THE STATE OF CLIMATE ACTION IN NEW MEXICO: *A Call to Action*

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cvnm
CONSERVATION VOTERS NEW MEXICO

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Conservation Voters New Mexico (CVNM) is a statewide, nonpartisan, nonprofit organization committed to connecting the people of New Mexico to their political power to protect New Mexico's air, land and water for a healthy Land of Enchantment. We do this by mobilizing voters, winning elections, holding elected officials accountable and advancing responsible public policies. Our vision is for New Mexicans to thrive in just, resilient communities where our conservation and cultural values guide our decision makers and public policies. For more information, visit CVNM.org or email CVNM at info@cvnm.org.

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About This Report

The team at CVNM acknowledges that the climate crisis impacts every single New Mexican and affects every aspect of our communities, from public health to community safety, housing, food, drinking water and more. It most severely impacts the very people who have historically been excluded from policy conversations within the climate movement, including those who are low-income, unhoused, pregnant, children, elderly and LGBTQ+. For too long, communities of color, Indigenous peoples and rural communities have been excluded from determining what policies are needed to protect New Mexicans from the devastating effects of climate change. While steps have been taken in recent years to move away from transactional models of engagement to begin engaging authentically with these communities, there is still much to be done. New Mexico needs to make more room at our policy tables and shift the way that policies are developed so that these communities have ample opportunity to determine and lead concerning the solutions that best reflect their unique needs.

The bulk of this report has been informed by partnerships with community advocates and organizations that represent and are led by facets of the communities most impacted by climate change highlighted above. Many of these partners provided solutions, highlighted various ways their communities have been impacted and further marginalized, and reviewed this report before its publication. The solutions outlined in this report represent a snapshot of these needs and are not intended to be either definitive or inclusive of all the policy actions that need to be taken. This report will be shared widely with policy makers, administration officials, the climate action community, and the general public. It will be available on our CVNM website. We recognize that more deep policy visioning with a variety of additional voices still needs to be carried out over the next few years. Nonetheless, we hope this report demonstrates a crucial step forward in this work and highlights the deep and diverse scope of needs that must be addressed to fully confront the climate crisis in our state and beyond.

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Arcosa Wind Towers worker assembling blade. Photo courtesy Arcosa.

THE STATE OF CLIMATE ACTION IN NEW MEXICO: *A Call to Action*

Executive Summary

How we all address climate change will define the 21st century. Conservation Voters New Mexico (CVNM) and our allies have been concerned with the outsized impacts of climate change on New Mexico's air, land, water, wildlife and communities for many years. Now, climate action has become the focal point of our collective work. It defines our many other conservation issues as well as our engagement with New Mexico's diverse communities.

New Mexico is facing a climate emergency. Its impacts reach deeply into the daily lives of the state's communities. Decades of extractive industry and climate change impacts in the southwest have put our wildlife species, ecosystems and communities at grave risk. The planet is now experiencing a global extinction crisis. Catastrophic wildfires, flooding, drought, and heat are uprooting communities and harming already marginalized people, especially Indigenous, communities of color, rural, low-income, LGBTQ+, people experiencing homelessness, pregnant persons, elderly and youth. Communities living adjacent to or working in the oil and gas industry, also known as fenceline and frontline communities, also suffer from poor air quality, water contamination, increased illness, poor working conditions, and more. This disproportionately impacts immigrant, Indigenous, rural and LGBTQ+ communities the most.

New Mexico needs a broad and multilayered community-led movement that can push through the components of a durable, rapid and equitable climate action framework. Past climate action has fluctuated over the last three state administrations. This fluctuation reflects the lack of a concerted and focused movement and overarching climate action framework.

Governor Bill Richardson was an early champion of strong national and state action on climate change. Governor Susana Martinez rolled back Richardson's actions. Governor Michelle Lujan Grisham's administration resumed climate action, set ambitious goals and achieved some early victories. These activities placed New Mexico in the front ranks of U.S. states, although the early momentum has since slowed, and other states have subsequently taken more aggressive actions in some areas. Moreover, some of Governor Lujan Grisham's actions have not been constructive and could work against state climate pollution targets.

Governor Lujan Grisham came into office as advocates and community leaders were pushing for robust climate action. Her executive order on climate sent a clear message that motivated her agencies to pass nation-leading rules limiting climate pollution emissions and moved the Legislature to begin setting renewable energy targets, just transition measures and supporting renewable energy programs. Her executive order on conservation extended the range of climate action beyond energy and emissions, explicitly linking work on protecting lands, water and wildlife with climate action. State action, in New Mexico and elsewhere, has been boosted by President Biden's Investing in America agenda, which has provided historic levels of climate funding and created a political climate that encourages further state action.

New Mexico's legislative history is also one of advances and retreats, as the list of pro- and anti-climate action legislation in the appendix shows. This history reflects, in part, the enormous power of the oil and gas industry in our state economy and among policy makers. In many ways, the industry has captured the legislature with dire warnings of the effect of certain climate action bills on the approximately 40% of the state's budget that currently derives from the industry's activities in the state.

Nonetheless, climate action in New Mexico is only beginning. This is clear from the Priority Climate Action Plan submitted to the U.S. Environmental Protection Agency earlier this year by the New Mexico Environment Department and the Energy, Minerals, and Natural Resources Department (New Mexico Environment Department, 2024). The plan details the large gap that exists between climate action goals and current efforts to reach them, and lays out 10 projects intended to close the gap. The state has much to do to achieve a "comprehensive, durable and enforceable" transition to a renewable energy economy that will protect the air, land, water, wildlife and community health and work for everyday New Mexicans.[1]

Recommended Actions[2]

Climate Action Framework

Pass comprehensive climate action framework legislation that includes establishing sector-based climate pollution reduction targets in statute. The framework should incorporate key actions listed in this report or at minimum ensure that state regulators have the authority and directive to pursue those actions administratively. This applies to all the actions detailed in the state's Priority Climate Action Plan (PCAP) and the governor's climate executive order (EO 2019-003). It is critical that existing policies and rules ensure New Mexico is able to lead the nation in climate action and place the state on a path to transition to a zero-emission economy by mid-century.

Implement the PCAP/CCAP

Ensure that the PCAP and the follow up Comprehensive Climate Action Plan (CCAP) emissions reduction policies and programs incorporate the components of such a climate framework (with or without its passage). Ensure that there is a plan for any necessary rulemaking, and that climate policies and directives are required by statute to secure sustained progress toward fulfilling the state's climate goals and prevent political backsliding.

Just Transition

Create a just transition that is more than a checkbox as the state builds a zero-emissions economy. It requires concrete, actionable steps based on equitable and inclusive discussions with New Mexico's diverse communities, especially with Native nations and other frontline or fenceline communities. Additionally, state and federal officials must develop plans for revenue replacement during the transition to moderate the long-term decline in oil and gas revenue and its impact on workers and families, as well as on local and state finances. Any just transition solutions must be directly shaped by the communities most impacted, including Indigenous people and other communities of color, LGBTQ+, low-income, border and fossil fuel communities. This inclusive approach is imperative for true, long-lasting, transformational change.

Climate Governance

Executive orders and rulemakings can easily be changed or eliminated by subsequent administrations. For this reason, it is essential to codify New Mexico's recent climate progress in statute. Examples of rules that the legislature should establish in law include the venting and flaring rule ("the methane rule"), the ozone precursor rule and the various clean cars and trucks rules.[3] The state's climate adaptation and resilience work (see the draft of the 2024 Climate Adaptation and Resilience report) must also be codified into statute.

1 The quoted language comes from the first of seven "guiding principles" enumerated by a large group of Indigenous, outdoors, agricultural, community-based and environmental organizations in a 2021 letter to Governor Lujan Grisham (Western Environmental Law Center et al, 2021)
2 A fuller list is included at the end of the document
3 Clean cars and trucks rules include: Advanced Clean Cars (ACC) I and II, Advanced Clean Trucks (ACT), and Omnibus Heavy-Duty Nitrogen Oxides (NOx).

Agencies must have complete capabilities to establish well-considered, enforceable regulations to drive climate pollution reductions across all sectors of the state's economy and carry out necessary permitting, monitoring and compliance to maximize the effectiveness of those climate regulations and ensure they work for New Mexico's families, communities and businesses. There is a critical need for supplemental inflation-adjusted funding to repair the deficiency caused by wholesale budget cuts under the Susana Martinez administration, and to manage new and proposed programs, including adequately compensating staff to improve hiring and retention. For example, agencies need critical funding to develop a state surface water permitting program and to improve our transportation infrastructure, broadband access, state trauma centers, rural healthcare facilities, and proactive adaptation and resilience measures statewide and at the local level.

Require Polluters to Pay for Damages

The state should enact a Climate Superfund Act to fund climate resilience and adaptation programs, as well as compensate communities following climate disasters (similar legislation was passed this year in Vermont and also proposed in New York, Massachusetts and Maryland; the New Mexico legislature's 2024 HB 104 – Public Health and Climate Resiliency Act – could serve as a starting point). Additionally, the Water Quality Act should be amended to make human-induced climate change a component of water quality degradation and not an excuse to alter criteria and lower related quality standards.

Oil and Gas Industry

Reform the Oil and Gas Act, including adequate financial assurance for full site reclamation, the reduction or elimination of unnecessary subsidies, and setbacks (minimum distances of oil and gas facilities from homes and schools, for example) to protect the environment and public health. The State Land Office should consider withholding lease purchase or permit approval from companies with track records of inaccurate reporting or failure to address permit non-compliance issues (so-called "bad actor" provisions). Agencies must ensure full compliance with the venting and flaring rule and the ozone precursor rule. The state should quickly develop a State Implementation Plan (SIP) to comply with new EPA air quality standards under the Clean Air Act. Hydrogen projects should only receive permits when they are designed and implemented in accordance with the seven principles outlined in the community and conservation organizations' letter to Governor Lujan Grisham (Western Environmental Law Center 2021) and the three pillars supported by national organizations (Fakhry, 2023).

Electrification and Efficiency

Ensure full implementation of the final Clean Fuels Standard, the clean cars and trucks rules (ACC II, ACT and NOx [nitrogen oxides, which contribute to smog and global warming]), community solar, and the charging infrastructure for personal and work vehicles and buses, including school buses. The legislature must also move quickly to solarize government buildings, including public schools, and thoroughly upgrade building efficiency and heating, ventilation and air conditioning (HVAC) systems. This can be achieved through mandates and funding, with the funds generated from cost savings via renewable energy development invested in upgrading HVAC systems for these buildings. The state should leverage federal funds to encourage adoption of heat pumps and electric stoves. The state should create a fund or mechanism for hospitals, centers of worship, schools and community centers to install solar and battery storage to serve as emergency, community response and cooling centers in the event of a climate disaster or heat wave.

Adaptation and Resilience[4]

Improve adaptation and resilience in both natural and human systems. Climate change is a global phenomenon, but New Mexico is warming at a much faster rate than almost any other state in the United States and is the second-largest producer of oil and gas in the country. At the outset, agencies must advance the Environmental Data Act, including the necessary funding and any legislation required to fully develop this publicly-available resource. It is also critical to complete the aquifer mapping program to obtain a full understanding of the state's groundwater characteristics and the state's water agencies need to implement the recommendations from the 50-Year Water Plan. The Game and Fish Department needs a fundamental reorganization centered on assuming an ecosystem approach to managing all wildlife. State and local governments must invest in urban green spaces and tree cover, rainwater capture should be built into or retrofitted for large buildings and hard surfaces such as parking lots and streets, and it is imperative to implement critical forest thinning for both wildfire control and improved water supply in our rivers and streams. The Legislature and administration need to pass and implement the Public Health and Climate Program policy (HB 104; 2024) to assist local communities in identifying and investing in community-centered resources and services, including healthcare, cooling centers and housing infrastructure. Complementing this policy is a need to implement an evidence-based occupational heat standard that will protect workers in high-risk communities and occupations from heat waves. Local, state, federal, Native and international experts should advise on switching from irrigated to dryland farming, adopting new crops and new varieties of existing crops that are more resistant to aridification and use less water, and tapping into the knowledge embedded in agricultural communities across the state, especially Native communities.

Democracy Protection

A large majority of New Mexicans want their government to move quickly and aggressively to address climate change. As a result, when New Mexicans are able to vote in large numbers and their elected representatives are responsive to voters' priorities, we can achieve our climate goals. The state must identify the measures still needed to protect democracy, broadly speaking, in New Mexico, but especially measures to embed protections against gerrymandering and voter suppression and ensure electoral transparency. Recent legislation, including the Voting Rights Act and the pioneering Native Voting Rights Act, as well as actions from the secretary of state have broadened access to elections and rendered them more secure. The state legislature needs modernization, including providing salaries, other adequate compensation and increased legislative staff to assist lawmakers. These changes will make it easier for a more diverse pool of candidates to run for office and participate in crafting legislation for all New Mexicans. This, in turn, will provide pathways for the communities most impacted by climate change to step into decision-making roles to directly shape policy solutions and ensure their voices are prioritized in decision-making.

Capacity Building

Bring community members and leaders together with businesses, nonprofits and elected officials at the local, state and federal levels to connect communities with the policymaking processes that affect them. It is important to amplify and directly resource the voices of the communities most impacted by the climate crisis in the decision-making process and build an understanding of how both the impacts of global warming and effective climate action require these voices to be heard and their knowledge to be incorporated into community-based solutions. Additionally, with the unprecedented amount of federal funding for climate action, communities and local governments need increased capacity to apply for, win, implement and report on grant funding.

4 A starting point for resilience planning and community engagement is the report prepared by the Energy, Minerals and Natural Resources Department, New Mexico Climate Adaptation and Resilience Plan (2024)

Introduction

The scientific community has been aware of the role of greenhouse gasses, such as carbon dioxide (C02) and methane in climate change for well over 100 years.[1] Modern climate scientists applying regional global warming models and recent New Mexico data have concluded that the state is warming faster than many other regions of the globe.[2] New Mexico is projected to experience an average temperature increase of 5° to 7°F over the next 50 years.

This is not a new finding. In 2007, David Gutzler, a professor at the University of New Mexico whose research focuses on climate variability in New Mexico, delivered a talk at the New Mexico Water Research Institute summarizing current climate research and its implications for New Mexico.[3] He noted that the 1950s drought was characterized by higher temperatures in the warm season, but the warming did not carry over into the cold season. New Mexico has had year-round warming since the 1960s, with an increase of approximately 2°F in the cold season and nearly 3°F in the warm season. This warming trend is more than twice the annual global average increase, which was approximately 1°F over the entire 20th century. Gutzler stated the following:

> **"If we choose a mid-range greenhouse gas emissions scenario and take the average of 18 global model predictions, then the models predict an increase in temperature across the state of New Mexico of more than 5°F in winter and about 8°F in summer by the end of the century!"**

4

New Mexico is witnessing a sustained, climate-fueled natural disaster. Massive recent wildfires, in part the result of past management practices intended to suppress wildfires and protect homes in the growing wildland-urban interface, in addition to extreme heat and near zero forest humidity at times, have destroyed small towns, displaced thousands of people and burned many hundreds of thousands of acres. These wildfires have burned so intensely and extensively that it is likely they have forever altered landscapes from their pre-fire existence, affecting plant and animal communities as well as human communities.[4]

1 Francis Molina's article "Remarkable Weather of 1911: The Effect of the Combustion of Coal on the Climate — What Scientists Predict for the Future" (Popular Mechanics, 1912) was republished worldwide. It was one of the first general publications to connect increased coal burning, increased CO_2 emissions, and increasing global temperatures. (Zinn Education Project, n.d.)

2 cf. Dunbar et al. (2022). "The bulletin [Climate Change in New Mexico Over the Next 50 Years: Impacts on Water Resources], which is the scientific foundation upon which New Mexico's 50-Year Water Plan (Office of the State Engineer, 2022) is based, represents a compilation, assessment and integration of existing peer-reviewed published research, technical reports and datasets relevant to the broad topic of changes to New Mexico climate over the next 50 years, and resultant impact on water resources. This project, also known as the "Leap Ahead" analysis, also identifies significant data and modeling gaps and uncertainties, and suggests research directions to strengthen our understanding of climate and water resource changes."

3 "Governor's Task Force Report on Climate Change"

4 A new report published in ArXiv Physics (Grandoni, 2024) warns that rapidly rising temperature and related drought and wildfires may be causing the land to lose its ability to act as a carbon sink, leading to much more rapid global warming than expected. The results are preliminary, as the authors note, but are based on a spike in CO_2 concentrations in 2023 and models showing that key carbon sinks in the Amazon, Southeast Asia and the Canadian boreal forests were weakening.

Moreover, wildfires degrade public water supplies because they introduce so much contamination – from the combustion products of burned timber and plants to the fire retardants used to suppress them – that water treatment systems relying on surface water are sometimes unable to cope and must shut down until post-fire floods and debris have cleared (Wolfe and Steckleberg, 2024).

Figure 1[5]

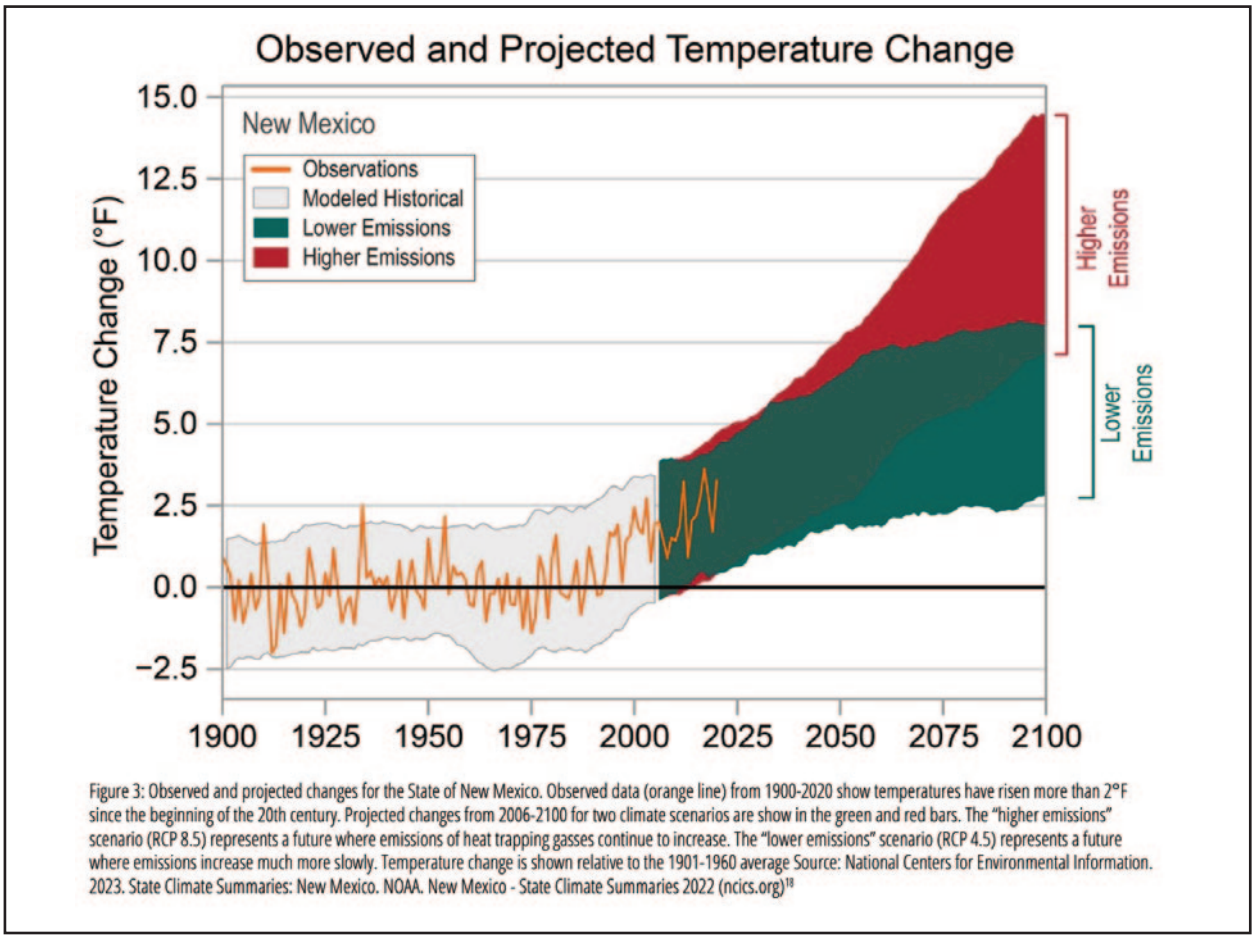


Figure 3: Observed and projected changes for the State of New Mexico. Observed data (orange line) from 1900-2020 show temperatures have risen more than 2°F since the beginning of the 20th century. Projected changes from 2006-2100 for two climate scenarios are show in the green and red bars. The "higher emissions" scenario (RCP 8.5) represents a future where emissions of heat trapping gasses continue to increase. The "lower emissions" scenario (RCP 4.5) represents a future where emissions increase much more slowly. Temperature change is shown relative to the 1901-1960 average Source: National Centers for Environmental Information. 2023. State Climate Summaries: New Mexico. NOAA. New Mexico - State Climate Summaries 2022 (ncics.org)[18]

5 New Mexico Energy, Minerals and Natural Resources Department (2024), p24

The impact of wildfires is astronomical: The Calf-Canyon/Hermits Peak wildfire cost nearly $1 billion for the firefighting response alone (Costello, 2022). The federal government has established a nearly $4 billion fund for community relief and compensation (Fisher & Lohmann, 2023). Although this fund is critical for community rebuilding, it cannot compensate for the loss of identity, history and culture that often accompanies natural disasters.

Reduced snowpack combined with earlier spring snowmelt and evaporation of snow pack has also led to more variable but generally lower spring runoff. This affects plant and animal communities attuned to centuries of stable seasonal changes, and the ability of water users to practice cultural and agricultural traditions. Climate disasters, such as floods and droughts, cause substantial damage to watersheds, acequias and irrigation canals (Lohmann, 2022). These waters are essential, vibrant ecosystems for wildlife, including birds, fish and other creatures (Medrano, 2021). Drought also shrinks wildlife habitats critical for protection, shelter, food and reproduction, further stressing wildlife species and their survival. Drought is especially devastating for wildlife species with small habitat ranges or compromised migration corridors (Grover, 2021). Almost all endemic species may become endangered and experience adverse impacts under unchecked global warming scenarios (Manes et al., 2021). This will have a devastating impact on New Mexico's outdoor recreation and tourism industry, which generates over $2 billion in annual state revenues and supports rural economies (Headwaters Economics, 2020).

