

SEPTEMBER 2023

GOVERNOR LUJAN GRISHAM'S CLIMATE SCORE ON THE VERGE OF FAILURE



CENTER for
BIOLOGICAL
DIVERSITY



EARTHCARE



progressnow
new mexico



ON THE VERGE OF FAILURE: **GOVERNOR LUJAN GRISHAM'S CLIMATE SCORE**

New Mexico, the country and the world are suffering through escalating climate catastrophes caused by fossil fuels. Eighty-five percent of planet-heating carbon dioxide emissions come from oil, gas and coal. The climate crisis is a fossil fuel crisis. The world's leading scientists and the Intergovernmental Panel on Climate Change are unequivocal: If the planet is to avoid catastrophic climate change, our leaders must prevent new fossil fuel development and immediately begin phasing down fossil fuels.

Unfortunately, over the last five years of Gov. Michelle Lujan Grisham's leadership, oil and gas production in New Mexico has skyrocketed. The state's oil production has more than doubled since the governor took office, and New Mexico is now the second-largest oil-producing and seventh-largest gas-producing state in the nation.

Given that the United States is the world's largest producer of oil and gas, and New Mexico is one of the top producers in the country, New Mexico is a substantial driver of the climate emergency. The governor's decisions have globally significant consequences not just for New Mexicans, but for the entire world.

This report assesses the actions Gov. Lujan Grisham has taken to address the main drivers of climate change — oil and gas pollution — and her progress on protecting frontline communities. The scorecard lays out the top five actions needed for New Mexico to shift from being a major threat to the climate to becoming a climate leader and evaluates the governor's performance on each.

The results show that Gov. Lujan Grisham's policies and actions to date have failed to meet the moment in addressing the climate crisis. However, she still has a historic opportunity in the final three years of her administration to correct course and curb fossil fuel production and pollution in New Mexico, thereby protecting the health of the residents of her state and helping to safeguard Earth's web of life.

Oil and gas production site on Greater Chaco Landscape. Photo: Becca Grady



SCORECARD

GOV. LUJAN GRISHAM'S RECORD ON THE TOP 5 CLIMATE ACTIONS NEEDED IN NEW MEXICO



Has the governor taken action to prevent new oil and gas production and phase down extraction?



Has the governor developed and enforced effective policies to reduce super polluting methane emissions?



Has the governor implemented health buffer zones to protect people from oil and gas pollution where they live, work, or go to school?



Has the governor taken action to reduce greenhouse gas emissions from vehicles?



Has the governor taken action to transition New Mexico to a clean, renewable economy and away from false solutions like hydrogen and carbon capture and sequestration?

RESULTS: 1/5 ACHIEVED

“Investing in new fossil fuels infrastructure is moral and economic madness. Such investments will soon be stranded assets — a blot on the landscape and a blight on investment portfolios.”

— United Nations Secretary-General António Guterres

ACTIONS NEEDED FOR CLIMATE LEADERSHIP

1. Prevent new oil and gas development and phase out existing extraction.

Because fossil fuels are driving the climate crisis,¹ Gov. Michelle Lujan Grisham cannot be a climate leader while overseeing a massive expansion of fracking in New Mexico's Permian Basin and failing to promote policies to phase out oil and gas production in the state.

The Intergovernmental Panel on Climate Change (IPCC), the world's authoritative scientific body on climate change, has determined that to have a fighting chance of saving life on Earth, there can be no new fossil fuel development and existing fossil fuel production must be phased out rapidly.² Wealthy, high-emitting countries like the United States, which bears the largest cumulative responsibility for the climate crisis, must lead the way by rapidly phasing out fossil fuels in line with science and equity.³

As United Nations Secretary-General António Guterres said in 2022, "Investing in new fossil fuels infrastructure is moral and economic madness. Such investments will soon be stranded assets — a blot on the landscape and a blight on investment portfolios."⁴ Recently, Guterres criticized fossil fuel producers and their financial backers for "racing to expand production, knowing full well that their business model is inconsistent with human survival."⁵

Researchers have classified oil and gas sites that have the potential to produce more than 1 gigaton (1,000 million metric tons ("MMT")) of greenhouse gas emissions over their lifetimes as global "carbon bombs." In fact, just New Mexico's portion of the Permian Basin (which stretches from southeastern New Mexico through west Texas) creates 1 gigaton of greenhouse gas emissions *every few years*, and **the Permian Delaware Tight sub-basin, which spans New Mexico and into northern Mexico, is the world's single biggest carbon bomb**, with potential carbon emissions of nearly 28 gigatons.⁶

In 2018 oil and gas extracted in New Mexico resulted in the emissions of 189 million metric tons of greenhouse gases when combusted.⁷ By 2022 oil and gas produced in New Mexico generated 397 million metric tons of greenhouse gases when combusted.⁸ That is more than the annual fossil fuel emissions of many entire countries, including large countries like Australia and the United Kingdom.⁹

Placing limits on New Mexico's oil and gas production is the single most important step Gov. Lujan Grisham must take to address the climate emergency.



