Climate Action Plan Update

Los Alamos County Council Meeting | November 12, 2024

Project Team

County

Angelica Gurule
Sustainability Manager

Linda Matteson
Deputy County Manager

Cascadia Consulting Group

Andrea Martin
Project Manager

Alicia Fennell
Deputy Project Manager

Jenna Decker
GHG Emissions & Strategy Lead

AMM

Amy Miller
Outreach & Engagement Lead

EcoDataLab

Ben Gould
Consumption-Based Inventory Lead

Meeting Goals

Provide an update on the draft Climate Action Plan (CAP) public comment period and public awareness campaign.

Provide an overview on the final climate action plan.

Outline next steps in the CAP process, including adoption of CAP and 2050 target to achieve carbon neutrality.

Project Update

Project Update

- **Since the July Council meeting…**
  - Public Comment Period was open from July 9th – August 9th
  - Launched Public Awareness Campaign
  - Reviewed public comments
  - Integrated feedback into the final Climate Action Plan

Public Awareness Campaign

Public Awareness Campaign

- County Line
  - 2,475 subscribers
- Press Release
  - Announcing public comment period
  - Reminder Press Release
- Farmer's Market
  - July 11th, 18th, 25th and August 1st
  - ~157 engagements
- Board of Public Utilities Meeting
  - July 17
  - 5 engagements
- ESB Meeting
  - July 18th
  - ~7 engagements
- Summer Concert
  - July 26
  - 11 engagements

Public Awareness Campaign

Weigh in on Los Alamos County's Climate Action Plan

Los Alamos County has released a draft of its new Climate Action Plan and wants to hear what the public has to say, since so many Lab employees live near or in the county.

The plan outlines "a vision and roadmap for reducing greenhouse gas emissions and increasing climate resilience in Los Alamos County," the document says, and represents the next step in the county's more formalized effort to address climate change.

The document is available online.

Members of the public can comment directly on the document or by emailing angelica.gurule@lacnm.us. The county is accepting comment through **Aug. 9**.

Questions, comments or feedback? Contact the News team (lanltoday@lanl.gov).

- Los Alamos County Social Media Platforms
  - YouTube (28 views)
  - Facebook Video (321 Reach & 322 plays)
  - Post (1,209 Reach & 1,522 impressions)
  - Reminder Post (455 reach and 466 impressions)
- Shared with following:
  - LANL employees
  - All County employees (700+)
  - Former LARES Task Force
  - All Boards and Commission Members (78)
  - Chamber of Commerce
  - Los Alamos Public Schools
  - League of Women Voters
  - Individuals who participated in 1:1 interviews for CAP

Public Awareness Campaign

- PEEC Nature Notes
  - 5,903 email subscribers
- Los Alamos Daily Post (Print)
  - 2 weeks
  - 9,300 copies delivered to every home and business in town
- Los Alamos Daily Post (Digital)
  - 4 weeks
  - 416,573 Impressions
  - 140 Clicks
- Next Door
  - July 11th, 16th, 22nd
  - ~5,875 impressions

Public Comment on Draft CAP

Public Comment Responses

There were a total of 520 comments received via Konveio, email, social media, and local media op eds, and ESB and BPU meeting were consolidated

~75 individual commenters

What We Heard

This is an excellent plan, developed over years with input from the community. I support it fully. Thank you County Staff and Government, all the Boards and volunteers, for developing our Climate Action Plan.

This "climate action" plan is arrogant. To think we have a significant effect on the climate is absurd.

This will be a large expense to homeowners due to the cost associated with running additional electrical circuits and potentially sub panels in order to implement these changes. We already struggle to get contractors to work in Los Alamos county for reasonable prices. All these suggested changes just add cost to the residents.

While I'm 120% in favor of electrification and very strong climate action, this will run into issues with homes already having maxed out service panels

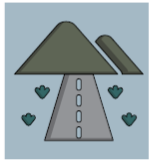
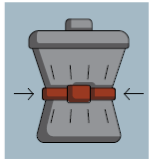
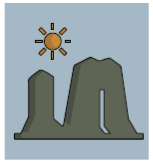
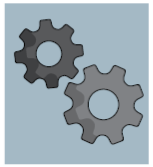
No mandates. None.

