

THE FUTURE OF ENERGY IN COLORADO



The 2024 Oil & Gas Worker and Community Transition Report

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Created in collaboration with

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EXECUTIVE SUMMARY

The Future of Energy in Colorado

The 2024 Colorado Oil and Gas Worker and Community Transition Survey aims to fill existing gaps in research on the state's energy transition by capturing the voices of Colorado's oil and gas workers and communities. By engaging with labor and community organizations and leveraging current surveys of the state's coal communities and energy workers nationwide, our goal was to amplify the voices of both oil and gas workers and the communities throughout the state that are significantly affected by this industry's economic, social, and environmental influences.

This final report is a quantitative analysis of the survey, which was disseminated to communities and workers, as well as one-on-one interviews. Our research reveals that oil and gas workers require greater access to quality job transition opportunities to support their families. Additionally, there is a significant lack of public awareness regarding clean energy rebate programs, and it is essential for the voices of both workers and communities to be heard and valued.

Colorado has the potential to remain at the forefront of Just Transition policy, provided that policies integrate the perspectives and priorities of the oil and gas workers and communities that have long fueled our state. It is essential to make energy upgrades accessible to everyone and assist oil- and gas-dependent communities in diversifying their economies. This also necessitates a reevaluation of the state's role in promoting broad economic prosperity through effective fiscal policies and strong public investments.

Colorado Oil and Gas Worker Survey

We collected feedback from oil and gas workers throughout the state, encompassing both upstream roles (such as derrick operators) and downstream industry positions (like those in oil refineries or transportation). This group included professionals involved in exploration and extraction, transportation and storage, energy transmission or supply, as well as construction roles (like pipefitting and concrete installation) and oil refining.

Job Quality Is Relatively Strong, but Workers Are Interested in Adjacent Fields

Respondents reported an average of seven and a half years of experience in the industry, and the survey findings are consistent with current economic data indicating that many jobs in oil and gas offer considerable job quality. Most participants in our sample are full-time salaried employees, earning over \$50,000 annually. Additionally, nearly 80% have access to some form of health insurance, while over 65% receive retirement contributions.

EXECUTIVE SUMMARY

Workers showed interest in adjacent fields where they could use similar physical skills. This interest spanned the energy sector, with the most popular being utility-scale solar (38%), followed by electrical grid management and construction (29%), carbon capture and storage (29%), and environmental remediation and plugging abandoned wells (26%), and geothermal (26%). Beyond the energy sector, workers were most interested in construction and civil engineering (38%), followed by waste and wastewater management or water processing (32%), and transportation.

Workers Want To Stay in Their Communities, but Need Support for Training in New Careers

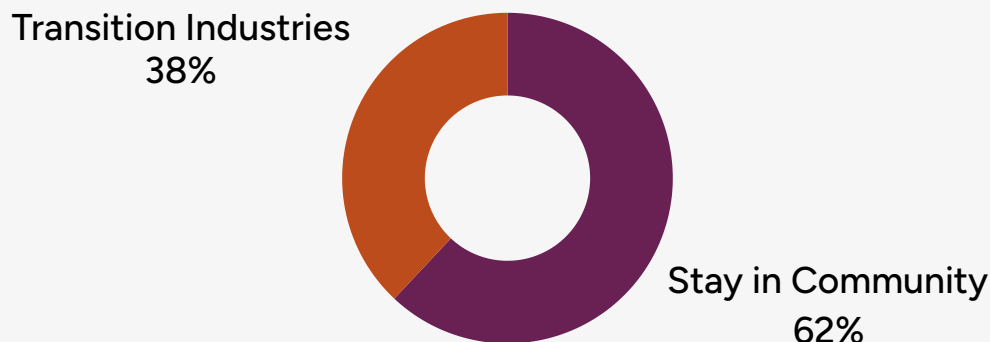
Colorado oil and gas workers have diverse opinions regarding energy transition. Many believe that several factors are influencing the availability of jobs in their field; however, most agree that the shift to renewable energy is a significant element that could affect their employment opportunities. If asked to relocate for work, most workers surveyed would prioritize staying in their communities instead of following oil and gas jobs.

Workers are willing to retrain to transition to new sectors, but only if the training is affordable; most would prefer it to be a paid, short-term retraining opportunity. Sixty percent indicated that they would only be interested in retraining if it took less than one month.

The data indicated that Colorado workers believe the government, as well as organizations like labor unions, should play a role in planning for the transition. Fifty percent of all respondents believed the government should assist in funding training for a new career path. Additionally, one in three individuals prioritized the extension of paid health benefits, wage replacement in case of layoffs, and pension guarantees.

Survey participants expressed a desire to join a union or explore employee ownership options, aiming to secure ongoing access to quality jobs and wages that support their families.

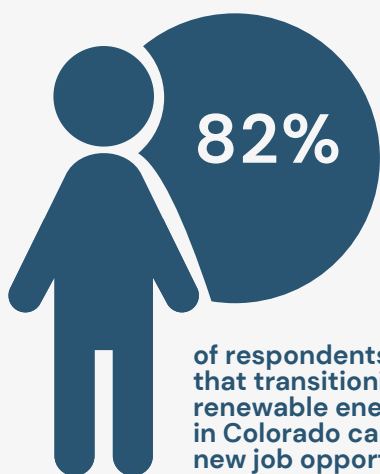
Figure 1: Most Colorado Workers Surveyed Want to Stay in Their Community



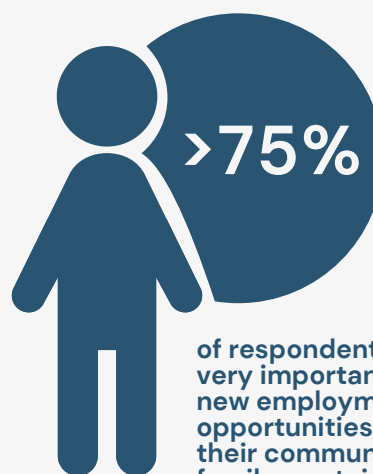
EXECUTIVE SUMMARY

Communities Are Supportive of a Just Energy Transition

We gathered 222 responses from community members throughout Colorado revealing widespread concerns about environmental and climate issues. The feedback shows broad support for efforts to transition to a clean energy economy.



of respondents believe that transitioning to renewable energy sources in Colorado can generate new job opportunities and foster economic growth in their communities



of respondents feel it is very important that any new employment opportunities offered in their community be family-sustaining positions that provide job security and benefits

Communities Lack Access and Awareness To Participate in Existing Transition Efforts

Current awareness of the transition to renewable energy is low; nearly 60% are completely unaware that their community is making this shift. Community members were broadly unaware of the role of oil and gas property tax revenue in their county's funding for services. Thirty-three percent were completely unaware their county relies on oil and gas property tax revenue, while over 27% were but didn't realize how high a percentage of their county's assessed property value was dependent on the oil and gas industry.

Community members have a low awareness of current programs and tax incentives that support electrification and energy efficiency, and even for those who are aware, survey results suggest these programs are not easy to navigate and financially accessible for many Coloradans.

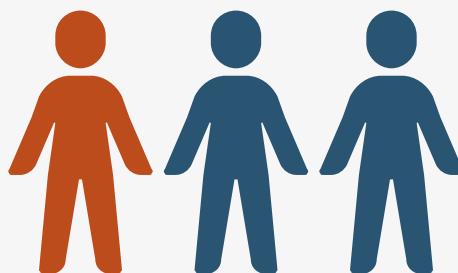
Accordingly, affordability is a priority for many Coloradans regarding where new federal investments to support regional economic prosperity to be prioritized. The most common priority was funding for local farmers, ranchers, and rural small businesses to purchase renewable energy systems or energy efficiency improvements. Communities also want to see affordable housing investments, such as affordable single-family units for seniors and people with disabilities, as well as funding to meet community construction and/or physical infrastructure needs, such as repairing roads and bridges.

EXECUTIVE SUMMARY

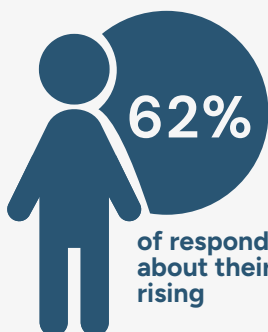
Respondents Showed Concern Over Rising Energy Costs and Acute Climate Impacts

Community members are most concerned about the rise of their own household energy costs that could accompany a transition to renewable energy. Over 62% of those surveyed were concerned about their own energy costs rising, about 37% were concerned about loss of their tax base. About one in three were concerned about job losses for workers.

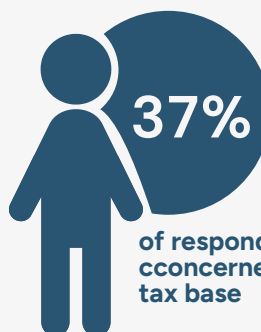
Respondents were somewhat concerned about air or water pollution in their community and on their families, but on average, showed more concern about acute climate impacts such as increased wildfires, drought, or extreme heat in their communities.



1 in 3 respondents were concerned about job losses for workers



62% of respondents were concerned about their own energy costs rising



37% of respondents were concerned about losing their tax base

Communities Across Colorado Want To Engage in Efforts To Plan the Transition, but Need More Equitable Engagement Opportunities

The majority of respondents believe that the voices of community members are not being considered in transition planning; fewer than 25% felt that community members have sufficient opportunities to engage in decision-making concerning the energy transition.

POLICY RECOMMENDATIONS



Colorado must enhance data collection and engage with affected parties to better identify needs, priorities, and opportunities as the transition progresses. Relying solely on clean energy initiatives like wind and solar will not sufficiently compensate for the revenue and job losses in local communities; therefore, broader strategies for economic diversification are necessary. Following the example set by the Just Transition Advisory Committee (JTAC), Colorado should establish an advisory committee that includes perspectives from the oil and gas community and workers, ensuring equitable representation for marginalized and frontline communities.

Involving community members and oil and gas workers is essential; their perspectives should be included in discussions. It's important to consider fair compensation and acknowledge their time and involvement. Through our data analysis and engagement with stakeholders, we have developed the following set of policy recommendations for consideration.

Involving community members and oil and gas workers is essential; their perspectives should be included in discussions.

POLICY RECOMMENDATIONS

Worker Policy Recommendations:

- Reduce barriers to unionization through policies like card check neutrality and modernizing the Colorado Labor Peace Act. It's essential to engage workers and organized labor in discussions to foster trust and enhance communication.
- Boost strategic investments in workforce development to enhance access to paid on-the-job training opportunities, registered apprenticeship programs, and high-road career pathways. These pathways refer to jobs that provide a living wage, opportunities for advancement, safe working conditions, and family-supporting benefits. This could include expanding existing programs such as registered apprenticeship programs and state well plugging and weatherization programs.
- Ensure equitable access to jobs for all oil and gas workers through wraparound services, which involve holistic and systemic methods to support workers in various areas such as childcare, transportation, and access to workforce training.
- Encourage local governments to set job quality standards by creating best practices and local policy guides around issues like minimum and prevailing wage and labor practices.
- Commission a feasibility study for safety net programs that workers value most, such as extended health care coverage or pensions, to understand the fiscal outlook and viability.

Community Policy Recommendations:

- Energy efficiency and clean energy upgrades must be affordable and accessible. This will require further outreach and engagement.
- Tax and budget policies should ensure backfill for lost revenue. Local governments and school districts will feel the effects. Community property tax shortfalls may also be addressed through various strategies. For instance, measures that replenish lost revenue could be combined with targeted investments, funded by fees imposed on the industry. This approach aims to diversify local economies away from dependence on a single industry while enhancing essential infrastructure, such as public transportation and internet access within those communities.
- Communities must be engaged and have access to resources. Our survey findings reveal that more than 65% of respondents would appreciate in-person public engagement opportunities accessible to everyone. Increasing chances for discussions about the transition could foster community support and inspire innovative local solutions.

POLICY RECOMMENDATIONS

Federal Policy Recommendations:

- Improve federal definitions of what constitutes an “energy community” to ensure that resources are going to communities most impacted by the transition.
- Enable federal tax credits to support broader economic development and promote community benefit agreements.
- Concentrate on the cleanup and remediation of historical pollution, as this initiative has the potential to generate thousands of new jobs for workers in transition while revitalizing local ecosystems.
- Pass the Protecting the Right to Organize (PRO) Act to restore workers’ right to unionize, paving the way to high quality jobs
- Ensure access to relevant federal funds
- Eliminate fossil fuel subsidies and repurpose funds to support Just Transition programs
- Pass the National Energy Community Transition Act

METHODOLOGY



Stakeholdering and Outreach Methods

These data are the result of a process of initial stakeholdering with community, political, and labor leaders across the state of Colorado, which culminated in the creation of two surveys that were disseminated to workers and community members. The surveys were available in both English and Spanish, and responses to surveys were kept completely confidential. All respondents were compensated for their time in taking the survey, and participation in follow-up interviews was also compensated.

The Oil and Gas Worker Survey

The oil and gas worker survey was designed to gain a comprehensive understanding of the current working conditions, core values, and priorities of Coloradans with jobs in the oil and gas industry. The questions were crafted through stakeholdering with labor leaders across the state, as well as drawing from the American Oil and Gas Worker Survey, a 2023 nation-wide study by True Transition.¹

Oil and gas workers were surveyed across both "upstream" and "downstream" roles. "Upstream" pertains to roles involved in the exploration and extraction of oil and natural gas, whereas "downstream industry" encompasses jobs in sectors such as oil refining, as well as activities like pipefitting or steelwork that are connected to the distribution or utilization of products derived from crude oil and natural gas.

The Community Survey

The community survey was distributed to communities where oil and gas production or related downstream industries like a steel mill or an oil refinery are a major source of jobs and tax revenue. The survey was designed to understand community member preferences for industries to support local economic development, whether current electrification programs are accessible, priorities for federal funding investments, and how people would like to be engaged in decision making related to the energy transition.

Follow Up Interviews

Survey respondents were asked whether they were interested in participating in a follow up interview to share more about their experiences and perspectives. Interviewees were compensated for participating in the interview.

Sampling Methodology

We estimate that there are approximately 22,000 oil and gas workers across Colorado, as of the third month of 2023. While our sample of 34 workers falls short of typical standards for generalizability, we supplemented this data through in-depth followup interviews, a trip to Garfield county, and site visits with USW union leaders in Pueblo and Commerce City to capture the voices of workers and place-based context.

Our survey and interviews were intended to build on existing national data with Colorado-specific data, to start a dialogue about what Colorado workers believe about the transition away from oil and gas and opportunities for career pathways in emerging and adjacent sectors. Future research should extend upon our preliminary data by drawing from larger samples and conducting analysis for potential disparities across worker's geographic region, race, ethnicity, gender, and other demographic factors.

BACKGROUND: JUST TRANSITION RESEARCH AND POLICY

The broad ranging impacts of the sector on communities near oil and gas exploration and extraction are difficult to quantify, and thus, we aimed to capture a strong sample of a few impacted communities. We received the most responses from Weld, Denver, Adams, Pueblo, Larimer, Mesa, and Garfield counties; we chose to set quotas for higher responses in counties that received more property tax revenue from oil and gas or are legacy oil and gas dependent, such as the Commerce City Refinery owned by Suncor Energy (U.S.A) Inc. refinery in Adams County, and Pueblo's EVRAZ Steel Mill.

Colorado is the first state in the nation to establish an Office of Just Transition (OJT), but this office is solely dedicated to coal workers and communities. We detail the policy history of Colorado's just transition policy and its role in the national landscape in the policy background and recommendations section. Due to the narrow focus of OJT, the current data we have on our state's transitioning energy workers and communities is focused on the nearly 3,000 Coloradans who fit the definition of a "coal transition worker" in state law.² Thus, the focus of this report is to fill this gap in just transition research by capturing the voices of Colorado's oil and gas workers and communities and discerning immediate next steps to incorporate these voices into the framework for Colorado's oil and natural gas transition policymaking.



It is important to note the key differences between the transition away from coal, which is largely underway and has strong policy support in Colorado, and the imminent transition away from oil and gas which has yet to be planned for. The economic impact of coal on workers and their local communities is more concentrated geographically than that of oil and gas wells, refineries, and downstream industries, and the shutdown dates created for coal are both more proximate and more clearly debilitating for the economies of these regions.

The oil and gas transition involves a more complex and wide reaching supply chain. Unlike the transition from coal to oil and natural gas which has largely already occurred, and was technologically driven due to the inevitability of oil and gas as more efficient fuel sources, many climate researchers argue that "the world will need to transition away from oil and other fossil fuels while they are abundant and inexpensive."³

Thus, this transition will look different than coal mine and power plant closures in Colorado and in other oil and gas producing states across the nation, but the state is positioned to pave the way.

BACKGROUND: JUST TRANSITION RESEARCH AND POLICY

While its focus is solely coal, the Colorado OJT's preliminary survey findings are nevertheless useful in building a Colorado-specific framework for this survey. The preliminary coal worker survey results showed that workers had often been in the industry for a long time, wanted to stay within their communities, and were concerned about loss of their income and benefits with plant closures.⁴ 61% of respondents said they want to remain in their community after closures; we aimed to discover if Colorado oil and gas workers may be more transient, as some research suggests,⁵ or more rooted in their communities.

In addition to the Colorado coal worker survey, our survey drew on the findings and methodology of a cross-sectional national survey by Milliken and Lindner's, "The Future of Energy & Work in the United States: The American Oil & Gas Worker Survey," and was circulated at the end of 2021 and beginning of 2022. Milliken & Lindner's provide a framework for the design and approach to this Colorado-specific study.⁶

Of the 1,635 workers who completed this national survey, across oil and gas exploration and production (upstream), support activities (including transportation, shipping or pipelines), refining and petrochemical, and other related jobs, a total of 87 survey respondents worked in Colorado at the time. We hoped to build upon this national research through executing a similar cross sectional survey of upstream and downstream workers in the state of Colorado.

