The Oil and Gas Industry and New Mexico's Fiscal Future:

Finding a Path Forward and the Need to Act

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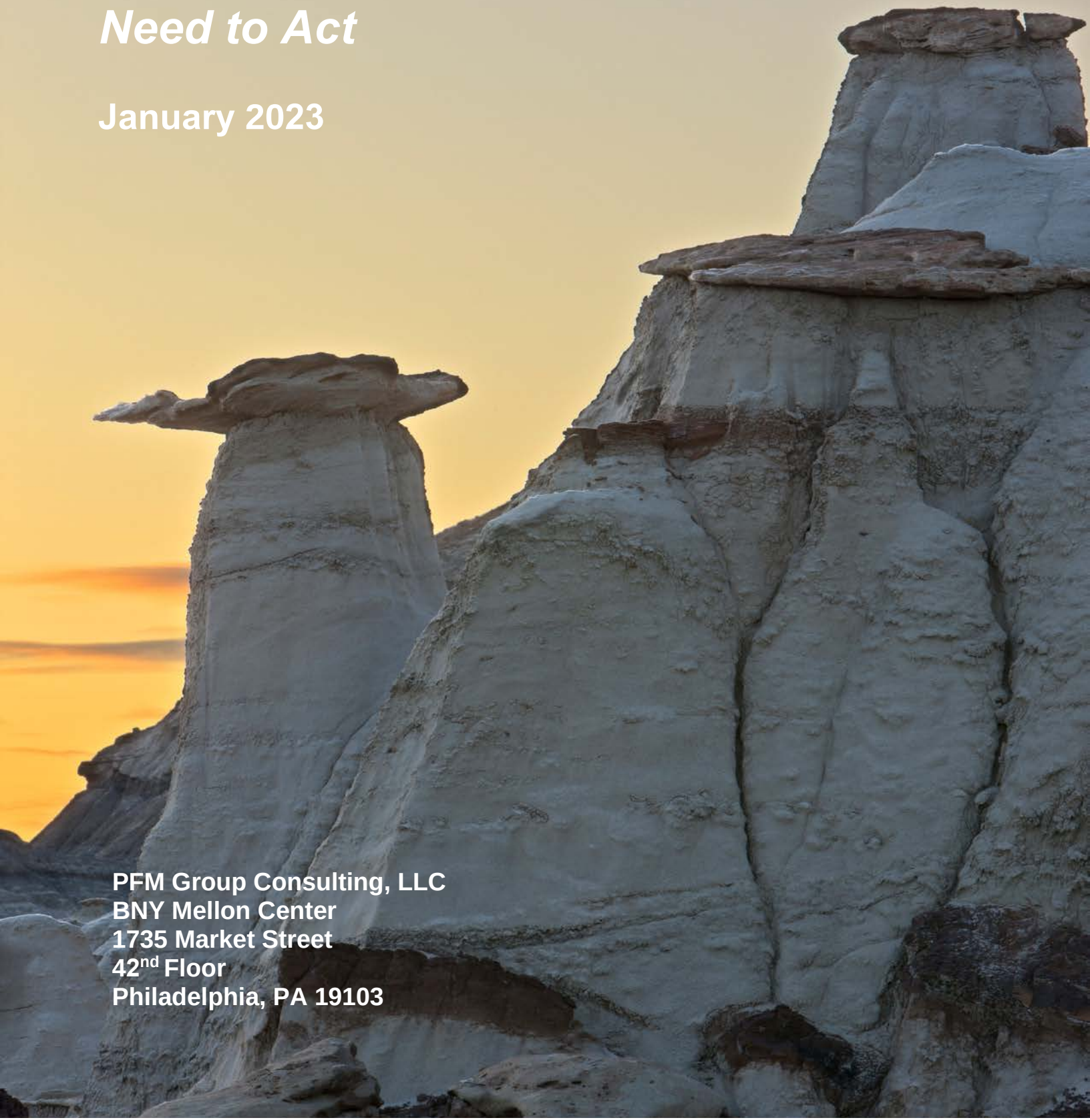

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PFM's December 2020 report, "State of New Mexico Tax Structure: Key Issues and Alternatives,"[1] highlighted New Mexico's reliance on revenue from the oil and gas industry and detailed a series of steps that the State could take to achieve a more diversified, more equitable, and increasingly stable revenue base. The study included a review of financial and budget documents and prior studies and was informed by 23 interviews with New Mexico tax subject matter experts and key stakeholders. The project team also compared New Mexico with peer states (benchmarking) and conducted best practices research. Since the report's release, there have been major shifts in the domestic and global macroeconomic situation – particularly as it relates to the oil and gas sector – and changes to the New Mexico tax code.

Current PFM Study: Why This Study is Needed Now

Recent "windfall" revenues from the oil and gas sector have contributed to a structural imbalance between the State's reliable, recurring sources of general revenue – primarily personal income taxes and gross receipts taxes – and recurring State spending. In other words, an increasing amount of vital State programmatic funding is reliant on an ultimately transitory revenue source.

The reliance on the oil and gas sector for revenue may also have a negative economic impact. New Mexico's more than decade-long lackluster economic performance and population stagnation, particularly when compared to neighboring states, may be the result of a "resource curse" – an economic term describing when reliance on extractive industries leads to underinvestment in policies needed for long-term growth.

If the oil and gas sector declines in the near-term, it will create a significant revenue shortfall and further exacerbate the gap between recurring revenue and State appropriations. The State's revenue estimates generally reflect an expectation that New Mexico's oil and gas sector will remain robust over the medium-term. Given energy experts' forecasts and predictions, market shifts, and historic trends, this assumption is risky.

Therefore, for the last nine months, PFM has been working on a new study that builds and expands upon our prior work and focuses on three critical questions:

- How will changes in the oil and gas sector affect State revenues over the next 15 years?
- If there is a long-term decline in the oil and gas sector, how can the State help offset the revenue impact through its tax structure?

[1] "State of New Mexico Tax Structure: Key Issues and Alternatives," PFM, December 2020, available at https://www.pfm.com/docs/default-source/consulting/state-of-new-mexico-tax-structure-key-issues-and-alternatives-december-2020.pdf?sfvrsn=27050db5_8

- What role can economic diversification play to increase revenue, promote growth, and improve equity for New Mexico residents?

Summary of PFM's Findings

- The recent surge in oil and gas revenue is due to a once-in-a-generation confluence of supply and demand factors that are unlikely to be sustained over time.

- Independent analysts suggest that the peak in oil and gas production, both in New Mexico and globally, could potentially come within the decade.

- Recent State revenue trend projections suggest assumptions of continued oil and gas revenue growth that are inconsistent with historical growth trends and with alternative scenarios of how price and production relate to changes in State revenue.

- If oil and gas revenue projections aren't achieved, it will worsen the structural recurring revenue deficit resulting in potentially significant outyear budget gaps.

- Closing the potential gaps would require unprecedented growth in the State's two other main sources of revenue – the gross receipts tax and the personal income tax.

- Therefore, utilizing non-recurring revenue to offset cuts to recurring revenue sources now would leave New Mexico even more vulnerable to the potentially catastrophic consequences of the next inevitable downturn.

- Instead, recent windfall revenues provide the perfect opportunity for the State to act now and use these resources wisely to foster growth in the future – before the next downturn.

New Mexico's Slow Growth and High Poverty Rates

New Mexico has lagged in economic and population growth for more than a decade and remains one of the poorest states in the nation. Between 2000 and 2010, New Mexico gained just over 95,000 jobs and total jobs grew by 10 percent. But between 2010 and 2019 (pre-COVID), New Mexico's jobs and total population growth decelerated. Jobs were up by just 5 percent, and New Mexico was fourth from the bottom in jobs growth – behind only Alaska, West Virginia, and Vermont.

In addition, between 2010 and 2020, New Mexico's population only grew by 2.8 percent – tied for the 11th slowest rate of growth. It was only the second decade since its founding that the State did not experience a double-digit growth rate. Despite the perception that remote workers have been moving into the State during the pandemic, the population of the State declined between 2020 and 2021, as did net in-migration. This is in stark contrast to neighboring states, especially Arizona.

New Mexico has also experienced persistently high poverty. Based on three-year data, New Mexico has the third highest state poverty rate – trailing only Mississippi and Louisiana. Relatedly, Arkansas, Mississippi, Oklahoma, and West Virginia were the only states with lower average weekly wages as of December 2021. In addition, poverty is concentrated in certain places – for example, Cibola, Socorro, Sierra, and McKinley Counties – and among certain groups of people, especially Latino households (21.3 percent), Black households (22.2 percent), and Native American households (30.0 percent).

As of May 2022, New Mexico was tied with Arkansas for the third lowest civilian labor force participation rate – only West Virginia and Mississippi had lower rates of participation. And, New Mexico has the 13th lowest college attainment rate at just 30.1 percent.

The Economic and Fiscal Impact of the Oil & Gas Sector

Absent robust economic and population growth, State revenue has become more dependent on the oil and gas sector. Employment in the mining, quarrying, and oil and gas extraction sector represented less than 2.5 percent of direct employment in the State for 2021, ranking 14th out of the 20 sectors examined by the U.S. Bureau of Labor Statistics. Other sectors actually drive employment in New Mexico, with nearly 40 percent of jobs contributed by the top three sectors: 17.8 percent in health care & social assistance, 11.4 percent in retail trade, and 10.3 percent in accommodation & food services.

In contrast, New Mexico's state budget depends on oil and gas for approximately one-third of its general revenue, meaning State policymakers must ride the "roller-coaster" of the ups and downs of oil and gas prices and production. Over the past two years, the surge in oil and gas revenue is largely the result of the timing of two once-in-a-generation events – a rebound in demand as the COVID-19 pandemic eases and a restriction in supply due to the Russian invasion of Ukraine.

Risks Related to the Reliance on the Oil and Gas Sector

Multiple sources currently estimate that peak production of oil and natural gas will occur by or before the mid-2030s. Projections used by the State for revenue forecasting, from analytical firms that include Moody's Analytics, Rystad Energy, and IHS Markit, estimate that the final turning point for oil production could occur as soon as 2028 and shortly thereafter for natural gas. Similarly, entities like the International Energy Agency predict peak demand will occur by the mid-2030s, and a survey of institutional investors in the oil and gas industry found that two-thirds of investors believed that demand would peak by 2030.

Recent Estimates Show Continued Reliance on Oil and Gas Revenues

The New Mexico Legislative Finance Committee (LFC) staff and Consensus Revenue Estimating Group (CREG) conducted the State's first formal long-term analysis of the General Fund in July 2022, with a heavy focus on severance tax revenues. In a review of mid- to long-

term revenue options, LFC staff projected that strong oil production will be maintained at least through the next 10 to 15 years. While LFC analyzed long-term trends, they did not create a projection of actual revenues beyond FY 2026.

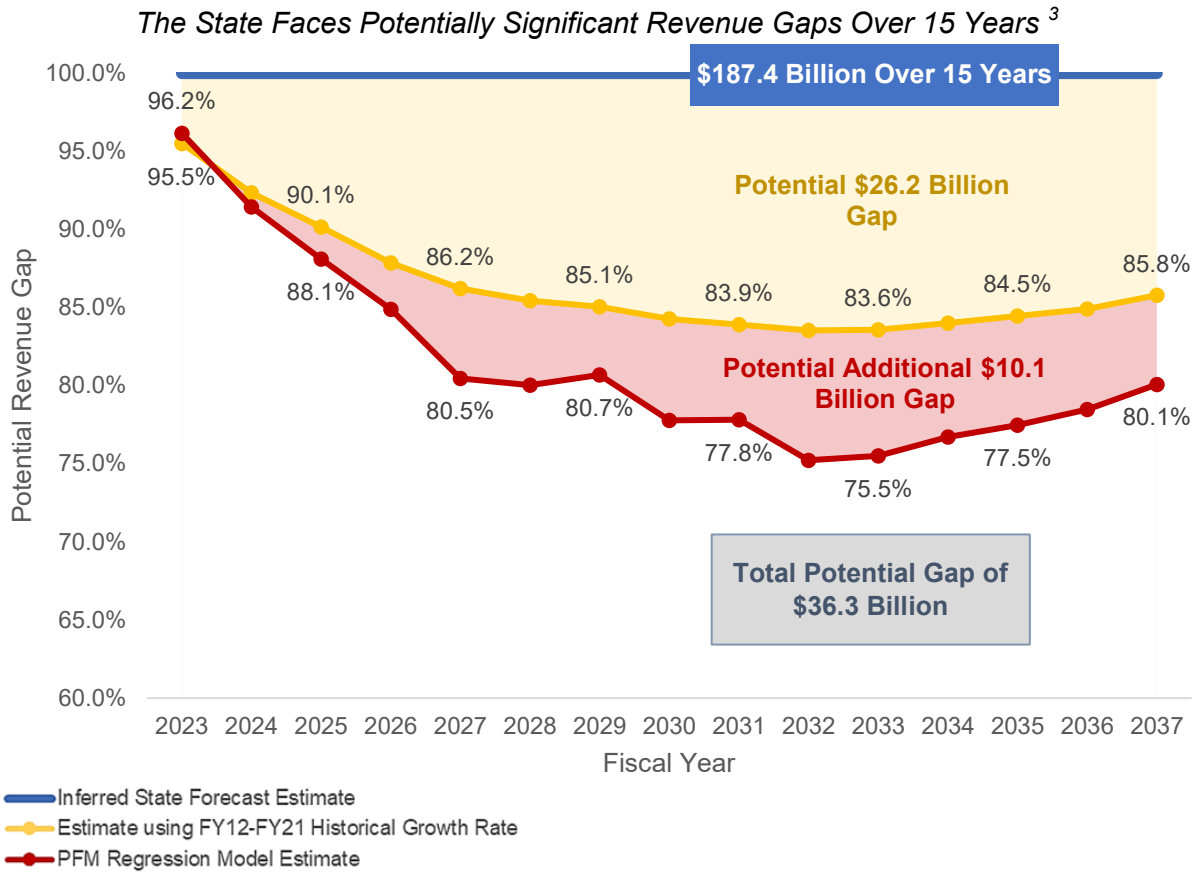
However, the recent spike in State revenues is "baked in" to the State's short-term baseline forecasts. Thus, growth that is slower than trend in the out years still results in substantially increased aggregate net revenues over a medium-term horizon. The group did conclude that at some point before FY 2050, revenue growth will dip below the ten-year historical trend and encouraged careful consideration of spending of recurring funds so that appropriations don't exceed revenue in the long-term.

Alternative Scenarios Suggest Long Term Risk in Reliance on Oil and Gas

In order to extrapolate a 15-year State baseline forecast, PFM inferred a State projection from the various growth rates embedded in the committee presentation's charts and tables from the summer meeting.[2] Then, PFM conducted a systematic regression analysis of dozens of available oil and gas historical data points and tested their predictive relationship to New Mexico's General Fund revenues, applying a line that statistically "fit" the data to a forward-looking estimate of the portion of future revenues anticipated to be derived from oil and gas.

When PFM modeled various price and production scenarios, we found that the inferred State forecast may be overstating aggregate revenues **by $26 billion to $36 billion over the next 15 years** – or up to $3 billion annually at the end of the projection period. (See figure on following page.)

[2] The State released long-term General Fund revenue forecast scenarios based on potential changes to the oil and gas market – dollar values for revenue were not provided and percent changes for growth trends required interpreting high-level graphs. "Long-Term Outlook Presentation to: Legislative Finance Committee," Office of the Governor Michelle Lujan Grisham and New Mexico Legislative Finance Committee, 20 July 2022, accessed at https://www.nmlegis.gov/handouts/ALFC%20072022%20Item%207%20Balancing%20Mid-to-Long-Term%20Revenues_CREG.pdf



15-Year General Fund Projected Revenues (millions)		FY2037	Total (FY2023-FY2037)
(A)	Inferred State Forecast Estimate	$15,331	$187,429
(B)	Estimate using FY12-FY21 Historical Growth Rate	$13,150	$161,250
(B - A)	*Difference to Inferred State Forecast Estimate*	*($2,181)*	***($26,180)***
(C)	PFM Regression Model Estimate	$12,277	$151,097
(C - B)	*Difference to Historical Growth Rate Estimate*	*($873)*	***($10,153)***
(C - A)	*Difference to Inferred State Forecast Estimate*	*($3,054)*	***($36,333)***

The Eventual Decline in Oil and Gas Revenue

While predictions of the specific timing of industry peaks are just that – predictions – at some point, State oil and gas revenues will begin to decline permanently. The State's Consensus Revenue Estimating Group estimates that oil and gas revenue will decline to 10 percent of General Fund revenue by 2050.

[3] Percentages indicate deviation from inferred State forecasted estimated revenues on an annualized basis.

Given historical volatility and long-term trends, a decline in revenue could begin much sooner, though, and there is no guarantee that it will occur in a linear fashion. A sudden or steep drop in State revenues would be devastating for New Mexico and would leave policymakers little time to "right-size" State government programs beyond major funding cuts.

The CREG and LFC staff acknowledge that many factors could contribute to a future shock to the industry, including recessions, environmental or geopolitical crises, changes to federal regulatory policy, or technological innovations. In other words, no matter which scenario one uses as a baseline, there is a significant risk in the continued reliance on oil and gas revenue. Doing so could lead to outyear revenue gaps that worsen the State's recurring revenue structural deficit.

Other Taxes Would Need to Grow at Unprecedented Rates to Close Gaps

Other than revenue from the oil and gas sector, New Mexico primarily relies on GRT and PIT collections. Without changes to the State's overall tax structure and economy, there would need to be unprecedented growth in both to offset potential revenue gaps. Over the 15-year period examined by PFM:

- Gross Receipts Tax (GRT) aggregate collections by FY2037 would need to increase more than 60 percent over what the historical growth rate would predict to cover the revenue gap from the PFM scenario outlined earlier, at $95.7 billion over the projection period versus a baseline of $59.4 billion using the historical growth rate of the GRT.

- Personal Income Tax (PIT) aggregate collections by FY2037 would need to increase by more than double to fill the same revenue gap – $71.4 billion over the projection period versus a baseline of $35.0 billion using the historical growth rate of the PIT.

- Under a combined scenario, aggregate GRT and PIT collections would need to increase by nearly 40 percent over the amount predicted by historical growth rates.

Unprecedented Collections in Traditional Revenue Sources Would Be Required to Cover the Revenue Gap

Time Period	FY2037	Total FY2023-FY2037)
Potential Revenue Gap (millions)	**($3,054)**	**($36,333)**
Scenario 1: Closing the Gap with GRT Revenue Only		
GRT Revenue Using Historical Growth Rate	$5,192	$59,363
GRT Needed for Potential Revenue Gap	$8,246	$95,696
Difference to Historical GRT Growth Rate Estimate	59%	61%
Scenario 2: Closing the Gap with PIT Revenue Only		
Net PIT Revenue Using Historical Growth Rate	$2,554	$35,031
PIT Needed for Potential Revenue Gap	$5,608	$71,364
Difference to Historical PIT Growth Rate Estimate	120%	104%
Scenario 3: Closing the Gap with Both GRT and PIT Revenue		
Combined GRT and PIT Revenue Using Historical Growth Rate	$7,746	$94,394
GRT and PIT Needed for Potential Revenue Gap	$10,800	$130,727
Difference to Combined Historical Growth Rate Estimate	39%	39%

Summary of Recommendations: Take Opportunity to Act Now

To reduce the risk and uncertainty related to the potential significant outyear budget gaps, New Mexico needs to act now to both reform its existing tax structure and expand efforts to grow a more equitable and sustainable state economy. Tax reform and economic expansion are both essential to fiscal health and economic prosperity.

- The State should consider a series of tax policy changes, including: reforming the PIT rate structure and eliminating the capital gains PIT deduction, reinstituting an estate tax, increasing the motor fuel tax rate, broadening the GRT tax base, and continuing to expand excise taxes.

- The State should better align tax policy and economic development strategy by examining the efficacy of current tax incentives.

- The State should build on its efforts at economic diversification by increasing investments in people and places, focusing on innovation, and explicitly considering likely revenue impacts of economic development initiatives.

The State Should Pursue Tax Policy Changes to Improve Equity, Reduce Volatility, and Better Position New Mexico to Meet Future Needs

The State should consider a series of tax reforms consistent with the LFC's tax principles, defined as follows:

- Adequacy – the tax or tax system generates enough revenue to pay for public services without continuous changes

- Efficiency – the tax or tax system minimizes economic distortion and avoids excessive reliance on any single tax

- Equity – the tax or tax system fairly distributes the tax burden among all taxpayers

- Simplicity – taxes are simple to understand and collect

- Accountability/Transparency – tax collection/administration is easy to monitor and evaluate and subject to periodic review

Broadening the GRT tax base. Broadening the GRT tax base – and avoiding policies that further narrow the GRT base – can improve tax revenue adequacy and stability by providing targeted tax relief to low-income earners while returning hundreds of millions of dollars in lost revenue to the State.

Reforming the PIT rate structure. Reinstituting a rate structure with higher marginal PIT rates at higher income levels can make New Mexico's tax structure more progressive and equitable, significantly increase General Fund revenue, and reduce reliance on other revenue sources.

Eliminating the capital gains PIT deductions. Lower capital gains rates or deductions significantly reduce progressivity in State income taxes specifically and the State tax structure in general. The exemption also undermines revenue sufficiency in the State tax structure, reducing State tax revenue collection by tens of millions of dollars per year.

Reinstituting an estate tax. Implementing an estate tax with exemptions for estates below a certain threshold will make New Mexico's tax structure more equitable, given that the current tax treatment overwhelmingly favors very wealthy individuals.

Increasing the motor fuel tax rate. Increasing the motor fuel tax rate to align with national trends (raising rates to adjust to long-term trends of increasing automobile fuel efficiency) can support greater tax base adequacy.

Continuing to expand excise taxes. The State should continue to align its excise taxes with new forms of goods or services that gain traction in the market; the typical regressivity of excise taxes can be offset by or coupled with a more progressive PIT.

The State Should Align Tax Policy and Economic Development Policy

The State should also revisit and examine its tax incentive structure. New Mexico has literally hundreds of targeted tax breaks; most of which are rarely used, while many of the more popular ones may result in significant net revenue losses for the State. The State should focus on fewer, more effective tax incentives, including an effort to streamline and market all tax incentives relevant to the State's nine existing "target industries," identified by the current Administration. If paired with other changes as part of a comprehensive tax reform package, a more progressive PIT tax structure can be designed to retain the tax benefits of living in New Mexico for high income households while generating more revenue to invest in the health, education, outdoor, cultural, and quality of life programs and services that can help support relocation to New Mexico.

Build on Current Efforts at Diversification by Investing in People and Places

The State's plan for economic diversification is centered on sector-specific strategies with a focus on retaining and attracting high wage jobs. New Mexico's tax expenditure programs are also largely industry specific. In addition to sector specific strategies, New Mexico also needs to focus more on economic development initiatives centered on certain areas and communities – both to ensure multi-sector growth and to reduce economic inequity. The State has made strides in this area – including growing investment in childcare and access to higher education as well as expanding tax credits for low-income families – but more needs to be done to drive economic expansion and poverty reduction.

Strategic Investment in People and Places

The State should continue to prioritize equity and reducing barriers to employment in its workforce development strategy – such as the cost of education, needs for childcare, structural racism, and criminal history – to better link workforce development with economic development and expand the economic power of New Mexico's tax base. The State already has programs that are focused on certain communities, but they largely provide project- or employer-specific funding. Using a data-driven approach, the State should concentrate its resources in geographic areas with both high poverty and high unemployment that are experiencing population decline, as well as in areas in the Permian and San Juan Basins that are most dependent on the oil and gas industry for employment.

The State should also develop and formalize a stronger framework – including adding State capacity where needed – to help connect local governments with third-party grants and technical assistance, encourage greater collaboration with regional organizations, and align State economic development priorities with local needs. New Mexico's Local Economic

Development Act (LEDA) program already requires local governments to adopt an economic development plan by ordinance to secure State funding for support for local businesses. Using these existing local efforts as a starting point, the State should work with communities to understand what they see for their future in order to address the fact that New Mexico is the only Western state that does not have substantial population growth that can help fill newly created high-wage jobs.

Specifically, the State should increase funding for both early and ongoing education for current residents, as well as pursue an active strategy to incentivize and attract domestic in-migrants who can join the labor force in the short- to medium-term to avoid constraining economic growth due to a lack of skilled labor. These initiatives can both help support current residents and better position the State to benefit from its current efforts in the innovation space. The National Labs play a very significant role in the State's high-wage jobs strategy, but the State is too dependent on third-party efforts in the innovation sector. The State should continue to bolster New Mexico Tech, UNM Rainforest, and other innovation efforts that seek to spin off technology in order to increase private sector activity, especially in the biosciences. These programs have the potential to significantly increase high-wage jobs and provide a path of opportunity for more New Mexicans.

The State Should Explicitly Consider the Revenue Impacts of its Economic Development Initiatives and Programs

The State needs to address economic inequities as part of its overall revenue strategy, too. A shift in strategy is important for New Mexico's people as well for its state budget. When New Mexicans earn more, their standard of living increases, and they pay more in taxes and may have less need for State services. The State should focus its economic development strategy on State revenue in addition to employment. As noted earlier, this requires a focus not only on people who have been left behind but also places that suffer from significant and persistent poverty.

The State's evaluation of its economic development efforts currently focuses mostly on job creation. But if economic diversification is going to help offset potential oil and gas revenue losses, the State should pay more attention to the revenue consequences of the State's economic development strategy, through strategic coordination on the front-end and regular evaluation on an ongoing basis that goes beyond relying on industry claims of revenue benefits from the very firms that receive the bulk of State incentive dollars.

The Bottom Line and the Need to Act

Despite current budget surpluses, New Mexico faces a series of interrelated challenges that stem from the State government's disproportionate reliance on revenue from the oil and gas industry. Over-reliance on taxes and royalties generated by oil and gas production subjects critical State services, including public education, public health, and public safety to the unpredictable "boom and bust" cycles of an increasingly volatile fossil fuel industry. Since 2020,

New Mexico has experienced an accelerated version of the historical cycle of boom and bust, with crude oil prices fluctuating from $115 per barrel to negative $38 per barrel.

While no one can credibly claim to predict the future with total accuracy, and current State forecasted growth trends represent one plausible scenario, the range of potential outcomes over the long-term is far more variable than State policymakers may assume. If the structural revenue gap is of sufficient magnitude, the State will require unprecedented gains in other economic sectors and other sources of revenue to offset the potential losses in oil and gas revenue. Such gains may be extremely difficult to achieve given the current structure of New Mexico's tax code and economy.

However, recent windfall oil and gas revenues create an unprecedented opportunity for the State to reduce the likelihood of a future revenue slump by investing in economic and revenue resilience through:

- Restructuring the State tax system
- Diversifying the economy
- Equalizing opportunity for all New Mexicans
- Making the State more attractive for both residents and new investors
- New Mexico's policymakers have taken steps to segregate and invest some surplus revenue when circumstances allow.

But alongside the many opportunities created by New Mexico's current revenue surplus is an equally potent threat that policymakers will utilize non-recurring revenue to offset cuts to recurring revenue sources, leaving New Mexico even more vulnerable to the potentially catastrophic consequences of the next inevitable downturn – and the risk that next time, there might not ever be a full recovery back to trend.

Report Methodology

The project team (see Appendix A) developed this report using a combination of national and state sources. National-level data sources include the U.S. Census Bureau, U.S. Bureau of Labor Statistics, and the U.S. Bureau of Economic Analysis supplemented by state-specific sources from New Mexico: annual comprehensive financial reports and audits, revenue reporting and estimates for tax sources, and reports from departments in New Mexico from the legislative and executive branches, such as the Legislative Finance Committee and the New Mexico Economic Development Department.

The project team also consulted with a range of subject matter experts and other stakeholders through interviews to develop a better understanding of the issues at hand related to the oil and

gas industry and energy sector, economic diversification efforts, and the overall economics and demographics of New Mexico (see Appendix B). These interviews included members of the legislative and executive branches and their staff, experts based in higher education, and other research and advocacy institutions. These interviews were not for attribution but were conducted to provide additional background and context for the project team. The findings and recommendations of this study are solely the product of the project team and should not be attributed to any interviewees individually or collectively.[4]

[4] Our research is funded by the Rockefeller Family Fund which is interested in long-term revenue and economic diversification and stabilization in New Mexico. PFM is a nationally recognized consulting firm that does independent research and analysis.

Discussion of 2020 PFM Study and Contemporary Context

Discussion of 2020 PFM Study and Contemporary Context

As noted earlier, PFM's 2020 study focused on the State's revenue and taxation system through the lens of the New Mexico Legislative Finance Committee's tax principles: adequacy, efficiency, equity, simplicity, and accountability/transparency.

With a large share of New Mexico's tax revenue tethered to the energy sector, the State has experienced a seemingly never-ending cycle of budget "shortfalls and windfalls" based on the health of the oil and gas industry at a given point in time. The study highlights a concern that the oil and gas industry is facing "chronic rather than acute" problems, especially related to long-term oil and gas production. While the industry has seen a surge in oil pricing largely due to unpredictable world events since the original report's publication, underlying issues related to volatility in the oil and gas industry remain. The previous study states plainly that the State's revenue structure is and will continue to be a problem for New Mexico's future; and while the recent windfall in State coffers may mask this problem in the short-term, it will persist unless and until there is a significant shift in the State's revenue structure, economic diversification, or both.

The report drew on in-depth analysis of state budget and tax data, State reports and prior studies, and discussions with policymakers and subject matter experts to provide findings on current tax and revenue sources, tax collections and tax burden, and revenue adequacy, volatility, and diversification. And it made specific recommendations on potential changes to the State's tax structure to promote the principles defined by the Legislative Finance Committee – as well as including a brief discussion of potential tools to increase economic diversification.

The first PFM report conducted extensive benchmarking of New Mexico and similar states, either in the region or with a significant reliance on the oil and gas industry. Across multiple key economic indicators, New Mexico ranks poorly compared to similar states in population growth, median household income, education, poverty rates, and "livability," defined as a mix of factors including K-12 and higher education attainment, infrastructure, health, economy, and business climate.

Notably, the 2020 study found that government and government enterprises and mining, quarrying, and oil and gas extraction were among the top industries by Gross Domestic Product (GDP), a measure of economic activity and spending. In New Mexico, mining, quarrying, and oil and gas extraction contribute over 10 percent of the state's GDP, compared to less than two percent for the United States as a whole.

The 2020 study provided a "top down" view of New Mexico's tax structure compared to the rest of the country – major sources were considered, including the gross receipts tax (which is the equivalent of other states' sales tax), personal income tax, property tax, and federal revenue. At a more granular level, the study engaged in a detailed review of New Mexico's various taxes. Each tax was comprehensively defined and contextualized, including tax policy structures, rates, comparisons to other states, and historical revenue collections. The study evaluated each measure using the Legislative Finance Committee's tax principles and offered conclusions as to

whether each tax category was positive or negative in its alignment with these principles, as follows:

Gross Receipts Tax

- Primarily because of its broad base and ability to tax firms that do business with the federal government, it raises a lot of revenue (positive for adequacy);

- Because it taxes business gross receipts, certain types of business structure and sectors are impacted more than others (negative for horizontal equity);

- To the extent it is passed along to consumers, as with most consumption taxes, it is more burdensome to lower income taxpayers (negative for vertical equity);

- Because it taxes business-to-business transactions, there is significant tax pyramiding (negative for transparency).

Personal Income Tax

- The PIT is a progressive tax – rates rise as income rises (positive for vertical equity);

- New Mexico uses refundable credits to reduce (or eliminate) the PIT tax burden for lower income taxpayers (positive for vertical equity);

- Rates have been changed numerous times, with reduced top rates and, most recently, a restoration of a higher top PIT rate (reduced rates were a negative for vertical equity and adequacy but may be a positive for efficiency);

- Collections tend to follow trend lines similar to the prices for oil and gas (negative for adequacy).

Oil and Gas Tax and Revenue

- The extraction taxes broaden New Mexico's key sources of revenue and ultimately reduce the net tax burden on state residents (positive for broad sources and adequacy);

- The extraction tax collections tend to rise and fall with what can be a cyclical industry (negative for volatility);

- Extraction non-tax revenue provides an important source of revenue (positive for adequacy)

Corporate Income Tax

- The CIT has become, in New Mexico and many other states, a declining source of tax revenue (negative for revenue diversification and adequacy);

- New Mexico has enacted mandatory combined corporate reporting to counter some of the more common corporate tax planning measures (positive for adequacy and horizontal equity);

- New Mexico uses a two bracket and rate structure (negative for horizontal equity);

- A significant share of CIT revenue is foregone by refundable tax credits (negative for adequacy and efficiency).

Excise Taxes

- Excise taxes are an additional revenue source (positive for diversification);

- Excise taxes have much higher tax rates than with general sales taxes or the GRT (negative for horizontal and vertical equity);

- Excise taxes are sometimes used to discourage consumption or ameliorate the negative effects of products or services, such as tobacco or indoor tanning (positive for efficiency).

Tax Incentives

- Tax incentives generally reduce revenue, at least in the short-term (negative for adequacy);

- Tax incentives may provide special benefits to a single company or industry that is not available to its competitors (negative for efficiency and horizontal equity);

- Depending on how they are structured, tax incentives may mask the extent of their use (negative for transparency);
- Tax incentives may be targeted to growth industries that broaden the economic base (positive for diversification).

The study also evaluated other key topics and issues for taxation in New Mexico. In an examination of revenue concentration and diversification, New Mexico's oil and gas industry was found to provide a larger share of state GDP than the largest industry in the average state. As noted earlier, one of the report's main findings was that New Mexico has higher revenue volatility than most states, placing the state in a volatility category that almost exclusively includes other states with a significant reliance on the oil and gas industry. Finally, the report also discussed tax burden issues, tax base erosion, potential new taxes relevant to

contemporary policymaking, and initial economic implications resulting from the COVID-19 pandemic.

For New Mexico's tax revenue and sources, the 2020 study found that New Mexico collects a larger share in gross receipts taxes and a smaller share in personal income tax than most states. Notably, extraction tax revenue provides a much larger share than most states. The State is also slower to implement more modern excise taxes and lags the country greatly in the share of property taxes collected. New Mexico's tax burden for households is also above average, with an average burden for businesses.

While taxes related to extraction are an important share of New Mexico's tax base, and are therefore necessary to fund New Mexico's State government, the revenue concentration from those same industries increases the volatility within the State's tax structure. Ultimately, PFM developed a series of 10 recommendations in the 2020 study to further the Legislative Finance Committee's principles within the tax structure. The study also provided an additional four recommendations beyond direct tax changes to support additional revenue growth and diversification. Recommendations on the tax structure include reforms for the personal income tax, gross receipts tax, excise taxes, tax incentives, and more to promote a "stable, equitable, and diversified tax structure." These recommendations are revisited in a subsequent section of this report.

However, the study also recognized that these changes alone are not enough to fundamentally change the economic base of New Mexico – and especially the State's reliance on the oil and gas industry through taxation on extraction.