Oil and gas production near a home in a Carlsbad neighborhood, New Mexico. Photo: Becca Grady.

2. Develop and strictly enforce effective policies to prevent emissions of super-polluting methane gas.

Gov. Michelle Lujan Grisham cannot claim to be a climate leader while overseeing massive super-polluting methane emissions from the oil and gas industry, and while failing to promote and enforce effective policies to reduce methane emissions in the state.

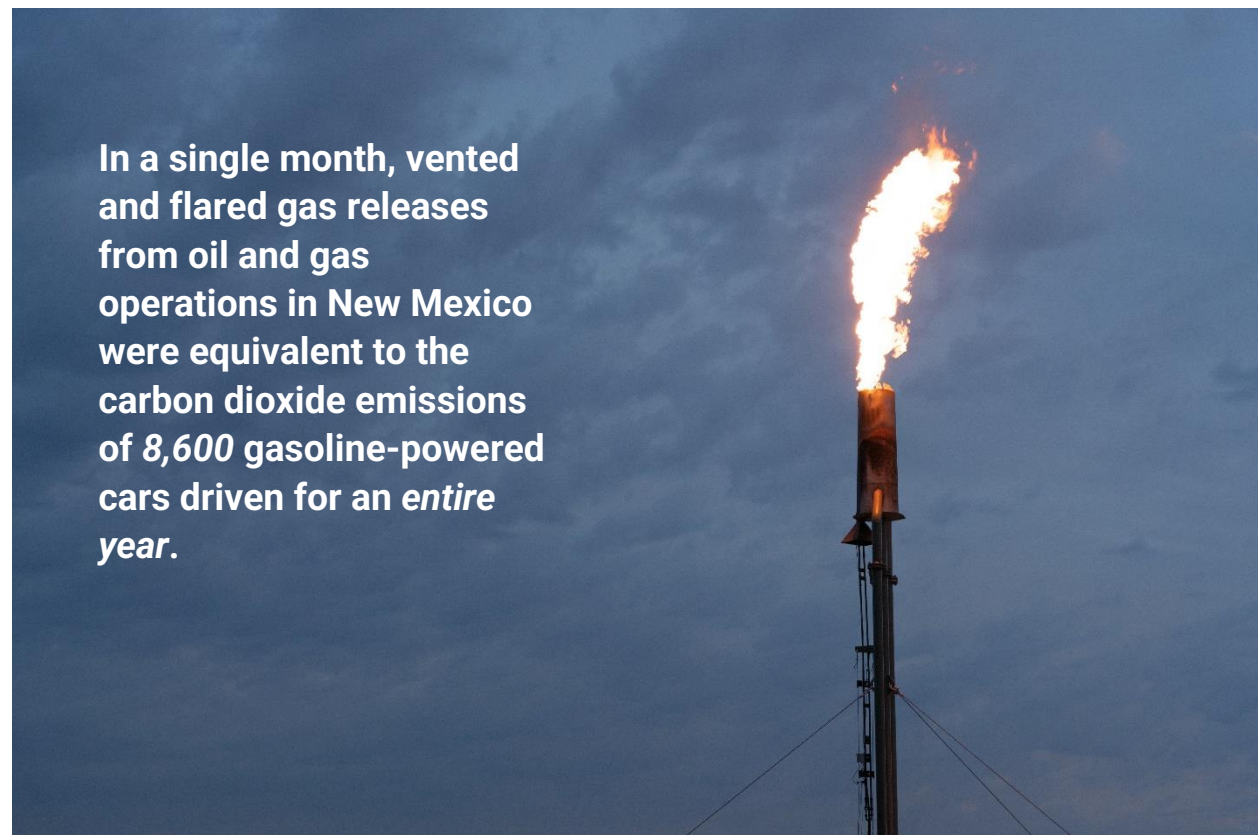
Methane gas is a climate super-polluter. It is over 80 times more powerful than carbon dioxide in heating the planet and second only to carbon dioxide in driving climate change. Yet so much methane spews into the atmosphere from New Mexico oil and gas

production sites that methane clouds can be seen from outer space over the Permian and San Juan Basins.