"When I first started, basically every single rig we'd have at least two engineers that would be responsible for this special equipment tool but then I started seeing a shift during the year I was at [my company].

They started having these remote engineers call in, so instead of having two engineers for every drilling rig, they'd have one engineer responsible for several rigs. Because of advanced technologies and better internet speeds, better broadband, they had these engineers in a control room and they were able to direct the tools from Houston, Texas, so they didn't need engineers out in the field doing that work. The engineers in Houston were able to watch multiple rigs which meant they were hiring less engineers and getting the same amount of work done. With these automatons you need less people to do the same amount of jobs." - Jeff, oil and gas worker, Arapahoe County

BACKGROUND: JUST TRANSITION RESEARCH AND POLICY

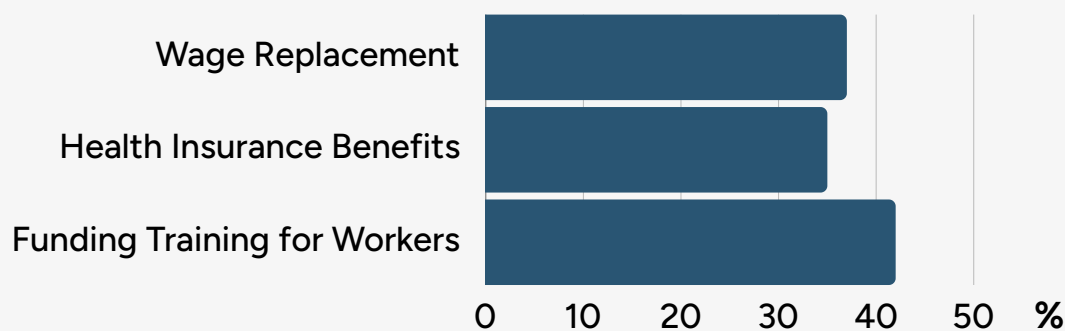
The national results showed both cause for concern and opportunities for oil and gas workers. The authors found that “workers expressed anxiety about not being able to do anything else outside of the oil and gas industry;” however, the “preference for work that utilized existing competencies” creates pathways to a Just Transition. Responses provided evidence of declining job security and wages in the oil and gas industry, especially during the pandemic period. Over half of the national survey respondents lost their jobs at least once before 2020. Milliken and Lindner cite this trend, in addition to rollbacks of safety and training protocols more broadly, as “evidence that the oil and gas industry has already been systematically reducing its workforce.” The authors note that between 2015 and 2019, companies laid off 55,000 oil and gas workers, 28% of the total workforce. The U.S is producing more oil and gas than ever before, with fewer workers, leading to employees feeling overworked or being on crews where most workers have limited training and experience.

Additionally, more than half of the True Transition survey respondents lost their jobs in 2020. Colorado’s data mirrors this national trend, showing a national dip during the pandemic and a partial recovery since. What we heard from workers also mirrored the existing national data.

The national respondents had seen a decline in average wages, and many workers expressed grievances after having been fired and then re-hired for the same work at lower pay. However, respondents expressed that opportunities in emerging alternative energy industries don’t pay enough for workers to consider transitioning.

While the authors of the national survey found that many workers expressed deep distrust of the government, some also acknowledged the need for the government to play a role in the transition if they lost their jobs, such as by providing wage replacement (37%), health insurance benefits (35%), and funding training for workers to find new employment (42%). Additionally, just under half of workers surveyed supported direct federal employment to plug oil and gas wells.

Figure 2: Worker Perspectives on Government Support in Employment Transitions



Source: Adapted from *The Future of Energy & Work in the United States: The American Oil & Gas Worker Survey* by M. Milliken Biven & L. Lindner, 2020, p. 5

BACKGROUND: JUST TRANSITION RESEARCH AND POLICY

Some local studies have also captured the voices of oil and gas workers, such as University of California, Berkeley's recent report, that focuses on workers that were laid off during California's Marathon Martinez refinery closure in 2020.⁷ This study focused on workers who did not have access to a just transition; it serves as a warning of what could happen if plants close without guidance from policies or a clear plan for what happens to these workers and their communities. Laid off workers landed in jobs that paid \$12 per hour less than their oil refinery jobs, a 24% cut in pay, and "overall, workers reported worse working conditions at their post-layoff jobs, even in higher wage jobs." Workers also struggled to show their skills and expertise when looking for jobs in other fields of work, due to the lack of certifications for refinery workers.

However, the Martinez case study also provides hope and echoes the findings of Millikin and Lindner's national oil and gas survey; the authors concluded that while workers experienced higher financial insecurity and worse working conditions after the layoff, they are highly motivated to use their existing skills to move to new jobs in new sectors. Nearly all of the workers (91%) would consider job training; however, workers were concerned about training program cost, needing to earn while retraining, and training program length, and workers were "uniformly uninterested in going back to school to earn degrees." These two studies prompted us to ask Colorado workers targeted questions about length and cost of training.

The Martinez case study authors conclude that a just, equitable transition would require coordinated assistance to retrain and transition these workers successfully, such as certifications of existing skills to show their qualifications to potential employers, as well as workforce development policies to promote high road job growth.

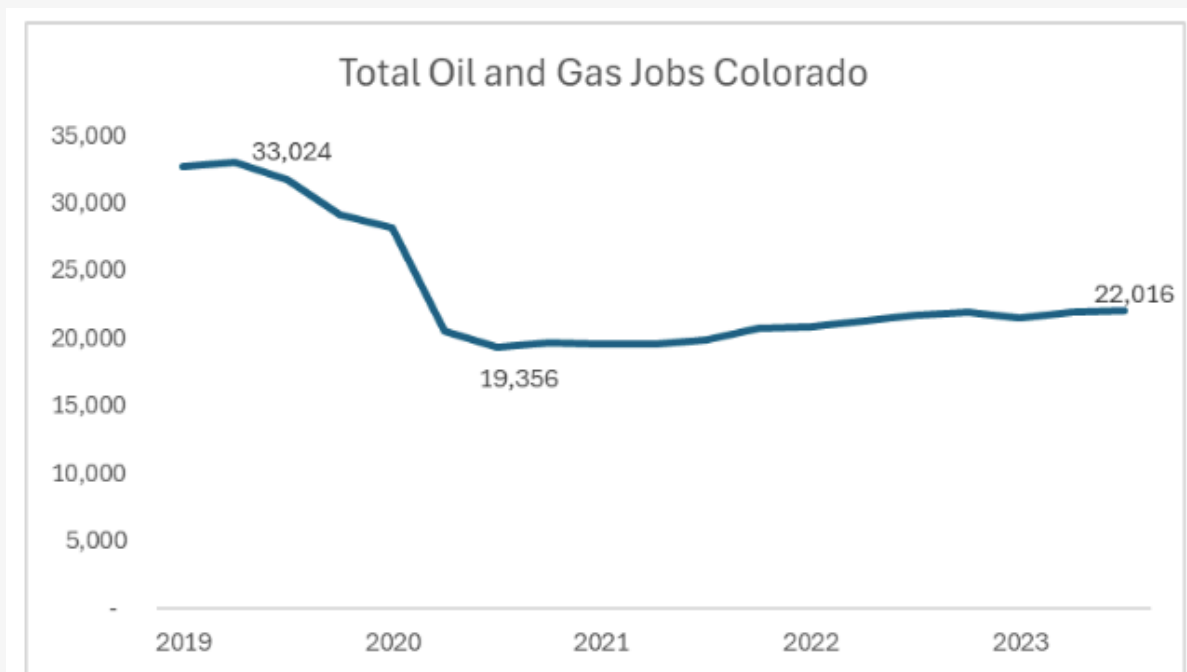
Turning towards the role of industry in the transition, existing evidence suggests that companies are not planning ahead for this. The World Benchmarking Alliance's pilot Just Transition Assessment reviewed 100 oil and gas companies, as well as electric utilities and auto manufacturers, and found a "striking and systemic lack of action by companies to identify, prepare for and mitigate the social impacts of their low-carbon strategies."⁸

Only 15 out of all 180 companies studied had included the voices of those who will be most impacted in their plans, and only 23% of the 180 companies assessed made a public commitment to reskill or upskill workers displaced by the low-carbon transition.

The tide appears to be changing, though, with the first high-level ministerial roundtable on transition being held at the most recent United Nations Climate Change Conference (COP 28). The roundtable met to provide recommendations for the work program on just transition, recognizing the importance of “balancing environmental, economic, and social factors” as nations around the globe move away from fossil fuels.⁹

COLORADO’S OIL AND GAS WORKFORCE

Nationally, direct employment in oil and gas extraction has been declining since its heyday in the 1980s of about 265 thousand jobs, and has been on the decline in recent years.¹⁰ While growth in the early 2000s, a small peak in 2015 at 200 thousand brought this number back up after decades of decline, it has been declining since then, sitting at about 120 thousand jobs nationally based on March 2024 data.

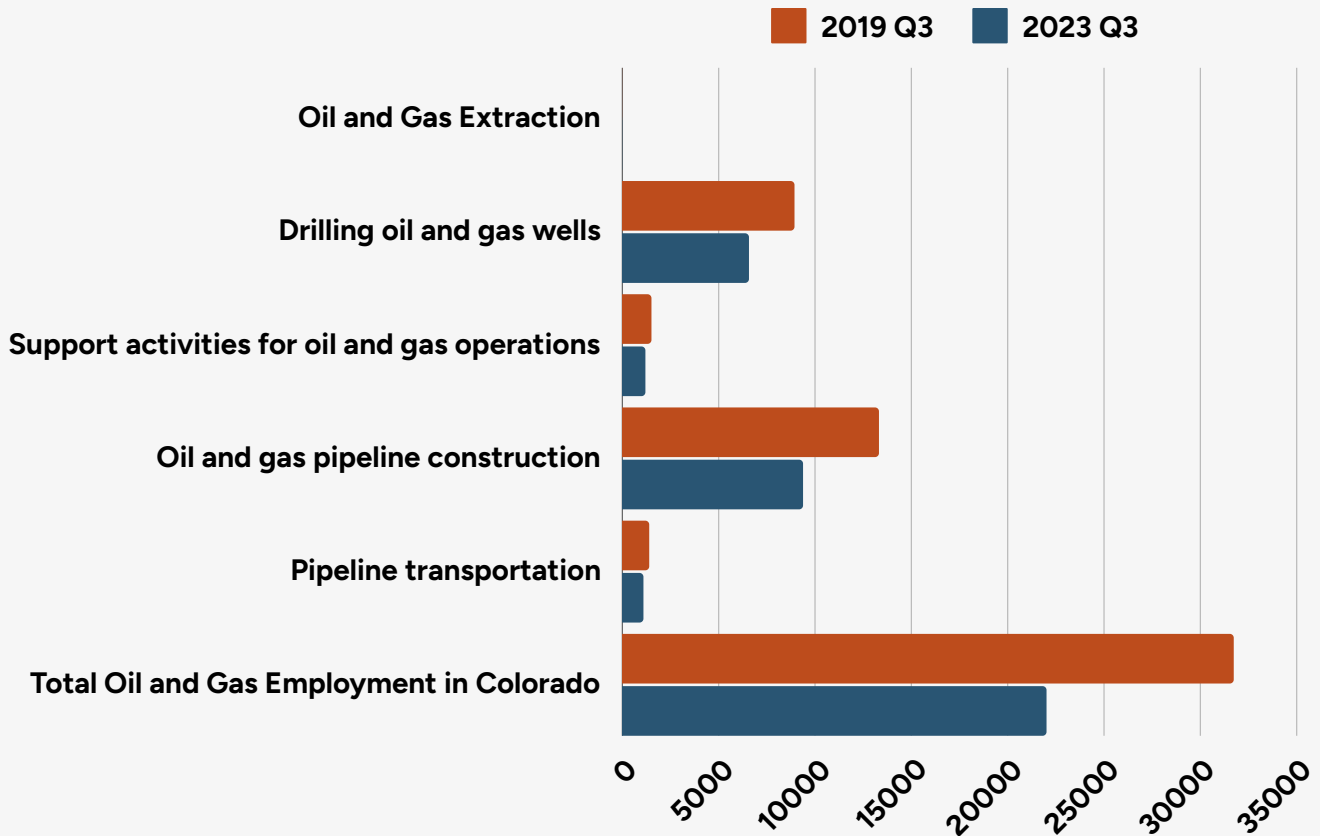


Source: Quarterly Census of Employment and Wages

Colorado’s employment numbers across the industry have mirrored this decline, especially since the COVID-19 pandemic, the share of total jobs has remained low. In the third quarter of 2023 (latest available data) there were 22,016 jobs in the oil and gas industry in Colorado. That makes up 0.91% of total employment. In 2019, the oil and gas industry comprised 1.4% of total jobs in Colorado.

COLORADO'S OIL AND GAS WORKFORCE

Figure 3: Oil and Gas Jobs Have Declined Since Pre-Pandemic Times



Source: Quarterly Census of Employment and Wages

By contrast, clean energy jobs are growing in Colorado and are nearly four times this amount. Including traditional transmission and distribution, in 2023, there were 89,419 jobs in clean energy in Colorado, growing 5.5% from the prior year.¹¹ These jobs might look like electric power generation (for example, workers selling or installing solar panels and keeping wind turbines moving), energy efficiency upgrades (energy star and efficient lighting, or renewable heating and cooling), and transportation and storage jobs (workers modernizing the grid and moving energy from one place to another). This is 57% of all energy jobs in Colorado.

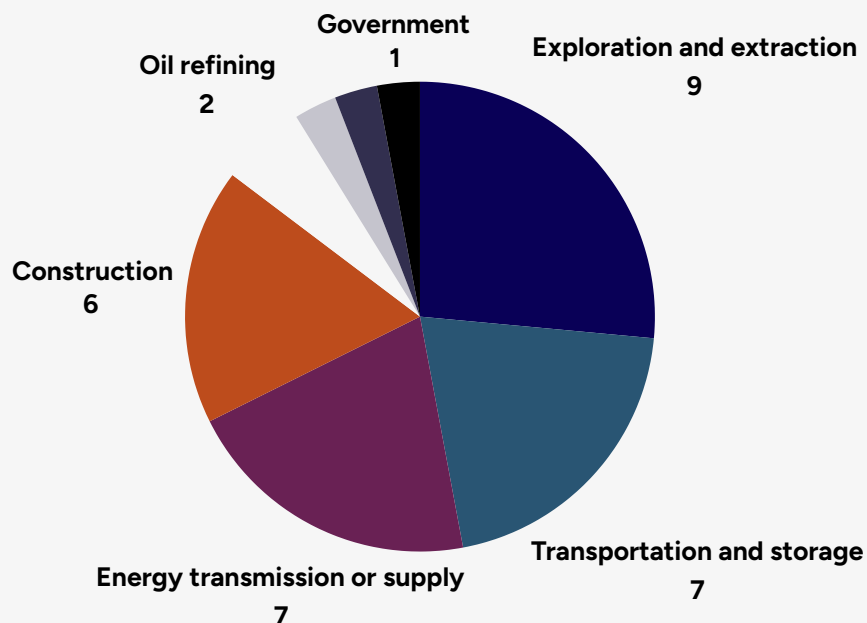
While Colorado was previously ranked #7 and #11 in wind and solar capacity, many of these clean energy jobs are concentrated in Denver and Colorado Springs.¹² Oil and gas dependent counties (in terms of property tax valuation) have seen some growth in these jobs, with wide variation across counties. For example, Dolores County has seen very little job growth, but Weld county housed 2,973 at the end of 2022 and 3.9% job growth that year, and Garfield saw 2.2% job growth and 695 new renewable jobs.¹³ Growth in renewables may not be tracking proportionately with where existing energy jobs are located.

“When I got laid off I became very pessimistic with the industry. I saw the cyclical nature of the industry [and] how it has these huge swings; when times are good and oil prices are higher to these times when morale is super low because everyone is getting laid off and everybody’s worried about keeping their jobs. I saw that the first time around in 2015-2016 and then I saw that again in 2020 during COVID. I saw how it impacted me personally and also a lot of my co-workers, especially for those that were the only breadwinners in their family. Them losing a job had a huge impact on whether they could provide for their families. When times are good, money is flowing, [workers] are definitely making a lot of money but when times are bad it can violently swing into the opposite side where people are struggling to make ends meet.” - oil and gas worker, Arapahoe County

FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

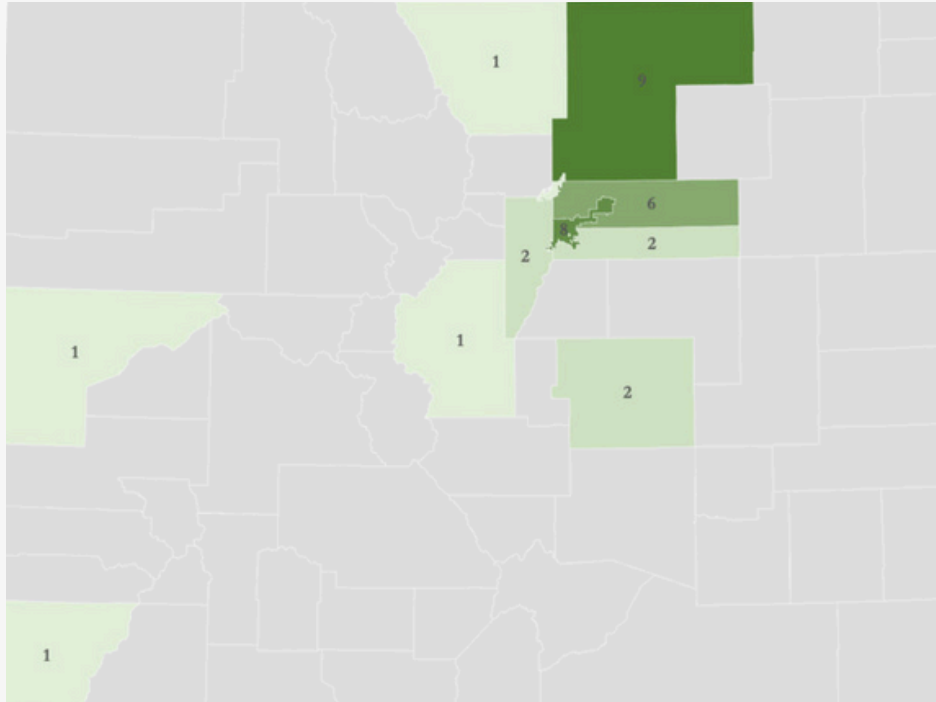
We surveyed workers from a variety of sectors across the oil and gas industry, with the majority coming from oil and gas exploration and extraction, oil and gas transportation and storage, energy transmission or supply, or construction (pipefitting, concrete installation, etc). Workers responded across the state, with high concentrations in counties where most extraction and refinery operations occur, such as Weld, Adams, and Denver.