The State's Current Efforts to Forecast and Address State Revenue Volatility

The State's Current Efforts to Forecast and Address State Revenue Volatility

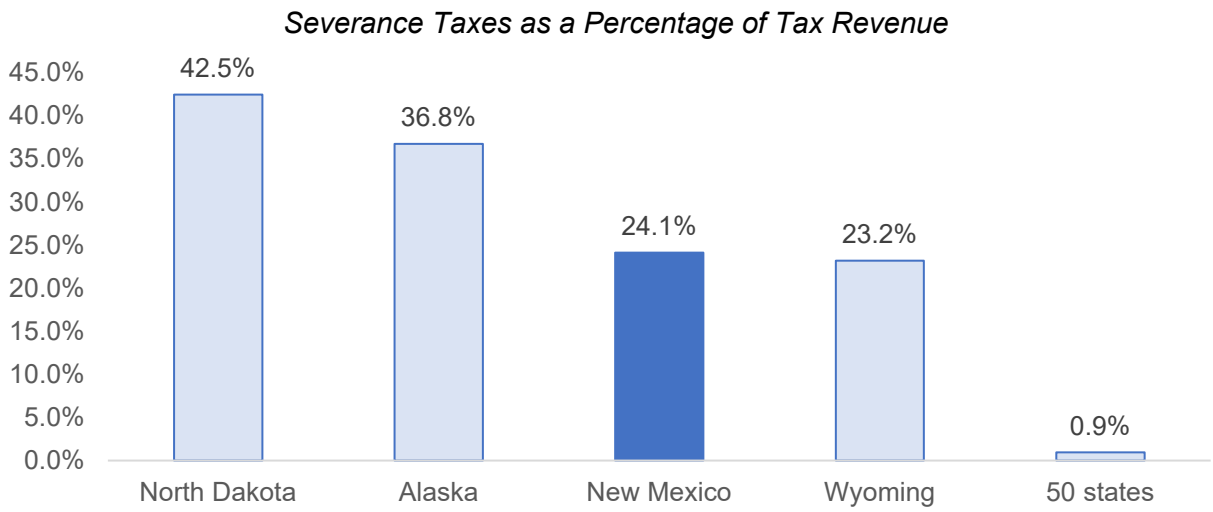
New Mexico Relies Disproportionately on Volatile Revenue Streams

The Pew Charitable Trusts conducted an analysis of tax revenue volatility for all 50 states in October 2021.[5] Pew's analysis found that the states that experience the highest revenue volatility are those states that rely most heavily on severance taxes. The organization examined volatility using "the standard deviation of yearly percent change in total tax revenue from fiscal years 2001 to 2020, less the effect of total tax policy changes" given the need to account for policy changes that would cause variation. In this study, New Mexico ranked fourth highest of all states for tax revenue volatility, surpassed by only Alaska, North Dakota, and Wyoming – all states reliant on the oil and gas industry. New Mexico's volatility score was calculated at 10.3 while the volatility score for all states averaged 5.0.

Pew also examined major tax revenue sources for each state, defined as sources that averaged at least 5 percent of revenue, and used a similar method as the overall volatility score to determine the volatility of individual revenue streams. Pew determined that New Mexico's three major revenue sources were severance taxes, personal income taxes, and sales taxes. In the two decades between State fiscal years 2001 and 2021, New Mexico severance tax revenue had the highest volatility of all state revenue sources and ranked in the top 10 out of the 175 total major revenue streams examined across states.

Pew also conducted an analysis of the revenue streams of states for fiscal year 2021 using the U.S. Census Bureau's 2021 Annual Survey of State Government Tax Collections and, notably, North Dakota, Alaska, New Mexico, and Wyoming make up the top four states reliant on severance taxes (with Texas in fifth). Comparatively, across all 50 states, the percentage of tax revenue raised by severance taxes was less than 1 percent.

[5] Barb Rosewicz, Justin Theal, and Jen Janson, "Volatile State Tax Collections Make Budgeting Difficult," The Pew Charitable Trusts, 14 October 2021, accessed at https://www.pewtrusts.org/en/research-and-analysis/articles/2021/10/15/volatile-state-tax-collections-make-budgeting-difficult



Source: Pew Charitable Trusts

Attempts to Put the Brakes on New Mexico's Ongoing "Rollercoaster Ride"

While New Mexico has experienced a revenue windfall in 2022 due to the surging energy industry, the State has faced budget gaps in the past due to oil and gas revenue volatility. As recently as 2016, a collapse in oil prices triggered a budget shortfall for New Mexico, with tax stabilization reserves being exhausted to support the then-current fiscal year's budget. As part of a presentation to the New Mexico Revenue Stabilization and Tax Policy Committee in July 2021, Legislative Finance Committee economists highlighted the "series of solvency measures [enacted] in 2015-2017 regular and special sessions, including using reserves, cutting budgets, raising revenues, sweeping cash balances, and swapping general fund expenditures for bonding capacity" that ultimately left the State with just $170 million in reserve balances in fiscal year 2016.[6] This also led to the introduction of "stress testing" the State's budget forecasts:

> Recognizing the severe effects an oil market crash could have on general fund state revenues, the consensus revenue estimating group began incorporating stress-testing into its revenue forecasts – projecting the potential changes in estimated revenues in the event of a moderate recession or another oil market collapse. Generally, the stress-tests found the state would need on average about 20 percent of recurring appropriations in reserves to support budgets for the current fiscal year and budget year (the upcoming fiscal year budget that will be set in the next legislative session) in the event of an oil price crash, and even higher to support budgets for the following fiscal year.[7]

[6] "Money Matters: General Fund Reserves – Relationship, Triggers, and Targets," New Mexico Legislative Finance Committee, 15 July 2021, accessed at https://www.nmlegis.gov/handouts/RSTP%20071521%20Item%204%20General%20Fund%20Reserves.pdf
[7] Ibid.

As a result, revised tax stabilization mechanisms were implemented shortly afterwards:

> Legislation passed in the 2017 session removed prior caps on the tax stabilization reserve, transforming the account into a true "rainy day fund" – a fund that can only be accessed through a simple majority vote if revenues fall short of appropriations, or for necessary expenditures that receive a two-thirds vote of both the House and Senate. Additionally, the legislation provided a revenue stabilization mechanism that automatically transfers revenues above the five-year average from the oil and gas emergency school tax to the [Tax Stabilization Reserve] – a process that both simplifies the general fund revenue estimating process and helps mitigate oil and gas market swings.[8]

According to the State Investment Council's September 2022 monthly report, the current balance of the Tax Stabilization Reserve Fund is over $1.8 billion.[9]

Beyond the changes to the reserve funds to help insulate New Mexico's budget from some of the volatility of the energy market, the State has leveraged extraction taxes and related revenue in additional ways to help smooth large swings in oil and gas prices and production. The State has two permanent funds that are funded primarily through tax revenue based on resource extraction, the Land Grant Permanent Fund and the Severance Tax Permanent Fund, established in 1912 and 1973, respectively.[10] Both funds are managed by the New Mexico State Investment Council and provide distributions to the General Fund. As of September 2022, the balance of the Land Grant Permanent Fund was over $24.1 billion and the balance of the Severance Tax Permanent Fund was over $6.5 billion.

Both permanent funds have distributions based on five-year average values of the funds, which is used to help smooth the distributions during shifts in the economy that could affect revenue generated. For fiscal year 2022, the estimated value of distributions from the two permanent funds to New Mexico's General Fund is over 1 billion dollars.

The State also created the Early Childhood Education and Care Fund as a means of providing a more stable and sustainable funding source for early childhood education in the state. The fund was created in early 2020 with a $300 million endowment and operates like the permanent funds under the management of the State Investment Council; one difference is that after fiscal year 2022, distributions are set to be "the greater of $30 million or 5 percent of the three-year average of the Fund to the Early Childhood Education Department."[11] As of September 2022, the balance of the Early Childhood Education and Care Fund was over $2 billion.[12]

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[8] Ibid.
[9] "REQUIRED REPORTING: NMSA 6-8-14 Monthly Reports," New Mexico State Investment Council, 30 September 2022 accessed at https://api.realfile.rtsclients.com/PublicFiles/7c4d03015a164367930068bfbb95f6a0/cee1594b-54c0-42b6-8297-565a9b5fcb3f/2022-09%20Monthly%20Reporting.pdf
[10] "Finance Facts: Permanent Funds," New Mexico Legislative Finance Committee, May 2021, accessed at https://www.nmlegis.gov/Entity/LFC/Documents/Finance_Facts/finance%20facts%20permanent%20funds.pdf
[11] "Early Childhood Education and Care Fund," New Mexico State Investment Council, accessed at https://www.sic.state.nm.us/investments/permanent-funds/early-childhood-education-and-care-fund/
[12] "REQUIRED REPORTING," New Mexico State Investment Council

While these mechanisms have helped smooth some of the General Fund's volatility, the current formula can result in large distributions, especially at times when the oil and gas industry is consistently on the upswing. In recent presentations including mid- to long-term projections by Legislative Finance Committee economists, they highlight that "[s]hort-term production spikes are bumping up the five-year average and weakening the smoothing effect of stabilization measures" and recommend consideration of reforming the five-year average method used to determine distributions, with examples provided for how oil- and gas- related revenue distributions would change with an eight- or 10-year average instead.

How the State Models Changes in the Oil and Gas Industry

New Mexico captures revenue through the oil and gas industry through a complicated system of direct and indirect taxation as well as royalties and bonuses.[13] The primary extraction-based taxes for oil and gas include:[14]

- Oil and Gas Severance Tax
- Oil and Gas Conservation Tax
- Oil and Gas Emergency School Tax
- Oil and Gas Ad Valorem Production Tax
- Oil and Gas Production Equipment Ad Valorem Tax
- Natural Gas Processors Tax

The State receives additional tax revenue from the oil and gas industry through both the gross receipts tax and personal income tax. Based on ownership of the land, New Mexico also gains through royalties and bonuses. Royalty payments for resources severed from State and federally owned land provide New Mexico a share of the production value of oil and gas extracted, while bonuses are one-time payments made by a lessee for the right to lease State and federal land to begin production and extraction. The latter includes a high degree of volatility, especially in a high-price market for oil and gas.

New Mexico's CREG provides general rules regarding how annual direct oil and gas revenues are impacted by price and production. In the August 2022 consensus revenue estimate, the impacts from changes for both oil and natural gas were determined to be as follows:

[13] "Finance Facts: Oil and Natural Gas Revenue," New Mexico Legislative Finance Committee, May 2021. Accessed at https://www.nmlegis.gov/Entity/LFC/Documents/Finance_Facts/finance%20facts%20oil%20and%20gas%20revenue.pdf

[14] Richard Anklam and Deborah Seligman, "Oil and Natural Gas Taxing in New Mexico," New Mexico Tax Research Institute and EnergyAdvocate LLC, accessed at https://www.nmlegis.gov/handouts/RSTP%20072111%20Item%200%20Oil%20and%20Natural%20Gas%20Taxing%20in%20New%20Mexico.pdf

- A $1 change in the annual average New Mexico price of oil has about a $37.7 million impact;

- A 10 cent change in the annual average New Mexico price of natural gas has about a $16.6 million impact;

- Each additional million barrels of oil generates about $5.8 million in severance taxes and federal royalties; and

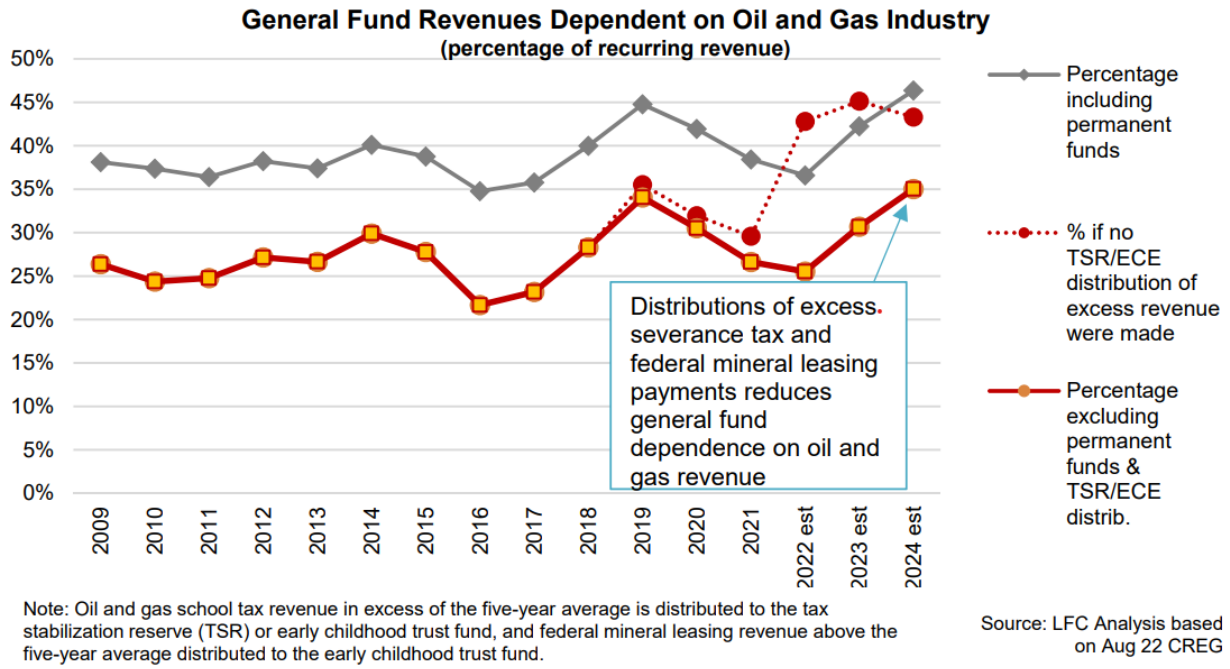
- Each additional 10 billion cubic feet of natural gas generates about $4.2 million in severance taxes and federal royalties.[15]

The CREG analysis notes that these changes do not consider indirect effects, such as changes in the gross receipts tax or personal income tax receipts resulting from job or income growth in the industry. The New Mexico Tax Research Institute (NMTRI) has developed calculations regarding the impact that the oil and gas sector has on General Fund revenue. NMTRI argues that in Fiscal Year 2021, the impact on recurring revenues beyond direct severance revenues included 7.7 percent of the gross receipts tax revenue and 9.7 percent of the personal income tax revenue, among others, with oil and gas having a total contribution of 35 percent of General Fund revenues.[16]

This large contribution by the industry was also highlighted in the August 2022 consensus revenue estimate. As shown in the graph developed by the CREG, the total percentage of recurring funds, including permanent funds, provided to the general fund was nearly 40 percent in 2021, and expected to grow to over 45 percent by 2024 (including stabilization distributions).

[15] "Money Matters: General Fund Consensus Revenue Estimate," New Mexico Legislative Finance Committee, 17 August 2021, accessed at https://www.nmlegis.gov/Handouts/ALFC%20081722%20Item%202%20Money%20Matters%20General%20Fund%20Consensus%20Revenue%20Estimate.pdf

[16] "State And Local Revenue Impacts of the Oil and Gas Industry Fiscal Year 2021 Update," New Mexico Tax Research Institute, accessed at https://d3n8a8pro7vhmx.cloudfront.net/nmoga/pages/1662/attachments/original/1638319798/NMTRI_State_and_Local_Revenue_Impacts_of_Oil_and_Gas_Industry_FY_2021.pdf?1638319798



Note: Oil and gas school tax revenue in excess of the five-year average is distributed to the tax stabilization reserve (TSR) or early childhood trust fund, and federal mineral leasing revenue above the five-year average distributed to the early childhood trust fund.

Source: LFC Analysis based on Aug 22 CREG

When developing the budget for the coming fiscal year, the executive and legislative branches of New Mexico create independent budget recommendations that are then reconciled and amended as part of the development of a final budget. As part of this process, New Mexico's CREG forecasts are used to determine available revenues for the General Fund.[17] These estimates are given to both the executive branch and the legislative branch as a common set of numbers to develop the budget. With some exceptions, the group generally provides updates to their revenue estimates in August and December, and these estimates include the preceding fiscal year with audited or unaudited numbers as well as forecasts for the upcoming five fiscal years. Changes from prior forecasts for the examined fiscal year and percent changes from the preceding fiscal year are also included.

While the use of unaudited numbers leads to a degree of imprecision versus audited actual numbers, the CREG's numbers provide an important foundation for policymakers in the budget process and a general view of what revenues New Mexico can anticipate to support the General Fund. There are 10 major categories of "recurring" revenue for the State:

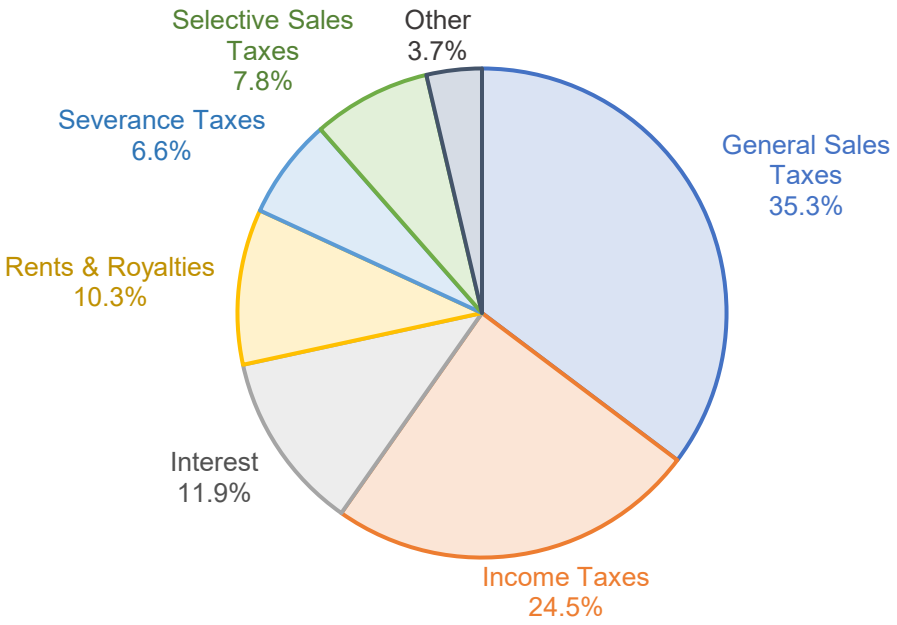
- General sales tax revenue, which includes the net gross receipts tax and compensating tax
- Selective sales tax revenue, which is largely composed of excise taxes on goods like tobacco and gaming as well as insurance premium taxes
- Income tax revenue, including personal income taxes and corporate income taxes

[17] An overview of the budget process and implications of the budget is described in detail in New Mexico Voices' "A Guide to New Mexico's State Budget," available at https://www.nmvoices.org/archives/6120

- Severance tax revenue, from oil, gas, and other natural resource extractions – deductions for tax stabilization measures that include the Tax Stabilization Reserve and Early Childhood Trust Fund are included in this section
- License fees
- Interest from other funds that include the Land Grant Permanent Fund, State Treasurer's Office, and Severance Tax Permanent Fund
- Rents and royalties from federal mineral leasing and the State Land Office
- Tribal revenue sharing
- Miscellaneous receipts
- Reversions

For the purposes of this analysis, license fees, tribal revenue sharing, miscellaneous receipts, and reversions have been combined and are represented in the category of "Other" given their relatively smaller individual revenue amounts compared to the other aggregate categories.

General Fund Recurring Revenue Proportion by Source, 10-Year Average (FY2012 to FY2021)



Includes contributions towards tax stabilization funds

Source: New Mexico Consensus Revenue Estimates

Using the ten-year average for the period that includes FY2012 to FY2021, almost half of the revenue directed to the General Fund came from general or selective sales taxes, with nearly a quarter from income taxes. Direct severance taxes, interest earnings, and rents and royalties, which are driven primarily by the oil and gas industry, contributed almost 29 percent of recurring revenue on average, with direct severance taxes contributing the smallest portion.

An analysis conducted by the New Mexico Tax Research Institute describes a far-reaching impact of the oil and gas industry revenue on the State's general fund beyond direct severance taxes alone.[18] As noted earlier, the Institute's analysis indicated that in fiscal year 2021, the impact of the oil and gas industry in the aggregate was 35 percent. The calculations were conducted using the August 2021 consensus revenue estimate, and their analysis suggests that nearly $3 billion in recurring general fund revenue is attributable to the oil and gas industry.

Based on the New Mexico Tax Research Institute's analysis, the oil and gas industry accounts for the majority of severance taxes, interest, and rents and royalties revenue, while also having also having a smaller proportion (yet still high dollar impact) on other major categories in general sales tax revenue and income tax revenue.

[18] "State And Local Revenue Impacts of the Oil and Gas Industry Fiscal Year 2021 Update," New Mexico Tax Research Institute

Table 3: FY21 Oil and Gas Share of General Fund Revenue

Revenue type	Total General Fund Revenue	Oil and Gas Revenue			
		FY21		Change from FY20	
		Amount	Percent	Amount	Percent
RECURRING REVENUES:	$MM	$MM		$MM	
Gross Receipts Tax	$2,852	$219	7.7%	-$122	-35.8%
Compensating Tax	$63	$14	22.0%	-$0.4	-2.6%
Personal Income Tax	$1,899	$185	9.7%	$19	11.3%
Corporate Income Tax	$145	$19	13.0%	$11	129.4%
Oil & Gas School Tax	$420	$420	100.0%	$31	7.9%
O&G Conservation Tax	$39	$39	100.0%	$9	31.9%
Natural Gas Processors Tax	$10	$10	100.0%	-$4	-29.7%
Land Grant Perm. Fund Dist.	$721	$697	96.7%	$46	7.0%
Sev Tax Perm. Fund Dist.	$234	$203	86.6%	$8	3.9%
Federal Mineral Leasing	$811	$803	99.0%	-$6	-0.7%
Land Office Income	$38	$10	26.0%	-$7	-41.9%
All Other	$814	--	NA	--	NA
TOTAL RECURRING	**$8,046**	**$2,619**	**32.5%**	**-$17**	**-0.6%**
Non-Recurring Revenues	-64	--	NA	--	NA
SUBTOTAL Operating Revenue	**$7,981**	**$2,619**	**32.8%**	**-$17**	**-0.6%**
O&G School Tax to TSR	$335	$335	100%	$169	101.5%
CIT to Film Credits	$83	$10	12%	$0.1	1.4%
GRAND TOTAL	**$8,464**	**$2,963**	**35%**	**$152**	**5.4%**

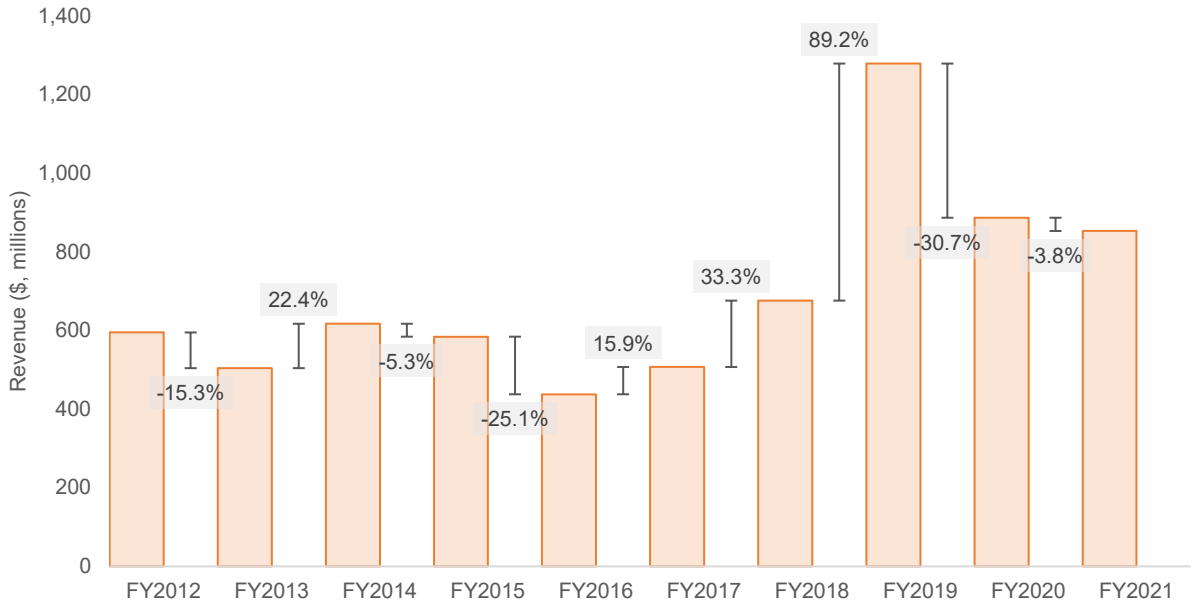
Sources: Total General Fund revenue from August 2021 Consensus Revenue Estimate. Oil and gas revenues calculated by NMTRI.

As described earlier, the New Mexico Legislative Finance Committee staff attributes a slightly lower percentage of about 30 percent (if no tax stabilization distributions are included) for fiscal year 2021, but nearly 40 percent of General Fund recurring revenues if the permanent fund distributions are included.

Excluding tax stabilization distributions made using revenue from the gross oil and gas school taxes, rents and royalties revenue and extraction tax revenue have the highest average annual growth rates over the 10 year period at 10 percent and 9 percent, respectively. However, both show notable volatility based on year-to-year percent changes.

Rents and royalties revenue experienced high volatility between fiscal year 2012 and fiscal year 2021, with the largest change occurring between fiscal year 2018 to fiscal year 2019 – an increase of nearly 90 percent – due to changes in federal policy. But in the following two fiscal years, revenue from rents and royalties declined by over 30 percent.

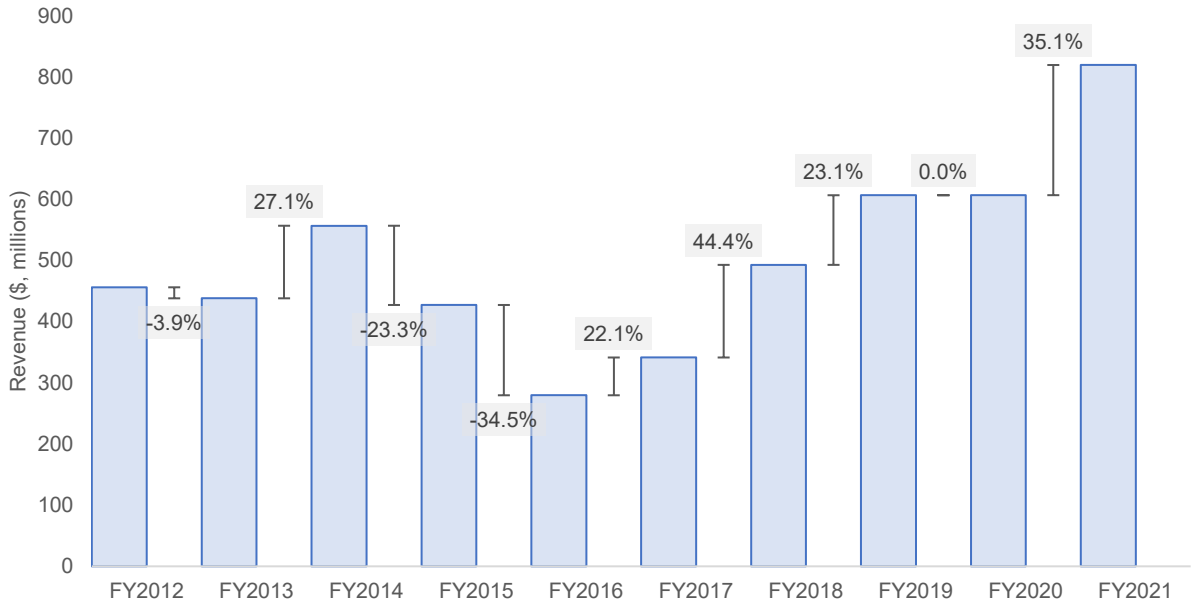
Rents and Royalties Annual Changes, FY2012 to FY2021



Source: New Mexico Consensus Revenue Estimates

Extraction tax revenue saw a significant decline from fiscal year 2014 to fiscal year 2016, coinciding with the major budget shortfall experienced by New Mexico in fiscal year 2016, before experiencing a resurgence through fiscal year 2021 based on the December CREG releases.

Severance Tax Annual Changes without Tax Stabilization Distributions, FY2012 to FY2021



Source: New Mexico Consensus Revenue Estimates

Given the importance of the forecasts provided by the CREG to the budget process, accuracy is important to help set expectations. The December forecasts examined in this analysis are developed by the CREG in the middle of each fiscal year and provide an outlook for that fiscal year and beyond. These forecasts also drive budget recommendations from the executive and legislative branches. The following table shows the percent difference between the actual revenues released for a fiscal year, both audited and unaudited, and the forecast from the preceding December for that fiscal year (excluding tax stabilization distributions). Differences greater or less than 5 percent are highlighted green and red, respectively.

Percent Difference – Actual Numbers and Preceding December Forecast, FY2012 to FY2021

Category	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
General Sales	2.9%	-3.9%	2.2%	0.6%	-9.9%	7.5%	15.1%	3.2%	-0.2%	15.7%
Income Taxes	2.3%	4.3%	-2.6%	4.9%	-10.7%	3.6%	9.4%	7.2%	4.5%	29.2%
Interest	0.3%	0.1%	1.8%	1.2%	0.0%	-0.4%	1.0%	6.9%	1.2%	-2.4%
Rents & Royalties	24.3%	0.8%	14.8%	0.8%	-4.7%	6.8%	23.1%	8.2%	0.3%	20.6%
Extraction Taxes	11.6%	4.5%	16.6%	-10.1%	-15.6%	10.0%	37.4%	43.9%	-5.3%	59.9%
Selective Sales	-1.1%	-3.0%	-3.6%	2.6%	2.9%	1.5%	-8.3%	-1.8%	0.5%	15.8%
Other	10.1%	3.7%	7.3%	4.3%	-1.2%	10.5%	22.0%	29.1%	-4.3%	-1.1%
Total	4.9%	0.0%	3.0%	1.2%	-7.4%	5.1%	11.9%	7.9%	0.5%	19.5%

Source: New Mexico Consensus Revenue Estimates

New Mexico's CREG is generally accurate or conservative in their forecasts. Notably, in the period examined, severance taxes saw the most variation between forecast and actual numbers as well as dramatic increases in fiscal years 2019 and 2021. However, with the distributions to the tax stabilization reserve or early childhood education funds included, the extraction tax percent changes between the actual number and preceding December forecast are much more closely aligned – 0.5 percent for fiscal year 2019, 1.4 percent for fiscal year 2020, and 3.8 percent for fiscal year 2021, further highlighting the smoothing effect of the State's tax stabilization measures.

New Mexico's general fund consensus revenue estimate for August 2022 provides a projection that revenues will remain consistently strong.[19] The August estimate also shows total revenue substantially outperforming even the previous December 2021 estimate.

[19] "General Fund Consensus Revenue Estimate – August 2022," New Mexico Consensus Revenue Estimating Group, 19 August 2022, accessed at https://www.nmdfa.state.nm.us/board-of-finance/general-fund-and-the-economy/general-fund-revenue-estimates/

August 2022 Total Recurring General Fund Revenue Estimates

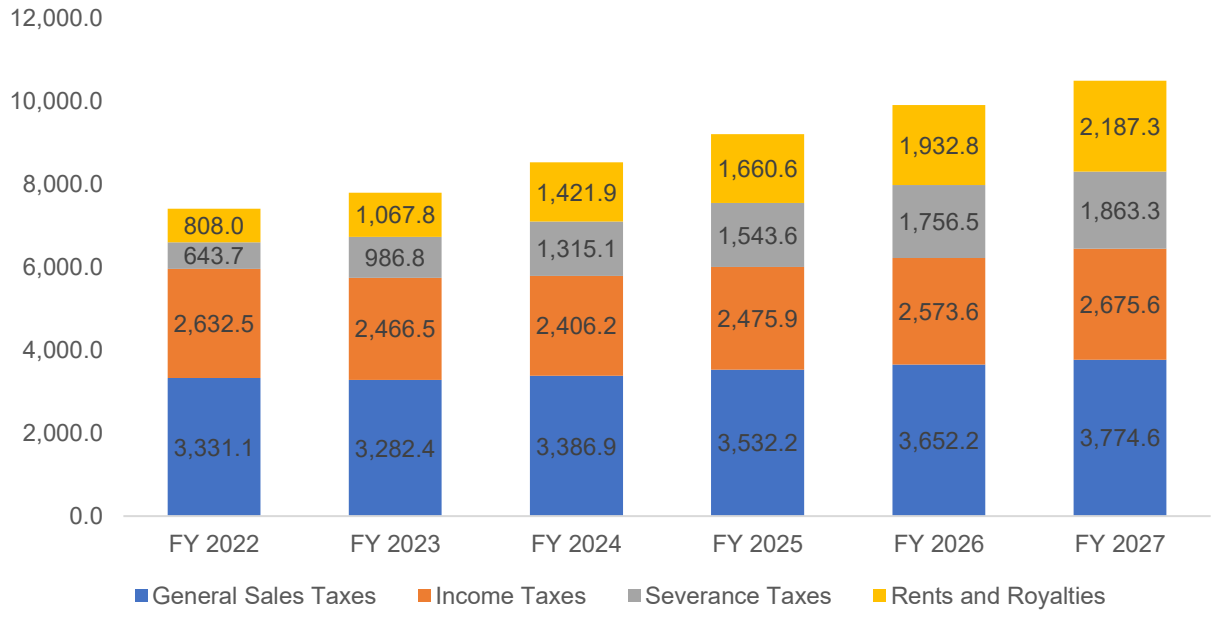
Fiscal Year	Dec. 2021 Est. (adj. for legis)	Aug 22 Est.	Change from Prior (Dec 21)	% Change from FY21	$ Change from FY21
FY 2022	8,163.1	9,216.6	1,053.6	14.0%	1,131.5
FY 2023	8,845.4	9,847.1	1,001.7	6.8%	630.4
FY 2024	9,235.0	10,859.0	1,624.0	10.3%	1,011.9
FY 2025	9,767.3	11,740.6	1,973.4	8.1%	881.6
FY 2026	10,328.2	12,546.1	2,217.9	6.9%	805.4
FY 2027	-	13,272.9	-	5.8%	726.8

Numbers in millions, $

Source: New Mexico Consensus Revenue Estimating Group

General sales taxes and income taxes are the consistent drivers of the upward-adjusted figures, with total severance taxes and rents and royalties adjustments showing larger changes in later years. Notably for extraction tax estimates, significant amounts of revenue are diverted towards the tax stabilization reserve fund or early childhood trust fund in the earlier years of the projection period while lower in later years, demonstrating the impact of the recent windfall on the five-year averages used in the calculation of how much revenue is diverted.

August 2022 CREG Major Sources of Revenue Estimates



Numbers in millions, $

Source: New Mexico Consensus Revenue Estimating Group

August 2022 Excess to Stabilization Funds Estimates

Fiscal Year	Gross Oil and Gas School Tax Excess to TSR or Early Childhood Trust Fund	Gross Federal Mineral Leasing Excess to Early Childhood Trust Fund
FY 2022	1,300.3	1,501.5
FY 2023	1,245.3	1,347.9
FY 2024	617.0	966.6
FY 2025	304.2	566.4
FY 2026	115.2	254.6
FY 2027	-	-

Numbers in millions, $

Source: New Mexico Consensus Revenue Estimating Group

Recent State Efforts to Think Longer-Term

New Mexico policymakers recently engaged in an effort to determine a longer-term future of oil and gas production and attendant budget implications for the State in a July 2022 Legislative Finance Committee session. The Consensus Revenue Estimating Group (CREG), which includes staff from the New Mexico Department of Finance and Administration, Taxation and Revenue Department, Department of Transportation, and Legislative Finance Committee, presented on a long-term outlook for the General Fund, the primary fund for State expenditures. The group developed a forecast of General Fund growth through Fiscal Year 2050 that uses a mix of general economic forecasts from Moody's Analytics and IHS Markit with oil and natural gas forecasts specifically for New Mexico from Rystad Energy. While the group analyzed long-term trends, policymakers did not create a projection of actual revenues.

In a review of mid- to long-term revenue options, the Legislative Finance Committee staff projected that strong oil production will be maintained at least through the next 10 to 15 years.[20] Staff explored different opportunities for insulating New Mexico against the volatility of oil and gas severance tax revenue, such as investing the revenues for future use in the Severance Tax Permanent Fund or extending the five-year average formula to eight or ten years. Staff also presented stress testing on various scenarios using projections through Moody's and potential effects on spending growth through FY2027. Ultimately, the group encouraged careful consideration for spending of recurring funds so that appropriations don't exceed revenue in the long term.