Temperature increases, droughts and disasters take a direct toll on New Mexico communities and their well-being. In the state, 80,000 residents are vulnerable to extreme heat, which is defined by the Centers for Disease Control and Prevention as summertime temperatures that are much hotter and more humid than the average for any given location (Shiv, 2023). Among those hit hardest are low-income people, unhoused people, children, the elderly, LGBTQ+ people, pregnant people, Indigenous and other communities of color and intersections of these groups. As the state continues to see record-setting temperature extremes, incidents of heat-related illness and hospital visits are also increasing (Segarra, 2023). The prevalent use of swamp coolers and the lack of other cooling infrastructures in many New Mexico communities mean that families find it more difficult to stay cool when temperatures peak. Furthermore, 15% of the state's residents have no cooling units to mitigate periods of extreme heat (Shiv, 2023). People living in communities without local hospitals or health centers may have to travel long distances to seek medical care, which can further impair recovery from heat-related illness.

The LGBTQ+ community and Indigenous and other communities of color are more likely to be victims of medical and housing discrimination, preventing them from receiving adequate care or resilient housing (Casanova-Perez et al., 2021). Pregnant people exposed to extreme heat and climate disasters are more likely to experience eclampsia, anemia, preterm birth, miscarriage and low birth weight (U.S. Environmental Protection Agency, 2023). Workers from agricultural, construction and other outdoor industries exposed to extreme heat are also disproportionately impacted. Farmworkers alone are 35 times more likely to die from heat complications, and other industries are seeing increases in heat stress and illness in correlation with rising temperatures (Walling, 2023).

For children and the elderly, who may not have access to adequate cooling at home or in their community, the impact is also staggering. The World Health Organization reports that between 2017 and 2021, heat-related mortality for seniors due to extreme heat has increased by approximately 85%. (World Health Organization, n.d.) Infrastructure for youths, such as schools and classrooms, is currently inadequate to counter heat extremes. New Mexico teachers and students are reporting classroom temperatures as high as 80 to 90°F or more, which prevents children from learning, exacerbates health issues and results in increased stress (Schacht, 2023).

In addition, drought leaves irrigators with less growing season water and the choice to fallow land or risk having reduced or no harvests. More intense and persistent summer heat leads to lower soil moisture, increased transpiration, further stress on agricultural crops, more evaporation of surface water and the introduction of new pests and diseases (Hsu et al., 2023). For families reliant on groundwater for drinking water, this can also mean less water for each person and potentially wells that run dry. Leaky and failing water systems, usually in under-resourced rural areas, exacerbate the problem by further reducing water quantities, which are also often of poor quality.

New Mexico's communities living in and adjacent to oil and gas operations are directly impacted by continued resource extraction that causes climate change. Members of the Navajo Nation are twice as likely as other New Mexico residents to live within one-half mile of an oil and gas facility, and communities near active oil and gas wells experience acute health impacts due to air and water pollution (Clean Air Task Force, 2018). Sites sacred to Indigenous peoples are also threatened by the oil and gas industry, like Chaco Canyon, Bears Ears and Grand Staircase-Escalante. A study conducted by the University of New Mexico (UNM) in 2024 found that immigrant oil and gas workers in the Permian basin experience unsafe working conditions, including long hours, dangerous working conditions, and a lack of health and safety standards (Sanchez Youngman et al, 2024). Many of these same workers also lack healthcare, paid vacation time, and other benefits that allow them to thrive or recover from serious injuries and illnesses. Water contamination, air pollution, and boom-and-bust economies also contribute to increased illnesses, less available drinking water, and higher poverty and unemployment rates.

The stress resulting from temperature extremes, droughts and climate disasters also impacts mental and behavioral health. Research has found a link between climate-related events and increased gender-based violence targeting women, girls and the LGBTQ+ community (Van Daalen et al, 2022). Marked increases in violence following climate disasters have been observed in homes, communities, temporary shelters or while traveling to safety. Incidents of animal abuse and abandonment also increase following disasters, as commonly witnessed in the aftermath of wildfires, hurricanes and other storms.

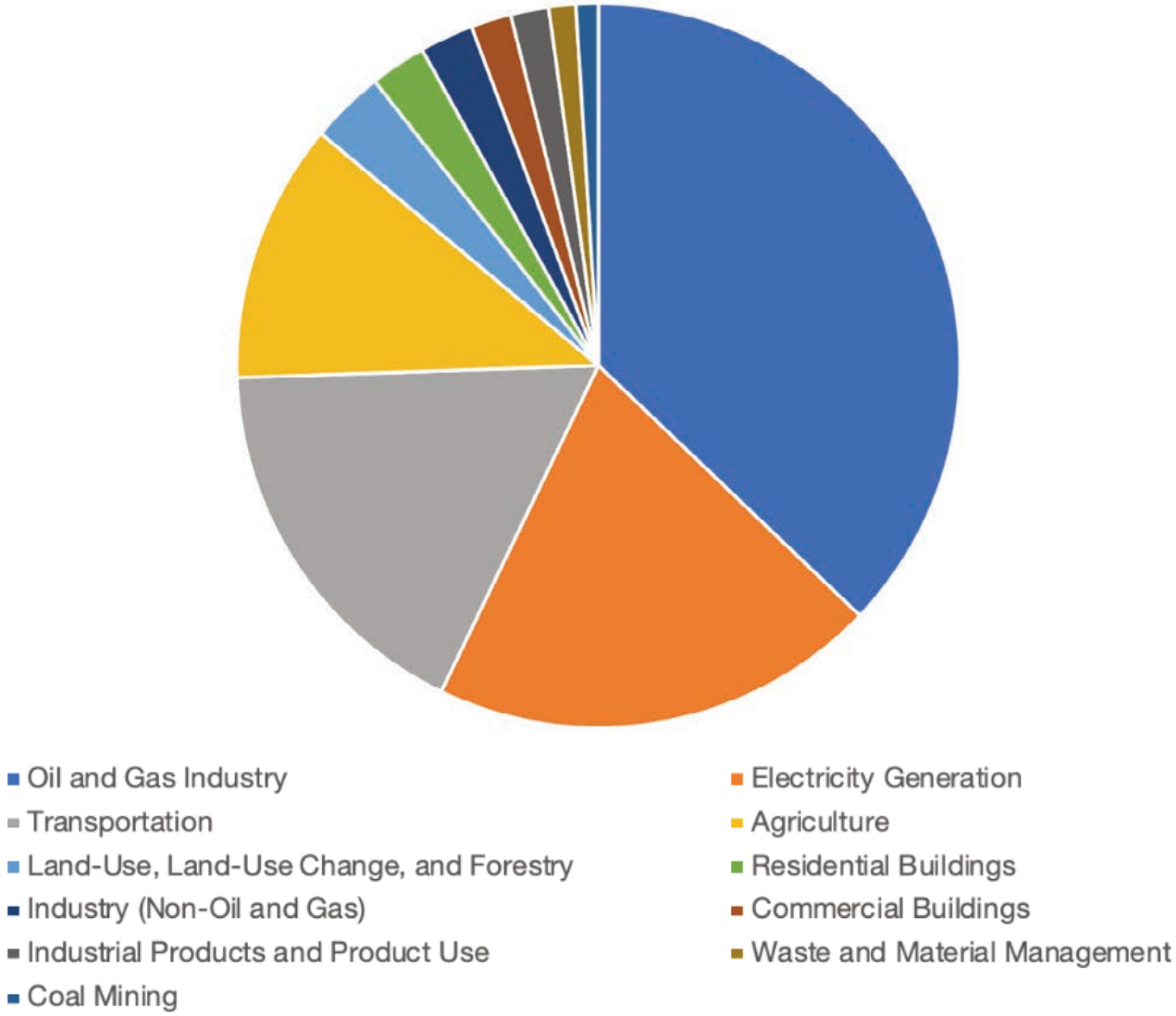
In turn, high levels of stress make communities more vulnerable to illness. Increased illness rates combined with the increased likelihood of climate-exacerbated infectious disease spread will result in more outbreaks and a strained medical system (Yehya, 2024). In fact, a 2022 study found that over half of all human pathogens are expected to be aggravated by climate change, including those spread by water, mosquitoes and food (Mora et al, 2022).

With so much at stake, it is imperative that New Mexico does all that it can to address the climate crisis and invest in community resilience. **If we fail to act, the costs of the climate crisis will add to the state's volatile dependence on the fossil fuel economy and further complicate our communities' capacity to thrive in the long term. However, if we take effective and durable climate action now, we can create a vibrant, renewable energy economy as part of, and in service to, broader economic diversification and justice. We must act with a sense of urgency to take bold climate action to eliminate the greenhouse gas (GHG) emissions that are the root cause of climate change.**

The single largest source of this climate pollution is fossil fuel extraction and combustion. However, the industry's impact is amplified by its dominant role in climate pollution from the transportation sector, in agriculture, and in plastics and other manufacturing, reflecting the wide use of fossil fuel products.

Figure 2[6]

New Mexico GHG Emissions (2021) by Sector



6 Chart created from data in New Mexico Environment Department *Priority Climate Action Plan* (2024), pp2-3

It is imperative that New Mexico and the nation quickly move forward with a robust and equitable transition to clean renewable energy and a zero-emission economy. This transition will set the foundation for a thriving, resilient future for all New Mexico families, our communities and our shared natural heritage.

There is no excuse for hesitation. To quote Governor Lujan Grisham, who called global warming an existential threat at the COP 26 meeting in Glasgow in November 2021,

> "This week was a true call to action for every city, state, province and nation on Earth. I'm bringing back to New Mexico ambitious commitments and valuable partnerships that will inform our continued action on climate in our state [...] **In a state that's an energy state, we have to lead by example. We have to get it right** [...] All of your critical infrastructure and social services get funded by oil and gas. So, for every single prior administration, the argument becomes we can't do anything to an industry irrespective of this existential threat because it funds public schools. That is ridiculous; that pervasive, perverse situation has to be upended. So, we've done what you should do." [emphasis added]

Accomplishing these goals together, New Mexico can act to create a world our children can thrive in and be proud to call home. We must act boldly to address the climate crisis by transitioning to a zero climate emissions economy and involving the most impacted and marginalized communities in the process.

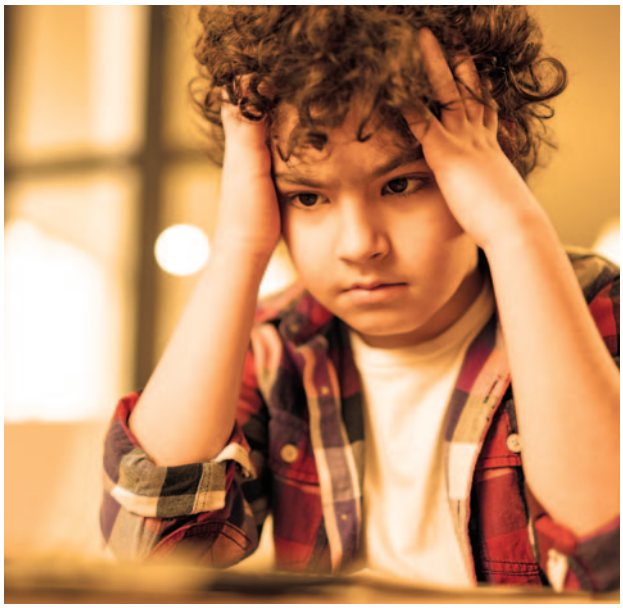
What Is at Stake: The Community Toll of Climate Change

When scientists, journalists, politicians and everyday New Mexicans discuss climate change impacts, the focus is usually on how they have affected natural disasters: larger and more intense wildfires that tear through small towns, subsequent floods that worsen the situation, drought, heat waves, and more erratic and destructive storm and flooding events.

It is important to think about these large-scale catastrophic climate events and learn how to mitigate their impacts, if possible, and integrate more resilience into nature and our communities to make recovery possible. However, there are many impacts resulting from the changing climate that do not often make the headlines, in part because they are slower moving and more difficult to see and in part because we are still learning about them and how they might impact our air, land, water, wildlife and communities. We must learn how to mitigate these impacts and how to adapt to them and build resilience.

Educators and Students[7]

New Mexico's warming climate has led to hotter classrooms, with summer and early fall temperatures hovering in unsafe ranges. In 2023, Albuquerque schools reported classroom temperatures over 80°F, well above the state code (Green, 2023). Parents in Las Cruces also expressed serious concerns when students were routinely exposed to 100+ degree heat while traveling on school buses with inadequate ventilation or no air conditioning (Dunlap, 2023). High temperatures also overstress already aging school HVAC systems that struggle to keep temperatures in the comfort zone. Schools without air conditioning, which includes 70% of Albuquerque public schools, rely on evaporative coolers, which are less effective at higher temperatures (Dunlap, 2023).



As temperatures increase, schools will struggle to obtain funding to replace aging or inadequate systems and will be forced to shift limited funds away from instruction and into energy efficiency and new equipment. Until that time, students and teachers will struggle to maintain attention levels. Research has found that increased temperatures negatively impact student performance on tests and disproportionately impact students of color and low-income families (Goodman et al., 2018). Additionally, repeated exposure to heat increases stress levels, which can exacerbate mental health conditions, lower student attention spans and shorten tempers (Khan Rony & Alamgir, 2023). Exposure to wildfire particulate pollution may also increase children's risk for autism and ADHD and result in poorer school performance (Shiv, 2023). All of these factors will also lead to an increase in student and classroom disruptions, which ultimately lower students' academic performance.

7 The following communities are just some of the ways to differentiate New Mexico's diverse communities.

Researchers learned from the COVID-19 pandemic that inadequate ventilation spreads respiratory illness (Haddrell et al., 2024). This was found to be the result of carbon dioxide assisting in viral spread. In a warming climate with increased carbon dioxide levels, researchers also predict that respiratory illnesses will remain active for longer periods (Haddrell et al., 2024). Additionally, research predicts that diseases are more likely to spread due to climate change. A paper published in Nature found that 218 of 375 known diseases may be aggravated by global warming because climate change may impact the environment for bacteria/viruses and the ways they spread (Mora et al., 2022). This means that for illnesses that spread quickly in a classroom environment, such as the cold, flu and chickenpox, students and faculty may remain contagious for longer periods of time. This, in turn, will increase the number of school days missed due to illness and impact students' academic performance.

Time spent outdoors is also critical for child development. However, outdoor activities will likely be limited due to heat, air quality advisories due to dust and pollution, and an increased threat from more disease-bearing insects. For example, the mosquito responsible for the spread of yellow fever, Zika, dengue and chikungunya, Aedes aegypti, has been observed in Albuquerque and southern New Mexico since 2018 (New Mexico Department of Health, 2018; Van Note, 2022), although no cases have been reported. School nursing staff are likely to be inundated, and more students will be sent to emergency rooms and hospitals for heat-related incidents (such as heat stroke) and sickness. These impacts are more likely to afflict schools in communities that are rural or low-income and in which the majority are Indigenous and other people of color because these communities are commonly under-resourced.

The longer these conditions persist, the more teacher and staff retention is likely to decrease, further harming student learning. As a result, students will suffer poorer educational outcomes, leading to lower graduation rates and college enrollment plans. School districts are also likely to receive decreased funding due to shifts in teacher retention, student performance and other factors. Therefore, the gap between high- and low-income schools will increase, leaving more students behind in New Mexico's educational system. This will also ultimately impact community poverty levels and economic opportunities.

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Opportunities for Climate Action[8]

- Create a state fund for school energy efficiency and leverage federal funding so every school (starting with low-income school districts) receives air sealing, roof insulation, insulated windows, air exchangers, adequate cooling and heat pumps.
- Ensure full funding and staffing for the New Mexico Department of Health's Infectious Disease Surveillance Program, including robust communication with similar programs in neighboring states, Mexico and the federal government.
- Establish an enforceable heat standard for classrooms and other indoor areas at schools and in buses.
- Redesign the HVAC system and classroom layouts to increase ventilation and diminish the spread of respiratory illness.
- Develop and implement a classroom and bus temperature monitoring system to ensure energy efficiency and cooling systems are operating adequately.
- Substantially invest in solarizing schools paired with electric buses and onsite battery charging.
- Invest in battery storage to allow schools to operate as community and emergency response centers.
- Expand the charging infrastructure for the transition to zero-emission buses, which will lower the air pollution that causes respiratory illnesses (this and the other energy-related measures will dramatically lower costs and make more funds available for the classroom, and the schools could function as "community solar" sites for surrounding homes).
- Invest in school bus upgrades that lead to a primarily electric bus fleet with updated cooling and heating systems.
- Invest in green spaces and tree cover around school facilities, which will lower temperatures and provide shade.
- Capture rainwater and use it to irrigate trees that are planted for shade on sun-exposed buildings to lower temperatures for outdoor play. Harvesting rainwater can also irrigate gardens to produce food.

Outdoor Recreation

Climate change will directly and indirectly impact all outdoor enthusiasts, including hunters, anglers, hikers and birdwatchers, through impacts on wildlife, ecosystems, public health and public access to the outdoors. The New Mexico Outdoor Recreation Division (2023) reports that outdoor recreation accounts for $2.4 billion in added value and revenue for the state and provides 28,000 jobs. However, heat, drought and the resulting impacts on wildlife and natural resources will decrease the window through which tourists and New Mexicans can enjoy the outdoor economy, impact revenues and directly harm the health of recreationists and the economic contribution of the outdoor recreation industry.

8 The opportunities outlined in this section are not meant to be inclusive of all possible steps to take. We recognize that deeper policy visioning still needs to be done over the next several years with additional voices at the table.

Elevated temperatures and heat waves will bring an increased risk for outdoor recreation heat-related illnesses, such as heat stroke, and a higher risk for injuries due to heat-induced fatigue and disorientation. The New Mexico Department of Health reported nearly 1,000 hospital visits in 2023 due to heat-related illnesses, with a majority occurring during the summer's hottest month, July (New Mexico Department of Health, n.d.). An article published by New Mexico Epidemiology estimates that heat-related illnesses are likely to double by 2030 (Woods et al., 2020).

With new record temperatures and heat waves being recorded each year, this trend could be problematic for New Mexico's outdoor recreation industry and life threatening for recreationists. In 2020, a 16-year-old boy hiking in Las Cruces with family tragically died after exposure to high heat combined with delayed rescue efforts (Heild, 2023). In neighboring Texas, a teen and his stepfather died after hiking in temperatures exceeding 119°F (Fortin & Gahan, 2023). These heartbreaking deaths reflect a pattern of heat-related deaths seen nationwide during heatwaves and temperature extremes.

In rural regions of the state, outdoor recreation also represents a vital economic boon, from whitewater rafting along the Chama to fishing and hiking in Silver City, and boating on reservoirs across the state. These communities rely on adequate water flow in their rivers and streams to attract hunters, anglers and outdoor enthusiasts. Warming has already led to less regular flow in intermittent (seasonal) streams and permanent watersheds, resulting in less reliable sources of drinking water, low river water levels and diminished water for wildlife (Dunbar et al., 2022; Easterling, 2019; Prokup, 2023).

Warmer water temperatures will also increase the likelihood of disease spreading by water, and warmer water and lower flows will lead to lower water quality and pressure to reduce the water quality criteria for specific segments and the associated water quality standards. These impacts will further deteriorate waterways for recreational purposes and impact the surrounding landscape.

Drought- and heat-stressed trees are more vulnerable to disease, resulting in increased pest devastation and death (Anderegg et al., 2015). Increasingly devastating wildfires in the southwest have also incinerated large swaths of forest, forever altering ecological structure and function as well as cultural, historic and other public uses of the landscape. Changes in seasonal timing caused by a warming climate can also disrupt patterns of emergence and mating, thereby impacting the food chain (U.S. Department of Energy, 2023). Drought, pests, disease, food scarcity and wildfires have altered wildlife migration paths and fragmented habitats. These changes directly impact the ability of wildlife to thrive, impact public use of the outdoors and diminish the economic revenue generated by wildlife enthusiasts.

"Elevated temperatures and heat waves will bring an increased risk for outdoor recreation heat-related illnesses... The NM Department of Health reported nearly 1,000 hospital visits in 2023 due to heat-related illnesses, with a majority occurring during the summer's hottest month, July ... heat-related illnesses are likely to double by 2030."

Opportunities for Climate Action[9]

- Address fire risk through strategies like thinning in appropriate locations to improve drought resistance and lessen the likelihood of massive, intense crown fires (El Kouarti, 2022). Thinning can also create conditions for a more diverse understory ecosystem that can support more biodiversity (Oregon State University, 2023). Treated forests can also hold and use water better, acting as a sponge to capture and slowly release water from more erratic and larger storm events (del Campo et al, 2022). When performed in close cooperation with local communities, thinning can also directly generate income from wages and indirectly from the use of downed and salvaged wood.
- Change statutes to make human-induced climate change a component of degradation and not an excuse to alter criteria and related quality standards.
- Implement a state-based surface water protection program to protect waters from pollution threats.
- Continue a robust and inclusive process to increase the protection of important river and stream segments, even entire watersheds, through petitions to designate Outstanding National Resource Waters.[10]
- Engage in a robust and inclusive process to establish policies and programs for environmental flows as a critical method for ensuring baseline water for the environment and public access, such as rafting.
- Reform the Game and Fish Department so it assumes an ecosystem approach and provides protections and improvements across the system, rather than for selected game species.
- Increase creation of and protection for critical wildlife corridors, including a sustainable fund for their implementation and maintenance.
- Prohibit development in wild spaces that are essential habitats and migration routes for wildlife.
- Invest in urban and rural greenspaces to support bird and insect migration patterns and to reduce air temperatures.

First Responders and Public Health[11]

Climate change, and the resulting heat waves and temperature extremes, are already leading to increases in heat-related incidents requiring emergency and hospital intervention (Prokop, 2024). Heat illnesses can include dehydration, heat rash, sunburn, heat cramps, heat exhaustion and heat stroke. Populations most vulnerable to heat-related illnesses include Indigenous and other communities of color, low-income families, pregnant people, people experiencing homelessness, LGBTQ+ people, youth, the elderly and outdoor workers, who all frequently lack access to treatment, cooling facilities and other resources (Hansen, 2023; Nguyen, 2023).[12] Extreme temperatures also increase the likelihood of death and illness due to heart issues, diabetes and respiratory issues (McPhillips, 2023). Of those impacted, communities that experience disproportionate discrimination and racism are often less likely to be able to afford or seek medical treatment for health problems, even acute issues, resulting in conditions increasing in

9 The opportunities outlined in this section are not meant to be inclusive of all possible steps to take. We recognize that deeper policy visioning still needs to be done over the next several years with additional voices at the table.
10 In May 2024, the EPA amended the Clean Water Act to require that states consider Native hunting, fishing, and gathering rights when crafting water regulations; it also covers off-reservation lands on which Native people exercise those rights (Brown, 2024; Federal Register, 2024). In addition, Congress is weighing funding to finalize six historic water right settlements for Native nations, which will clarify water rights (Prokop, 2024).
11 Yale University School of Public Health and the University of Cape Town in South Africa maintain the Health Attribution Library (https://www.healthattribution.org/), a searchable database established to support the detection and attribution of human health impacts of human-caused climate change and illustrate the growing costs of climate inaction (The Wellcome Trust, 2024).
12 This would appear to be a disparate list of groups of people, but one critical link among them is housing - for example, the lack of sufficient affordable housing, family stress that causes LGTBQ+ youth to be driven from home and often onto the streets, discrimination that leaves people of color in inferior housing, and wages too low to support an adequate standard of living (Sileo, 2024).

severity or going untreated (Shukla, 2022). Asthma and respiratory illnesses also increase in communities with high levels of air pollution or particulates, including car emissions and other climate pollutants.