Figure 4: Worker Survey Representation Across Sectors



FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

Figure 5: Worker Survey Representation Focused on Higher-Production Counties



The Future of Energy in Colorado; The 2024 Oil & Gas Worker and Community Transition Report by S. Mariam and J. Allen, 2024.

The sample was majority male and white, reflective of the lower diversity and underrepresentation of women and workers of color in the national energy workforce. Fifty percent of the surveyed workers held a bachelor's degree or higher, while the other 50% held high school, some college, or an associates degree.¹⁴

This sample was more educated than the average for oil and gas workers nationally; according to Bureau of Labor Statistics (BLS) data on educational attainment for workers 25 years and older in 2021, 21.1% of derrick operators, rotary drill operators, service unit operators had less than a high school diploma, while only 10% had a bachelor's degree or higher, and 68.3% of these three occupations had a high school diploma or equivalent, some college, or an associate's degree.¹⁵

FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

Current Working Conditions for Colorado Oil and Gas Workers

Most workers had been in the industry for many years, with an average time in the oil and gas sector of seven and a half years. Workers spent about 12 hours commuting per week and averaged just over 45 hours working per week. Earnings trended high, with three in four workers earning over \$50,000 a year, and 35% earning over \$100,000 per year. This data tracks with national BLS data for average working hours and salaries of oil and gas extraction workers, distribution workers, and other job titles held by respondents.¹⁶

Chart 1: Wages for Common Oil and Gas Jobs in Colorado

	Jobs	10th Wage	25th Wage	Median Hourly Wage	75th Wage	90th Wage
Derrick Operators, Oil and Gas	330	\$21.30	\$23.50	\$24.67	\$28.99	\$32.46
Rotary Drill Operators, Oil and Gas	360	\$24.52	\$32.53	\$36.99	\$42.62	\$45.43
Service Unit Operators, Oil and Gas	2,230	\$20.50	\$23.21	\$28.69	\$33.50	\$41.59
Roustabouts, Oil and Gas	1,490	\$18.61	\$19.04	\$22.18	\$23.67	\$27.15
All Occupations in CO	2,832,010	\$16.14	\$18.67	\$25.98	\$40.22	\$62.79

Source: May 2023 State Occupational Employment and Wage Estimates

Nationally, oil and gas extraction workers worked an average of 45.6 hours in May 2024 for production and nonsupervisory employees. The median Colorado earnings for service unit operators was \$28.69, while the statewide median hourly wage for all covered employment was \$25.98 based on 2023 data.¹⁷

FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

This data suggests that many oil and gas workers are earning more than the median hourly wage for Colorado workers, and explains the hesitancy of many workers to transition to fields with lower wages, as well as losing their access to benefits. Most survey respondents had access to benefits, with nearly 80% having health coverage of some sort, compared to 85.3% for all Colorado private sector employees.¹⁸

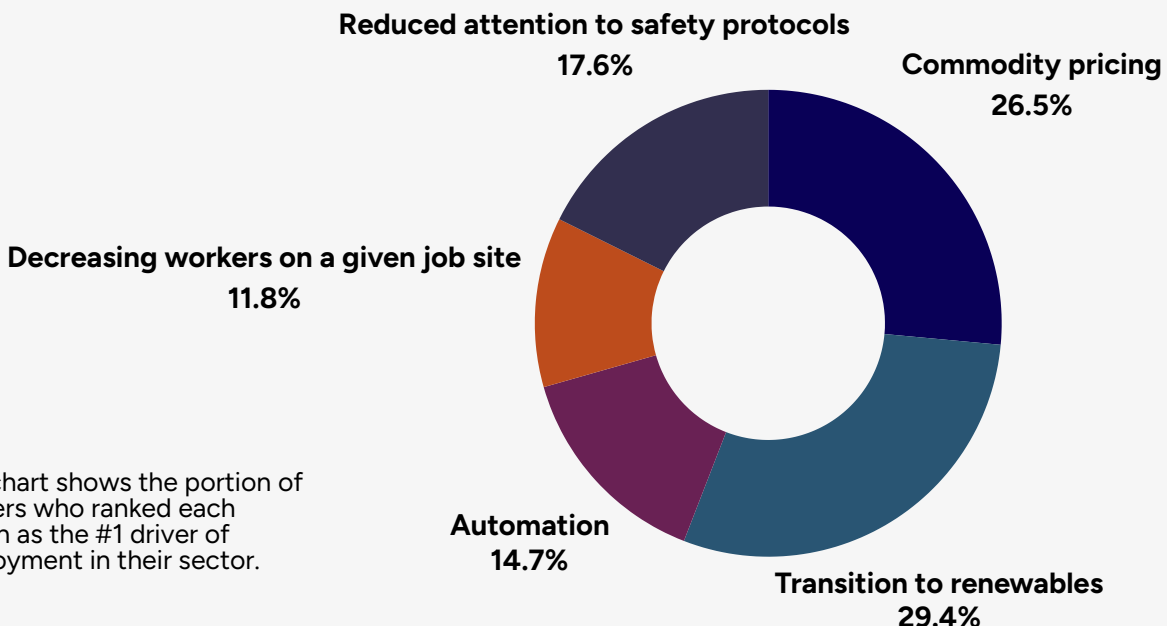
Seventy three percent of the Colorado sample had access to paid vacation, just under the national industry standard; 79% of construction workers and 81% of trade, transportation, and utilities workers have access to paid vacation as of 2024 data.¹⁹

Perspectives on the Transition to Renewables

Workers believe a mix of factors is impacting their job prospects in the oil and gas field, but were most likely to cite the transition to renewables as the number one driver of a reduction in jobs. However, this was a polarizing question; nearly 53% ranked renewables as either the first or second most important driver, while 20% ranked renewables last, relative to factors unrelated to the energy transition such as commodity pricing and automation.

The second most cited driver of the volatility in employment levels for their sector was commodity pricing, suggesting that workers are aware of how both the transition to renewables and the volatility of the oil and gas industry more broadly affects their current and future job prospects. Some workers also cited corporate consolidation and the market power of oil and gas companies as additional factors that may be impacting the number of jobs in oil and gas.

Figure 6: Worker Perspectives on Factors Impacting Their Job Prospects



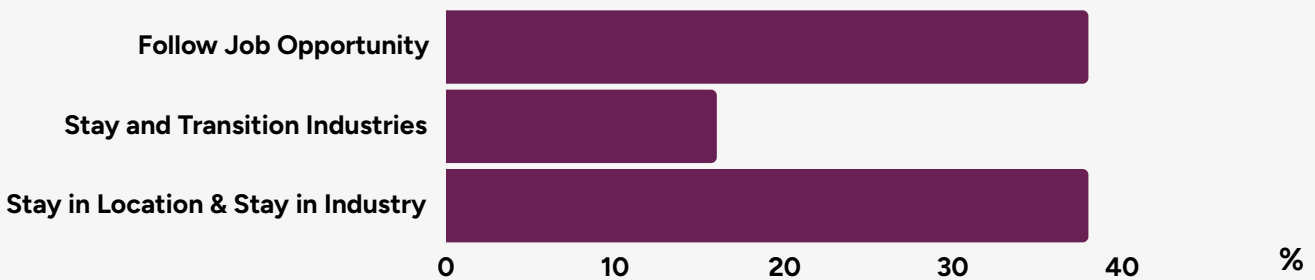
“I do believe that most workers at the base of this situation it's not that they are 'pro-oil and gas' its just that they want to work and feed their families and those are the good jobs to do it” - oilfield worker, Weld County

“Most of the people I know in the industry are leaving the state because of the uncertainty” - oilfield worker, Weld County

Workers Prefer To Stay Rooted in Their Communities

The oil and gas workers surveyed don't agree on if it's worth it to move to stay in the industry, but a majority (61%) would prioritize staying in their communities. While 38% said they would follow the job opportunities to remain in the oil and gas industry or downstream industry even if they had to move out of their communities, 38% would prioritize staying in their current location with a preference for staying in the oil and gas or related industry if possible, and another 23% would prioritize staying put even if they had to transition to a new industry.

Figure 7: Most Colorado Workers Surveyed Want to Stay in Their Community



The Future of Energy in Colorado; The 2024 Oil & Gas Worker and Community Transition Report by S. Mariam and J. Allen, 2024.

Responses suggest that Colorado oil and gas workers are not entirely unlike coal workers surveyed by OJT. Colorado's Coal Worker Transition Survey was focused on coal plant closures, which are much more abrupt and likely have created more isolated, acute impacts than the slower more diffuse transition from oil and gas we can expect. While comparisons must account for different contexts, the OJT survey does have a similar finding; the results show that 61% of respondents said they want to remain in their community after coal plant closures, while another 21% was undecided. Only 18% said they intend to leave.²⁰ Thus, it appears that oil and gas workers are slightly more transient than coal workers, but still prefer to stay in their communities when possible.

This reflects the diversity of worker preferences across upstream and downstream industry and the varying levels of mobility. Even broken down by sector, workers still appear to have varying preferences regarding relocation, regardless of if they work in upstream jobs like extraction and exploration, transportation and storage, or construction and skilled trades that relate to transmission and distribution. The limited size of our sample means that further data collection is necessary to draw meaningful conclusions about geographic transience of oil and gas workers for transition policies, however, this data also suggests that further questions need to be asked to understand if factors like age, job experience, or salary may be impacting the variation in geographic transience we saw.

FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

Workers Are Interested in New Fields, but Are Concerned About Pay and Job Security

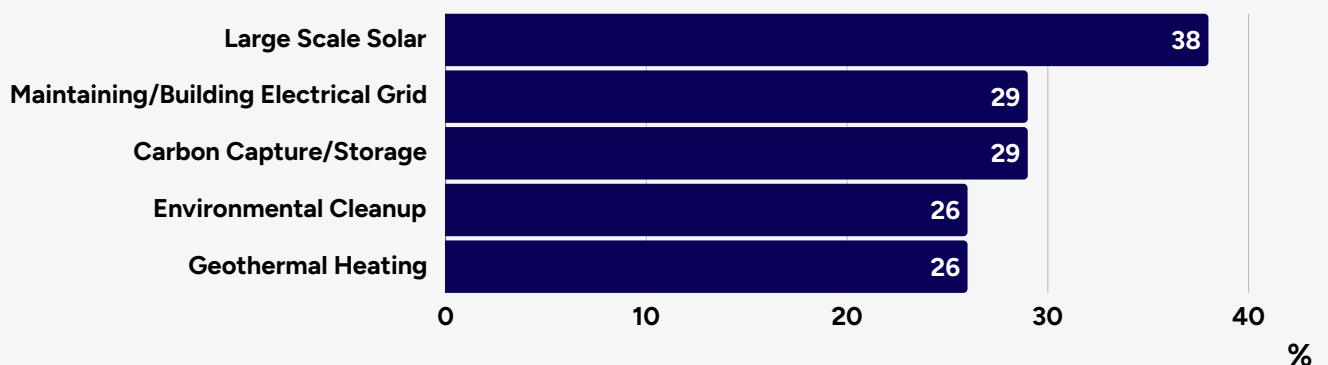
The aspect of job quality most important to workers was comparable pay, with over 82% selecting this within their top three priorities, followed by comfortable benefits at 47% of all respondents prioritizing this option, and job security (contract length) at over 41%. Interestingly, having a flexible work schedule (compressed/alternative scheduling or extended time off) was very important to about a third of respondents, while workplace health and safety was a priority for about one in four workers surveyed.

When asked about any concerns about moving into other fields of work that are outside of the oil and gas industry, workers are concerned emerging industries are less stable, treat workers less fairly, and pay less. New skills were another concern for workers. The following responses illustrate some of the concerns of workers:

- "I am concerned about stability of emerging industries such a solar panel production, and battery production."
- "Just how the business are getting ran and how the bosses are towards their workers."
- "The concern I would have would be job security."
- "No experience in other fields."
- "Yes, that I have to start from scratch."

Workers were interested in training and transitioning to a variety of fields across the energy sector, with the most popular being large-scale solar projects (38% showed an interest), followed by jobs maintaining and building out the electrical grid (29%), carbon capture and storage (29%), cleaning up environmental damage and plugging abandoned wells (26%), and geothermal heating (26%).

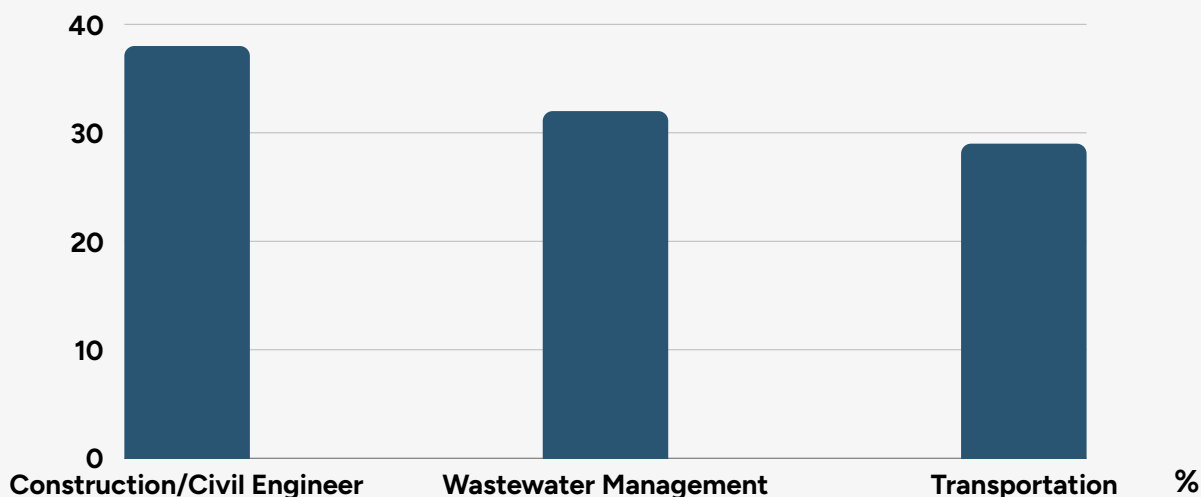
Figure 8: Worker Showed Interest in a Variety of Fields Across the Energy Sector



FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

Outside of the energy sector, workers were most interested in construction and civil engineering (38%), followed by waste and wastewater management or water processing (32%), and transportation (29%). City maintenance, manufacturing, and electrical distribution and maintenance were also of interest to over one in four of the workers surveyed.

Figure 9: Worker Showed Interest in Fields Outside the Energy Sector



The Future of Energy in Colorado; The 2024 Oil & Gas Worker and Community Transition Report by S. Mariam and J. Allen, 2024.

Workers Are Willing To Retrain, but Only if the Training Is Affordable, and Most Would Prefer It To Be a Paid Retraining Opportunity

If the training is free, either subsidized by the state or employers, but workers would not be compensated for their time, only 50% were interested. However, if workers were paid for their time participating in retraining, over 88% would be interested in retraining.

In terms of time investment, workers' willingness to participate varied greatly. Sixty percent of workers indicated that if compensated for training, they would be willing to retrain, but not for longer than a month.

"I am respectful of the economic opportunity that the industry provides but what's really important to me is that it's hazardous work. People take risks, people get injured. Without strong unions and strong labor organizing, workers often find themselves at the mercy of business decisions and decision makers in the industry. The decisions that are made to lay people off and how those decisions are made or what sort of implicit or explicit bias goes into those decisions is really concerning. I am concerned for the Latino population where folks can be let go a little more easily coming from a marginalized community." - Environmental Protection Specialist, Garfield County

FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

“We would be better off not retraining workers but diverting future workers into more productive fields of work.” - oilfield worker, Weld County

Views on Government, Unions, and the Role of Policy

Workers clearly prioritized policies that would allow for paid training for a new field of work. Fifty percent of all respondents believed the government should help pay for training for a new field of work. This mirrors the national data from the True Transition’s report, which found that 42% of workers surveyed nationally said the government should fund training for workers to find new employment.

The next three most common responses were paid health benefit extension, wage replacement if laid off, and pension guarantees, with nearly 30% of all workers placing each of these in their top three priorities. Again, this mirrors the national data from True Transition, which showed support for wage replacement (37%) and health insurance benefits (35%) from the government.

