG New Mexico Clean Energy Grants 			<ul style="list-style-type: none"> Form a planning team with key County staff or with Environmental Sustainability Board to identify grants to offer rebates/incentives, including determining eligibility Solicit grants to offer rebates and incentives for eligible entities to encourage adaptation upgrades on residential and commercial properties (e.g., reducing paved areas to address runoff and heat, installing green roofs, permeable pavement, air filters, fans) Research and compile a list of potential funding opportunities from federal, state, and private sources Develop grant proposals and involve community members and local businesses to gather input and support
CR2.2: Embed climate adaptation and resilience in County operations					
▶▶			Not estimated		<ul style="list-style-type: none"> Embed climate adaptation and resilience across County operations Review plans, policies, programs and operations with a climate adaptation and resilience lens, including current Emergency Management Plan Update plans and policies to include adaptation and resilience strategies Integrate into Project Management and Interdepartmental Review Committee review of buildings and projects to consider energy and water efficiency, EV readiness, and zero waste strategies Improve climate literacy of County staff
CR2.3: Address and prepare for heat and other climate impacts					
▶▶			Not estimated		<ul style="list-style-type: none"> Address and prepare for heat and other climate impacts in Los Alamos Incorporate extreme heat preparedness and response into the County's emergency management plan or consider developing an emergency heat response plan Implement a neighborhood cooling program, including partnering with local nonprofits and organizations to provide resources and check in on vulnerable residents during extreme heat events Implement County cooling centers for the community in collaboration with community partners Based on the findings from the vulnerability assessment (CR1.1), develop and implement additional adaptation and resilience strategies

Cross-Cutting

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
CC1.1: Develop a sustainable business certification					
▶▶	DPU	<ul style="list-style-type: none"> Resilient Communities Fund BRIC LEDA 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Collaborate with local businesses and relevant partners to develop and promote a certification program or labeling system that recognizes businesses that adopt sustainability measures such as energy efficiency, waste diversion, sustainable landscaping, and sustainable product sourcing As part of the certification program development, define sustainability criteria and guidelines Connect with local business leaders and relevant partners to design the certification program and define sustainability criteria and guidelines Promote this program in conjunction with Los Alamos County Chamber of Commerce
CC2.1: Facilitate equitable public participation in planning					
▶▶	CMO	<ul style="list-style-type: none"> Resilient Communities Fund BRIC NMED Environmental Justice Small Grants Program 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action In addition to providing robust and equitable education to help prepare vulnerable communities for climate impacts (CR1.2), actively seek input from marginalized or vulnerable populations in climate policy-making processes by expanding ESB membership. In Los Alamos, more vulnerable communities may include communities of color, low-income residents, older adults, and non-English speaking residents Identify vulnerable community members, community leaders, and community organizations to collaborate with Convene a community leader group to collaborate with the ESB and plan for engaging vulnerable populations in climate planning

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
CC2.2: Monitor and share climate action progress					
▶▶	CMO	<ul style="list-style-type: none"> Resilient Communities Fund BRIC 	 		<ul style="list-style-type: none"> Consistently monitor CAP implementation progress through an online dashboard or website that provides climate action information and resources to community members, businesses, and partners Work with consultants and/or staff members to design and launch an online dashboard or website to track and display CAP implementation progress and provide climate action information Establish a system for regularly updating data on CAP implementation and annual progress updates Provide annual progress updates to County Council and the ESB Provide regular updates at County Council meetings on plan progress and provide updates to community
CC2.3: Collaborate with local Pueblos					
▶▶	CMO	<ul style="list-style-type: none"> Resilient Communities Fund BRIC CDBG NMED Environmental Justice Small Grants Program 	 		<ul style="list-style-type: none"> Identify staff time and capacity needed to implement action Work with local Pueblos to share resources and ideas on climate change issues, and align with relevant plans such as the Pueblo de San Ildefonso Climate Action Plan Support the County's efforts to build equitable partnerships with local Pueblos through the Progress through Partnering initiative, regional, or one-on-one projects to increase green workforce training offerings, clean energy access, transit, and public safety and wellbeing Initiate meetings and discussions with local Pueblos to exchange resources and ideas on climate change issues Co-develop a plan for partnership and engagement, building off the Progress through Partnering initiative

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps & Other Considerations
CC2.4: Expand community partnerships					
	CMO	<ul style="list-style-type: none"> Resilient Communities Fund BRIC NMED Environmental Justice Small Grants Program 	 		<ul style="list-style-type: none"> Establish a vision for engagement and formalize partnerships with representatives from LANL, local schools, community-based organizations, Chamber of Commerce, and service organizations Through the working group/partnership encourage technology development and innovative solutions to addressing climate challenges Create communication materials to encourage participation, especially targeting community-based organizations representing those most impacted by climate change Identify other pertinent beneficial partnerships for the County including state agencies and regional planning districts that could offer expertise and resources on CAP implementation

Conclusion

This CAP builds on recommendations made by the LARES Task Force and priorities set by County Council to solidify Los Alamos County's commitment to climate action. With this CAP, Los Alamos County has established GHG emission reduction targets of 30% reduction by 2030, 80% reduction by 2040, and carbon neutrality by 2050, compared to 2022 baseline emissions levels. This CAP also includes actions that increase the community's resilience to climate impacts while establishing and expanding partnerships throughout the community.

Actions in this plan will protect our community and minimize negative impacts from natural hazards such as fire, droughts, and flooding. These actions also ensure that Los Alamos County does its part to address this global crisis, which affects everyone on Earth regardless of their individual contributions, including the world's most vulnerable populations. Implementation of this plan will also bring a slew of additional benefits, including reducing energy costs for residents and businesses, improving local air quality, creating more beautiful landscapes, and providing additional mobility options for moving around the county.



Los Alamos County is excited to lead this important work in collaboration with community members and other partners. Taking action on climate change is not just a choice; it's a moral imperative that shapes our future. By acting now, we can safeguard our planet for future generations, ensuring they inherit a world with clean air, stable weather patterns, and thriving ecosystems. Every action we take today, whether it's reducing our carbon footprint, supporting renewable energy, or advocating for sustainable practices, contributes to a healthier and more resilient planet. Together, we have the power to protect vulnerable communities, preserve biodiversity, and create a sustainable and equitable future for all. Joining the fight against climate change isn't just about responsibility—it's about seizing the opportunity to make a positive impact that reverberates across borders and generations.

Appendices

For more details about the analyses and CAP development process, see the following appendices, available on the County's website here: lacnm.com/sustainability.

- Appendix A. Sector-Based GHG Emissions Inventory Report
- Appendix B. Consumption-Based GHG Emissions Inventory Report
- Appendix C. Baseline Policy Assessment Memo
- Appendix D. Zero Waste Strategy
- Appendix E. Survey Summary
 - Survey Summary Appendix A: Survey Questions
 - Survey Summary Appendix B: Open-Ended Responses
- Appendix F. Community Workshop Summary
- Appendix G. Focus Groups and Individual Interviews Summary
- Appendix H. County Commuting Survey Results
- Appendix I. GHG Reduction Strategies Quantification Methodology & Findings
- Appendix J. Implementation Matrix by Timeframe





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