The CREG coupled assumptions from Rystad Energy's forecast of peak production of oil and gas in New Mexico occurring in FY2029 and FY2031, respectively, with a no-action scenario of other variables such as State tax expenditures, tax rates, and population growth. The group's determination was that General Fund revenue growth projections through FY2050 will be below

[20] "Mid- to Long-term Revenue Options," New Mexico Legislative Finance Committee, 20 July 2022, accessed at https://www.nmlegis.gov/handouts/ALFC%20072022%20Item%207%20Mid-%20to%20Long-Term%20Revenue%20Options.pdf

the current ten-year trend and remain at a slow growth in all scenarios due to a decline in revenue derived from oil and gas extraction. The group ultimately concludes that "[a]djusted for inflation, the general fund is looking at a contraction" even in the face of above-trend revenue in the short term.[21]

However, because the State's short-term revenue projections are so robust, and those revenues are then counted as part of the "base," growth that is slower than trend in the out years still results in substantially increased aggregate net revenues over a medium-term horizon. And, as noted above, the CREG forecast focused on overall trends and percentages, with the group electing not to publish revenue dollar estimates for the projection's various charts and tables.

But as noted above, the CREG forecast does acknowledge a sharp decline in direct severance revenues over the very long-term. Historically, revenues attributable to oil and gas have ranged between 25 percent to 35 percent of General Fund revenues in a given fiscal year. The CREG forecast estimates that by FY2050, severance revenue will comprise 10 percent of General Fund revenues, with growth occurring from other sources including gross receipts tax and personal income tax revenue.

The CREG provided a long-term outlook that focused on the United States and New Mexico economies, as well as on oil and natural gas economic factors.[22]

In the three forecasts provided from Moody's Analytics, IHS Markit, and Rystad Energy, all three projected the West Texas Intermediate price of oil to peak in late 2022, followed by a drop – the IHS Markit forecast shows prices not rising above the 2022 peak until the late 2040s, while Moody's Analytics and Rystad Energy forecasts show slower growth rates that still exceed pre-pandemic prices. The Moody's Analytics and IHS Markit oil production forecasts show United States oil production peaking between 2028 and 2033, according to CREG. Similarly, the group provides Rystad Energy's oil and natural gas production projections specific to New Mexico which show peak production in that same timeframe.

Ultimately, they conclude that the growth rates of the economic scenarios modeled using Moody's Analytics and IHS Markit will slow below the current 10-year general fund growth rate by FY2029 and FY2030 and that "[d]espite steady growth from GRT, PIT and Other Revenues, the sharp decline in direct Oil and Gas Severance Revenue, pulls the General Fund Growth down" which will ultimately cause a contraction. (However, to reiterate, the recent spike in State revenues is "baked in" to the short-term baseline forecasts. Thus, even if growth were to dip below trend after FY 2030, the CREG forecast implies record-setting State revenues for years to come.)

[21] Ibid.
[22] "Long-Term Outlook," New Mexico Legislative Finance Committee, 20 July 2022, accessed at https://www.nmlegis.gov/handouts/ALFC%20072022%20Item%207%20Balancing%20Mid-to-Long-Term%20Revenues_CREG.pdf

Other Industry Experts and Stakeholder Predictions are Consistent with a Potential Peak Within the Next Decade

OPEC provides a World Oil Outlook, with the 2022 iteration projecting out to 2045.[23] Measuring in millions of barrels a day, the organization estimates that global oil demand will rise to 110 million barrels a day in 2045, but highlight that "[o]verall growth slows over the projection period, with virtually no increase after 2035, hinting to a relatively long period of plateauing oil demand at the global level" which they attribute to a rise in alternatives to oil for energy.

Oil and gas companies such as ExxonMobil provide their own long-term projections for energy outlooks. ExxonMobil projects that by 2050, "oil and natural gas will account for 55% of the world's energy mix in 2050, with renewables mostly displacing coal" and "[n]atural gas demand rises, largely to help meet increasing needs for electricity and lower-emission industrial heat".[24] ExxonMobil also highlights in their energy outlook the initiatives they are pursuing to lower emissions through technology such as biofuels, hydrogen, and carbon capture and storage, in order to reach net-zero emissions over the very long-term.

The Federal Reserve Bank of Dallas releases quarterly energy surveys of oil and gas executives in the Federal Reserve's Eleventh District, which also covers the Permian Basin region of New Mexico, to assess the current activity in the market.[25] In the third quarter energy survey released in September 2022, oil and gas executives who responded to the survey said that expansion in the oil and gas sector continued in the quarter at a high pace, although slightly lower than previous quarter, and respondents generally stated that they expect prices to remain strong through the end of the year. They expected the West Texas Intermediate spot price to be almost $90 per barrel by the end of 2022, almost $5 above the price per barrel at the time of the survey, but for the Henry Hub spot price of natural gas to be nearly $0.20 lower than the price at the time of the survey. Eighty-five percent of the executives surveyed responded affirmatively to the question "Do you expect a significant tightening of the oil market by the end of 2024, given the current underinvestment in exploration?" but 79 percent of respondents also reported expectations that some financial investors will return to the oil and gas sector, with 11 percent expecting "many" to return and 10 percent expecting investors not to return.

The International Energy Agency (IEA) releases an annual World Energy Outlook in which they conduct analyses and projections on current and future energy sector trends.[26] In the 2022 report, the Agency examines three scenarios:

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[23] "World Oil Outlook 2045," Organization of the Petroleum Exporting Counties, 2022, accessed at https://woo.opec.org/chapter.php?chapterNr=311

[24] "Outlook for Energy: A perspective to 2050," ExxonMobil, 2022, accessed at https://corporate.exxonmobil.com/-/media/global/files/outlook-for-energy/2022/2022-outlook-for-energy-executive-summary.pdf?la=en&hash=240E8F434D13911739A734EF8281F1AA7DEB7271

[25] "Oil and Gas Expansion Continues; Cost Pressures, Supply-Chain Delays Persist," Federal Reserve Bank of Dallas Energy Survey, 28 September 2022, accessed at https://www.dallasfed.org/research/surveys/des/2022/2203.aspx#tab-report

[26] "World Energy Outlook," International Energy Agency, 2022, accessed at https://iea.blob.core.windows.net/assets/830fe099-5530-48f2-a7c1-11f35d510983/WorldEnergyOutlook2022.pdf

- “Stated Policies Scenario” (STEPS) which is focused on current policies in place.

- “Announced Pledges Scenario” (APS) which “assumes that all aspirational targets announced by governments are met on time and in full, including their long-term net zero and energy access goals.”

- “Net Zero Emissions by 2050 Scenario” (NZE) which would represent the path to global average temperatures not exceeding 1.5 degrees Celsius and “universal energy access to modern energy by 2030.”

In their outlook for liquid fuels, the International Energy Agency highlights the current uncertainties in the oil market, both near- and long-term, based on a variety of factors and shifts in the market especially since the COVID-19 pandemic and more recently due to the war in Ukraine.

In the estimate for STEPS, the Agency predicts that peak oil demand will occur in the mid-2030s and experience a slight decline by 2050, with a price of approximately $82 a barrel in 2030. The APS projects peak oil demand in the mid-2020s, which will fall by 40 percent between 2030 and 2050, leading to a price drop to $65 a barrel in 2030 and continuing to decline after. In the NZE, the projection is that oil demand does not return to pre-pandemic levels, and “falls by 2.5% each year on average between 2021 and 2030, and by just under 6% each year from 2030 to 2050” with prices falling to $35 a barrel in 2030 and $24 a barrel in 2050.

In their outlook for gaseous fuels, the International Energy Agency discusses the historical view of natural gas as a bridge to clean energy, but concedes that Russia’s invasion of Ukraine and the ensuing shift of European countries to reduce their reliance on Russian natural gas has prompted new questions for its future – even as it remained a stable source in the early days of the COVID-19 pandemic.

For the STEPS projection, the Agency predicts that demand for natural gas will peak in 2030 and remain at that level through 2050. The APS projects that demand for natural gas peaks soon, and drops 10 percent by 2030 compared to 2021, then down by almost 45 percent in 2050 compared to 2021. In the NZE scenario, natural gas demand drops by 20 percent by 2030 compared to 2021, and by 2050, “unabated natural gas meets less than 15% of total demand for gaseous fuels; low-emissions gases account for over 70% of total gaseous fuel demand and natural gas used either for non-combustion purposes or equipped with carbon capture, utilization and storage (CCUS) for the remainder.”

Boston Consulting Group’s Center for Energy Impact conducted a survey of 250 institutional investors in the oil and gas industry finding that “investors are optimistic that the oil and gas (O&G) industry can continue its recent streak of strong short-term shareholder returns. Yet they also want leadership teams in the industry to think through value creation during the looming

energy transition to more environmentally sustainable options"[27]. Key findings from Boston Consulting Group's survey include the following:

- Nearly 70% of respondents expect oil prices to remain above $60 per barrel through 2024

- 85% of respondents view natural gas as a bridge between fossil fuels and renewable energy and 70% would like to see oil and gas companies to pursue growth in natural gas

- Nearly 67% of respondents believe that peak oil demand will occur by 2030

Additionally, over half of investors feel pressure from clients to divest in fossil fuels, and more than three-quarters want better clarity from energy companies on their plans for the energy transition. While the survey respondents were not unanimous in what they view as the necessary steps to meet emissions targets, the overall trend for investors appears to be pivoting away from fossil fuels as a major component of their portfolios in the long-term.

Clearly, the price of oil and natural gas is determined through a complex web of supply and demand that is influenced by a variety of factors, both based on physical conditions and financial markets. The U.S Energy Information Administration (EIA) provides an overview of the different influences on the oil and gas market. In the United States, oil and natural gas futures contracts are traded as commodities on the New York Mercantile Exchange (NYMEX), with the underlying commodities being West Texas Intermediate and Henry Hub, respectively – prices of these commodities are used as benchmarks for the North American market. However, these specific commodities do not exist in a vacuum and are subject to economic factors in the global market.

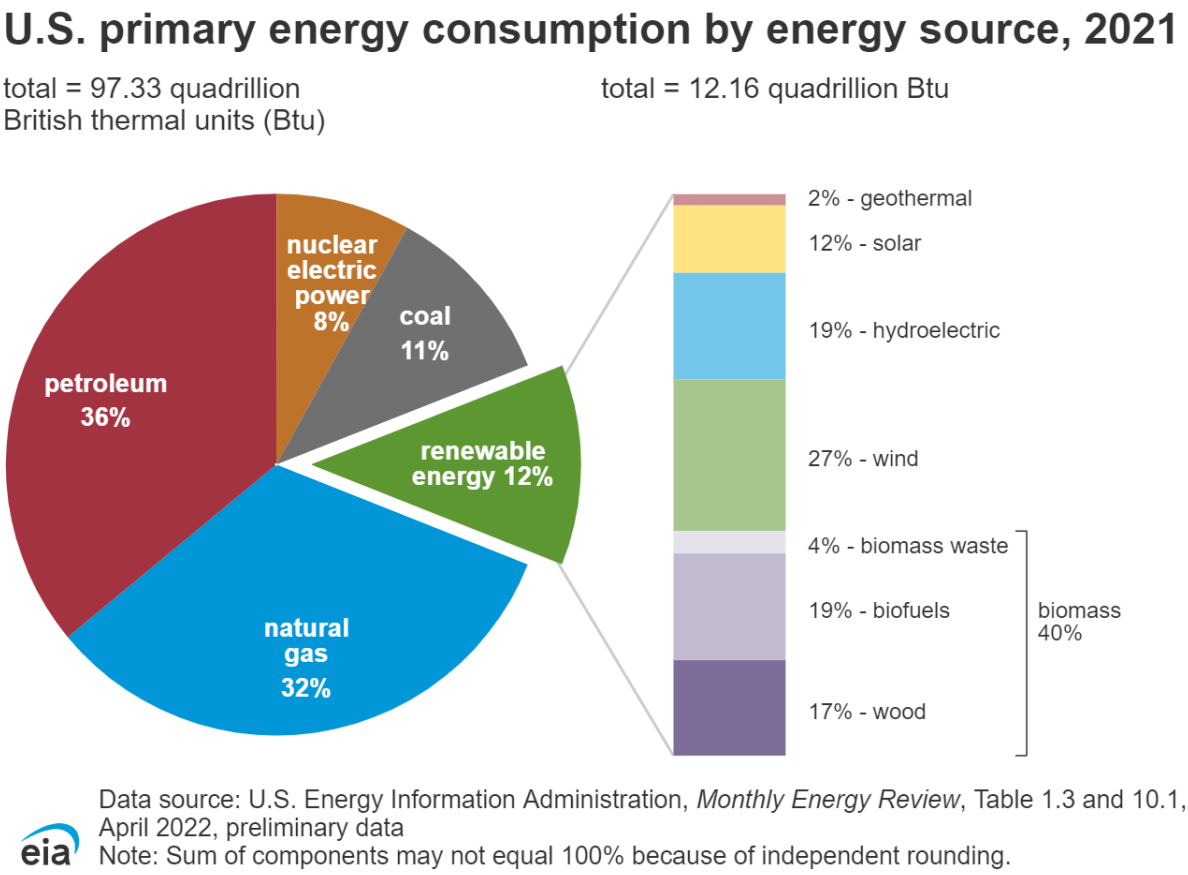
In their overview on oil prices and outlook, the U.S. EIA highlights that economic growth is the biggest driver in changes to demand for oil.[28] Due to having some of the world's largest oil reserves, OPEC can influence the global price of oil given that members maintain "the world's entire spare crude oil production capacity" which the U.S. EIA defines as "the volume of oil production that can be brought online within 30 days and sustained for at least 90 days".

Beyond OPEC, the U.S. EIA describes how the global market that sets the price of oil is "the result of thousands of transactions taking place simultaneously around the world at all levels of the supply chain, from the crude oil producer to the individual consumer" and can be prone to disruptions due to geopolitical events and severe weather, such as hurricanes in the Gulf of Mexico affecting production or harsh winters increasing consumer demand for heating.

[27] Maurice Berns, Rebecca Fitz, Lars Holm, Jamie Webster, and Betsy Winnike, "How Institutional Investors See the Future of Oil and Gas," Boston Consulting Groups, 6 January 2022, accessed at https://www.bcg.com/publications/2022/how-investors-see-future-of-oil-gas
[28] "Oil and petroleum products explained: Oil prices and outlook," U.S. Energy Information Administration, 25 February 2022, accessed at https://www.eia.gov/energyexplained/oil-and-petroleum-products/prices-and-outlook.php

Natural gas prices are similarly subjected to supply and demand conditions, with the same pressure from disruptions or weather affecting demand. The U.S. EIA highlights that similar to oil, economic growth is the primary influence on the natural gas market, and "increases in demand for goods and services from the commercial and industrial sectors may increase natural gas consumption."[29]

In the United States, the mix of what energy sources are used to meet demand also influence price, based on production and availability of different sources. The U.S. EIA provides the following chart highlighting what energy sources were used to meet primary energy consumption – the type of source used to generate energy.[30]



Specifically looking at natural gas and oil, the U.S. EIA provides an overview of changes over time to the energy source mix. Natural gas consumption reached a record high for consumption in 2021 and domestic production has exceeded consumption since 2017, with the increased production pushing prices down and further increasing consumption. Oil production was in a state of decline from 1970 and 2008 before reversing and reaching record production in 2019.

[29] "Natural gas explained: Factors affecting natural gas prices," U.S. Energy Information Administration, 5 October 2021, accessed at https://www.eia.gov/energyexplained/natural-gas/factors-affecting-natural-gas-prices.php
[30] "U.S. energy facts explained," U.S. Energy Information Administration, 10 June 2022, accessed at https://www.eia.gov/energyexplained/us-energy-facts/

For New Mexico specifically, the EIA highlights that the Permian Basin is “one of the most prolific crude oil-producing areas in the nation and the world,” which has contributed to New Mexico’s domestic rise to become the “second-largest crude oil-producing state, after Texas, when it surpassed North Dakota's production.[31] New Mexico is also one of the top 10 states for production of natural gas.

[31] “New Mexico: State Profile and Energy Estimates,” U.S. Energy Information Administration, 21 April 2022, accessed at https://www.eia.gov/state/analysis.php?sid=NM#25

Alternative Scenarios Suggest Long-Term Risk in Reliance on Oil and Gas

Alternative Scenarios Suggest Long-Term Risk in Reliance on Oil and Gas

With a high dependency on the oil and gas industry in the state and a shifting and uncertain landscape for the industry's future, there are concerns over the long-term fiscal health of New Mexico and its state budget in the face of a long-term decline in extraction. PFM has developed a set of scenarios to represent a series of possibilities for the future of oil and gas revenue and its impact on General Fund revenue for New Mexico. Should the industry and the revenue it provides to the State decline, the fallout could have dramatic effects on the state's budget in the future even with current tax stabilization measures in place.

Given the historical revenue volatility described in the previous section, PFM engaged in an effort to model various potential revenue scenarios over a 15-year time horizon to help policymakers plan for an uncertain future. PFM was guided by the following principles as the project team developed the alternative scenarios:

- While it is appropriate to forecast continued uncertainty, it isn't prudent to plan on external factors continuing to drive high oil prices over the long-term.

- Scenarios should reflect – to the extent possible – consensus views on production peaks and future pricing, which are related.

- Scenarios are just that – scenarios. They are not predictions of the future but rather tools for assessing potential impacts and planning for them.

- Scenarios are based on no change in current policy regarding type of taxes, dedication of funding, and levels of taxation.

- Scenarios reflect lags in impact on State revenue due to current policy – e.g., dedicated funds for certain spending; investment of certain revenues.

PFM drew upon a variety of data sources to build it scenarios. First, PFM relied on New Mexico-specific indicators from EIA, including the New Mexico Crude Oil First Purchase Price, NM Crude Oil Production, and WTI Spot Price (described further below). For forward-looking projections, the team used the EIA's Annual Energy Outlook 2022 Total Energy Supply, Disposition, and Price Summary (with multiple cases). Because EIA provides only national forecasts of key variables, PFM analyzed a historical comparison of New Mexico to the US for ratios between the two, with the most recent fiscal year ratio carried forward using the national forecasts, understanding that that ratio may change over time. PFM further adjusted the calendar year data to align with New Mexico's fiscal year for both historical data and future projections.

For State revenues, PFM used the State's Annual Financial Reports from FY12-21, confirming our understanding of the data with Component Appropriations Funds Annual Financial Reports and the Schedule of General Fund Revenues. Next, the team utilized the State Investment Council's Annual Audit Reports from FY12-21. The Annual Reports were used in conjunction with the LFC consensus revenue estimates and the New Mexico Tax Research Institute State and Local Revenue Impacts of the Oil and Gas Industry Fiscal Year 2021 Update to account for the Severance Tax Permanent Fund and Land Grant Permanent Fund income impacts on revenue for the General Fund. Finally, absent a State government source, PFM utilized the State and Local Revenue Impacts of the Oil and Gas Industry Fiscal Year 2021 Update for determining the share of oil & gas revenue on General Fund revenues to determine the magnitude of potential impacts.

The PFM team faced some data limitations when building the scenarios. Long-term forecasts for oil and gas production specifically in New Mexico are rare. The LFC uses a proprietary and customized Rystad forecast which was not provided to PFM upon request (and is not typically provided to outside stakeholders). And, as noted above, EIA provides only national forecasts, so PFM had to make assumptions about how national forecasts would translate to New Mexico over the projection period. EIA provides city gate, residential, commercial, and industrial metrics, but all metrics appear to be specific to consumers, whether that's the utility company (city gate price) or general consumers. PFM had access to the New Mexico Natural Gas Gross Withdrawals and Henry Hub Spot Price data (as available), but historically these metrics have not been a good predictor of State revenues.

Finally, the PFM team utilized the State of New Mexico Oil and Natural Gas Administration and Revenue Database, but certain historical revenue data appears to have been migrated to the Taxation and Revenue Department's Oil & Natural Gas Severance Reports. The Severance Reports include School Tax, Severance Tax, Conservation Tax, and Production Tax by filing period – all but the latter had annual values obtained from the State comprehensive annual financial reports, but the Production Tax is not separately attributed to General Fund revenues, requiring an estimate.

New Mexico General Fund Revenues, FY2012 to FY2021

Fiscal Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total General and Selective Sales Tax	2,428.0	2,397.7	2,514.3	2,695.5	2,553.8	2,586.8	2,978.3	3,291.0	3,571.5	3,475.0
Total Income Taxes Without Transfers*	1,797.7	1,870.4	1,827.2	1,976.4	1,834.3	1,450.8	1,652.1	1,694.8	1,755.1	1,956.1
Total Severance Taxes	456.4	438.4	557.1	427.5	279.8	341.6	493.1	607.0	440.1	820.0
Total License Fees	49.6	50.0	51.7	55.9	54.8	53.3	61.4	56.0	50.7	22.2
Total Interest Earnings with SIC Data*	662.8	653.0	662.1	709.7	773.8	738.8	802.9	946.2	990.5	961.0
Total Rents and Royalties	595.1	504.3	617.3	584.4	437.8	507.2	676.1	1,279.3	887.0	811.5
Total Miscellaneous Receipts and Fees	113.3	112.0	112.9	123.3	112.5	98.3	101.6	119.4	79.2	92.5
Total Other Revenues	110.7	121.1	131.3	95.3	96.0	367.2	0.2	0.1	0.2	0.5
Total	6,213.5	6,146.8	6,473.9	6,668.0	6,142.7	6,144.0	6,765.6	7,993.8	7,774.2	8,138.7

Numbers in millions, $

*Income Tax numbers do not include transfers for retiree health care and reversions

**Interest earnings data from State Investment Council audit reports

Source: New Mexico Annual Financial Reports, New Mexico State Investment Council Annual Audits

Over the 10-year historical period examined, the compound annual growth rate (CAGR) of General Fund revenues (as defined above) was 3.0 percent. PFM did a straight-line projection using the historical CAGR through the projection period.

Next, PFM extrapolated the State's revenue projection from the LFC and CREG at their summer meeting. Recall that the State did not actually publish a revenue projection, so PFM inferred a State projection from the various growth rates embedded in the presentation's charts and tables.

Then, PFM conducted a systematic regression analysis of dozens of available oil and gas historical data points and tested their predictive relationship to New Mexico's General Fund revenues. Many variables were not predictive and/or not statistically significant. However, PFM identified a regression equation using the Cushing, OK WTI Spot Price FOB (Dollars per Barrel), New Mexico Crude Oil First Purchase Price (Dollars per Barrel), and New Mexico Field Production of Crude Oil annual data that fit. While these are annual data points (and therefore only include ten observations across the historical period), the R Square value of the equation is 0.986 – indicating an extremely high predictive power – and the P-values were all well under 0.05, as follows:

Data	P-value
Intercept	0.00000
Cushing, OK WTI Spot Price FOB (Dollars per Barrel)	0.00251
New Mexico Crude Oil First Purchase Price (Dollars per Barrel)	0.00449
New Mexico Field Production of Crude Oil	0.00000

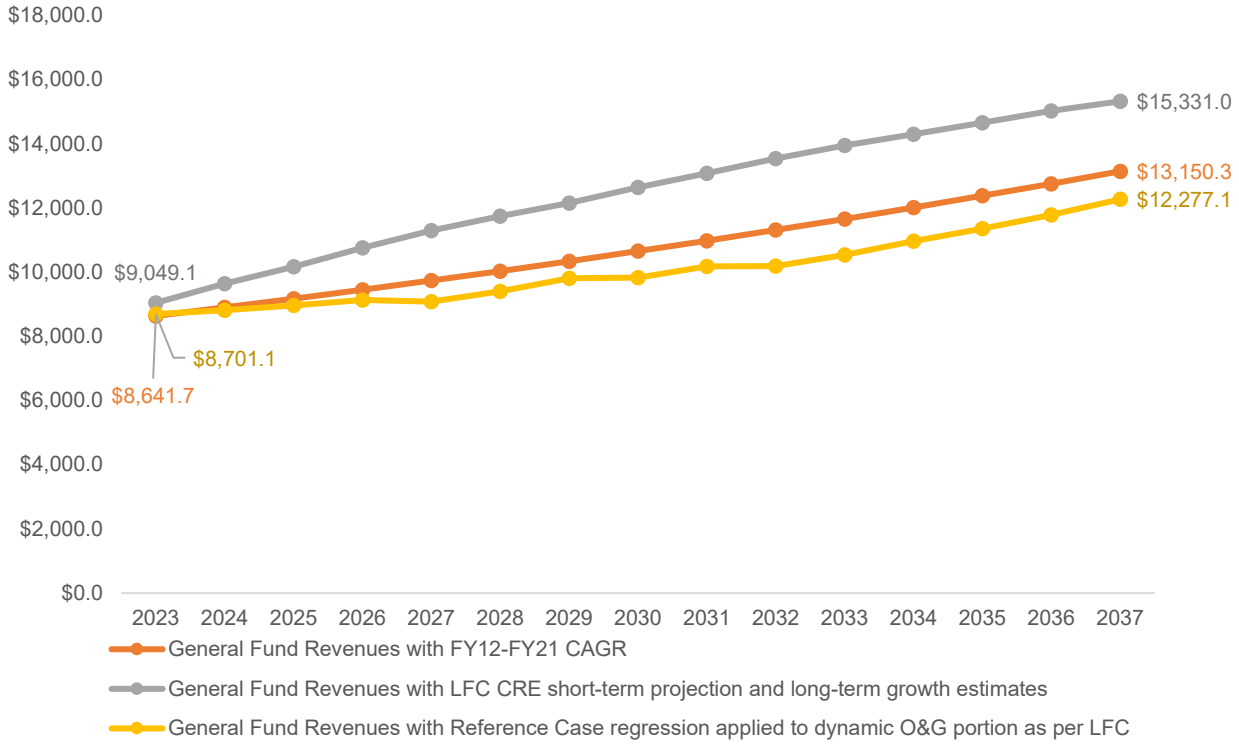
Applying the regression equation to the forward-looking projected data for each metric (as adjusted for New Mexico; see Appendix C) results in the following range of "baseline" scenarios.

General Fund Revenue Scenarios 1-3, FY2023 to FY2037

#	Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030
1	General Fund Revenues with FY12-FY21 CAGR	$8,641.7	$8,904.8	$9,175.9	$9,455.2	$9,743.1	$10,039.7	$10,345.3	$10,660.3
2	General Fund Revenues with LFC CRE short-term projection and long-term growth estimates	$9,049.1	$9,643.2	$10,178.8	$10,761.8	$11,299.9	$11,751.9	$12,163.2	$12,649.7
3	General Fund Revenues with Reference Case regression applied to dynamic O&G portion as per LFC	$8,701.1	$8,818.0	$8,967.9	$9,134.2	$9,092.1	$9,404.3	$9,813.4	$9,837.9
#	**Fiscal Year**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**Total**
1	General Fund Revenues with FY12-FY21 CAGR	$10,984.8	$11,319.2	$11,663.8	$12,018.9	$12,384.8	$12,761.8	$13,150.3	$161,249.9
2	General Fund Revenues with LFC CRE short-term projection and long-term growth estimates	$13,092.5	$13,550.7	$13,957.2	$14,306.2	$14,663.8	$15,030.4	$15,331.0	$187,429.4
3	General Fund Revenues with Reference Case regression applied to dynamic O&G portion as per LFC	$10,187.2	$10,193.3	$10,539.6	$10,975.4	$11,359.3	$11,795.9	$12,277.1	$151,096.6

Numbers in millions

General Fund Revenue Scenarios 1-3, FY2023 to FY2037



What this analysis indicates is that over the projection period:

- The General Fund revenues through FY2037 using the FY12-21 CAGR would be $161.2 billion ($13.2 billion in FY2037).

- The General Fund revenues through FY2037 using the inferred State forecast would be $187.4 billion ($15.3 billion in FY2037).

- The General Fund revenues through FY2037 using the regression prediction based on industry metrics would be $151.1 billion ($12.3 billion in FY2037).

In other words, the revenue gap resulting from applying the historical growth in General Fund revenues vs. the State projection could be $26.2 billion in the aggregate over the 15-year projection period, with the differences most pronounced in the outyears. The revenue gap resulting from applying the regression prediction could be an additional $10.2 billion vs. the historical straight-line projection, or $36.3 billion (rounded) vs. the State projection. Note that even if additional stabilization measures result in increased diversions to the General Fund, there would be a corresponding loss in permanent funds (and associated potential investment gains).

To provide an alternatives analysis of these baseline scenarios, PFM used various “cases” from the industry metrics data to model various scenarios, as follows:

- Price: Global market balances, primarily non-domestic supply and demand factors, will drive future crude oil prices. To account for these factors, oil prices are an external assumption in our analysis. In the AEO2022 High Oil Price case, the price of Brent crude oil, in 2021 dollars, reaches $170 per barrel (b) by 2050, compared with $90/b in the Reference case and $45/b in the Low Oil Price case.

- High Supply Case: Compared with the Reference case, the High Oil and Gas Supply case assumes that the estimated ultimate recovery per well for tight oil, tight gas, or shale gas in the United States is 50 percent higher. This side case assumes that undiscovered resources in Alaska and the offshore Lower 48 states are 50 percent higher than in the Reference case. Rates of technological improvement that reduce costs and increase productivity in the United States are also 50 percent higher than in the Reference case.

- Low Supply Case: Conversely, the Low Oil and Gas Supply case assumes that the estimated ultimate recovery per well for tight oil, tight gas, or shale gas in the United States; the undiscovered resources in Alaska and the offshore Lower 48 states; and rates of technological improvement are all 50 percent lower.

- Economic Growth: The High Economic Growth case and Low Economic Growth case address the effects of economic assumptions on the energy consumption modeled in the

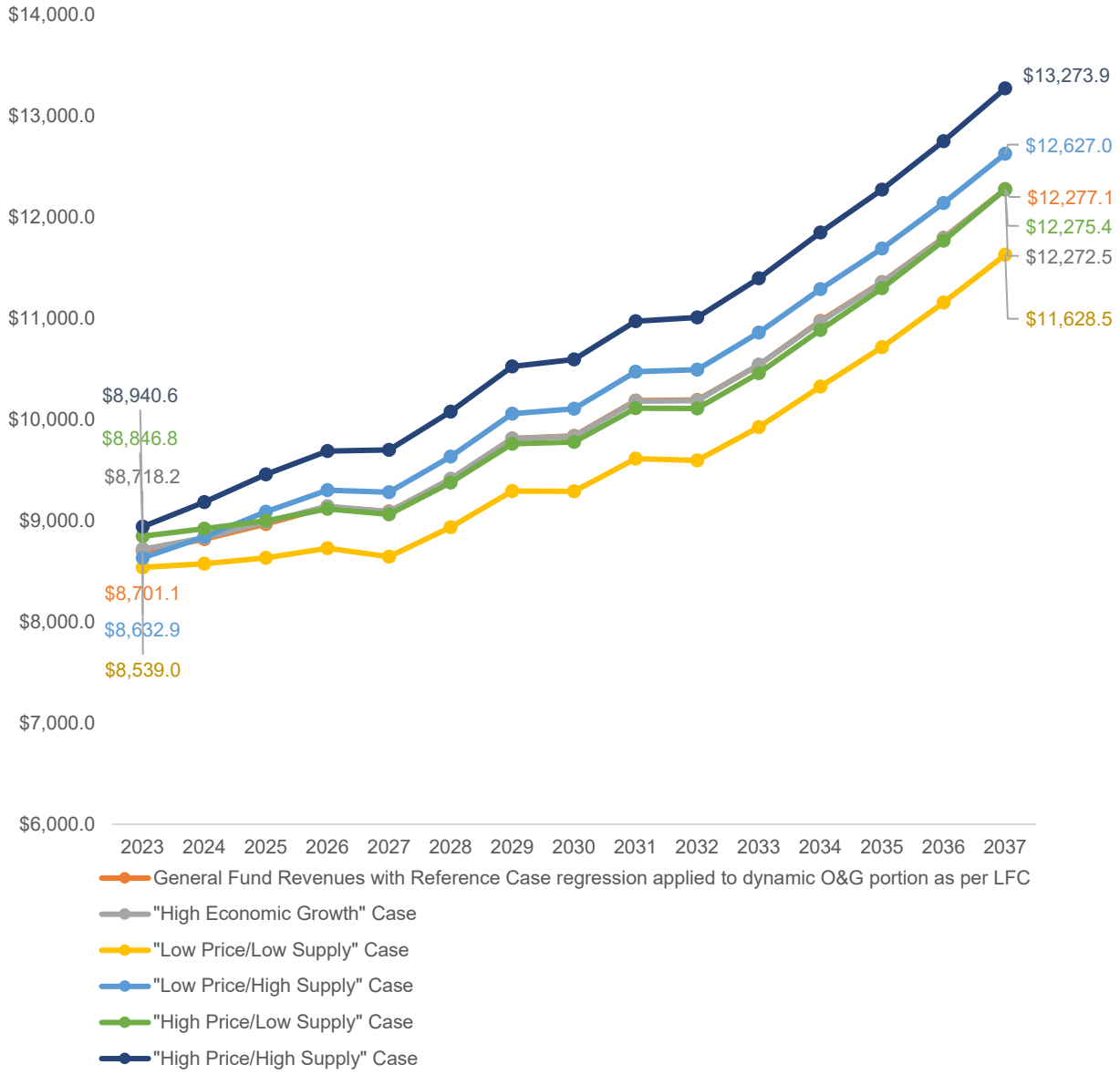
AEO2022. From 2021 to 2050, the High Economic Growth case assumes the compound annual growth rate for U.S. GDP is 2.7 percent, and the Low Economic Growth case assumes a rate of 1.8 percent vs. the Refence Case of 2.2 percent over the projection period. PFM applied only the High Economic Growth Case.

General Fund Revenue Scenarios 3-8, FY2023-FY2037

#	Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030
3	General Fund Revenues with Reference Case regression applied to dynamic O&G portion as per LFC	$8,701.1	$8,818.0	$8,967.9	$9,134.2	$9,092.1	$9,404.3	$9,813.4	$9,837.9
4	"High Economic Growth" Case	$8,718.2	$8,832.3	$8,988.9	$9,142.1	$9,088.3	$9,414.4	$9,811.6	$9,835.7
5	"Low Price/Low Supply" Case	$8,539.0	$8,576.5	$8,632.5	$8,729.5	$8,645.2	$8,935.2	$9,294.7	$9,290.0
6	"Low Price/High Supply" Case	$8,632.9	$8,840.6	$9,090.1	$9,301.0	$9,281.5	$9,634.8	$10,058.9	$10,107.5
7	"High Price/Low Supply" Case	$8,846.8	$8,920.5	$8,999.3	$9,117.4	$9,062.3	$9,377.1	$9,760.0	$9,776.6
8	"High Price/High Supply" Case	$8,940.6	$9,184.6	$9,456.9	$9,688.9	$9,698.6	$10,076.7	$10,524.3	$10,594.1
#	**Fiscal Year**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**Total**
3	General Fund Revenues with Reference Case regression applied to dynamic O&G portion as per LFC	$10,187.2	$10,193.3	$10,539.6	$10,975.4	$11,359.3	$11,795.9	$12,277.1	$151,096.6
4	"High Economic Growth" Case	$10,182.3	$10,186.1	$10,541.1	$10,966.3	$11,354.6	$11,790.4	$12,272.5	$151,124.8
5	"Low Price/Low Supply" Case	$9,612.6	$9,594.9	$9,924.4	$10,327.2	$10,714.8	$11,156.5	$11,628.5	$143,601.4
6	"Low Price/High Supply" Case	$10,473.4	$10,494.3	$10,859.5	$11,288.9	$11,689.6	$12,140.4	$12,627.0	$154,520.4
7	"High Price/Low Supply" Case	$10,111.7	$10,110.5	$10,459.5	$10,885.4	$11,297.1	$11,767.3	$12,275.4	$150,766.8
8	"High Price/High Supply" Case	$10,972.4	$11,009.8	$11,394.7	$11,847.2	$12,271.9	$12,751.2	$13,273.9	$161,685.9

Numbers in millions

General Fund Revenue Scenarios 3-8, FY2023-FY2037



As compared to the Reference Case regression analysis, the “low price/low supply” case could further reduce State revenues by $7.5 billion over the projection period, while the “high price/high supply case” could mitigate revenue losses to the tune of $10.6 billion, with other alternatives in between.

However, there is no guarantee that the peak and ultimate decline of the oil and gas industry will occur in a linear fashion. There are many factors that could affect a projection over a long-term period, including recessions, environmental disasters, international geopolitical events, future health pandemics, technology innovations, and federal legislation. And, while outside the direct scope of this study, revenue gaps beyond the 15-year projection period may be even more significant.