In the past few years, New Mexico passed regulations to prohibit the venting and flaring of methane. These regulations rely on self-reporting by oil and gas operators, are unenforced, and have not resulted in a decrease in dangerous venting and flaring.

Venting reached an all-time high in December 2022, with a 161% monthly increase in gas vented straight to the atmosphere, as well as a 39% monthly increase in flared gas.¹⁰ According to the EPA's greenhouse gas calculator, those releases in *one month* were equivalent to the carbon dioxide emissions of *8,600 gasoline-powered cars driven for an entire year*.¹¹ A comprehensive study of methane leakage from oil and gas production in New Mexico's Permian Basin estimated that 9.4% of all methane produced in this region is leaking into the atmosphere, which is nearly seven times higher than the EPA's average methane leakage rate for the U.S. of 1.4%.¹²

Gov. Lujan Grisham should use her authority to stop the illegal venting, flaring and leaking of methane in New Mexico.



In a single month, vented and flared gas releases from oil and gas operations in New Mexico were equivalent to the carbon dioxide emissions of 8,600 gasoline-powered cars driven for an *entire* year.

A well flaring methane near Carlsbad, New Mexico. Photo: Becca Grady.

3. Establish science-based health buffer zones of at least one mile between oil and gas facilities and schools, homes, health care facilities, workplaces and other locations frequented by people. Quickly phase out existing oil and gas facilities within these health buffer zones.

Despite the grave risks that exposure to pollution from oil and gas production poses to public health and safety, there is no statewide health buffer zone or “setback” between communities and polluting oil and gas production sites. In 2023, the State Land Office put in place a moratorium on new oil and gas leasing on state trust lands within a mile of schools. To protect the health and safety of New Mexicans, the governor needs to implement a state-wide health buffer of at least one mile between oil and gas facilities and schools, homes, health care facilities, workplaces and other places frequented by people. Existing oil and gas facilities within the health buffer must be phased out expeditiously.



Warning of hazardous area and hydrogen sulfide poison at an oil and gas production site in Hobbs neighborhood. Photo: Becca Grady.

Oil and gas production causes toxic pollution that enters our air, water and soil and endangers surrounding communities. Studies show that communities near oil and gas

extraction sites face a range of health harms from the air pollution alone, including reproductive and respiratory harm and cancer.¹³ Children are particularly vulnerable to this pollution.

Oil and gas wells and infrastructure also threaten public safety with the risk of fires, explosions, leaks, spills and chemical releases. San Juan County in northwestern New Mexico and Eddy County in the southeastern corner of the state, both areas of heavy oil and gas production, have among the worst air quality in the nation, receiving “F” grades from the American Lung Association for ground-level ozone pollution.¹⁴

Currently, more than 34,000 of New Mexico’s children attend schools that are surrounded by oil and gas facilities. Many schools in the southeast and northwest corners of the state are surrounded by dozens and even hundreds of oil and gas wells, endangering the health of all those who attend and work at these school.¹⁵ Approximately 144,000 New Mexicans (about 7 percent of the state’s population), including almost 28,000 children, reside or attend school within a half-mile of oil and gas production.¹⁶

Science shows that establishing a setback, or “health buffer,” decreases communities’ exposure to harmful air pollution.¹⁷

Given the severe health and safety risks associated with frequent exposure to oil and gas pollution, Gov. Lujan Grisham should use her authority to introduce a statewide health buffer of at least a mile to protect New Mexicans from these harms.

4. Rapidly and vastly reduce greenhouse gas emissions from vehicles.

When Gov. Lujan Grisham came into office in 2019, she issued Executive Order 2019-003, in which she pledged to reduce greenhouse gas emissions statewide.¹⁸ To move toward this goal, she introduced the Advanced Clean Cars Rule to electrify most of the state’s cars, SUVs and pick-up trucks by 2032.¹⁹ This policy is expected to slash about 76 million metric tons of greenhouse gas pollution from New Mexico’s vehicles during the next few decades. It will also cut 50,000 tons of smog-causing pollution, protecting the health of our children. And, because it will mean these vehicles will use little or no gas or diesel fuel, it will save New Mexico consumers millions of dollars at the gas pump.

