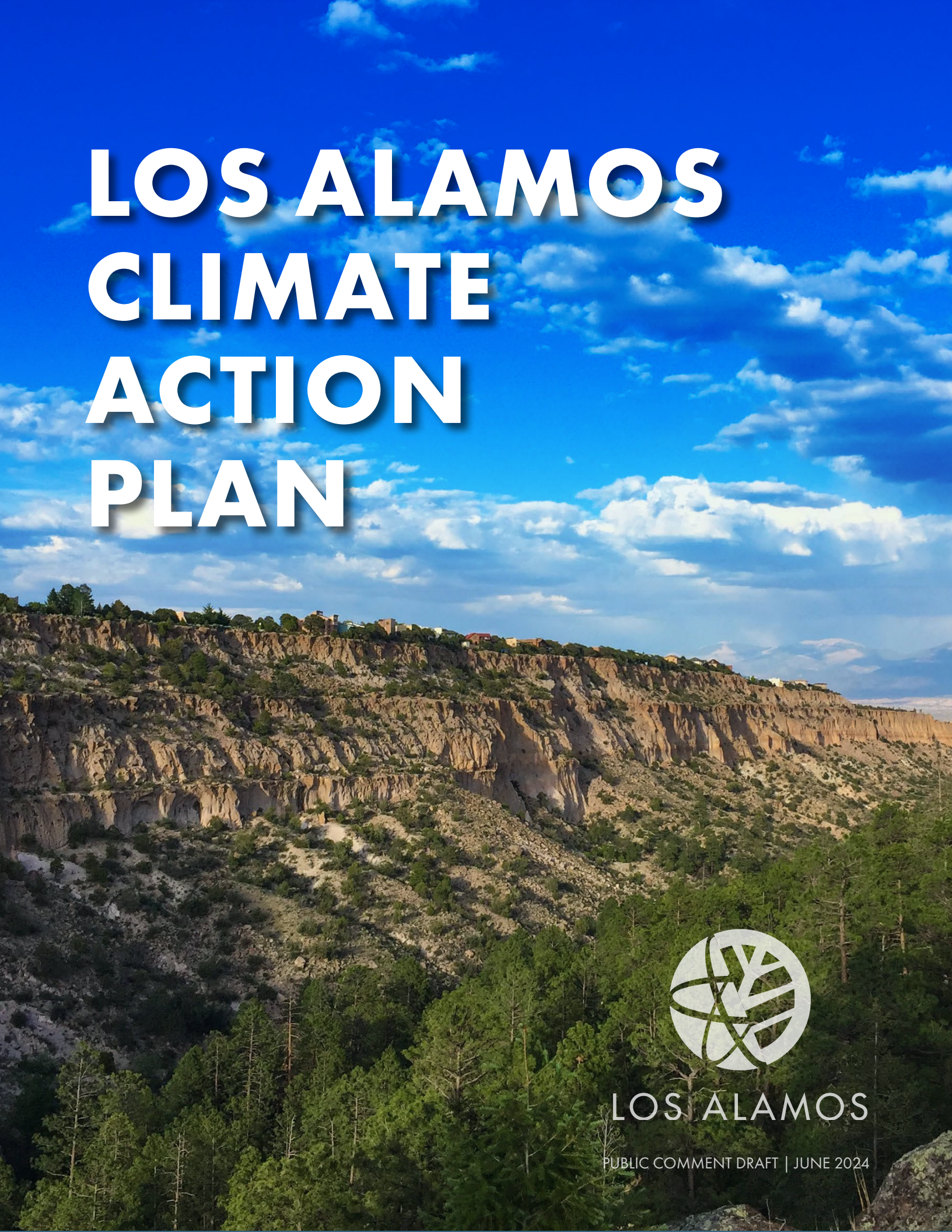

LOS ALAMOS CLIMATE ACTION PLAN

LOS ALAMOS

PUBLIC COMMENT DRAFT | JUNE 2024

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Letter from the County

Letter will be drafted in final version.

Key Terms and Abbreviations

Key terms

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.

Abbreviations

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.
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.
$MTCO_2e$	**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 (CO2), based on the global warming potential (GWP) of the gas.
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 L**os 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.

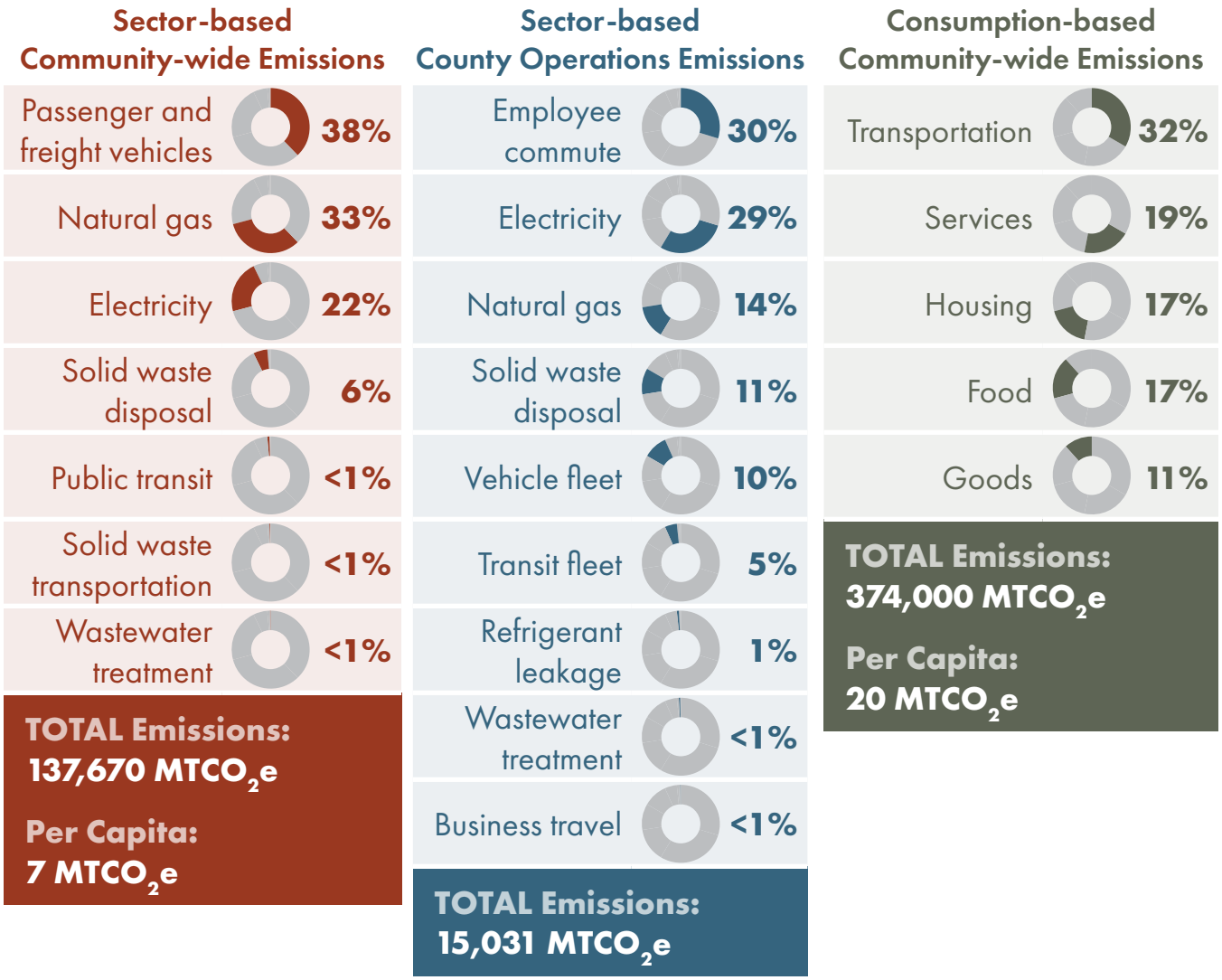
Where Do Our Emissions Come From?