Other Taxes Would Need to Grow at Unprecedented Rates to Close Gaps

Other Taxes Would Need to Grow at Unprecedented Rates to Close Gaps

Needless to say, the scenarios analysis indicates that there is a significant amount of State revenue to "make up" if inferred State revenue projections do not materialize. To take full advantage of economic diversification in the state as a means of developing new streams of revenue and offset the dominance of the oil and gas industry as a revenue source, New Mexico must also pursue a reform to its tax structure. PFM previously developed a series of recommendations based on the New Mexico Legislative Finance Committee's tax principles, but with the state's budget currently above trend due largely to the revenues of the oil and gas industry, most of the action taken since 2020 has included tax cuts, credits, deductions, and rebates.

To fill the revenue gap from the Reference Case scenario, GRT and/or PIT collections would have to increase substantially.

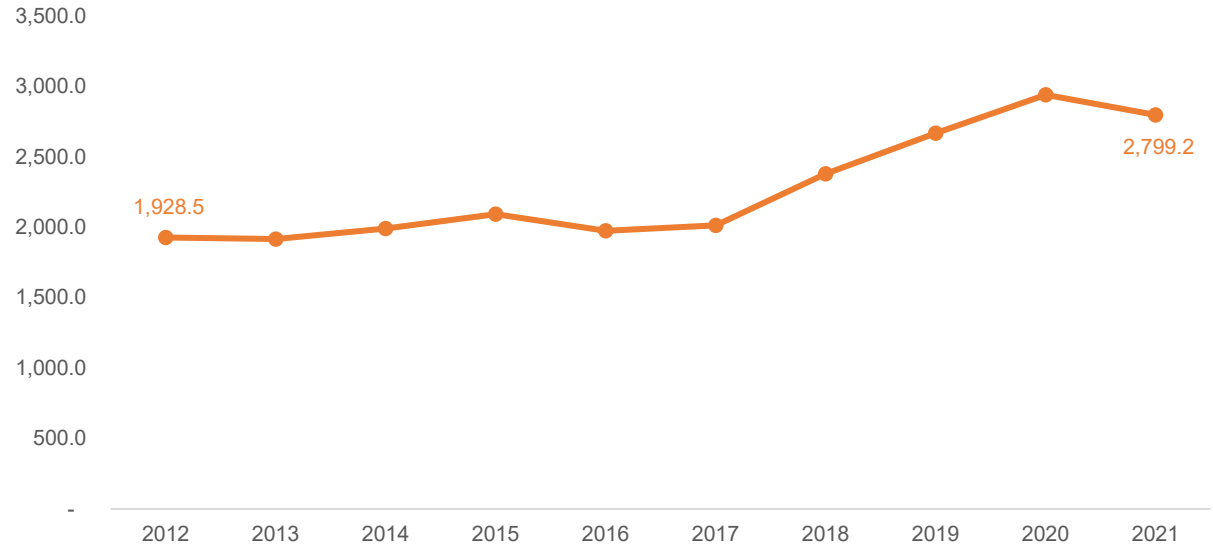
New Mexico General Fund Revenues – Gross Receipts Tax (GRT), FY2012 to FY2021

Fiscal Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
GRT Revenue	1,928.5	1,917.7	1,992.0	2,095.2	1,975.4	2,013.5	2,381.1	2,669.4	2,942.1	2,799.2

Numbers in millions, $

Source: New Mexico Annual Financial Reports

General Fund Revenue – Gross Receipts Tax, FY2012 to FY2021



Numbers in millions

Source: New Mexico Annual Financial Reports

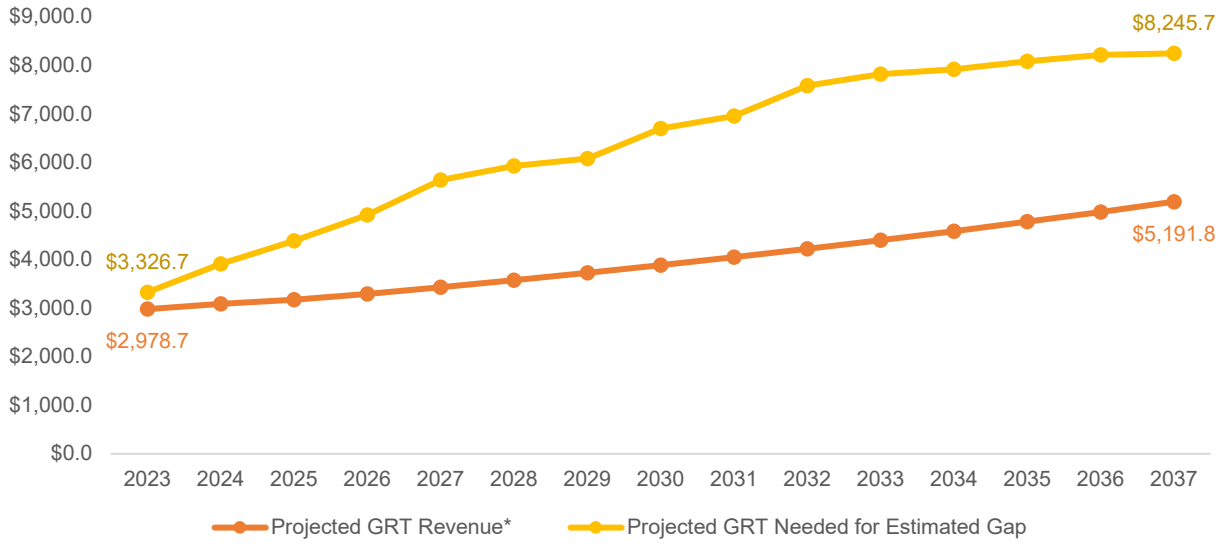
New Mexico General Fund – GRT Projections using Historical FY2012 to FY2021 GRT CAGR and Estimated Revenue Needed to Cover Revenue Gap from PFM Scenario*

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030
Projected GRT Revenue*	$2,978.7	$3,087.8	$3,174.7	$3,292.5	$3,431.7	$3,576.7	$3,727.9	$3,885.5
Projected GRT Needed for Estimated Gap	$3,326.7	$3,913.0	$4,385.6	$4,920.1	$5,639.5	$5,924.3	$6,077.7	$6,697.3
Difference to Projected GRT	12%	27%	38%	49%	64%	66%	63%	72%
Fiscal Year	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**Total**
Projected GRT Revenue*	$4,049.8	$4,221.0	$4,399.4	$4,585.3	$4,779.2	$4,981.2	$5,191.8	$59,363.2
Projected GRT Needed for Estimated Gap	$6,955.1	$7,578.4	$7,817.0	$7,916.1	$8,083.7	$8,215.7	$8,245.7	$95,695.9
Difference to Projected GRT	72%	80%	78%	73%	69%	65%	59%	61%

Numbers in millions

*GRT projected using FY2012-2021 CAGR of 4.2%

New Mexico General Fund – GRT Projections using Historical FY2012 to FY2021 GRT CAGR and Estimated Revenue Needed to Cover Revenue Gap from PFM Scenario*



Numbers in millions

**GRT projected using FY2012-2021 CAGR of 4.2%*

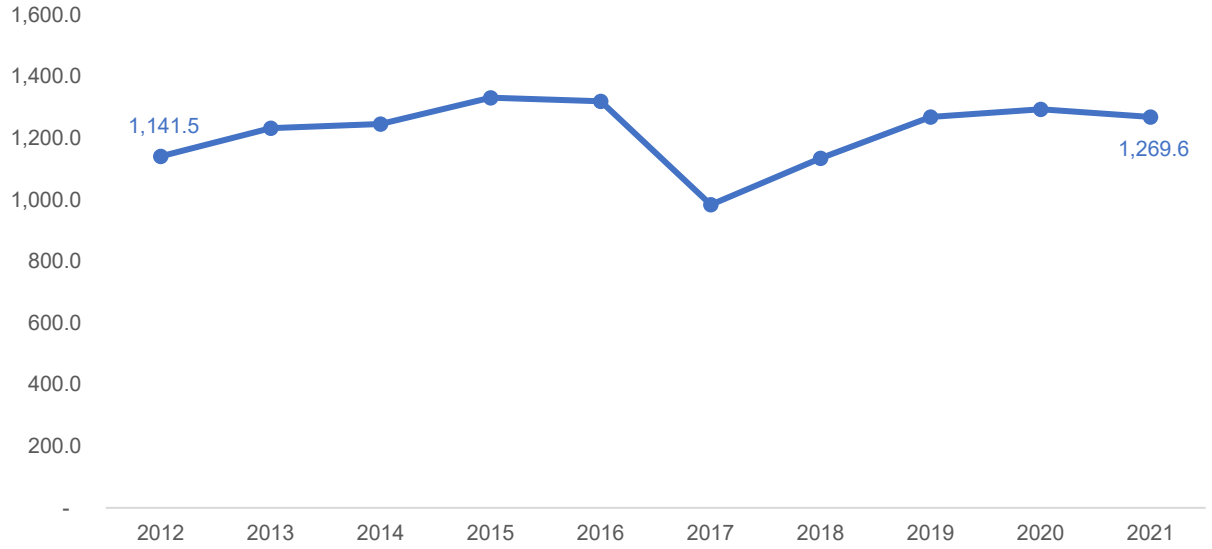
This analysis indicates that in order to cover the entire revenue gap from the Reference Case scenario, GRT collections would need to increase to $95.7 billion over the projection period vs. a baseline of $59.4 billion using the historical CAGR of the GRT. On an annualized basis, GRT collections would need to increase by as much as 80 percent. The deviations from the historical PIT collections are even more pronounced.

New Mexico General Fund Revenues – Net Personal Income Tax, FY2012 to FY2021

Fiscal Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Net Personal Income Tax Revenue*	1,141.5	1,233.6	1,247.0	1,332.2	1,320.2	984.5	1,135.6	1,269.2	1,294.6	1,269.6

Numbers in millions, $
*Includes transfers for retiree health and reversions
Source: New Mexico Annual Financial Reports

General Fund Revenue – Net Personal Income Tax, FY2012 to FY2021*



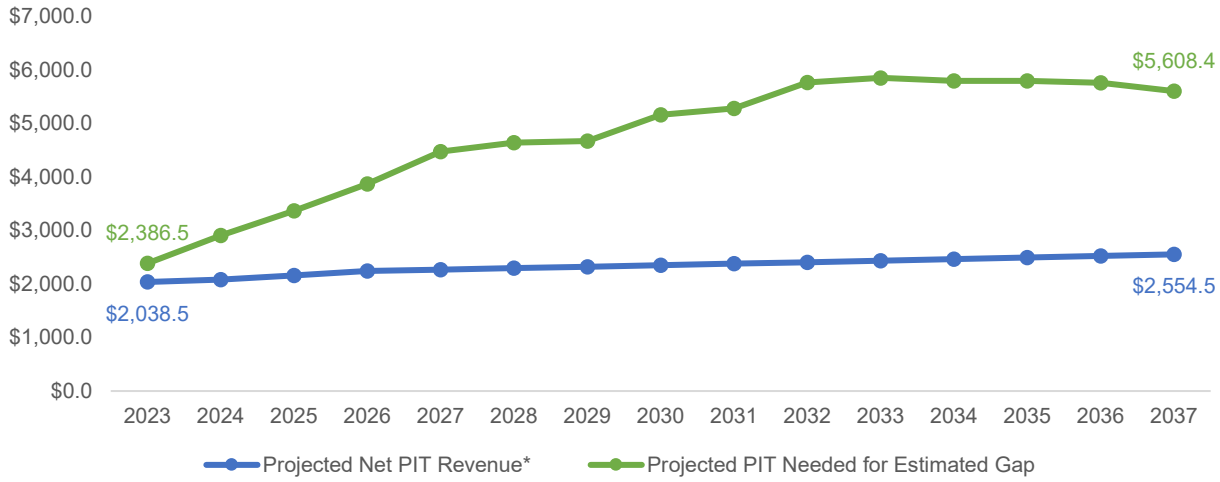
Numbers in millions
*Includes transfers for retiree health and reversions
Source: New Mexico Annual Financial Reports

New Mexico General Fund – PIT Projections using Historical FY2012 to FY2021 PIT CAGR and Estimated Revenue Needed to Cover Revenue Gap from PFM Scenario*

Fiscal Year	2023	2024	2025	2026	2027	2028	2029	2030
Projected Net PIT Revenue*	$2,038.5	$2,084.1	$2,160.4	$2,243.0	$2,269.7	$2,296.7	$2,324.0	$2,351.6
Projected PIT Needed for Estimated Gap	$2,386.5	$2,909.3	$3,371.3	$3,870.6	$4,477.5	$4,644.2	$4,673.8	$5,163.4
% Difference to Projection	17%	40%	56%	73%	97%	102%	101%	120%
Fiscal Year	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**Total**
Projected Net PIT Revenue*	$2,379.6	$2,407.9	$2,436.5	$2,465.5	$2,494.8	$2,524.4	$2,554.5	$35,030.9
Projected PIT Needed for Estimated Gap	$5,284.9	$5,765.3	$5,854.2	$5,796.2	$5,799.3	$5,759.0	$5,608.4	$71,363.7
% Difference to Projection	122%	139%	140%	135%	132%	128%	120%	104%

Numbers in millions
*Net PIT projected using FY2012-2021 CAGR of 1.2%

New Mexico General Fund – PIT Projections using Historical FY2012 to FY2021 PIT CAGR and Estimated Revenue Needed to Cover Revenue Gap from PFM Scenario*



Numbers in millions
*Net PIT projected using FY2012-2021 CAGR of 1.2%

This analysis indicates that in order to cover the entire revenue gap from the Reference Case scenario, PIT collections would need to increase to $71.4 billion over the projection period vs. a baseline of $35.0 billion using the historical CAGR of the PIT. On an annualized basis, PIT collections would need to increase by as much as 140 percent, or more than double.

Finally, under a combined scenario, aggregate GRT and PIT collections would need to increase by nearly 40 percent over the amount predicted by historical growth rates.

Unprecedented Increases in Other Tax Sources Needed to Cover Revenue Gap

Estimated Collections Needed to Cover Revenue Gap (millions)	FY2037	Total FY2023-FY2037)
Potential Revenue Gap	**($3,054)**	**($36,333)**
Scenario 1: Closing the Gap with GRT Revenue Only		
GRT Revenue Using Historical Growth Rate	$5,192	$59,363
GRT Needed for Potential Revenue Gap	$8,246	$95,696
Difference to Historical GRT Growth Rate Estimate	59%	61%
Scenario 2: Closing the Gap with PIT Revenue Only		
Net PIT Revenue Using Historical Growth Rate	$2,554	$35,031
PIT Needed for Potential Revenue Gap	$5,608	$71,364
Difference to Historical PIT Growth Rate Estimate	120%	104%
Scenario 3: Closing the Gap with Both GRT and PIT Revenue		
Combined GRT and PIT Revenue Using Historical Growth Rate	$7,746	$94,394
GRT and PIT Needed for Potential Revenue Gap	$10,800	$130,727
Difference to Combined Historical Growth Rate Estimate	39%	39%

The State Should Pursue Tax Policy Changes to Improve Equity, Reduce Volatility, and Better Position New Mexico to Meet Future Needs

The State Should Pursue Tax Policy Changes to Improve Equity, Reduce Volatility, and Better Position New Mexico to Meet Future Needs

Of the tax reforms recommended in PFM's prior report focused on the State's tax structure, only a cannabis tax has been implemented. PFM continues to recommend the following tax changes as a hedge against the potential loss of oil and gas revenue, categorized by the tax policy principles of equity, adequacy, and economic efficiency identified by the LFC.

Equity

A tax system should fairly distribute the tax burden across all taxpayers. Equity in a tax structure is often framed in terms of horizontal equity (similar treatment of taxpayers with similar income) and vertical equity (the amount of taxes paid is a function of ability to pay and thus increases with income). The following recommendations should improve equity within the current State tax structure.

Reinstitute a rate structure with higher marginal PIT rates at higher income levels. Reversing its past PIT policy decision to lower the top PIT rate would make New Mexico's tax structure more equitable. Increasing top PIT rates would also significantly increase General Fund revenue, and thus aligns with the additional key principle of revenue adequacy. The change would also further diversify the State's revenue structure by providing greater revenue from its second largest General Fund source, with the additional benefit of reducing reliance on the GRT. If desired, this reform could be made revenue-neutral by lowering the burden on low-income taxpayers.

From 2002-2009, New Mexico made a concerted effort to lower its top PIT rate. These changes significantly lowered PIT collections from the state's higher income taxpayers. For example, the District of Columbia's yearly tax burden analysis calculated that for a New Mexico family of three earning $150,000 a year, the average PIT payment was $7,268 in tax year 2000 and declined to $5,764 in 2018, a reduction of 20.7%; in 2018 constant dollars, the decline would be 45.6%. In 2000, the New Mexico tax burden for this income cohort ranked 26th among the states with a PIT and was the median of all states. In 2018, the New Mexico tax burden for this income cohort ranked 35th, and the median was $7,307. Clearly, New Mexico is now imposing a smaller PIT burden on higher income taxpayers than most states.

In this respect, New Mexico was part of a national trend among states to lower PIT rates. A study by the Urban Institute identified 19 states that reduced the top PIT rate between the years 2000 and 2016. Besides New Mexico, this included the neighboring states of Arizona, Colorado, Oklahoma and Utah.[32]

[32] Norton Francis, "Using the Tax Structure for State Economic Development," The Urban Institute, May 2016, accessed at https://www.urban.org/research/publication/using-tax-structure-state-economic-development

The question, of course, is whether there is significant value in this change – which, by any standard, makes the PIT less progressive and increases the regressivity of the State tax structure while increasing reliance on oil and gas revenue. In general, those who support reductions in top income tax rates argue that it will increase the attractiveness of the state for higher income individuals or businesses associated with them. While academics disagree about the precise impacts,[33] the New Mexico economic and demographic data cited earlier in the report does not indicate that there has been a noticeable change in economic activity, migration patterns or other data that would support the economic benefit from the reduction in income tax collections from New Mexico's highest earning households. This conclusion is supported by studies of other state outcomes with tax cuts. One study, by economists William Gale, Aaron Krupkin, and Kim Rueben, found that "examination of recent state experiences with changing tax structures reveals little evidence of tax cuts driving growth."[34]
Other studies also cast doubt on the traditional argument from critics of 'Millionaires Tax' rates – that those subject to the tax will leave for states with more attractive tax rates. Recent research, based on an analysis of IRS tax records for all individuals who earned over $1 million a year between the years 1999 to 2011 (over 45 million records) led to the following conclusions:[35]

- The overall millionaire tax migration rate is low (2.4%), and only a small portion of those moves (15%) bring a net tax advantage;

- Only 0.3% of the overall millionaire population (15% of 2.4%), on balance, shifted to a lower tax state;

- Tax rate differentials account for a very small percentage of moves undertaken by wealthy households, including for taxpayers making at least $10 million a year, those who own businesses and those who mostly live off capital gains.

In explaining the low rate of geographic mobility among high income households, many millionaire households have significant social, personal and business connections that make moves problematic. High income earners are also typically late career professionals who are past the age or life-cycle stage in which moving is more likely. The previously cited study concludes that "there is a grain of truth about millionaire tax flight…However, the effect is small and has little impact on a state's overall stock of millionaires."[36]

Several states are making or considering significant changes to income tax brackets at the top end of their PIT. In September 2020, the New Jersey Legislature approved changes that will tax

[33] For example (albeit a study of national tax structures), a recent study found that "certain segments of the labor market, especially high income workers and professions with little location-specific human capital, may be quite responsive to taxes in their location decisions."
Henrik Klevin, Camille Landais, Mathilde Munoz, and Stefanie Stantcheva, "Taxation and Migration: Evidence and Policy Implications, National Bureau of Economic Research Working Papers, April 2019
[34] William Gale, Aaron Krupkin, and Kim Rueben, "The Growth Mirage: State Tax Cuts Do Not Automatically Lead to Economic Growth," Tax Policy Center, 8 September 2015, accessed at https://www.taxpolicycenter.org/sites/default/files/publication/104441/2000377-the-growth-mirage.pdf
[35] Cristobal Young, "The Myth of Millionaire Tax Flight," Stanford University Press, 2018, pp. 23-25.
[36] Ibid, p. 25.

income of between $1 million and $5 million a year at a rate of 10.75%, up from 8.97%, on earned income above $1 million (all income above $5 million is already taxed at 10.75%). The increased tax rate is expected to bring in at least $390 million in annual revenue and will take effect during the 2020 tax year.[37] Other states that have considered higher tax rates on high earners include California, Hawaii, Illinois, Maryland, Massachusetts, New York, Oklahoma, Vermont and Wisconsin.

Eliminate the capital gains PIT exemption. Prior to 2019, New Mexico personal income taxpayers were able to deduct from net income an amount equal to the lesser of the taxpayer's net capital gain up to $1,000 or 50% of the taxpayer's net capital gain income. In 2019, this deduction was reduced from 50% to 40% of net capital gain income. This change was projected to increase State revenue by $10 million per year.

While the federal tax code provides lower tax rates for capital gains compared to ordinary income, the tax treatment among the states varies considerably. Most states with a PIT tax capital gains, but some do not. As of 2020, at least 24 states including New Mexico provide varying exemptions, deductions or lower tax rates for capital gains.[38]

Nearly all the benefit from this preferential treatment is enjoyed by a very small percentage of taxpayers. Given that State PIT brackets are more compressed than for the federal income tax, lower capital gains rates or exemptions significantly reduce progressivity in State income taxes specifically and the State tax structure in general.

The capital gains deduction also undermines revenue sufficiency in the State tax structure. It is estimated that this deduction reduces State tax revenue collection by approximately $40 million a year. Further, capital gains income as a share of personal income continues to grow, which means that the value of the deduction – primarily for high income taxpayers – will continue to grow.

Re-institute an Estate Tax. Before 2001, all 50 states imposed an estate tax, in part because the federal estate tax provided a dollar-for-dollar credit of up to 16% of the estate's value for state estate taxes. This enabled states to impose a 16% estate tax without increasing residents' overall tax burden– the state estate tax reduced the federal estate tax owed by the same amount as the state estate tax collected. In 2001, federal tax changes phased out the federal credit for state estate taxes by 2005. Because state estate taxes were linked to the federal credit, states that wished to retain their estate tax had to enact their own state estate tax. Most did not. At present 11 states have an estate tax (which is owed by the estate); an additional 5

[37] Kate King, "New Jersey Lawmakers Pass Budget With Heftier Millionaires Tax," The Wall Street Journal, 24 September 2020, accessed at https://www.wsj.com/articles/new-jersey-lawmakers-pass-budget-with-heftier-millionaires-tax-11600977779

[38] Marco Guzman, "State Taxation of Capital Gains: The Folly of Tax Cuts & Case for Proactive Reforms," Institute on Taxation and Economic Policy, September 2020, accessed at https://itep.sfo2.digitaloceanspaces.com/092520-State-Taxation-of-Capital-Gains_ITEP.pdf

states impose an inheritance tax (which is owed by those who inherit the estate), while Maryland imposes both an estate and an inheritance tax.[39]

Every state with an estate tax provides for an exemption from taxation that applies to most estates. The exemption ranges from a low of $1 million in Massachusetts and Oregon to a high of $5.85 million in New York. Most states have a progressive estate tax rate structure with a top 16% tax rate – the same rate that was in place when the federal credit existed.

While opponents like to label the estate tax a 'death tax' there is a logical public policy rationale for the tax. For starters, the estate tax is one of the few wealth-related taxes that is in use by state and local governments. As income inequality has continued to grow, wealth taxes are one of the logical tools for income redistribution, and the logical place to apply these taxes is at probate of an estate.

Another public policy rationale for the tax relates to how assets that have appreciated in value are treated upon the death of its owner. These held assets (such as real estate, stocks, collectibles, or other capital assets) get their original cost basis, for purposes of capital gains taxes, 'stepped up' to its current fair market value. This eliminates an heir's capital gains tax liability on appreciation in the property's value that occurred during the decedent's lifetime. Under current State and federal law, people who inherit assets such as stocks, bonds, or real estate pay no taxes on any appreciation of those assets that occurred before they inherited them. As a result, a large share of capital gains are never taxed.

State estate taxes compensate for stepped-up basis by taxing assets at the time they were inherited. As previously noted, this tax treatment overwhelmingly favors very wealthy individuals, and the exemption from the estate tax in every state ensures that most "middle class" estates are still not subject to tax.

Adequacy

An effective tax system generates enough revenue to pay for public services without the need for frequent or drastic changes in tax rates or the tax base. The overall tax structure should be able to weather, as much as possible, changing economic conditions without endangering the State's ability to pay for key government services.

As is evident from recent history, the New Mexico tax and revenue structure has struggled to maintain adequate State revenues during periods of low demand for and production of oil and gas. While every state has struggled during major economic downturns (including the Great Recession and the COVID-19 pandemic-driven recession), New Mexico's woes (and those of

[39] In 2020, states with an estate tax are Connecticut, Hawaii, Illinois, Massachusetts, Maryland, Minnesota, New York, Oregon, Vermont and Washington. States with an inheritance tax are Iowa, Kentucky, Maryland, Nebraska, New Jersey and Pennsylvania. See "Estate and Inheritance Taxes," State and Local Finance Institute, Urban Institute, accessed at https://www.urban.org/policycenters/cross-center-initiatives/state-and-local-finance-initiative/state-and-local-backgrounders/estate-and-inheritance-taxes

several other energy producing states) have been compounded by periodic declines in the extractive industries, even when the national economy was doing well.

As previously noted, excise tax increases are often used by states to balance budgets through increased revenue collection. Excise taxes are applied to specific kinds of consumption, and they may fall disproportionately on lower-income taxpayers. For that reason, the recommendations seek to identify instances where there is also an economic justification for the tax or where the consumption is not a necessary part of daily commerce.

Increase the motor fuel tax rate. Motor fuel taxes are one of the historic 'big three' of excise taxes (along with those on tobacco products and alcohol), and they are generally one of the largest sources of State excise tax revenue. They are also described as a sort of 'user tax' as the revenue is often dedicated to the maintenance and construction of public roads. In this respect, motor fuel taxes have been waging a losing battle for years: improvements in fuel economy have eroded the tax base (since it is a gallonage tax), and the rise of non-motor fuel cars (primarily electric vehicles) have also reduced consumption.

Faced with these realities, most states have raised their motor fuel taxes in recent years. Since 2013, 31 states have raised their motor fuel rate, and in some of these states, rate increases have been indexed to inflation.[40] States are also undertaking other changes to their revenue structures to deal with the issue of electric vehicles and other vehicles not subject to motor fuel taxes, such as additional surcharges or registration fees for non-motor fuel powered vehicles. Many states also impose their sales tax (or, in the case of Delaware, a gross receipts tax) on the purchase price of motor fuel.[41]

In New Mexico, the gasoline tax is 17 cents per gallon and is imposed on distributors for the privilege of receiving gasoline in the state.[42] It is presumed that this tax, like its federal counterpart, is passed along in the final purchase price to consumers. Among the states, New Mexico has the fifth lowest combined motor fuel tax rate.[43] According to the FTA, the average state gasoline tax rate is 28.5 cents a gallon, and the median is 26.9 cents a gallon. Though New Mexico taxes other sources of energy (such as electricity under the GRT), New Mexico could raise its gasoline tax by 10 cents a gallon and still be below the national average. It is notable that the current allocation of New Mexico gas tax revenue is to a variety of sources, and

[40] "Recent Legislative Actions Likely to Change Gas Taxes," National Conference of State Legislatures, 12 August 2020, accessed at https://www.ncsl.org/research/transportation/2013-and-2014-legislative-actions-likely-to-change-gas-taxes.aspx
[41] "State Motor Fuel Tax Rates," Federation of Tax Administrators, 2020, accessed at https://www.taxadmin.org/assets/docs/Research/Rates/mf.pdf
[42] "Gasoline Tax," New Mexico Department of Revenue and Taxation, accessed at http://www.tax.newmexico.gov/all-nmtaxes.aspx?9674a2e28c1442ce8b25e81c6d015418blogPostId=3c68e8c324d2447b8692a5054b988666
[43] Many states impose additional fees or sales taxes on motor fuel. The states with lower rates are Alaska (8.95 cents per gallon), Hawaii (16.0), Mississippi (18.4) and Missouri (17.4). In 2017, Missouri legislators approved a 10 cents per gallon increase over four years, but the general electorate overturned the increase with a 53% no vote in 2018. In 2020 Virginia increased its motor fuel tax by 10 cents a gallon over two years, to 26.2 cents per gallon.

most are outside the General Fund.[44] Of course, that allocation could be changed as part of raising the tax; even if it were to stay the same, it would provide needed additional resources to address state and local infrastructure needs.

Broaden the GRT tax base to include food and enact a revenue neutral (for lower income taxpayers) refundable PIT food credit. One of the identified strengths of the GRT is the fact that it has a very large base. However, a large and growing portion of consumption, food, is not included in the economic activity that is subject to the GRT. In this respect, most states exempt food from their sales tax – 38 states plus the District of Columbia do not tax food at the state level, five states tax food at a reduced rate, and seven states tax food at the general sales tax rate, although five of the seven allow a rebate or income tax credit for low-income households.[45] However, including food in the tax base can improve revenue adequacy and stability, and there are approaches that can ameliorate the impact of the tax on lower-income residents.

First, there is a significant tax revenue loss from this deduction. According to the annual report on New Mexico tax expenditures, for FY 2018 this deduction led to a revenue loss of $149.3 million for the State and an additional expenditure of $101.1 million provided to local governments to compensate them for lost revenue from this deduction.[46]

Second, this deduction applies to all qualifying food sales at retail food stores as defined under the federal food stamp (now referred to as SNAP) program. The purchase of filet mignon is exempt from the GRT to the same extent as the purchase of hamburger. The purchase of lobster is exempt from the GRT to the same extent as the purchase of fish sticks.

It is possible to combine a consumption tax on food with a low-income refundable PIT. Hawaii takes this approach with its refundable food excise tax credit. Households whose federal adjusted gross income does not exceed $50,000 (for single filers, the limit is $30,000), may claim the credit, even if they have no personal income tax liability. The credit is on a sliding scale and starts at $110 per dependent for those with AGI of $5,000 or less; at the other end of the scale, the credit is $35 per dependent for those with household income of between $40,000 and $50,000.[47] With a state general excise tax rate of 4%, the $110 tax credit effectively replaces the GET on $2,750 of food purchases. On the other end of the spectrum, the $35 effectively replaces the GET on $875 of food purchases.

The value of a broad-based grocery tax exemption for all versus a targeted refundable tax credit for low income state residents was explained by ITEP in 2015, related to the State of Idaho's

[44] According to the New Mexico Department of Taxation and Revenue website, the current split of gasoline tax revenue is State aviation fund - .26%; Motorboat fuel tax fund - .13%; Counties and municipalities - 10.38%; County government road fund - 5.76%; Road funds of municipalities - 5.76%; Municipal arterial program - 1.44%; General fund $33,333 per month; Qualified Tribes 40% of the net receipts attributable to the gasoline tax paid to the Department on 2,500,000 gallons of gasoline each month; State road fund – Residual.
[45] "State Sales Tax Rates and Food and Drug Exemptions," Federation of Tax Administrators, January 2020, accessed at https://www.taxadmin.org/assets/docs/Research/Rates/sales.pdf
[46] 2018 New Mexico Tax Expenditure Report, page 149-150.
[47] State of Hawaii, Department of Taxation, Form N-311, Refundable Food/Excise Tax Credit for Tax Year 2019. Accessed at https://files.hawaii.gov/tax/forms/2019/n311_i.pdf

Grocery Credit Refund versus a blanket sales tax exemption for food: “The benefits of grocery tax exemptions are also not very targeted. Visitors from outside the state benefit from grocery exemptions in the same way as residents, and high-income households with large grocery bills tend to receive a disproportionate share of the overall tax benefits.” As a result, ITEP concluded that “Idaho’s Grocery Credit Refund is an effective tool for offsetting some of the regressivity of sales taxes on groceries. If grocery tax relief is a priority for Idaho lawmakers, they should consider expanding that refund rather than eliminating it in favor of a less targeted grocery tax exemption.”[48]

A refundable PIT credit could act as a complement or supplement to New Mexico’s existing Low-Income Comprehensive Tax Rebate (LICTR) that was established in 1972 (and expanded in 2021) and acts as a partial offset for State and local consumption taxes paid by low income taxpayers. Currently, it may be claimed by taxpayers with a modified gross income of less than $36,000. The rebate amount is dependent upon modified gross income as well as the number of exemptions claimed and varies between $15 and $730.[49]

From a tax policy perspective, this type of targeted refundable tax credit is more efficient than a blanket food exemption, where the largest share of the benefit is going to taxpayers who do not really need it. As previously noted, the food exemption from the GRT was estimated to forego $149.4 million in FY2018 GRT revenue as well as an additional $101.1 million in payments to local governments to make up for their lost revenue. By way of comparison, the Hawaii refundable credit reduced state revenue by $29.9 million in tax year 2017.[50]

There are arguments against using a refundable credit in lieu of a blanket exemption: some taxpayers will not be aware of the credit and will not take it (particularly if they otherwise have no need to file a personal income tax return), and the refund is delivered as a lump sum after the end of the tax year, while the GRT is paid throughout the year. Both of the concerns are valid; as it relates to awareness of the credit, as noted earlier, the State’s low income comprehensive tax rebate has been in existence since 1972, so it is already well known. However, New Mexico has one of the highest rates in the nation of non-filing for low-income households and barriers to access remain (e.g., lack of rural broadband). As it relates to timing of payments, the credit can be designed to, in essence, make up the difference in both taxes paid on food and the time value of those payments, but that may require investment in State systems/infrastructure that is not currently being contemplated. Finally, advocates for maintaining the food exemption from the GRT point out that New Mexico has the worst or near-worst (depending on the year) rates of childhood food insecurity in the nation, and maintain that increased food costs cause food insecurity challenges on a day-to-day food purchasing basis and that federal anti-poverty programs are not fully adequate to address needs for food insecure households.

[48] “Grocery Tax Exemption is No Improvement for Idaho,” Institute on Taxation and Economic Policy, February 2015, accessed at https://itep.sfo2.digitaloceanspaces.com/id_grocerytax_0215.pdf
[49] 2018 New Mexico Tax Expenditure Report, page 104.
[50] State of Hawaii Tax Credit Report, Tax Year 2017, accessed at https://tax.hawaii.gov/stats/a5_1annual/a5_4credits/

The U.S. Bureau of Labor Statistics (BLS) publishes annual household consumer expenditure surveys, and from those surveys it is possible to get a reasonably accurate picture of food purchases by income group. In the target income population for this type of credit, food expenditures are generally between 13% and 17% of total income. The credit can be designed, at these income levels to return slightly more of the amount paid in food taxes to make up for the time lag.

These two recommendations must be done in concert with one another. Absent one or the other, alignment with the two key tax principles of vertical equity and adequacy will be lost. If done together, however, the State tax structure will be more balanced and less prone to major revenue swings by expanding the tax base for the GRT to include food for home consumption.

Resist the temptation to increase the State GRT rate. In many cases, the first point of comparison for general consumption taxes (sales taxes in most states and the GRT in New Mexico) is the tax rate. In the case of New Mexico, the State rate is relatively competitive – the 5.125% rate is only 32nd highest among the 50 states and lower than all of the surrounding states except for Colorado and Oklahoma.[51] However, the New Mexico combined average state and local rate ranks as the 15th highest among all states (when compared to state and local combined sales tax rates).[52]
New Mexico local governments have also been given greater GRT taxing authority, and they are increasing rates. In 2013, local governments were given the option to raise GRT rates by up to three-eighths of one percent. By FY2017, these rate increases had generated an additional $110.7 million in local government tax revenue.[53]

While the GRT combined state and average local rate is already above average, the overall impact of the GRT is heightened when it is understood that the New Mexico taxable base is much broader than nearly every other state sales tax base. Measures that take into consideration both the GRT rate and base rank the New Mexico consumption tax effort among the highest of any state. When considering state and local sales/gross receipts tax collections per capita, New Mexico ranks ninth highest among the states.[54] On sales/gross receipts tax breadth (the ratio of the sales tax base to personal income), New Mexico ranks third among the states.[55] Given these factors, raising the GRT rate is not advised at this time.