Key Themes and Sentiments

- Support for Climate Action
- Concerns about Feasibility
- Skepticism and Opposition
- Request for Clarity and Detail
- Concern about Local Infrastructure and Practical Solutions
- Health and Equity Concerns
- Support for Community Engagement and Education
- Concerns regarding Technical and Policy Challenges

Feedback by Focus Areas

Focus Areas

	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

Buildings and Energy

Pros

- Support for Renewable Energy
- Support for Energy Efficiency in new buildings
- Support for moving away from natural gas to electrification of homes and buildings

Cons

- Concerns about cost of electrification and switching from natural gas to electric systems
- Concerns about skilled contractor availability
- Concerns about strain on the electric grid

Transportation and Land Use

Pros

- Support for bicycle infrastructure, expanding bike lanes and creating safe bike routes.
- Support for enhancing public transportation and electrifying the bus fleet

Cons

- Concerns about the difficulty of reducing transportation emissions from commuting into the County for work
- Concerns about safe bicycle infrastructure
- Concerns were raised about the cost of EV charging stations

Materials and Consumption

Pros

- Support for expanding recycling and composting programs
- Support for Zero Waste initiatives such as reducing single-use plastics and food waste, and implementing community education

Cons

- Concerns regarding the cost for residents associated with zero waste policies
- Commenters questioned the relevance of including support for farmers' markets in the climate action plan

Natural Systems and Water Resources

Pros

- Residents emphasized the importance of protecting forests and open spaces
- There is broad support for water conservation efforts, including greywater systems and rain harvesting

Cons

- Some concerns about the County's greywater policy and the need for it to be more comprehensive
- Concerns about watering the golf course are seen as inconsistent with climate goals

Cross Cutting Issues (Education, Equity & Policy Coordination)

Pros

- Strong support for expanding climate education efforts, particularly in schools and the community
- Many comments emphasize the need for equitable implementation of climate initiatives