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).

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.

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.



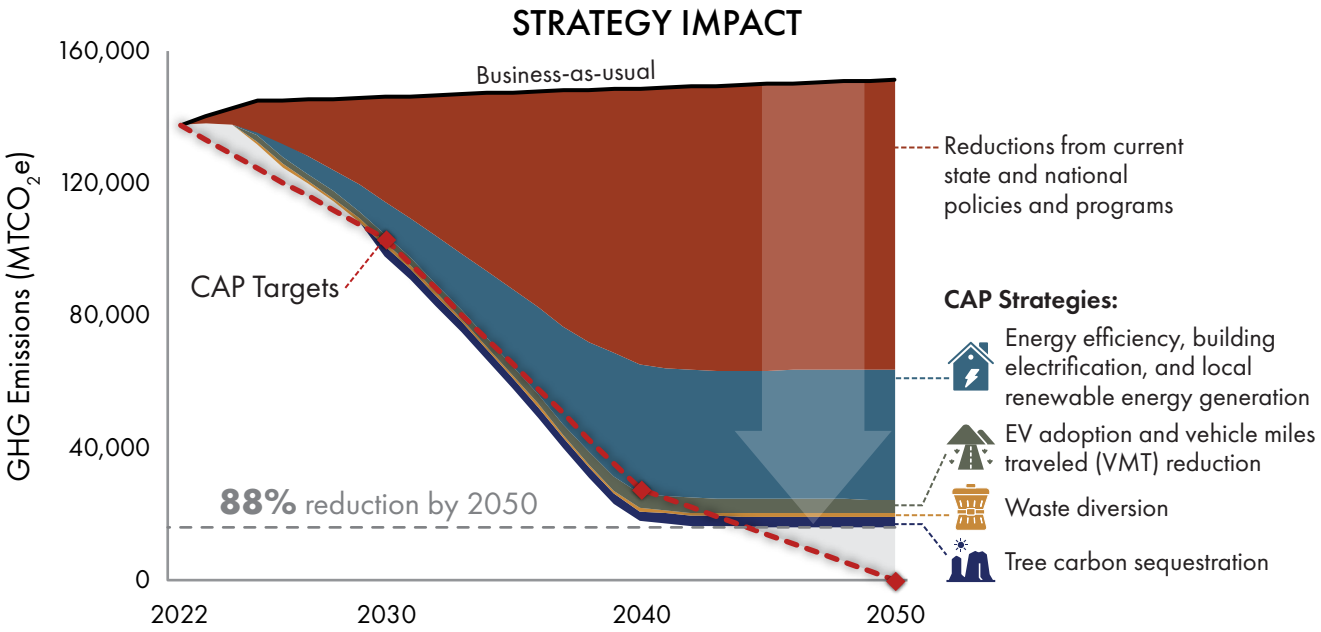
ATTACHMENT B

What will 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 a 2022 baseline). 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.

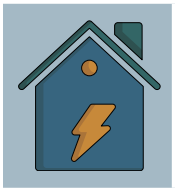
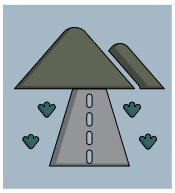
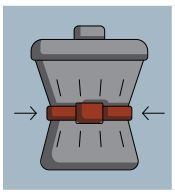
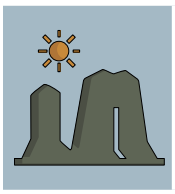
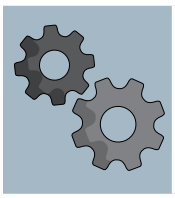
To achieve these targets, both the County government and community members will need to take strides to reduce our carbon footprint through the strategies shown below.



What's needed?

	COUNTY STRATEGIES	EXAMPLE ACTIONS
	Energy efficiency	Encourage energy efficiency and electrification retrofits
	Building electrification	Require electric equipment replacement at burnout
	EV adoption	Develop EV infrastructure plan
	Vehicle miles traveled (VMT) reduction	Expand mixed-use, transit oriented development policies
	Waste diversion	Implement food waste prevention and diversion program
	Tree carbon sequestration	Promote urban forest stewardship and tree preservation

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
	**Buildings & Energy** • Increase building efficiency and decarbonization • Increase renewable energy generation	• Encourage energy efficiency and electrification retrofits • Expand electric energy resiliency
	**Transportation & Land Use** • Expand EV infrastructure and adoption • Expand and promote multi-modal connectivity and sustainable land use planning	• Develop EV infrastructure plan • Expand mixed-use, transit-oriented development policies • Encourage multimodal transportation
	**Materials & Consumption** • Maximize waste diversion	• Expand and refine waste data tracking, reporting, and goals
	**Natural Systems & Water** • Increase urban green space • Conserve water resources	• Promote urban forest stewardship and tree preservation • Provide greywater reuse education
	**Community Resilience & Wellbeing** • Enhance community understanding of climate change • Prepare the community for climate impacts	• Invest in public climate education campaigns • Encourage adaptation upgrades
	**Cross-cutting** • Encourage sustainable businesses • Promote climate education outreach	• 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 L**os Alamos Resiliency, Energy, and Sustainability (LARES) Task Force and a County Council initiative** to address climate change. In its final report,[1] 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."

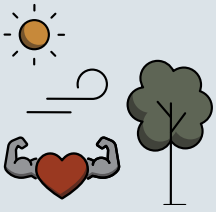
This **Los Alamos County Climate Action Plan (CAP)** represents the next step in implementing this initiative by outlining a vision and roadmap for **reducing greenhouse gas emissions and increasing climate resilience in Los Alamos County**.

1 Los Alamos Resiliency, Energy and Sustainability Task Force Final Report (2022)

Benefits of Climate Action

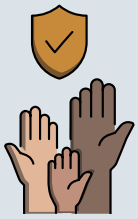
Taking action on climate change can bring benefits for Los Alamos County ecosystems, residents, and businesses. By doing our part, we can protect our local ecosystems and enhance our quality of life.

Improved quality of life & public health



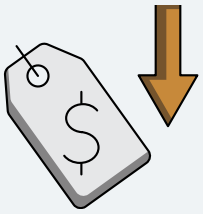
Climate action can contribute to our collective health and wellbeing through clean air, clean water, and a healthy environment.

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 emissions reductions 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.

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:

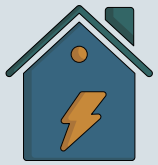
- Los Alamos County Comprehensive Plan (2016)
- Los Alamos Long-Range Water Supply Plan (LRWSP) (2018)
- Los Alamos Integrated Resource Plan (IRP) (2022)
- Los Alamos Resiliency, Energy, And Sustainability (LARES) Report (2022)
- Los Alamos Energy & Water Conservation Plan (2022)
- Los Alamos Strategic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

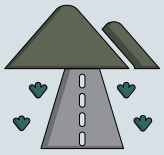
- **Mitigation:** Reducing greenhouse gas emissions from Los Alamos County government and community member activities (100% by 2050 (carbon neutral).
- **Adaptation & Resilience:** Increasing Los Alamos County government and community resilience to climate change impacts such as drought, flooding, wildfire,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

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.