Continue to expand excise taxes to align with new forms of goods or services consumption. There are additional excise taxes that should be on the State's radar – as new products and services are developed, state excise taxes are often imposed once an established market has developed. An example of this is excise taxes on vapor products. Vapor products generally

[51] Janelle Cammenga, "State and Local Sales Tax Rates, 2020," Tax Foundation, accessed at https://files.taxfoundation.org/20200115132659/State-and-Local-Sales-Tax-Rates-2020.pdf
[52] Ibid.
[53] Jon Clark and Dawn Iglesias, "Food Tax Deduction," LFC Hearing Brief," May 2018, accessed at https://www.nmlegis.gov/Handouts/ALFC%20052118%20Item%2010%20LFC%20May%202018%20Hearing%20Brief_Food%20Tax%20 Deduction_REVISED.pdf
[54] "Facts and Figures: How Does Your State Compare?" Tax Foundation, 2019, accessed at https://files.taxfoundation.org/20190715165329/Facts-Figures-2019-How-Does-Your-State-Compare.pdf
[55] Ibid.

deliver nicotine, the addictive component in cigarettes, without inhaling the cigarette smoke (or exhaling the second hand smoke) that is associated with carcinogens and other health issues. Currently, New Mexico is one of 21 states that has a vapor tax (or taxes). These taxes vary widely – Minnesota's wholesale tax is the highest with a 95% wholesale rate – by contrast, New Mexico's is relatively low at 12.5%. However, these taxes are not materially impacting State revenue collections.

The same is generally the case for "sharing" features of the 21st century economy. Ride sharing is perhaps the most established industry, and many local governments have sought to revise their tax structures to address lost revenue from taxes and fees imposed on the most established taxi and car rental industries. It is notable that car sharing services are subject to the GRT, and many states have also revised their tax codes to make these services part of their sales tax base.

The same is true for short term rentals, such as those booked through Airbnb and similar services. As states and local governments have seen a decline in collections of lodging taxes from traditional hotels and motels, they have sought to apply these taxes to these newer forms of lodging. Effective January 1, 2020, hosts of short-term rentals with fewer than three rooms must collect local lodging taxes.

Vacation rental owners in New Mexico are also required to pay the GRT. While some of the rental platforms will collect lodging taxes, that is not necessarily the case for the GRT, as it is technically a tax on the operator. It is notable that Airbnb now collects the GRT as part of rental reservations within the State of New Mexico.[56]

Economic Efficiency

The LFC defined an efficient tax structure as one that has a broad tax base and low rates to "minimize economic distortion and avoid excessive reliance on any single tax." Tax systems that are efficient are also often thought of as being neutral in market decisions. In other words, the tax system should not shape or significantly alter the economic decisions of people and firms any more than is necessary to raise the appropriate amount of tax revenue.

As has been described, the New Mexico State tax structure has higher than average reliance on its single largest revenue source, the GRT. Many of the prior recommendations would seek to create greater balance within the mix of taxes. A greater balance would assist in keeping the GRT rate from increasing in the future. There is an oft-quoted rule of thumb that a general sales and use tax rate of over 10% will begin to impact on market decisions. To the extent that recommendations to broaden the tax base take some pressure of the GRT, the recommendations help promote economic efficiency.

[56] "Occupancy tax collection and remittance by Airbnb in New Mexico," accessed at https://www.airbnb.com/help/article/2318/occupancy-tax-collection-and-remittance-by-airbnb-in-new-mexico

While not recommending its adoption at this time, identify parameters for a carbon tax or market-based approaches. As previously noted, a carbon tax is imposed on the burning of carbon-based fuels (coal, oil and gas) and is a Pigovian tax, which is intended to correct an inefficient market outcome, either by generating revenue equal to a commodity's social cost or reducing the activity associated with the negative externalities.

As previously discussed, a carbon tax has been attempted unsuccessfully in several states. At this point in time, taxing carbon emissions is probably not a viable revenue alternative for New Mexico. That said, state revenue structures tend to evolve over time, and, for this study's purpose, it is useful to consider how New Mexico might structure this tax should it become a more widely accepted revenue generation strategy.

The point in the chain of commerce where a carbon tax is imposed is important because it determines who is required to monitor and report emissions and make payments. For example, a state could impose a carbon tax on fuel producers, distributors, or final consumers. At the state level, the point of taxation could be the point of existing Federal Environmental Protection Agency (EPA) data collection for stationary sources. For example, power plants, refineries, and a wide range of industrial facilities must report their greenhouse gas emissions to EPA each year. EPA makes this data publicly available and any state can use this information to identify potentially taxable emissions and estimate their potential revenues under different assumptions about which facilities would be subject to the tax.
In 2019, a carbon tax proposal was introduced to the New Mexico State Legislature.[57] The bill, which did not pass, would have levied a $0.40 per gallon surtax on gasoline and a $3.00 per mmBtu surtax on natural gas processors. Revenue generated by the tax would have supported three new funds including a low-income home energy assistance fund (15%), a renewable energy technology fund (15%), and a fossil fuel displacement worker fund (10%). Remaining revenue from the tax would have funded a carbon emission income tax credit for low-to-moderate income taxpayers.

The LFC estimated the natural gas surtax would generate $405.4 million in revenue by FY 2024, while the gasoline surtax would generate $356.0 million. Despite these large revenue estimates, many issues with the bill were raised in the LFC's analysis. After distributing revenue to dedicated funds, LFC estimated the revenue provided to the General Fund would be insufficient to cover the increasing cost of the proposed income tax credit. The proposed surtax rate on gasoline would give the state the highest gasoline tax in the nation, leading to concerns about the cost to state residents and businesses. The surtax on natural gas processors would have placed a heavy burden on operators with the tax rate estimated to be 83% of forecasted natural gas value. Furthermore, the natural gas processors tax would be levied on processors, but not on those extracting the natural gas which is seen as an unfair distribution of a tax burden intended to offset the externalities caused by the industry.

[57] SB 393 was sponsored by Senator Bill Soules. Senator Soules also introduced SB 475, which would have appropriated $250,000 to the Energy, Minerals and Natural Resources Department to draft legislation imposing a carbon tax.

Beyond the existing tax rates, independent analysis suggests that "system wide venting, leaking, and flaring of natural gas has resulted in New Mexico losing between $182-244 million worth of natural gas every year" which can translate to a loss of nearly $28 million in taxes and royalty revenues for the State.[58] The State can limit this waste of natural gas and lost revenue through enforcement of recently adopted rules on emissions from oil and gas operations, which target venting, flaring, and monitoring leaks.[59]

Notwithstanding the concerns related to SB 393, a carbon tax has significant potential to generate revenue for the State while assisting in efforts to reduce greenhouse gas emissions. As with SB 393, proposals for a carbon tax should consider the possible tax burden on both residents and businesses and how the tax burden is distributed across industries responsible for greenhouse gas emissions.

A common argument against a carbon tax is that it is a regressive tax, and numerous distributional studies have studied those effects. As a starting point, those studies primarily examine the 'use side' impacts. It may well be that a carbon tax would lower some production costs.[60] If returns to capital fall more than wages (because the tax increases the cost of capital), then the carbon tax can be progressive on the 'sources side.'[61] In fact, in constructing a general equilibrium model of the economy with a carbon tax, one research team found that various source side effects would fully offset the 'use side' effects, and the carbon tax could be distributionally neutral to slightly progressive.[62]

Of course, how revenue from a carbon tax is used will also have distributional effects. At the national level, the Climate Leadership Council advocates distributing carbon revenue through an equal per capita cash grant, which would be highly progressive. Likewise, using a portion of the revenue to make the tax revenue neutral for lower or middle-income taxpayers (such as through existing New Mexico PIT credits or exemptions) would also be progressive. Several modeling exercises have demonstrated the feasibility of this type of approach.[63]

There are also non-tax methods that might be considered. As previously noted, Governor Grisham established the Interagency Climate Change Task Force (Task Force) by executive order in 2019. One policy to be evaluated that is specifically referenced by the Governor's order is the adoption of a comprehensive market-based program that sets emission limits to greenhouse gas pollution across the state.

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[58] Renee McVay, Hillary Hull, and David Lyon, "Oil and Gas Methane Emissions in New Mexico," Environmental Defense Fund, accessed at https://www.edf.org/sites/default/files/new-mexico-methane-analysis.pdf
[59] "New Mexico's nationally leading oil and gas emissions rule becomes law," Office of the Governor Michelle Lujan Grisham, 28 July 2022, accessed at https://www.governor.state.nm.us/2022/07/28/new-mexicos-nationally-leading-oil-and-gas-emissions-rule-becomes-law/
[60] Factor prices refer to factors of production, which are primarily labor and capital.
[61] Gilbert Metcalf, "On the Economics of a Carbon Tax for the United States," Brookings Papers on Economic Activity, Spring 2019, accessed at https://www.brookings.edu/wp-content/uploads/2019/03/Metcalf_web.pdf
[62] Ibid., p. 440.
[63] Ibid, p. 441.

The most common method of implementing a market-based program is through a 'cap and trade' program, as New Mexico implemented in 2010 but repealed in 2012. This type of system places a limit on the total amount of greenhouse gases that can be emitted across the state (or region). Permits for each ton of greenhouse gas emissions are sold by the State at auction to large-scale emitters. Emitters that don't utilize their full allotment can sell their permits to emitters that need more. The establishment of a market for the right to emit creates a strong financial incentive for firms to reduce pollution. The State gradually reduces the total emissions cap, reducing the supply of emissions permits, and increasing the cost of using fossil fuels.

In addition to reducing greenhouse gas emissions, cap and trade programs also provide revenue to state governments. For example, the Regional Greenhouse Gas Initiative (RGGI), which includes 10 states in the Northeast, reported $248 million in revenue from auctions that funded various programs in each member state. Since RGGI started in 2005, member states have used auction revenue to fund energy efficiency programs, investments in clean and renewable energy, greenhouse gas abatement, and direct bill assistance.

It is also reasonable to suggest that some portion of revenue generated through a cap and trade program would be used for general purposes. California's cap and trade auctions generated $4.4 billion in state revenue from FY 2012 through FY 2017. Revenue generated in FY 2016 or later is restricted by statute so that 60% is used for specific purposes including high-speed rail projects and affordable housing, while the remaining 40% of revenue is available for appropriation.

Undertake a regular evaluation process for major State business incentives. In general, there is tension between industry (or business)-specific incentives and the economic efficiency tax policy principle. Because of this, it is important that a State have a formal process in place to review and evaluate its incentives on a regular basis, beyond relying on data from incentive applicants themselves. Many states have instituted this type of formal process, and New Mexico should as well.

In recent years, New Mexico has made a significant investment in the film production industry, both through broad-based incentives and through additional economic development agreements with specific companies. In 2019, the dollar cap for the Film Production Tax Credit was increased from $50 million to $110 million a year, and additional one-time funds (totaling $98.5 million) were dedicated to this initiative at the end of FY2019. While it is too early to determine the long-term outcome from those efforts, supporters have pointed to renewed film production activity since the cap was increased.[64]

Of course, one would expect increased economic activity within an industry that receives a significant State subsidy – the question to be answered is whether there is a positive return on investment from the subsidy. Nearly every independent study of state film tax credits across the

[64] Alicia B. Keyes, Cabinet Secretary, New Mexico Economic Development Department, "Want results from film incentives? They're heeere!" Albuquerque Journal, October 6, 2019, accessed at https://www.abqjournal.com/1374954/want-results-from-filmincentives-theyre-heeere.html

country has determined that the credits do not create a positive return on investment. Recently, for example, the Georgia Department of Audits and Accounts, Performance Audits Division, determined that "the economic activity generated by the film tax credit does not generate sufficient additional revenue to offset the credit, even after considering tourism and studio construction. In 2016, the film tax credit resulted in a net revenue loss to the State estimated at $602 million. The State's return on investment for the credit was 10 cents for each dollar, though local governments received an additional return of 11 cents in revenue."[65] A study of the Louisiana film credit program commissioned by the State's Department of Economic Development estimated tax revenue from economic activity associated with the state's film credit of $54.4 million in FY2018, at a cost of $150.5 million associated with the tax credit.[66]

To its credit, the 2019 expansion of the Film Production Tax Credit also required annual reporting related to the credit and development of an econometric tool to identify the economic impact of the credit.[67] While that is an example of specific language added to this credit, the State should broaden that application to include all business incentives. Determining the efficacy of any individual incentive should be an ongoing process that uses data and information to determine the appropriate course of action.

The Pew Charitable Trusts has provided technical support to states related to tax incentive evaluations. In 2017, it provided a detailed review of all 50 states activities for incentive evaluation.[68] In its discussion of New Mexico, they wrote that "In 2011, Governor Susana Martinez signed an executive order requiring the Taxation and Revenue Department to prepare an annual report on tax credits, exemptions, and deductions, including an evaluation of each program. These reports include valuable descriptive information on tax incentives, including their purposes, how they function, and how much they cost. They also include policy recommendations for many incentives, some of which offer ways to improve the design of the programs. However, the evaluation of each program typically consists of only a few paragraphs of discussion, with little or no original economic analysis."

The Pew analysis also noted that "New Mexico policymakers could consider providing more scrutiny to major tax incentives, such as the High Wage Jobs Credit, which cost $70 million in fiscal year 2015, than to such expenditures as a tax exemption totaling $10,000 annually for street vendors with disabilities."

In that 2017 evaluation, Pew identified 10 states as leading in incentive evaluation, 18 as making progress, and 32 as trailing. New Mexico was identified as one of the trailing states.

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[65] "Impact of the Georgia Film Tax Credit: Credit's impact on economy, jobs is less than reported," Georgia Department of Audits and Performance, January 2020, p. 20.
[66] "Economic and Fiscal Impact of Louisiana Entertainment Tax Credits," Camoin Associates, 2019, accessed at https://louisianaentertainment.gov/docs/default-source/default-library/2019-economic-fiscal-impact-of-louisiana-entertainment-taxcredits.pdf
[67] S.B. 2, Section 5, 2019. Accessed at https://www.billtrack50.com/BillDetail/1051136
[68] The Pew Charitable Trusts, "How States are Improving Tax Incentives for Jobs and Growth: A national assessment of evaluation practices," May 2017, accessed at https://www.pewtrusts.org/-/media/assets/2017/05/edti_how_states_are_improving_tax_incentives_for_jobs_and_growth.pdf

Pew has continued to update its evaluation of states. Its April 2020 updated listed Colorado as a leading state, joining Oklahoma among neighboring states. Both Texas and Utah continue to be listed as making progress, while Arizona and New Mexico are trailing.

The mechanics for setting up a regular process vary from state to state, even among the leading states. Some are done by professional staff of the legislative audit committee, which is the case in both Virginia and Washington. Some are done by the State Auditor's office, which is the case in Minnesota. Some are done by an outside contractor, which is the case in Oklahoma.[69] In Iowa, they are done by the executive branch Department of Revenue. In each case, however, there is a regular process to identify incentives for evaluation, and the evaluations are in-depth assessments of the particular program, in most instances accompanied by recommendations to improve its overall effectiveness. New Mexico would benefit from establishing a similar formal process for incentive review and evaluation.

A further discussion of various State incentive programs is included in a subsequent section and in Appendix D.

Complementary Revenue Structures

It is generally necessary to discuss state and local tax and revenue structures in combination, as the services provided to residents by state and local government vary substantially from state to state. As previously noted, property taxes are the most frequently imposed local-level tax in the U.S., and they have traditionally been the largest single local own-source tax revenue. That is not the case in New Mexico.

Taxes imposed on real property have long been a staple of local taxes for a variety of reasons. They generally have the highest collection rates of all major taxes, they have been more stable than other taxes during economic downturns, and there is a direct connection between the local government services provided within neighborhoods and communities where property taxes are imposed.

Another important feature of the property tax is that it is not generally imposed by either the federal or state government. Within the U.S., the income tax is imposed by both the federal and state governments (and a small but important group of cities and counties). Both states and local governments also impose broad-based consumption taxes. However, there are very few states that impose taxes on real property, and in no case is this a major revenue source. This primacy of local property taxes is important, as local governments are less likely to encounter competition over that tax base.

Without a doubt, there is a unique cultural context and history related to the State of New Mexico and property taxes, which pre-dates statehood. This context was explained in the 2010 Government Restructuring Task Force final report: "New Mexicans have had a deep suspicion

[69] It should be noted that PFM has provided business incentive evaluation services to the State of Oklahoma from 2016 through 2020.

of property taxes since Mexican rule, which only deepened during the territorial ‘land grab’ days, so it was natural that the State made the choice not to use property taxes for educational purposes. In addition, because of New Mexico's historically low property tax rate, large tracts of public and tribal lands and the fact that the railroads did not pay property tax, relying on such a tax for public school funding would not have been beneficial.”

The New Mexico State Constitution (Article 7, Section 2) limits the property tax to 20 mills (one mill equals one one-thousandth of a dollar of assessed property value). The 20 mills are divided between counties (11.85), municipalities (7.65) and school districts (0.50). Property values are to be assessed uniformly across the state, at one-third of market value. Thus the 20 mills represent 2% of one-third of market value, resulting in an effective tax rate of two-thirds of 1%. Among all states, this is a particularly low rate of property taxation.

Amend the New Mexico State Constitution to shift greater local funding responsibility to property taxes and away from the GRT. A major recommendation coming out of the 2010 Government Restructuring Task Force was to establish a state-wide real property tax levy of 5 mills to help fund K-12 public education. From our perspective, this is a focus on the correct tax but the wrong method for implementation. First, it would create some property tax competition among state and local government in this revenue source. Second, it would not assist with reducing some of the over-reliance on the GRT and the high rates associated with it because of its reliance as a primary revenue source for both the State and its major cities.

From our perspective, a better approach would be to allow use of additional mills for local governments in return for a direct reduction in their GRT rate. This would have several advantages. First, it would reduce the GRT rate imposed on most New Mexico businesses (and generally passed along to consumers). Given that the GRT is considered to be the most regressive of the major taxes imposed in the state, this would help with vertical equity concerns. Second, it would replace the GRT tax with a more stable tax, which would assist with issues of adequacy, particularly during economic downturns, when the demand for services generally increases. Finally, it would improve economic efficiency. It’s accepted that over-use of a tax will create ‘winners and losers.’ It has been observed that consumption decisions are more likely to consider the tax burden when consumption tax rates approach or exceed 10%. That is becoming more of an issue in New Mexico, based on combined state and local GRT rates, and reducing these combined rates should have a positive effect.

At the same time, there are valid concerns related to creating an additional property tax burden, particularly for those on fixed incomes who may have lived in their homes for decades and now see property values (and, thus, real property taxes) increasing faster than their incomes. The best way to deal with this is, once again, through a targeted assistance program – rather than a blanket restriction on taxation that also benefits those with the ability to pay.

An oft-used approach to deal with this problem is through a circuit breaker program. This type of program, which is usually instituted and funded at the state level, limits the percentage or

amount of income that can be dedicated to paying property taxes on a primary residence. There are usually income eligibility caps, and it is often done on a sliding scale.[70]
New Mexico has a form of circuit breaker, but it is a county-funded program and is only in effect in two counties. The low-income property tax PIT rebate is a partial offset for property taxes paid by low income residents with a principal place of residence in a county that has enacted an ordinance authorizing the rebate (to date only Los Alamos and Santa Fe Counties have enacted the required ordinances), and modified gross income[71] of less than $24,000. The rebate is calculated as a percentage of the taxpayer's property tax liability and based on the taxpayer's modified gross income. The rebate amount cannot exceed $350, or $175 if married filing separately. The State is reimbursed annually by the authorizing county for any low- income property tax rebates granted under this section.

Many state-funded circuit breaker programs are limited to those ages 65 and older and/or the disabled. An example is Utah, which limits its circuit breaker program to those 65 years of age or older or those who can demonstrate a disability or extreme hardship. The program is indexed; for 2019, the income limit for program eligibility is $34,167. The benefit is 50% of the total tax for the current year, or a maximum of $1,043, whichever is less. The dollar limit is also indexed to inflation for successive years.[72]

There are states that apply a broader circuit breaker. For example, Wyoming has a circuit breaker that provides up to one-half the homeowner's property tax bill or one-half of the median residential property tax bill within the County of residence, whichever is less. To be eligible, the homeowner's household income must be no more than three-fourths of the median household income in their county of residence or the state as a whole, whichever is higher. Three-fourths of the Wyoming state average for 2020 is $47,865. There are 9 of the state's 21 counties where the income eligibility would be higher, and they range up to a high of $71,678 in Teton County.[73]

[70] Aidan Davis, "Property Tax Circuit Breakers in 2018," Institute on Taxation and Economic Policy, 17 September 2018, accessed at https://itep.org/property-tax-circuit-breakers-in-2018/
[71] "Modified gross income is a calculation unique to New Mexico. It means -- for the entire household -- all income and all compensation from other sources regardless of whether the income is taxable by the U.S. Government or the state of New Mexico." New Mexico Taxation and Revenue Department, accessed at http://www.tax.newmexico.gov/frequently-askedquestions.aspx?9674a2e28c1442ce8b25e81c6d015418blogPostId=5061f8b51e134a939af717df9686a3aa
[72] "Publication 36 Revised, Property Tax Abatement, Deferral and Exemption Programs for Individuals," State of Utah, accessed at https://tax.utah.gov/forms/pubs/pub-36.pdf
[73] "Current Property Tax Refund/Credit/Deferral Programs in Wyoming," Wyoming Department of Revenue, accessed at https://sites.google.com/a/wyo.gov/wy-dor/administrative-services/property-tax-refund-program

The State Should Align Tax Policy and Economic Development Policy

The State Should Align Tax Policy and Economic Development Policy

As noted earlier, the possible future decline in oil and gas revenues and the need to diversify the economy are both significant topics of conversation in New Mexico. But the question of whether a more diversified economy can replace the State revenues lost by a declining oil-and-gas economy has not been widely discussed.

PFM reviewed the State's plan for economic diversification and assessed the likelihood that this diversification effort will succeed in both growing the State's targeted industries and also help to mitigate or offset potential revenue losses from a decline in oil and gas.

In 2021, the New Mexico Economic Development Department (EDD) commissioned SRI International's Center for Innovation Strategy & Policy to review the State's recent economic development efforts and propose a Strategic Plan for economic development in the state At part of that effort, SRI examined nine industries targeted by the State and identified strategies that would move those industries forward.

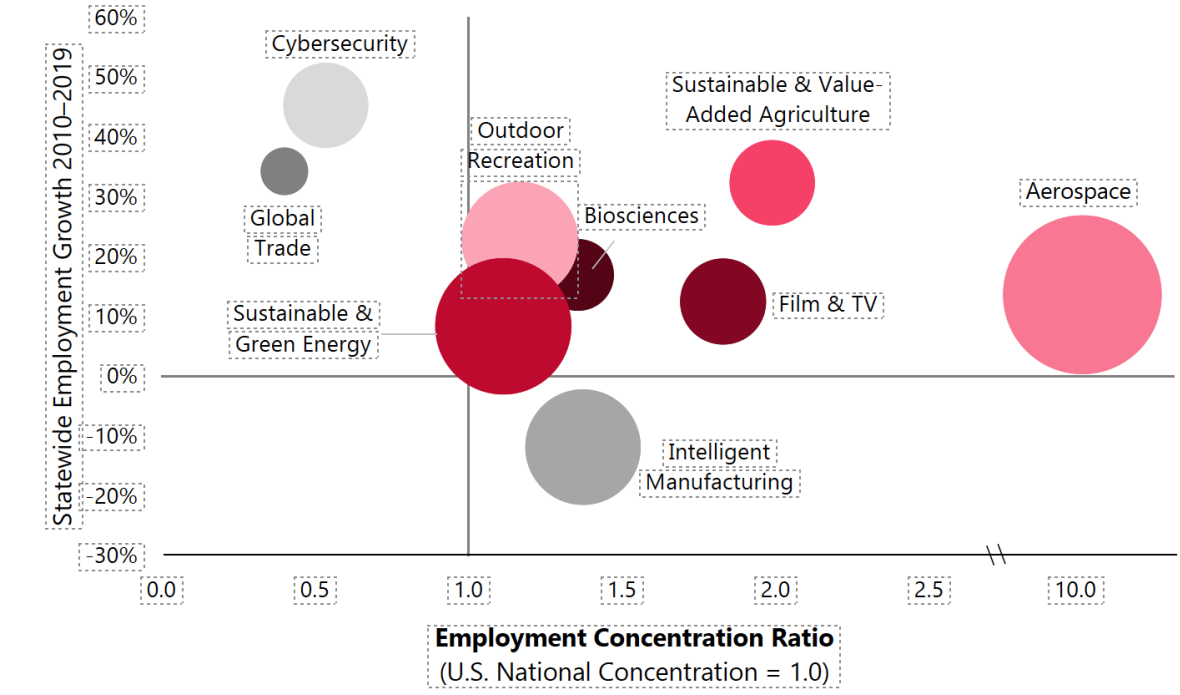
The Strategic Plan and the State's efforts are heavily focused on the nine industries. Subsequent to the release of the SRI report, the Legislature created the Sustainable Economy Task Force (made up largely of Cabinet officers) and the Sustainable Economic Advisory Council (made up of a broader set of stakeholders) to help implement the recommendations of the Strategic Plan, especially for the nine targeted industries. EDD is working with the New Mexico Chamber of Commerce and others to create "industry councils," initially for three of the nine targeted industries, to help implement the State's forward-looking agenda for those industries.

The nine targeted industries are:

1. Aerospace
2. Biosciences
3. Cybersecurity
4. Film and Television
5. Outdoor Recreation
6. Sustainable and Value-Added Agriculture
7. Intelligent Manufacturing
8. Global Trade
9. Sustainable and Green Energy

Together these industries represent approximately 11% of New Mexico's current jobs base. Some individual industries represent a larger scale of the state's gross domestic product – almost 12% in the case of agriculture, for example. The graphic below, included in the SRI report, depicts New Mexico's competitive position in each of these industries, at least with

regard to jobs. As the graphic shows, these industries are well positioned in some ways and underperform in other ways. None of these industries has both significant recent employment growth and significant employment concentration in New Mexico.



However, PFM did a separate analysis of gross receipts and the gross receipts tax, using data in the SRI report and from the Department of Taxation and Revenue. Though the PFM analysis may underestimate both gross receipts and GRT revenue from the target industries, it does indicate that all of these industries are growing faster than the state's economy as a whole.

Several of these industries take advantage of tax incentive programs offered by the State. For example, the film and television industry has its own dedicated tax credit, while manufacturing companies can take advantage of the Manufacturer's Investment Tax Credit. Several of the targeted industries generate high-wage jobs, which are eligible for the High Wage Jobs Tax Credit. Although the incentives may help the State achieve important policy goals – jobs in certain economic sectors, increasing renewable energy infrastructure – it is difficult to assess whether the incentives generate enough tax revenue to pay for themselves.

Use of Selected State Tax Credits	Amount	Year
Manufacturing sales tax credit	$42,876,000	CY 19
Film and television tax credit	$39,823,000	FY 21
Renewable Energy Production credit	$36,300,000	FY 21
High Wage Jobs Credit	$4,706,000	CY 20
Technology jobs & R&D credit	$4,687,000	FY 21
Angel Investment Credit	$919,000	FY 21
Credits for trucks near Santa Teresa border crossing	$472,000	FY 21
Rural Job Credit	$178,000	FY 21

Source: New Mexico 2021 Tax Expenditure Report

Broadly speaking, it is unlikely that any of these industries can replace lost oil-and-gas revenue in full, especially in the short- to medium-term, given the fact that some of them are reliant on the tax advantage of State tax credits. Most of these sectors, however, do hold the potential to create high-wage jobs, which appears to be an important strategy in the State's economic development efforts. One foundational question is how many high-wage jobs would be required – or, alternatively, how much would the state's median wage have to increase – in order to cover the potential loss of oil-and-gas revenues. This question is especially pressing given that (1) the PIT brackets are relatively flat and the PIT is not as progressive as other states, and (2) there has been some discussion during the current oil-and-gas revenue boom of *lowering* the current PIT rates.

PFM's high-level assessment of the revenue potential of each of the nine industries is below. More detail is contained in Appendix D.

Aerospace

Aerospace has long been viewed as a major opportunity for the New Mexico economy. According to PFM's own NAICS code analysis of the aerospace industry in New Mexico, the industry is small but growing rapidly, partly because of the presence of the national labs. In addition, the State has made an investment of more than $200 million in Spaceport America, located in rural southeast New Mexico, which was the first spaceport in the United States. Aerospace is one of the industries for which EDD has already created an industry council.

The impact of the aerospace industry on State revenue is difficult to assess but it is not likely to be large. To the extent that aerospace businesses are producing high-wage jobs, they are adding to the PIT revenue, but the industry as a whole is still quite small. Similarly, GRT revenue is likely small. An economic impact analysis by Moss Adams in 2020 estimated the actual direct economic impact of Spaceport at about $33 million in 2019, generating about $1.9 million in gross receipts tax, with extremely optimistic predictions for the future. PFM's NAICS analysis estimated aerospace GRT in 2020 at $428,000 – a 562% increase over 2015, but still quite small.

Biosciences and Cybersecurity

Both biosciences and cybersecurity have been targeted by the State as potentially important industries, in large part because of their connection to the national labs. Los Alamos claims to generate $1.54 in tax revenue for every $1 spent. Though both biosciences and cybersecurity are growing fast as economic sectors, cybersecurity is much bigger. Both have grown by an average of 30-40% per year since 2015.

The impact on State revenue will largely be accrued in the PIT. Biosciences and cybersecurity jobs pay well – more than $75,000 per year on average. But SRI found that the two sectors, though growing fast, together added only 3,400 jobs between 2010 and 2020. To have a significant impact on PIT revenue, these industries will have to add jobs far more rapidly than they have in the past.

Film & Television

There is no question that film and television activity is increasing rapidly in New Mexico. Like many states, New Mexico has a State film office housed in the Economic Development Department and a robust State tax credit program that provides credits in excess of $100 million per year. The State provides additional credits to "partner" companies that make significant investments in film infrastructure. A 2021 economic impact study for the New Mexico film office estimated that direct, indirect, and induced economic activity from the film and television industry was $933 million.[74] The overall economic activity represents approximately 1% of the state's GDP.

No recent analysis has been done to determine whether there is a net positive revenue impact on the State government, but it is extremely unlikely that this is the case. The most recent analysis conducted to date is contained in a report to the LFC in 2008, which found that $38 million in tax credits at that time generated about $5 million in tax revenue, about 14% of the total invested.[75] This is consistent with the few other studies conducted on this topic. The film and television industry pays relatively high wages and therefore could have an impact on PIT, assuming the recipients of those wages live in New Mexico.

[74] "Economic Impact of the New Mexico Film Production Tax Credit: A Study for the New Mexico Film Office by Olsberg SPI," Olsberg SPI, 19 November 2022, accessed at https://nmfilm.com/assets/uploads/migrated/2021/11/NMFO_EconomicImpactStudy_NMFilmProductionIncentiveProgram_2021.pdf

[75] Anthony V. Popp and James Peach, "The Film Industry in New Mexico and The Provision of Tax Incentives," New Mexico State University – Arrowhead Center, Office of Policy Analysis, 26 August 2008, accessed at https://www.nmlegis.gov/entity/lfc/Documents/Money_Matters/NMSU%20Report%20on%20Economic%20Impact%20of%20Film%20Production%20Tax%20Credit%20-%20August%202008.pdf

Outdoor Recreation

Given the state's natural wonders, outdoor recreation should have great potential to contribute to the state's economy. Nevertheless, New Mexico's outdoor recreation economy is small compared to other states in the Intermountain West.

A PFM analysis of data from the Bureau of Economic Analysis estimated New Mexico's "value-added" outdoor recreation economy[76] at approximately $550 million in 2020. By contrast, Colorado's value-added outdoor economy was about $3 billion, Arizona's $2 billion, and Utah's $1.5 billion. Even with rapid growth, it is not clear that outdoor recreation can have a significant impact on state revenue. Within the context of the state's focus on high-wage job growth, outdoor recreation is not likely to be a major contributor, as the average wage in the sector is $38,000 per year.

Sustainable & Value-Added Agriculture

Agriculture is one of the leading economic sectors in New Mexico. According to an analysis from New Mexico State that is now nearly a decade old, agriculture and food processing accounted for $10.6 billion in 2012, 12% of the state's overall economy, plus 32,000 in direct jobs and 18,000 in indirect jobs.[77]

However, most of New Mexico's agricultural activity is in the low-value-added growing sector. Given the state's emphasis on creating high-value jobs and therefore increasing PIT revenue, the agricultural industry is unlikely to serve as a big contributor. The authoritative 2014 New Mexico State report, *Agriculture's Contribution to New Mexico's Economy*, found that even though agriculture contributed more than $10 billion and 50,000 jobs to the New Mexico economy, it accounted for only $23 million in PIT and $40 million in CIT, including indirect effects.[78]

Intelligent Manufacturing

Manufacturing is the only one of the targeted industries that decreased overall employment in recent years, even though concentration of manufacturing employment in New Mexico is above the national average. In addition, almost half of New Mexico's manufacturing businesses have fewer than 50 employees. However, much of New Mexico's economic development effort is focused on manufacturing – especially "intelligent" manufacturing, which makes use of real-time data and technology to maximize manufacturing productivity.

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[76] BEA defines "value added" as "The gross output of an industry or a sector less its intermediate inputs; the contribution of an industry or sector to gross domestic product (GDP). Value added by industry can also be measured as the sum of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus" – a glossary is available at https://www.bea.gov/help/glossary/compensation-employees-paid

[77] Joel Diemer, Terry Crawford, and Michael Patrick, "Agriculture's Contribution to New Mexico's Economy," New Mexico State University - Cooperative Extension Service, College of Agricultural, Consumer and Environmental Sciences, December 2014, accessed at https://pubs.nmsu.edu/_circulars/CR675.pdf

[78] Ibid.

The manufacturing sector's impact on State revenue is heavily dependent on both the sector's overall growth and its uses of the manufacturing tax credit and other tax credits. Evidence is mixed that the manufacturing sector is growing. Despite SRI's finding that manufacturing has declined in recent years, the Department of Taxation and Revenue's gross receipts figures show a significant increase. But the lack of a trained workforce – which is, along with the GRT, the biggest brake on increased manufacturing in New Mexico – could limit future growth, which would in turn limit GRT and PIT from the manufacturing sector.

Global Trade

New Mexico's global trade is increasing rapidly compared to other states, in large part because of crossing improvements and industrial development at Santa Teresa, near El Paso and the Mexican border, which was expanded to take pressure off of El Paso. Continued rapid growth in global trade should provide some benefit to State revenue. The sector is growing rapidly and the average wage is close to $60,000 per year. However, two-thirds of the employment is in warehousing and storage, which tend to produce relatively few jobs.

Sustainable & Green Energy

Although New Mexico's energy sector is best known for oil and gas, the potential for sustainable and green energy is considerable. The state has abundant wind and solar resources. SRI found that sustainable and green energy employment grew by 9.1% between 2010 and 2020. Energy is one of the three industries for which EDD has already created an industry council.

The construction of alternative energy facilities and transmission lines is likely to create a significant number of well-paying jobs, thus assisting the State's strategy of increasing PIT with high-wage jobs, at least in the short-term. In the long term, however, alternative energy is not likely to create a large number of jobs throwing off PIT.

The State Should Build on Current Efforts at Diversification by Making Strategic Investments in People and Places

The State Should Build on Current Efforts at Diversification by Making Strategic Investments in People and Places

As noted in the previous sections, tax reform alone will not easily allow New Mexico to offset the revenue loss that will result over time from the decline in the oil and gas industry. In addition to the changes recommended above, New Mexico needs to make fundamental changes to its economy. It needs to do so both to achieve revenue goals and to put the state back on a path toward growth and prosperity. And even diversification alone will not be enough. New Mexico's economic future also needs to account for the challenges of inequality and inequity in the state.