Openness to Unions and Employee Ownership Indicates Opportunities To Support Good Jobs

While only 15% of our sample was a member of a union, this is still higher than the average private sector unionization rate in Colorado of 6.9% across all industries. Of those union workers, four of the five suggested that it is either somewhat or very important that their union plays a role in helping them transition to new opportunities that utilize similar skill sets.

We asked this question in the context of the strong public support and growing attention and investment in union organizing across the nation in recent years, and the “rise of the union curious,” characterized by an increase in the portion of workers who are undecided, but interested in learning more about organizing their workplace.²¹ This was also critical due to the notable disparities in union density and job quality between oil and gas-dependent jobs, and the lack of opportunities to join a union in many emerging energy sectors in Colorado. As of DOL’s 2024 national report on U.S. Energy & Employment Jobs, union density in the energy sector (11%) was 50% greater than the private sector average (7%), and interestingly, in 2023 unionization rates in clean energy surpassed traditional energy employment for the first time nationally.²² However, Colorado’s union density is relatively low overall, and may be lagging on these metrics for clean energy jobs.

In Colorado, energy workers are interested in joining unions, especially if they were to transition to new sectors. Nearly 3 in 4 workers indicated interest in joining a union in another sector or the renewable energy sector if there was the opportunity to do so, with 1 in 3 answering yes and over 40% requiring more information on unions.

FINDINGS: 2024 COLORADO OIL AND GAS WORKER SURVEY

This is policy-relevant data considering the major concerns workers raised about lower salaries and benefits and instability in the renewable energy sector as barriers to transitioning to these fields, and strong economic evidence suggests unions can help boost these job quality metrics to attract skilled workers.²³ The 2024 USEER report also indicates that unions can help employers fill high-demand jobs; Union employers reported lower difficulty finding workers than non-union employers in 2023, with 24% of union and 40% of non-union firms reporting that it was “very difficult” to find workers.²⁴

Unions also appear to be an asset in diversifying the energy workforce, to ensure that these jobs are not only high-road jobs (jobs with a living wage, opportunities for promotion, safe working conditions, and benefits that can support a family) but also that these pathways to economic prosperity are accessible to Coloradans of all backgrounds. The same USEER report found that union shops in the energy industry are more likely than non-union shops to have policies about recruiting from communities of color or women.

“I think there should be unions, especially in the oil and gas industry. When I was laid off, a lot of us felt like we were just a number on a spreadsheet to be moved around if the company needed to make more profits.” - oil and gas worker, Arapahoe County

Forming partnerships between state agencies, educational institutions, and organized labor in creating equitable, accessible pathways for workers from all backgrounds to train and connect to careers in new and emerging sectors is a space ripe for further research, and state and local policy development. We explore this in our policy section.

Employee ownership is another opportunity to improve job quality and wealth building opportunities for workers; our data indicates that workers value the benefits that employee ownership can bring, such as increased transparency, opportunities for workers to participate in decision making, and opportunities to buy holdings in the company. Nearly three in four respondents indicated interest in these benefits and employee ownership more broadly; 38% answered yes, and over 35% indicated that these benefits are important to them, but they would want more information on employee ownership.

COMMUNITY IMPACT OF OIL AND GAS

The oil and gas industry not only impacts workers across the energy supply chain, but also affects the communities who live near oil and gas exploration, extraction, and processing and often rely on the local property and severance taxes from these industries to fund critical social, economic, and community services.

A number of national and international studies show that oil and gas provides few jobs, but the industry has an outsized impact on local economies that are often geographically concentrated.²⁵ Similarly, CFI's previous report, "Clearing the Air: The Real Costs and Benefits of Oil and Gas in Colorado" showed that while oil and gas is a small percentage of total employment in the state, with updated numbers showing that oil and gas was only responsible for 0.91% of total employment in Colorado in 2023, the jobs and the property tax revenue that funds local communities are concentrated in a few heavily impacted areas.

While just 9 of Colorado's 64 counties got more than 10% of their property tax from oil and gas property in 2021, those that do are highly reliant on this revenue; Dolores County has the highest portion of its assessed value coming from oil and gas property at 61.3%, followed by Montezuma (45.8%), Weld (43.6%), Garfield (40.3%), and Rio Blanco (40.2%).

The industry also often underpays its taxes, based on audits by the state; one state audit between 2016 and 2018 found that Colorado oil and gas operators failed to file more than 50,000 monthly well reports and filed more than 1,000 incomplete reports.²⁶

Many of the profits and economic benefits resulting from oil and gas have leaked out of local communities. One 2017 study found that 73% of the economic activity in Colorado's Piceance Basin (including Mesa and Garfield Counties) leaked out of the basin and 57% of the associated oil and gas extraction revenues left the State of Colorado.²⁷

Much of this property tax revenue goes towards funding schools. Only 94 out of 178 school districts have some oil and gas assessed value, and of those 94 districts, 41 of them get less than 2% of property tax from oil and gas. On the other hand, 15 of those school districts get more than half their property tax from oil and gas.

In 2021, \$108 million in local property tax dollars contributed to school funding as part of the statewide school finance formula. If that suddenly went away, the state would backfill that \$108 million for localities.

Outside the statewide school finance formula, school districts have also asked voters to approve "override" mills, or additional property taxes that all stay local to the school district and do not impact total program funding. Of the \$2.9 billion in override revenue, 3.5% of it comes from oil and gas property (\$102 million).

COMMUNITY IMPACT OF OIL AND GAS

Oil and gas simultaneously serves as a revenue source that benefits some communities, but also creates significant health, environmental, and other costs that are paid by Coloradans, not the industry. While some serious impacts of oil and gas development are not quantifiable, the Colorado Fiscal Institute (CFI) has quantified some of these costs in our 2022 report, "Clearing the Air; the Real Costs and Benefits of Oil and Gas for Colorado." Pollution emitted by oil and gas operations in Colorado alone will cause well over \$13 billion of damages between 2020 and 2030, based on calculations of the social cost of oil and gas pollution that are set in state law.

Some of the tax revenue paid by the oil and gas industry shouldn't get deemed as a "net benefit" when we consider these costs; for example, say a dollar is not just used to pay for a teacher, but instead is used to clean up the mess they themselves make.²⁸

Other health and environmental costs include emissions of volatile organic compounds (VOC) and Nitrogen Oxides (NOx), which lead to dozens of deaths in Colorado each year, high amounts of water usage, lower property values near oil and gas drilling sites, habitat fragmentation, and costs related to cleaning and plugging abandoned oil and gas wells.

"In the fall of 2014, Encana, which was ultimately acquired by Crestone and then acquired by Civitas, came to drill the first of the 13 wells at the Pratt and Waste Connection sites 800 feet north of my house. They had significant problems that the horizontal drilling technology and in particular the geology of the area behind my house was very difficult.

No site has logged more complaints than the Pratt and Waste Connection pads directly behind my house. It was incredibly disruptive for the better part of the year and it's one of those things that until you experience it, you have no idea what it's like to have that kind of noise and that kind of disruption constantly in your life when you're trying to raise a family and work from home and enjoy the outdoors that Colorado has to offer." - community member, Erie, Colorado

COMMUNITY IMPACT OF OIL AND GAS

The oil and gas industry is the largest industrial source of emissions of volatile organic compounds (VOCs), which contribute to ground level ozone pollution.²⁹ VOCs from drilling and fracking operations, together with nitrogen oxides, are responsible for 17% of locally produced ozone in Colorado’s heavily drilled Front Range. The total cost of ozone precursors NOx and VOCs from the oil and gas sector is estimated to be between \$100 million and \$180 million (in 2015 dollars).³⁰

These environmental costs are borne by Coloradans, especially those communities sited nearest the oil and gas developments, which research shows are more likely to be communities of color and places where people are more likely to earn low incomes, such as Commerce City.³¹ Data and qualitative analyses of the impacts to the residents of an area adjacent to an oil refinery can be found in the Commerce City community profile.

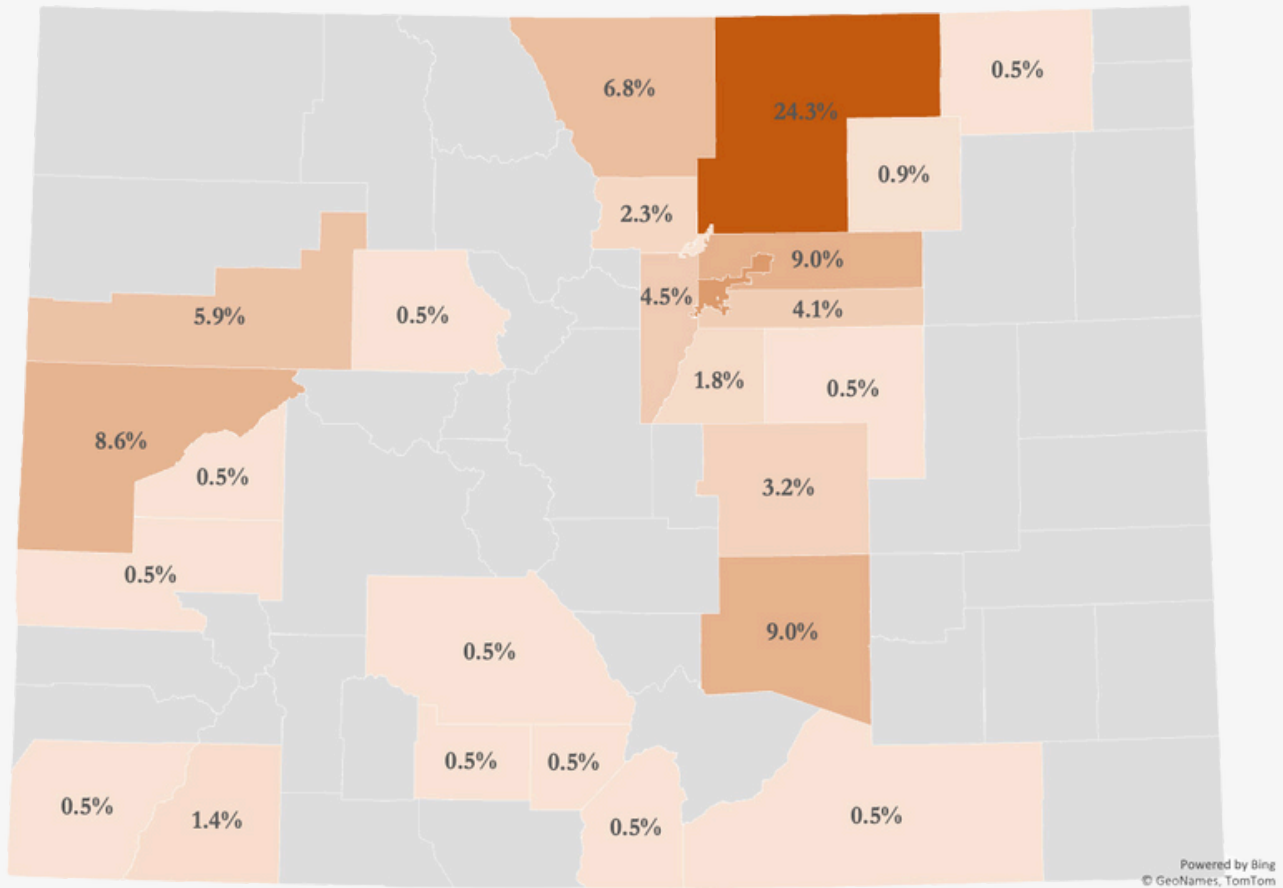
Statewide costs of these health impacts are concerning; by 2025, the average number of PM2.5 and ozone related premature deaths attributable to oil and gas emissions in Colorado is estimated to be 70 deaths which is the equivalent of 1.9 premature deaths per 100,000 people.³² This is 210% of the national population-adjusted premature death rate.

RESULTS: 2024 OIL AND GAS COMMUNITY SURVEY

The community survey data were distinct from the survey data we collected from oil and gas workers themselves. We received the most responses from Weld County (24%, 54 responses), Denver (13%, 29 respondents), Pueblo (9%, 20 responses), Mesa (9%, 19 responses), Adams (9%, 20 responses), Larimer (7%, 15 responses), and Garfield (6%, 13 responses).

County by county breakdowns of demographic data and responses to questions around funding and local priorities for their community can be found in the “additional data” appendix.

Figure 10: Community Representation Was Concentrated in Counties Most Economically and Environmentally Impacted by the Industry

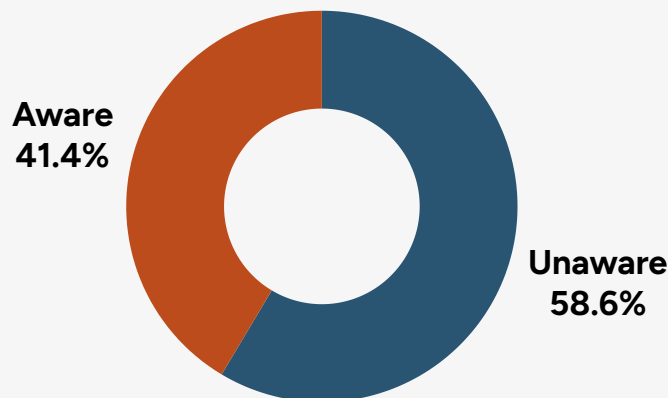


The Future of Energy in Colorado; The 2024 Oil & Gas Worker and Community Transition Report by S. Mariam and J. Allen, 2024.

Coloradans Have Low Awareness of the Energy Transition

Nearly 60% (130 of 222 respondents, or 58.5%) are unaware of their community transitioning to renewable energy in any way.

Figure 11: Communities Show Low Awareness of the Energy Transition



The Future of Energy in Colorado; The 2024 Oil & Gas Worker and Community Transition Report by S. Mariam and J. Allen, 2024.

RESULTS: 2024 OIL AND GAS COMMUNITY SURVEY

However, while communities are not aware of current efforts, they are optimistic about the transition and the impact it could have on their community. Nearly 82% of Coloradans surveyed believe that transitioning to renewable energy sources in Colorado could create new job opportunities and contribute to economic growth in their communities.

Community members were broadly unaware of the role of oil and gas property tax revenue in their county's property tax value, and therefore funding for critical public services. Nearly 33% were entirely unaware their county of residence was dependent on oil and gas property tax revenue, and over 27% were aware, but didn't realize how high a percentage of their county's assessed property value was dependent on the oil and gas industry. Seventeen percent answered that while they did not live in a county with over a 1% assessed property value dependency, they were aware that their county is still impacted by a downstream oil and gas related industry like a refinery or a steel plant.

Community members have a low awareness of current programs and tax incentives that support electrification and energy efficiency, and even for those who were aware, the survey results suggest they are not easy to navigate and financially accessible for many Coloradans. 1 in 3 respondents are unaware of any programs or tax breaks related to electrification, while another 35% said these programs are not accessible. Only 40% of Coloradans surveyed felt they could access and navigate processes such as purchasing an electric vehicle, weatherizing their home, or installing solar panels and applying for tax credits. Many respondents noted that they had heard of opportunities to install solar or tax refunds for electric cars, but that they could not afford these investments.

Many renters felt they couldn't participate in energy efficiency efforts because they don't own their homes; one respondent from Weld County expressed "hopefully there can be improvements that will allow those renting to see some benefits too, and help the community to improve".

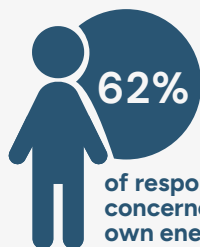
"I have not looked into anything like electric vehicles or solar panels because I think even with government help, it would still be more expensive than what I have now."- community member, Aurora

"I do not own a home and therefore don't really have much say in my energy sources. I'm aware of some solar panel programs for houses that give you tax breaks but that's it. If housing were actually affordable I would totally do this for my home if I'm ever able to get one."- community member

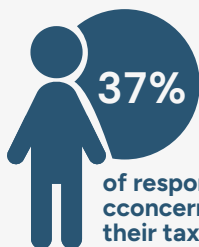
"We need more information about current programs, for everyone not just certain areas."- community member, Arapahoe County

Top Concerns Are Energy Costs and Acute Climate Impacts

Community members are most concerned about the rise in their own household energy costs that could accompany a transition to renewable energy, followed by concerns about loss of their tax base (local funding for schools, fire districts, etc). More than 62% of respondents were concerned about their own energy costs rising and about 37% were concerned about losing their tax base. One in three were concerned about job losses for workers as well.



of respondents were concerned about their own energy costs rising



of respondents were concerned about losing their tax base



1 in 3 respondents were concerned about job losses for workers

In some counties, particularly those with a greater reliance on property taxes from oil and gas, like Mesa and Weld, there were more concerns about job losses and the potential decline of their tax base. For example, 37% of respondents in Weld county expressed concern about jobs and 43% about their tax base. In Mesa county, 47% were concerned about employment, and 63% worried about the effects on their tax base, compared to 30% and 37%, respectively, for the entire sample. Meanwhile, respondents from some Front Range counties like Denver and Boulder showed less concern about both jobs and their tax base, on average.

Seven out of 10 Coloradans are concerned about acute climate impacts such as increased wildfires, drought, or extreme heat in their communities.

Respondents expressed significant concern about environmental issues, prioritizing acute climate impacts relative over cumulative pollution risk. Respondents rated their concern about air or water pollution in their community and on their families at about five out of 10. However, Coloradans were, on average, more concerned about acute climate impacts such as increased wildfires, drought, or extreme heat in their communities, with an average rating of just short of seven out of 10.