Temperature extremes and climate disasters can also exacerbate stress and other factors, leading to increased incidents of domestic violence, hate crimes and child abuse. A study conducted by researchers at the University of Cambridge found that following climate disasters such as Hurricane Katrina, incidents of sexual and domestic violence increased for nearly a year (Van Daalen et al., 2022). Additionally, the LGBTQ+ community was targeted in the storm's aftermath and prevented from receiving aid or access to shelters. They also experienced direct physical harm and threats. Furthermore, studies have found that hate speech and online bullying also increase during incidents of temperature extremes, contributing to racism, sexism, harassment, and threats (Nelson, 2022). As climate disasters grow more common, physical violence and harassment of already marginalized communities have also dramatically increased, resulting in devastating physical and mental health outcomes for impacted people.

Heat and climate pollution are also predicted to lead to the emergence of new diseases and disease vectors as a result of the migration of animals and insects, such as mosquitoes, that carry diseases, combined with lowered human immune systems due to heat and stress (Hansen, 2023). This is happening now with the rise of H5N1 ("bird flu") in dairy cows, which has been transmitted to dairy workers. Disease spread, along with increased incidents of abuse and heat illness, will increase the need for community members to access health care services.

However, New Mexico has a shortage of healthcare providers and infrastructure, leaving medical staff overstressed and overworked (Catlin, 2024; Furlow, 2023). As witnessed during the COVID-19 pandemic, prolonged health emergencies quickly lead to healthcare worker and first responder burnout, further aggravating the shortage of qualified staff and creating a cascading staffing problem that negatively affects patient outcomes as patients are triaged. This shortage of staff results in delayed treatment for "non-critical" patients and, inevitably, avoidable death and disability outcomes. Staff and supply shortages place increased burdens on healthcare facility budgets because contracted traveling staff cost more, further impacting quality of care, especially in rural healthcare facilities and at trauma centers.[13] Compounding the problem is the fiscal crisis affecting New Mexico's community-based clinics, so-called federally qualified health centers, which serve all patients, insured or not, in their local communities. While demand for their services has grown, federal funding, which is their overwhelming source of revenue, has remained the same, leading to an impending public health crisis in those areas (Porter, 2024).

First responders, such as firefighters and paramedics, are also relied on to address emergency situations, including climate disasters.[14] Wildfires, in particular, are increasing in frequency and severity. Since 2015, the United States has seen fires increase by approximately 100 wildfires per year (Union of Concerned Scientists, 2020). Fires are also burning hotter, resulting in more acres burning and more permanent damage to soils, making restoration difficult. The impact is substantial: Wildfires are estimated to cost the nation approximately $395 to $893 billion in economic outlays and damages annually (Joint Economic Committee, 2023). Additionally, the number of emergency responders, such as firefighters, is declining due to increased stress and disaster-level events, low pay and inadequate healthcare (Perano, 2019).

13 UNM Hospital is the only Level 1 trauma center - the highest level with full trauma and specialty care services along with trauma research and training - in the state; there are no Level 2 trauma centers (full trauma and speciality care) in the state. NM depends on one Level 1 and two Level 2 facilities in Lubbock and El Paso for additional high-level trauma care. There are seven Level 3 trauma centers (full trauma and some specialty care). Level 4 and 5 centers provide patent diagnostics, stabilization and transfer to a higher facility. See the map prepared for the NM Legislature: https://www.nmlegis.gov/handouts/LHHS%20092016%20Item%2019%20NM%20Trauma%20Centers%20Map.pdf

14 It is not just fires and floods that call out firefighters. PSE Healthy Energy, in an article published in Energy Policy, found that gas leak incidents - not including leaks that ignited - quadrupled between 2003-2018 and cost US fire departments $564 million in 2018 alone (Brodsky et al, 2024). PSE calls for this often unaccounted for cost to become a part of discussions on the energy transition.

Opportunities for Climate Action[15]

- Invest tax dollars in publicly owned or run healthcare institutions, including federally qualified health centers, that focus on the needs of the communities they serve, including providing incentives for healthcare providers to work in rural and low-income communities and to close the nation-leading gap in staffing at senior care facilities.
- Provide incentives for health care facilities to implement sustainability initiatives within Medicaid.
- Invest deeply in health provider and first responder education on discrimination and create more adequate feedback channels for reporting discrimination. Enforce anti-discrimination and harassment policy.
- Identify and invest in community-centered resources and services for marginalized communities, including healthcare services, cooling centers, housing infrastructure, community refrigeration/freezer units to store perishables, and more.
- Utilize the Medicaid program, as Oregon has, to provide air filters and air conditioners for people with the highest needs.
- Establish occupational heat standards for outdoor workers to protect them from heat illnesses and impacts.
- Establish a statewide paid medical leave standard so that all workers can address health concerns and issues without sacrificing their incomes.
- Increase funding for Level 1 trauma centers (such as University of New Mexico Hospital) and work with rural healthcare facilities to raise their trauma level beyond a very basic level in order to treat more people closer to home and relieve some of the Level 1 trauma center load.
- Provide better pay and healthcare for wildland and hotshot firefighters, and prioritize recruitment for emergency response roles in climate-vulnerable communities.
- Develop better early warning fire and flood systems.
- Work with climate-impacted frontline communities to be better prepared to provide more extensive and long-term support to emergency crews (fire and flood) and displaced community members, including preparing and updating emergency response plans and pre-positioning supplies and equipment.
- Educate communities, especially rural communities, to recognize and report new pest and illness outbreaks to authorities and recognize the symptoms of heat exhaustion and heatstroke.
- Place restrictions on housing density in the urban/wildland interface including developing and strictly enforcing use of fire-resistant building materials, meaningful setbacks, basic insurance, and evacuation plans and routes being sent to every household and business (all of which should reduce the need to “save buildings” and allow firefighters to fight the fires). This will require funding to assist low-income residents.
- Engage climate-impacted communities in developing and implementing fire management and related plans and in implementing them – using local knowledge and cultural practices.

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Rural Communities

Rural communities and low-income communities bear a disproportionate burden from the climate crisis. They frequently have fewer resources and less infrastructure than urban areas and are at the epicenter of the "wildland-urban interface," where structures and other human development meet wild, undeveloped vegetation. Furthermore, rural communities' economies are often connected to tourism and rely on the health of the land for quality of life and revenue. All of these factors make them vulnerable to the impacts of climate change.

New Mexico is recognized as one of the best states in the nation for pecan, chile pepper, milk, cheese and onion production (New Mexico Department of Agriculture, 2024). In 2022, agricultural production contributed over $3.7 billion to the state's economy. New Mexico's signature crop, the chile pepper, is also particularly vulnerable to high temperatures and heatwaves (Yu, 2021; Gleason, 2024). Chile and pecans are also water-heavy crops, and increased drought further stresses irrigation resources. As crops become stressed, the likelihood of pest and disease outbreaks increases, threatening entire farms, local economies and community food security (Singh et al., 2023; Tayag, 2024).[16] The agricultural industry also contributes to climate pollution, from equipment exhaust fumes to byproducts such as manure and fertilizer (Yang et al., 2022). Strategies such as converting farm equipment to electric and mitigating fertilizer emissions will help minimize climate pollution in rural communities.

In addition, outdoor workers, such as agriculture and oil field workers, are more likely to be impacted by heat waves and heat-related illnesses. In fact, the American Lung Association reports that agricultural workers are 35 times more likely to die from heat extremes than other workers (Becerra, 2023). Due to discrimination and a lack of health insurance, farmworkers face a disproportionate challenge in accessing healthcare. According to MHP Salud (n.d.), only 56% of farmworkers report having health insurance, and 77% identify as people of color. Immigrant workers also comprise nearly three-fourths of all agricultural workers nationwide but experience discrimination from language barriers and racism (Moriarty, 2022). These impacts are likely to further strain agricultural worker health, quality of life, retention and recruitment.

Rural communities with bustling tourism industries, from skiing to whitewater rafting, are also dramatically impacted by climate change. Recent winter seasons have shifted to warmer temperature trends, minimizing the days of snowfall that have traditionally supported the ski and snow recreation industry (Melhado, 2021). As a result, ski hills have now become reliant on snowmaking, and the industry is witnessing a shorter ski season overall (Travero, 2021). Whitewater rafting companies, along with other water tourism industries such as fishing, are also subject to the whim of water levels, temperatures, and drought conditions. As the climate continues to change, conditions that allow these industries to thrive will be threatened.

In northern New Mexico, acequias are being threatened by flooding, wildfires and drought, destabilizing sustainable and community-informed water management traditions (Segarra, 2022). Acequia systems and their

16 Jay Famiglietti, Global Futures Professor in the School of Sustainability at Arizona State University, argues in a recent guest essay in the New York Times that "The United States has no plan for the disruptions that will befall our food systems as critical water supplies dwindle" (2024).

"In northern New Mexico, acequias are being threatened by flooding, wildfires and drought... their community-driven management practices are vital to traditional and democratic water distribution, ensuring that all users in the system equitably receive water, even in drier periods. ...Other climate disasters, including wildfires, also destroy acequia systems and deteriorate water quality from ash and soil runoff. These threats have become so elevated that acequia leaders declared 2022 the 'worst year on record' for fire and drought."

community-driven management practices are vital to traditional and democratic water distribution, ensuring that all users in the system equitably receive water, even in drier periods (Marzia & Zahra, 2024). However, less mountain snowpack and water runoff will inevitably mean fewer water resources for irrigators, including acequia communities. Other climate disasters, including wildfires, also destroy acequia systems and deteriorate water quality from ash and soil runoff (Lohmann, 2022). These threats have become so elevated that acequia leaders declared 2022 the "worst year on record" for fire and drought (Lohmann, 2022).

Heat also increases demand for cooling systems and the electric grid, raising the cost of utilities for homes and businesses. Many homes lack insulation or even cooling systems, which adds to health concerns. The risk of downed power lines, grid limits and energy costs disproportionately impact rural residents, who are often served by smaller utilities with less grid infrastructure. Increasing grid capacity sometimes means that transmission lines and towers are proposed without consultation with impacted communities, especially Native nations, or without adequate consideration for environmental impacts. Climate disasters, such as floods and wildfires, are also more likely to disrupt or destroy rural infrastructure constructed with limited resources, such as roads and bridges, and water and wastewater systems that are vital lifelines for the community. Furthermore, research has highlighted a $180 billion funding backlog for rural infrastructure nationwide (TRIP, 2022). This represents a significant challenge: Vulnerable roads, bridges and other infrastructure vital for rural connectivity are also aging. As a result, a flooded road may keep an entire neighborhood from accessing emergency care or escaping dangerous conditions. Natural disasters such as wildfires also threaten infrastructure, homes and livelihoods, thus, uprooting and destroying entire communities.

One-quarter of all New Mexico families do not have internet access at home, with low-income and rural New Mexicans impacted the most (McKay, 2020). Internet connectivity provides communities with access to ecommerce, remote work possibilities, education and training resources, opportunities for civic engagement and more. Although internet technology requires energy for data storage and technology operations, it also reduces air and carbon pollution in surrounding communities, especially rural areas with homes far from commercial centers, by providing engagement options that do not require travel (York, 2024). However, the energy it takes to power the internet also contributes over 3% of global climate emissions, and more steps need to be taken to ensure that internet data centers and bitcoin mining, for example, are powered by new, dedicated renewable energy sources (York, 2024).

Statistics on violence against Native people, especially Murdered and Missing Indigenous Women (MMIW) are sobering. While Albuquerque and Gallup are among the 10 U.S. cities with the highest number of MMIW and girls, the percentages tell a more nuanced story (New Mexico Department of Indian Affairs, n.d.). In Farmington, 66% of Native people's cases were missing females, and of the solved homicide cases, Native people represent 43%. In Gallup, Native people comprise 76% of all missing persons and 87% of all homicide cases between 2014–2019. In fact, Native women in New Mexico have the highest rate of homicide among all racial and ethnic groups. One contributing factor is the influx of outsiders, such as non-Indigenous male workers brought in to work in the oil and gas fields (Mutert, n.d.). Nationally, 96% of Indigenous female survivors have experienced violence from a non-Indigenous perpetrator.

It is also particularly important to emphasize the tremendous impact on Native people from being unable to adapt to changing natural systems, as they have done from time immemorial, by moving. They now live "within the overlay of a foreign government and within boundaries and systems not entirely of their own choice" (Pasqual, 2024). They are now embedded in the landscapes and systems in which they find themselves and must rely on generations, and centuries, of accumulated knowledge and understanding of those systems to find a way to adapt.

Climate change's impact on vital rural industries will also undoubtedly impact the local workforce and economy. Less revenue and economic opportunities due to shrinking industries will increase mental stress and health disparities among rural residents. Heat, drought and aridity will also lead to increases in dust and air pollutants, triggering respiratory problems, such as asthma and chronic obstructive pulmonary disease (Bayram, 2017). All of these circumstances will further strain the rural healthcare system.

L Bar. In 2022, Trust for Public Land secured the L Bar property with help from multiple partners. The property will be added to the Marquez Wildlife Area, more than quadrupling its size and making it the largest wildlife area in the state.

Opportunities for Climate Action:[17]

- Engage local, state, federal, Native nation and international experts along with farmers in switching from irrigated to dryland farming and using regenerative agricultural practices while harvesting rainwater.
- Investigate new crops or new varieties of existing crops that are more resistant to aridification and use less water.
- Provide agricultural and other outdoor workers with better field conditions and basic medical insurance, and enact occupational heat standards and protections.
- Increase safeguards for the food supply, including greater monitoring in the field and at production facilities.
- Train agricultural workers and farm and ranch owners to recognize the symptoms of heat exhaustion and heatstroke and to recognize and report new pests or illnesses so interventions can occur as rapidly as possible.
- Require the reporting of all water wells, whether for domestic supply or irrigation, to the State Engineer as part of its effort to manage an out-of-control system, and install metering to improve collaborative water shortage sharing and minimize impacts on aquifers and surface water supplies.
- Complete the aquifer mapping program to obtain a full understanding of the state's groundwater resources, including the impacts of past and future pumping and changing recharge rates under global warming.
- Invest in state water conservation measures for rural communities, including xeriscaping, and upgrade outdated infrastructure such as water pipes.
- Leverage the Inflation Reduction Act, New Mexico Match Fund and other federal grant opportunities to update rural roads, bridges, water and wastewater facilities, and other aging infrastructure.
- Invest in robust broadband services so people in rural areas can more easily access education and training opportunities, business development, online medicine and more diverse information and entertainment.
- Address climate emissions from technology and data hubs located in or relocating to New Mexico by ensuring data centers are powered by new dedicated renewable energy sources so existing renewable energy is not diverted.
- Create economic development plans that can foster a more diversified local economy, including strengthening outdoor recreation opportunities.
- Increase rural healthcare system funding to handle increased levels of trauma and mental health crises.
- Implement recommendations from the New Mexico MMIW Task Force, including data gathering; law enforcement agreements and increased Native nation officer training; increased services and infrastructure; more training and support for tribal justice systems; and increased support for education, outreach and other preventive measures.
- Improve rural infrastructure, such as roads and bridges, and expand zero-emission vehicle capacity for personal and work vehicles as well as school buses to improve air quality and help mitigate respiratory problems caused by warming.

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- Add electric farm equipment to existing state electric vehicle tax credits.
- Support pilots for agrivoltaic[18] solar farms with crops that thrive in partial sunlight.
- Set GGE (Greenhouse Gas Emissions) reduction targets for the agricultural sector, including soil and fertilizer management, livestock management, manure management and more.
- Support and fund the installation of community refrigeration and freezer units to store perishables connected to renewable alternative energy production equipment. During the COVID-19 pandemic, it was difficult to store large quantities of perishables for people to access, especially when having to drive a long distance to access quality food.

As pictured here, agrivoltaics is the combination of working agricultural land, with crops or animals, and solar energy production.

18 Agrivoltaics (from agrophotovoltaics) is the combination of working agricultural land and solar energy production (USDA, n.d.)

Oil and Gas Communities

According to the U.S. Energy Information Administration (2023), New Mexico is the second-largest oil-producing state in the nation. Most of the state's oil and gas production originates from two regions: the San Juan Basin in northwestern New Mexico and the Permian Basin in southeastern New Mexico (Moskowitz, 2022). The San Juan Basin also overlaps with the Navajo Nation, the largest Native nation in the United States (Romero, 2021). As a fenceline and frontline community, Navajo citizens contend with all the burdens that arise from an oil and gas basin.[19] The Western Environmental Law Center (n.d.) reports that more than 91% of the land in the San Juan Basin has been leased to the oil and gas industry by the Bureau of Land Management, with approximately 40,000 wells drilled to date. Citizens of the Navajo Nation are twice as likely as New Mexico residents to live within one-half mile of an oil and gas facility, and communities near active oil and gas wells experience acute health impacts due to air and water pollution (Clean Air Task Force, 2018). In fact, the American Lung Association (2024) gave San Juan County an "F" grade for poor air quality (smog) in their 2024 State of the Air report.

Oil spills, gas leaks and other sources of pollution also disproportionately impact Indigenous and rural fenceline communities, which frequently rely on agriculture, grazing and other land-based activities for their livelihoods. In 2023, an oil spill resulting from a punctured pipeline in Shiprock occurred on grazing lands and next to an irrigation canal used for agriculture (Becenti, 2023). A lack of communication about the spill resulted in widespread concerns about community exposure to toxins and threats to livestock (Pietrorazio, 2024). In 2016, 36 oil tanks caught fire in San Juan County, resulting in community evacuations and toxins spewing into the air (Ecowatch, 2016). Furthermore, pipeline explosions and facility

19 The term "fenceline communities" describes communities that live immediately with or adjacent to the oil and gas industry

fires have been reported in the Permian Basin, and oil and gas infrastructure is increasingly at risk from wildfires and climate disasters. Moreover, orphaned or abandoned oil and gas wells pose significant pollution risks to communities because they can emit pollutants into the air and water and cause fires or explosions. The state of New Mexico estimates that there are approximately 1,700 orphaned wells on state and private land that need reclamation (Energy, Minerals and Natural Resources Department, 2022).

The oil and gas production process also uses significant amounts of water and leaves behind wastewater, called produced water, with contaminants from the extraction process (Allison and Mandler, 2018). The New Mexico Oil and Gas Association reports that "for every barrel of oil produced in New Mexico…three to six barrels of [waste] water are produced" (n.d.). Much of this water is often sourced from local water resources, including groundwater, rivers and lakes. Water may also be transported in by pipelines or trucks. This water is then used in the extraction process and contaminated with hydraulic fracturing and drilling fluids and other natural toxic contaminants from the ground. Wastewater is commonly then disposed of in open pits, underground disposal wells or transported off site (Earthworks, n.d.; Pskowski, 2024). The chemicals in produced water have made wildlife sick and contaminate soil and water, threatening the quality of life and health of the surrounding communities (Earthworks, n.d.).

Outside of the basins, communities along oil and gas transportation routes are also negatively impacted. In McKinley County, a transport train carrying gasoline and propane derailed in 2024. The train cars caught fire and burned for several days before the fire could be extinguished (Rushton, 2024). The neighboring community, primarily Navajo, was exposed to air toxins throughout the duration of the fire and was forced to stay indoors or evacuate.

Sites sacred to Indigenous peoples are also threatened by the oil and gas industry. For decades, Native advocates have fought for oil and gas drilling bans around Chaco Canyon, a sacred and historic site of the Navajo Nation and several Pueblos (Davenport, 2023). Bears Ears and Grand Staircase-Escalante are additional sacred sites that have been at risk from oil, gas and extractive industries. Although protections have been introduced to prevent extraction, mining and monument degradation, including the expansion of parks and monuments, advocates have called for additional protections to ensure the full legacy of these sacred sites is protected for future generations.

Additionally, in a conversation several years ago, a New Mexico state legislator explained what small towns in the Permian Basin have had to contend with.[20] The list was comprehensive: a shortage of teachers and school room space; lack of police, fire and mental health services that impact public safety; extensive damage to roads; the appearance of sinkholes; and a shortage of housing and rapidly rising housing costs. All of these community systems are vulnerable to the boom-and-bust nature of the oil and gas industry and suffer dramatically when market prices drop. The industry's volatility makes community planning inconsistent and vulnerable to market whims, further impacting the most vulnerable members of the region: youth, elderly, people experiencing homelessness, communities of color, LGBTQ+, and pregnant persons.

Immigrants comprise a significant portion of the oil and gas workforce, especially in the Permian Basin. A study conducted by the University of New Mexico (UNM) in 2024 found that immigrant workers experience unsafe working conditions, including long hours, dangerous working conditions and a lack of health and safety standards (Sanchez Youngman et al, 2024). Many of these same workers also lack healthcare, paid vacation time and other benefits that would allow them to thrive or recover from serious injuries and illnesses. Undocumented residents in the southern part of the state face the risk of being stopped by border patrols located far inland when trying to access more advanced care in Albuquerque (Williams,

20 In conversation after an interim committee meeting held in Roswell in 2019.

2024). Language barriers and a lack of services may also prevent workers from accessing resources or reporting abuses, further contributing to discrimination. Significantly – and undercutting local government and business claims that "everyone" likes the oil and gas industry – the UNM study found that 78% of immigrant oil and gas field workers do not want their children to work in the industry.