Some of the recommendations below may take significant State funding and investment. Fortunately, recent windfall revenues provide the perfect opportunity to act now and use these resources wisely to foster growth in the future – before the next downturn.

Summary of Key Findings:

- Economic and population growth in New Mexico slowed considerably between 2010 and 2020, with jobs growth dropping from 10 percent in the prior decade to 5 percent and the population increasing at one of the slowest rates in the State's history in that same period – by contrast, all neighboring states have experienced stronger economic and population growth.

- New Mexico has the third highest rate of poverty in the country and is tied for third lowest labor force participation rate in the country, with poverty highly concentrated in certain areas of the State and demographics.

- As noted earlier, the State's evaluation of its economic development efforts currently focuses mostly on job creation rather than a more holistic set of factors (including State revenue impacts).

- New Mexico's plan for economic diversification is centered on sector-specific strategies with a focus on retaining and attracting high wage jobs, similar to the State's tax expenditure programs which are also largely industry-specific.

- The State already has programs that are focused on certain communities, but they largely provide project- or employer-specific funding.

- The State has already leveraged some of the recent influx of federal funding for economic development but could go further in this area.

- The National Labs play a very significant role in the State's high-wage jobs strategy, but the State is too dependent on third-party efforts in the innovation sector.

Summary of Recommendations:

- New Mexico needs to focus more on economic development initiatives centered on certain areas and communities – both to ensure multi-sector growth and to reduce economic inequity.

- Using a data-driven approach, the State should concentrate its resources in geographic areas with both high poverty and high unemployment that are experiencing population decline, as well as in areas in the Permian and San Juan Basins that are most dependent on the oil and gas industry for employment.

- The State should continue to prioritize equity and reducing barriers to employment in its workforce development strategy – such as the cost of education, needs for childcare, structural racism, and criminal history – to better link workforce development with economic development and expand the economic power of New Mexico's tax base.

- The State should increase funding for both early and ongoing education for current residents, as well as pursue an active strategy to incentivize and attract domestic in-migrants who can join the labor force in the short- to medium-term to avoid constraining economic growth due to a lack of skilled labor.

- The State should develop and formalize a stronger framework – including adding State capacity where needed – to help connect local governments with third-party grants and technical assistance, encourage greater collaboration with regional organizations, and align State economic development priorities with local needs.

- New Mexico's LEDA program already requires local governments to adopt an economic development plan by ordinance to secure State funding for support for local businesses. Using these existing local efforts as a starting point, the State should work with communities to understand what they see for their future in order to address the fact that New Mexico is the only Western state that does not have substantial population growth that can help fill newly created high-wage jobs.

- The State should continue to bolster New Mexico Tech, UNM Rainforest, and other innovation efforts that seek to spin off technology in order to increase private sector activity, especially in the biosciences. These programs have the potential to significantly increase high-wage jobs and provide a path of opportunity for more New Mexicans.

New Mexico's Stagnant Economic and Population Growth

Jobs were growing. For decades, New Mexico looked similar in many ways to other states in the Southwest. Between 2000 and 2010, New Mexico gained just over 95,000 jobs – a ten percent increase over the course of the decade. Most of the job growth was centered in seven sectors, each of which accounted for a gain of more than 5,000 jobs in the decade: health care (31,100),

professional, scientific and technical services (19,550), local government (15,801), real estate (9,857), mining (8,461), food services (7,050), and educational services (5,587).

New Mexico Employment by Sector, 2000 to 2010

Description	2000	2010	Percent Change	Amount Change
Health care and social assistance	88,361	119,461	35.2%	31,100
Professional, scientific, and technical services	58,845	78,395	33.2%	19,550
Local government	90,364	106,165	17.5%	15,801
Real estate and rental and leasing	29,500	39,357	33.4%	9,857
Mining, quarrying, and oil and gas extraction	18,603	27,064	45.5%	8,461
Accommodation and food services	73,955	81,144	9.7%	7,189
Educational services	11,225	16,812	49.8%	5,587
Other services (except government and government enterprises)	49,404	53,732	8.8%	4,328
Finance and insurance	31,039	34,860	12.3%	3,821
Farm employment	21,910	25,631	17.0%	3,721
Federal civilian	30,215	33,728	11.6%	3,513
Administrative and support, waste management and remediation services	51,628	54,283	5.1%	2,655
Arts, entertainment, and recreation	20,655	23,104	11.9%	2,449
Construction	60,677	61,130	0.7%	453
Utilities	4,385	4,612	5.2%	227
Military	17,091	17,136	0.3%	45
Management of companies and enterprises	5,755	5,377	(6.6%)	(378)
Forestry, fishing, and related activities	5,699	5,183	(9.1%)	(516)
Information	18,206	17,130	(5.9%)	(1,076)
Transportation and warehousing	24,939	23,437	(6.0%)	(1,502)
Retail trade	112,003	110,350	(1.5%)	(1,653)
Wholesale trade	28,859	26,905	(6.8%)	(1,954)
State government	64,654	60,407	(6.6%)	(4,247)
Manufacturing	46,947	34,574	(26.4%)	(12,373)

Source: Bureau of Economic Analysis

Population was growing. For four consecutive decennial periods, the state's population had grown by double digit percentages:

- 1970 – 1980: 28.7%
- 1980 – 1990: 16.1%
- 1990 – 2000: 19.8%
- 2000 – 2010: 13.4%

Overall, New Mexico gained 1.1 million residents between 1960 and 2010. Population gains were largely concentrated in four counties: Bernalillo (+400,365), Dona Ana (+159,613), Santa Fe (+99,200) and San Juan (+76,738).

Between 2010 and 2019, New Mexico's economic trajectory began to change dramatically. Many have framed this as a delayed recovery – or lack of a recovery – from the Great Recession.

During this period, New Mexico's rate of job growth lagged the rest of the nation, at fourth from the bottom. Only Alaska and West Virginia had slower job gains.

Job Growth by Jurisdiction, 2010 to 2019

Jurisdiction	2010	2019	Percent Change	Amount Change
West Virginia	899,472	881,598	(2.0%)	(17,874)
Alaska	443,904	454,785	2.5%	10,881
Vermont	413,312	433,602	4.9%	20,290
New Mexico	**1,059,977**	**1,116,979**	**5.4%**	**57,002**
Connecticut	2,171,933	2,298,065	5.8%	126,132
Wyoming	385,059	408,235	6.0%	23,176
Iowa	1,950,444	2,071,092	6.2%	120,648
Maine	791,331	842,473	6.5%	51,142
Kansas	1,801,873	1,924,539	6.8%	122,666
Louisiana	2,536,560	2,717,896	7.1%	181,336
Mississippi	1,490,731	1,607,696	7.8%	116,965
Arkansas	1,541,272	1,664,214	8.0%	122,942
Illinois	7,251,002	7,859,703	8.4%	608,701
Oklahoma	2,130,128	2,309,852	8.4%	179,724
Wisconsin	3,426,438	3,719,288	8.5%	292,850
Missouri	3,475,301	3,779,850	8.8%	304,549
Nebraska	1,219,802	1,328,812	8.9%	109,010
Pennsylvania	7,119,776	7,773,246	9.2%	653,470
New Hampshire	813,707	890,110	9.4%	76,403
South Dakota	558,135	610,900	9.5%	52,765
Kentucky	2,325,921	2,550,230	9.6%	224,309
Ohio	6,418,162	7,072,285	10.2%	654,123
Alabama	2,460,298	2,712,163	10.2%	251,865
Hawaii	824,460	914,163	10.9%	89,703
Minnesota	3,408,753	3,783,623	11.0%	374,870
Rhode Island	586,363	651,037	11.0%	64,674
Montana	616,344	686,459	11.4%	70,115
Maryland	3,345,423	3,743,604	11.9%	398,181

Job Growth by Jurisdiction, 2010 to 2019 (Continued)

Jurisdiction	2010	2019	Percent Change	Amount Change
New Jersey	4,960,621	5,571,414	12.3%	610,793
Virginia	4,743,189	5,329,887	12.4%	586,698
Indiana	3,525,335	3,970,076	12.6%	444,741
District of Columbia	809,137	915,189	13.1%	106,052
Michigan	5,038,194	5,713,882	13.4%	675,688
Delaware	522,400	602,812	15.4%	80,412
North Dakota	503,813	581,826	15.5%	78,013
New York	11,005,742	12,746,559	15.8%	1,740,817
United States	*172,901,700*	*201,648,200*	*16.6%*	*28,746,500*
Massachusetts	4,115,539	4,872,989	18.4%	757,450
Oregon	2,174,324	2,578,253	18.6%	403,929
Tennessee	3,515,804	4,168,951	18.6%	653,147
North Carolina	5,178,363	6,149,574	18.8%	971,211
Washington	3,771,444	4,589,563	21.7%	818,119
South Carolina	2,357,627	2,882,340	22.3%	524,713
Idaho	868,718	1,064,118	22.5%	195,400
Georgia	5,211,352	6,399,395	22.8%	1,188,043
California	19,642,444	24,227,775	23.3%	4,585,331
Arizona	3,181,571	3,929,985	23.5%	748,414
Colorado	3,143,637	3,895,377	23.9%	751,740
Texas	14,262,558	17,902,900	25.5%	3,640,342
Nevada	1,478,054	1,884,215	27.5%	406,161
Utah	1,620,799	2,103,036	29.8%	482,237
Florida	9,805,154	12,761,585	30.2%	2,956,431

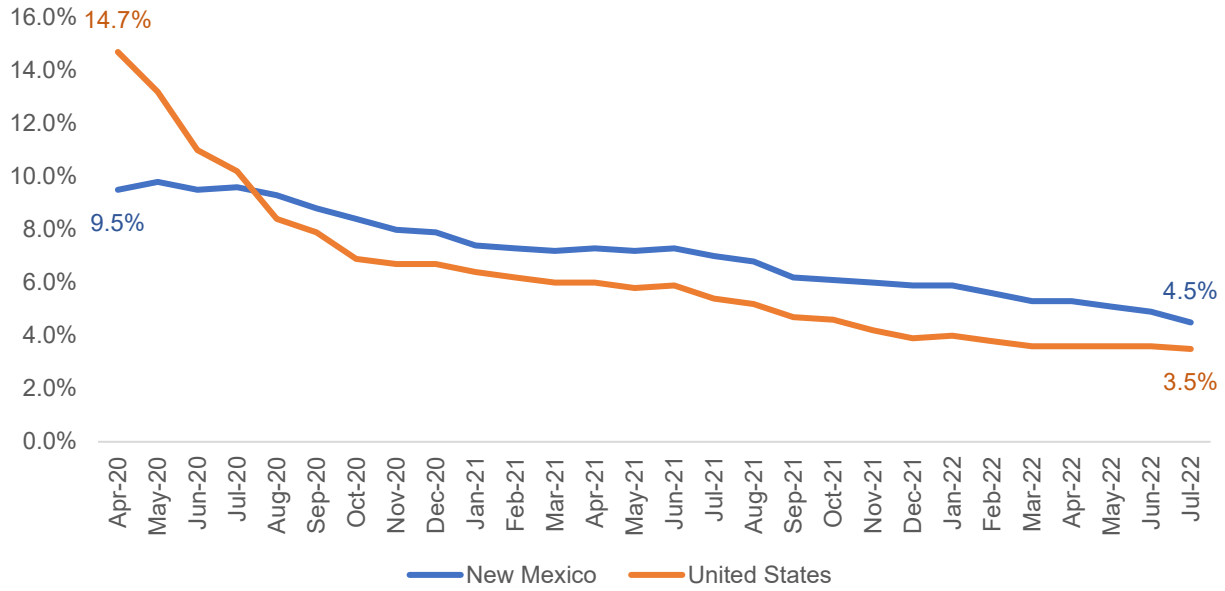
Source: Bureau of Economic Analysis

New Mexico gained just under 57,000 jobs – just a 5% increase over nine years. While New Mexico was adding an average of just under 10,000 jobs per year between 2000 – 2010, that dropped to just under 6,500 jobs per year in the 2010s. Of the high growth industries from 2000 to 2010, there were job losses in both local government and real estate. Growth continued in three sectors, but at a slower rate than during the prior decade – mining (18% vs. 45%), health care (15% vs. 35%) and professional, scientific and technical services (6% vs. 33%). Only food services (19% vs. 12%) grew at a faster rate from 2010 – 2019 than it had from 2000 – 2010. From 2010 – 2019, only two other sectors – transportation (8,795) and construction (6,761) added more than 5,000 jobs.

During the pandemic, unemployment in New Mexico peaked at 9.8 percent in May 2020 – one month after national unemployment had peaked at 14.7 percent. Since August 2020, New Mexico's unemployment rate has been higher than the U.S. unemployment rate by one to two

percentage points. As of July 2022, New Mexico has the highest state unemployment rate in the nation – 4.5 percent.[79]

Unemployment – New Mexico and the United States, April 2020 to July 2022



Source: Bureau of Labor Statistics

As job growth stalled, so did population growth. Between 2010 and 2020, New Mexico's population only grew by 2.8 percent – tied for the 11th slowest rate of growth with Missouri and Vermont. The period marked just the second decade since 1900 that the state did not experience a double-digit growth rate. And while the state overall continued to grow, there were dramatic differences from county to county.

From 2000 – 2010, population increased in 19 out of New Mexico's 33 counties. Between 2010 and 2020, most of New Mexico's counties – 20 out of 33 – experienced population loss. In the four large counties that had historically driven state population growth, population declined in San Juan County (down by 6.4% after growing 14.3% between 2000 and 2010 and losing 8,383 residents) and grew modestly in Santa Fe (+7.4% and +10,653 residents), Dona Ana (+4.9% and +10,328 residents) and Bernalillo (+2.1% and +13,880 residents) counties. Only one other county – Sandoval (17,273) – added more than 10,000 residents in the decade. Only Eddy, Lea and Sandoval counties had growth rates of greater than 10 percent. Four counties – Union, Mora, Hidalgo and De Baca – all lost more than ten percent of their residents in the decade.

[79] Data accessed at https://www.bls.gov/web/laus/laumstrk.htm

New Mexico Population by County – 2000, 2010, 2020 U.S. Census

County	2000	2010	2020	2000-2010 Difference	2000-2010 Percent Difference	2010-2020 Difference	2010-2020 Percent Difference
Eddy County	51,658	53,829	62,314	2,171	4.2%	8,485	15.8%
Lea County	55,511	64,727	74,455	9,216	16.6%	9,728	15.0%
Sandoval County	89,908	131,561	148,834	41,653	46.3%	17,273	13.1%
Los Alamos County	18,343	17,950	19,419	(393)	(2.1%)	1,469	8.2%
Santa Fe County	129,292	144,170	154,823	14,878	11.5%	10,653	7.4%
Otero County	62,298	63,797	67,839	1,499	2.4%	4,042	6.3%
Doña Ana County	174,682	209,233	219,561	34,551	19.8%	10,328	4.9%
Taos County	29,979	32,937	34,489	2,958	9.9%	1,552	4.7%
Bernalillo County	556,678	662,564	676,444	105,886	19.0%	13,880	2.1%
McKinley County	74,798	71,492	72,902	(3,306)	(4.4%)	1,410	2.0%
Luna County	25,016	25,095	25,427	79	0.3%	332	1.3%
Rio Arriba County	41,190	40,246	40,363	(944)	(2.3%)	117	0.3%
Curry County	45,044	48,376	48,430	3,332	7.4%	54	0.1%
Cibola County	25,595	27,213	27,172	1,618	6.3%	(41)	(0.2%)
Valencia County	66,152	76,569	76,205	10,417	15.7%	(364)	(0.5%)
Chaves County	61,382	65,645	65,157	4,263	6.9%	(488)	(0.7%)
Lincoln County	19,411	20,497	20,269	1,086	5.6%	(228)	(1.1%)
Quay County	10,155	9,041	8,746	(1,114)	(11.0%)	(295)	(3.3%)
Roosevelt County	18,018	19,846	19,191	1,828	10.1%	(655)	(3.3%)
Sierra County	13,270	11,988	11,576	(1,282)	(9.7%)	(412)	(3.4%)
Catron County	3,543	3,725	3,579	182	5.1%	(146)	(3.9%)
Grant County	31,002	29,514	28,185	(1,488)	(4.8%)	(1,329)	(4.5%)
Guadalupe County	4,680	4,687	4,452	7	0.1%	(235)	(5.0%)
Harding County	810	695	657	(115)	(14.2%)	(38)	(5.5%)
San Juan County	113,801	130,044	121,661	16,243	14.3%	(8,383)	(6.4%)
Socorro County	18,078	17,866	16,595	(212)	(1.2%)	(1,271)	(7.1%)
San Miguel County	30,126	29,393	27,201	(733)	(2.4%)	(2,192)	(7.5%)
Torrance County	16,911	16,383	15,045	(528)	(3.1%)	(1,338)	(8.2%)
Colfax County	14,189	13,750	12,387	(439)	(3.1%)	(1,363)	(9.9%)
Union County	4,174	4,549	4,079	375	9.0%	(470)	(10.3%)
Mora County	5,180	4,881	4,189	(299)	(5.8%)	(692)	(14.2%)
Hidalgo County	5,932	4,894	4,178	(1,038)	(17.5%)	(716)	(14.6%)
De Baca County	2,240	2,022	1,698	(218)	(9.7%)	(324)	(16.0%)
New Mexico	**1,819,046**	**2,059,179**	**2,117,522**	**240,133**	**13.2%**	**58,343**	**2.8%**

Source: US Census Bureau

The slowing of population growth is particularly stark when compared to New Mexico's bordering states. Utah (18.4%), Texas (15.9%), Colorado (14.8%) and Arizona (11.9%) all had population growth at four to six times New Mexico's rate of population growth. New Mexico also lagged behind Oklahoma (5.5%) and the national population growth of 7.4 percent.

New Mexico and Bordering States Population – 2000, 2010, 2020 U.S. Census

State	2000	2010	2020	2000-2010 Difference	2000-2010 Percent Difference	2010-2020 Difference	2010-2020 Percent Difference
Utah	2,233,169	2,763,885	3,271,616	530,716	23.8%	507,731	18.4%
Texas	20,851,820	25,145,561	29,145,505	4,293,741	20.6%	3,999,944	15.9%
Colorado	4,301,261	5,029,196	5,773,714	727,935	16.9%	744,518	14.8%
Arizona	5,130,632	6,392,017	7,151,502	1,261,385	24.6%	759,485	11.9%
United States	*281,421,906*	*308,745,538*	*331,449,281*	*27,323,632*	*9.7%*	*22,703,743*	*7.4%*
Oklahoma	3,450,654	3,751,351	3,959,353	300,697	8.7%	208,002	5.5%
New Mexico	**1,819,046**	**2,059,179**	**2,117,522**	**240,133**	**13.2%**	**58,343**	**2.8%**

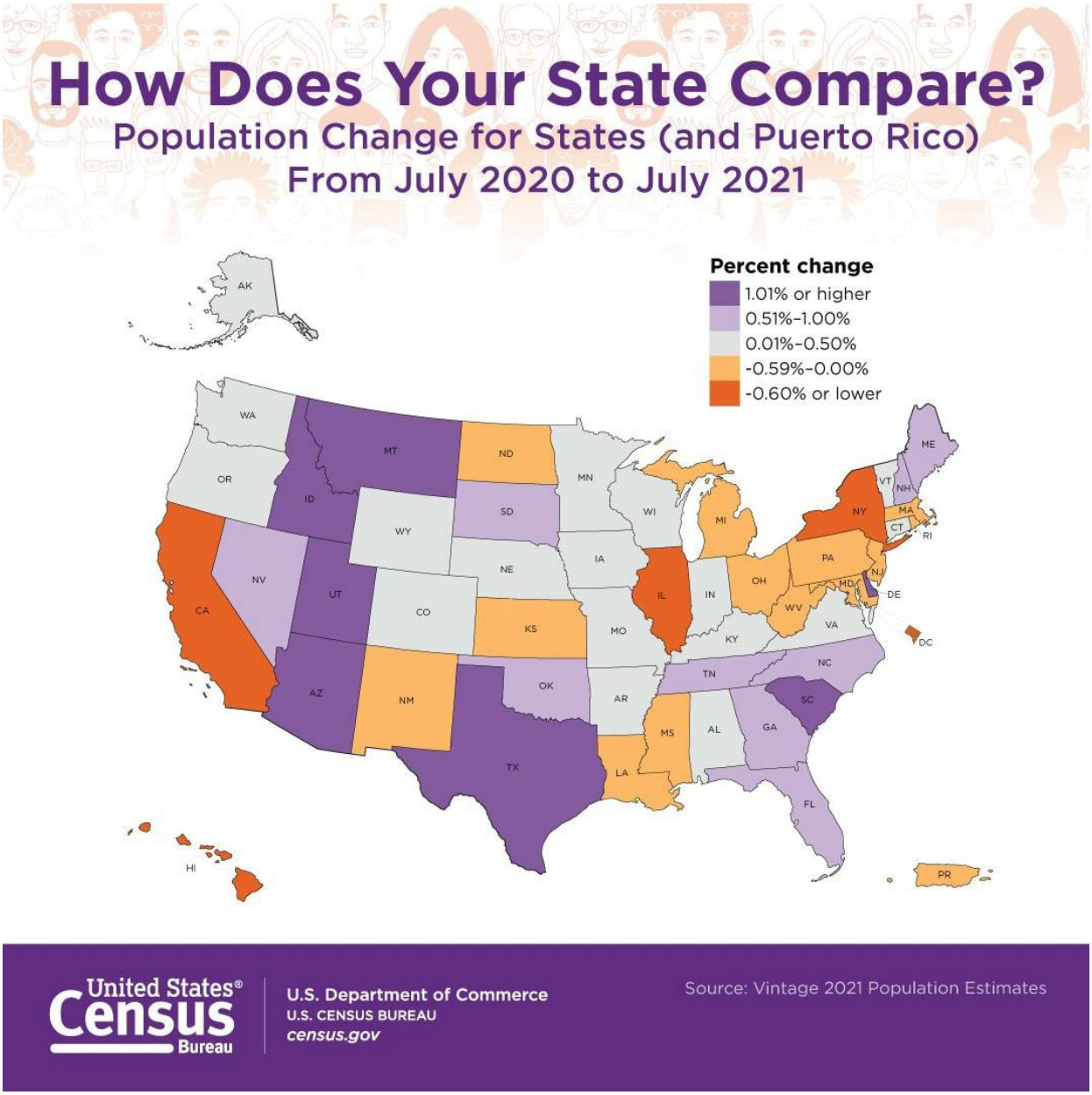
Source: US Census Bureau

Census estimates suggest that New Mexico's population declined in 2021. Nationally, Census estimates indicate that the population grew by just 0.1% over the prior year – the slowest growth rate since the state's founding: 17 states lost population, including 11 that are estimated to have lost 10,000 or more residents.[80] In New Mexico, Census estimates suggest a population decline of 1,689 residents or -0.1 percent.

By comparison, Census estimates suggest that each of New Mexico's neighbors saw a one-year increase in population during the pandemic:

- Utah: +56,291 (1.7%)
- Arizona: +98,330 (1.4%)
- Texas: +310,288 (1.1%)
- Oklahoma: +24,608 (0.6%)
- Colorado: +27,761 (0.5%)

[80] "New Vintage 2021 Population Estimates Available for the Nation, States and Puerto Rico," U.S. Census Bureau, 21 December 2021, accessed at https://www.census.gov/newsroom/press-releases/2021/2021-population-estimates.html



At the county level, Census estimates also indicate that population grew in 17 counties and declined in the remaining 16 counties between 2020 and 2021. Two counties – Sandoval and Dona Ana – saw increases of more than one thousand residents. Three counties – Bernalillo, Eddy and Lea – all lost more than one thousand residents. On a percentage basis, Catron, Torrance and Sandoval were the three fastest growing counties while Harding, Eddy and Lea had the deepest declines.

New Mexico County Population Change, 2020 to 2021

County	2020	2021	Percent Change	Amount Change
Sandoval County	149,218	151,369	1.4%	2,151
Doña Ana County	219,899	221,508	0.7%	1,609
Valencia County	76,329	77,190	1.1%	861
Otero County	67,861	68,537	1.0%	676
Torrance County	15,051	15,307	1.7%	256
Taos County	34,392	34,623	0.7%	231
Santa Fe County	154,977	155,201	0.1%	224
Lincoln County	20,296	20,436	0.7%	140
Catron County	3,612	3,731	3.3%	119
Luna County	25,420	25,532	0.4%	112
Cibola County	27,076	27,184	0.4%	108
Union County	4,067	4,107	1.0%	40
Colfax County	12,332	12,369	0.3%	37
San Miguel County	27,115	27,150	0.1%	35
Mora County	4,184	4,196	0.3%	12
De Baca County	1,678	1,680	0.1%	2
Guadalupe County	4,447	4,449	0.0%	2
Harding County	660	639	(3.2%)	(21)
Sierra County	11,526	11,502	(0.2%)	(24)
Quay County	8,721	8,656	(0.7%)	(65)
Hidalgo County	4,149	4,074	(1.8%)	(75)
Rio Arriba County	40,264	40,179	(0.2%)	(85)
Los Alamos County	19,424	19,330	(0.5%)	(94)
Roosevelt County	19,118	19,019	(0.5%)	(99)
Socorro County	16,565	16,311	(1.5%)	(254)
Grant County	28,209	27,889	(1.1%)	(320)
Curry County	48,325	47,999	(0.7%)	(326)
San Juan County	121,429	120,993	(0.4%)	(436)
Chaves County	65,168	64,629	(0.8%)	(539)
McKinley County	72,630	71,780	(1.2%)	(850)
Eddy County	62,257	60,911	(2.2%)	(1,346)
Lea County	74,586	73,004	(2.1%)	(1,582)
Bernalillo County	676,581	674,393	(0.3%)	(2,188)

Source: US Census Bureau

Inequality and Equity in New Mexico

Given this data, as New Mexico looks to grow its economy through diversification to increase prosperity and drive new revenue for state and local government, it must also address fundamental inequality and equity issues across the state. In part, New Mexico's slow to

stagnant growth over the last decade or so may be the result of these challenges finally overcoming all of the benefits of New Mexico as a place to live and to locate jobs. These challenges affect quality of life, the availability of talent for employers, and the ability of the State to overcome projected future gaps in revenue detailed in the earlier sections of this report.

As noted earlier, New Mexico is a poor state. Based on averages from three years of data from the Current Population Survey, 16.2 percent of New Mexicans were living in poverty in 2020. Only Mississippi (18.8%) and Louisiana (17.4%) had higher poverty rates. New Mexico's poverty rate was more than two-thirds higher than the U.S. poverty rate of 11.2 percent.[81] New Mexico's poverty rate is also higher than the poverty rates in its neighboring states: Oklahoma (13.2%); Texas (12.9%); Arizona (11.2%); Colorado (9.3%) and Utah (7.2%).

[81] Emily A. Shrider, Melissa Kollar, Frances Chen, and Jessica Semega, "Income and Poverty in the United States: 2020," U.S. Census Bureau, 14 September 2021, accessed at https://www.census.gov/library/publications/2021/demo/p60-273.html

Poverty Rate by State, 2018-2020 3-year average

Rank	State	Poverty Rate	Rank	State	Poverty Rate
1	Mississippi	18.8%	27	Montana	10.3%
2	Louisiana	17.4%	28	Maine	10.0%
3	**New Mexico**	**16.2%**	29	Connecticut	9.9%
4	Arkansas	14.7%	30	Hawaii	9.5%
5	Alabama	14.6%	31	North Dakota	9.5%
6	District of Columbia	14.6%	32	Wyoming	9.5%
7	West Virginia	14.6%	33	Colorado	9.3%
8	Kentucky	14.4%	34	Idaho	9.2%
9	South Carolina	13.7%	35	Illinois	9.2%
10	Georgia	13.4%	36	Nebraska	9.2%
11	North Carolina	13.2%	37	Iowa	9.1%
12	Oklahoma	13.2%	38	Oregon	9.1%
13	Texas	12.9%	39	Vermont	9.0%
14	Florida	12.8%	40	Rhode Island	8.8%
15	Tennessee	12.8%	41	Virginia	8.8%
16	Ohio	12.3%	42	Kansas	8.7%
17	Alaska	12.2%	43	Wisconsin	8.3%
18	Nevada	12.1%	44	Massachusetts	8.2%
19	New York	11.8%	45	Delaware	8.1%
20	Arizona	11.2%	46	Maryland	8.1%
21	Indiana	11.2%	47	Washington	7.9%
22	California	11.0%	48	New Jersey	7.6%
23	South Dakota	10.9%	49	Minnesota	7.3%
24	Missouri	10.8%	50	Utah	7.2%
25	Michigan	10.6%	51	New Hampshire	5.3%
26	Pennsylvania	10.4%	-	*United States*	*11.2%*

Source: US Census Bureau

New Mexico's high poverty rate is not new. A similar 2010 analysis found that 17.5 percent of New Mexicans were living in poverty. Mississippi (21.3%) and Arizona (17.8%) were the only two states with higher poverty rates. Over the decade, New Mexico made little progress in reducing poverty – down by just .7 percentage points – while the national rate declined from 13.4 percent to 11.2 percent: moreover, neighboring states like Arizona (down by 6.6 percentage points) and Texas (down by 3.7 percentage points) also saw more dramatic drops.[82] In 2000, New Mexico had the highest state poverty rate at 20.8 percent – nearly fifty percent higher than the national poverty rate of 12.6 percent.[83]

[82] Carmen DeNavas-Walt, Bernadette D. Proctor, and Jessica C. Smith, "Income, Poverty, and Health Insurance Coverage in the United States: 2009," U.S. Census Bureau, September 2010, accessed at https://www.census.gov/data/tables/2010/demo/income-poverty/p60-238.html

[83] Joseph Dalaker and Bernadette D. Proctor, "Poverty in the United States: 1999," U.S. Census Bureau, 1 September 2000, accessed at https://www.census.gov/data/tables/2000/demo/income-poverty/p60-210.html

In part, as noted earlier, New Mexico's high poverty rate is impacted by the low labor force participation rate. As of July 2022, New Mexico had the third lowest state labor force participation rate – 56.7 percent: only West Virginia (55.2%) and Mississippi (55.5%) had lower labor force participation rates. Again, New Mexico's relative standing in labor force participation rate has not changed over the last ten years. In July 2012, New Mexico was tied with Alabama for the second lowest labor force participation rate at 58.2 percent. Only West Virginia had a lower rate in July 2012 – 54.4 percent.

Labor Force Participation Rate, Seasonally Adjusted, July 2012 and July 2022

Rank	State	July 2012	July 2022	Difference	Rank	State	July 2012	Jul 2022	Difference
1	District Of Columbia	69.3%	73.0%	3.7%	27	Missouri	64.2%	62.5%	(1.7%)
2	Nebraska	71.8%	70.0%	(1.8%)	28	California	63.1%	62.4%	(0.7%)
3	Colorado	68.8%	69.5%	0.7%	29	Georgia	63.8%	62.2%	(1.6%)
4	North Dakota	72.7%	69.1%	(3.6%)	30	Ohio	63.2%	61.9%	(1.3%)
5	South Dakota	70.7%	68.9%	(1.8%)	31	Pennsylvania	63.6%	61.7%	(1.9%)
6	Minnesota	70.4%	68.4%	(2.0%)	32	Vermont	69.2%	61.7%	(7.5%)
7	Utah	66.6%	68.1%	1.5%	33	Delaware	62.0%	61.1%	(0.9%)
8	Iowa	69.3%	67.8%	(1.5%)	34	Tennessee	61.6%	61.1%	(0.5%)
9	Kansas	68.4%	66.4%	(2.0%)	35	Arizona	61.0%	60.9%	(0.1%)
10	Wisconsin	68.5%	66.2%	(2.3%)	36	Hawaii	60.9%	60.8%	(0.1%)
11	Alaska	67.9%	66.0%	(1.9%)	37	Oklahoma	62.0%	60.7%	(1.3%)
12	Maryland	67.8%	65.8%	(2.0%)	38	North Carolina	62.9%	60.6%	(2.3%)
13	Massachusetts	65.5%	65.8%	0.3%	39	New York	61.7%	60.3%	(1.4%)
14	New Hampshire	69.3%	65.7%	(3.6%)	40	Michigan	60.1%	60.1%	0.0%
15	Washington	64.5%	65.0%	0.5%	41	Nevada	64.4%	60.1%	(4.3%)
16	Illinois	65.9%	64.6%	(1.3%)	42	Florida	60.5%	59.3%	(1.2%)
17	Connecticut	66.1%	64.5%	(1.6%)	43	Louisiana	59.6%	58.9%	(0.7%)
18	Texas	65.4%	63.8%	(1.6%)	44	Maine	64.7%	58.8%	(5.9%)
19	Virginia	66.6%	63.8%	(2.8%)	45	Kentucky	60.8%	58.1%	(2.7%)
20	Rhode Island	66.1%	63.6%	(2.5%)	46	South Carolina	59.9%	57.3%	(2.6%)
21	Oregon	63.3%	63.5%	0.2%	47	Alabama	58.2%	57.2%	(1.0%)
22	Indiana	62.8%	63.4%	0.6%	48	Arkansas	59.5%	57.0%	(2.5%)
23	Wyoming	68.3%	63.4%	(4.9%)	**49**	**New Mexico**	**58.2%**	**56.7%**	**(1.5%)**
24	New Jersey	65.9%	63.0%	(2.9%)	50	Mississippi	59.0%	55.5%	(3.5%)
25	Idaho	64.7%	62.6%	(2.1%)	51	West Virginia	54.4%	55.2%	0.8%
26	Montana	64.1%	62.6%	(1.5%)	-	*United States*	63.7%	62.1%	(1.6%)

Source: St Louis Federal Reserve FRED Economic Data

But New Mexico was not always in this position. In July 2002, New Mexico was tied with two other states – New York and South Carolina – at the eighth lowest labor force participation rate of 63.2 percent: at the time West Virginia, Louisiana, Mississippi, Florida, Alabama, Kentucky and Arkansas all had lower rates of labor force participation.[84]

[84] Data accessed at https://www.bls.gov/web/laus/ststdsadata.txt

For those who are working in New Mexico, average annual pay is lower than in most other states based on Bureau of Labor Statistics data. In 2021, based on preliminary data, employed New Mexicans earned an average of $52,250 in pay. Average annual pay was lower in just eight states: Mississippi, West Virginia, Idaho, South Dakota, Oklahoma, Montana, Arkansas and South Carolina. New Mexico's rank in annual pay worsened somewhat since 2021 when it was the 13th lowest state in the nation. This was due to New Mexico's slow growth in average annual pay – ninth lowest among all states.