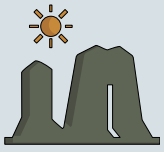


Transportation & Land Use

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 & Wellbeing

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

Cross-Cutting

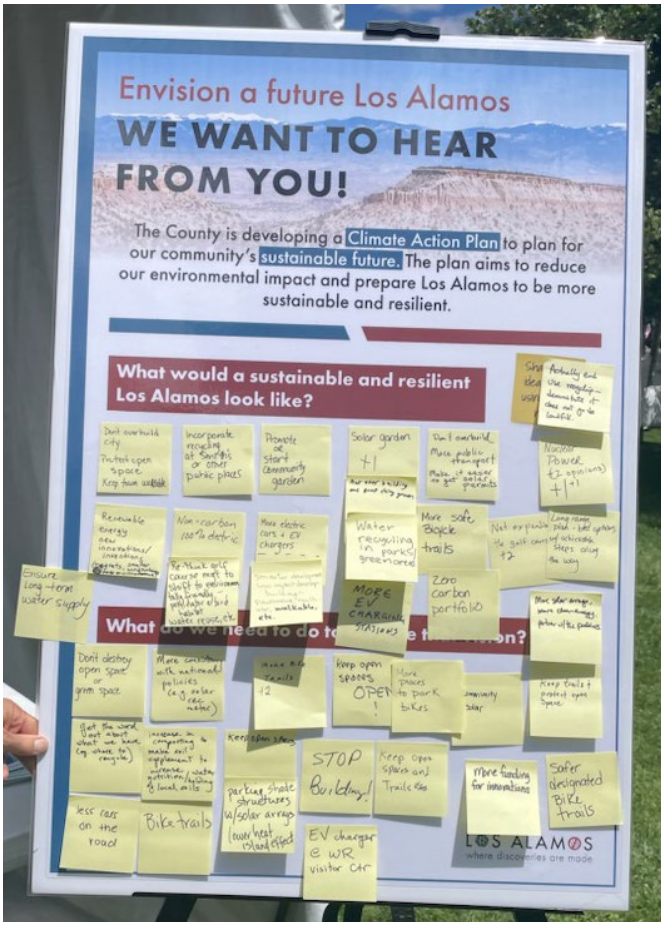
Reduce community-wide greenhouse gas emissions and inspire climate action through outreach, engagement, partnership, and leadership.

How it Came Together

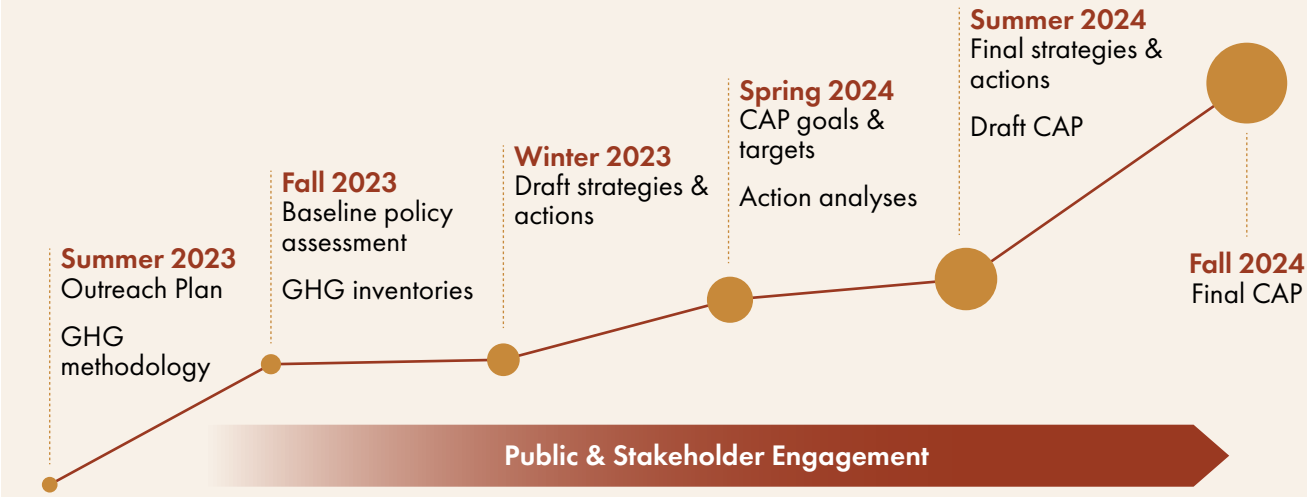
This CAP is built on several key steps and analyses, including:

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

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



CLIMATE ACTION PLAN TIMELINE



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 County stakeholders to gather input and feedback about the CAP. The process included the following key phases:

Phase 1: Raising Profile & Visioning

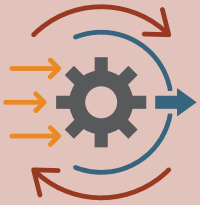
Build awareness about the CAP process and gather priorities, ideas, and concerns

- Community survey
- County Council meeting

Phase 2: Collaborative Planning

Vet and refine proposed strategies and actions

- Community workshop
- County Council meeting
- County staff meeting
- ESB meeting
- Focus groups (3)
- Interviews (9)
- Commuter survey for County Staff



Phase 3: Refinement & Implementation Transition

Solicit feedback on the draft CAP and prepare for implementation

- Public comment review of CAP
- County Council meetings (2)

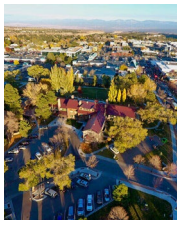
Throughout this process, the planning team sought to integrate racial equity and inclusivity. For example, the County provided a diversity of engagement options, tracked participation demographics, and supported both in-person and virtual attendance to accommodate those with scheduling or transportation 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. 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 the "Appendices".