Emissions from venting, flaring and leaking oil and gas infrastructure are also contributing dramatically to the climate crisis. Recent studies have shown that this pollution is much higher than reported in the National Emission Inventory, contributing up to 60% of the reported ozone, nitrogen oxide (NOx) and particulate matter (PM2.5), although reported exceedances, especially for PM2.5 and NOx, are lower than those for ozone under current national ambient air quality standards (Tran et al., 2024).[21] However, an NMED and EPA inspection of New Mexico oil and gas facilities in the Permian Basin found that 60% are violating air quality rules for ozone precursors (Jones, 2024). A recent report indicates that oil and gas facilities across the country have methane emissions that are four times the EPA estimate and eight times higher than industry targets (Environmental Defense Fund, 2024). As one journalist noted, 15% of New Mexico's oil production is under federal consent decrees for having violated air quality rules and the Environment Department's lawyers are swamped with investigations. New Mexico may have tough rules on climate pollution due to leaks and waste, but having the capacity to compel the industry to comply is another matter (Redfern, 2024).[22]

Oil and gas production, with its leaks, venting and flaring, emits a wide range of toxic chemicals, such as ethane (a simpler compound than methane), methane and various volatile organic compounds (VOCs). Many of these are environmental toxins that, in combination, can form ground-level ozone, which is linked to respiratory problems including asthma. Other VOCs are strong carcinogens and are linked to heart, liver and other health issues (Environmental Protection Agency, n.d.; Laturkar, 2023). A recent study

An example of a methane flare.

21 PM2.5 describes fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller. Their very small size allows them to penetrate deeper into the lungs and cause more damage

22 NMED Secretary James Kenney, in an opinion piece (Kenney, 2024) pointed out that his agency could be more effective and improve air quality more quickly, if the agency could modernize. Specifically, he pointed to the agency's proposed permit fee increase (allowed by statute), which needs approval by the Environmental Improvement Board, and a bill similar to SB 228 (2024 regular session) allowing more efficient allocation of overhead across common agency functions, which was never scheduled for hearing by Senate Finance Committee chair Muñoz once the mining industry opposed it.

linked VOCs and other industrial pollutants to low infant birth weight in New Mexico (Cayton, 2024). Ozone and ozone nonattainment zones are also increasing because of climate change and air pollutants, further exacerbating health problems (Environmental Protection Agency, 2024).

During a 2024 New Mexico Legislative Finance Committee interim meeting on a possible first-ever statewide setback requirement for oil and gas wells, a committee analyst noted that 144,000 New Mexicans live less than a mile from oil and gas facilities. State Representative Debra Sariñana stated the setbacks were intended to prevent vulnerable populations, including children, from breathing air pollutants associated with oil and gas. She observed that in some communities, such as Eunice along New Mexico's eastern border to Texas, "entire school districts" are surrounded by oil and gas facilities, and students breathe in chemicals such as benzene every day (Hedden, 2024a). In fact, Eddy County, with no large urban areas, was ranked 17th in the nation for the worst air quality in the latest American Lung Association "State of the Air" report (Hedden, 2024b) and was one of only two rural counties to be listed in the top 25. A Texas A&M atmospheric chemist testifying at a 2024 interim Legislative Finance Committee meeting presented research that revealed that Eddy County is the only U.S. county where ozone levels are both above the EPA NAAQS (National Ambient Air Quality Standards) and rising (Schade, 2024).

"a committee analyst noted that 144,000 New Mexicans live less than a mile from oil and gas facilities.... the setbacks were intended to prevent vulnerable populations, including children, from breathing air pollutants associated with oil and gas... 'entire school districts' are surrounded by oil and gas facilities, and students breathe in chemicals such as benzene every day."

Workers and residents are exposed to chemicals that aggravate asthma, heart disease and other chronic health issues, but people in the oil field will also feel direct economic impacts from the transition to a zero-emissions economy. The more electrification advances and is fueled by clean renewable energy sources, the less demand there will be for oil and gas production. Prices are likely to fall in the face of lower demand, placing pressure on companies struggling to keep up profits to lay off workers. Price collapse occurs during the "bust" cycle of the industry, such as after the 2014 oil price crash and after the start of the COVID-19 pandemic (Egan, 2015; Paraskova, 2021;).[23] Recurring stress on oil and gas operator profits also increases the use of automation in the industry, especially among the largest operators (Hedden, 2019). Operators in the Permian Basin are now experimenting with driverless trucks for delivery of fracking sand (Hedden, 2024c).

Without oil and gas industry efforts to make the transition smoother, it will fall to local, state and federal efforts to replace jobs and revenues. One possible avenue is to build a restoration economy.[24] This approach could leverage oil patch worker skills to cleanup and restore oil and gas production and transport infrastructure and abandoned mines, especially uranium mining and milling facilities (Ding et al, 2017; Kelmenson et al, 2016).

23 Lost jobs added up to 86,000 after the 2014 price crash and 120,000 after the start of the pandemic. Increasing automation and other efficiencies in the face of these stressors mean that not all the jobs came back

24 The Federal Reserve Bank of Boston estimated in 2014 that the restoration economy "generates approximately 221,000 jobs and $24.86 billion in economic output" (Kelmenson et al, 2016).

Opportunities for Climate Action:[25]

- Prioritize fossil fuel communities for entrance into workforce training, apprenticeship and other economic development programs to create new career pathways for transitioning workers.
- Establish a universal basic income for fossil fuel workers and their families impacted by the transition.
- Work with the Economic Development Department, New Mexico Environment Department, Energy, Minerals and Natural Resources Department, and the private sector to build a "restoration economy" that includes workforce training to clean up abandoned oil and gas infrastructure, mining and milling sites, and other brownfield sites and restore them.
- Establish statewide criteria for oil and gas setbacks to protect vulnerable communities from the impacts of the industry.
- Update financial assurance and bonding requirements for the oil and gas industry to ensure funding is adequate for reclamation.
- Eliminate unnecessary tax subsidies for the oil and gas industry and channel the funding generated into a climate resilience fund to assist the state in implementing climate mitigation plans and policies.
- Build interagency cooperation to efficiently address health, pipeline leaks, water leaks and explosions, and ensure the public has access to emergency reporting.
- Enact legislation increasing taxes on the oil and gas industry to fund climate resilience and adaptation programs and compensate communities following climate disasters.[26]
- Strictly monitor, enforce and update state methane and ozone rules. Pass a State Implementation Rule (SIP) for compliance with the EPA methane rules as soon as possible.
- Require the oil and gas industry to fund community infrastructure and public service needs to address strains on the community due to population growth from the oil and gas workforce.
- Prioritize community protection from produced water and wastewater disposal, and implement policies to limit freshwater use and protect public health.

Hobbs Oil and Gas Field. Photo credit: Omar Ornelas, El Paso Times.

25 The opportunities outlined in this section are not meant to be inclusive of all possible steps to take. We recognize that deeper policy visioning still needs to be done over the next several years with additional voices at the table.
26 Vermont passed the "Climate Superfund Act" in 2024 that accomplishes this same goal. New York and Maryland are also considering similar legislation.

Wildlife

The cumulative impact of decades of extractive industry and climate change effects in the southwest have placed our wildlife species and ecosystems at grave risk. The planet is now experiencing a global extinction crisis.[27] The 2022 Living Planet Report from the World Wildlife Fund found an average decline of 69% of mammals, birds, fish and reptiles since 1970, placing the future of our global ecosystem in jeopardy (World Wildlife Fund, 2022). This crisis is being driven by a combination of unchecked human development, poor habitat and forest governing practices, extractive industry, habitat destruction and the impacts of climate change. In New Mexico alone, the Department of Game and Fish State Wildlife Action Plan has 274 species in greatest conservation need (NM Department of Game & Fish, n.d.).

Warming has already led to less regular flows in intermittent (seasonal) streams and permanent watersheds, resulting in diminished water for mollusks, crustaceans, amphibians, fish and the animals that feed on them. This also impacts species whose life cycle is partially dependent on a water-based stage. Declining flows are predicted to worsen over the next 50 years, with river water flow projected to decline an additional 16%–28% (Dunbar et al., 2022). Heat waves and drought will also lead to elevated surface water temperatures, eliminating the cool water habitats necessary for the survival of some fish and other riverine species, especially the cold water species prized by anglers that draw tourists from around the world (Easterling, 2019; Prokup, 2023).

Warmer water temperatures will also increase the likelihood of disease spreading by water, directly impacting wildlife (Mora, C. et al, 2022). Additionally, warmer water and lower flows will lead to lower water quality standards as streams fail to meet their current criteria (Van Vilet et al., 2023). A decline in water quality standards can expose waterways to increased unregulated pollution, especially in the wake of the Supreme Court's Sackett decision, which removed federal protections for a vast majority of state waters. All of these impacts will further deteriorate waterways and impact the surrounding landscape.

For wildlife, changes in seasonal timing caused by a warming climate can disrupt patterns of emergence and mating that have been established over millennia. For example, pollinators may emerge after blossoms have disappeared, impacting the long-term survival of those plants and the food supply of birds dependent on those insects, thereby rippling up the food chain (U.S. Department of Energy, 2023). Climate impacts on trees and plants, such as drought or earlier plant blooming, also impact the food supplies of herbivores and omnivores such as deer, bears, mice and rabbits. Changing plant growth patterns directly impact food availability for the animals that rely on them for survival. This, in turn, impacts predator-prey dynamics and threatens food sources for larger animals such as wolves, cougars and coyotes.

Pollinators vital for ecosystem resilience and food production are also directly impacted by climate change. Extreme weather events, heat and drought all impact the ability for pollinators to thrive, affecting their reproduction cycle, food availability and pollination windows (Brunet and Fragoso, 2024). The climate crisis, combined with increased pesticide use, has also dramatically lowered pollinator populations as much as 80%, even in forests undisturbed by humans (Beams, 2023). This decline, in turn, impacts every aspect of the ecosystem including the ability for plants to thrive.

Changing landscapes due to drought, pests, disease, food scarcity and wildfire have also forced wildlife, including game species and birds, to migrate northward. Wildlife migration paths and habitats are often fragmented due to development, making it difficult for some species to adapt. Furthermore, many species cannot move or move fast enough to adapt. Drought is especially devastating for wildlife species with

27 A just-released research paper suggests that while tipping points of major Earth systems are certainly observable in the past, we lack adequate data and modeling sophistication to predict with any certainty when one or more of these systems could tip in the future (Ben Yami et al, 2024). This is not to say tipping points aren't approaching.

small habitat ranges or compromised migration corridors, such as the Sacramento mountain salamander, which is considered an endemic species (Grover, 2021). Research has found that up to 90% of all endemic species could become endangered and experience adverse impacts under unchecked global warming scenarios (Manes et al., 2021). These changes directly impact the ability of wildlife to thrive and survive.

Heat extremes also stress wildlife. Birds are particularly vulnerable to heatwaves, as they struggle to keep their bodies cool and find relief from the heat (Wilson, 2023). In 2020, communities were shocked by the sudden deaths of thousands of birds that fell out of the sky across the Southwest. Scientists concluded that the bizarre occurrence was likely to be the result of climate change: There were many wildfires in the West, and it is likely that the fires and their drifting smoke forced birds to change their migration routes, making the routes longer and less optimal (Associated Press, 2023). In addition, persistent drought across the West has diminished the supply of insects and other food these large flocks depend on to fuel their arduous migrations to warmer climates in the winter and prepare them for their spring breeding season (Guardian, 2021).

A deer herd in the Valles Caldera

Opportunities for Climate Action[28]

- Recognize that land and water protections are an important tool for adaptation and mitigation of the effects of climate change; protected lands can help sequester carbon, provide better quality habitat and forage, limit the range of fossil fuel extraction, and preserve working lands as wildlife conservation areas.
- Avoid the use of pesticides that harm pollinators, insects and small mammals critical for ecosystem resilience, including prohibiting large-scale aerial application of pesticides on public lands.
- Thin select state forests to lessen the likelihood of massive, intense crown fires. This will create conditions for a more diverse understory ecosystem that can support more biodiversity, help trees use water more efficiently, and improve soil moisture so it can better hold water, thereby acting as a sponge to capture and slowly release water from more erratic and larger storm events.
- Change statutes to make human-induced climate change a component of degradation and not an excuse to alter criteria and related quality standards.
- Implement a surface water protection program to protect waters from pollution threats.
- Continue a robust and inclusive process to increase the protection of important river and stream segments, even entire watersheds, through petitions to designate Outstanding National Resource Waters.
- Engage in a robust and inclusive process to establish policies and programs for environmental flows as a critical method for ensuring baseline water for the environment and public access, such as rafting.
- Reform and modernize New Mexico's Game and Fish Department to assume an ecosystem approach and provide protections and improvements across the system, not just for selected game species.
- Increase protection for rivers and streams, critical wildlife corridors, high quality habitats and areas characterized by a high degree of biodiversity.
- Prohibit development in wild spaces that are essential habitats and migration routes for wildlife.
- Invest in green spaces to support bird and insect migration patterns and to reduce air temperatures.
- Prioritize smaller-scale renewable energy development on rooftops and areas with existing development or infrastructure to avoid development in wildspaces crucial for wildlife habitat.
- Center and actively mitigate any wildlife impacts of renewable energy siting and development when selecting locations for renewable energy projects.

28 The opportunities outlined in this section are not meant to be inclusive of all possible steps to take. We recognize that deeper policy visioning still needs to be done over the next several years with additional voices at the table.

A History of Starts and Stalls: Climate Progress from 2003–2018

Federal Action on Climate

States do not act in isolation, either from each other or from the federal government. Momentum for climate action has slowly built at the federal level since the 1970s.[29] In the mid-1990s, the Clinton administration committed the nation to voluntarily reducing GHG emissions to 1990 levels by 2000. Under Clinton's administration, the United States also participated in the first Conference of the Parties in Berlin to examine internal initiatives to address climate change. Furthermore, in 1997, the United States signed onto the Kyoto Protocol, pledging to reduce carbon emissions by 7%. These actions helped the United States step more firmly onto the climate world stage.

However, George W. Bush's administration quickly unraveled some of this progress, most notably announcing in 2001 that the United States would not implement the Kyoto Protocol (Goldenberg, 2009). A year later, Bush's administration announced a separate plan, replacing the Kyoto Protocol, which was focused on reducing the carbon intensity of GHGs.[30] However, this plan still allowed climate pollution to grow as industry production increased. The Bush administration also publicly and continuously questioned the science of climate change and dismantled sections of the Clean Water Act, Clean Air Act and Endangered Species Act (Goldenberg, 2009). The administration's lack of action in capping climate pollution did prompt some states, including New Mexico, to adopt their own GHG cap and trade policies or programs.

Shortly after stepping into office in 2009, the Obama administration worked with Congress to introduce and build support for the first nationwide GHG cap and trade program. The bill, called the American Clean Energy and Security Act, passed the House of Representatives by a vote of 219-212 but failed to be heard on the U.S. Senate floor. In Obama's second term, his administration fast-tracked several climate initiatives, including the design and adoption of the Clean Power Plan, which established carbon pollution limits for power plants (Lavelle, 2016). Obama also prioritized fuel-efficiency standards for trucks and addressed methane pollution from the oil and gas industry and energy efficiency standards for homes. Furthermore, he rejected the Keystone Pipeline and halted new oil and gas drilling projects. His administration prioritized environmental justice for the first time in over a decade, directing federal agencies to develop plans to address injustice and equity issues. The United States also signed onto the Paris Agreement in 2016, addressing EPA and BLM methane rules as part of our nation's GHG reductions, an effort continued at the state level by Governor Lujan Grisham.

29 Knowledge of the relationship between CO_2 and global warming goes back over a century, but became a part of scientific and public discourse starting in the 1970s. The fossil fuel industry was keenly aware of the connection. Exxon conducted research at this time on the role of CO_2 in global warming; their predictions of the amount of warming, its timing and its impacts are in alignment with current estimates. Scientific American (Hall, 2015) reported on an investigation by InsideClimate News detailing Exxon's knowledge and refusal to go public. The story led to other investigations that showed the largest oil and gas trade association had known since the 1950s, the coal industry by the 1960s, and the auto industry by the 1970s. The story gained a second life in 2023 when a team of Harvard-led scientists published an article in Science providing additional information on more recent cover-ups and a detailed analysis of all Exxon's known climate modeling research from 1977-2003, which they found "skillful."

30 As Chevron Corporation (2022) explains, "carbon intensity is a measure of carbon dioxide and other greenhouse gasses (CO_2e) per unit of activity, like generating a product". While this is a good thing, it does not necessarily mean that total climate pollution is declining. It can easily be the case that total emissions increase because total production has increased, even if emissions per unit of production are down. Even more than this, Chevron admits (indirectly) that it is making poor progress in reducing carbon intensity. The company identified "nearly 100 potential projects to further lower our greenhouse gas intensity" but as of 2021 had made progress on only 36 and completed only 5.

However, the Trump administration dismantled all of this progress, weakening or reversing over 100 rules and regulations (Popovich, Albeck-Ripka, & Pierre-Louis, 2021). Those on the chopping block included the Clean Power Plan, fuel economy standards for vehicles and methane pollution standards (Pitt, Larsen & Young, 2020). The Trump administration also fast-tracked oil and gas permitting without adequate vetting, leading to a boom in the oil and gas industry in the Southwest. The administration attempted to dismantle oil and gas methane rules but advocates and the courts slowed this progress. The United States once again withdrew from the Paris Agreement and approved the Keystone Pipeline (Montgomery & Karni, 2019). Vulnerable wildlife habitats, such as the Arctic National Wildlife Refuge, were approved for new oil and gas drilling operations against the wishes of community, climate and wildlife advocates. Critical laws such as the Clean Air Act and Clean Water Act were gutted, and funding for the EPA was stripped. Government websites were also cleared of references to climate change, and climate science was openly denied (Waldma, 2018). As a result, all opportunities for climate progress shifted to the states.

"...the Trump administration dismantled all of this progress, weakening or reversing over 100 rules and regulations... Critical laws such as the Clean Air Act and Clean Water Act were gutted, and funding for the EPA was stripped. Government websites were also cleared of references to climate change, and climate science was openly denied. As a result, all opportunities for climate progress shifted to the states."

Bill Richardson Administration (2003–2010; Democrat)[31]

Bill Richardson became New Mexico's governor after serving in President Clinton's White House as secretary of energy from 1998–2001. As secretary, he championed strong home appliance energy efficiency standards, argued for energy conservation in response to the California electricity crisis (manufactured, it turned out, by the electric industry), and called for a national renewable portfolio standard (RPS) and the development of new vehicle technology.[32] In the lead up to his 2008 run for President as "the energy candidate," he published a book calling for U.S. leadership in an energy "revolution."[33]

Richardson brought his energy and climate concerns with him to his role as governor. In 2004, he signed New Mexico's first RPS into law. The RPS required that 5% of New Mexico's electricity come from renewable sources by 2006 and 10% by 2011. In 2007, the RPS targets increased to 15% of electricity produced from renewable sources by 2015 and 20% by 2020. These requirements led to large increases in renewable uptake in New Mexico.

31 For a look into the state of climate change knowledge towards the end of the Richardson administration, see a working paper on this topic (Amigos Bravos, 2009)
32 The California energy crisis of 2000-2001 was manufactured, in large part, by Texas energy trading corporation Enron, allowing its partners to raise prices as much as 800%. Whistleblower allegations led to investigations that eventually brought the company down (Borger, 2005; Jamali, 2021).
33 Leading by Example: How We Can Inspire an Energy and Security Revolution (2007)

In 2005, Richardson issued an executive order (EO) establishing the New Mexico Climate Change Advisory Group (CCAG), administered by the NMED. The CCAG issued a report (2006) projecting New Mexico's future climate pollution emissions and recommending policies to reduce the state's total emissions to 2000 levels by 2012, 10% below 2000 levels by 2020 and 75% by 2050.[34]

The legislature also passed, and Richardson signed, a 2007 bill creating the Renewable Energy Transmission Authority (RETA) to plan, finance, develop, permit and acquire high voltage electric transmission and energy storage projects to connect renewable energy to the grid and market it to other states. The RPS and RETA were major accomplishments of Richardson's clean energy agenda and made New Mexico one of the leading states for renewable energy standards. In addition to electric utility renewable energy standards, Richardson supported solar, biodiesel and biofuel tax incentives; eliminated sales taxes on hybrid vehicles; and set aggressive targets to reduce global warming pollution. Near the end of his term, the Environmental Improvement Board approved a GHG emissions cap and trade program, the first in New Mexico's history. The Richardson administration also advanced nation-leading energy conservation building codes that were promptly reversed by the Martinez administration.

Figure 3[35]

Figure EX-1

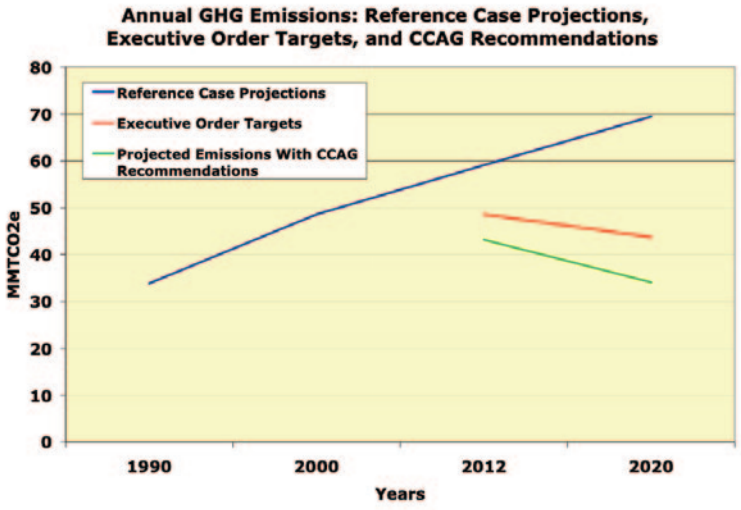


Table EX-1. Annual Emissions: Reference Case Projections, Executive Order Targets, and Impact of CCAG Recommendations

ANNUAL EMISSIONS	1990	2000	2012	2020
REFERENCE CASE PROJECTIONS	33.9	48.6	59.1	69.5
EXECUTIVE ORDER TARGETS [a]			48.6	43.7
GHG REDUCTIONS FROM CCAG RECOMMENDATIONS			*-15.9*	*-35.4*
ANNUAL EMISSIONS WITH CCAG RECOMMENDATIONS			43.2	34.1

[a] Targets aim to reduce New Mexico GHG emissions to 2000 levels by 2012, and 10% below 2000 levels by 2020.

34 It is difficult to assess the appropriateness of the CCAG targets and their effectiveness. In 2016, NMED produced a report on the "Inventory of New Mexico's greenhouse gas emissions: 2000-2013." In the report, total GHG emissions as CO2e were calculated in 2000 as 86.8MMT, which is 79% higher than the 48.6MMT for the "reference case" in 2000. In 2013 (there was no data for 2012) total emissions were 80.9MMT, which is 87% higher than the projected 43.2MMT that would be achieved implementing the CCAG recommendations.This underscores two problems: calculating past (and present) total emissions, and calculating the impact of proposed emissions-reduction policies and programs.

35 New Mexico Climate Change Advisory Group (2006); pEX-2

In 2007, Richardson joined the governors of Arizona, California, Oregon and Washington in signing the Western Climate Initiative. The policy was intended to build on state-level climate emissions tracking by developing a regional target for reducing climate pollution, participate in a multi-state registry to track and manage GHG emissions in the region and develop a market-based program to reach the target.