Average Annual Pay by State, 2011 versus 2021

State	2011	2021	Percent Increase	2011 Rank	2021 Rank	Rank Change
New York	$61,792	$88,030	42.5%	1	1	0
California	$55,013	$85,753	55.9%	5	2	3
Massachusetts	$59,671	$83,738	40.3%	3	3	0
Washington	$50,256	$82,479	64.1%	10	4	6
Connecticut	$61,145	$77,903	27.4%	2	5	-3
New Jersey	$57,546	$76,320	32.6%	4	6	-2
New Hampshire	$47,281	$72,055	52.4%	15	7	8
Maryland	$53,008	$71,711	35.3%	6	8	-2
Colorado	$49,082	$70,540	43.7%	12	9	3
Illinois	$50,840	$70,127	37.9%	7	10	-3
Virginia	$50,657	$67,968	34.2%	8	11	-3
Minnesota	$47,858	$67,032	40.1%	14	12	2
Texas	$48,735	$65,976	35.4%	13	13	0
Pennsylvania	$47,035	$64,704	37.6%	16	14	2
Delaware	$50,499	$64,439	27.6%	9	15	-6
Oregon	$43,090	$63,998	48.5%	23	16	7
Alaska	$49,383	$62,700	27.0%	11	17	-6
Rhode Island	$45,705	$62,257	36.2%	18	18	0
Georgia	$45,090	$62,228	38.0%	19	19	0
Arizona	$44,581	$61,744	38.5%	20	20	0
Michigan	$45,828	$61,641	34.5%	17	21	-4
Florida	$42,313	$60,319	42.6%	28	22	6
Hawaii	$42,473	$59,650	40.4%	25	23	2
North Carolina	$42,121	$59,578	41.4%	29	24	5
Nevada	$43,102	$59,474	38.0%	22	25	-3
Tennessee	$42,454	$59,079	39.2%	26	26	0
Ohio	$42,972	$58,338	35.8%	24	27	-3
Utah	$40,279	$57,830	43.6%	35	28	7
North Dakota	$41,778	$56,849	36.1%	30	29	1
Missouri	$41,461	$56,451	36.2%	31	30	1
Wisconsin	$41,003	$56,364	37.5%	33	31	2

Average Annual Pay by State, 2011 versus 2021 (Continued)

State	2011	2021	Percent Increase	2011 Rank	2021 Rank	Rank Change
Vermont	$40,293	$56,248	39.6%	34	32	2
Indiana	$40,248	$54,960	36.6%	36	33	3
Maine	$38,020	$54,632	43.7%	45	34	11
Alabama	$41,186	$54,356	32.0%	32	35	-3
Iowa	$39,204	$54,297	38.5%	41	36	5
Nebraska	$38,269	$53,925	40.9%	44	37	7
Louisiana	$42,375	$53,886	27.2%	27	38	-11
Kansas	$39,989	$53,415	33.6%	39	39	0
Wyoming	$43,394	$53,020	22.2%	21	40	-19
Kentucky	$39,646	$52,860	33.3%	40	41	-1
New Mexico	**$40,032**	**$52,520**	**31.2%**	**38**	**42**	**-4**
South Carolina	$38,427	$52,302	36.1%	43	43	0
Arkansas	$37,280	$51,456	38.0%	46	44	2
Montana	$35,791	$51,322	43.4%	47	45	2
Oklahoma	$40,108	$51,318	27.9%	37	46	-9
South Dakota	$35,413	$51,254	44.7%	49	47	2
Idaho	$35,626	$50,745	42.4%	48	48	0
West Virginia	$39,092	$50,503	29.2%	42	49	-7
Mississippi	$34,976	$44,947	28.5%	50	50	0

Source: Bureau of Labor Statistics

One of the reasons for low average annual pay in New Mexico may be the state's relatively low college attainment rate. Based on 2020 data, New Mexico has the 13th lowest college attainment rate -- 30.1 percent. Overall college attainment rate masks a significant difference between New Mexico and other states with below average college attainment. In large part because of the presence of the national laboratories in New Mexico, the state has one of the highest percentages of population with a professional or graduate degree – 14.1 percent, 14th in the nation.[85] At the same time, New Mexico has one of the lowest percentages of population that have attained a high school degree – it had the fourth lowest high school graduation rate.[86] The low high school attainment rate may explain why college attainment alone does not explain poverty or pay. Of the twelve states with a lower college attainment rate, New Mexico has a higher poverty rate than ten. Seven of the twelve states have a higher average annual pay.

Within New Mexico, poverty is concentrated by both place and people. Data from 2020 from the Small Area Income and Poverty estimates demonstrate dramatic differences in poverty rate by county. Poverty ranges from a low of 3.3 percent in Los Alamos County to a high of 32 percent in McKinley County. Only two New Mexico counties had rates below the national poverty rate –

[85] Data accessed at https://fred.stlouisfed.org/release/tables?rid=330&eid=398089&od=2021-01-01#
[86] Data accessed at https://fred.stlouisfed.org/release/tables?rid=330&eid=394766

Los Alamos and Sandoval (10.4%) in 2020. In three New Mexico counties, more than one in four residents were living in poverty – Cibola (25.1%), Socorro (25.1%) and McKinley.

Counties of New Mexico Poverty Rates, 2020

Rank	County	Percent	Rank	County	Percent
1	Los Alamos	3.3%	18	Rio Arriba	19.7%
2	Sandoval	10.4%	19	Mora	19.8%
3	Santa Fe	12.5%	20	Hidalgo	19.8%
4	Lea	12.6%	21	Grant	20.0%
5	Eddy	12.8%	22	Dona Ana	20.5%
6	Curry	14.9%	23	San Miguel	20.9%
7	Harding	15.1%	24	Torrance	21.4%
8	Bernalillo	15.3%	25	San Juan	21.5%
9	Valencia	15.5%	26	Quay	22.0%
10	Otero	15.5%	27	Sierra	22.1%
11	Lincoln	16.9%	28	Luna	22.3%
12	DeBaca	17.0%	29	Guadalupe	22.8%
13	Colfax	17.2%	30	Catron	22.8%
14	Roosevelt	18.2%	31	Cibola	25.1%
15	Taos	18.9%	32	Socorro	25.1%
16	Union	19.0%	33	McKinley	32.0%
17	Chaves	19.2%	34	*New Mexico*	*16.8%*

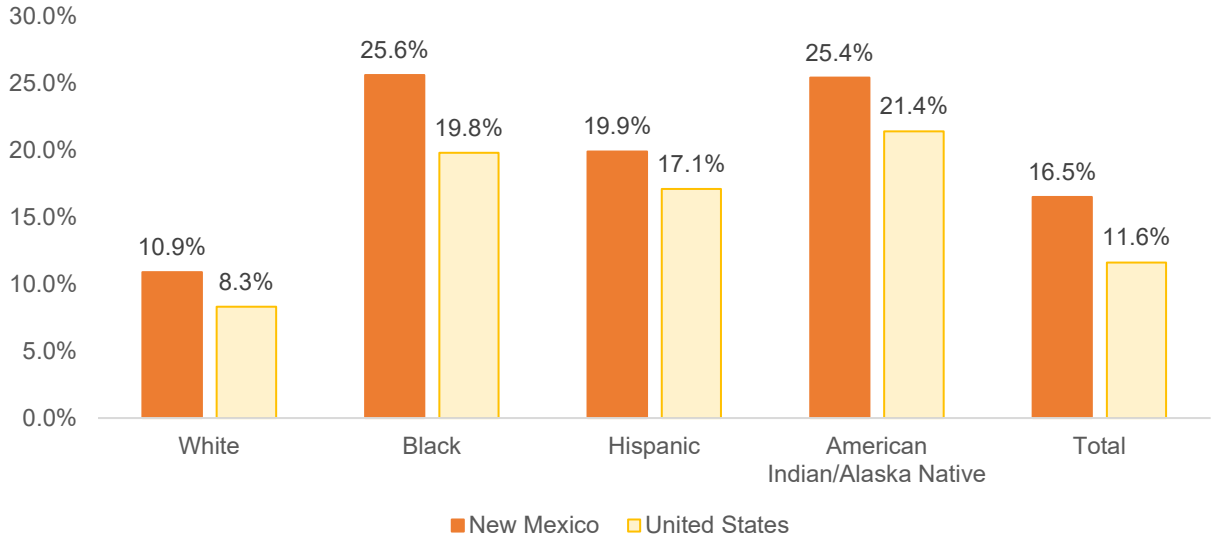
Source: US Census Bureau

While other counties had higher poverty rates, most New Mexicans living in poverty were living in larger counties. An estimated 346,455 New Mexicans were living in poverty in 2020. Bernalillo (29.5%), Dona Ana (12.8%) and San Juan (7.5%) counties were the home to just under half of New Mexicans living in poverty. McKinley County was the only county with a population of 100,000 residents or less to have more than 20,000 residents living in poverty.[87] Using data from the Current Population Survey, it is also possible to see differences in poverty by race, ethnicity and origin. KFF estimated that in 2020, white New Mexicans had a poverty rate of 10.9 percent: Latinos (25.6%) and Native Americans (25.4%) had poverty rates more than double the rate for whites: Blacks in New Mexico had a poverty rate of 19.9 percent.[88] Nationally, whites had an 8.3 percent poverty rate, compared to 17.1 percent for Latinos, 19.8 percent for Blacks and 21.4 percent for Native Americans and Alaska Natives.

[87] Data accessed at https://www.census.gov/data-tools/demo/saipe/#/

[88] KFF estimates based on the Census Bureau's March Current Population Survey (CPS: Annual Social and Economic Supplements), 2017-2021, accessed at https://www.kff.org/other/state-indicator/poverty-rate-by-race-ethnicity-cps/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

Poverty Rate by Race/Ethnicity, 2020



Source: Kaiser Family Foundation

The same KFF analysis highlighted a gender disparity in poverty as well: 18 percent of New Mexico women are living in poverty compared to 13.8 percent of men. This is consistent with a disparity nationally: women have a 12 percent poverty rate compared to 8.8 percent for men. The KFF analysis also suggests that the poverty rate for men in New Mexico is the highest among all states.[89]

Poverty is also related to educational attainment. A 2019 analysis found that the poverty rate for New Mexicans with a college degree was 5.9 percent, compared to 4.1 percent nationally. For those with some college, the poverty rate was 13.1 percent in New Mexico compared to 9.1 percent nationally. For high school graduates, the poverty rate was 18.2 percent in New Mexico compared to 13.1 percent nationally. For those lacking a high school degree, the gap between New Mexico and the nation was even greater – 33.0 percent in New Mexico and 23.4 percent nationally.[90]

[89] KFF estimates based on the 2008-2021 American Community Survey, 1-Year Estimates, accessed at https://www.kff.org/other/state-indicator/adult-poverty-rate-by-sex/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

[90] Rachel Moskowitz, "Poverty in New Mexico: 2019," New Mexico Department of Workforce Solutions, accessed at https://www.dws.state.nm.us/Portals/0/DM/LMI/Poverty_in_NM_2019.pdf

New Mexico Department of Workforce Solutions Labor Market Review, February 2019

4 Poverty Rate for Select Characteristics New Mexico and U.S., 2019

	U.S.	N.M.
Sex		
Male	11.1	16.2
Female	13.5	20.1
Race		
White Alone	10.3	16.1
Black/African American Alone	21.2	22.2
American Indian/Alaskan Native Alone	23.0	30.0
Hispanic or Latino Origin		
Hispanic or Latino Origin (of Any Race)	17.2	21.3
White Alone, not Hispanic or Latino	9.0	11.5
Educational Attainment (25 Years and Over)		
Less Than High School Graduate	23.4	33.0
High School Graduate (Includes Eqv.)	13.1	18.2
Some College, Associate's Degree	9.1	13.1
Bachelor's Degree or Higher	4.1	5.9
Employment Status (16 Years and Over)		
Employed	5.7	8.9
Unemployed	28.3	32.9
Work Experience in Past 12 Mos. (16 Years and Over)		
Worked Full-Tme, Year-Round	2.5	4.1
Worked Part-Time or Part-Year	14.9	21.4
Did Not Work	20.4	26.4

Source: New Mexico Department of Workforce Solutions

While New Mexico is moving forward with strategies that are focused on retaining and recruiting jobs in targeted industries, the State also needs to focus on people-based and place-based strategies that promote growth and opportunity *and* address underlying challenges related to inequality and equity. This approach is consistent with the SRI report which details six major challenges to New Mexico's ability to grow jobs and grow wages:

- Lack of collaboration between economic development stakeholders
- Difficulty attracting and retaining talent in urban, rural and tribal communities
- Misalignment between higher education and industry
- Disengagement of socioeconomically disadvantaged communities in planning processes

- Public-sector dominance in New Mexico's ecosystem

- Concentration of economy in a few key industries[91]

While the focus on target industries and addresses the need for diversification detailed in the challenge in the last bullet above, it does not address the other five challenges. Compared to the recommendations related to diversification, strategies, and priorities to address the other challenges identified by the SRI report appear to be more "works in progress":

- Collaborative New Mexico: align the efforts of stakeholders; streamline and simplify rules and regulations; strengthen business recruitment and retention efforts

- Dynamic New Mexico: increase community capacity for economic development; redefine urban regions; commit to the economic sustainability of rural and tribal communities

- Skilled New Mexico: improve higher education and training through industry engagement and institutional reform; reform workforce development; prepare students for success

- Inclusive New Mexico: increase collaboration with tribal communities; expand access to resources for entrepreneurs from disadvantaged backgrounds; improve education and workforce outcomes for underserved populations

- Innovative New Mexico: build capacity for entrepreneurs; remove barriers to financial resources; sustain an entrepreneur friendly environment; connect entrepreneurs and innovators to critical industry knowledge[92]

The primary focus of the State's strategy around attracting target industries is to create more high wage jobs in New Mexico – a laudable and important goal, especially given the stated need to increase taxable income to offset some of the projected loss of oil and gas revenue over the next decade and a half. But there needs to be a complementary focus on significantly reducing New Mexico's poverty rate.

New Mexico's Current Efforts Focused on Place and People

To be clear, New Mexico has already taken important steps to address poverty issues and the talent gap in the state – albeit outside of the context of economic development and diversification. Using funds from the temporary surge in oil and gas revenue, the State has provided a significant increase in access to early childhood education and college education. In March 2022, Governor Lujan Grisham signed Senate Bill 140 making college tuition-free for most New Mexicans. The legislation expands funding for the Opportunity Scholarship program –

[91] "Empower and Collaborate - New Mexico's Economic Path Forward," Center for Innovation Strategy & Policy at SRI International prepared for New Mexico Economic Development Department, October 2021, page ES-2, available at https://eddstateplan.com/
[92] Ibid., page ES-9 to ES-10.

which itself was an expansion of free tuition under the Lottery Scholarship. Under the Opportunity Scholarship program, any New Mexican can now attend any public or tribal college at no cost, including community colleges.[93]

One month later, Governor Lujan Grisham announced the expansion of no-cost child care programs for New Mexico residents. Under the program, childcare will be free "to qualifying families earning up to 400% of federal poverty level (FPL) — $111,000 for a family of four. Beginning May 1, 2022, all families enrolled in the state's Childcare Assistance Program will no longer owe copays for child care services, making child care cost-free."[94]

Even before these landmark new efforts, New Mexico already invested significantly in both people and place.

Current Investment in People: K-12 Education

Because of the funding structure for public education in New Mexico, the State is the primary funder with more than half of the state budget already going to K-12 education. Using data from 2018-2019, New Mexico was fourth among states in the percentage of total funding for K-12 education from state government – 68.8 percent: nationally, 46.7 percent of education comes from state government. Only Vermont (90.3%), Hawaii (88.3%) and Washington public schools were more dependent on state funding.[95]

[93] Fiscal Impact Report for Opportunity Scholarship Act, New Mexico Legislative Finance Committee, 14 February 2022, accessed at https://www.nmlegis.gov/Sessions/22%20Regular/firs/SB0140.PDF
[94] "New Mexico leads the nation as Governor Lujan Grisham makes childcare free for most families," Office of the Governor Michelle Lujan Grisham, 28 April 2022, accessed at https://www.governor.state.nm.us/2022/04/28/new-mexico-leads-the-nation-as-governor-lujan-grisham-makes-childcare-free-for-most-families-2/
[95] Data accessed at https://nces.ed.gov/programs/digest/d21/tables/dt21_235.20.asp?current=yes

State Revenues Amount and Share for Public Elementary and Secondary Schools, 2018-2019

Rank	State	Amount (000s)	Percent	Rank	State	Amount (000s)	Percent
1	Vermont	1,636,839	90.3%	27	Arizona	5,712,761	49.1%
2	Hawaii	2,760,300	88.3%	28	Tennessee	5,105,970	46.6%
3	Washington	13,459,016	69.4%	29	Georgia	10,365,335	45.9%
4	**New Mexico**	**2,836,184**	**68.8%**	30	New Jersey	14,718,666	44.5%
5	Idaho	1,929,390	66.3%	31	Louisiana	4,113,396	43.7%
6	Minnesota	9,489,462	65.9%	32	Maryland	6,950,516	43.0%
7	Kansas	4,428,062	63.8%	33	Montana	875,872	42.8%
8	North Carolina	10,040,918	62.8%	34	Rhode Island	1,148,971	42.8%
9	Alaska	1,599,906	62.5%	35	Colorado	5,281,701	42.7%
10	Indiana	8,408,921	62.2%	36	Ohio	10,652,975	41.3%
11	Delaware	1,418,388	62.0%	37	Virginia	7,068,882	40.1%
12	Michigan	12,859,538	59.7%	38	Connecticut	4,757,235	39.8%
13	California	58,235,032	58.0%	39	New York	29,698,937	39.4%
14	West Virginia	2,018,878	55.8%	40	Massachusetts	7,454,632	39.3%
15	Alabama	4,708,652	55.8%	41	Maine	1,183,307	39.1%
16	Kentucky	4,785,635	55.3%	42	Florida	12,204,010	38.6%
17	Utah	3,617,420	55.2%	43	Pennsylvania	12,657,272	37.8%
18	North Dakota	1,020,926	54.8%	44	Texas	24,484,118	36.6%
19	Wyoming	964,548	53.4%	45	Nevada	1,861,030	34.3%
20	Iowa	3,836,233	52.7%	46	South Dakota	582,705	34.2%
21	Oregon	4,597,475	51.6%	47	Missouri	3,930,985	32.4%
22	Arkansas	2,971,791	51.1%	48	Nebraska	1,502,051	32.2%
23	Mississippi	2,436,388	49.7%	49	New Hampshire	1,007,939	30.8%
24	Wisconsin	6,288,629	49.5%	50	Illinois	8,276,977	26.6%
25	South Carolina	5,452,153	49.3%	51	District of Columbia	N/A	N/A
26	Oklahoma	3,600,427	49.1%	-	*United States*	*$356,997,353*	*46.7%*

Source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "National Public Education Financial Survey," 2018-19

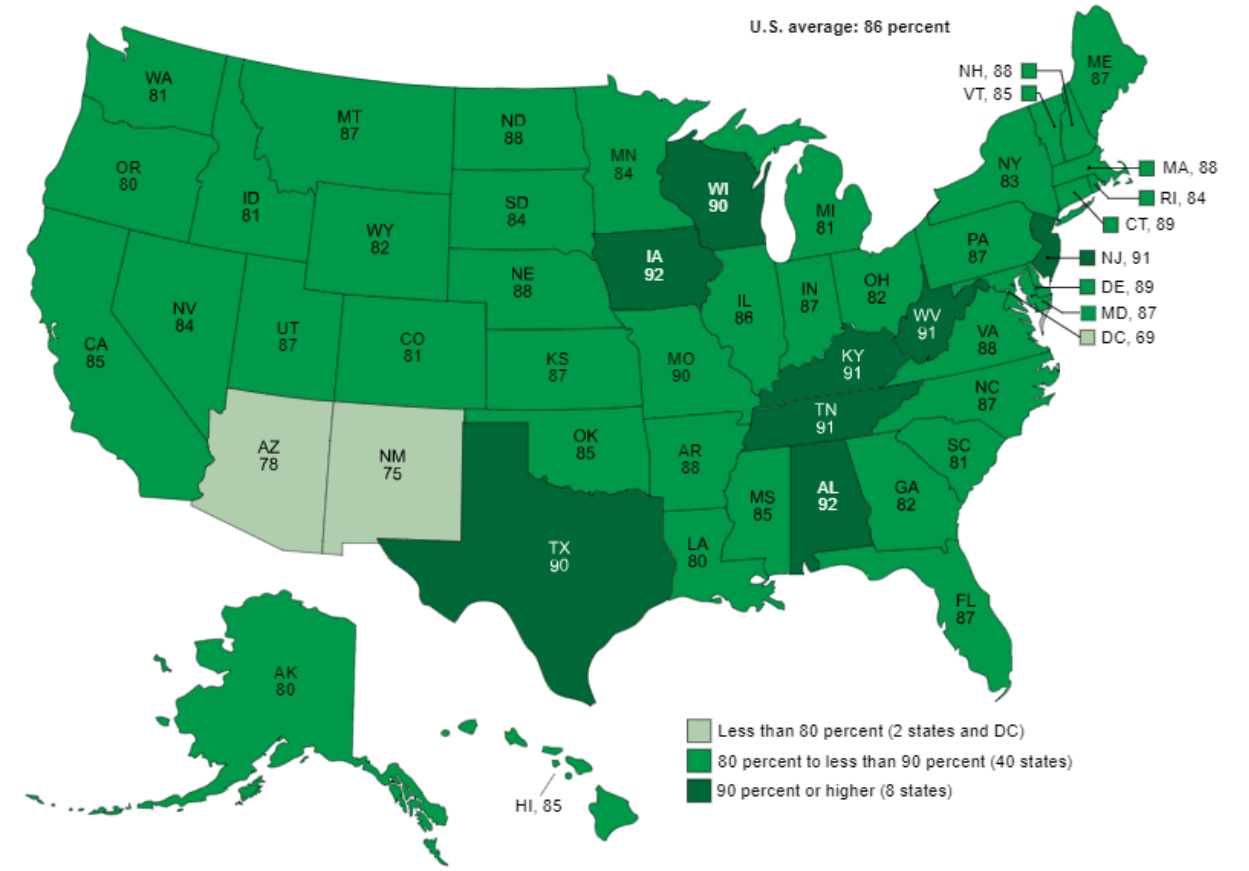
Yet overall spending per student in New Mexico lagged behind other states. In 2018-2019, expenditure per pupil in fall enrollment nationally was $15,034: in New Mexico, it was $11,918, 13th lowest among states.

What did the current level of investment buy? The most recent data on state high school graduation rates – from the 2018-2019 school year – highlights the problem. New Mexico had the lowest high school completion rate – 75 percent – of all states; the national completion rate was 86 percent. There are disparities by race and ethnicity: while the graduation rate was 79 percent for White students; it was 75 percent for Latinos; 70 percent for Native American/Alaskan Natives; and 67 percent for Black students.[96]

[96] "Public High School Graduation Rates" U.S. Department of Education Institute of Education Sciences National Center for Education Statistics, May 2021, accessed at https://nces.ed.gov/programs/coe/indicator/coi.

Public High School Graduation Rates

Figure 1. Adjusted cohort graduation rate (ACGR) for public high school students, by state and categorized into specific ranges: 2018–19



NOTE: The ACGR is the percentage of public high school freshmen who graduate with a regular diploma within 4 years of starting 9th grade. The U.S. average ACGR is for the 50 states and the District of Columbia. The graduation rates displayed above have been rounded to whole numbers. Categorizations are based on unrounded percentages. The Alabama State Department of Education has indicated that their ACGR data for some years was misstated. For more information, please see the following press release issued by the state: https://www.alsde.edu/sec/comm/News Releases/12-08-2016 Graduation Rate Review.pdf.

SOURCE: U.S. Department of Education, Office of Elementary and Secondary Education, Consolidated State Performance Report, 2018–19; and National Center for Education Statistics, EDFacts file 150, Data Group 695, and EDFacts file 151, Data Group 696, 2018–19. See *Digest of Education Statistics 2020*, table 219.46.

Source: National Center for Education Statistics

Another means of measuring education performance in the state is to look at college participation – the number of high school graduates from the state going directly to a two- or four-year college. In 2018, 60.7% of high school graduates in New Mexico went on to college – 32nd among states and below the national average of 63.7%. Among those going on to college, not all stayed. Among students going to four-year colleges, 70.5 percent of New Mexico students returned for their second year: New Mexico ranked 47th among all states and fell below the national rate of 80 percent. For New Mexico students attending two-year colleges, 54.4 percent returned for a second year – 36th among states.[97]

[97] Data accessed from http://www.higheredinfo.org/

4-Year and 2-Year College Total Retention Rate by State, Fall 2018

4-Year College Rank	State	4-Year College Total Retention Rate	2-Year College Total Retention Rate	4-Year College Rank	State	4-Year College Total Retention Rate	2-Year College Total Retention Rate
1	California	86.4%	59.8%	27	Maine	77.6%	53.7%
2	Massachusetts	85.6%	53.5%	28	Wyoming	77.6%	55.7%
3	Rhode Island	84.0%	59.8%	29	Georgia	77.0%	54.6%
4	Maryland	83.8%	57.1%	30	South Carolina	77.0%	46.5%
5	New Jersey	83.7%	61.2%	31	North Dakota	76.8%	61.2%
6	New York	83.6%	57.6%	32	Missouri	76.5%	55.7%
7	Florida	82.9%	67.9%	33	Nevada	76.1%	70.4%
8	Virginia	82.9%	57.7%	34	Tennessee	76.1%	51.0%
9	Pennsylvania	82.7%	53.8%	35	Indiana	75.7%	49.7%
10	Michigan	82.6%	52.8%	36	Mississippi	75.4%	59.9%
11	Connecticut	82.5%	53.8%	37	Kansas	75.1%	54.3%
12	Washington	82.1%	56.8%	38	Arkansas	75.0%	54.3%
13	Iowa	82.0%	54.0%	39	Louisiana	75.0%	47.6%
14	Minnesota	81.7%	54.4%	40	Arizona	74.9%	53.0%
15	Vermont	81.1%	39.8%	41	Kentucky	74.4%	53.4%
16	Wisconsin	80.8%	57.1%	42	Idaho	73.8%	50.4%
17	North Carolina	80.5%	54.1%	43	South Dakota	73.7%	72.9%
18	Oregon	79.9%	51.6%	44	Oklahoma	73.3%	48.7%
19	New Hampshire	79.6%	56.6%	45	Hawaii	71.8%	53.4%
20	Illinois	79.5%	60.4%	46	Utah	71.8%	50.9%
21	Delaware	79.2%	67.9%	47	Montana	70.7%	53.1%
22	Ohio	79.2%	51.3%	**48**	**New Mexico**	**70.5%**	**54.4%**
23	Alabama	78.5%	53.9%	49	West Virginia	68.2%	52.3%
24	Colorado	78.3%	57.6%	50	Alaska	65.9%	69.9%
25	Nebraska	78.1%	56.2%	-	United States	80.0%	56.0%
26	Texas	77.9%	54.3%				

Source: The National Center for Higher Education Management Systems

Current Investment in People: Workforce Development

EDD provides project specific assistance for workforce development under JTIP: this is in addition to the state's extensive role in providing funding for workforce development through the Department of Workforce Solutions that will be discussed below.

Under JTIP, employers receive funding for workforce development where the State "funds classroom and on-the-job training for newly-created jobs in expanding or relocating businesses for up to 6 months. The program reimburses 50-75% of employee wages. Custom training at a New Mexico public educational institution may also be reimbursed."[98] According to EDD, in FY

[98] "Job Training Incentive Program," New Mexico Economic Development Department, accessed at https://edd.newmexico.gov/business-development/edd-programs-for-business/job-training-incentive-program/

2022, 80 firms trained 2,357 workers with an average wage of $23.67 per hour: 567 of the trainees were in rural areas.

In addition to employer providing training under JTIP, the State also supports an array of federally funded workforce development programs primarily through its Department of Workforce Solutions (NMDWS) and administered by local workforce development boards. These include:[99]

Title I – Adult Dislocated Worker and Youth: NMDWS receives Title I funds through the Workforce Innovation and Opportunity Act (WIOA) which are then redistributed among the state's four local workforce development boards (LWDBs) serving individuals with barriers to employment. LDWBs screen who is eligible for WIOA programs, refer eligible program participants, and provide several coaching, training, and educational development activities, including job search workshops and English language training. LDWBs also serve businesses as needed, which can include writing job postings, referring applicants, and coordinating involvement with programs or job fairs. LWDBs also operate twenty-three Workforce Connection Centers across the state which carry out these programs locally.

Title II - Adult Education and Family Literacy Program: The New Mexico Higher Education Department administers WOIA Title II funds through the state's Adult Education system. The Adult Education system in New Mexico includes a network of 24 local programs providing free instructions to eligible adults (unemployed, underemployed, or employed) and individuals in the 16–18 year age range not in school. These programs take an individual approach and provide support in acquiring a high school diploma equivalent, enrolling in post-secondary education or training, and placement in workplace and training programs.

Title III – Wagner Peyser Funds: Title III funds are administered through Workforce Connection Centers and provide basic career services such as career planning, job matching, an online portal for job seekers (the Workforce Connection Online System), business development, and economic data related to the labor market. The primary role of this program is to match employers with potential employees as a means of boosting the economy.

Title IV – Vocational Rehabilitation (DVR): New Mexico operates two vocational rehabilitation programs using Title IV funds: the New Mexico Commission for the Blind (an independent agency serving individuals who are blind or visually impaired) and the New Mexico Division of Vocational Rehabilitation (NMDVR) within the Department of Education, which serves all other disabilities. Services provided by these programs include guidance and counseling, transition services, job search and placement, and assistive technology and equipment – as well as other services tailored to the specific needs of their respective clients. Some program participants overlap between the two programs, so the two programs coordinate to prevent double or repeat training.

[99] These summaries are based on information detailed in the WIOA State Plan for New Mexico, available at https://wioaplans.ed.gov/node/1071

Between July 1, 2020, and June 30, 2021, a total of $29.9 million in WIOA funding was invested in New Mexico. But a 2021 report by the Statewide Workforce Development Board (SWDB) found that the number of participants served by LWDBs had declined dramatically from PY 2014 to PY 2019, going from 9,782 to 4,360: this decline was attributed to changes in eligibility. The report also cited data from the U.S. Department of Labor – detailed in an August 2020 report by the Legislative Finance Committee – indicating that New Mexico "ranked in the bottom one-third of states and territories for employment and earning outcomes for laid-off workers [and] … below the national [rate] for the percent of individuals entering employment or obtaining a credential after exiting either the adult or youth training programs. New Mexico ranked 45th out of the 55 states and territories for adult credential attainment and 46th for youth."[100]

Current Investment in Place: Grants for Business Development

Under the New Mexico Local Economic Development Act (LEDA), the State Economic Development Department provides grants to municipalities and county governments to assist businesses that are expanding or relocating businesses. LEDA grants can be used for one of three purposes:

- The purchase, lease, grant, construction, reconstruction, improvement or other acquisition or conveyance of land, buildings or other infrastructure;

- Public works improvements essential to the location or expansion of a qualifying entity; and

- Loan guarantees securing the cost of land, buildings or infrastructure in an amount not to exceed the revenue that may be derived from the municipal infrastructure gross receipts tax or the county infrastructure gross receipts tax.[101]

According to EDD, the State has used LEDA to make investments in 53 businesses since January 1, 2019.[102] Since the beginning of 2022, EDD has announced LEDA funding for the following projects:[103]

- $200,000 in Luna County for expansion of a brewery/distillery and canning facility

- $150,000 in Santa Fe for a company to process smooth stones

[100] "Making the Case for Transformation and Redesign of the New Mexico Workforce Development System," New Mexico Department of Workforce Solutions State Workforce Development Board, April 2021, accessed at https://www.dws.state.nm.us/Portals/0/DM/Partners/SWDB_Recommendation_04_2021.pdf
[101] "LEDA Overview," New Mexico Economic Development Department, accessed at https://edd.newmexico.gov/business-development/edd-programs-for-business/finance-development/leda/
[102] "LEDA assistance awarded to Luna County brewery/distillery and canning facility," New Mexico Economic Development Department, 25 August 2022, accessed at https://edd.newmexico.gov/wp-content/uploads/2022/08/Little-Toad-LEDA_CORRECTED.pdf
[103] Based on a review of LEDA announcements on the EDD website, available at https://edd.newmexico.gov/press-releases/

- $5 million in Valencia County to support the construction of an aluminum can sheet rolling mill and recycling center
- $1 million for expansion of a telehealth company in Las Cruces
- $250,000 for expansion of a steel company in Albuquerque
- $5 million to support expansion of a research, development and manufacturing firm in Albuquerque
- $250,000 to support expansion of manufacturer of fuel catalysts in Albuquerque
- $750,000 to support expansion of warehouse facilities for a food and beverage distribution firm in Albuquerque
- $50,000 to support expansion of a beef jerky processing plant in Grant County
- $600,000 for refrigerated warehouses in Las Cruces

In addition to support of local economic development programs, EDD also recently launched a Rural LEDA Infrastructure Fund in 2020. Unlike other LEDA grants, these investments do not support a specific project but instead provide support for infrastructure in rural areas. In 2022, there have been two grants under the program:

- $4 million to support extension of utilities to industrial park in McKinley County
- $1.8 million to support industrial park revitalization in San Juan County

Another Approach: North Carolina's Focus on Talent

North Carolina is widely credited for its success with workforce training and development for its economic development strategy,[104] with a particular focus on the role played by the state's community colleges.[105] North Carolina's 2021 state economic development plan outlines three goals, all focused on talent:[106]

- Prepare North Carolina's workforce for career and entrepreneurial success.

[104] North Carolina has historically been considered one of the leading states for development of customized training services to align job training with business needs. See Timothy Bartik, "What Works in State Economic Development?," W.E. Upjohn Institute for Employment Research, accessed at https://www.purdue.edu/hhs/hdfs/fii/wp-content/uploads/2015/07/s_wifis27c02.pdf

[105] The state's focus on community colleges has been a decades long effort. For example, in just the three-year period between 1966 and 1969, community college enrollment doubled. See https://www.nccommunitycolleges.edu/mission-history

[106] "NC Strategic Economic Development Plan," The University of North Carolina at Chapel Hill School of Government ncIMPACT Initiative, accessed at https://ncimpact.sog.unc.edu/nc-strategic-economic-development-plan/

- Prepare North Carolina's businesses for success by growing and attracting a talented workforce.

- Prepare communities across North Carolina to be more competitive in growing and attracting a talented workforce and businesses.

The North Carolina plan identifies 14 specific strategies in support of these goals:

- Increase access to high-quality early childhood education and decrease childcare expenses for working families.
- Lead the nation in work-based learning engagement.

- Increase attainment of high-quality credentials to ensure that by 2030, two million North Carolinians have a high-quality postsecondary credential.

- Increase labor force participation through workforce system enhancements to better support populations with barriers to employment

- Strengthen initiatives that foster high-quality, productive work environments, promote talent development, and enhance business growth.

- Encourage and support wage growth across North Carolina.

- Bolster a robust small business recovery, inclusive of opportunities for new entrepreneurs and women- and minority-owned firms.

- Invest in key production sectors that provide critical technologies and supply chains to fuel and safeguard our state and national economies.

- Improve regional access to quality, affordable housing and transportation to grow and retain a vibrant workforce and attractive local communities.

- Maximize the benefits of improved broadband access by advancing high-speed internet adoption and digital skills of North Carolina's businesses and workforce.

- Support initiatives that seek to build healthier communities.

- Support local efforts to expand physical infrastructure needed to attract residents, workers, entrepreneurs, and businesses.

- Foster the local leadership and expertise needed to build vibrant communities that attract talented businesses and workers.

- Strategically identify investment and growth opportunities to maximize their regional reach.

While North Carolina has identified target industries, its framework for economic development is largely focused on people and place.

A Complementary Approach to Economic Development

In a recent paper, Glied and Kellerman argue that state economic development agencies need to rethink their strategic approach to focus on three imperatives:[107]

- Confronting systemic inequality
- Embracing new models of work
- Leveraging increased federal spending

They argue that the pandemic had a disparate impact on the economic wellbeing of low-income residents, as well as the disparate health impact. Citing an analysis by the Economic Policy Institute, they note that "rising inequality has slowed U.S. economic growth in aggregate demand by two to four percentage points."[108]

The pandemic has also fundamentally changed both the nature of work and where people work. Firms that needed to locate in or near cities prior to the pandemic now have greater flexibility in their location. Their workers, now able to telecommute, have even greater flexibility as to where to live.

As of June 2022, 55 percent of workers are on site; 30 percent have a hybrid working arrangement and 15 percent are working from home full-time.[109] The same analysis found differences in working from home by place and by industry. Workers in large cities and more dense places were more likely to work from home than individuals in smaller cities and towns. Workers in Information, Finance and Insurance, Professional and Business Services, Arts & Entertainment and Real Estate reported spending between 1.84 to 2.72 days per week from home: workers in Manufacturing, Retail Trade, Other Personal Services, Hospitality & Food Services, and Transportation & Warehousing reported spending on average less than one day per week working at home.