The governor’s leadership on the Advanced Clean Cars Rule deserves applause. But because the emissions from New Mexico’s oil and gas production are many times higher than that of the emissions from the state’s vehicles, action on reducing emissions from cars and trucks only plays a small part in addressing New Mexico’s contribution to the climate emergency.



A flare from an oil and gas site burning behind a home near Carlsbad, New Mexico. Photo: Becca Grady.

To succeed, the governor must combine strong action in the transport sector with necessary actions on the rapid phase out of oil and gas production, which is responsible for the lion's share of the state's emissions.

5. Lead a just transition for New Mexico towards a clean renewable future and away from false solutions that perpetuate fossil fuels, like hydrogen and carbon capture and sequestration (CCS).

With ample solar and wind power potential, New Mexico can rapidly transition to a clean energy future and address the disproportionate harms that fossil fuel extraction has caused to Indigenous Peoples, people of color and frontline communities. Unfortunately, rather than a rapid transition to solar and wind, Gov. Lujan Grisham is promoting a massive buildout of hydrogen infrastructure, a disastrous plan that harms the climate, hurts communities and extends the fossil fuel era by delaying the transition to clean renewable energy.

More than 99% of hydrogen is currently produced with fossil fuels.²⁰ Hydrogen uses vast quantities of water to produce, is extremely dangerous to transport via pipeline, and emits harmful smog-causing nitrogen oxide (NOx) when combusted.



Oil and gas production site on the Greater Chaco Landscape. Photo: Becca Grady.

Research has shown that when carbon capture and sequestration (CCS) is added to fossil fuel hydrogen production, the dangers to communities and the environment are even greater.²¹ As such, hydrogen and CCS are not legitimate climate solutions, but simply a more expensive and riskier form of dependence on fossil fuels, particularly fossil gas. Hydrogen is a false solution that will further worsen the climate crisis and disproportionately harm people of color, low-income communities and Indigenous peoples.

To lead a just energy transition, New Mexico must meaningfully consult with and earn the free, prior and informed consent of Indigenous peoples, Pueblos and Tribal Nations. The state must recognize that Traditional Ecological Knowledge and Indigenous Knowledge Systems are critical forms of science that have a central role to play in mitigating the climate crisis in New Mexico and globally.²² Frontline communities and workers whose livelihoods have depended on the fossil fuel industry must be engaged in decision-making about economic diversification and a just transition.

New Mexico's continued reliance on oil and gas has not served its population, which has one of the highest poverty rates ²³ and one of the lowest economic opportunity rankings in the country.²⁴ A rapid transition to a more diverse and clean economy is the only way forward.

Climate leadership requires Gov. Lujan Grisham to reject hydrogen and instead invest in true, community-supported renewables like wind and solar. This will not only diversify New Mexico's economy, but also protect life on Earth.



This scorecard was produced by the Center for Biological Diversity. For more information please contact Gail Evans at gevans@biologicaldiversity.org or Silas Grant at sgrant@biologicaldiversity.org.

ENDNOTES

¹ Climate Central, *The Global Carbon Budget* (2023), <https://www.climatecentral.org/climate-matters/the-global-carbon-budget-2023> (last visited August 30, 2023).