> "In the absence of federal leadership, I feel a real sense of urgency to take action at the state level to fight global warming and strengthen our energy security… These strategies also help to protect the environment, create high-tech, high-wage jobs and grow our economy."
>
> Governor Bill Richardson[36]

Susana Martinez Administration (2011–2018; Republican)

Immediately after starting her term on January 1, 2011, Governor Susana Martinez withdrew the state from the Western Climate Initiative. She attempted to end the Richardson-era efforts to cut GHG emissions by 3% a year, but the state Supreme Court found she had violated the state constitution by doing so. Instead, she dismissed the members of the Environmental Improvement Board who had previously approved climate pollution regulations, and her newly appointed members ended the GHG emissions and cap and trade programs. She placed pro-industry people at the head of NMED and EMNRD and gutted agency budgets. Her administration also froze and reduced funding for New Mexico's healthcare system. When a methane hotspot was identified over northwestern New Mexico, Martinez' response was to criticize the federal government for not issuing drilling permits fast enough (Montoya Bryan, 2018). Her administration did negotiate a compromise agreement with EPA and Public Service Company of New Mexico (PNM) regarding mandated haze reduction from the San Juan Generating Station, operated by PNM (Martinez, 2014).[37]

Additionally, Governor Martinez eliminated the energy efficiency building codes adopted by Governor Richardson and weakened rules that protected communities from pollution. Notable safeguards that were gutted or weakened included regulations governing disposal of pollution from the oil and gas, copper, and dairy industries (Correia, 2013; Williams, 2010).

Governor Martinez often wielded her veto pen, even refusing to sign legislation passed with strong bipartisan support but lacking a veto-proof majority. As a sign of the frustration felt by pro-climate action legislators during the eight years of the Martinez administration, State Senate Pro Tempore Mimi Stewart stated,

> "When I was introducing bills in 2005, 2006 and 2007, it was to try and educate people, but the reason I don't introduce those bills now is they will not be signed. The governor has made it clear: she has vetoed my solar tax credits, my other bills like that, and it just doesn't make sense to many of us to work as hard as we can to get bills passed only to have them vetoed."[38]

36 Quoted from Richardson (2007)
37 This agreement, which confirmed PNM's plan to shut down two of the four operating units at the facility, would have set the SJGS on the path to becoming a methane gas-fueled energy source. The 2019 ETA, pushed through by environmental and climate action groups, led to the commitment to develop replacement power solely from solar + battery back-up.
38 Quoted in Paskus (2017)

Renewed Momentum: Climate Progress from 2019 to Present

Federal Action on Climate: The Investing in America Agenda

Starting in 2021, the Biden administration stepped into office with an ambitious agenda for climate action. In Biden's first year, he established a national standard to reduce carbon emissions from 2005 levels by 2030 (Lashof, 2024). The United States officially rejoined the Paris Agreement, and a key permit for the Keystone XL pipeline was revoked, halting the project indefinitely (Brown, 2021). Following the COVID-19 pandemic, the Biden administration championed the largest investment in climate action in history through the passage of the Investing in America agenda. This program includes the American Rescue Plan Act, the CHIPS and Science Act, the Infrastructure Investment and Jobs Act (known as the "Bipartisan Infrastructure Law") and the Inflation Reduction Act (IRA). The IRA alone represents the largest investment in climate action and environmental justice in the country's history. Together, these policies have funneled tens of billions of dollars into state and local governments for infrastructure resilience, technology innovation and research, and climate adaptation needs, as well as for addressing legacy pollution and investing in renewable energy (White House, 2024).

In 2023, the Biden administration finalized rules, based in large part on the New Mexico rules, to cut methane pollution from the oil and gas sector (U.S. Environmental Protection Agency, 2023). His agencies also temporarily paused approvals of liquefied natural gas exports to evaluate and update export decisions for consumer and climate change impacts (White House, 2024).

The federal IRA has funneled significant new resources into New Mexico, launching a multitude of new renewable energy businesses and projects. For example, Arcosa Wind Towers announced the expansion of its manufacturing facilities to New Mexico (City of Belen, n.d.). Maxeon Solar Technologies announced the opening of a one-billion-dollar solar manufacturing center in Albuquerque, making New Mexico home to the first commercial-scale solar cell manufacturer in the nation (Maxeon Solar Technologies, 2023). Furthermore, New Mexico has received significant funding for wildfire and climate disaster prevention and relief, land and water protection, electric buses and vehicles, charging infrastructure, solar energy and transmission, and more. This surge of funding has reignited efforts at the state level to address climate pollution and incentivized market growth in the renewable sector.

Governor Michelle Lujan Grisham Administration (2019-present; Democrat)

During Governor Lujan Grisham's administration, there has been substantial state progress in repairing the climate action damage caused by the Trump and Martinez administrations. The governor, her administration and the legislature have undertaken significant climate actions and redirected the trajectory of the state toward an equitable zero-emission economy. The governor's leadership has notably improved the actions of administrative agencies, especially EMNRD and NMED. Both agencies suffered debilitating budget cuts and serious staff morale problems under the Martinez administration. Now, these agencies' budgets are being rebuilt, not only to carry out their traditional work, but also to implement large, new climate and conservation programs. Agency heads are fully engaged in the Climate and 30x30 executive orders (EO). The governor's leadership on climate issues has resulted in her appointment to serve as co-chair of the U.S. Climate Alliance, a bipartisan coalition of governors working to secure a net-zero future.

The climate action movement in New Mexico (Indigenous, community-based, agricultural, public health, outdoors and environmental organizations that coalesce to varying degrees around specific climate actions) has been instrumental in building the legislative political will necessary to act on positive climate action and equity, but has not yet achieved the level of transformative action that this moment requires. Between the Permian Basin oil boom and the extreme weather of the summer, the climate action movement is called on to do more to drive more rapid and effective action.

President Biden's Investing in America agenda has directed billions to the state that will help build climate resilience and create jobs.[39] The private sector has responded with substantial wind, solar, grid and electric vehicle (EV) investments that will increase entrepreneurship and help develop a more diverse economy.[40] Nevertheless, a fully articulated and funded climate action framework in New Mexico, with its attendant statutory and regulatory measures, would significantly strengthen these initial actions and propel further movement towards an equitable zero-emission economy.

Example of the Inflation Reduction Act (IRA) in Action:
In 2024, the EPA awarded New Mexico state regulators $156 million in funding to make renewable energy available to nearly 21,000 low-income homes (Governor Michelle Lujan Grisham, 2024). This investment is part of the **Solar For All program funded through the IRA** and marks record investment in solar energy expansion across the country.

Key State-Level Climate Actions Under Governor Lujan Grisham[41]

New Mexico's climate pollution reduction measures were first outlined in the 2019 EO on climate; most of the measures are currently being implemented, but some rules are not yet in statute, such as the methane rule and the ozone precursor rule. Historic climate actions implemented under the Lujan Grisham administration include the following:

- **2019 EO Addressing Climate Change and Energy Waste Prevention (2019-003),** which ordered that New Mexico join the U.S. Climate Alliance, embraced the 2015 Paris Agreement Goals, created a climate change task force and called on all state agencies to address climate change (Governor Michelle Lujan Grisham, 2019).
- **2019 Energy Transition Act (SB 489),** which included an **RPS of 100% carbon-neutral energy by 2045** for investor-owned utilities and by 2050 for rural co-ops. The act also created funds to support workers and communities impacted by the San Juan Generating Station coal plant and mine closure.
- **2019 $200,000 budget allocation** to Department of Workforce Solutions to conduct a study to develop a workforce and economic development roadmap to integrate underrepresented communities into the clean energy economy.

39 To view the full investment of funding in New Mexico to date, visit the State of New Mexico's Federal Funding dashboard: https://www.nm.gov/federal-funding/
40 To view a comprehensive dashboard of project investments, visit the American Progress tracker: https://www.americanprogress.org/article/biden-administration-investment-tracker/
41 A more complete list of climate actions, including actions that work against meeting the state's goals, is in the Appendix

- **2020 Energy Grid Modernization Roadmap (HB 233),** which directed EMNRD to develop a strategic plan for grid modernization and establish a grant program for grid modernization projects (Governor Michelle Lujan Grisham, 2020).
- **2021 EO Protecting New Mexico's Lands, Watersheds, Wildlife and Natural Heritage (2021-052)**, commonly known as "30x30," which set a goal of protecting 30% of all lands and waters in New Mexico by 2030. It also called for establishing climate stabilization areas (Governor Michelle Lujan Grisham, 2021).
- **2021 methane waste rules prohibiting routine venting and flaring of natural gas** in the oil and gas industry. Methane is a key pollutant that contributes to climate change and the rule requires methane pollution to be cut by 98% by 2027 (Redfern, 2021).
- **2021 Community Solar Act (SB 89) adopted**, which enables low-income homeowners and renters, commercial spaces and neighborhoods to subscribe to community renewable energy sources (Conservation Voters New Mexico).
- **2021 Environmental Database Act (HB 51)** created a centralized public website that includes both environmental and health data. The database will help agencies and industries obtain a more informed understanding of environmental impacts and make more well-informed decisions (Calman, 2021).
- **2021 Local Government Air Quality Regulations (SB 8)** granted Albuquerque and Bernalillo County the authority to adopt more stringent environmental standards than the federal level. This was particularly important for subsequent passage of several clean cars and trucks rules aimed at improving air quality (Governor Michelle Lujan Grisham, 2021).
- **2021 Sustainable Economy Task (SET) Force (SB 112),** which created a state task force to develop a strategic plan to transition the state away from fossil fuel reliance (D'Ammassa, 2021).
- **2022 state rules to reduce ozone precursor pollution,** which would limit leaks of VOCs, methane and other chemicals from oil and gas industry facilities. Some of these chemicals are known carcinogens or cause other health problems and some can combine to create ground-level ozone, a factor in respiratory illness (Governor Michelle Lujan Grisham, 2022).
- **2022 Advanced Clean Cars (ACC) I** to address tailpipe pollution from new cars and trucks starting in 2026. Transportation pollution accounts for 28% of all GHGs nationwide (U.S. Environmental Protection Agency, 2024; Western Resource Advocates, 2022).
- **2023 ACC II, Advanced Clean Trucks, and Omnibus Heavy-Duty NOx (nitrogen oxides) standards** calling for 82% of all new vehicle sales to be electric or hybrid by 2032 (Mena, Harris & Ortiz, 2023).
- **2023 New Mexico Climate Investment Center,** which created a "green bank" that will fund climate-focused projects (Governor Michelle Lujan Grisham).
- **2024 state adoption of the 2021 International Energy Conservation Code,** which will improve building efficiency (Shanahan, 2024).
- **2024 Conservation Legacy Permanent Fund (SB 9)** fully funded the permanent fund, allowing it to sustainably support the Land of Enchantment Legacy Fund that provides annual operating funds to critical state land, water and wildlife conservation programs, including those that protect habitats vulnerable to climate change impacts (Conservation Voters New Mexico, 2024). The funds were first adopted with partial funding in 2023.
- **2024 New Mexico Match Fund (HB 177)** to leverage federal grants from Biden's Investing in America agenda to expand infrastructure and renewable energy projects at the local level. The fund was seeded with $75 million (Conservation Voters New Mexico, 2024).

- **2024 Clean Fuel Standard (HB 41)** is aimed at reducing climate pollution from transportation through new standards for fuel producers and importers, making New Mexico the fourth state in the nation to do so (Governor Michelle Lujan Grisham, 2024).
- **2024 draft Climate Adaptation and Resilience Plan** to identify strategies to protect and prepare communities for the impacts of the climate crisis (Gleason, 2024).

This list of climate action accomplishments is impressive. The climate progress New Mexico has made in the past six years has undoubtedly put New Mexico on a path to confronting climate change in ways no previous administration has achieved. **However, as the climate crisis continues to increase in severity, the Permian oil boom has pushed our emissions goal post ever further out. The importance of taking continued bold action has only been amplified.** In the years since Governor Lujan Grisham's first critical action on climate change, other states have also followed New Mexico's efforts to advance climate policy and surpassed them. New Mexico has now fallen significantly behind other states, such as Colorado, which have codified economy-wide emissions standards, ensuring all agencies and industries meet reduction goals (Environmental Defense Fund, n.d.). Additionally, while Colorado and New Mexico both have methane pollution standards, Colorado has strengthened its standards since initial adoption to require direct measurement of emissions, among other strategies, making them the strongest rules in the nation (Environmental Defense Fund, 2023).

Examples of Ways Other States Have Led on Climate Action That New Mexico Has Not Addressed[42]

- **Climate Governance:** Colorado and Nevada, among others, have codified economy-wide 100% zero-emission commitments into law, driving the state to address emissions from all sectors. New Mexico currently has a commitment of a 40% economy-wide reduction by 2030 adopted through an EO, but nothing enacted in statute. For these reductions to be meaningful, rulemaking must be swift and enforcement must be funded and diligent. Other industries that contribute substantially to climate change that should be addressed include industrial heating, agriculture, construction and waste management, among others.
- **Adaptation and Resilience:** New Mexico recently published a draft adaptation and resilience plan for the first time. Although it represents a landmark step forward, the plan is a reflection of interagency discussions and is not codified into law. Other states have taken this work to deeper levels by establishing offices and divisions dedicated to resilience (Massachusetts) and creating dedicated funding streams to fund adaptation and resilience programming (Vermont[43]). By elevating these strategies into law and resourcing programs, other states have ensured this work remains a priority for the states in years to come.

42 This list represents a snapshot of state advancements on climate action, and is not meant to represent all the ways states are leading. See the new report from the Clean Energy States Alliance on the innovative approaches adopted by four states (Costello, 2024).
43 Vermont's Climate Superfund Act was passed into law in 2024.

- **Transportation:** New Mexico has successfully adopted clean cars and trucks standards through the ACC I and II, ACT and NOx standards. The state has also committed to transitioning the state's government vehicle fleet to electric and adopted a clean fuel standard. However, other states have surpassed New Mexico in other transportation efforts, including actions to expand pedestrian corridors and accessibility (Minnesota[44]) and mandating GHG emissions as a core consideration for project planning and development (Virginia[45]). Furthermore, other states have adopted legislation requiring all new public transportation to be zero emission (Maryland[46]) or other incentives to support municipal fleet transition (New Jersey[47]). As states look to expand EV charging infrastructure, some states have also established statewide public plug-in vehicle charging systems (New Jersey[48]). Clean Fuels Standards in some states have incentivized out of state bio fuels rather than in state electrification. For these rules to truly result in transportation decarbonization, they must be carefully crafted to help transportation-impacted communities drive electrification and public transit in the state.
- **Agriculture and Food:** Food waste that can be composted frequently goes to landfills, where it generates harmful methane pollution that contributes to climate change. States nationwide are beginning to explore ways to reduce this pollution by adopting food waste reduction targets (Washington[49]) and mandating composting (Connecticut[50]; Vermont[51]; Massachusetts[52]). The City of Albuquerque is currently exploring a city compost program.
- **Industry and Materials:** Several states have enacted legislation that promotes low-emission building and construction material (Colorado[53]), and/or requires the state to address or consider carbon emissions during the process of procurement (Colorado[54], California[55], New York[56]). New Mexico does not currently have such policies in place.

The Limits of Climate Action in New Mexico

New Mexico's 2019 climate EO goals have not yet been fully achieved. As the Environmental Defense Fund (EDF) noted in a 2023 report,

> "New Mexico faces an emissions gap—the difference between the reductions projected in the state and the amount required to meet these goals—of between 20–23 million metric tons (MMT) of carbon dioxide equivalent (CO_2e) in 2025 and 26–36 MMT CO_2e in 2030" (Environmental Defense Fund, 2023).[57]

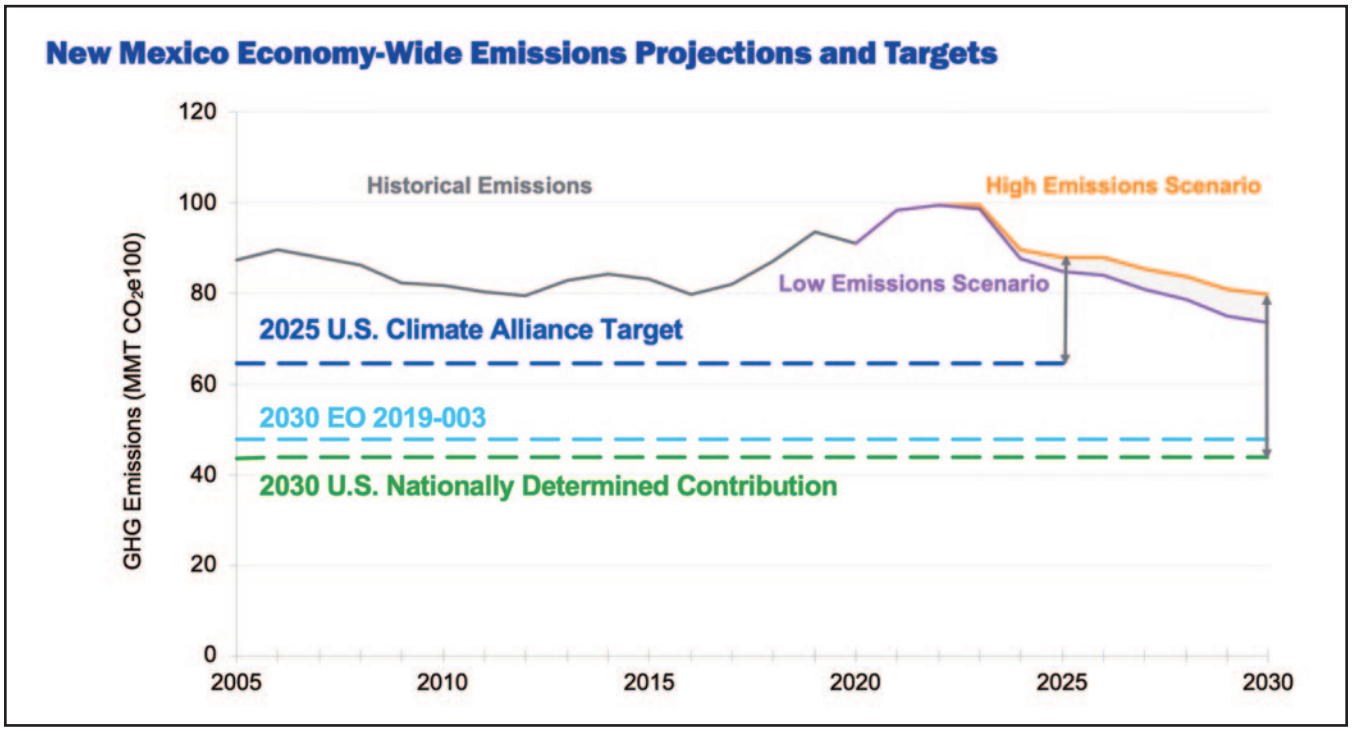
EDF (2023) points out that New Mexico is already "further off track than most other U.S. Climate Alliance states." Climate Alliance states have committed to reducing CO_2e emissions by at least 26–28% by 2025 and 50–52% by 2030, and reaching net-zero emissions by 2050.

44 Minnesota adopted a statewide pedestrian system plan in 2021.
45 Virginia's Transportation Board adopted a project prioritization system that included greenhouse gas emissions as a factor.
46 Maryland's SB 137 was enacted in 2021.
47 New Jersey's S2252 was enacted in 2020.
48 New Jersey's S2252 was enacted in 2020.
49 Washington's House Bill 1799 Organic Materials Various Provisions (2022)
50 Connecticut's Public Act 13-285 An Act Concerning Recycling and Jobs (2014)
51 Vermont's Universal Recycling Law was adopted in 2012.
52 Massachusetts Commercial Organic Waste Ban, adopted through the Department of Environmental Protection in 2014.
53 Colorado SB22-051 Policies to Reduce Emissions from Built Environment (2022)
54 Colorado HB21-1303 Global Warming Potential For Public Project Materials (2021)
55 California's Buy Clean California Act (2017)
56 New York Assembly Bill A2591A (2021-2022)
57 CO_2 is the most common GHG emitted by human activity, but there are many other GHGs, some of which are far more powerful in the short term than CO_2. Using carbon dioxide equivalents (CO_2e) is a way to measure and compare the effect of different GHGs on the climate. Methane, for example, is 80 times more potent than CO_2 over a 20-year timespan, so focusing on rapidly reducing methane gas emissions can have a large impact on reducing overall GHG emissions and their long-term impact on the climate.

One additional important point to note regarding climate action under the administrations of Governors Lujan Grisham and Richardson is the base year for setting targets. RPS goals have accelerated with the Lujan Grisham administration, but the emissions targets use 2005 as the base year rather than 2000, even as the percentage of the base year has increased. However, EDF's 2023 report shows some significant differences between the analysis on which it based its report and the analysis used by NMED for its GHG inventory (2023).

On the one hand, EDF's analysis, using data from Rhodium Group, estimated baseline CO2e emissions in 2005 to be nearly 30% greater than the estimates used by the state for its inventory: 98.1 MMT CO2e as opposed to 75.6 MMT CO2e. On the other hand, the EDF estimates for economy-wide emissions in 2018 reveal a slight decline to 91.0 MMT CO2e, while NMED's estimates show an increase of more than 50% to 113.6 MMT CO2e. The primary reason for the discrepancy appears to be the EDF's lower number for 2018 emissions versus NMED's much higher number; this impacts the projection of future emissions relative to 2005 and any remaining gap (Environmental Defense Fund, 2023).

Figure 4[58]



When there are such large discrepancies in the fundamental measure of progress, it is impossible to assess the impact of sector-specific programs; the need to add or adjust programs; and the need to communicate to industries, the legislature, administrative agencies or the public in any meaningful way. It also highlights the need for direct measurement and verification of emissions to ensure that reduction targets are being met.

With the exception of some notable climate champions in the New Mexico legislature, overall climate action has been unreliable over the past few years. In 2022, attempts were made to pass a climate framework bill (HB6 – Clean Future Act) that would have codified the governor's zero emission goals to ensure New Mexico addressed climate pollution economy-wide by 2050.

58 Environmental Defense Fund (2023), p3..

Following the bill's failure to pass, it was introduced again in 2023, when it was only heard in a single committee. Other efforts to codify the state's methane and ozone precursor rules into law have also failed. Legislation introduced by public health experts and family advocates calling for climate adaptation and resilience strategies to be funded has also repeatedly failed. These represent a handful of many examples of stalled legislation that would have served to further propel the state toward its climate goals and ensure they are carried forward regardless of the focus of a future administration.