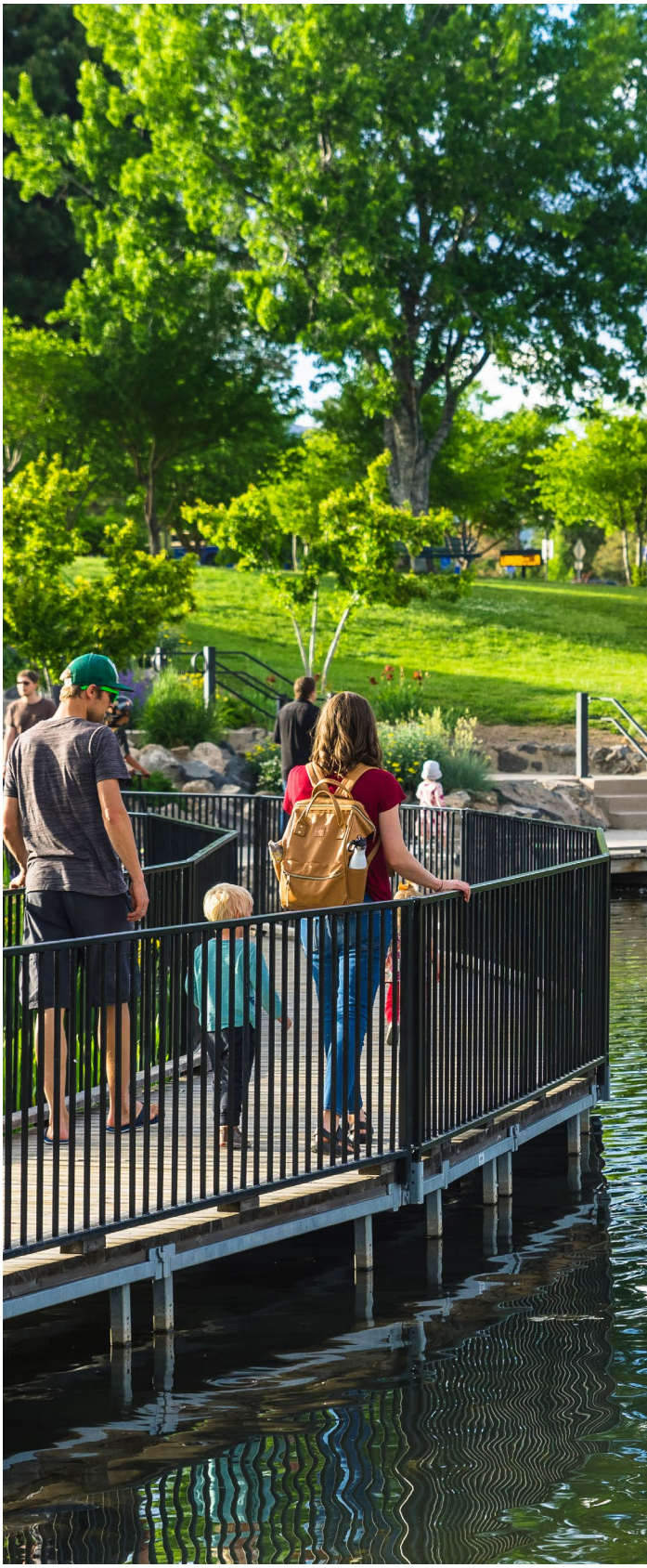
Finalize actions through Council and community input.

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 stakeholders 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. See the "Appendices" 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.[2,3] 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, 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.



2 Climate Policy Initiative: The Cost of Inaction (2024)
3 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 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)
- 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)
- Energy and fuel costs and savings
- Upfront costs for new infrastructure, equipment, or retrofits
- Available tax incentives and rebates

Costs were summarized in net 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 total net present value (NPV) community cost of implementing select CAP actions is equivalent to about **$122 in savings per resident per year** ($3,057 in savings per resident over the 25-year implementation timeframe). Much of these savings to the community are in the form of rebates/incentives and fuel cost savings. 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 selected CAP actions (negative value are net cost savings).

ID	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
BE2.1	Incentivize electrification retrofits	$166,971	($37,081,632)	($36,914,662)	($631,390)	($37,546,051)	($1,869)
BE1.4	Adopt green building standards	$593,664	($23,311,003)	($22,717,339)	($9,508,735)	($32,226,074)	($1,175)
BE1.2	Establish an energy benchmarking program for municipal buildings	$1,132,882	$0	$1,132,882	($685,968)	$446,913	$0
T1.2	Develop EV infrastructure plan	$895,346	$100,746	$996,091	($624,417)	$371,674	$5
T1.4	Transition County fleet to EVs	($1,216,117)	$0	($1,216,117)	($3,613,425)	($4,829,542)	$0
T3.4	Expand non-motorized transportation options and accessibility	$17,146,368	$210,048	$17,356,416	($24,477)	$17,331,939	$11
T3.5	Develop a CTR program	$447,518	$0	$447,518	($195,949)	$251,569	$0
CR1.3	Support the local food system	$372,931	($578,890)	($205,959)	$0	($205,959)	($29)
	Total	**$19,539,562**	**($60,660,731)**	**($41,121,169)**	**($15,284,362)**	**($56,405,531)**	**($3,057)**

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 county has experienced increased frequency and size of wildfires, extreme precipitation and flooding events, and extended drought periods,[4] 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.

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.[5]

Projections indicate a 25% decrease in **surface water runoff and groundwater recharge** over the next 50 years, affecting agriculture and ecosystems across New Mexico.[6]

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.

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.[7]

More frequent and intense **heat waves** 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.

4 Climate Change and the Los Alamos National Laboratory: The Adaptation Challenge (2015)
5 New Mexico Climate Risk Map
6 New Mexico Climate Adaptation and Resilience Plan (2024)
7 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 the "Appendices".

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, Los Alamos County's **community** produced an estimated 137,670 metric tons of carbon dioxide equivalent ($MTCO_2e$), equating to approximately 7 $MTCO_2e$ per-capita.[8] The largest contributors to emissions were community building energy consumption and transportation.

Passenger and freight vehicles	38%
Natural gas	33%
Electricity	22%
Solid waste disposal	6%
Public transit	<1%
Solid waste transportation	<1%
Wastewater treatment	<1%

TOTAL 2022 Emissions: 137,670 $MTCO_2e$

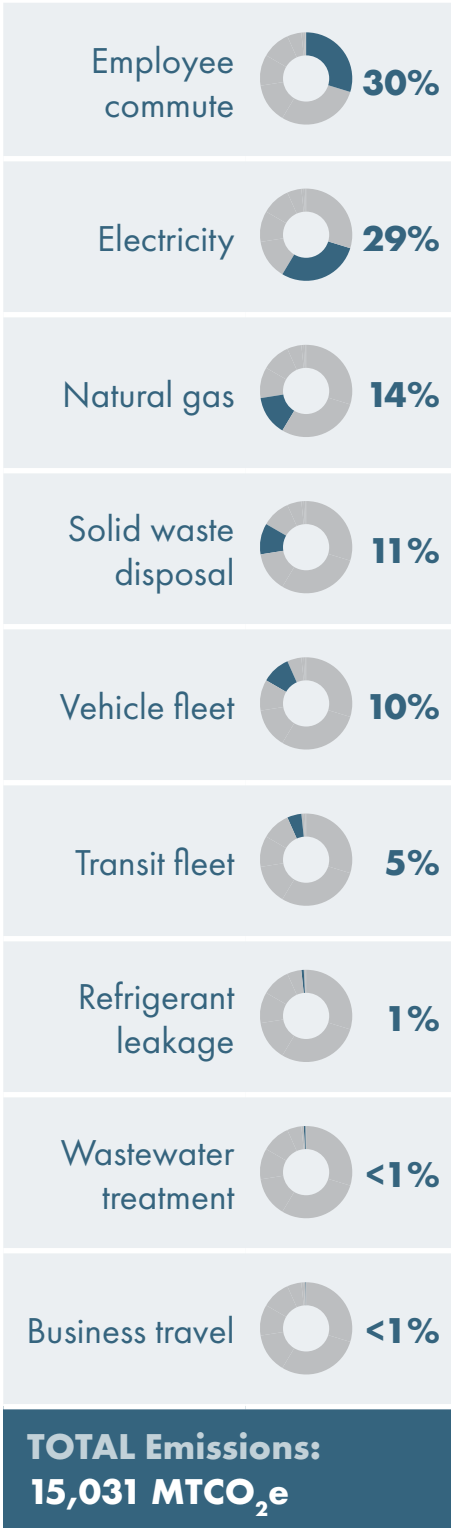
Per Capita: 7 $MTCO_2e$

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

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 $MTCO_2e$ 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