“We got a letter in the mail before saying that the water is so polluted and has cancer causing agents in it. We are downstream from a bunch of factories and the water goes off into our drinking supply in Brighton. I wish something could be done about this more than just ‘more filtering’-the tap water is not drinkable.” - community member, Adams County

Community Members Prioritized Good Jobs and Affordability

It was very important to community members that new economic development strategies provide high road jobs in their communities; 76% of respondents said it was critical that any jobs and opportunities coming to their community provide family sustaining local jobs, (including job security and benefits). The majority of the rest of those surveyed said it was somewhat important, with only 5% answering neutral or not important.

The Coloradans surveyed would prefer to see the most potential for job growth in Solar (59%), Electrical Grid management and Construction (47%), Wind (40%), and Home Building Weatherization and Electrification (28%).

Respondents are open to a variety of new industries coming in to support a strong tax base to replace the hole left by oil and gas. The most popular was Food and Agriculture (46%), followed by Health and Wellness (40%), Technology and Information (34%), Tourism/Outdoor Recreation (29%), and Advanced Manufacturing (24%).

Communities want new federal investments to support regional economic prosperity to be prioritized for funding for local farmers, ranchers, and rural small businesses to purchase renewable energy systems or energy efficiency improvements, with 43% of respondents placing this in their top priority. Their second chosen priority was affordable housing investments (36%), such as affordable single-family units for seniors and people with disabilities. Their third priority was meeting community construction and/or physical infrastructure needs, such as repairing roads and bridges (35%). About one in three respondents also listed community economic development needs like health care, public safety, childcare, utility services, and food access as a priority, with another third calling for assistance for local utilities to establish new clean energy systems.

Community members envisioned various improvements for their communities, such as affordable solar energy for families, better public infrastructure walking and biking, more electric vehicle charging stations, and support and compassion for people experiencing homelessness in their communities.

- "Help low income families get solar"
- "Make it easy to walk and bike in the community"
- "Installation of more EV charge stations"
- "Solar and wind"
- "Better public transportation, and incentives for bike lanes, sidewalks and alternative transportation infrastructure"

RESULTS: 2024 OIL AND GAS COMMUNITY SURVEY

Preferences for Community-Centered Policy Engagement Indicate Need for More Outreach

Most respondents do not believe their community members have equitable opportunities to participate in decision-making related to the energy transition. Less than 25% felt that community members have ample opportunities to participate in decision-making related to the energy transition.

More than 27% of respondents believe that the public is not being engaged in decision-making related to the energy transition in their community. About half of the respondents felt that some members of the community have the opportunity to have their voice heard, but historically underserved groups do not have a voice in decision-making.

“I feel that these community meetings are a joke, that [the industry] conducts them simply to check a box. I think that forced pooling, which has been used all across the state for years to force these things down people’s throats is not an effective way of hearing community voice. I would suggest that many entities in the state like the ECMC, CDPHE, CPW, DNR are all ineffective in working with each other; the industry still controls a fair amount of the mind space of those committees and agencies.” - community members, Aurora

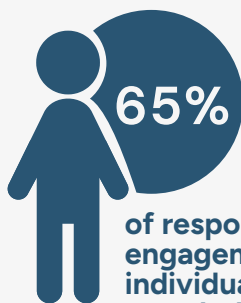
“I wish elected officials would listen to the people and not just to the companies.” - community member, Pueblo

RESULTS: 2024 OIL AND GAS COMMUNITY SURVEY

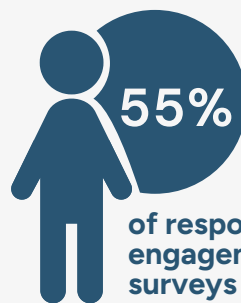
“Xcel is deciding what happens for the energy transition at one coal plant transition in Pueblo, but the power generally goes to Denver.”- community member, Pueblo

Communities are eager for the state or local government to improve community engagement to ensure that the transition to renewable energy reflects their needs and the priorities of their community. Most respondents want to see more in-person opportunities for engagement, as well as online surveys. However, all types of engagement garnered significant interest from the respondents.

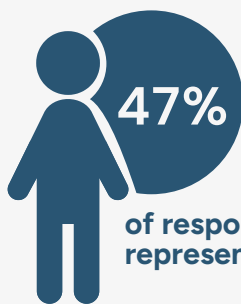
Over 65% would like to see in-person, public engagement opportunities open to all individuals like community roundtables or events. Many respondents would also like to see more online engagement opportunities like surveys, with nearly 55% selecting this option. About 47% were in favor of representative engagement, such as collecting indirect input from community leaders like business leaders, faith and education leaders, and local elected officials. About 39% of respondents chose engagement organized through member-based groups and community spaces.



of respondents want in-person, public engagement opportunities open to all individuals like community roundtables or events



of respondents want more online engagement opportunities like surveys



of respondents want representative engagement



of respondents want engagement organized through member-based groups and community spaces

COMMUNITY PROFILE

Garfield County: The Struggle From an Extractive Past to a Clean Energy Future

Building off of its rich history of mining in the region, Garfield County remains one of the top producers of natural gas in the U.S. and places second in statewide drilling activity at a distant pace behind the state's fracking titan of Weld County.³³ In 2008, Garfield's local economy experienced a boom due to increased demand for natural gas, rising fuel prices, and advancements in hydraulic fracturing technology. However, this was followed by a sharp decline during the 2009–2010 recession.³⁴ By 2023, drilling had declined from 110 wells in 2022 to 90 wells, hitting an all-time low in 2021 with only 30 new wells, the lowest number since the 1990s.³⁵ Employment in the oil and gas sector has also declined significantly. As of 2023, Garfield and Mesa counties had around 900 oil and gas jobs, with the mining sector (including coal, oil, gas, and other forms of mining) employing approximately 2% of the regional workforce.³⁶

The oil and gas industry is notorious for its boom-and-bust cycles, leading to substantial fluctuations in public revenues. From 2010 to 2019, the total public revenue received by taxing entities in Garfield County varied from a high of \$118 million in 2012 to a low of \$57 million in 2016.

37

Despite these trends, Garfield County is still economically reliant on tax revenue coming from the sector, receiving 40% of its total assessed property value from oil and gas in 2021.³⁸ The region has received around \$7 million annually in payments in lieu of taxes (PILTs) since 2013; PILTs are federal payments to local governments to offset losses of property taxes when there are federal lands within county boundaries. These federal payments, combined with sales and lodging taxes, have provided consistent and growing revenue sources for local governments.³⁹

Extreme swings in economic activity from oil and gas remains a hallmark of the county's history. Residents still remember the flurry of excitement surrounding the proposed oil shale project backed by Exxon in the early 1980s.

Developers of the multi-billion dollar Colony Project planned to establish strip mines in Garfield and Rio Blanco and plants to produce 15 million barrels of synthetic fuels per day. The town of Battlement Mesa, now a retirement community, was created to house the workforce on the project, which was projected to bring hundreds of thousands of new residents by 2010.⁴⁰ A decrease in oil prices only a few years later caused Exxon to quickly back out of the project on May 2, 1982, a day infamously named by the local community as 'Black Sunday.' The local economy crashed causing hundreds of businesses to close, property values collapsed and thousands of people lost their jobs overnight.⁴¹

Despite its oil and gas legacy, the region appears to be divided on whether an extraction-based economy continues to be part of its future. This was most recently evidenced by battles surrounding the proposed Uinta Basin Railway Train, which would establish a rail line between Utah and Garfield County to transport crude oil to refineries in places like Texas and Louisiana, or the finalized Bureau of Land Management rules, which increased the outdated bonding requirements for wells on federal lands, making sure operators, not taxpayers, pay for their cleanup.^{42, 43} Local political dynamics have a strong interplay with oil and gas attitudes in the region, with many long-serving elected officials looking to preserve oil and gas as the county's primary industry.

COMMUNITY PROFILE

Garfield County: The Struggle From an Extractive Past to a Clean Energy Future

Population, Geography, and Housing

- Garfield County has a population of nearly 62,000, with Rifle and Glenwood Springs being the primary cities in the area.⁴⁴
- The region has a growing Latino population, making up 30% of residents in Garfield county.
- The average area median household income is around \$80,000 per year.⁴⁵
- The region is impacted by in-migration and spillover from people working in neighboring towns like Aspen and Steamboat Springs where the cost of living is unattainable for the average Colorado resident.
- This, coupled with changes to remote work opportunities, access to recreation activities, high building costs, and availability of developable land is driving up cost of living and housing prices exponentially.
- The West Mountain Regional Housing Coalition reported that the median housing price on the market is around \$885,000, pricing the majority of first time home buyers in the region out of home ownership and pushing them into the rental market, skewing the rental market towards high income earners.⁴⁶
- In addition to housing challenges, the region is currently experiencing slow down due to low birth rates, an aging population, and a lack of community infrastructure like childcare and transportation making it difficult to attract workers to the area.⁴⁷
- These trends have led to a high disparity in economic stability from the western part of the county in towns like Parachute and Rifle compared to more affluent areas like Glenwood Springs to the east.

“Our county commissioners think this one industry hung the moon and they’ve had 20 years time of shackling Garfield County to this narrative and identity and even when the jobs aren’t there, it’s like only 3% of the workforce when you actually look at the numbers, but the power of that narrative really drives home. People’s sense of identity is really tied to it and they’ll defend it to their core.” - Environmental Protection Specialist, Garfield County

COMMUNITY PROFILE

Garfield County: The Struggle From an Extractive Past to a Clean Energy Future

Clean Energy Investments

Collaboration in the region has led to increased solar development over the past few decades, growing jobs and boosting energy security. In 2008, a New Energy Communities Initiative grant from the Department of Local Affairs funded the creation of Garfield Clean Energy (GCE) which is a regional partnership between Garfield County, local municipalities and community partners. The grant allowed for the installation of solar on several public buildings including libraries, schools, police stations and town halls and reached 4.6 MW of added capacity to the region. The region now boasts 4% of solar powered electricity and has plans to increase this share with residential solar through GCE's Solarize Garfield County campaign launched in 2021, and with three new solar farms being developed in partnership with utility companies Holy Cross Energy and Xcel Energy.⁴⁸

These solar investments allow for greater energy security while securing local jobs and tax revenue, increasing the economic resilience of the region. In GCE's most recent Energy Action Plan, they lay out a roadmap to advancing energy efficiency, renewable energy and clean transportation that supports a diverse economy that is no longer dependent on fossil fuels.⁴⁹

Regional Comparisons

Mesa County has cut its reliance on oil and gas by half since 2018, now becoming a hotspot for health care and outdoor recreation manufacturing.⁵⁰ The region is also grappling with a coal transition, with nearby counties of Rio Blanco and Moffat taking the brunt of the impact. Between 40–50% of the region's GDP comes from coal. Rio Blanco has a relatively small population with about 70% of their GDP coming from coal, oil and natural gas.⁵¹ Moffat County is putting all ideas on the table as the shutdown date for the Craig Station coal-fired power plant and nearby Trapper Mine draws nearer.⁵² Planning and resources supported by local leaders and the OJT have helped to start making critical investments like bringing high-speed broadband to the region and investigating alternative uses of the coal sites for renewable or low carbon energy projects like hydrogen or nuclear.^{53, 54} As these communities develop plans to replace lost revenue from coal, it provides a good example for how neighboring counties like Garfield should plan ahead for anticipated declines in oil and gas production.

COMMUNITY PROFILE

Commerce City: The High Cost of an Industry City

Situated along a transportation corridor in North Denver dotted with railroads and interstates, Commerce City has had a long history as an industrial city. With a primarily Latino population, the region is one of the fastest growing in Colorado due to its proximity to Denver International Airport and its affordability compared to downtown Denver.⁵⁵

While Commerce City is often touted as a hub to produce and move goods out of the North Denver region, it has come at a great cost for the communities who have long called Commerce City home. The region faces significant environmental justice challenges due to the presence of polluting facilities like the Suncor petroleum refinery, the Nestle–Purina PetCare factory, the Cherokee Generating power station, as well as local freight and truck traffic along the web of expanding Interstates 25, 70 and 270 bisecting local neighborhoods.⁵⁶

One of the most consistent offenders when it comes to local pollution is the Suncor petroleum refinery, which Colorado relies on to produce jet fuel, diesel, asphalt, and gasoline.⁵⁷ The refinery also creates many jobs and is an important source of revenue for Adams County and Commerce City.

ECONOMIC IMPACT

Originally founded in 1931 as The Continental Oil Refinery and then later acquired by the Canada-based Suncor in 2005, the site built along Sand Creek remains Colorado's only refinery in the state.⁵⁸ Currently, the refinery provides 30% of the gasoline, 50% of the diesel fuel in Colorado and 30% of the jet fuel used by airlines at the Denver International Airport. Suncor also provides fuel to more than 200 Mobil, Shell, and Exxon gas stations in Colorado and Wyoming. Suncor's operations have significant economic implications, contributing over \$200 million in state, county, and city taxes over five years. The refinery's operations account for 5% of Adams County's annual property tax collections and about 4.25% of Commerce City's sales and use tax revenue. Suncor also employs approximately 500 workers, 250 of which are members of the United Steelworkers Union, as well as 350 contract workers daily for repair work. These jobs have afforded workers a reliable source of income and a high quality of life for their families.⁵⁹

COMMUNITY PROFILE

Commerce City: The High Cost of an Industry City

A History of Environmental Injustice

Suncor is one of the largest single-source polluters in the entire state of Colorado and its history includes numerous toxic spills, leaks, and air and water quality violations. One notable incident was a 2019 mechanical malfunction that released a yellow ash substance over nearby residences and vehicles, causing temporary lockdowns of local schools.⁶⁰ The pollutants released from the refinery like benzene, hydrogen cyanide, and hydrogen sulfide are incredibly toxic and known carcinogens.⁶¹ The refinery also contributes to the region's growing ozone levels, emitting volatile organic compounds and nitrogen oxide that develop ground level ozone pollution.

Colorado has failed to meet federal level standards for air quality and the EPA recently downgraded the North Front Range region to 'severe nonattainment' for ozone in 2022.⁶² The neighborhoods bordering the refinery are primarily communities of color with 70% of Globeville, Elyria, and Swansea (GES) identifying as Latino.⁶³ The Community Health Study published in 2024 by Colorado State University, the presence of these activities has led to higher levels of respiratory illness, congenital abnormalities, diabetes, obesity and poor mental health in the neighborhoods of GES, which was notoriously named to be one of the most polluted zip codes in the country in 2017.^{64,65}

In response to multiple air quality violations since 2017, the Colorado Department of Public Health and Environment (CDPHE) required Suncor to pay a \$9 million settlement, including \$4.05 million for community environmental projects. But affected communities argue that the settlement was insufficient, especially considering Suncor's large profit margins.⁶⁶ Part of the settlement funding supported local Latino-led nonprofit, Cultivando, to do air quality monitoring in collaboration with community leaders and Boulder A.I.R., an air quality monitoring research firm. The project found that multiple pollutants like benzene and hydrogen sulfide were present with a high variability in pollutant concentrations over the study period. The monitoring also found evidence of airborne radioactivity.⁶⁷

Most recently, the EPA and CDPHE issued a notice to Suncor alleging at least a dozen violations under the Clean Air Act. Potential penalties could reach \$50,000 per day under state law and up to \$121,000 per day under federal law if violations are confirmed.⁶⁸



COMMUNITY PROFILE

Commerce City: The High Cost of an Industry City

Nationwide Refinery Trends and a Push for a Just Transition

Since 2019, eight refineries across the U.S. have closed, which resulted in the loss of thousands of high paying jobs and millions of dollars in tax revenue that supported local governments.⁶⁹ The majority of these refineries have avoided cleanup of their sites by either converting to producing biofuels or idling their facilities, all while laying off the majority of their workforce and leaving workers scrambling to make ends meet. The abrupt nature of these closures didn't allow for communities to have a say in what these sites become in the future. Only one of the seven refinery sites in the Sightline study is being redeveloped – the Philadelphia Energy Solutions (PES) refinery that shut down after a catastrophic explosion caused several areas of the site to catch on fire. The company announced they were filing for bankruptcy, laying off about 1,000 workers including 640 union members. Union leaders had to fight to secure \$5 million in severance payments to laid off employees. A real estate company, Hilco Redevelopment Partners (now HPR Group), acquired the site and plans to turn it into a multi use complex for life science laboratories and warehouses for nearby universities to use. Community members expressed frustration about not being included in remediation plans given that there was no community benefits agreement established between Hilco and neighboring communities.⁷⁰

In response to these closures, some states have been laying the groundwork for facilitating a just transition for refinery workers and local communities. In 2023, Washington State allocated \$250,000 in its budget for the following two years to plan the future of its five oil refineries. The study will analyze the feasibility and impact of refinery conversion to produce biofuels, options and support needed for workers and local communities dependent on the refinery, and a community-led vision for what the refinery sites could become, including the cleanup costs associated with redevelopment.⁷¹ California recently passed SBX1-2, also known as the “Price Gouging Bill” to hold oil companies accountable for increasing gasoline prices and putting California on a path towards a clean energy future. The bill allows the California Energy Commission to set a maximum gross gasoline refining margin with penalties for refineries that exceed it, creates an independent division to monitor petroleum markets and identify instances of market manipulation, and to work with the California Air Resources Board (CARB) to create a roadmap for an equitable transition away from fossil fuels.⁷²

Colorado should follow the leadership of these states to develop a long term analysis and comprehensive plan for the future of the Suncor Refinery that safeguards communities and protects workers against market changes or disruptive events.

