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

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The Toll of Climate Change on 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. 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 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 were 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.

Chaco Canyon

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. **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, 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). **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).

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 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).

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;). **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. T**his 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);**

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