² Oil Change International, *Drilling Toward Disaster: Why U.S. Oil and Gas Expansion Is Incompatible with Climate Limits* (2019), <http://priceofoil.org/drilling-towards-disaster>; Tong, Dan et al., *Committed Emissions from Existing Energy Infrastructure Jeopardize 1.5°C Climate Target*, 572 *Nature* 373 (2019), <https://www.nature.com/articles/s41586-019-1364-3>; SEI, IISD, ODI, E3G, and UNEP, *The Production Gap: The Discrepancy Between Countries' Planned Fossil Fuel Production and Global Production Levels Consistent with Limiting Warming to 1.5°C or 2°C* (2020), <http://productiongap.org/>; International Energy Agency (IEA), *Net Zero By 2050: A Roadmap for the Global Energy Sector* (May 2021), <https://www.iea.org/reports/net-zero-by-2050>; Teske, Sven and Sarah Niklas, *Fossil Fuel Exit Strategy: An Orderly Wind Down of Coal, Oil and Gas to Meet the Paris Agreement* (June 2021), <https://fossilfueltreaty.org/exit-strategy>; Welsby, Dan et al., *Unextractable Fossil Fuels in a 1.5 °C world*, 597 *Nature* 230 (September 2021), <https://doi.org/10.1038/s41586-021-03821-8>; Calverley, Dan and Kevin Anderson, *Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets* (March 2022), <https://research.manchester.ac.uk/en/publications/phaseout-pathways-for-fossil-fuel-production-within-paris-complia>; Trout, Kelly et al., *Existing Fossil Fuel Extraction Would Warm the World Beyond 1.5°C*, 17 *Environmental Research Letters* 064010 (2022), <https://iopscience.iop.org/article/10.1088/1748-9326/ac6228#references>; International Institute for Sustainable Development, *Navigating Energy Transitions: Mapping the Road to 1.5°C* (October 2022), <https://www.iisd.org/publications/report/navigating-energy-transitions>; IPCC, 2023: *Summary for Policymakers*. In: *Climate Change 2023: Synthesis Report, A Report of the Intergovernmental Panel on Climate Change, Contribution of Working Groups I, II and III*, <https://www.ipcc.ch/report/sixth-assessment-report-cycle/> at 19-20 (“CO₂ emissions from existing fossil fuel infrastructure (without abatement) would exceed the remaining carbon budget for 1.5°C”; “Projected CO₂ emissions over the lifetime of existing and planned fossil fuel infrastructure are about equal to the remaining carbon budget for limiting warming to 2°C with 83% confidence.”); Paul, Mark and Lina Moe, *An Economist’s Case for Restrictive Supply Side Policies: Ten Policies to Manage the Fossil Fuel Transition*, *Climate and Community Project* (March 2023), <https://www.climateandcommunity.org/economists-case-end-fossil-fuels>

³ Muttitt, Greg and Sivan Kartha, *Equity, Climate Justice and Fossil Fuel Extraction: Principles for a Managed Phase Out*, 20 *Climate Policy* 1024 (2020), <https://doi.org/10.1080/14693062.2020.1763900>; U.S. Climate Action Network, *The U.S. Climate Fair Share* (2020), <https://usfairshare.org/background/>; Dooley, Kate et al., *Ethical Choices Behind Quantification of Fair Contributions Under the Paris Agreement*, 11 *Nature Climate Change* 300 (2021), <https://doi.org/10.1038/s41558-021-01015-8>; Calverley, Dan and Kevin Anderson, *Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets* (2022), <https://research.manchester.ac.uk/en/publications/phaseout-pathways-for-fossil-fuel-production-within-paris-complia>

⁴ United Nations Secretary General, *Secretary-General Warns of Climate Emergency, Calling Intergovernmental Panel’s Report “a File of Shame”, While Saying Leaders “Are Lying”, Fuelling Flames*, Press Release (April 4, 2022), <https://press.un.org/en/2022/sgsm21228.doc.htm>

⁵ Kottasová, Ivana, *“Inconsistent With Human Survival”: UN Chief Slams Fossil Fuel Industry Expansion in Davos Speech*, CNN (January 18, 2023), <https://www.cnn.com/2023/01/18/business/davos-climate-un-warning-fossil-fuels-intl/index.html>

⁶ Kuhne, Kjell et al., *“Carbon bombs” – Mapping key fossil fuel projects*, 166 *Energy Policy* 112950 (July, 2022), <https://doi.org/10.1016/j.enpol.2022.112950>

⁷ Production data obtained from: U.S. Energy Information Administration, *Crude Oil Production* (August 31, 2023), https://www.eia.gov/dnav/pet/pet_crd_crpdn_adc_mbb1_a.htm (last visited August 8, 2023); U.S. Energy Information Administration, *Natural Gas Gross Withdrawals and Production* (2023), https://www.eia.gov/dnav/ng/ng_prod_sum_a_EPG0_FPD_mmcfa.htm (last visited August 8, 2023). Emissions calculated using the U.S. Environmental Protection Agency combustion emissions factor, obtained at: U.S. Environmental Protection Agency, *Greenhouse Gases Equivalencies Calculator - Calculations and References*, (2023), <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references> (last visited August 28, 2023).

⁸ *Id.*

⁹ Global Carbon Atlas (2023), <https://globalcarbonatlas.org/emissions/carbon-emissions/> (last visited August 28, 2023).