COMMUNITY PROFILE

Pueblo: From 'Steel City' to Clean Energy Leader

Pueblo, Colorado, is known by many names. Often referred to as the "Steel City," it has a rich industrial history that is deeply intertwined with the story of American manufacturing.⁷³ The city's identity was shaped by the Colorado Fuel and Iron Company (CF&I), which became the largest steel mill west of the Mississippi in the early 20th century and a cornerstone of the Industrial Revolution in the West.⁷⁴ This industrial giant not only provided thousands of jobs but also played a pivotal role in shaping the city's demographic and cultural landscape, attracting immigrant workers from many different backgrounds.

DEMOGRAPHICS AND HISTORY

- During its heyday, more than 40 languages were spoken at the steel mill.⁷⁵ Today, about 50% of Pueblo's population identifies as Hispanic.⁷⁶ This diverse population has brought a vibrant mix of traditions, languages, and cultural practices to Pueblo, making it a unique and dynamic community.⁷⁷ However, like many other working-class cities in America, Pueblo has faced challenges related to economic inequality and access to opportunities, which have disproportionately affected communities of color.⁷⁸
- Pueblo's reliance on steel manufacturing also made it vulnerable to economic downturns. In the 1980s, international competition led to massive layoffs, shrinking the mill's workforce from around 8,000 workers to about 1,000 workers by 1984.⁷⁹ This event drastically altered Pueblo's economy, leading to a sharp decline in manufacturing jobs and a long, challenging recovery period. The city's economic struggles were emblematic of the broader decline of American manufacturing during the late 20th century, as global competition and technological changes reshaped the industry.
- Despite these challenges, Pueblo's labor force has a strong tradition of organizing and fighting for workers' rights. The United Steelworkers Union, which still represents many of the workers at the now Russian-owned EVRAZ Rocky Mountain Steel Mill, played a critical role in fighting for better working conditions and wages, even as the number of manufacturing jobs dwindled, which provided inspiration to labor organizers across the nation. Pueblo Steelworkers organized to put pressure on Oregon Steel and Wells Fargo in the historic labor strike of 1997, leading USWA to win the largest back-pay settlement in U.S. history in 2004.⁸⁰
- This legacy of labor activism continues to influence the city's approach to economic development and worker justice.

COMMUNITY PROFILE

Pueblo: From 'Steel City' to Clean Energy Leader

Coal Plant Closure

The closure of Pueblo's coal-fired Comanche Station Unit 3 in 2031 will mark the end of a series of planned coal-plant closures in Colorado. Operated by Xcel Energy, Unit 1 closed in 2022 and Unit 2 is scheduled to close in 2025, causing tax payments to Pueblo County to drop by 21%, while Unit 3 is expected to cause payments to drop by 69%.⁸¹ Xcel Energy will pay nearly \$30 million annually once the plant is closed to replace lost tax revenues through 2040, helping to keep the county afloat as it loses one of its main revenue drivers.⁸² All told, the closure of the Comanche 3 will result in the loss of over 400 direct, indirect and induced jobs.⁸³ The economic impact of closing Comanche 3 will be profound for Pueblo, which has historically relied on the coal industry for high-quality jobs and consistent funding for local budgets. The plant's closure will likely lead to reduced economic activity in the region, making the transition to alternative energy sources and new industries critical. Xcel Energy will submit a 'Just Transition Resource Plan' later this year "to seek replacement electric generation for Comanche 3, with a focus on reinvestment in the Pueblo community."⁸⁴



Comanche 3 is the state's largest coal-fired power plant and has also been one of the most costly and the single largest source of carbon dioxide emissions in the state.⁸⁵ The plant is scheduled to close a decade earlier than initially planned, amidst pressure from environmental advocates.⁸⁶ Since it was brought online in 2010, the Comanche 3 plant has been riddled with operational, financial and equipment failures that led to more than 700 days of unplanned shutdowns.⁸⁷

The local community bears the burden of pollution coming from the facility without receiving any of the electricity produced there; it gets exported to more affluent communities along the Front Range.⁸⁸ The local community remains divided on what the site should become as local leaders attempt to create a viable plan to replace jobs and tax revenue. Recently, a 10-month study conducted by the Pueblo Innovative Energy Committee proposed the plant should be repurposed into a modular nuclear facility in an effort to fill the tax revenue and jobs gap in Pueblo while contributing to the state's clean energy goals.⁸⁹

However, this proposal has sparked debate among local residents and environmental groups who are concerned about the implications of introducing nuclear energy to the region, including where to store the radioactive waste, the water needed to operate it, and the project costs and time required to build such a facility.⁹⁰

COMMUNITY PROFILE

Pueblo: From 'Steel City' to Clean Energy Leader

The Oil & Gas Impact

While Pueblo is not an oil and gas town, the impact of the industry's boom and busts can be felt there. This connection became less hidden during the Covid-19 pandemic, when low oil prices caused the Evraz Steel Mill, which makes casings for oil and gas wells, to furlough 200 employees.⁹¹ While this was a snapshot in time, workers shared that this was an early indicator of a long term shift in the nation's energy mix.

In an interview with Colorado Public Radio, Chuck Perko, President of the Steelworkers Local 3267 and an inspector at the steel mill expressed the need for both federal and state transition planning to prepare communities dependent on oil and gas revenue. "There will come a time when something's going to affect the business where we won't come back...And so we need to work very, very hard before the end to make sure those types of programs are in place."⁹²

Preparing communities for expected oil and gas production declines will be critical to ensure a smooth transition and to mitigate against indirect impacts like what Pueblo steelworkers experienced during the pandemic.

Paving the Way to a Green Energy Future

In recent years, Pueblo has embarked on an ambitious journey to redefine itself as a leader in green energy.⁹³ Pueblo's transformation into a clean energy hub is exemplified by the development of large-scale solar and wind energy projects. The city is home to one of the largest wind tower manufacturing plants in the world, operated by CS Wind. This facility has become a backbone of Pueblo's green energy economy, creating hundreds of jobs and attracting significant investment.

The plant's expansion, fueled by provisions in the Inflation Reduction Act, is predicted to double its capacity and add 850 new jobs.⁹⁴ In addition to wind energy, Pueblo has also embraced solar power. The EVRAZ steel mill became the first solar powered steel mill with the Bighorn Solar Project and the Comanche Solar Project surrounding the Comanche Station provides 300,000MWh of electricity to the area.^{95,96} Xcel Energy was recently awarded \$90 million from private and federal funds to build energy storage batteries in Colorado and Minnesota. The project will create the company's first iron air battery, which will be located at the Comanche coal plant site and can hold power for up to 100 hours, increasing the resilience of the energy grid.⁹⁷

These investments have positioned Pueblo as a model for other cities seeking to transition from fossil fuels and will help put Colorado on a path to meeting its emission reduction goals. However, this transition has not been without challenges. Jobs in solar and wind are not unionized and often pay a lot less with fewer benefits.⁹⁸ Pueblo still identifies as a "union town" but union power has dwindled over the past decade.⁹⁹ Part of facilitating a just energy transition will require safeguarding wages and benefits for those who move from extraction-based sectors to clean energy work.



COMMUNITY PROFILE

Weld County: Colorado's Oil and Gas Hub

Weld County located in Northeast Colorado is the epicenter of oil and gas development in the state.

The county's economic landscape has long been anchored by this industry, which like other oil and gas communities, has filled up government coffers in years when oil prices are high and has put great strain on local budgets in periods when prices fall. The volatility of the oil and gas market has impacted Weld County's budgetary planning, as highlighted in the county's 2022 annual report. The report underscores the fluctuating nature of the oil and gas assessed values, driven by changes in production levels and price dynamics.

"Although the future of energy development in Weld County appears bright, it is not without risks. Oil and gas production in Colorado has risks associated with the potential of more government regulations and voter initiatives trying to restrict or limit fracking in Colorado communities in efforts to limit greenhouse emissions. These regulatory risks, if implemented, could dramatically impact future oil and gas development in Colorado and the impact on property tax revenues and employment." - Weld County Government, 2022 Annual Report

Such unpredictability necessitates prudent management of the county's property tax base. The economic challenges are already evident in the 2022 revenue figures, with total revenues dropping by \$32.74 million, or 7.46%, from the previous year. The decline in oil and gas assessed values led to a decrease of \$54.65 million in property taxes.¹⁰⁰

Although the shortfall was partly offset by increases in severance taxes and other revenues, the overall financial health of the county, which uses these revenues to pay for schools, fire districts, libraries, and other critical social infrastructure, remains precarious, especially as the state and nation look to transition away from oil and gas long term.

Take Platte Valley RE-7 school district for example, where an astonishing 86% of their assessed property value in 2021 came from oil and gas. This dependency translates to significant financial contributions to the district, amounting to \$17.1 million in total funding from these properties. CFI's reporting found that state funding could backfill \$6.8 million of tax revenue for the district, but the additional \$5.8 million in override property taxes from oil and gas will not be replaced, leaving a serious financial void.¹⁰¹

COMMUNITY PROFILE

Weld County: Colorado's Oil and Gas Hub

Slow Pandemic Recovery and the Need for Economic Diversification

The aftermath of the COVID-19 pandemic further exposed the vulnerabilities of an economy heavily reliant on oil and gas. Weld County's recovery was notably slower compared to other Colorado metro areas, with the region's economy regaining only 57% of its pre-pandemic job levels in contrast to Colorado's overall employment reaching 117% of surpassed pre-pandemic levels. Jobs in oil and gas declined from nearly 8,000 in early 2020 to under 5,000 in early 2022. Local governments were hit especially hard, losing about \$45 million in oil and gas property tax revenue from 2019 to 2021 and having 3.3 million in severance tax revenue in 2020 to a measly \$141,944 in 2021.¹⁰²

While production has climbed back up in recent years since the pandemic, this period shows the precarity of the oil and gas industry and the negative economic impacts of having one major industry be the main source of revenue for the county.¹⁰³

Fortunately, Weld County's economic landscape is becoming more diverse. The largest employers in the region are JBS USA, Banner Health, Vestas Wind Systems, Greeley-Evans School District 6, and Weld County government. Sectors such as bioscience, distribution, e-commerce, aerospace, and food processing are poised for growth, offering new avenues for economic development and employment opportunities.¹⁰⁴

Investments from companies like Vestas, who recently announced plans to invest \$40 million in its Brighton Nacelles facility and its Windsor Blades factory are expected to bring 800-1,000 new jobs to Weld and Adams counties. Vestas has also incorporated an internship program and works with high school students to provide hands-on manufacturing training as part of their apprenticeship program.¹⁰⁵

More community investments like these will be critical in the future to support job growth and development in non-fossil fuel sectors, enhancing the economic resilience of the region.

COMMUNITY PROFILE

Weld County: Colorado's Oil and Gas Hub

DEMOGRAPHICS

- Weld County has a population of 358,111 residents.
- The annual average wage stands at \$63,453, with a median household income of \$89,182, contributing to greater cost of living challenges for residents as inflation drives up prices.¹⁰⁶
- Earlier this year, the Weld Food Bank reported a nearly four times increase in the use of their Emergency Food Program, signaling a sharp change in economic security of local residents.¹⁰⁷
- The cost of housing has also been on unprecedented rise, with Greeley snagging fourth place in 2023 for the highest median home price in the state's metro areas for the first time ever, behind Boulder, Denver and Fort Collins.¹⁰⁸
- The county is marked by a significant Latino community, comprising 31% of its residents and nearly 65% of students in the Greeley-Evans School District 6.¹⁰⁹
- The region's demographic makeup is a reflection of its historical and ongoing labor needs, especially in agriculture, food processing and energy sectors.
- Colorado's recently formed 8th congressional district, added to the state after the 2020 census, is the biggest Latino district in Colorado.¹¹⁰ The district has seen increased efforts to organize voters to get more representation in elected positions, where the Latino community has largely felt left out and ignored in the decision-making processes.¹¹¹

The presence of extensive oil and gas development in the region brings with it a number of environmental justice concerns. People living in close proximity to oil and gas wells are at higher risk of a multitude of health concerns, ranging from cancer, respiratory problems, birth defects, and premature death.¹¹² An air quality monitoring study conducted by local governments in the Front Range over several years found that despite stricter regulations on the oil and gas industry, methane emissions have not decreased.¹¹³ In Longmont, methane emissions are rising faster than the global average and are higher in areas that are closest to oil and gas wells.

In Broomfield, health officials found that adults living near wells had more incidents of nausea, shortness of breath and nosebleeds, and children had higher incidence of respiratory and gastrointestinal problems. In Erie, there were several wells that were found to be leaking methane even though they were plugged. The study also highlighted emissions from fracking are a top contributor to volatile organic compounds that form ground-level ozone and can cause premature deaths, asthma and lower birth weights.¹¹⁴

This data was in direct opposition to data shared by Weld County officials to the Air Quality Control Commission (AQCC) that showed methane emission levels going down in the region.¹¹⁵

POLICY CONTEXT AND RECOMMENDATIONS

Changes to the energy market, along with commitments by the Governor Polis Administration to reach 100% renewable electricity by 2040, prompted the state of Colorado to transition away from coal as an energy source. In response to this, Colorado passed House Bill 19-1314 creating the first Office of Just Transition (OJT) in the nation in 2019.

The OJT has two main goals: to replace revenues lost to communities when coal mines and power plants close and to help workers transition to new jobs or retire early without losing their ability to provide economic stability for themselves and their families. At the time of its inception, there were six coal mines and eight coal-fired power plants scattered across ten counties in Colorado: Pueblo, El Paso, La Plata, Larimer, Morgan, Gunnison, Moffat, Montrose, Routt, and Rio Blanco.

It's not only about helping workers transition and finding economic opportunities for communities, it is also about recognizing the decades of injustice communities have had to endure from extractive industries in the name of economic progress and energy security. For a transition to be truly just, it must address the harms of the past while committing to not perpetuating them in the future. Despite this declaration, the legislation did not provide guidance as to how the OJT would go about addressing these impacts. The OJT shared that it will work with the DIC subcommittee of its main Advisory Committee and will engage with state agencies to further Colorado's efforts to support these communities as appropriate.

HB19-1314 determined that: "Colorado must ensure that the clean energy economy fulfills a moral commitment to assist the workers and communities that have powered Colorado for generations, as well as the disproportionately impacted communities who have borne the costs of coal power pollution for decades, and to thereby support a just and inclusive transition."¹¹⁶



POLICY CONTEXT AND RECOMMENDATIONS

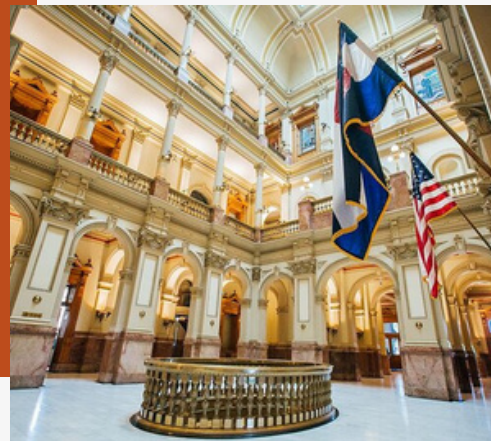
The legislation established a cash fund to support the efforts of the OJT and also created the Just Transition Advisory Committee (JTAC), which includes representatives from labor unions, utilities, coal communities, local elected officials, and cabinet members from the Department of Local Affairs and the Department of Labor and Employment. This committee worked on creating the draft Colorado Transition Plan which laid the groundwork for the Colorado Just Transition Action Plan. The Action Plan is a roadmap to achieving a just transition for coal communities and aims to “to help each community end up with more family-sustaining jobs, a broader property tax base, and measurably more economic diversity than when this process began in 2019.”

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The collective losses of coal-related closures cannot be stressed enough. The OJT estimates that \$3.2 billion in commercial property value will be lost which impacts a total of 95 special districts across the affected areas and includes critical infrastructure like school districts, fire districts, libraries, and hospitals. A total of 825 power plant workers, 866 miners, and 1,000 supply chain workers will lose their jobs. Collectively, these changes have numerous multiplier effects that can be hard to overcome, especially in rural areas where the majority of coal activity is located. The Action Plan identifies several strategies to combat these losses, focusing on the most impacted communities in a tiered system approach.

The legislation also requires certain utilities to develop a plan to support their workforce in the transition. In 2021, Xcel Energy released the first version of its Workforce Transition Plan, which includes identifying new job opportunities based on worker skill sets and providing resources to workers such as training, tuition reimbursement, relocation support and severance packages.¹¹⁸ This commitment from Xcel Energy sets precedent for the role that individual companies should play in fostering an equitable transition for their employees.

In 2021, the legislature allocated \$15 million to implement the Action Plan and to establish the Coal Transition Worker Assistance Program. Using these funds, the OJT is rolling out seven strategies to help workers and their families find new economic opportunities. This includes services such as career planning, education and training, certification of existing skills, and support for starting a small business.



POLICY CONTEXT AND RECOMMENDATIONS

In a recent presentation where the OJT reflected on lessons learned so far, they underscored that economic diversification will often involve pursuing projects outside of the energy sector. Out of 23 community assistance grants awarded, only one has been for an energy-based project. In fact, two renewable energy project applications were not awarded because they would have not created many jobs and would have produced little in property tax revenue.

Future energy transition communities can learn from this; they need to consider industries outside the energy sector in order to diversify their economies and make up lost revenue. The OJT also stressed the importance of facilitating supportive services that allow local communities to take control of their own economic transitions and cited their grant writing assistance program to help communities apply for transition funding as an example.

As the state continues to make decisions about its energy future and strives to make progress in achieving justice for disproportionately impacted communities, the efforts of the OJT can provide critical lessons learned about what it takes to have a transition that is equitable and community-led.