Table 1
Key Climate Action Metrics Under the Richardson & Lujan Grisham Administrations

	GHG Emissions Goals	RPS Renewable Energy Electricity Goals
Richardson	• Baseline: **2000** levels • 10% below 2000 by 2012 • 75% below 2000 by 2050	• 5% by 2006 • 10% by 2011 • 15% by 2015 • 20% by 2020
Lujan Grisham	• 28% of **2005** levels by 2025 • 45% by 2030 • 100% ("zero or near-zero") by 2050	• 40% by 2025 • 80% by 2040 • 100% by 2045 ("zero-carbon sources")
Clean Future Act	• 50% of **2005** levels by 2030 • 100% by 2050	

Additionally, the accelerated push by many of these legislators and the current administration to embrace fossil fuel-based hydrogen production threatens New Mexico's ability to fully resource sustainable clean energy technologies. The transition to clean, renewable energy is complex. Some sectors – at least for the moment – are "hard-to-decarbonize," and non-fossil fuel hydrogen electricity may have a role to play. These sectors include heavy industry, such as steel and cement, medium- and long-haul aviation, maritime shipping and long-haul trucking, though electrification may be a better alternative for trucking. Hydrogen may also have a place as a limited complement to electric battery storage for longer duration energy storage. However, **research and development is advancing rapidly, with emerging renewable technologies on track to meet much of this need in the near future.** Any hydrogen, whether fossil-fueled or green, should undergo in-depth analysis concerning the required end use. New Mexico has limited water resources and needs renewable energy on the grid, not harvesting hydrogen.

In the United States, 95% of hydrogen is produced using natural gas, approximately 4% is produced through coal gasification and 1% is produced from electrolysis. The use of methane gas and fossil fuel energy sources without carbon sequestration is called gray hydrogen and with carbon sequestration is called blue hydrogen; almost 95% of U.S. hydrogen production is gray (Ochu et al, 2021; Epstein, 2021). This is highly problematic for communities impacted by the consequences of fossil fuel production who are calling for the state to transition away from fossil energy. Many studies have shown that fossil fuel hydrogen with carbon capture may increase GHG emissions compared with directly burning methane gas (Environmental Defense Fund, 2024). This is due to the additional steps required to produce hydrogen and sequester captured carbon that provide outlets for increased methane leakage. Furthermore, carbon

capture itself is energy intensive, thereby reducing a large portion of the net energy production (Ochu, 2021). All of these factors make blue and gray hydrogen bad for the climate and bad for public health. Green hydrogen, while produced without fossil fuels, is water intensive and problematic for an arid state such as New Mexico without careful analysis of the sustainability of the water resource being used.

Electrolytic hydrogen or green hydrogen – in the limited sectors where such use makes economic and climate sense – should only be produced in co-location with its end uses. Pipeline infrastructure is not equipped to transport hydrogen in high quantities. Expanding pipeline infrastructure carries many of the same environmental, environmental justice and health concerns as New Mexico's existing fossil fuel pipeline infrastructure. Hydrogen may be even more likely to leak and even more volatile and explosive than methane, posing additional risks to workers and community members. Any hydrogen leakage could undermine the benefits of green hydrogen because hydrogen is an indirect GHG that is at least five times more potent than carbon dioxide over a 100-year timeframe (Ocko & Hamburg, 2022; Environmental Defense Fund, 2022). Additionally, new long pipelines will inevitably cross Native lands and are likely to impact low-income communities, Native peoples and other communities of color, increasing the burden these communities already carry from energy production and pollution. As a water-stressed state, the use of New Mexico's scarce water resources for hydrogen energy production could also bring additional problems and tensions into the system.

Moreover, the state's oil and gas industry continues to be a powerful influence that works to diminish political will for climate action. Although the state is working to reduce its reliance on the industry, fossil fuels continue to be a major economic generator for the state. The industry's lobby influence is also large: A 2020 report from Common Cause New Mexico and New Mexico Ethics Watch (2020) showed that between 2017 and 2020, the industry contributed approximately $11.5 million to support candidates and elected officials. In a state with an unpaid citizen legislature, these sizable contributions often pressure elected officials to deprioritize policies that the industry does not support, even if they are in the public's best interest. The outcomes of this pressure and influence have resulted in many of the failed or weakened policy outcomes highlighted in Appendix 3 of this report. Notable examples include the following:

- Increased funding for NMED and EMNRD, but failure to enact legislation to reform the Oil and Gas Act or adequately fund the ability to create a state-based surface water permitting program.
- Important EOs on climate and 30x30, but limited legislation or statutory language to codify them.
- Nation-leading methane and ozone rules, but limited permitting and enforcement capacity.
- Major victories for climate action, but major defeats and mixed signals from the governor and legislative leadership on commitment to "bold" climate action.

The New Mexico Interagency Climate Change Task Force report (2020) provided an update on climate action across the administration 18 months after the 2019 EO on climate and the first year of the COVID-19 pandemic. While highlighting significant progress toward meeting climate targets, the report concluded that **"reaching these ambitious targets will require significant change beyond the bold steps we are already taking."**[59]

59 With the important caveat that, based on EDF's report discussed earlier, there are apparently major problems ascertaining what the numbers are.

Moving Forward: New Mexico's Climate Action Plan

"This reduction appears to be just under 12% of the total existing gap to reaching a zero-emission economy statewide by 2050. As can be seen in Figure 5, the state will fall short of its 2030 target by approximately 34 MMT or just over half the total target."

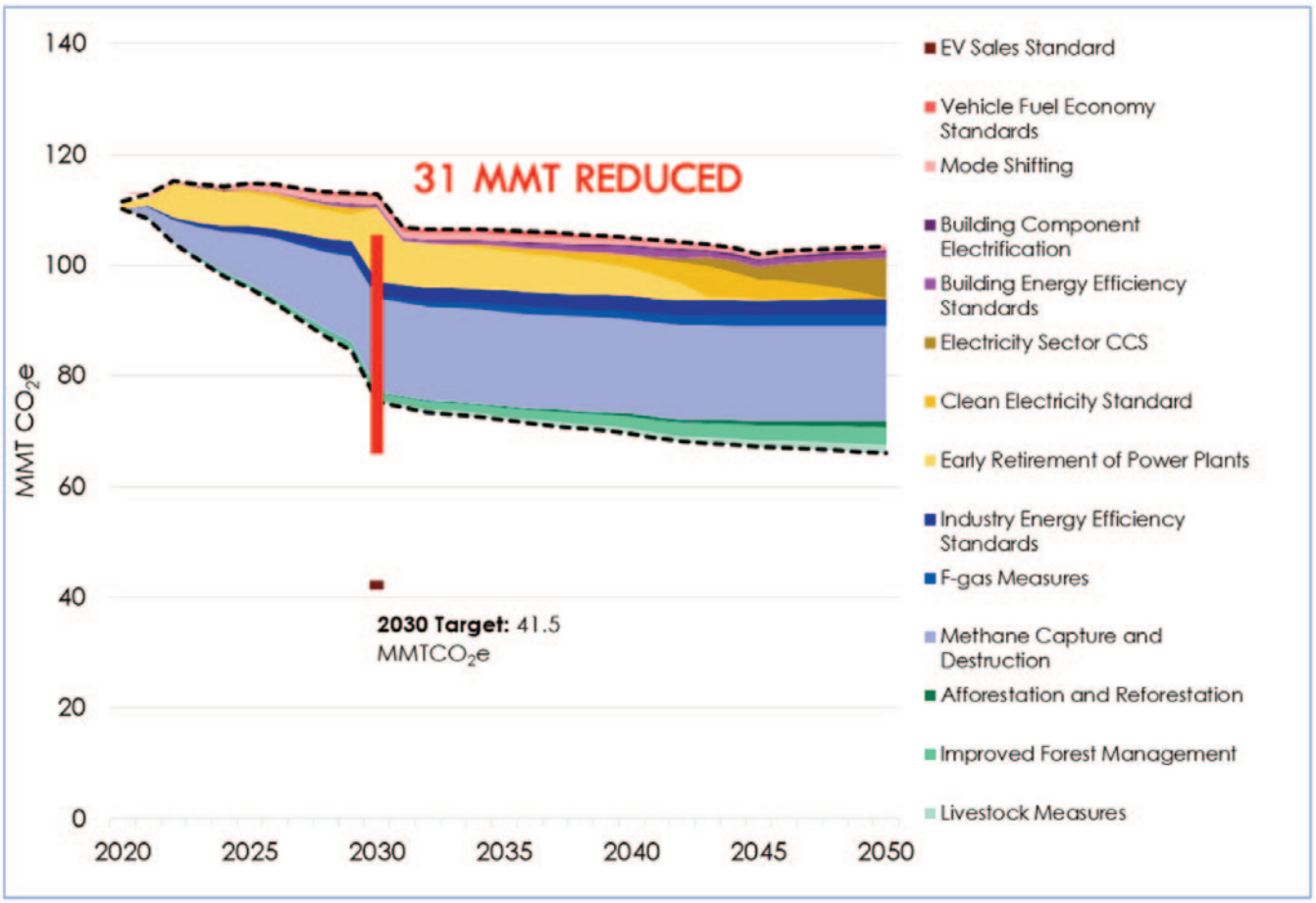
Nationwide, 45 states, Puerto Rico and the District of Columbia have developed and published PCAPs detailing strategies to reduce climate pollution and steps required to meet goals (Climate XChange, 2024). They were funded as part of IRA regrants through the EPA's Climate Pollution Reduction Grant Program and are the first of two phases. The next phase is the CCAP, which includes more specific strategies for implementing the priority measures in Phase 1.

The New Mexico PCAP (New Mexico Environment Department, 2024) is led by NMED and EMNRD in conjunction with the Interagency Climate Change Task Force. New Mexico's PCAP prioritizes 10 measures. These will be supplemented by additional measures in the subsequent CCAP. The PCAP explains the CO2e emissions gap between projected totals by 2050 versus a zero-emissions target; how that gap will be eliminated or significantly reduced; and how the economies of individuals, communities and the state will adapt to the rapid decarbonization of the economy in the shift from a fossil fuel-driven economy to a diversified clean energy-based economy.

The PCAP shows that in 2021 the major climate polluting sectors emitted 88.6 MMT of CO2e [CO2 equivalent].[60] According to the EPA, this is equivalent to over 97.6 billion pounds of coal burned in a single year.[61] Assuming this estimate remains constant for the 26 years between 2025 and 2050 (the timeframe of the Action Plan) produces a total of 2,303 MMT CO2e. The Action Plan provides details on 10 "implementation ready" projects to begin to address the gap, including the anticipated CO2e reduction impact each strategy may have.[62] The measures span the transportation, industry, buildings, energy and natural/working lands sectors. The total projected reduction in CO2e from these 10 priority projects is 270 MMT, of which 245 MMT is from the "Methane Response Project."[63] This reduction appears to be just under 12% of the total existing gap to reaching a zero-emission economy statewide by 2050. As can be seen in Figure 5, the state will fall short of its 2030 target by approximately 34 MMT or just over half the total target.

60 According to the graph in the Interagency Climate Change Task Force report (see below), 2021 emissions were approximately 110 MMT. As noted previously, there are unresolved data discrepancies across multiple sources.
61 Environmental Protection Agency (2024).
62 PCAP pp4-7; full descriptions are in the PCAP Appendix starting on p80.
63 This is the combined EMNRD venting and flaring rule and the NMED ozone reduction rule. The graph does not appear to reflect the overwhelming contribution of the methane reduction work; a full description is in the PCAP Appendix starting on p120.

Figure 5
Impact of Policies Instituted During Governor Lujan Grisham's First Term[64]



Granted, the PCAP is the first of two steps culminating in a CCAP. The CCAP will establish equitable and sustainable economic development strategies to reduce emissions across the entire economy. It will include near- and long-term emission projections together with emission reduction measures and an analysis of benefits (including a workforce planning analysis), as well as plans to leverage federal funding. In 2027, New Mexico will publish a status report that details implementation progress for measures included in the PCAP and CCAP, along with relevant updates to PCAP and CCAP analyses and next steps and future budget and staffing needs to continue implementation of CCAP measures.[64]

However, the glacial pace of these programs and reporting is frustrating at best. The state has targets for CO2e reductions in 2030, but the progress report on these 10 programs and additional unspecified "strategies" in the CCAP will only emerge in 2027. It is important to note that publication of the report will be after the end of the Lujan Grisham administration and would depend for its thoroughness and timing – perhaps even its existence – on the inclinations of the next administration that takes office after the 2026 gubernatorial election.

One additional note on the PCAP and CCAP analysis is that NMED makes it quite clear – in its assessment of sector job implications from the PCAP and CCAP – that it is assuming the continued existence of a robust oil and gas industry in New Mexico.

64 New Mexico Interagency Climate Change Task Force. (2021), p10. Note that the red bar denoting the emissions reduction is out of place.
65 PCAP p78.

> "New Mexico is the nation's second-largest oil-producing state and fifth-largest natural gas-producing state. Because the long-term national and global market trends are the primary factors impacting oil industry jobs, NMED does not anticipate an adverse impact on this sector from its PCAP."[66]

In the section on recommendations that follows, we lead with the need for a climate action framework. In some respects, the PCAP and CCAP resemble such a framework, but fall short in two ways. First, unless some striking new measures are undertaken in the CCAP, New Mexico will fall far short of its zero-emissions goals. New Mexico needs an independent and comprehensive climate action framework passed into statute that incorporates the PCAP/CCAP, addresses the tremendous emissions gap reflected in the state's climate action plans and provides additional impetus to reach the climate pollution reduction targets.

Second, the state's climate action should embrace all the topic areas in the recommendations, while the PCAP and CCAP is more narrowly focused on sector-based emissions reductions and related economic development, including workforce participation along just transition lines. However, the state must do much more, including providing full and effective funding for climate action-related agencies and programs, placing all relevant orders and rules into statute, and implementing a wide range of adaptation and resilience measures, among other critical actions detailed below.

66 PCAP p35; the wording does leave open a reconsideration when the CCAP is released with its more comprehensive and longer-term focus. The legislature has received multiple analyses in recent years predicting "peak oil" in the state sometime in the next 5-10 years, with consequent reductions in jobs, local and state revenues, and the overall state economy.

Recommendations for Comprehensive, Equitable and Durable Climate Action

The climate action movement must work to build a defensible package of climate and energy legislation and rules and, where necessary to insulate climate action from unfriendly future administrations, have them committed into statute. The recommendations in this paper are woven from several threads: past successes that need to continue, gaps in sector or statewide rules and targets, the need to progress rulemaking into statute and a focus on expanding and implementing the PCAP and the subsequent CCAP.

The following list consolidates the various climate actions listed earlier in the report and adds additional measures. It is not meant to be the final word. It will be subject to change as circumstances change and discussions evolve. For ease in surveying the list, items are grouped under specific headings, but these should not be taken as restricting the potential scope of action of an item as it takes shape and is put into action.

Climate Action Framework

- Pass and codify comprehensive climate action framework legislation encompassing a zero-emission economy-wide climate pollution reduction goal and pass relevant pieces into statute.
- Ensure that agencies have the necessary authority and capacity to carry out monitoring and verification of GHG emission sources and the progress of efforts to eliminate them.
- Of particular importance ahead of the 2027 report and relevant to both a climate framework and the PCAP and CCAP is legislation establishing capacity within NMED or EMNRD to create and administer a working group to quantify economy-wide CO2e emissions and reconcile the inconsistencies among current state analyses and the work done by the EDF and others.
  - Relevant data points are statewide and sector-based numbers for the 2005 baseline emissions, current emissions and trends, projections for the 2030 and 2050 targets, and clarification on the relevant contributions of each sector to the expected gap between projections and goals and what is still needed to close the gap, especially the 2050 gap.
- Incorporate the PCAP and subsequent CCAP into the framework, including sector-specific GHG emissions and projected emissions reductions from sector-specific climate action measures.

- Incorporate the Climate Resilience and Adaptation data and recommendations into the framework.
- Ensure full implementation of the governor's climate EO, including codification of standards into law that ensure New Mexico is a zero-emission state by 2050 or sooner. Ensure rulemaking, clear enforcement authority and agency capacity for implementation.
- Assess the status of the Interagency Climate Change Task Force and recommendations for any improvements, if needed, in agency compliance with the mandate to assess their climate impact and implement mitigation measures. The Task Force has not issued a report since 2021.

Implement the PCAP and CCAP

The PCAP is the first of two steps, culminating in the CCAP in 2027. With or without climate framework legislation, the state must work to ensure that the PCAP and CCAP incorporate the components of such a framework, that there is a plan for any necessary rulemaking, and that as much as possible is converted into statute where relevant. According to NMED's PCAP, the CCAP will have several goals; the agency needs to act diligently to ensure not only that these goals are met, but also that a suite of durable, robust and equitable rules and statutes reach fruition.

- Develop near- and long-term emission projections based on the analysis of the advisory council mentioned above.
- Establish and implement equitable and sustainable sector-based economic development strategies to reduce emissions across the entire economy.
- Provide an analysis of benefits from emission reductions, including a workforce planning analysis.
- Develop and implement plans to leverage federal funding.
- Develop and publish a status report (due in 2027) that details implementation progress for measures included in the PCAP and CCAP, any relevant updates to PCAP and CCAP analyses, and next steps and future budget and staffing needs to continue implementation of CCAP measures.

In addition to NMED's stated goals, the Legislature and administration should also

- Provide supplemental funding to help NMED and EMNRD develop and implement the PCAP and CCAP.
- Maintain close contact with NMED and EMNRD leadership and key climate staff to obtain early and regular information about closing the CO2e emissions gap by 2030 and 2050 and any new initiatives and strategies the agencies are discussing internally and with the administration.
- Pass legislation to commit parts of the plans into statute as needed.

Just Transition

A just transition cannot be a checkbox as New Mexico builds a zero-emissions economy. It requires concrete, actionable steps based on equitable and inclusive discussions with New Mexico's diverse communities. Any just transition solutions must also be directly shaped by the communities most impacted, including communities of color, LGBTQ+, low-income, border and fossil fuel communities. This is imperative for true, long-lasting, transformational change. New Mexico must ensure that the fenceline and frontline communities, especially Native nations and immigrant communities, who will bear the brunt of the transition and who already face the worst aspects of climate change and suffer the consequences of a boom-and-bust economy will be a critical part of implementing programs and policies that they have helped develop for their respective communities.

- Prioritize fossil fuel communities for entry into workforce training, apprenticeship and other economic development programs to create new career pathways for transitioning workers.
- Pursue policies or administrative action for holistic job training and opportunities for rural communities and communities of color to build a just, renewable energy economy.
- Establish a universal basic income for fossil fuel workers impacted by transition.
- Develop plans for state revenue replacement during the transition that includes equity in New Mexico's tax system.[67]

- Build strong support for transit equity policy.
- Pass legislation that invests in pedestrian and mass-transit friendly infrastructure, such as high-speed rail and pedestrian corridors, which reduce reliance on personal vehicles.
- Regularly update information about the CO2e emissions targets for 2030 and 2050 and any new initiatives and strategies so that impacted communities and climate action partners can discuss them and comment on the transition plan to ensure that equitable economy-wide CO2e emissions goals are reached.
- Educate interim committees and legislative leadership on topics such as costs of climate inaction, benefits of electric transportation, job potential of renewables and climate change impacts in New Mexico to inform both a just economic transition and a just zero-emissions transition.
- Continue to fund climate initiatives such as the Energy Transition Act, Community Energy Efficiency Development Block Grants, the Sustainable Economy Task Force, and other just transition efforts.


San Juan Generating Station.
Photo credit: WildEarth Guardians

Climate Governance

- Protect the ETA and its full implementation. The state should also consider modifying the ETA to establish emissions reduction targets in addition to renewable portfolio requirements, which would ensure overall pollution from the sector continues to fall even if total electricity demand increases, as well as consider increasing the ambition of the clean energy standard to better align with nationally leading states who have adopted 100% clean electricity by 2040 standards.
- Increase core agency budgets to reach full capacity for permitting, monitoring and compliance; agencies include NMED, EMNRD, the Office of the State Engineer, the Interstate Stream Commission, the Department of Agriculture, and the Department of Game and Fish.
- Increase fees charged by NMED and EMNRD to support their respective permitting programs.
- Ensure agencies are transparent to the public, with prominent and easy access to data, regularly updated program timelines and progress, and a mechanism to report problems and issues on the ground. For example, community members have complained that there is no obvious number to call for oil and gas production emergencies. Others have noted that it is difficult to determine how the Tax and Revenue Department or EMNRD are supporting the "on-the-hood" rebates for EV tax credits.[68]
- Provide sustainable funding for a state surface water permitting program (so-called "primacy"); a fund similar to the Conservation Permanent Fund is one possibility.
- Provide multi-year supplemental funding to manage the outcome of the TX v NW litigation.
- Provide supplemental multi-year funding to advance the 50-Year Water Plan and increased capacity of the Water Trust Fund.
- Secure recurring sustainable funding for the New Mexico Match Fund to ensure that municipalities and other entities can tap into funding for federal projects through 2035.
- Ensure the Biden administration's Investing in America funding creates clean, renewable energy projects on the ground in New Mexico and supports research and manufacturing related to renewable energy.

68 EMNRD announced (July 2024) a new website called ECAM (Energy Conservation and Management), which provides information on tax incentives and credits for energy efficiency products and programs for homes and businesses; it includes a list of products and programs and the ability to sign up for notifications. The site is located at https://clean.energy.nm.gov/

- Establish a climate resilience tax credit for businesses and medical care facilities to install xeriscaping, water conservation measures, shade awnings or structures, and tree plantings with a percentage of the tax credit prioritized for low-income communities and jurisdictions.
- Require and fund upgrades to state-run community and senior centers that include shade awnings, tree plantings and water conservation measures.
- Increase funding for Level 1 trauma centers (such as University of New Mexico Hospital) and work with rural healthcare facilities to raise their trauma level beyond the very basic level to treat more people closer to home and relieve some of the Level 1 trauma center load.
- Implement recommendations from the New Mexico MMIWR Task Force, including data gathering; law enforcement agreements and increased Native nation officer training; increased services and infrastructure; more training and support for tribal justice systems; and increased support for education, outreach and other preventive measures.
- Explore ways to more deeply leverage the National Labs to advance innovative, effective climate pollution emissions reduction research and technological and process solutions.
- Provide better pay and healthcare for wildland (especially hotshot) fire fighters, and prioritize recruitment for emergency response roles in climate-vulnerable communities.
- Invest in robust broadband services so that rural people can more easily access education and training opportunities, business development, online medicine, and more diverse information and entertainment.
- Leverage the IRA, New Mexico Match Fund, and other federal grant opportunities to repair or replace rural roads, bridges, dams and other aging infrastructure vulnerable to extreme weather events and to provide new climate-resilient infrastructure at critical points in the system.
- Update the state's standards to achieve 100% carbon pollution-free electricity by 2040 or sooner.
- Codify the state's methane and ozone precursor rules into statute.
- Codify the state's climate adaptation and resilience work (Energy, Minerals and Natural Resource Department, 2023) into statute.
- Change water statutes to make human-induced climate change a component of water quality degradation and not an excuse to alter criteria and lower related quality standards.