Cons

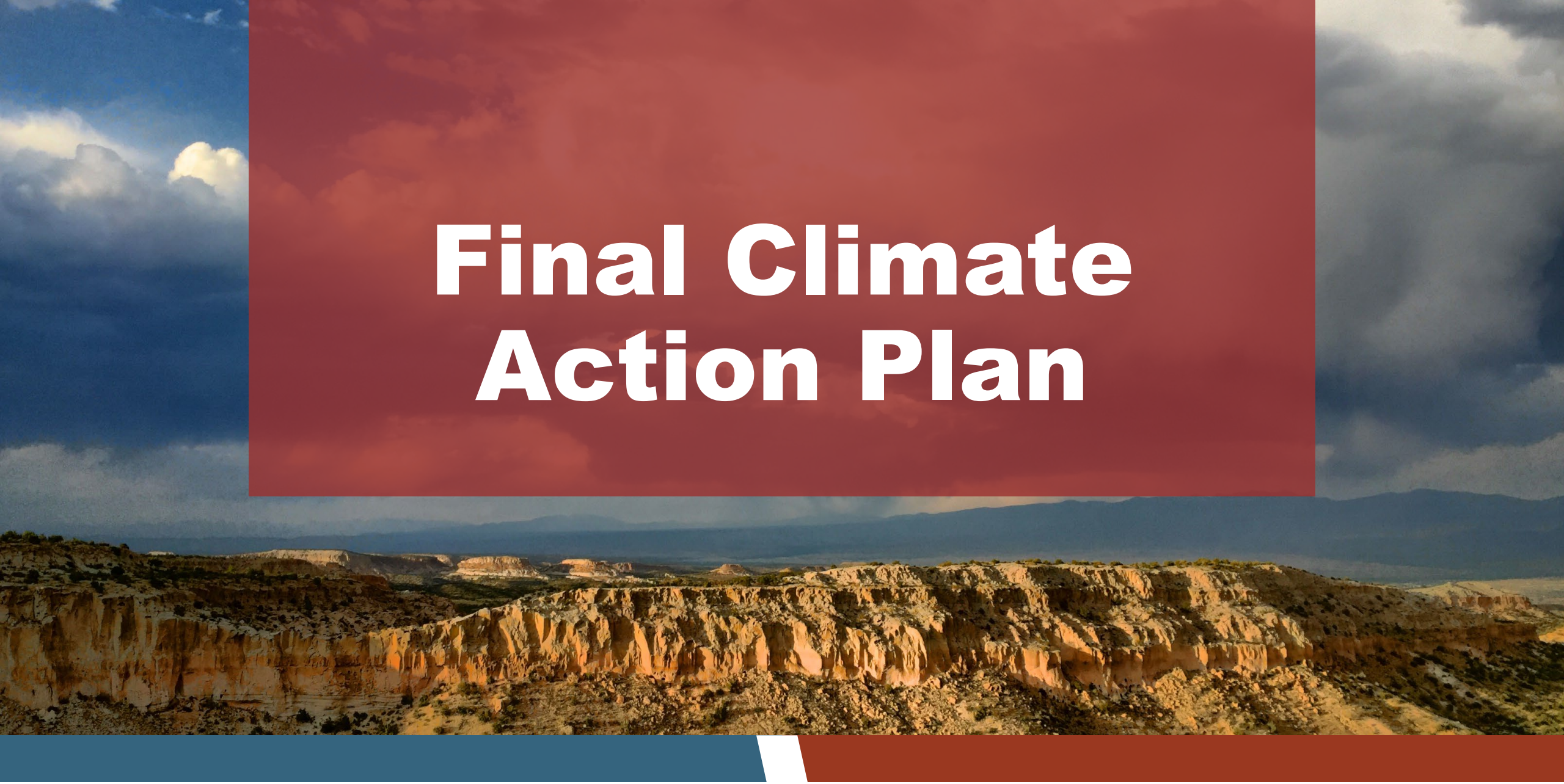
- The anti-donation clause is cited as a barrier to providing financial incentives for residents to make energy-efficient upgrades
- Concern for policy inconsistency between CAP initiatives and other county policies i.e. BPU's Goal to Phase out natural gas by 2070

How We Addressed the Comments

- **Consolidated comments:** All comments received via Konveio, emails to Council and staff, social media, local media op eds, and ESB and BPU meeting were consolidated
- **Comment review period:** Over a period of two weeks, County staff reviewed ~500 comments and addressed each one individually.
- There were 2 basic categories of comments:
  - 1) Comments that didn't require a revision - either the comment was already addressed in the CAP or the comment was more of a statement
  - 2) Comments that required/suggested edit - staff made the revision request based on the comment
- Integration of comments: Cascadia made revisions and integrated them into the final CAP