In 2023, the legislature passed HB23-1074, a bill to Study Workforce Transitions To Other Industries.¹²⁰ The bill instructs the Office of Future of Work within the Colorado Department of Labor and Employment to contract with a third party to “evaluate the skill transferability of workers in the oil and gas industry and in occupations in Colorado that are facing the most disruption due to automation, explore training availability, skills needed, and transition strategies; and provide recommendations for programs and policies to prepare the workforce for these transitions.” The office will submit their findings to the legislature in December of this year, paving the way for policies that don't leave oil and gas workers behind.



“Helping communities have their own voices in matters related to their own futures, rather than having those futures decided for them, is the best thing we have done so far.” - Wade Buchanan, Director of the Office of Just Transition ¹¹⁹

NATIONAL POLICY CONTEXT: IRA AND ILJA

The Inflation Reduction Act of 2022 (IRA) and the Infrastructure Investment and Jobs Act of 2021, also known as the Bipartisan Infrastructure Law (BIL), represent a historic commitment by the U.S. Federal Government to modernize and decarbonize the nation's energy system. The Congressional Budget Office (CBO) estimates that the combined support for climate and clean energy initiatives authorized by these two laws is expected to exceed \$430 billion from 2022 through 2031.¹²¹ This substantial investment is intended to transform the U.S. economy while addressing environmental justice concerns and promoting high-quality union jobs. A significant portion of these funds is earmarked to support communities transitioning away from traditional energy sources, demonstrating a commitment to equitable economic revitalization.¹²²

One of the key provisions within the IRA is the Qualifying Advanced Energy Project Credit, commonly referred to as the 48C tax credit. This \$10 billion initiative is designed to spur industrial decarbonization and foster the growth of a clean energy economy in the United States.¹²³ In its first round of allocations, the U.S. Department of Energy (DOE) awarded \$4 billion in 48C tax credits to over 100 projects across 35 states, targeting clean energy manufacturing, critical mineral recycling, and industrial decarbonization.¹²⁴ Importantly, the 48C tax credit includes specific incentives for projects located in "energy communities," areas historically burdened by pollution due to their proximity to polluting industries. To maximize the benefits of the 48C tax credit, projects must meet prevailing wage and registered apprenticeship requirements, ensuring that these investments also support fair labor practices.¹²⁵

The federal government provides a detailed definition of what constitutes an "energy community" for the purposes of the tax credit bonus. These communities fall into one of three categories: brownfield sites (previously developed, abandoned land which contains environmental contamination), census tracts with recent coal mine or coal-fired power plant closures, and areas with economies heavily reliant on fossil fuels.¹²⁶ However, this definition has drawn some criticism. Resources for the Future (RFF) highlights that the inclusion of communities based on unemployment rates may be problematic, as these rates change frequently, potentially affecting eligibility for the tax credit. Additionally, the broad geographical scope of the "energy community" designation could exclude key areas like Wyoming and North Dakota, where fossil fuels are critical to local economies, or include areas where there is little fossil fuel production occurring like Oregon and Michigan.¹²⁷ To address these concerns, RFF researchers recommend refining the federal definition to focus on county-level data, enabling more targeted resource allocation and engagement.¹²⁸



POLICY CONTEXT AND RECOMMENDATIONS

Support for these energy communities is coordinated through the Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization (IWG), established in 2021.¹²⁹ The IWG collaborates with a diverse array of stakeholders, including state and local officials, community groups, labor unions, and corporations, to prioritize and coordinate federal actions aimed at fostering economic revitalization in these regions. The IWG identified their top 25 energy communities across the country for near-term investment using federal agency programs. Two Colorado cities made the list: Grand Junction and Greeley.¹³⁰

Despite progress made to allocate resources and funding to impacted energy communities, there has been an overemphasis on coal and power plant communities.

This makes sense considering the rapid decline in coal and the fact that it is the most carbon intensive fuel source. However, one of the great takeaways from the unfolding coal transition is that timing is critical; it takes time to diversify local economies and shore up resources to create transition pathways for workers.¹³¹

Considering the impacts of decarbonization policies on oil and gas production and how predicted declines will impact energy communities, it is critical to start planning for now, before economic downturns occur.¹³² A permanent Just Transition Bureau within the federal government could add additional capacity to the work of the IWG to facilitate long-term policy coordination, provide additional resources to localities, enable widespread data collection to identify workers and communities most at risk, and create new mechanisms to fund a transition and spur robust public investments in energy communities.¹³³

TRANSITION CASE STUDIES

Policies from other states and localities can lay the groundwork for how a just transition could look for Colorado’s oil and gas communities.

West Virginia ACT Now Coalition:

One example of a transition that built on a strong coalition of stakeholders is West Virginia’s ACT Now Coalition, a partnership between local governments, institutions of higher education, economic development organizations, and private sector innovators.¹³⁴ The coalition is leveraging federal investments to ensure that localities, educational institutions, and employers all have their needs met and are promoting high road, clean energy jobs and economic growth. The coalition is working to engage communities to ensure an equitable, just transition from a coal-reliant economy to solar and other clean energy technologies.



This includes workforce programs like GROW Now Workforce Initiative, which is helping support regional workforce development through subsidized job training and directly employing on-the-job trainees, and the “RePower Appalachia Initiative” to increase solar and renewable deployments by “training a workforce to install 750 solar roofs annually, backed by a new investment fund to help small businesses and nonprofits access low-cost capital and incentives for projects.” The coalition is also involved in place-based innovations that repurpose old energy spaces for a new clean energy economy; for example, rejuvenating a former brownfield manufacturing facility into a welding and robotic training center as part of Marshall University’s Advanced Manufacturing and Technology Center.

California Just Transition Initiatives:

California has emerged as a leader to create partnerships at both regional and local levels to pave the way for oil and gas workers and communities to weather a changing energy economy. In 2023, the United Steelworkers Local 675 launched a coalition of fifteen labor unions to advocate for a worker-led just transition and a climate resilient economy.¹³⁵

In their 2024 policy platform, the group is fighting for stronger labor standards for programs that receive federal funding, better safety nets for impacted workers, more energy efficient and climate safe schools, and safer protections for biofuel refinery workers.¹³⁶

TRANSITION CASE STUDIES

Two noteworthy programs have been developed with significant input from labor unions: the state's Displaced Oil and Gas Workers Fund and the Oil Well Capping Pilot Program. The Displaced Oil and Gas Workers Fund, which granted a total of \$36.5 million in General Fund dollars to organizations focused on workforce development, is designed to help workers from the oil and gas sector transition into new industries that align with their skills and offer similar wages.¹³⁷

Another worker-led initiative, the Oil Well Capping Pilot Program, provides training for displaced oil workers to take part in cleaning up abandoned oil wells.¹³⁸ The success of these initiatives relies heavily on close collaboration with labor groups, ensuring that the transition is beneficial both for the workforce and for the environment.

Collaboration among multiple stakeholders is crucial for bringing diverse perspectives to the table, a process already underway in Northern California's refinery sector. The Contra Costa Refinery Transition Partnership, led by the BlueGreen Alliance Foundation, exemplifies this approach by uniting oil refinery workers, community organizations, industry representatives, and other key stakeholders to develop strategies to ensure a just transition for refinery workers and the communities that rely on the revenue coming from these operations.¹³⁹

In Los Angeles County, efforts to support workers and communities affected by the phase-out of oil drilling and extraction are being developed through the county's Just Transition Task Force and its related Just Transition Strategy. Over the course of a year, from November 2021 to November 2022, the Task Force and its subgroups met regularly to develop goals, strategies, and actions aimed at ensuring a just transition for those impacted by the proposed phase-out of fossil fuels.¹⁴⁰



The Task Force identified three long term goals: to prepare the workforce and their families impacted by the phase-out to transition into jobs with comparable pay and skills or to early retirement while preserving livelihoods and wellbeing, to remediate and monitor closing oil well sites with input from local tribes and community groups, and to leverage public and private funds to implement the Task Force recommendations.

While the timelines for a phase-out of fossil fuels are still being determined, the strategy is a proactive step to have a plan to set into motion once closure dates become more defined.

POLICY RECOMMENDATIONS

Workers and communities are supportive of a transition, but despite the promise of federal investments such as the IRA and IIJA, many Colorado workers and communities are uncertain what the energy transition will mean for them and their communities, jobs, local economies, and energy costs. We also learned that while oil and gas workers encompass a much broader range of sectors and jobs than coal workers, surprisingly, Colorado oil and gas workers may have more in common than expected with the state's coal workers in terms of preference to stay in their communities while transitioning jobs.

Both workers and communities acknowledge the transition is happening and are open to being a part of the planning; community and worker perspectives that must be brought to the table, with compensation and considerations for their time and participation.

Clean Energy Alone Cannot Backfill Lost Revenue and Jobs; Broader Strategies for Economic Diversification Are Required

The goal for many communities should be economic diversification, as recent evidence from the OJT's work with coal communities has shown, not just replacing one industry with another for the community to be dependent on. For example, broader strategies should also consider building out critical infrastructure like roads, water, and broadband; policies should consider the regional economic outlook outside of specific impacts of climate policy and clean energy development. Planning for a more resilient future means ensuring that working families have access to the basics; such as child care, public transit, and affordable housing; this means economic development needs to plan for wider rural prosperity, not the climate transition narrowly.

Create an Advisory Committee To Bring Community and Worker Perspectives to the Table

Just as the current Just Transition Advisory Committee (JTAC) includes "representatives of coal communities, labor unions, and utilities as well as issue experts and members of the Colorado General Assembly and the Governor's Cabinet," an oil and gas transition task force should include representation for labor, communities impacted by oil and gas property taxes, utilities, environmental justice communities, and representatives of impacted areas.¹⁴¹ The composition of workers should be reflective of the demographics of the transitioning oil and gas workforce, encompassing a mix of union and non-union members, a range of occupations, age groups and workers at various levels including early-career, mid, and senior level positions.

POLICY RECOMMENDATIONS

Ensure Equitable Representation From Districts Most Impacted, Marginalized and Frontline Communities, and All Relevant Stakeholders

Representation could be determined in part by the percent of total property tax value from oil and gas, but may also require a more complex analysis of downstream jobs and industrial impact. The new state report on workforce transitions through HB23-1074, which is set to be submitted to the governor and to specified legislative committees of reference by December of 2024, may be leveraged to decide the best metrics for how areas of additional county-level workforce and economic impact can be quantified and prioritized.

However, data and metrics cannot determine representation alone; often the voices of low wage workers, immigrants, Coloradans of color, and frontline environmental justice communities are excluded from policy discussions. Efforts to secure a just transition for oil and gas communities present an opportunity to course correct and ensure a truly equitable transition that addresses the harms of historical environmental injustice while preserving dignity for oil and gas workers and communities.

Colorado Will Need More Data and Stakeholdering

Collecting additional data on the economic impact of the transition and reliance on public revenues across localities could allow for policies that prioritize the communities who face the nearest-term impact. In 2023, the legislature passed HB23-1074, a bill to Study Workforce Transitions To Other Industries, which can be a starting point, however, the final bill narrowed the focus to the direct workforce impacts. It will be critical to collect data on the broader economic (tax and budget), social, and health impact of oil and gas industries on communities, and to engage stakeholders such as organized labor, local communities, institutions of higher education or registered apprenticeship programs, industry, and economic development organizations in a continued conversation.

The policy approach could mirror OJT's framework to place localities into Tier 1 and Tier 2 coal closure communities; but to do so requires identifying key economic indicators and mapping statewide data. This could allow for credits and funds to be allocated to the communities who need them the soonest, in addition to capacity building programs.

For example, capacity building could model after Colorado's Regional Grant Navigators which is working to understand the federal funding opportunities through the Infrastructure Investment and Jobs Act (IIJA or "Bipartisan Infrastructure Law") and the Inflation Reduction Act (IRA) and to assist local governments and Tribes in accessing this funding. A similar regional approach could help communities access funds and resources for economic transition projects and strategies.

WORKER POLICY RECOMMENDATIONS

Bringing Workers and Organized Labor to the Table, and Building Trust and Communication, Is a First Step

Understanding and alleviating short term concerns of workers could be one major pathway to build trust with this population. For example, we heard that worker safety is a major concern for many Suncor oil refinery workers, and current oil and gas workers may need support in both winning better occupational health and safety conditions in the short term. These efforts might also help mitigate pollution for frontline communities and hold corporate operators accountable to improve conditions for all stakeholders for as long as the refinery continues to operate.

Stakeholdering revealed that many labor unions are concerned about indirect jobs and want these workers to be prioritized in state planning around the transition; to do so, we need clear metrics and to operate from the same jobs data points. Communication is key; bringing workers into the conversation, and being clear about the economic realities for their specific region, will be critical to ensure a just policy making process.

Support for Training and High-Road Career Pathways Requires Strategic Investment in Workforce Development

Responses from workers indicated that workers would be willing to retrain, but this varied based on compensation and duration of training. Our data and other studies indicate that oil and gas workers do not want to go back to universities or degree programs, but are willing to participate in shorter, paid retraining options. Accordingly, workers clearly prioritized government policies that would allow for paid training for a new field of work across our survey and other existing studies; 50% of all Colorado respondents believed the government should help pay for training for a new field of work.

High quality wages, benefits, and training are a package deal; the issue is also not only about filling the skills gap to ensure safe installation and dissemination of new technologies, but also ensuring quality jobs to attract skilled workers. State policies that reduce barriers to unionization and set fair standards for projects tied to federal funds can help bolster high job quality standards across the board in emerging industries where oil and gas workers already have relevant, transferable skill sets.

WORKER POLICY RECOMMENDATIONS

Reducing Barriers to Unionization So Workers Can Win Better Contracts Through Policies Like Card Check Neutrality and Modernizing the Colorado Labor Peace Act

Unions are one useful tool to boost job quality and ensure worker voice, but arcane labor policies like the second election of the Colorado Labor Peace Act, which sets a high bar for union security agreements, create large barriers to building worker power. Without a strong voice in contract negotiations, low-road jobs may continue to be the status quo for positions in new and emerging sectors that could otherwise lead to high job quality for oil and gas workers.

Notably, in 2023, unionization rates in clean energy grew to their highest level yet across the nation, driven by large increases in union-dense construction and utility employment. However, Colorado is a low union density state relative to states like California and Michigan who lead the nation in clean energy jobs.¹⁴³

Further, the prevailing trend is that Union membership has declined in the US in part due to the decline of formerly unionized industries, as new nonunion industries in emerging sectors have risen in importance; therefore, one policy study notes that “green industry will thus further erode union membership in the US unless unions can make inroads in these new industries.”¹⁴⁴ However, federal industrial policy under the Biden administration has intended to encourage high road jobs, and can be leveraged in Colorado to ensure a just transition and shared economic prosperity in oil and gas dependent regions.

Reducing barriers for all workers hoping to form unions will be critical, as well as sector-specific policy innovation, such as incentivizing card check neutrality for projects utilizing tax credits in emerging industries.

Card check neutrality refers to a form of voluntary recognition, a majority of workers sign cards or other statements supporting representation by a union, and workers ask their employer to recognize the union without a formal election based on this majority support. The employer remains neutral to the effort to organize their firm, and a neutral third party counts the cards. For example, the Federal Mediation and Conciliation Service (FMCS) offers majority sign up/card check recognition services to employers and unions at no cost.

WORKER POLICY RECOMMENDATIONS

For example, industrial policy played a role in the growth of unions and raising the bar on wages and job quality in Puerto Rico. Legal scholars have noted the potential for robust industrial policies to mirror this success, such as “mandating employer neutrality and card checks in all green firms profiting from federal subsidies, tax breaks, grants, and other benefits.”¹⁴⁵ State level mandates could ensure that recent federal policies that incentivize labor standards translate to high-road jobs in states like Colorado.

Support for Training and High-Road Career Pathways Requires Strategic Investment in Workforce Development

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Existing Programs Could Be Expanded and Targeted To Support Oil and Gas Workers in Paid, On the Job Training Opportunities

One strong point to build from, and increase investment in, is Colorado’s Registered Apprenticeship Program. As of January–March 2024, Colorado’s Registered Apprenticeship Program supported 5,740 apprentices in the building and construction trades (BCT) (nearly three in four of all apprentices), and 1,984 in new and emerging industries. Top Occupations in BCT included electricians, pipefitters, plumbers, and sheet metal workers; many of these skills trades are both represented by labor unions and work in industries reliant on oil and gas extraction or downstream products. 5,063, or over 88%, of BCT apprentices were in construction and extraction industries.

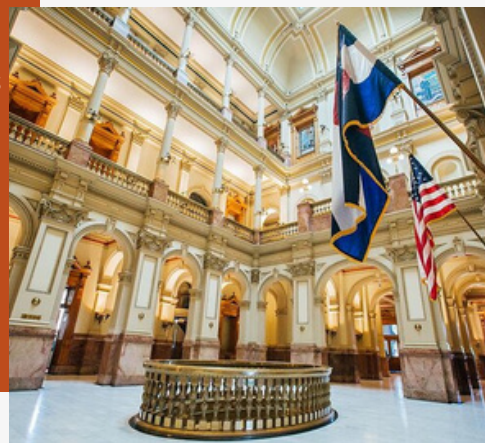
These programs can help create workforce pathways for critical jobs shortages, including industries workers in oil and gas already have the skills for; for example, Colorado will need 45,000 new construction workers needed in Colorado by 2027.¹⁴⁶

WORKER POLICY RECOMMENDATIONS

With a total apprentice count of under 8,000 in FY 2024, Colorado has seen a 50% rise in its total apprentice count since 2024, but numbers took a hit during the pandemic, and the state saw a .17% dip in year over year counts in 2024.¹⁴⁷ We are trailing other states with strong economies in terms of the number of workforce training providers per 100k people in the labor force.¹⁴⁸ We are also falling behind in the number of apprentices relative to our civilian labor force; for example, Colorado's total workforce is about 67% of Michigan's, but the state has an apprentice count of nearly 20,000, over 150% larger than our state's capacity. Minnesota's workforce is slightly smaller than Colorado's and a comparable size overall, yet the state has about 40% more apprentices with a median wage over \$5 more than Colorado apprentices see, despite having a lower cost of living.¹⁴⁹ This creates an ecosystem in other states where the bar is higher for the entire industry, and career pathways are more attractive for registered apprenticeships. With the Governor's existing commitment to workforce development, Colorado has the potential to catch up to other states on job quality in registered apprenticeships.