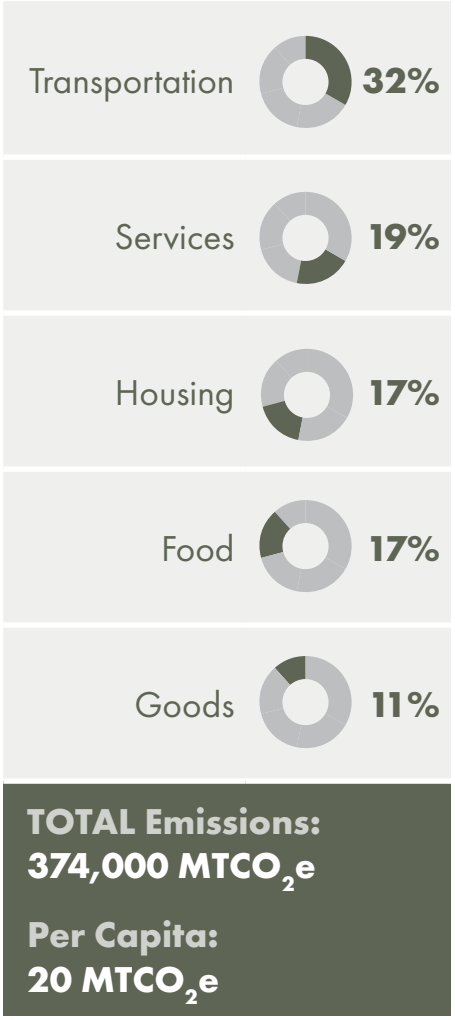
Lastly, Los Alamos County completed a **consumption-based emissions inventory (CBEI)**, estimating the greenhouse gas emissions associated with the household consumption of all residents, including upstream emissions—emissions produced during the production and transportation stages of a product or service.

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 $MTCO_2e$ annually, or about 20 $MTCO_2e$ per person (for comparison, the national average is slightly lower at about 42 $MTCO_2e$ per household annually). With 7,999 households in the county, this is a total of roughly 374 thousand $MTCO_2e$ in 2022 attributable to residents of Los Alamos County. In contrast, the community-wide inventory totaled only 135,997 $MTCO_2e$. 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, but high household income, high vehicle ownership, and high educational attainment are major drivers of consumption-based emissions. For more details about the CBEI methodology and results, see the "Appendices".



Emission Reduction Targets

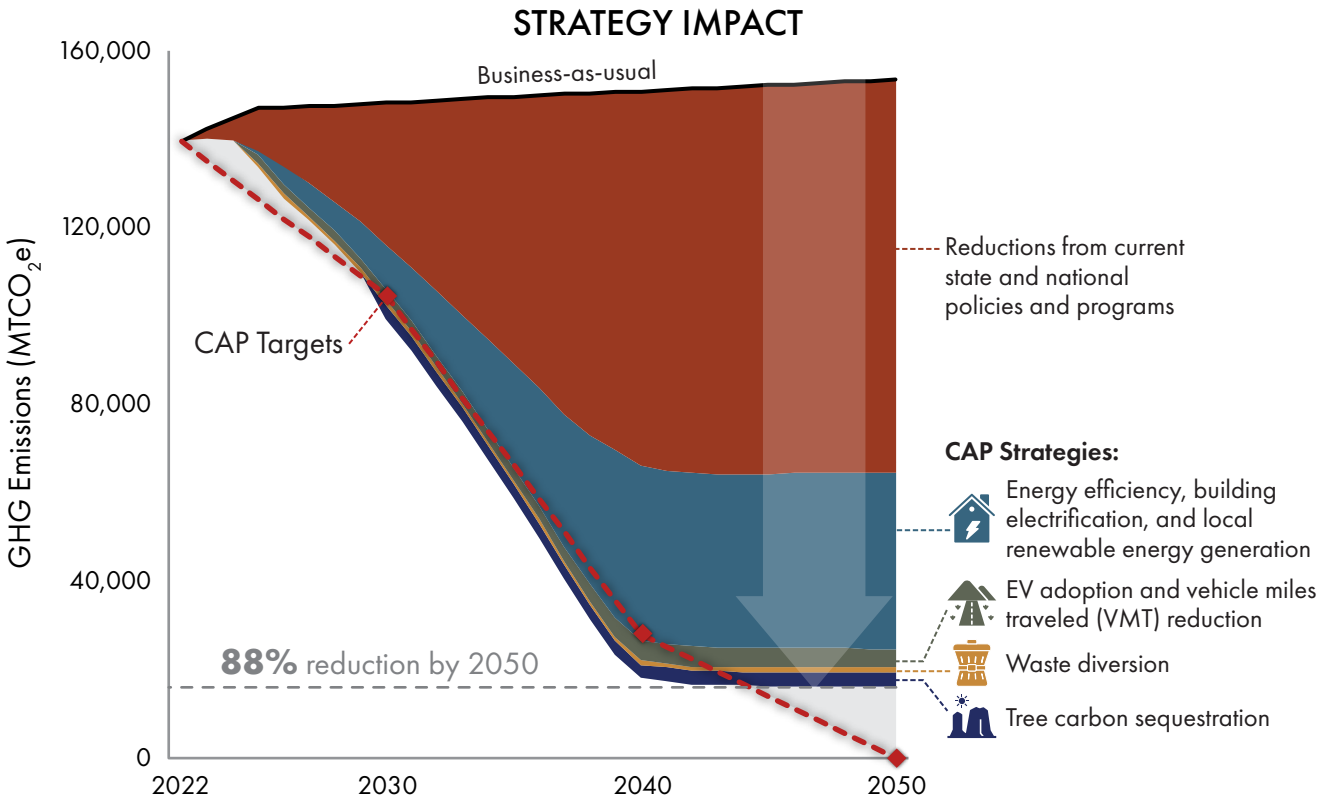
Los Alamos County has established the following GHG emission reduction targets compared to 2022 baseline emissions levels:

- 30% reduction by 2030.
- 80% reduction by 2040.
- 100% reduction (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 Will It Take?

To achieve these targets, both the County government and community members will need to take strides to reduce our carbon footprint. The entire community will 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. This Climate Action Plan aims to encourage and drive these changes through policies, programs, partnerships, and other mechanisms, described in the "Strategies and Actions" section on the following pages.



The need for climate action

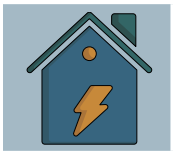
Based on the community-wide GHG inventory, if no action is taken to address climate change, population and economic growth are anticipated to increase GHG emissions by 10% by 2050. However, existing federal, state, and local policies that address climate change will help reduce those future emissions increases—specifically, the policies modeled in this analysis are expected to result in a 54% reduction by 2050 compared to 2022 emission levels. Local action is needed to achieve further emission reductions. **The CAP actions modeled here are expected to reduce community-wide emissions by 88% by 2050 compared to 2022 emission levels.** The remaining 12% reduction will rely on additional federal and state action, technological innovations, regular evaluation of Los Alamos' progress, and consideration of other tools and options beyond actions included in this CAP.

What's needed?