¹⁰ Redfern, Jerry, *Flaring and Venting Spike in December Cold Snap*, Source New Mexico (February 2, 2023), <https://sourcenm.com/2023/02/02/flaring-and-venting-spike-in-december-cold-snap/>

-
- ¹¹ U.S. Environmental Protection Agency, *Greenhouse Gases Equivalencies Calculator – Calculations and References* (2023), <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>
- ¹² Chen, Yuanlei et al., *Quantifying Regional Methane Emissions in the New Mexico Permian Basin with a Comprehensive Aerial Survey*, 56 Environ. Sci. Technol. 4317 (2022), <https://pubs.acs.org/doi/10.1021/acs.est.1c06458>
- ¹³ Shonkoff, Seth B.C. et al., *Response to CalGEM Questions for the California Oil and Gas Public Health Rulemaking Scientific Advisory Panel* (October 1, 2021), https://www.conservation.ca.gov/calgem/Documents/public-health/Public%20Health%20Panel%20Responses_FINAL%20ADA.pdf
- ¹⁴ American Lung Association, *Report Card: New Mexico 2023*, American Lung Association State of the Air (2023), <https://www.lung.org/research/sota/city-rankings/states/new-mexico> (last visited July 27, 2023).
- ¹⁵ Figures based on an analysis of school enrollment data from the New Mexico Public Education Department and well and location data from the New Mexico Oil Conservation Division. See New Mexico Public Education Department, *STARS* (February 2023), <https://webnew.ped.state.nm.us/bureaus/information-technology/stars/>; New Mexico Energy Minerals and Natural Resources Department, *OCD Statistics*, Industry Oversight (2023), <https://www.emnrd.nm.gov/ocd/ocd-data/statistics/>
- ¹⁶ Earthworks & FrackTracker, *The Oil & Gas Threat Map* (2023), <https://oilandgasthreatmap.com/threat-map/new-mexico/> (last visited September 6, 2023).
- ¹⁷ See Shonkoff, et al. (October 21, 2021), note 17 above.
- ¹⁸ Executive Order on Addressing Climate Change and Energy Waste Prevention, Executive Order 2019-003 (January 29, 2019), https://www.governor.state.nm.us/wp-content/uploads/2019/01/EO_2019-003.pdf
- ¹⁹ Office of the Governor Michelle Lujan Grisham, Gov. Lujan Grisham Announces State Will Enact Advanced Clean Car Rules, Clean Truck Rules, Press Release (July 3, 2023), <https://www.governor.state.nm.us/2023/07/03/gov-lujan-grisham-announces-state-will-enact-advanced-clean-car-rules-clean-truck-rules/>
- ²⁰ U.S. Department of Energy, *Hydrogen Strategy: Enabling a Low-Carbon Economy*, Office of Fossil Energy (July 2020), https://www.energy.gov/sites/prod/files/2020/07/f76/USDOE_FE_Hydrogen_Strategy_July2020.pdf
- ²¹ Howarth, Robert W. and Mark Z. Jacobson, *How Green is Blue Hydrogen?*, 9 Energy Science and Engineering 1676 (2021), <https://doi.org/10.1002/ese3.956>; Friedlander, Blaine, *Touted as Clean, 'Blue' Hydrogen may be Worse than Gas or Coal*, Cornell Chronicle (August 12, 2021), <https://news.cornell.edu/stories/2021/08/touted-clean-blue-hydrogen-may-be-worse-gas-or-coal>
- ²² Lander, Eric and Brenda Mallory, *Memorandum for the Heads of Departments and Agencies: Indigenous Traditional Ecological Knowledge and Federal Decision Making* (2021), <https://www.whitehouse.gov/wp-content/uploads/2021/11/111521-OSTP-CEQ-ITEK-Memo.pdf>; Convention on Biological Diversity, *Final text of Kunming-Montreal Global Biodiversity Framework available in all languages* (December 22, 2022), <https://www.cbd.int/article/cop15-final-text-kunming-montreal-gbf-221222>
- ²³ Gilligan, Chris, *The States with the Highest Poverty Rates*, U.S. News (May 3, 2023), <https://www.usnews.com/news/best-states/slideshows/us-states-with-the-highest-poverty-rates?slide=12> (last visited August 30, 2023).
- ²⁴ U.S. News, *Economic Opportunity*, 2023, <https://www.usnews.com/news/best-states/rankings/opportunity/economic-opportunity> (last visited August 30, 2023).