Oil and Gas Industry

- Reform the Oil and Gas Act, including adequate financial assurance for full site reclamation, the reduction or elimination of unnecessary subsidies, and setbacks to protect public health.
- Ensure full compliance with the EMNRD venting and flaring rule and the NMED Ozone Precursor Rule.
  - Assess these agencies' enforcement capacity and enforcement actions.
  - Ensure the agencies provide early and frequent information on overall CO2e emissions reductions

versus targets (emissions gaps) and other metrics.
    - Operators are required to capture 98% of venting and flaring emissions by 2026.
    - There are indications that self-reporting by the operators is inaccurate, but EMNRD has insufficient resources to enforce compliance (Pskowski, 2023).
- Enact the Climate Superfund Act to fund climate resilience and adaptation programs and compensate communities following climate disaster (passed this year in Vermont; also proposed in New York, Massachusetts and Maryland) in addition to paying for the cleanup of orphaned groundwater spills and uranium piling sites.
- Quickly develop a SIP to comply with new EPA air quality standards for new and existing oil and gas operations under the Clean Air Act.
- Transition away from fossil fuel projects; this includes hydrogen unless it is executed within the seven principles outlined in the organizational letter to Governor Lujan Grisham (Western Environmental Law Center et al., 2021).
- Establish statewide criteria for oil and gas setbacks to protect vulnerable communities from the impacts of the industry (Colorado has a statewide 2,000-foot setback, California's is 3,200 feet, and in 2023 the New Mexico State Land Office announced a moratorium on oil and gas drilling on state trust lands within one mile of schools).
- Update financial assurance and bonding requirements for the oil and gas industry to ensure funding is adequate for reclamation of well sites and all related infrastructure, such as surface and subsurface pipelines.
- Eliminate unnecessary tax subsidies for the oil and gas industry, and channel generated funding into programs that benefit vulnerable populations (including children and schools) and a climate resilience fund to assist the state in implementing climate mitigation plans and policies.
- Consider cumulative impact when issuing a permit to drill.
- Prioritize community protection from produced water and wastewater disposal, and implement policies to limit freshwater use.
- Require the oil and gas industry to fund community infrastructure needs to address strains on the community due to population growth from the oil and gas workforce.
  Promote interagency cooperation to efficiently address health, pipeline leaks, water leaks and explosions and ensure the public has access to emergency reporting.

Photo Credit: San Juan Citizens Alliance

Electrification and Efficiency

- Ensure full implementation of the Community Solar Act.
- Solarize government buildings by mandating in legislation and/or creating a fund for local municipalities to apply for funding for this purpose.
- Solarize public schools in New Mexico through establishment of a fund and benchmark/timeline. Funds generated from cost savings via renewable energy development/utilities could be invested in upgrading HVAC systems and cooling for schools.

    - Sample legislation that was similarly introduced in the past includes Senator Bill Soules' SB 60 - Photovoltaic Systems in New Public Schools, although this only applied to new schools and did not address HVAC systems.
- Ensure rapid and full development of zero-emission vehicle charging capacity for personal and work vehicles, as well as public transit and school bus fleets.
- Ensure the new state building energy efficiency codes are regularly updated and enforced.
- Create a state fund for school energy efficiency and leverage federal funding so that every school (starting with low-income school districts) can install roof insulation, insulated windows and efficient HVAC systems (especially heat pumps) and can redesign the HVAC system and classroom layouts to increase ventilation and lower the spread of respiratory illness.
- Create a fund or mechanism for hospitals, centers of worship, schools and community centers to install solar and battery storage to serve as emergency, community response and cooling centers in events of climate disaster or heat waves.
- Address climate emissions from technology and data hubs located in or relocating to New Mexico by ensuring data centers are powered by new, dedicated, renewable energy sources so existing renewable energy is not diverted.
- Add electric farm equipment to existing state EV tax credits.
- Support pilots for agrivoltaic solar farms with crops that thrive in partial sunlight.

Adaptation and Resilience

- Advance the Environmental Data Act, including necessary funding and any required legislation.
- Complete the aquifer mapping program.
- Implement the recommendations from the 50-Year Water Plan and commit relevant sections into statute.
- Implement a surface water protection program to protect waters from pollution threats.
- Pass and implement the Public Health and Climate Program policy (HB 104, 2024) that will include climate impacts in public health and assist local communities in developing and implementing adaptation strategies.
- Invest in green spaces and tree cover around school facilities as well as in communities with green space deficits, which will lower temperatures and provide shade.
- Leverage federal and other restoration and climate resilience funds by using social vulnerability and environmental justice indicators, not just property value, to calculate the return on investment of the funds.[69]
- Capture rainwater and use it to irrigate trees at schools, around commercial buildings and along medians and sidewalks for shade and to create lower temperatures for outdoor recreation.
- Reform the Game and Fish Department so it assumes an ecosystem approach and provides protections and improvements across the system, rather than just for selected game species.

69 In "The New Math of Climate Resilience," the American Planning Association discusses an innovative approach used by the city of Norfolk VA to multiply the impact of a large federal floodwater mitigation grant. By using "nontraditional" social and environmental indicators - essentially incorporating area vulnerability risk and environmental justice indicators - the funded project showed a cost-benefit ratio that was 10 times higher than using a standard methodology (Morrison, 2024).

- Increase protections for rivers and streams, critical wildlife corridors, high quality habitats and areas characterized by a high degree of biodiversity.
- Ensure a robust and inclusive process to submit and win approval for Outstanding National Resource Water petitions for critical and sensitive streams and rivers.
- Ensure a robust and inclusive process exists to foster policies and programs to develop environmental flows on critical river segments.
- Prohibit development in wild spaces that are essential habitats and migration routes for wildlife, and prohibit or strictly limit development that creates impediments to effective wildland firefighting.
- Prioritize smaller-scale renewable energy development on rooftops and areas with existing development or infrastructure to avoid development in wildspaces crucial for wildlife habitat.
- Center and actively mitigate any wildlife impacts of renewable energy siting and development when selecting locations for renewable energy projects.
- Invest in green spaces to support bird and insect migration patterns and to reduce air temperatures.
- Address fire risk through strategies like thinning in appropriate locations to improve drought resistance and lessen the likelihood of massive, intense, crown fires; create conditions for a more diverse understory ecosystem that can support more biodiversity; and improve soil conditions so it acts as a sponge to capture and slowly release water from more erratic and larger storm events.
- Identify and invest in community-centered resources and services for marginalized communities, including healthcare services, cooling centers, housing infrastructure and more.
- Implement an evidence-based occupational heat standard that will protect workers in high-risk communities and occupations from heat waves.
- Establish a statewide paid medical leave standard so that all workers can address health concerns and issues without sacrificing their incomes.
- Place restrictions on housing density in the wildland-urban interface, including strictly enforcing the use of fire-resistant building materials, meaningful setbacks, basic insurance (recognizing the character of most of New Mexico's rural homes, which are not "traditional" and should have adjusted rates) and developing evacuation plans and routes that are sent to every household and business (all of which should reduce the need to "save buildings" and allow firefighters to fight the fire).
- Engage state, federal and international experts on switching from irrigated to dryland farming and related crops.
- Investigate new varieties of existing crops that are more resistant to aridification and use less water.
- Provide agricultural and other outdoor workers with better field conditions and basic medical insurance, and enact occupational heat standards and protections.
- Report all water wells, whether for domestic supply or irrigation, to the State Engineer as part of its effort to manage an out-of-control system, and install metering to improve collaborative water shortage sharing and minimize impacts on aquifers and surface water supplies. Invest in public education around the importance of this action.
- Invest in state water conservation measures for rural communities, including xeriscaping, and upgrade outdated infrastructure, such as water pipes.
- Support and fund the installation of community refrigeration and freezer units to store perishables connected to renewable alternative energy production equipment. During the COVID-19 pandemic, it was difficult to store large quantities of perishables for people to access, especially when having to drive a long distance to access quality food.

A drying Rio Grande in Albuquerque, Summer 2022

Democracy Protection

A large majority of New Mexicans want their government to move quickly and aggressively to address climate change. As a result, when New Mexicans are able to vote in large numbers and their elected representatives are responsive to voters' priorities, we can achieve our climate goals. We must identify the measures still needed to protect democracy, broadly speaking, in New Mexico, but especially measures to embed protections against gerrymandering and voter suppression and to ensure electoral transparency. The current period presents more dangers to our democracy than at any other time in the country's history. Recent legislation and actions from the New Mexico Secretary of State have broadened access to elections and made them more secure. However, violence and threats have crept into the electoral process in New Mexico and across the country. As climate change continues to directly impact New Mexican communities, it is imperative that all voters have unobstructed access to the ballot box and accessible pathways to engage in policy and run for office. This, in turn, will provide pathways for the communities most impacted by climate change to step into decision-making roles to directly shape policy solutions and ensure their voices are involved in decision-making.

- Identify measures still needed to protect democracy, broadly speaking, in New Mexico but especially measures to embed protections against gerrymandering and voter suppression and to ensure electoral transparency.
- Modernize the state legislature, including providing salaries, staffing and adequate compensation for state legislators, which will enable more people of color, parents, LGBTQ+ individuals and low-income communities to step into policy spaces.
- Ensure all people have access to climate change, climate science, environmental justice, civil rights and diversity literature in public libraries.
- Ensure students are being taught about climate change, climate science, environmental justice, civil rights and diversity in schools to educate the next generation of decision-makers and leaders.

Conclusion

The climate action envisioned in this paper reflects how broadly state leaders must approach the climate crisis. We must focus not only on emission reductions, but also on community resilience, adaptation, and system changes to ensure marginalized and heavily-impacted communities are resourced and supported. In order to achieve this equitably, the policies shaped must be envisioned and led by the very communities they impact.

Those working on climate solutions need to recognize that New Mexico's diverse communities, many of which are not often included in climate work, have shared historical traditions and culture, and engagement in narrative and policy shifts that offer critical perspectives for climate action solutions. Their shared leadership in working toward climate solutions will ensure that other interrelated issues in their communities – health, housing, public safety and others – are woven into the fabric of the larger climate action framework.

This means that we must engage in resource sharing (money, access to power) through such means as joint public education campaigns, strategic collaboration and messaging guidance. Doing so is an acknowledgment that true collaboration means trusting that others also know how to wield resources effectively (and better in their context), and doing so makes space for historically marginalized communities to empower themselves while also creating the change that is needed to address acute climate issues.

The state must transition from overreliance on the oil and gas industry for energy production and state and local budgets to a zero-emission economy reliant on renewable energy sources with a diversified and sustainable state budget, and the legislative, regulatory and statutory underpinnings of such a transition.

This is an enormous undertaking that will require tremendous collaboration and cooperation from every part of the state and all its diverse communities. It will also require acknowledging and building upon the interconnected nature of this work: Not just the way in which global warming's impacts play out across geographical areas and across issues such as health, employment and education, but also how climate action impacts different communities in different ways. This includes low-income communities and people of color – especially Indigenous and immigrant communities – and others, such as LGBTQ+ communities, who have been excluded from policy spaces far too often.

New Mexico's transition must be one in which a healthy environment and a healthy economy reinforce each other. It must be based on the Principles of Environmental Justice adopted by the First National People of Color Environmental Leadership Summit in 1991 and the Jemez Principles for Democratic Organization adopted in 1996 (ejnet.org, n.d.). Communities must be included in decision-making that impacts them: "Nothing about us, without us." As a starting point, the climate action outlined in this report also requires the following:

- Bring the communities most impacted by the climate crisis to the center of the decision-making process, especially Indigenous and other communities of color, LGBTQ+ individuals, youth, elderly and persons experiencing homelessness. This work must begin from a place of building authentic partnership and trust.
- Remove barriers to engagement in the policymaking process, including language access, public engagement at times when the public can participate, adequate public notice, virtual and in-person engagement and more.

- Facilitate meetings between state leaders and communities to discuss climate change impacts they are witnessing and share personal experiences and stories to emphasize the need for policy making, rulemaking and statutory process.
- Engage private-sector actors whose vision and activities are aligned with creating an equitable zero-emission economy that connects a healthy environment with a healthy economy.

It is, finally, critically important that a central fact always informs any climate action the state takes on behalf of its residents:

> "The people most responsible for climate change historically – globally, as well as domestically – are not the same people who are feeling the pain first, worst and longest. If you're just talking about greenhouse gasses and parts per million, you're not seeing the issues around vulnerability and justice."
>
> —Dr. Robert D. Bullard (Chow, 2020)

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Appendix 2: Climate Action and Inaction, 2019–2021[70]

Pro-Climate Action by Year

The following is a list of key climate actions taken by the governor through executive orders, her agencies and rulemaking bodies, and the legislature. It is not all-inclusive. Key actions are in **bold**.

2019

- **Executive Order (EO) *On Addressing Climate Change and Energy Waste Prevention*** sets a goal of reducing greenhouse gas emissions to 45% of 2005 levels by 2030 and established an Interagency Climate Change Task Force to assess agencies' climate change impacts and roles
- Efficient Use of Energy Act Changes *(*HB291*)*
- PRC Application for Vehicle Electricity (HB521)
- **Restore EMNRD Oil Conservation Division's (OCD) authority (HB546)**
- **Create Outdoor Recreation Division (SB462)**
- **Energy Transition Act (ETA) (SB489)** lays out the securitization of PNM's holdings at the San Juan Generating Station (SJGS) and the use of the gains from bonding to fund worker training and community economic development. It also sets targets for renewable energy electricity at 40% by 2025, 80% by 2040 and 100% of electricity supplied by zero-carbon resources by 2045. It was upheld by the state Supreme Court and has been used in decisions made by the Public Regulatory Commission (PRC) in denying permits for new natural gas power plants. The PRC firmly denied a petition by PNM to delay the bonding of its liabilities for the SJGS

2020

- **Budget Items**:
    - EMNRD was allocated $24,030,600, including funding to help implement the ETA and methane rulemaking; this represents a 20% increase over the previous administration's budget
    - NMED was allocated $14,071,300; an 18% increase
    - The Outdoor Recreation Division was allocated $450,000 to address staffing needs
- Efficient Use of Energy Act Changes (HB93)
- **Energy Grid Modernization Roadmap (HB233)** directs EMNRD to establish a roadmap for energy grid modernization and administer a grant program for projects that modernize the energy grid. Eligible projects may improve electrical system efficiency, reliability, resilience and security; lower operations and maintenance costs; incorporate a new technology or a new or innovative application of an existing technology; complement or coordinate with the resource planning of a public utility; and/or stimulate in-state economic development
- Solar Market Development Income Tax Credit (SB29)

2021

- **EO *Protecting New Mexico's Lands, Watersheds, Wildlife, and Natural Heritage*** set a goal of having at least 30% of lands and waters in New Mexico in conservation, with an additional 20% designated as climate stabilization areas
- **Rules to prevent routine methane venting and flaring** requires oil and gas operators to reach 98% gas capture by 2026; implemented by EMNRD
- Sustainable Building Tax Credit (HB15)
- **Environmental Database Act (HB51)** creates a centralized, map-based searchable website to provide various geographic data, information on public health, wildlife status and other

70 Major actions – both positive and negative – are in bold font

interrelated environmental and energy industry data to enhance transparency and interagency cooperation
- EIB Permit Denial for Poor Compliance (HB 76)
- Water Trust Board Projects & NM Unit Fund (HB 200)
- **Local Government Air Quality Regulations (SB 8)** allows state agencies and local boards to adopt rules that ensure a maximum ozone concentration of 95% of the national ambient air quality standard for ozone. It also allows the state to adopt rules that are stronger than current federal standards
- **Community Solar Act (SB 84)**, implemented by the PRC in 2023, allows creation of local subscriber-based small-scale solar energy projects, including requirements for access by low-income users
- **Sustainable Economy Task Force (SB 112)** establishes a task force that will develop a strategic plan and identify ways to develop a sustainable economy with diversified revenues, especially for communities dependent on natural resource extraction

2022
- **2022 Ozone precursor rules** to prevent leaks of volatile organic compounds from oil and gas facilities; implemented by the NMED
- **2022 Advanced Clean Cars I rules** approved by the state Air Quality Bureau and the Albuquerque-Bernalillo County Air Quality Control Board; sets stricter emission standards for new cars and trucks offered for sale in the state, encouraging automakers to introduce low-emission and electric vehicles as early as 2023 models, with full implementation starting with the 2026 model year (late 2025)
- **NMED Climate Bureau funding** in HB2 ultimately includes $650,000 for a climate bureau, sufficient for three to four staff; this was far below the staffing request from NMED
- Community Energy Efficiency Development Block Grant (HB37) creates a new state grant program to support improvement of the energy efficiency of low-income households and complements New Mexico's climate goals by achieving 100% energy affordability for all New Mexico residents while helping to reduce greenhouse gas emissions by 2050

2023
- **Governor Announces Creation of the Climate Investment Center ("Green Bank")**, which is an independent, public nonprofit investment fund. Its purpose is to create a loan portfolio for residential and commercial customers to increase adoption of mature, commercially viable technologies that reduce greenhouse gas emissions and other pollutants. The focus is on closing financial gaps and strengthening existing financial institutions' abilities to lend to non-traditional borrowers; providing direct benefits for low-income, disadvantaged, and tribal communities; and reducing energy burdens through loans that support energy efficiency in buildings, accelerate ownership of rooftop solar, provide lower-cost community solar subscriptions, and scale up house retrofits supporting energy efficiency adoption
- **2023 Advanced Clean Cars II, Advanced Clean Trucks and Omnibus Heavy Vehicle NOx rules** approved by the state Air Quality Bureau and the Albuquerque-Bernalillo County Air Quality Control Board. They adopt stricter emission standards for new cars and trucks, including NOx standards for new, large diesel vehicles offered for sale in the state, encouraging automakers to introduce low-emission and electric vehicles as early as 2024 models, with full implementation starting with the 2027 model year (late 2026)
- **Budget Items to fund agencies and programs**
  - $100 million for the Conservation Legacy Fund
  - $7.5 million for the Strategic Water Reserve
  - $500,000 for 50-Year Water Plan implementation and future planning

- $680,000 for NMED to develop a state surface water permitting program
- $100 million for Energy and Economic Transition

- **Voting Rights Protections (HB4)** makes substantial changes to state election law including: restoration of voting rights to citizens convicted of felonies; improvement of Native voter protections (Native Voting Rights Act – the first state-level Native voting rights legislation); upgrades to secure automatic voter registration; creation and enforcement of a permanent absentee list; Election Day marked as a school holiday
- Renewable Energy Office in State Land Office (HB95)
- Regional Water System Resiliency (SB1)
- **Create Legacy Permanent Funds (SB9)** creates two funds: the Conservation Legacy Permanent Fund, an investment fund, and the Land of Enchantment Legacy Fund, which is an annual operating fund. These funds will go to 12 existing programs across six agencies to better protect communities from extreme weather conditions such as wildfire, flooding and drought; preserve our cultural heritage and outdoor traditions; and leave a legacy for our children to hunt, fish, farm, ranch, and enjoy the lands and waters in the same way our ancestors have for generations
- Create Wildlife Corridors Fund (SB72)
- Water Security Planning Act (SB337)

2024

- **New Mexico Construction Industries Commission** adopts the 2021 International Energy Conservation Code, with additional requirements that new buildings include infrastructure to support charging for electric vehicles
- **Budget Items**
  Several pro-conservation priorities were in the proposed budget package that will have a lasting impact on environmental protection. These proposals will help turn short-term volatile funds into long-term funding to leverage substantial additional federal funds. Legislators **successfully increased agency budgets moving into the 2025 fiscal year**, which will enable environmental regulators to more fully execute their mission and vision. Notable budget outcomes include the following:
  - EMNRD received a 20.9% increase in funding, including a $112% increase to the healthy forests program; the department's new budget is now $188.2 million
  - NMED received a 19.9% increase in funding, bringing the agency budget to $116.9 million; the budgets for water protection programs increased 63% and resource management increased 41.8%
  - Department of Game and Fish received an 8.8% increase in funding, totaling $52.8 million; species conservation received a 14% increase in funding

  In addition, a number of **appropriations were included in the budget bill House Bill 2**, including the following:
  - $300 million for the Conservation Legacy Permanent Fund, which will allow for land, water and wildlife projects to be funded in perpetuity
  - $75 million for the NM Match Fund, allowing communities to leverage federal dollars for renewable energy and clean car infrastructure
  - $7 million to NMED to design and implement surface water and groundwater permitting and regulatory enforcement
  - $10 million to EMNRD for the Climate Investment Center
  - $5 million ($50 million was requested by the conservation community) to implement the Wildlife Corridors Act

Finally, a number of different tax-related items were consolidated into **the tax omnibus bill, Adjust Income Tax Brackets (SB252)**, including the following:

- HB 92: Geothermal Electricity Generation Tax Credits creating a new geothermal electricity generation tax credit and corporate tax credit and a gross receipts tax, along with compensatory tax reductions
- HB 140: Clean Car Income Tax Credit creating personal and corporate tax credits for clean cars and clean car charging units
- HB 274: Advanced Energy Equipment Tax Credit creating a new tax credit for individuals and corporations for the production of any advanced energy product (to include wind and solar power and other efforts targeted at reducing greenhouse gas emissions)
- SB 121: Tax Credit Changes amending New Mexico's solar market development income tax credit, allowing it to apply to businesses or agricultural enterprises owned by tribal entities, and raising the cap on annual aggregate amounts for certified credits
- SB 232: Energy Storage Industrial Revenue Bonds adding "energy storage facilities" to the list of eligible recipients of industrial and county industrial revenue bonds acts. It would also have amended the GRT deduction statute to include energy storage facilities

- **Clean Transportation Fuel Standards (HB41)** tasks NMED's Environmental Improvement Board with establishing a statewide clean transportation fuel standard, with targets of 20% below 2018 levels by 2030 and 30% below 2018 levels by 2040
- Water Project Fund Projects (HB148)
- **NM Match Fund (HB177)** creates a New Mexico Match Fund of $100 million. Managed by the state treasury, the funds will be annual and non-reverting and used to support grantmaking efforts, especially for federal grants that require a substantial local match
- Election Changes (HB182)
- Firearms Near Polling Places (SB5)
- **Land & Water Conservation Fund Changes (SB169)** amends the Outdoor Recreation Act and describes the distribution of the state supplemental land and water conservation fund. It also appropriates an additional $10 million in non-reverting dollars to the fund, removes the requirement that political subdivisions must provide matching funds, raises the population cap for municipalities from 15,000 to 65,000 and prioritizes funds disbursement to tribal entities and rural communities