	COUNTY STRATEGIES	EXAMPLE ACTIONS
	Energy efficiency	Encourage energy efficiency and electrification retrofits
	Building electrification	Require electric equipment replacement at burnout
	EV adoption	Develop EV infrastructure plan
	Vehicle miles traveled (VMT) reduction	Expand mixed-use, transit oriented development policies
	Waste diversion	Implement food waste prevention and diversion program
	Tree carbon sequestration	Promote urban forest stewardship and tree preservation

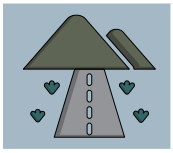
Strategies and Actions

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:



Buildings & Energy

- Increase building efficiency and decarbonization
- Increase renewable energy generation

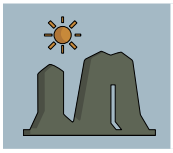


Transportation & Land Use

- Expand EV infrastructure and adoption
- Expand and promote multi-modal connectivity and sustainable land use planning

Materials & Consumption

- Maximize waste diversion

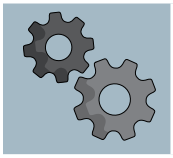


Natural Systems & Water

- Increase urban green space
- Conserve water resources

Community Resilience & Wellbeing

- Enhance community understanding of climate change
- Prepare the community for climate impacts



Cross-cutting

- 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 following icons indicate the scope of each action:

Community

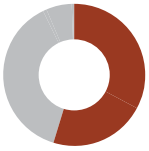
County government operations

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 including 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 (Leadership in Energy and Environmental Design) LEED 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 the Utilities Assistance Program, 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 decarbonzation

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 argument 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 an 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 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.

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.

LARES Task Force recommendation alignment: (CP-3) Educate property owners on potential energy-saving renovations to their buildings; and (NG-11) Make energy audits and other relevant information available to property owners through County government.

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.

This action supports LARES recommendations and BPU's goal to phase out natural gas by 2070, which is the leading source of building energy emissions in the county.

BE1.5: Develop a contractor training program

Identify, support, and/or develop free training programs and resources for local and regional contractors, design professionals, and County staff (i.e., plan reviewers, building inspectors, and project managers) 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

Develop policies and programs that will result in replacement of fossil fuel appliances and equipment at the end of their useful life in residential and commercial buildings. Policies and 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. Policy options include:

- Restrictions on local sale of gas-powered appliances/systems such as furnaces and water heaters.
- Requirements for end-of-life replacement of gas-powered equipment with efficient, electric equipment for homes and businesses.

LARES Task Force recommendation alignment: (CP-2) Advocate for change or clarification of the NM Anti-Donation Clause to allow local governments to provide incentives for energy reduction projects.

Strategy BE2: Increase renewable energy generation

BE2.1: Promote local renewable energy

Support local and statewide standards for community solar programs, micro-grid establishment, and grid modernization. This may include:

- Continuing to work with DPU to plan for enhanced distributive energy goals and assist with rooftop distributed solar installation by installing net meters to reduce energy costs.
- Advocating for the development of regional or statewide standards, policies, or resources that advance community solar programs, including those that establish solar micro-grids (localized energy systems) or provide 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:

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

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 considered 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 by engaging with non-profit service providers who oversee daily operations of affordable 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.

LARES Task Force recommendation alignment: (TM-9) Convert municipal small engines, lawn/garden equipment, and golf carts, to be fossil fuel free within ten years.

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 Electric 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.

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

LARES Task Force recommendation alignment: (TM-3) Increase publicly accessible electric vehicle charging infrastructure.

T1.3: Implement codes requiring EV infrastructure

Implement new building codes to incentivize 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

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.

LARES Task Force recommendation alignment: (TM-4) Increase the number of electric vehicles in the County fleet by at least two per year, eventually making 100% of light duty (passenger cars and trucks) plug-in electric.

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 Work 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

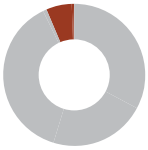
Develop a commute trip reduction (CTR) program for County employees that builds on the "Drive Less Los Alamos" Walk, Bike, Ride, Carpool Initiative, which may include:

- 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)



6% of community-wide emissions

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 adjusted rates and 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.

ESD is set to launch a food scrap collection program for residents to drop off their food scraps for free at the Eco Station and curbside collection for commercial businesses for no additional charge. 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 2016, the County recycling rate was 24%.
- Achieve 75% diversion of construction and demolition (C&D) materials and debris (waste) by 2020. As of 2016, the County C&D waste diversion rate was 83%.
- Receive an excellent or good rating from at least 75% of respondents in a survey for quality of residential recycling services. As of 2016, 89% 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 (EPP) for all County government agencies and departments. As part of this, develop and define EPP criteria and decision-making processes.

LARES Task Force recommendation alignment: (WCNR-2) Reduce consumption-associated greenhouse gas emissions through sustainable purchasing and consumption/ disposal of food, goods and services.

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

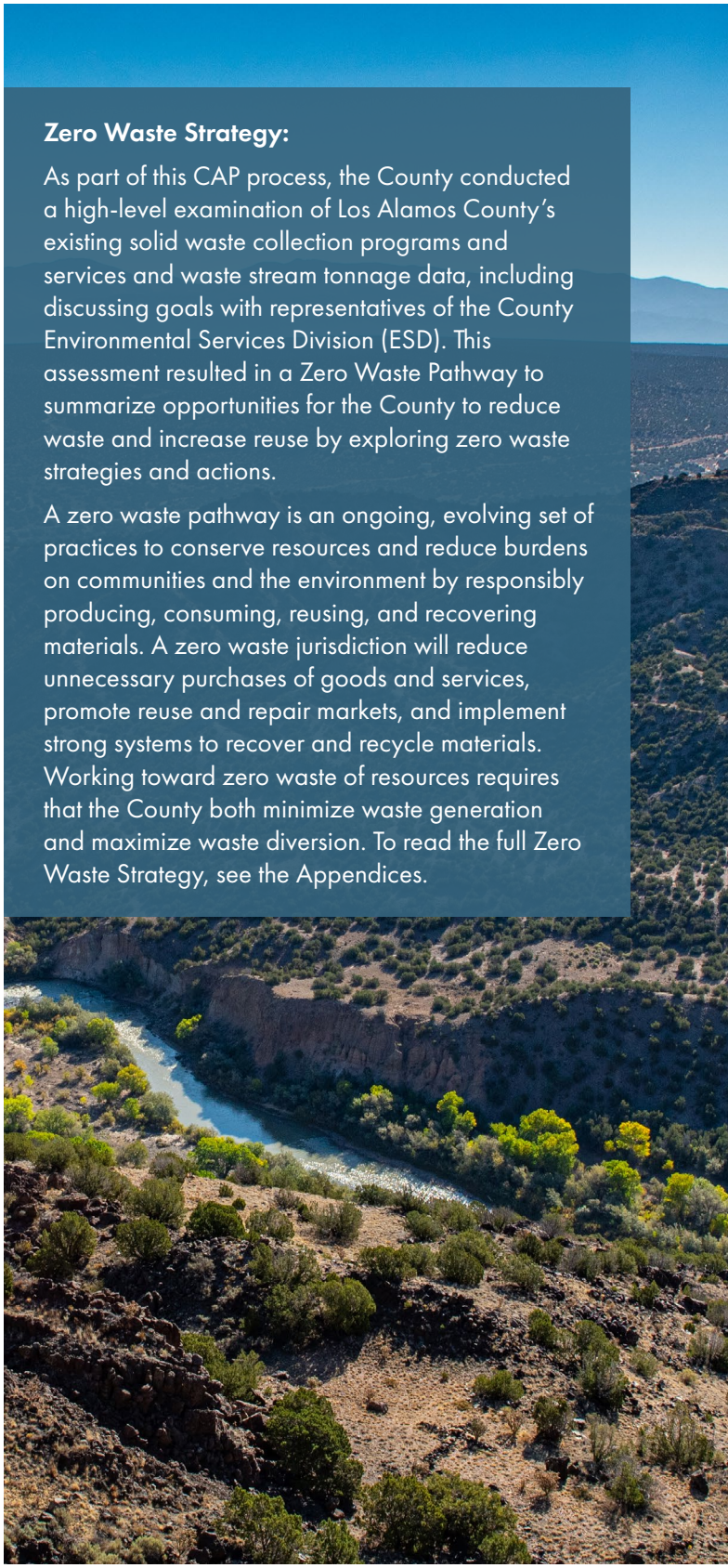
Building on current work, expand waste data tracking and reporting methods to establish new goals, including new zero waste targets and management plan. This includes:

- 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 the Appendices.