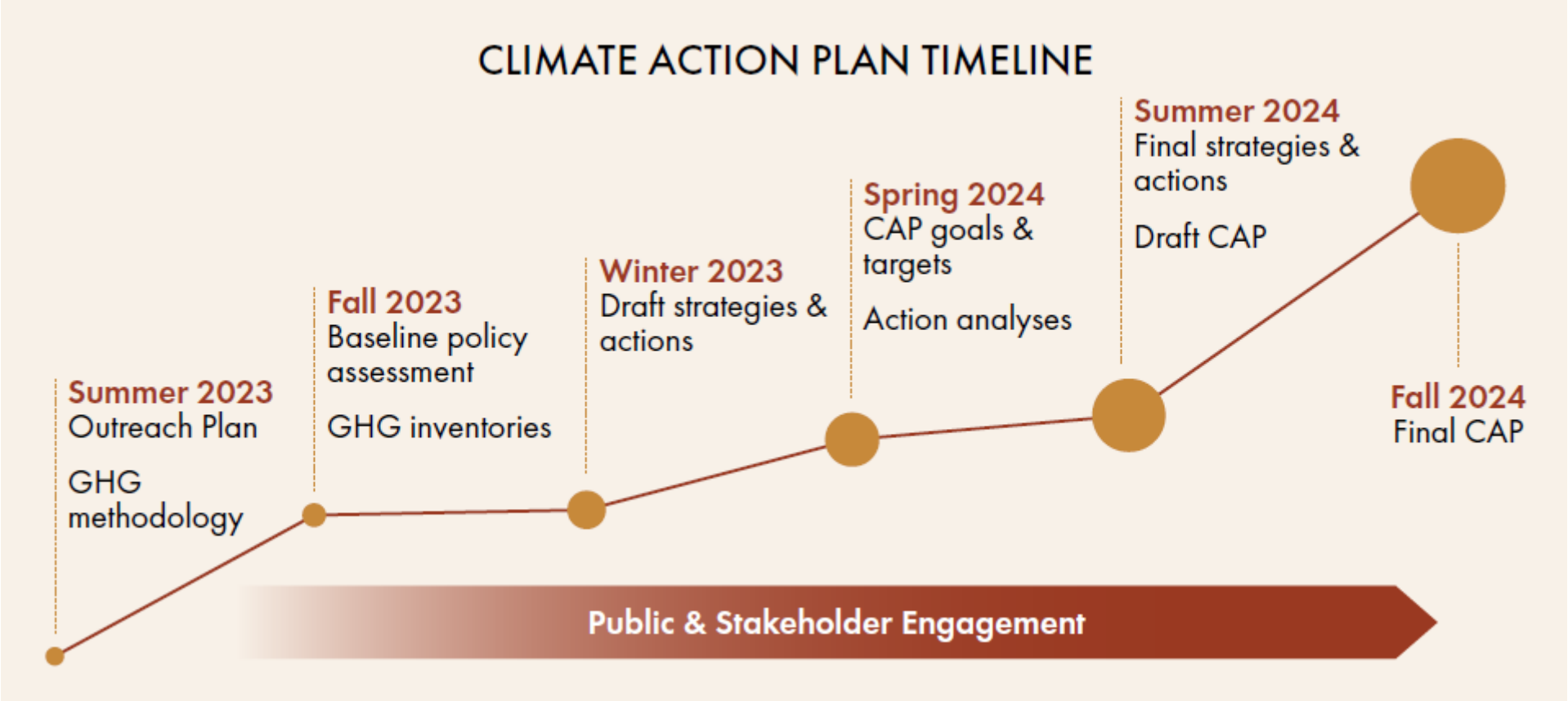
Some Key Changes…

- Commenters expressed strong opposition to mandates
  - The County maintained mandates for County operations but removed mandates, as they applied to the community.
- Commenters expressed the need for more information on cost analysis
  - A more detailed cost analysis is outside the scope of the agreement. However, as projects are pursued, ROI will be evaluated.
- Commenters expressed the need for more clarification on terms, graphs, acronyms
  - Clarification was provided
- Commenters expressed the need for GHG emission calculation data to be included in appendices
  - Calculations will be included as part of the appendices in the final report or are on the Sustainability website.
- Commenters expressed concern to include adaptation strategies as part of the CAP plan
  - The County dedicated an entire page to highlight the County's current adaptation strategies and have also added a new strategy that will "Embed climate adaptation and resilience in County operations (County)"



Final Climate Action Plan

How it Came Together



Introduction

Why a climate action plan?

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

Benefits of Climate Action

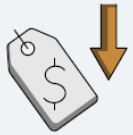
Taking action on climate change can bring benefits for Los Alamos County ecosystems, residents, and businesses.

Improved quality of life & public health

Climate action can contribute to our collective health and wellbeing through clean air, clearn 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.