Existing policies can provide a roadmap to align oil and gas transition planning with broader workforce development goals of the state. In June 2021, HB21-1007 designated the state as a state apprenticeship agency (SAA) in the department of labor and employment (department), "codifying the state's commitment to increase access to earn-and-learn programs that lead to high quality jobs and to build the talent pipeline that industry needs."¹⁵⁰

Bills like HB21-1149, Energy Sector Career Pathway In Higher Education, have made modest appropriations towards helping Coloradans train for high quality jobs in the renewable sector.¹⁵¹ HB24-1365, the Opportunity Now Grants & Tax Credit, transferred \$3.8 million from the general fund to create a regional talent development initiative grant program fund to address workforce shortages in infrastructure and building trades, and created a state income tax credit (tax credit) for the costs of facility improvement and equipment acquisition associated with training programs designed to alleviate workforce shortage.¹⁵²



WORKER POLICY RECOMMENDATIONS

However, while these bills are a promising start, standards must be set to set a high bar for job quality and skill requirements, and policies must be strategic to ensure that state funding is supporting high road jobs, especially in the building trades. For example, labor stakeholders indicated concerns that new job classifications and credentialing may undermine existing career pathways if not carefully designed, and as a result some labor stakeholders have expressed concern that they could undercut existing classifications. New programs like strengthening photovoltaic and renewable careers (SPARC) workforce development program (SPARC program), investments through the Opportunity Now program, or claimants of the accompanying tax credit must be monitored to ensure these investments and incentives are having their intended impact in terms of quality, family-supporting jobs.¹⁵³

Further, a new wave of federal funding for apprenticeship programs to close workforce gaps has recently been rolled out nationally through two federal grant programs – the Apprenticeship Building America initiative and the State Apprenticeship Expansion Formula, and five organizations across Colorado are receiving over \$16 million in funding.¹⁵⁴

State programs could be expanded and additional outreach could help ensure that state and federal dollars for workforce development are reaching oil and gas workers who already have related skills to the high-demand sectors of our clean energy future, such as electrification, utility scale solar, and geothermal.

Colorado is in the top five states for growth in energy efficiency jobs, presenting a major opportunity to guarantee accessibility of these positions for oil and gas workers.¹⁵⁵ Workers expressed interest in energy efficiency and orphaned well plugging. Colorado can build off existing programs such as the Weatherization Assistance Program and the Orphaned Well Enterprise to include opportunities for oil and gas workers to bring their skills to these critical fields.

Existing programs should also be connected to high quality contracts; even if state subsidized training and registered apprenticeships are quality, if the standard for the industries are not high as well, skills shortages may continue. For example, Washington state has created quality standards across industries; the director of the Department of Labor and Industries (L&I) appoints the Washington State Apprenticeship and Training Council (WSATC) to regulate registered apprenticeship program standards.¹⁵⁶ The Colorado State Apprenticeship Agency needs proper staff and funding support to maintain these quality standards.

WORKER POLICY RECOMMENDATIONS

Equitable Access to Jobs for All Oil and Gas Workers

Considering that many jobs in oil and gas and in adjacent fields that workers may have relevant skills for, like the construction trades, are historically male dominated, transition policy also offers opportunities to fortify equitable access to jobs. Serving both workers and community means fostering a workforce that builds out new clean infrastructure and energy technology in Colorado is representative of our state's diversity, and accessible to historically underrepresented groups such as women, rural Coloradans, people of color, LGBTQ+ Coloradans, and working parents.

For example, Colorado might build out programs similar to Michigan's "Women In Skilled Trades (WIST) program," a free 16-week program that helps women pursue thriving careers in the historically male-dominated skilled trades through registered apprenticeship readiness training.¹⁵⁷

Ensuring training opportunities and jobs attract a diverse workforce and are accessible to all requires using best practices; the Department of Labor suggests building out intentional regional equity and diversity plans and policies, inclusive local/regional partnerships, policies to safeguard a safe and inclusive workplace culture in training programs and job sites, and using data to drive decisions while creating requirements to monitor and report on metrics for equity in recruitment, training, and job sites.¹⁵⁸ One critical component of ensuring equitable opportunities for retraining is providing access to wraparound supports like childcare for participants, especially if Colorado hopes to support women and working parents in the transition.

Geographic Access to Workforce Development

Stakeholders from the Western Slope indicated that even if communities want to make investments in clean energy or have energy upgrades on the western slope, there is a gap in the skilled workforce, and workforce training opportunities like skilled-based training and registered apprenticeship programs may be in areas like Denver that aren't geographically accessible. Some colleges and some registered apprenticeship programs have also mentioned mobile training labs as a way to bridge this geographical gap, but this requires funding for staff and physical construction costs.

One policy idea to maximize the impact of workforce investments is to strategically locate new workforce training hubs where they are needed most, like oil and gas and justice impacted communities. But this requires policy development to be done in line with, and response to, unique community contexts and needs. For example, one local resident and policy planner noted that if you nest a workforce development hub in Eagle Valley, because of road shutdowns, residents from Roaring Fork Valley won't be able to access that multiple days per week because people can't drive there on the road. Robust community engagement could help uncover which areas would be most accessible to workers and their communities.

WORKER POLICY RECOMMENDATIONS

Incentives Alone Are Not Enough; Local Governments Can Also Set Job Quality Standards

While federal legislation like the Inflation Reduction Act and Bipartisan Infrastructure Law provide many incentives, these federal policies and the funding streams they regulate lack enforcement mechanisms to make sure that federal and state funding translates to quality jobs in the communities that need them most. Localities can help fill this gap. Wage floors for new and emerging sectors could be accomplished through creating best practice and local policy guides around issues like minimum and prevailing wage or labor practices.

Safety Net Programs Had Strong Support, but Require Policy Planning and Funding

While workers were supportive of having immediate relief for oil and gas workers who may experience abrupt transitions, including paid health benefit extension, wage replacement if laid off, and pension guarantees, these policies may be longer term areas to explore, as most refineries and oil and gas wells will remain in operation for the short term. Unsurprisingly, nearly 30% of all workers placed these safety net programs in their top three priorities, which mirrors the national data from True Transition, which showed support for wage replacement (37%) and health insurance benefits (35%) from the government. The state might commission a feasibility study for safety net programs that workers value most, like extended health care coverage or pensions, to understand the fiscal outlook and viability in Colorado.

Thus, any policy working groups must explore strategies to design and fund these policies as a form of insurance in case workforce retraining and alternative economic development strategies cannot secure comparable job quality and smooth transitions for all workers.

COMMUNITY POLICY RECOMMENDATIONS

Energy Efficiency and Clean Energy Upgrades Must Be Affordable and Accessible, Which Requires Further Outreach and Engagement

The survey findings suggest a low awareness of current programs and tax incentives that support electrification and energy efficiency, and concerns that they are not easy to navigate and financially accessible for many Coloradans, suggest that further outreach and efforts to make these investments more financially accessible could help communities become more supportive of the energy transition.

Communities want new federal investments to support energy and construction upgrades, funding for local farmers, ranchers, and rural small businesses to purchase renewable energy systems, as well as affordable housing investments and community construction and/or physical infrastructure needs. Policies should include further outreach so that communities have access to existing credits, grants, and resources that translate to energy upgrades and good, clean energy jobs for their region.

Communities Want To Be Engaged and Have Access to Resources

Our survey results indicate that over 65% would like to see in-person, public engagement opportunities open to all individuals; more opportunities to engage in conversations on the transition could catalyze community-buy in and innovative local approaches.

We also heard from stakeholders that localities would be interested in federal programs or state resources that provided resources to hire additional staff to commit sustained engagement with these communities, rather than one-off federal or state interventions. For example, we might build on Colorado's Regional Grant Navigators program funded through the Governor's office to assist local communities to access federal funding opportunities through IIJA and IRA. This model could be expanded to include targeted capacity for energy transition communities to leverage funding at both the state and federal level.

COMMUNITY POLICY RECOMMENDATIONS

Tax and Budget Policies Should Ensure Backfill for Lost Revenue

The question of local revenue, especially school funding, must be addressed through Colorado tax policy.

While only 15 school districts across the state get more than half their property tax from oil and gas, these districts will be impacted if the revenue is not backfilled. There is already a backfilling mechanism in place for schools in the form of the school finance formula that compensates for property wealth disparities, and that would cover about half of the lost property taxes currently contributed by oil and gas. However, this assumes the state budget has the capacity to backfill; it doesn't necessarily guarantee that money will be available to make localities whole, because history indicates that economic downfalls could lead to statewide budgetary shortfalls.¹⁵⁹

As noted in CFI's previous report, in 2021, \$210 million funding will need to be found somewhere else in the system to replace what oil and gas pays in. Half of this funding will be backfilled on auto pilot assuming the state budget can come up with it, because \$108 million in local property tax dollars contributed to the statewide school finance formula funding. If that suddenly went away, the state would backfill that \$108 million for localities.

However, the other half is less certain; school districts have also asked voters to approve "override" mills, or additional property taxes that all stay local to the school district. Of the \$2.9 billion in mill levy override revenue, 3.5% of it comes from oil and gas property (\$102 million). This means \$102 million that would not automatically be backfilled with state sources; some of it may be filled with higher mill rates on the existing non-oil and gas properties in the district. Having a stronger state revenue source to backfill the lost revenue would make a huge difference.

Local governments will also be impacted outside the mill levy overrides, because county and local special districts will lose funding and there is no backfill formula for this loss. In 2021, of the \$621 million generated for total local governments (schools, counties, cities, and special districts), or 5.2%, came from property taxes on oil and gas property. \$128 million of this went to county budgets. This revenue must be backfilled to ensure essential local services.

It's important to note that for fossil fuel communities, current fossil fuel revenues from fees can be reinvested in state programs.

COMMUNITY POLICY RECOMMENDATIONS

Thus, reforms to the tax system or fees on the industry can serve to increase share of the revenues from production that return to and benefit communities in the form of programs that increase decarbonization and other climate goals. For example, earlier this year, the legislature passed SB 24-230 which creates a new fee on oil and gas production to support expansion of public transportation as well as land and wildlife remediation.¹⁶⁰ Building from this policy precedent, policies that backfill lost revenue could also be coupled with specific investments, financed through fees on the industry, aimed at economic diversification or enabling critical infrastructure in those communities.

Community Property Tax Losses Might Also Be Recovered Through a Variety of Means.

The first step will be replacing revenue with new economic growth in sectors; one that many rural, resort, and energy communities may already be focusing on is recreation and tourism. CFI's past research has noted that while the outdoor recreation industry employs more than 6 times as many people as the oil and gas industry does in Colorado (in 2021, there were 125,244 jobs in the outdoor sector, compared to the 19,871 jobs in the oil and gas sector), oil and gas does bring in more in GDP.

As a size of Colorado's economy, the oil and gas industry contributed 14.1 billion in 2021 compared to 11.6 billion from outdoor recreation. Colorado is in the top 10 states when it comes to the share of GDP generated by the oil and gas industry. And for workers, the wage differentials and seasonal nature of some outdoor jobs is a critical consideration; while oil and gas may have employed only a sixth as many workers as outdoor recreation, it brought in nearly 44% of the wages outdoor recreation did, indicating a large wage gap. This speaks to a broader policy implication; there is no one size fits all way to fill the revenue and wage gaps left by oil and gas. Rather, a diverse economic portfolio that prioritizes the communities most impacted by the transition will be critical. Policies should invest in economic development studies to identify which sectors or industries might be the most feasible and desirable to replace lost revenues.

Further, for some regions facing acute impacts, the state may need to find ways to backfill the loss of property tax value. The federal PILT (payments in lieu of taxes) model to backfill revenue for nontaxable federal lands, which already pays millions annually to many oil and gas regions on the Western slope, may serve as a policy model.¹⁶¹

FEDERAL POLICY RECOMMENDATIONS

Improve Federal Definitions so That Resources Are Going to the Communities Most Impacted by the Transition

The federal definition of “energy communities” as laid out in the IRA have a number of challenges, and should be redefined to look at county level data and include metrics on employment, energy production, and local socioeconomic and environmental conditions to better allocate resources to the communities most impacted by the energy transition, with a special attention to local governments that may have low capacity.^{162,163}

Federal Tax Credits Should Allow for Broader Economic Development and Community Benefit Agreements

Early work of the OJT and research analyzing the ability of renewable energy to replace lost fossil fuels revenues shows that clean energy alone cannot make up these funding gaps for local governments, yet IRA incentives are heavily geared towards establishing new clean energy projects, with an emphasis on energy communities. To fully support communities in the transition, tax credits should be inclusive of projects outside of the energy sector to make up lost revenues. In addition, programs can support addressing gaps in both public infrastructure like transportation and housing so that energy communities can thrive. Federal and state funding should be tied to community benefit agreements and plans to ensure investments advance shared prosperity and goals.

Remediation and Cleanup of Legacy Pollution

Nationwide there are over 10 million oil and gas wells and related infrastructure that need to be decommissioned and remediated. Even previously plugged wells are prone to leaking, meaning there is a need for monitoring of these sites. Programs like the Federal Orphaned Wells Program and the Methane Emissions Reduction Program are increasing funding for states to clean up abandoned well sites.^{164,165} While an emphasis on workforce development is encouraged in these programs, it is not a requirement to qualify for funding from these programs. Establishing a permanent federal office to identify, clean up and monitor orphaned, abandoned and idle wells would create tens of thousands new good paying, government jobs while creating opportunities for a transitioning oil and gas workforce.^{166,167}

FEDERAL POLICY RECOMMENDATIONS

Pass the PRO Act

The Protecting the Right to Organize (PRO) Act represents a crucial reform to U.S. labor laws, and would empower millions of workers, especially those who work in dangerous or exploitative jobs, like many in the oil and gas industry, to build collective power and have a say in their workplaces.¹⁶⁸ While unionization rates in the clean energy sector have increased since the passage of the IRA, jobs in the clean energy sector are often low paying compared to the fossil fuel industry.^{169,170}

The PRO Act would pave the way for more high-paying, family sustaining jobs in the clean energy sector, making them more attractive for job seekers and transitioning workers.

Ensure Access to Relevant Federal Funds

New provisions under IRA such as direct pay, which allows tax-exempt and governmental entities to receive payment equal to the full value of tax credits for building qualifying clean energy projects, are intended to make it easier for localities to invest in and deploy new clean energy technologies.¹⁷¹ However, raising awareness and access to direct pay in oil and gas communities will determine if the policy translates to equitable implementation for all of Colorado, especially localities with less capacity, and supports just transition efforts.

Another example of how existing policies must be made accessible for oil and gas communities is TCTACs, or Environmental Justice Thriving Communities Technical Assistance Centers.¹⁷² The EJ TCTACs will “provide training and other assistance to build capacity for communities and environmental justice stakeholders navigating federal grant application systems, writing strong grant proposals, and effectively managing grant funding.” These technical assistance centers can be leveraged to ensure support is accessible to oil and gas impacted communities.

Eliminate Fossil Fuel Subsidies and Repurpose Funds To Support Energy Transition

According to the International Monetary Fund, subsidies for the fossil fuel industry totaled \$757 billion in 2022, including \$3 billion in direct subsidies including cuts to drilling costs and tax cuts, and \$754 billion in indirect subsidies or external costs to society like environmental pollution and climate change.¹⁷³ In addition, states subsidize oil and gas activities through policies like reduced severance tax rate for low producing wells, the ad valorem tax credit and through taxpayer-funded cleanup for wells that go orphaned when operators go bankrupt.^{174,175}

FEDERAL POLICY RECOMMENDATIONS

A study from the Natural Resources Defense Council found that in the Permian Basin, there were 57 individual federal and state special exemptions for oil and gas operators.¹⁷⁶ Seventy percent of these subsidies support oil and gas exploration and production; however, collectively, these billions of dollars in state and federal subsidies could be repurposed to fund just transition programs, clean energy projects, and critical public infrastructure like education and housing.

Pass the National Energy Community Transition Act

The National Energy Community Transition Act would “establish a new permanent Endowment fund and federally chartered Corporation to support economic development and diversification, capacity building, transition planning, and core public services in communities that have historically relied on fossil fuel energy generation or extraction and are experiencing, or likely to experience, a related economic transition.”¹⁷⁷ The act deals with federal leasing revenues, and wouldn't address property tax revenue gaps and operations on private land.

Committing federal resources to the transition would move the needle immediately through enabling access to multiple streams of funding such as formula payments, transition grants, and investments. This support would be critical, especially for a state like Colorado facing a tight budget.

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APPENDIX

The following link provides a full appendix which features the full survey questions, worker and community survey data by county, and disaggregated data by key demographic groups.

https://www.coloradofiscal.org/wp-content/uploads/2024/12/Appendix_-_The-2024-Oil-Gas-Worker-and-Community-Transition-Report.pdf