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, NGOs, 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, and grocery stores such as Gaia's Pantry 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.
- 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 has an internal policy on tree preservation and mitigation under the County's Parks and Recreation Plan. 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 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 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.

Community Resilience & 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 2023 Hazard Mitigation Plan and 2022 LANL Climate Change Vulnerability Assessment and Resilience Plan (VARP), which 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 community groups and businesses such as the Los Alamos High School EcoClub.

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 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).

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' (BPU) commitment to becoming a net-zero electricity provider by 2040 in 2013, the ESB's 2017 Sustainability Plan, and the County's hire of a dedicated sustainability staff to facilitate climate action plan development and provide ongoing outreach for the CAP in 2022. 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 relevant stakeholders 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 the County's Small Business Center.

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

LARES Task Force recommendation alignment: (GR-7) Form a partnership with LANL and the Los Alamos Public Schools with the specific intention of collaboration on greenhouse gas reduction.

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. If you're a renter, look into opportunities to purchase renewable energy, or 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.

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
  - Previous program to help small businesses save in three areas—transportation, building and site. The website is not available but AMM Consulting can provide sample documents to the County.
- Examples of utility incentives for energy efficiency
  - El Paso Electric Company
  - Tri-State Generation and Transmission Association Programs for Rural Electric Cooperatives
  - Xcel Energy Programs
  - PNM Reduce Your Use Grants (PNMR Foundation)

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.		= 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.		= 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	**IIJA:**	Infrastructure Investment and Jobs Act	**PNM:**	Public Service Company of New Mexico
BRIC:	Building Resilient Infrastructure and Communities	**DOE WARP:**	Department of Energy Weatherization Assistance Program	**IRA:**	Inflation Reduction Act	**PPRF:**	Public Project Revolving Fund
CDBG:	Community Development Block Grant	**EMNRD:**	Energy, Minerals, and Natural Resources Department	**LEDA:**	Local Economic Development Act	**TAP:**	Transportation Alternatives Program
CIG:	Conservation Innovation Grants	**HEEHRA:**	High-Efficiency Electric Home Rebate Act	**NEVI:**	National Electric Vehicle Infrastructure		

Immediate

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	• IRA • New Mexico Clean Energy Grants • PNM			• Identify necessary staff time to devote to program development; secure funding for delivering free energy audits • Identify potential partners and gaps to supplement existing County programming • Educate property owners on potential energy-saving renovations to their buildings • Identify and compile list of existing incentives, funding sources, resources, and information • Develop education 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) • Develop energy audit program, starting with a pilot program if appropriate; purchase additional DIY energy audit tools such as thermal cameras	

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
BE1.4: Adopt green building standards						
▶	Lead: CDD Support: CMO Sustainability Manager	• Green Building tax incentives • IRA			• Identify necessary staff time to devote to implementation of action • Research and decide on standards to adopt, based on noted examples, conversations with stakeholders and County staff, and Council direction • 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 • Develop education program, including developing promotional/educational materials	Consider combining outreach and education efforts with BE1.1 and BE1.3, as appropriate
T1.1: Promote EV adoption						
▶	CMO	• [NEVI Formula Program • IRA • New Clean Vehicle Tax Credit			• Identify necessary staff time to devote to implementation of action • 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 transition plan for municipal small engines to be fossil free within ten years	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	• NEVI Formula Program • IRA Charging and Fueling Infrastructure Grant Program			• 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 • 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 stakeholders 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	
T2.1: Expand mixed-use, transit-oriented development policies						
▶	CDD	• TAP			• Identify necessary staff and partners to involve, and determine the staff time needed to implement this action • 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	

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
T2.6: Develop a CTR program						
▶	CMO				• 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	
CR1.1: Conduct a vulnerability assessment						
▶	CMO/PD (Emergency Management Commander)	• New Mexico Climate and Conservation Fund • Resilient Communities Fund • BRIC • HMGP • PPRF			• Identify staff time and capacity needed to conduct the assessment • 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 nmclimaterisk.org Consider incorporating climate emergency/ public health planning into existing plans

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
CC2.4: Expand community partnerships						
▶	CMO	• Resilient Communities Fund • BRIC • NMED Environmental Justice Small Grants Program			• Establish a vision for engagement and formalize partnerships with representatives from LANL, local schools, and community-based organizations • 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	Potential partners: • LANL • Los Alamos Public Schools

ATTACHMENT B

Near-Term

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			• Identify necessary staff time to devote to program development; secure funding for assessments, upgrades, monitoring, and maintenance • Develop benchmarking criteria through research of similar programs and discussions with stakeholders/County staff • Determine next steps for ROI assessments; identify all relevant County-owned buildings • Develop building performance dashboard; research options and discuss with County IT/communications teams	Explore resources from the ENERGY STAR® Portfolio Manager®
BE1.5: Develop a contractor training program						
▶▶	Lead: CDD Support: CMO and DPU	• Green Building tax incentives • IRA			• Identify necessary staff time to devote to program development • Reach out to potential partners to understand training needs and partners' interest in collaborating on the program development or implementation • Develop training priorities and program content, based on needs identified by partners, stakeholders, and local contractors • Connect with Santa Fe Community College and the NM Energy, Minerals and Natural Resources for information on existing programs	Consider combining outreach and education efforts with BE1.1 and BE1.3, as appropriate

ATTACHMENT B

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
BE1.6: Require electric equipment replacement at burnout						
▶▶	CDD	• IRA	$$ 🍃🍃🍃	👥	• Identify staff time and capacity needed to implement action • Conduct peer city research on similar natural gas equipment restrictions • Consult with contractors and building owners on replacing natural gas equipment with electric • Draft policy to limit natural gas equipment sales • Educate the public on the policy and 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	

ATTACHMENT B

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
BE2.1: Promote local renewable energy						
▶▶	Lead: DPU Support: CMO	• HEEHRA • IRA • Solar Market Development Tax Credit • EMNRD Renewable Energy Production Tax Credit • New Mexico Clean Energy Grants			• Determine staff time and capacity needed to promote this action • Facilitate dialogue with DPU, utility companies, solar energy providers, and community organizations to highlight the benefits of micro grids and grid modernization through workshops and social media • Identify sites that are suitable for renewable energy pilot-projects. Consider areas with high energy costs or those that would benefit most from distributive energy solutions • Understand current renewable projects or installments, and assess current county regulations related to solar energy and micro-grids • Identify existing grants, loans, and financial assistance programs to incentivize solar	