Community Engagement

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

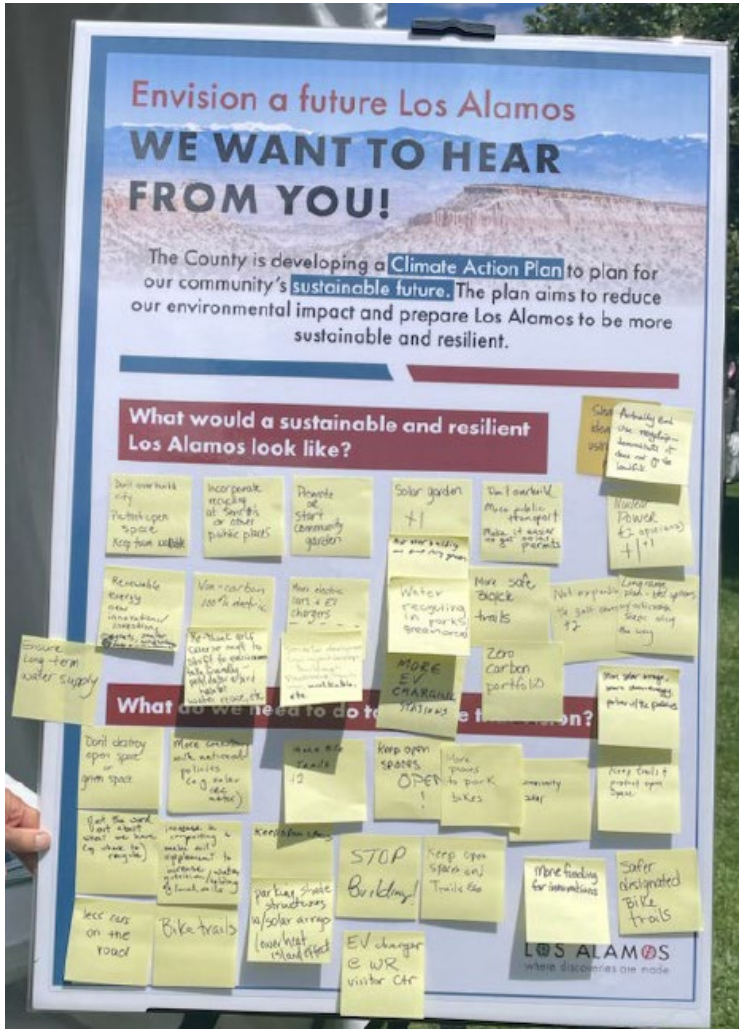
Vet and refine proposed strategies and actions

- 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)



What We Heard

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

"Continue to make the central business district more walkable."

"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."

"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."

Climate Risk and Resilience

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.

Greenhouse Gas Emissions

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.

Sector-based Community-wide Emissions

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 Emissions:
137,670 $MTCO_2e$

Per Capita:
7 $MTCO_2e$

Sector-based County Operations Emissions

Employee commute	30%
Electricity	29%
Natural gas	14%
Solid waste disposal	11%
Vehicle fleet	10%
Transit fleet	5%
Refrigerant leakeage	1%
Wastewater treatmenet	<1%
Business travel	<1%