Failed Positive or Proposed Negative Climate Action by Year

Despite substantial progress on climate action during Governor Lujan Grisham's administration, there have been some notable pro-climate efforts that failed along with misguided initiatives. The governor's obsession with establishing New Mexico as a hydrogen energy leader is the overarching example of such a misguided initiative. The governor never attempted to make clear whether this would be for 100% green hydrogen – which could have received support from a sizable portion of the climate movement if it were organized within certain guidelines – even though a key industrial partner, Universal Hydrogen, moved to the New Mexico Sunport with its announcement regarding using 100% green hydrogen for aviation fuel.[71] Failed pro-climate efforts include multiple attempts to create some form of a fully articulated and funded climate action framework that could inform and advance climate action towards an equitable and intersectional zero-emission economy that

71 Universal Hydrogen shut down at the end of June, 2024, after failing to secure additional funding to continue operations.

works for all people residing in New Mexico. The following is a list of failed and misguided (or outright negative) climate actions. The list is not all-inclusive.[72]

2019

Failed Positive Action

- **Resource Sustainability and Security Act (HB28)** would have created a sustainability and resilience council, which would have developed a government-wide plan to ensure the long-term sustainability and resilience of New Mexico and its infrastructure and resources
- **Environmental Review Act (HB206)**, also known as the "State NEPA," would have required non-federal government agencies to consider the impacts of state-funded projects on public health, ecosystems and the environment
- Oil, Gas and Vented Gas Royalties (HB 398/SB 500) would have established a threshold beyond which oil and gas production were taxed at 25%. The bill also established that vented and flared gas were subject to royalties
- New Solar Market Development Tax Credit (SB518)

2020

Failed Positive Action

- Budget-related bills relating to various pro-climate action tax credits or other tax changes failed, including new gas and special fuel surtaxes, energy storage system credits, EV credits, solar system installation credits and increasing oil and gas operator binding requirements.
- Two renewable energy investment-related bills failed:
  - Differential Rates for Investments (HB60) would have provided for the investment of no less than 1% of the market value of the Severance Tax Permanent Fund in renewable energy businesses, projects and bonds, strengthening the state's portfolio and benefiting renewable energy development in the state
  - Renewable Energy Investment Policy Funding (HB 99) would have appropriated $50,000 to the State Investment Council to develop a strategic plan for investment in renewable energy, storage and transmission in New Mexico
- Healthy Soil Program Funding (HB 166)
- **NMED Greenhouse Gas Evaluations (HB 293)** would have appropriated $150,000 to NMED to finalize its evaluation of emissions trends and proposed policies to reduce carbon dioxide and other greenhouse gas emissions[73]

2021

Failed Positive Action

- **Water Administration Changes (HB95)** would have amended state water application processes, compelling the State Engineer to publish its findings, to be considered within a 40-year impact framework and to include its rationale, which would create precedent in future decisions. It incorporated the long-term (40-year) impacts of climate change into state water planning, local water conservation planning and the required criteria for approval of regional water planning funding by the Interstate Stream Commission ISC). It calls on the ISC to publish

72 Governor. Some types of action aren't generally mentioned because they reoccur so often and fail to pass. The same goes for various tax credits that appear regularly, including the Governor's vetoes of a handful of energy-related tax credits in the 2023 session, which largely passed out of the 2024 session

73 This information did find its way into the 2024 "Priority Climate Action Plan," funded through the Biden administration's IRA

a biannual water budget analysis. It also compels the State Engineer to adopt rules for identifying and assessing climate impacts on state water resources, with a July 1, 2023 deadline
- Clean Electrification Act (HB137)
- Use of Water for Oil & Gas Operations (SB 86) would have made it illegal for oil and gas operators to spill produced water [reintroduced and failed in 2022 session]

Proposed Negative Action
- Photovoltaic Systems in New Public Schools (SB63) & Photovoltaic Systems in New Homes (SB132)
- Purchase of Electric Vehicles (SB130)
- **Energy Transition Act Changes (SB 155)** would have amended portions of the Renewable Energy Act and would have brought uncertainty into the securitization process, which can negatively affect bond interest rates. Some of the amendments misunderstood the sections they were trying to amend and others were contradictory
- Increase Penalties for Environmental Violations (SB296)
- State Agency Renewable Energy Purchases (SB 297)
- Repeal of Law Enacted by the Legislature (SJR 6)

2022

Proposed Negative Action
- **EO on Establishing the Clean Hydrogen Development Initiative** established the basis for an agreement with the governors of Wyoming, Colorado and Utah to partner with New Mexico in pursuing the $8 billion of federal Invest in America funds set aside for hydrogen hubs. Earlier in the year, the state signed an agreement with Sandia National Laboratories and Los Alamos National Laboratory to develop hydrogen power technologies to bolster New Mexico's pursuit of the funds
- Hydrogen Hub Development Act (HB 4)
- Hydrogen Hub Development Act (HB 227 & 228)
- Additional Energy Acts Definitions (SB 194)

Failed Positive Action
- **Clean Future Act (HB6)** would have positioned New Mexico to be a national leader on the climate crisis by establishing economy-wide climate pollution reduction targets that would reduce direct emissions to 50% of 2005 levels by 2030 and remaining regulated emissions to zero by 2050, thus, meeting goals established by the international scientific community and protecting families from toxic air pollution such as diesel exhaust. HB6 also called for direct coordination with the communities most impacted by climate pollution, such as low-income, rural, and/or Indigenous and other communities of color. Allies have urged that HB6 be strengthened to ensure that a just economic transition is fully realized, and pollution is addressed in frontline communities

2023

Failed Positive Action
- **Public Health and Climate Resiliency (HB42/SB5)** would have established a statewide public health and climate program within the NMDOH Environmental Health Epidemiology Bureau. Its purpose would have been to administer funds and assist Indigenous and other local and frontline communities in preparing and responding to climate-related emergencies
- Energy Facilities Bonds and Gross Receipts (HB67)
- Water Right Lease Effective Date (HB121)
- Environmental Standards for Appliances & Fixtures (HB185)

- **Economic Transition Division (HB 188)** was aimed at ensuring New Mexico has a just and equitable transition away from fossil fuels and a more stable, diversified economy by creating the Economic Transition Division within the New Mexico Economic Development Department. The division would have supported workforce development for oil and gas communities in the renewable energy sector and would have collected and allocated funds from the federal Inflation Reduction Act and the Bipartisan Infrastructure Law. The target was local governments and community groups that provide on-the-ground assistance to low-income, overburdened communities through health insurance, unemployment benefits and income support. While the legislation failed, ***the transition issue was given some consideration in the budget***
- Low-Income Public Utility Rates (HB218)
- **Private Right of Action for Certain Statutes (HB242)** would have added to the Air Quality, Hazardous Waste, Water Quality, and Solid Waste Acts the ability for private citizens to initiate civil actions for claims relating to injury, including economic or imminent threat to injury for violations of the act, instead of waiting for frequently over-taxed state agencies; private right of action already exists under the Mining Act, for example
- Oil & Gas Permit Applications (HB276) would have given EMNRD the authority to require proof from oil and gas operators that they have proper environmental insurance and can demonstrate fiscal solvency as part of the oil and gas permitting process. The bill would also have created procedures for application denial, suspension and revocation for poor compliance. The goal was to ensure the oil and gas industry takes necessary steps to maintain oil wells and prevent environmental and health hazards related to orphaned and abandoned wells
- Energy Generation Facility Requirements (SB74)
- New Home Build Renewable Requirements (SB77)
- Future Oil & Gas Lease Royalty Rates (SB164) would have amended the State Land Office lease form for oil and gas land tracts to increase the minimum on royalty payments for oil and gas corporations to 1/4 from 1/5 of the amount and value of oil produced on newly leased land. The bill would also have required land lessees to minimize waste, venting and flaring, and pay royalties on waste. This change would have brought New Mexico's royalty revenue rate closer to neighboring states
- **Strategic Water Reserve (SB167)** would have appropriated $25 million in non-reverting general fund dollars to the Interstate Stream Commission (ISC) to administrate the Strategic Water Reserve, allowing the ISC to act competitively in leasing or purchasing water rights from willing sellers and lessors. The Strategic Water Reserve is currently utilized for two purposes: for compact compliance and to assist the state in Endangered Species Act compliance
- Climate Investment Center & Fund (SB169) **Note: The governor announced the creation of the CIC as a private nonprofit**.
- No Aviation Fuel with Lead Sales (SB238)
- Retail Distributed Generation (SB266)
- Conserved Unimproved Land Valuation (SB394)
- **Oil & Gas Justice and Reform Act (SB418)** would have protected frontline communities, especially Native peoples, from the lack of oversight of the oil and gas industry by updating the Oil and Gas Act (Section 70-2-1 to 70-2-39 NMSA) for the first time since 1935. It would have 1) expanded the jurisdiction of the Oil Conservation Commission (OCC) and the Oil Conservation Division (OCD) to include environmental justice initiatives, and 2) expanded the membership of the OCC from three to five members and require one of the members to be an environmental justice expert
- Gov't Unit Utility Savings Contracts (SB420)
- Low-Income Solar Act (SB432)

2024

Proposed Negative Action

- **Strategic Water Supply Program (SB294)** was intended to start the governor's strategic water initiative, but the bill had several significant issues. It was aimed at brackish water that is at least 2,500 feet below ground surface, which is water over which the State Engineer has no jurisdiction, and although the bill states that the Environment Department shall consult with the State Engineer (among others) to determine whether the extraction of the brackish water will impair existing water rights, it made no provision for other water rights holders or members of the public to be able to protest proposed extractions of brackish water from deep aquifers. The bill also contained no provisions indicating that the extraction of brackish water would be allowed only if that extraction did not impair New Mexico's interstate compact obligations. There was also nothing in the bill to indicate that the program must be preceded by an analysis of how much brackish water there was or how the waste generated by processing the brackish water would be disposed of in a safe manner. Finally, the small amount of existing research on deep brackish water aquifers indicates that such aquifers are often not being replenished. This means that the proposed program would have called for the mining of a non-renewable resource
- **SB 64: Severance Tax Exemption for Certain Projects** would have exempted natural gas projects that comply with Oil Conservation Commission venting, flaring and ozone rules from the oil and gas severance tax. SB 64 died, but a tax exemption for most stripper wells was amended into SB 252. **The governor line item-vetoed this tax exemption**

Failed Positive Action

- Oil and Gas Future Royalty Rate (HB 48/SB 24) would have increased the maximum oil and gas royalty payment amount from 20% to 25% of the amount and value produced on leased land. New Mexico's oil and gas industry currently pays far lower royalty rates than other states with robust oil and gas production. With this increase, the oil and gas industry would have to pay its fair share to state trust lands and increase revenue for the state
- Energy Storage Systems Income Tax Credit (HB 73)
- **Statewide Public Health & Climate Program (HB 104)** would have created a new program under the Environmental Health Epidemiology Bureau of the Department of Health related to public health and climate, as well as a new public health and climate resiliency fund. This bill would have appropriated $11.1 million in reverting general fund dollars to be issued in grants of up to $250,000 to political subdivisions and tribal entities. These funds were to be used to assist local communities with the following:
  - public health emergencies
  - improvement of interagency collaboration
  - assistance in the formation of action plans
  - offerings of expertise for planning purposes
  - engagement with those most harmed by the effects of climate change
- Local Solar Access Fund (HB 108) would have created a new non-reverting fund managed by the Department of Finance and Administration to enhance access to solar energy and appropriated $110 million to the fund. This fund would have encouraged the expansion of solar adoption in New Mexico by providing technical assistance in federal grant applications and planning, designing, constructing, purchasing and installing solar generation. The fund would also have helped many low- to middle-income New Mexicans gain access to solar energy
- **Oil & Gas Act Changes (HB 133)** would have updated the Oil & Gas Act to raise the cap on "blanket plugging financial assurance" from $250,000 to $10 million. This bill would have also tripled certain application and permitting fees from $150 to $450 and from $500 to $1,500, allowing for future increases in application fees. It would have substantially increased the cap

on penalties for violations and expanded the scope of EMNRD's OCD to include the regulation of the transfer and conversion of oil drilling operations
- Allow Water Reuse Requirements (HB 291)
- **Water Trust Fund (SB 1)** would have transferred $100 million from the general fund to the Water Trust Fund, which is essential for funding state water projects. This appropriation would have supported the Fund's ability to distribute adequate funding to accomplish various projects across New Mexico, from supporting soil and water conservation districts to water conservation and flood prevention projects
- Geothermal Heat Pump Tax (SB 40)
- **Protect State Waters (SB 111)** sought to address New Mexico surface water quality vulnerability after the SCOTUS Sackett decision by appropriating funds to NMED to protect surface water in New Mexico. This would have been accomplished in two ways: by monitoring and enforcing water regulations and by increasing water mapping programs. The aim of the water mapping is to better understand how the majority SCOTUS interpretation of the federal Clean Water Act has impacted almost all of New Mexico's surface waters. ***NB: $7 million – well beyond expectations – was allocated to NMED in the budget to enforce water regulations and increase water mapping programs***
- State Investment in Climate Technology (HB 259)

References for Climate Action by Year
The following is a list of references for key climate actions, both positive and negative, taken by the Governor through executive orders, her agencies and rulemaking bodies, and the legislature.

Positive Actions
2019
- **Executive Order (EO; 2019-003) *On Addressing Climate Change and Energy Waste Prevention***
  https://www.governor.state.nm.us/wp-content/uploads/2019/01/EO_2019-003.pdf
- Efficient Use of Energy Act Changes *(*HB 291*)*
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=291&year=19
- PRC Application for Vehicle Electricity (HB 521)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=521&year=19
- **Fluid Oil and Gas Waste Act (HB 546)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=546&year=19
- **Create Outdoor Recreation Division (SB 462)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=462&year=19
- **Energy Transition Act (ETA) (SB 489)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=489&year=19

2020
- **Budget Items** [HB 2 – General Appropriations]
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=2&year=20
- Efficient Use of Energy Act Changes (HB 93)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=93&year=20
- **Energy Grid Modernization Roadmap (HB 233)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=233&year=20
- Solar Market Development Income Tax Credit (SB 29)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=29&year=20

2021
- **EO (2021-052) *Protecting New Mexico's Lands, Watersheds, Wildlife, and Natural Heritage***
  https://www.governor.state.nm.us/wp-content/uploads/2021/08/Executive-Order-2021-052.pdf
- **Rules to prevent routine methane venting and flaring**
  https://naturalgasintel.com/news/new-mexico-targeting-98-methane-capture-from-oil-natural-gas-operations-in-six-years/
- Sustainable Building Tax Credit (HB 15)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=15&year=21
- **Environmental Database Act (HB 51)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=51&year=21
- EIB Permit Denial for Poor Compliance (HB 76)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=76&year=21
- Water Trust Board Projects & NM Unit Fund (HB 200)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=200&year=21
- **Local Government Air Quality Regulations (SB 8)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=8&year=21
- **Community Solar Act (SB 84)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=84&year=21
- **Sustainable Economy Task Force (SB 112)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=112&year=21

2022
- **2022 Ozone precursor rules**
  https://www.governor.state.nm.us/2022/07/28/new-mexicos-nationally-leading-oil-and-gas-emissions-rule-becomes-law/

- **2022 Advanced Clean Cars I rules**
  https://www.env.nm.gov/transportation/#:~:text=The%20Advanced%20Clean%20Car%20rules,in%20New%20Mexico%20each%20year
- **NMED Climate Change Bureau funding (HB 2)**
  https://nmpoliticalreport.com/nmleg/nmed-pushes-for-funding-for-climate-bureau/
- Community Energy Efficiency Development Block Grant (HB 37)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=37&year=22

2023

- **Governor Announces Creation of the Climate Investment Center ("Green Bank")**
  https://www.governor.state.nm.us/2023/10/13/governor-announces-new-mexico-climate-investment-center/
- **2023 Advanced Clean Cars II, Advanced Clean Trucks and Omnibus Heavy Vehicle NOx rules**
  https://www.nrdc.org/bio/alexis-mena/new-mexico-adopts-crucial-package-clean-cars-and-trucks
- **Budget Items to fund agencies and programs (HB 2)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=2&year=23
- **Voting Rights Protections (HB 4)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=4&year=23
- Renewable Energy Office in State Land Office (HB 95)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=95&year=23
- Regional Water System Resiliency (SB 1)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=1&year=23
- **Create Legacy Permanent Funds (SB 9)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=9&year=23

  Create Wildlife Corridors Fund (SB 72)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=72&year=23
- Water Security Planning Act (SB 337)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=337&year=23

2024

- **New Mexico Construction Industries Commission Adopts International Energy Conservation Code**
  https://www.iccsafe.org/about/periodicals-and-newsroom/new-mexico-strengthens-building-safety-and-sustainability-by-adopting-international-energy-conservation-code/
  https://www.swenergy.org/new-mexico-adopts-money-saving-building-codes/
- **Budget Items (HB 2)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=2&year=24
  - **Tax omnibus bill, Adjust Income Tax Brackets (HB 252)**
  - https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=252&year=24
- **Clean Transportation Fuel Standards (HB 41)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=41&year=24
- Water Project Fund Projects (HB 148)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=148&year=24
- **NM Match Fund (HB 177)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=177&year=24
- Election Changes (HB 182)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=182&year=24
- Firearms Near Polling Places (SB 5)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=5&year=24
- **Land & Water Conservation Fund Changes (SB 169)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=169&year=24

Failed Positive or Proposed Negative Actions

2019

Failed Positive Action

- **Resource Sustainability and Security Act (HB 28)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=28&year=19
- **Environmental Review Act (HB 206)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=206&year=19
- Oil, Gas and Vented Gas Royalties (HB 398/SB 500)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=398&year=19
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=500&year=19
- New Solar Market Development Tax Credit (SB518)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=518&year=19

2020

Failed Positive Action

- Budget-Related bills relating to various pro-climate action tax credits or other tax changes, including new gas and special fuel surtaxes, energy storage system credits, EV credits, solar system installation credits and increasing oil and gas operator binding requirements.
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=2&year=20
- Two renewable energy investment-related bills failed:
  - Differential Rates for Investments (HB 60)
    https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=60&year=20
  - Renewable Energy Investment Policy Funding (HB 99)
    https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=99&year=20
- Healthy Soil Program Funding (HB 166)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=166&year=20
- **NMED Greenhouse Gas Evaluations (HB 293)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=293&year=20

2021

Failed Positive Action

- Use of Water for Oil & Gas Operations (SB 86) [reintroduced and also failed in 2022 session]
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=86&year=21
- **Water Administration Changes (HB 95)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=95&year=21
- Clean Electrification Act (HB 137)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=137&year=21
- Photovoltaic Systems in New Public Schools (SB 63) & Photovoltaic Systems in New Homes (SB 132)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=63&year=21
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=132&year=21
- Purchase of Electric Vehicles (SB 130)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=130&year=21
- Increase Penalties for Environmental Violations (SB 296)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=296&year=21
- State Agency Renewable Energy Purchases (SB 297)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=297&year=21

- Increase Penalties for Environmental Violations (SB 296)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=296&year=21
- State Agency Renewable Energy Purchases (SB 297)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=297&year=21

Proposed Negative Action

- **Energy Transition Act Changes (SB 155)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=155&year=21
- Repeal of Law Enacted by the Legislature (SJR 6)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=JR&LegNo=6&year=21

2022

Proposed Negative Action

- **EO (2022-013) on Establishing the Clean Hydrogen Development Initiative**
  https://www.governor.state.nm.us/wp-content/uploads/2022/03/Executive-Order-2022-013.pdf
- Hydrogen Hub Development Act (HB 4)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=4&year=22
- Hydrogen Hub Development Act (HB 227 & 228)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=227&year=22
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=228&year=22
- Additional Energy Acts Definitions (SB 194)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=194&year=22

Failed Positive Action

- **Clean Future Act (HB 6)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=6&year=22

2023

Failed Positive Action

- **Public Health and Climate Resiliency (HB 42/SB 5)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=42&year=23
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=5&year=23
- Energy Facilities Bonds and Gross Receipts (HB 67)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=67&year=23
- Water Right Lease Effective Date (HB 121)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=121&year=23
- Environmental Standards for Appliances & Fixtures (HB 185)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=185&year=23
- **Economic Transition Division (HB 188)** While the legislation failed, ***the transition issue was given some consideration in the budget***
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=188&year=23
- Low-Income Public Utility Rates (HB 218)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=218&year=23
- **Private Right of Action for Certain Statutes (HB 242)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=242&year=23
- Oil & Gas Permit Applications (HB 276)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=276&year=23
- Energy Generation Facility Requirements (SB 74)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=74&year=23
- New Home Build Renewable Requirements (SB 77)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=77&year=23
- Future Oil & Gas Lease Royalty Rates (SB 164)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=164&year=23

- **Strategic Water Reserve (SB 167)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=167&year=23
- Climate Investment Center & Fund (SB 169) NB: the Governor announced the creation of the CIC as a private non-profit.
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=169&year=23
- No Aviation Fuel with Lead Sales (SB 238)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=238&year=23
- Retail Distributed Generation (SB 266)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=266&year=23
- Conserved Unimproved Land Valuation (SB 394)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=394&year=23
- **Oil & Gas Act Changes (SB 418)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=418&year=23
- Gov't Unit Utility Savings Contracts (SB 420)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=420&year=23
- Low-Income Solar Act (SB 432)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=432&year=23

2024

Proposed Negative Action

- **Strategic Water Supply Program (SB 294)**
  https://www.governor.state.nm.us/2023/12/05/gov-lujan-grisham-to-establish-first-of-its-kind-strategic-water-supply-500-million-investment-will-leverage-advanced-market-commitments/
- **SB 64: Severance Tax Exemption for Certain Projects** (Passed, but the Governor line item-vetoed this tax exemption)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=64&year=24

Failed Positive Action

- Oil and Gas Future Royalty Rate (HB 48/SB 24)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=48&year=24
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=24&year=24
- Energy Storage Systems Income Tax Credit (HB 73)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=73&year=24
- **Statewide Public Health & Climate Program (HB 104)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=104&year=24
- Local Solar Access Fund (HB 108)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=108&year=24
- **Oil & Gas Act Changes (HB 133)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=133&year=24
- State Investment in Climate Technology (HB 259)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=259&year=24
- Allow Water Reuse Requirements (HB 291)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=H&LegType=B&LegNo=291&year=24
- **Water Trust Fund (SB 1)**
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=1&year=24
- Geothermal Heat Pump Tax (SB 40)
  https://www.nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=40&year=24
- **Protect State Waters (SB 111)** [NB: $7 million was allocated to NMED in the budget to enforce water regulations and increase water mapping programs]

Cover: top left photo,Gila River Hikers, by Jay Hemphill.

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