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
T1.4: Transition County fleet to EVs						
▶▶	PW	• Clean Heavy-Duty Vehicles Program • NEVI Formula Program • IRA			• 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)	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
T2.2: Continue public transit education campaign						
▶▶	PW/CMO	• CMAQ	$$ 🍃🍃		• Identify necessary staff time to design and implement educational campaign • Develop, review, and understand key performance metrics for community engagement • Partner with Atomic City Transit to develop educational materials such as brochures and videos, to provide through various media channels to ensure the community is informed about the benefits and usage of public transit	
T2.3: Advocate and partner regionally to improve transit network						
▶▶	PW	• The I-40 TradePort Corridor • IIJA	$$ 🍃🍃🍃		• Identify staff time and capacity needed to implement action • 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	Partners: Atomic City Transit, LANL, Los Alamos Public Schools, North Central Regional Transit District, and NM Park and Ride
T2.5: Expand non-motorized transportation options and accessibility						
▶▶	PW	• DOT Transportation Infrastructure Finance & Assistance • IIJA	$$ 🍃🍃		• Identify staff time and capacity needed to implement action • 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
MC1.1: Promote circular economy practices						
▶▶	Lead: PW – ES Support: CMO	• CPRG	$		• Identify staff time and capacity needed to implement action • Conduct peer city research on circular economy practices • Develop and vet an EPP for County operations in partnership with key County staff • 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		$$		• Identify staff time and capacity needed to implement action • Assess current waste characterization for gaps in material types and sectors • Develop an updated material list for waste characterization	
MC1.3: Implement food waste prevention and diversion program						
▶▶	Lead: PW Support: CMO	• USDA (Food waste reduction program)	$$		• Identify staff time and capacity needed to implement action • 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 (i.e., restaurants, multifamily buildings)	

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
NS1.1: Promote urban forest stewardship and tree preservation						
▶▶	CSD	• Urban & Community Forestry Program	$		• Identify staff time and capacity needed to implement action • 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	
NS2.2: Develop a water security strategy						
▶▶	DPU	• The Drinking Water State Revolving Loan Fund • IIJA • BIL • NMED Water Quality Grant Program	$$		• Determine staff time and capacity needed to conduct water risk assessment • 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	

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
NS2.3: Encourage sustainable landscaping and water conservation						
▶▶	DPU	• Native Plant Society of New Mexico • CIG • NMED River Stewardship Program • NMED Water Quality Grant Program			• Identify staff time and capacity needed to implement action • Establish a system that tracks water usage and other useful metrics • Explore options for rebate programs that provide assistance in water efficiency landscape practices such as replacing grass with turf • Research and consider implementation of a smart meter program for water customers • 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)	
CR2.1: Encourage adaptation upgrades						
▶▶	CMO	• Resilient Communities Fund • BRIC • DOE WAP • DOE EECBG • New Mexico Clean Energy Grants			• Form a planning team with key County staff to identify and manage grants to offer rebates/incentives • 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	

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
CC1.1: Develop a sustainable business certification						
▶▶	DPU	• Resilient Communities Fund • BRIC • LEDA			• Identify staff time and capacity needed to implement action • Connect with local business leaders and relevant stakeholders to design the certification program and define sustainability criteria and guidelines • Develop sustainability criteria and guidelines for the certification program	
CC2.1: Facilitate equitable public participation in planning						
▶▶	CMO	• Resilient Communities Fund • BRIC • NMED Environmental Justice Small Grants Program			• Identify staff time and capacity needed to implement action • 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	• Resilient Communities Fund • BRIC			• Determine if there is in-house capacity to develop a plan. If not, hire a consultant • 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 regular updates at County Commission meetings on plan progress and provide updates to local media	
CC2.3: Collaborate with local Pueblos						
	CMO	• Resilient Communities Fund • BRIC • CDBG • NMED Environmental Justice Small Grants Program			• Identify staff time and capacity needed to implement action • 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	

Mid-Term

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	• IRA • LEDA	$		• Identify necessary staff time to devote to program development • Identify and formalize relationships with community partners, such as the Los Alamos Chamber of Commerce, to help develop and promote a program • Identify and compile list of existing incentives • Develop education program, including developing promotional/educational materials and identifying priority businesses and buildings • Develop benchmarking criteria through research of similar programs and discussions with stakeholders	Resources: Business energy efficiency program through NM State University
T1.3: Implement codes requiring EV infrastructure						
▶▶▶	CDD	• NEVI Formula Program • IRA • Charging and Fueling Infrastructure Grant Program	$$		• Identify staff time and capacity needed to implement action • Research current EV infrastructure code and identify areas for improvement • Collaborate with relevant stakeholders, including developing and distributing guidelines and resources for contractors and developers to facilitate compliance with new EV readiness and charging infrastructure requirements • Explore codes to require EV readiness for single-family homes and a proportion of EV chargers for multi-family developments and commercial builds • Determine proportion of EV chargers to units needed per multi-family development	

ATTACHMENT B

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
T2.4: Encourage multimodal transportation						
▶▶▶	CDD	• ATTAIN • IIJA	$$ 🍃🍃		• Identify staff time and capacity needed to implement action • Develop educational resources for property owners, which could include flyers, brochures, and webinars • Develop outreach campaign plan for providing educational materials and resources to property owners • Explore land use code update options; research peer jurisdiction examples	
MC1.6: Implement the zero waste strategy						
▶▶▶	PW	• Recycling and Illegal Dumping Grant	$$ 🍃🍃		• Identify staff time and capacity needed to implement action • 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	
NS2.4: Provide greywater reuse education						
▶▶▶	DPU	• BIL	$ 🍃🍃🍃		• Identify staff time and capacity needed to implement action and identify funding needed for rain barrel purchases • Develop educational materials • Collaborate with community groups to share educational materials	

Ongoing

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
BE2.2: Expand electric energy resiliency						
↻	DPU	• IRA • IIJA • House Bill 233, Energy Grid Modernization Roadmap	$$$ 🍃🍃🍃	🏛	• Identify staff time and capacity needed to implement action • Research options, steps, and potential challenges to increase battery storage usage so that energy from renewables can be stored and used during peak hours • Explore establishment of microgrids within the systems for energy redundancy and security	
MC1.5: Conduct recycling and composting outreach and education						
↻	PW		$$ 🍃	👥	• Identify staff time and capacity needed to implement action • Develop "what goes where" guides and signage to provide to businesses and residents and post online • 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	County Council allocated funding during FY25 budget cycle for outreach, education and marketing for greenhouse gas emissions reductions.

Timeframe	Lead	Funding	Relative Cost & Impact	Scope	Immediate Next Steps	Other Considerations
NS2.1: Promote green stormwater infrastructure and low-impact development						
↻	CDD/PW	• BIL • IIJA • NMED River Stewardship Program • CIG	$$		• Identify staff time and capacity needed to implement action • 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 • 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
CR1.2: Invest in public climate education campaigns						
↻	CMO	• Resilient Communities Fund • BRIC	$		• Identify staff time and capacity needed to implement action • 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	Potential partners: • Pajarito Environmental Education Center • Los Alamos High School Eco Club 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	• Resilient Communities Fund • BRIC • NMED Environmental Justice Small Grants Program	$		• Identify staff time and capacity needed to implement action • 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 • Promote the Los Alamos Farmers Market on the County's website and social media and at County events	Potential partners: • LA Cares • Farmers market and gardening groups Local food banks and food retailers

ATTACHMENT B

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 100% reduction (carbon neutral) 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.

- Sector-Based GHG Emissions Inventory Report
- Consumption-Based GHG Emissions Inventory Report
- Baseline Policy Assessment Memo
- Zero Waste Strategy
- Survey Summary
  - Survey Summary Appendix A: Survey Questions
  - Survey Summary Appendix B: Open-Ended Responses
- Community Workshop Summary
- Focus Groups and Individual Interviews Summary
- County Commuting Survey Results
- GHG Reduction Strategies Quantification Methodology & Findings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