TOTAL Emissions:
15,031 $MTCO_2e$

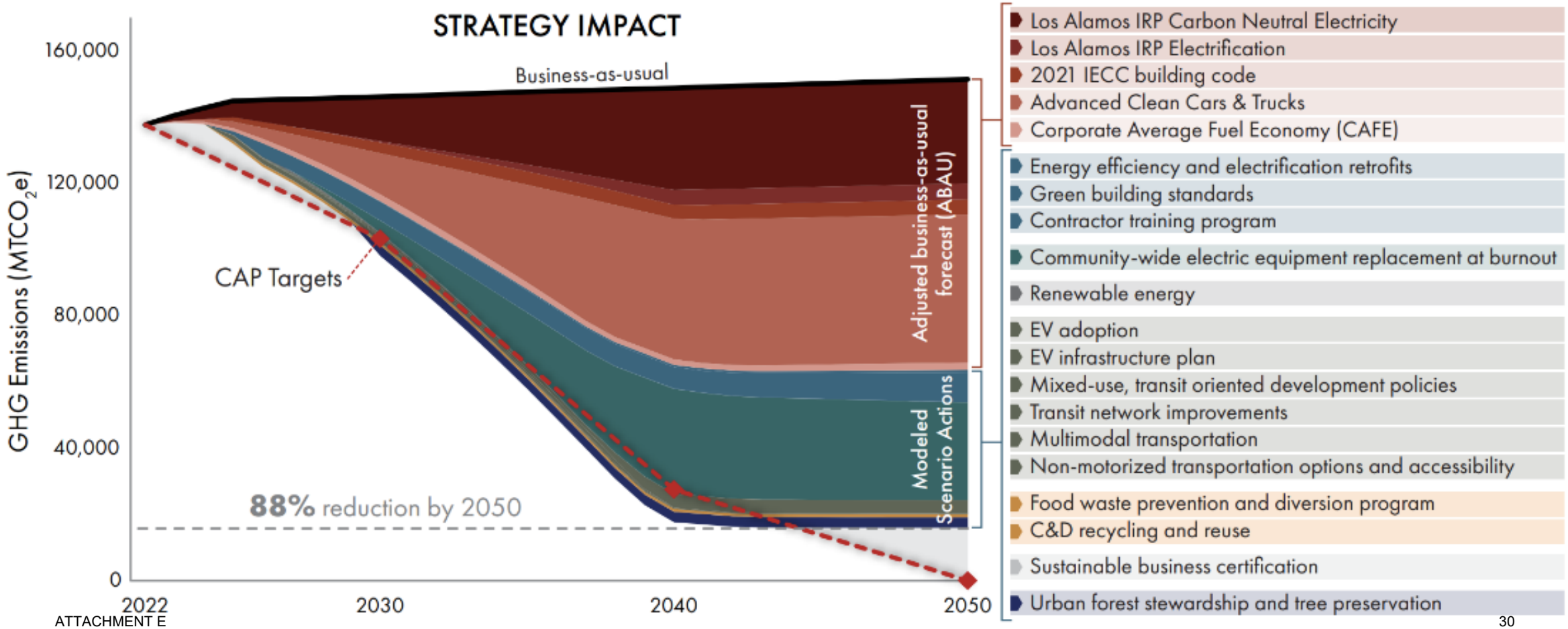
Consumption-based Community-wide Emissions

Transportation	32%
Services	19%
Housing	17%
Food	17%
Goods	11%

TOTAL Emissions:
374,000 $MTCO_2e$

Per Capita:
20 $MTCO_2e$

Emission Reduction Targets



Focus Areas and Strategies

	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, Adaptation, & Wellbeing** • Enhance community understanding of climate change • Prepare the community for climate impacts	• Invest in public climate education campaigns • Encourage adaptation upgrades
	**Cross-cutting** *(actions that focus on outreach, engagement, partnership, and leadership across sectors)* • Encourage sustainable businesses • Promote climate education outreach	• Develop a sustainable business certification • Expand community partnerships

Implementation Matrix

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.

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 • Continue to expand electric energy resiliency by investing in a diverse set of renewable energy sources such as wind, solar, geothermal, and nuclear, as well as energy storage • Work with DPU staff to align with existing initiatives and increase energy resiliency for the community through the Integrated Resource Plan (IRP) and by providing redundancies within the circuit systems • Research options, steps, and potential challenges to increase battery storage usage so that energy from renewables can be stored and used during peak hours • Explore establishment of microgrids within the systems for energy redundancy and security

Next Steps

Next Steps

- Request County Council adopt the climate action plan and target to achieve carbon neutrality by 2050
- Address BPU's goal to phase out natural gas by 2070
  - Staff recommends maintaining the 2070 timeline for residents and businesses; and accelerate the phase out of natural gas for County facilities by 2050 in alignment with the CAP target.

Thank you!
Questions?

Contact Information:

Angelica Gurule
Angelica.Gurule@lacnm.us