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[107] Sherry Glied and Carol B. Kellermann, "Strategies for Building Inclusive and Progressive State Economies in the post-COVID Era," Robert F. Wagner Graduate School of Public Service; National Bureau of Economic Research (NBER), 16 June 2022, accessed at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4136503

[108] Josh Bivens, "Inequality is slowing U.S. economic growth," Economic Policy Institute, 12 December 2017, accessed at https://www.epi.org/publication/secular-stagnation/#:%7E:text=EPI%20estimates%20that%20rising%20inequality,GDP%20annually%20in%20recent%20years.&text=In%20the%20longer%20run%2C%20we,%2D%20and%20middle%2Dwage%20workers.

[109] Jose Maria Barrero, Nicholas Bloom, and Steven J. Davis, "SWAA September 2022 Updates," WFH Research, accessed at https://wfhresearch.com/wp-content/uploads/2022/09/WFHResearch_updates_September2022.pdf

An earlier analysis by Pew found differences in work from home by state: nationally, workers reported working from home 39 percent of the time and in New Mexico, workers reported working from home 36 percent of the time.[110]

Significant new federal investments are also opportunities to leverage those investments – specifically funding under CARES, the American Rescue Plan Act (ARPA) and the Infrastructure Investment and Jobs Act (IIJA). The National Conference of State Legislatures has been tracking both CARES and ARPA spending at the state level. CARES provided $497 million in assistance to New Mexico – with $194 million for unemployment insurance, $178 million in assistance for tribal and local governments; $100 million for grants to small businesses and non-profits with prioritization for the hospitality business; $15 million for emergency housing assistance for homeless individuals; $5 million for direct assistance to low income residents; and $5 million for emergency food bank services.[111]

New Mexico has received more than $1 billion in allocations under ARPA, with a projected full disbursement of $1.8 billion. The State is already using ARPA funds for initiatives aligned to economic development. These include:[112]

- $142.5 million to the Department of Transportation for acquisition of rights of way, planning, design and construction and to match other state funds for statewide infrastructure projects.

- $20 million to the Energy, Minerals and Natural Resources Department to plan, design, construct, improve, renovate, furnish and equip facilities and infrastructure at state parks statewide.

- $15 million to the Department of Finance and Administration for disbursement to the New Mexico mortgage finance authority for expenditure for energy-efficient affordable housing

- $15 million to the Higher Education Program Development Enhancement fund for expanding enrollment in and graduation from nursing programs at state institutions of higher education.

- $15 million to the Tourism Department for tourism marketing advertising

- $10 million to the Department of Transportation to plan, design, construct, renovate and equip upgrades to regional airports statewide

[110] Tim Henderson, “As Remote Work Persists, Cities Struggle to Adapt,” The Pew Charitable Trusts, accessed at https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2022/05/24/as-remote-work-persists-cities-struggle-to-adapt
[111] See information accessed from https://www.ncsl.org/research/fiscal-policy/state-actions-on-coronavirus-relief-funds.aspx
[112] See information accessed from https://www.ncsl.org/research/fiscal-policy/arpa-state-fiscal-recovery-fund-allocations.aspx

- $7 million to the Economic Development Department for outdoor recreation grants.
- $5 million to the Department of Workforce Solutions for the Return to Work Initiative.
- $3 million to the Economic Development Department for the Outdoor Equity Grant program fund.

Total funding that will be available to New Mexico under IIJA will depend on how the State and local governments fare in efforts to seek competitive grants. Federal government estimates suggest that under formula grants, New Mexico would receive:[113]

- $2.5 billion for federal-aid highway apportioned programs
- $366 million over five years for public transportation
- $355 million to improve water infrastructure
- $225 million for bridge replacement and repairs
- $90 million for airport infrastructure
- A minimum of $100 million for broadband access
- $38 million for electric vehicle charging

And New Mexico has already started to benefit from competitive grants. Under the U.S. Department of Transportation's Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program, Albuquerque and Carlsbad both received grants that totaled $12.6 million. Most of the RAISE funding -- $11.5 million – went to an Albuquerque project designed to create an urban trail through the middle of downtown.[114] And under the Infrastructure for Rebuilding America (INFRA) program, the New Mexico Department of Transportation was recently awarded $45 million to connect the Santa Teresa Port of Entry (STPoE) with State Road 273 (NM273) in Sunland Park.[115]

To meet the imperatives of addressing inequality, the shift toward increased work from home and opportunities to leverage federal funding, Glied and Kellerman suggest that economic development agencies need to focus on five areas.

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[113] "The Infrastructure Investment and Jobs Act will Deliver for New Mexico," accessed at https://www.whitehouse.gov/wp-content/uploads/2021/08/NEW-MEXICO_Infrastructure-Investment-and-Jobs-Act-State-Fact-Sheet.pdf

[114] "RAISE 2022 FACT SHEETS," U.S. Department of Transportation, accessed at https://www.transportation.gov/sites/dot.gov/files/2022-08/RAISE%202022%20Award%20Fact%20Sheets_0.pdf

[115] "INFRA 2022 Awards Fact Sheets," U.S. Department of Transportation, accessed at https://www.transportation.gov/sites/dot.gov/files/2022-09/INFRA%202022%20Fact%20Sheets%20%281%29.pdf

Generally, they argue that states need to focus economic development tools on strategic opportunities. This suggests a shift from a transactional approach to a more targeted approach based on data. They also suggest a focus on new business development that leverages universities to drive research and development.

This approach varies from the current targeting of industries in New Mexico. One problem with an emphasis on targeting industries is that targets are subject to change over time. For example, the State's focus on film and television – where it has seen success over the last decade – might have to change if the current financial woes of Netflix reduce future investment or activity in New Mexico. Similarly, the focus on aerospace as an industry might be boosted by the recent award of a federal Build Back Better grant for western Texas. The key is for the state to have a robust approach to constantly monitoring these sorts of changes so that the state's focus industries – and its strategies – can be adjusted over time.

A Jobs for the Future report on workforce development in New Mexico – discussed in detail below – specifically argues for the need to "(U)tilize real-time labor market data to identify specific local employer and workforce needs and to inform the alignment of programs and career pathways strategies." Doing otherwise risks spending limited state capacity and resources focusing on yesterday's opportunities for growth.

Similarly, a focus on small business generally is slightly different than the state's target industry approach. While the SRI report speaks to the importance of bolstering entrepreneurs in the state, a focus on small business has been somewhat less of a focus on the implementation of the State's economic development plan.

Small business – as is the case in most states – is an important driver of economic activity and employment in New Mexico. Small businesses accounted for more than 99 percent of all firms and 54.4 percent of total employment in New Mexico.[116] As of 2018, there were 158,844 small businesses in the state. Most, just under 126,000, had no employees; 28,497 had between 1 and 19 employees and 4,422 had between 20 and 500 employees. In four sectors – Professional, Scientific and Technical Services, Other Services, Construction and Health Care and Social Assistance – each accounted for more than 15,000 small businesses.
In Construction (93.2%), Educational Services (91.3%), Agriculture, Forestry, Fishing and Hunting (90.6%), Other Services (91%), Real Estate (72.3%), Arts, Entertainment and Recreation (70.5%), small businesses accounted for more than 70 percent of statewide employment.

Finally, the other three areas of focus suggested by Glied and Kellerman are either directly or indirectly tied to place or people:

[116] Data accessed from, U.S. Small Business Administration, Office of Advocacy, 2021 Small Business Profile: New Mexico, available at https://cdn.advocacy.sba.gov/wp-content/uploads/2021/08/30144808/2021-Small-Business-Profiles-For-The-States.pdf

- Workforce development, linking workforce development to business needs and future job opportunities

- Affordable communities

- Digital infrastructure, which is critical to making all parts of a state – rural and urban – accessible to employers and employees in an economy more dependent on work from home

Investing in People

Simply put, workforce development and education are the two most essential ingredients for a robust economy, for income growth and for overcoming income inequality. Researchers at the Federal Reserve Bank of Cleveland found that educational attainment has consistently been one of the most reliable indicators for state per capita income growth and that counties with higher levels of high school graduates tend to have lower poverty rates and higher levels of labor force participation.[117] Research from the Federal Reserve Bank of Cleveland highlights four key lessons from successful workforce development efforts:

- Collaboration and commitment are essential for building effective programs – cross sector approaches and those that maximize partnership result in success

- Communication between employers, workers, and trainers is needed to ensure that programs tackle the right problems – in particular, communication between workers and employers is essential

- Effective workforce development programs recognize the importance of place – in other words, workforce development and efforts at regional economic development are linked

- Programs should regularly be evaluated and informed by data

Recent research also points to the need for a focused and deliberate effort to make sure that workforce development programs are implemented in a way that addresses racism. A recent paper by the Atlanta Federal Reserve Bank noted that "[W]orkforce development, which is uniquely positioned to disrupt cycles of generational poverty and generational racism, must first acknowledge and address the structural, systemic, and institutional racism built into the very DNA of the field."[118]

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[117] Loretta J. Mester, "Successful Workforce Development Programs: Four Lessons from Four Decades of Federal Reserve Research and Outreach," Federal Reserve Bank of Cleveland, 14 April 2022, accessed at https://www.clevelandfed.org/collections/speeches/2022/sp-20220414-successful-workforce-development-programs

[118] Clair Minson, "The Workforce Development Field or a Conduit for Maintaining Systemic Racism?," Federal Reserve Bank of Atlanta, 19 February 2021, accessed at https://www.atlantafed.org/-/media/documents/cweo/workforce-currents/2021/02/19/the-workforce-development-field-or-a-conduit-for-maintaining-systemic-racism.pdf

Work over the last several years in King County, Washington (population of 2.2 million – or slightly more than New Mexico) is an example of how to have equity considerations drive a different approach to workforce development. While mindful of the need to focus on providing a pipeline of workers for those industries where the opportunity for growth is the greatest, King County also recognized the need to focus on those populations of workers who need the most assistance.

In 2019, the County – in partnership with the City of Seattle – announced a new approach to workforce developed focused on three elements:[119]

- Prioritize employment and training for those who face the most barriers to opportunity.
- Improve coordination between employers, labor, and educators to make sure job seekers are prepared for the best career opportunities available right now.
- Better align local, federal, and philanthropic funding to maximize the impact and produce better results.

The immediate result of the re-orientation of the County's priorities was to provide a combination of federal, local and philanthropic funding to organizations focused on hard to employ populations.

A year and a half later, in the middle of the pandemic, the Workforce Development Council of Seattle-King County released a detailed blueprint for an equitable recovery with a focus on workforce development.[120] The December 2020 plan concluded that:

> Historically, the workforce development system has emphasized skills, training, and job placement. In many instances, this exclusive emphasis fails to result in actual employment or at best, the placement into a low-wage job. In the absence of addressing the barriers to work and higher quality jobs often facing low-income workers and workers of color, continuing this approach is likely to exacerbate existing income disparity and occupational segregation. Barriers to work include financial resources to pay for education & training, supports that enable work (childcare, and transportation), structural racism, and exclusionary policies that relegate BIPOC workers to low-wage jobs with little to no opportunity for growth and advancement.[121]

[119] "Transforming how the region funds employment and job training to connect more people to high-demand careers," King County Government Executive Office, 22 May 2019, accessed at https://kingcounty.gov/elected/executive/constantine/news/release/2019/May/22-transforming-workforce-system.aspx
[120] "Recover Better: A Regional Plan for Equitable Economic Recovery," Workforce Development Council of Seattle-King County, December 2020, accessed at https://static1.squarespace.com/static/53c04ba6e4b0012ad48d079e/t/5fd79b8e3351061c2d35a952/1607965584852/Regional+Strategic+Plan_WDC-SKC_121820.pdf
[121] Ibid., page 44

To address these barriers, the plan details an approach focused on relief strategies, recovery strategies and population-base strategies, as well as both advocacy and systems change. Specifically, the report calls for relief strategies focused on subsidized transitional employment; recovery strategies focused on sector partnerships, high demand careers, apprenticeships, credentials and digital literacy; and population-based strategies focused on young people of color and immigrants and refugees. The advocacy agenda includes a call for funding lifetime learning accounts, expanded access to childcare and portable benefits, and removing criminal background as a barrier to employment. The Workforce Development Council report also calls for systems change including the need to better link workforce development to economic development.

In December 2020, Jobs for the Future issued findings on how an equity-based approach could be applied to workforce development programs in New Mexico: the work was done at the request of the Higher Education Department.[122] Its three-part vision, echoing many of the lessons identified by the Federal Reserve Bank, called for:

- Economic development that focused on the specific needs of a regional geography, labor market and educational opportunities and connects to career pathways;

- Cross sector leadership and infrastructure for implementation; and

- Targeted support for diverse and high-need populations, holding equity at the center of design and implementation.

This recommended approach is not inconsistent with much of what is detailed in the SRI report, though it is distinctive both in its integration of place and people and in articulating a deliberate focus on equity.

For example, JFF specifically ties workforce development to place by recommending that the state "(E)ngage a range of community-based organizations to provide support services and market new education and skill-building opportunities, including in and with tribal communities and dispersed rural populations."

JFF also notes that "(S)olely taking a statewide approach could result in a mismatch between workforce talent and industry need at the regional level. A focus on local, place-based collaboration between government, industry, community, and education partners will better inform and shape the educational and training programs that can develop the skills and knowledge for the jobs that pay."

Finally, JFF outlines an approach to workforce development that takes "into consideration the needs of lower-skilled adults and those with criminal records, moving them from adult and

[122] Jobs for the Future, Roadmap for Creating a Strategic Talent Pipeline in New Mexico: Recommendations for Next Steps in Career Pathways Systems-Building, December 2020.

corrections education programs to community college degree or certification programs in growing sectors of the economy."

And that focus on equity is also what leads JFF to recommend broadening efforts at job development beyond target industries. As the report notes, "many of the individual industries and occupations in those priority sectors do not consistently pay a living wage for one adult supporting one child … and the economic impact of COVID-19 has changed much of the state's context."

The JFF report is also noteworthy for its focus on hard to employ groups, such as individuals who are returning to their community after being incarcerated. This group is particularly important because New Mexico has a higher incarceration rate at the local and state level than the nation as a whole: an analysis by the Prison Policy Institute found that in 2018, more than 34,000 New Mexicans were under the supervision of the criminal justice system and that an estimated 49,000 different New Mexicans were booked into a local jail in a given year – the fourth highest bookings per capita rate in the nation.[123]

As noted in both the SRI report and the JFF report, workforce development and education are inextricably linked. The quality of local public education also goes to the competitiveness of place: employers and a talented workforce often are looking for a strong local public education system. Yet, a 2021 brief by New Mexico Voices for Children noted that "New Mexico has too frequently allowed our education system to offer uneven support to our students with a particular lack of attention to the ways our K-12 schools are unable to meet the needs of children, families, and communities of color and children from working families earning low incomes."[124]

While the scope of this report does not allow for a detailed set of recommendations related to the improvement of K-12 education as a means of better positioning New Mexico for equitable economic growth, it is worth noting how some comparable states have addressed this challenge.

New Mexico's neighbor to the north, Colorado, has recently launched a new, targeted initiative designed to improve public education in school districts most in need. Under the $32.7 million Response, Innovation and Student Equity Fund (RISE), the State provides targeted grants to charter schools, public school districts, non-profit organizations and higher education to address learning challenges that are the result of the pandemic. Using federal CARES funding, the goal is to improve student learning, close equity gaps and increase efficiency. Awards range between $250,000 and $2 million.[125]

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[123] Wanda Bertram and Alexi Jones, "How many people in your state go to local jails every year?," Prison Policy Initiative, 18 September 2019, accessed at https://www.prisonpolicy.org/blog/2019/09/18/state-jail-bookings/

[124] Emily Wildau, "New Mexico's K-12 Schools: Funding the Education System Our Students Deserve," New Mexico Voices for Children, June 2021, accessed at https://www.nmvoices.org/wp-content/uploads/2021/06/EducationBrief-web.pdf

[125] "Colorado RISE Turnaround Education Fund", State of Colorado, https://www.colorado.gov/governor/risefund

Funding is prioritized based on three criteria:

- Serve students attending a school that has been on the turnaround clock for more than two years or a district that has been on a priority improvement plan for more than two years.

- Address significant academic gaps between students based on income, race or ethnic group, status as an English learner, or disability status.

- Add Free Application for Federal Student Aid (FAFSA) completion as a graduation requirement for a school district or charter school.

To date, there have been two rounds of funding under the program.

In Round 1, 13 grants were funded, with the three largest going to higher education institutions partnering with K-12 schools.

- Fort Lewis College received $3.6 million for a partnership between Pueblo Community College and school districts to pool resources and build strong postsecondary pathways for students in the building trades and environmental science.

- The State provided $2.4 million to Metro State University to support students of color, underserved students and students from rural areas from 9th grade through college completion.

- The University of North Colorado also received $2.4 million to partner with a school district to improve school readiness for children with disabilities.[126]

In Round 2, there were 19 additional grants awarded, with the three largest going to:[127]

- Colorado Mountain College, for $3.0 million, to increase enrollment opportunities for high schools and local institutions of higher education in rural communities.

- St. Vrain Valley Schools, for $2.8 million, for the development of a full-time summer literacy program for K-5th graders at schools with lower performance five school districts.

- Ute Mountain Ute Tribe, for $2.8 million, to create a Science, Technology, Engineering, (Native) Arts, and Math (STEAM) program integrated with Ute arts, language and culture that can serve as a model for other American Indian and indigenous communities.

[126] Response, Innovation, and Student Equity Fund One-Pager, State of Colorado, accessed at https://www.colorado.gov/governor/sites/default/files/2020-1
[127] Response, Innovation, and Student Equity Fund Two-Pager, State of Colorado, accessed at https://www.colorado.gov/governor/sites/default/files/2021-01/RISE%20II%20Two-Pager.pdf

As noted earlier, New Mexico stands out among other states for the degree to which K-12 public education is funded by the state rather than being dependent on local revenue. While funding is disproportionately state-based, public schools in New Mexico are run by local school districts. As of 2019, New Mexico had 145 school districts with an average of 2,284 students per district – or a total of 331,206 students. Nationally, there are an average of 2,635 students per district and many states with more students have fewer school districts. For example, Nevada (21 districts), Maryland (25), Florida (76) and South Carolina (101) have fewer districts and more students.[128]

Two of the three states that contribute a greater share of school funding than New Mexico have a different approach to administration. Hawaii is the only state with a statewide school district. A Superintendent oversees all of Hawaii's schools. The Superintendent is appointed by the State Board of Education, whose members are appointed by the Governor.[129] While Hawaii's approach limits local control, it makes it easier to achieve parity in funding, standardization of curriculum and teacher qualifications and quality.

In 2015, the Vermont Legislature approved Act 46 with a goal "to improve education outcomes and equity by creating larger and more efficient school governance structures."[130] The goal was to address disparities in funding and educational opportunity that is frequently based on the income status of the residents of the district. In addition, the Legislature sought to reduce costs. Under the law, the State did not create a single school district but instead incentivized the merger of school districts – with the State Board of Education acting to consolidate those districts that did not participate in the merger process. The result of Act 46 and earlier legislation was that "206 districts in 185 towns have formed 50 new union school districts (a reduction of 156) districts."

In higher education, where New Mexico has already taken a major step forward by easing financial barriers to college completion, other states have been innovative in other ways. More than 290,000 New Mexicans have some college education, but no degree or credential. On a per capita basis (per 1,000 students enrolled in undergraduate education), New Mexico is the seventh highest nationally trailing Alaska, Oregon, Wyoming, Washington, Nevada and Illinois.[131]

With respect to both poverty and pay, there are real differences between individuals who have some college and those who have a college degree. As a result, North Carolina has launched a targeted effort to help so-called "stopped out" students complete their degrees. In a partnership announced earlier this year, the University of North Carolina system is working with InsideTrack to provide one-on-one coaching for these former students. The effort builds on the success of

[128] Data accessed at https://nces.ed.gov/ccd/tables/201920_summary_2.asp
[129] State of Hawaii Board of Education Members, accessed at https://boe.hawaii.gov/About/Members/Pages/Members.aspx
[130] "Act 46: State Board of Education's Final Report of Decisions and Order", State of Vermont Agency of Education, accessed at https://education.vermont.gov/vermont-schools/school-governance/act-46-state-board-final-plan
[131] "Some College, No Credential Student Outcomes Annual Progress Report – Academic Year 2020/21" National Student Clearinghouse Research Center, accessed at https://nscresearchcenter.org/wp-content/uploads/SCNCReportMay2022.pdf

the NC Reconnect Initiative, which had more than 750 students with some college re-enroll in the first year: 68 percent either completed a degree or credential or continued on to the next term.[132] InsideTrack's work in North Carolina was part of national efforts to use success coaches to increase re-enrollment: their study found that of those who re-enrolled, more than 70 percent were "from underserved backgrounds, self-identifying as either Black, Indigenous People of Color; Pell-eligible students; first-generation college-goers; or adult learners."[133] Other state colleges and universities have taken other steps to address the "stop out" problem. The University of Kentucky created a flexible degree option and Colorado's Pueblo Community College offered targeted grants to induce students to return to college.[134]

Investing in Place

Different parts of the state of New Mexico have some challenges and opportunities that are alike. But the reality is that every place has its own unique competitive assets and deficits. As noted in the discussion of workforce, there really needs to be a place-specific approach to economic development in every part of New Mexico.

Those parts of the state that are the weakest – where poverty and unemployment are high and where population is in decline – need special and specific help. The same plan and approach that may work in Albuquerque or Santa Fe may not work in Farmington or Gallup. Even within places that are more prosperous, there may be neighborhoods that have not shared in that prosperity. They too may require different or specialized types of assistance.

In addition to those counties and neighborhoods with high poverty and/or that have experienced population decline, there is also a particular need for a targeted place-based approach in those counties most dependent on the oil and gas industry for employment. In 2019 (pre-pandemic), there were just under 32,000 New Mexico workers employed in mining, quarrying and oil and gas extraction statewide, with nearly eighty percent of those jobs in three counties -- Eddy (10.092), Lea (9,835) and San Juan (5,567). These jobs accounted for twenty four percent of employment in Eddy County, twenty three percent of employment in Lea County and just over nine percent of total jobs in San Juan County.[135]

A 2021 analysis by Pew outlined how states can direct economic development to distressed areas and places in need. The Pew analysis detailed a series of steps that states could take:[136]

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[132] "North Carolina Community Colleges Double Down on Efforts to Re-Enroll Adult Learners with Some College, No Degree," InsideTrack, 14 July 2022, accessed at https://www.insidetrack.org/north-carolina-community-colleges-reenroll-learners/

[133] "2021 Re-Enrollment Initiatives Helped Thousands of Underserved Students Return to College," InsideTrack, 24 February 2022, https://www.insidetrack.org/2021-re-enrollment-initiatives-helped-thousands-of-underserved-students-return-to-college/

[134] "Fulfilling the Promise: Re-enrolling America's College Stopouts," EAB, accessed at https://www.luminafoundation.org/wp-content/uploads/2020/10/fulfilling-the-promise.pdf

[135] Data accessed at https://www.bea.gov/data/employment/employment-county-metro-and-other-areas

[136] "How States Can Direct Economic Development to Places and People in Need," The Pew Charitable Trusts, 2 February 2021, accessed at https://www.pewtrusts.org/en/research-and-analysis/reports/2021/02/how-states-can-direct-economic-development-to-places-and-people-in-need

- Target programs using quantitative measures. To ensure that benefits accrue to communities in need, policymakers should use carefully selected objective measures of distress to determine eligible areas.

- Systematically assess geographic targeting. States should regularly examine where businesses using programs are located in order to identify and correct instances in which wealthier areas unintentionally benefit.

- Regularly update the set of eligible locations. Because local economic conditions change over time, policymakers should regularly review where programs are available to ensure that those places still need assistance.

- Tailor economic development strategies to local needs. Financial incentives alone may be insufficient to encourage private investment in areas that lack trained workers or necessary infrastructure, so policymakers should address these prerequisites to growth.

- Create job opportunities for low-income residents. Even programs that successfully encourage investment in distressed areas may not provide benefits to the local population, so states should embrace strategies—such as prioritizing industries that offer good jobs to people without college degrees—that can help direct economic gains to community members.

Virginia is one model of this type of effort. GO Virginia is a place-based economic development initiative funded by the Commonwealth. In 2016, the Legislature enacted the GO Virginia program with strong bipartisan and business community support. GO Virginia recognized that while the economy was strong in some parts of the state – e.g. Northern Virginia – other parts of the state were lagging in opportunity. Under the program, regional boards – including business and civic leadership – were created to direct state funds to economic development initiatives that would have the greatest impact in their specific region.[137]

The state is divided into nine distinct regions:

- Region 1: Population of 381,015 and includes the cities of Bristol, Galax, and Norton; and the counties of Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, and Wythe

- Region 2: Population of 781,648 and includes the cities of Covington, Lynchburg, Radford, Roanoke, and Salem; and the counties of Alleghany, Amherst, Appomattox, Bedford, Botetourt, Campbell, Craig, Floyd, Franklin, Giles, Montgomery, Pulaski, and Roanoke.

[137] General information on GO Virginia and details of the composition of the nine regions is directly from information provided at www.govirginia.org.

- Region 3: Population of 373,322 and includes the cities of Danville and Martinsville; and the counties of Amelia, Brunswick, Buckingham, Charlotte, Cumberland, Halifax, Henry, Lunenburg, Mecklenburg, Nottoway, Patrick, Pittsylvania, and Prince Edward.

- Region 4: Population of 1,262,655 and includes the cities Colonial Heights, Emporia, Hopewell, Petersburg, and Richmond; and the counties of Charles City, Chesterfield, Dinwiddie, Goochland, Greensville, Hanover, Henrico, New Kent, Powhatan, Prince George, Surry, and Sussex.

- Region 5: Population of 1,727,781 and includes the cities of Chesapeake, Franklin, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg; and the counties of Accomack, Isle of Wight, James City, Northampton, Southampton, and York

- Region 6: Population of 508,626 and includes the city of Fredericksburg; and the counties of Caroline, Essex, Gloucester, King and Queen, King George, King William, Lancaster, Mathews, Middlesex, Northumberland, Richmond, Spotsylvania, Stafford, and Westmoreland.

- Region 7: Population of 2,525,053 and includes the cities Alexandria, Fairfax, Falls Church, Manassas, and Manassas Park; and the counties of Arlington, Fairfax, Loudoun, and Prince William.

- Region 8: Population of 538,346 and includes the cities of Buena Vista, Harrisonburg, Lexington, Staunton, Waynesboro, Winchester; and the counties of Augusta, Bath, Clarke, Frederick, Highland, Page, Rockbridge, Rockingham, Shenandoah, and Warren.

- Region 9: Population of 432,939 and includes the city of Charlottesville; and the counties of Albemarle, Culpeper, Fauquier, Fluvanna, Greene, Louisa, Madison, Nelson, Orange, and Rappahannock.

Each of the regions has a regional council that is supported by a local organization – these include planning, non-profit, philanthropic and academic institutions. And each region has identified key sectors for growth in the specific region.

For program years FY 2018 – FY 2022, regional councils were able to secure state funding totaling $82.3 million – which leverage an additional $95.5 million in additional investment. State funds are awarded to regional councils on a per capita basis, through a competitive Economic Recovery and Resiliency program (focused on pandemic response) and through statewide competitions. Funding has been assigned in four different categories: cluster scale up, site development and infrastructure, startup ecosystem and workforce development. Project grants vary widely in amount. Among the smallest grants were: [138]

[138] Information accessed at https://www.govirginia9.org/wp-content/uploads/2022/06/gova-funded-projects.pdf

- $99,500 to Virginia Career Works – Piedmont to connect dislocated workers not served by WIOA to employment opportunities with regional employers.

- $76,500 to the Charlottesville Business Innovation Council to use Start Up Space technology to develop a cloud-based platform (native mobile app, responsive website, utility/interaction platform as service) that will help businesses accelerate recovery from and after the pandemic.

- $60,000 to Common Grain Alliance to: (i) develop a scalable and repeatable process of supporting and building cooperative relationships between farmers, other local producers, and distributors impacted by the Coronavirus by introducing a platform to facilitate supply chain logistics which enables a network of farmer cooperatives and distributorships, (ii) introduce farmer efficiency technology to streamline food sales, cold or dry storage access, and distribution, and (iii) leverage the established web applications of Local Food Network (LFN) and Virginia Cooperative Extension's (VCE) Market Maker and Buy Fresh Buy Local in order to provide an online marketplace to increase sales from wholesale buyers and direct consumers.

Among the largest grants under the program were:

- $2.5 million to the Loudon Education Foundation to create and implement an immersive and integrated computer science curriculum in grades 6-12 in Loudoun County and in partnership with Chesapeake City Public Schools in Region 5. The two participating school systems will offer students an opportunity to learn computer science and computational thinking as part of the 6-12 core curriculum, culminating in capstone courses and experiential learning opportunities including internships at the high school level.

- $2.4 million to 757 Accelerate to support developing new innovation and entrepreneurship programming, capacity, and services to early-stage companies by bringing together an accelerator, private capital, collaborative space, and community outreach programs.

- $1.6 million to Virginia's Gateway Region to elevate 15 sites totaling 1,652 acres in Region 4 by completing all environmental due diligence work associated with the sites.

GO Virginia has been a means of challenging local leadership – both civic and business – to come together to articulate how the economy of a region can grow. By pushing down some of the decision making to the local level, it also allows for a means of resolving the tension between state and local priorities in a productive way. While funding for GO Virginia has been

limited, it did create an incentive for government, business and non-profit leaders to convene and to begin to think about a regional approach – vs. one city or one county at a time.[139][140] GO Virginia, however, did not include regional decision making on tax benefits. State incentives are driven by the Virginia Economic Development Partnership (VEDP). Though, funding for site development and workforce development under the GO Virginia program certainly complemented tax incentives provided through VEDP and workforce programming provided through Virginia's LWDBs.

Place specific strategies also recognize the linkage between quality of life and economic development. For example, quality K-12 education is important both as a means of creating a homegrown pipeline for talent and to attract talent. As noted earlier, the lack of quality schools – and other local government services and amenities – may make it more difficult to attract new business and new workers.

Often the same places that are struggling economically are struggling in other ways as well. In New Mexico, the state's lowest performing schools are categorized as those needing comprehensive support and improvement (CSI). Nearly forty-four percent – 41 out of 94 schools – are in the Albuquerque Public School district, most of which are in Bernalillo County where nearly thirty percent of all New Mexicans who are living in poverty reside – and home to just under thirty two percent of all New Mexicans.[141]

Ten schools are in McKinley and Cibola counties combined – two counties that account for less than five percent of state population but have two of the highest county poverty rates in the state and are home to more than ten percent of CSI schools.[142] Rio Arriba is the only other county with school districts that have more than two CSI schools: with less than two percent of state population, there are six CSI schools in Rio Arriba which has a poverty rate of 19.7 percent. There needs to be a holistic approach to place-based economic development that recognizes the improvements in public schools, development of public amenities and reduction in crime are all components of a successful local or regional economic development strategy.

The Massachusetts Transformative Development Initiative (TDI) administered by their economic development agency, MassDevelopment, is a good example of that type of an approach. TDI is focused on 26 cities in the Commonwealth known as Gateway Cities: these are cities that meet three criteria – population between 35,000 and 250,000; median household income below the state median; and a lower percentage than the state average of adults with a college degree.[143]

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[139] The authors benefitted greatly from the insights of Karl Stauber, a rural economic development expert, former President of the Danville Regional Foundation and a member of the Region 3 regional council.
[140] See, for example, Ascend WV, a public-private partnership launched in 2021: available at https://governor.wv.gov/News/press-releases/2021/Pages/Gov.-Justice,-Brad-&-Alys-Smith,-and-West-Virginia-University-launch-Ascend-WV-remote-worker-program.aspx. Other local governments have also turned to worker relocation grants as a means of incentivizing population and economic growth: see https://www.governing.com/work/how-relocation-incentives-are-fueling-local-economic-growth
[141] Data accessed at https://newmexicoschools.com/schools
[142] This includes schools from the Gallup-McKinley, Grants-Cibola and Zuni school districts.
[143] "Transformative Development Initiative: Building a Culture of Co-investment in Small Cities," MassDevelopment, accessed at https://www.massdevelopment.com/assets/what-we-offer/TDI/220207_TDI_Overview_Presentation_for_website.pdf

Many of these cities have been slow to recover after decades of deindustrialization and population decline. For example, one Gateway city – Fall River – reached its peak population in 1920 and has lost residents each decade for the last century.

Under the program, MassDevelopment has deployed TDI Fellows to cities, provided technical assistance to support economic revitalization, supported equity investments in businesses, and linked businesses and local governments to other state programs and grant opportunities. The program works with local governments to establish TDI districts within each of the cities. These districts, frequently in formerly vibrant downtown areas, have a focus on both increasing population and increasing business. For example, in Haverhill, the TDI worked to transform a vacant building into new housing and three new retail businesses.[144]

MassDevelopment has invested $20 million in TDI districts since 2015 directly leading to over $100 million in public and private investments and assisting in another nearly $220 million in investment. Earlier this year, Governor Baker committed an additional $23.7 million to the program.[145]

The type of technical assistance provided by TDI is an important part of any place-based strategy focused on economically challenged places. Just as places with economic challenges may also have challenges related to crime, education and other quality of life issues, they also frequently lack the fiscal or operational capacity to address these issues. With few resources and little fiscal and operational capacity, many city leaders struggle to set realistic priorities and pick a starting point for recovery. More than providing information and expertise, technical assistance requires help on the ground to implement best practices.

The National Resource Network (the Network) was a federal initiative designed to provide cross cutting technical assistance to economically challenged cities. With funding from the federal government, state and local government and private and philanthropic funders, the Network provided technical assistance to more than sixty cities nationally from 2013 to 2021. Eligible cities were defined by high poverty rates, high unemployment rates and/or population decline. While a city's economic condition was the basis for eligibility, the work of the Network focused on four different areas: community development, economic development, workforce development and budget and operational issues. Cities applied for assistance and were selected for assistance based on readiness and willingness to engage in taking on significant challenges. As much as megatrends such as deindustrialization and suburbanization may have caused economic decline, recovery is impossible unless local leadership is ready and willing to take on tough challenges with strategies that can be arduous and sometimes politically unpopular to execute.

[144] "Beyond Walls," MassDevelopment, accessed at https://www.massdevelopment.com/who-we-are/success-stories/beyond-walls

[145] "Baker-Polito Administration Expands Transformative Development Initiative for Gateway Cities," State of Massachusetts, 15 February 2022, accessed at https://www.mass.gov/news/baker-polito-administration-expands-transformative-development-initiative-for-gateway-cities-0

An assessment process involving the applicant city and members of the consortium leading the Network was used to identify the area or areas of technical assistance that would have the greatest impact in improving the economic conditions of the city.[146] Rather than adopting a "one size fits all" approach, the Network has tailored technical assistance to specific circumstances on the ground.

Mayors and city managers acknowledged the transformative impact of the assistance:

- In Providence, the Network developed a ten-year strategic fiscal and management plan. Mayor Jorge Elorza said "This (National Resource Network) report provides a call to action to put Providence on a sustainable path forward... we have a clear understanding of our challenges and a set of options for how we can address them."

- In Rockford, the Network developed a comprehensive fiscal and community development plan. Mayor Thomas McNamara said, "The Network is unique and unlike other federally funded programs…does not apply a one size fits all approach. The Network has been truly responsive to the unique challenges that Rockford faces…helping to bring all City partners to the table to help devise a long-term fiscal plan."

- In Waco, the Network brought together a team that focused on community, economic and workforce development issues, along with aligning the operations of city government to an initiative to reduce poverty. Mayor Malcolm Duncan said, "(T)here was a tremendous appeal to us for the Network because of the technical expertise...because of the scope and complexity of it, we really didn't know how to target specific strategies, and we need somebody that's been there before to help guide us."

An independent evaluation by the Urban Institute concluded that "(O)verall, NRN engagements were viewed as a success ... (City leaders) strongly believed that the engagement provided a valuable service… In fact, when asked whether the work done in the engagement would have occurred in the absence of the SC2 NRN program, almost all respondents…indicated that they believed that their city would not have been able to accomplish the task."[147]

The Network was the basis for a current federal program, the Distressed Cities and Persistent Poverty Technical Assistance initiative (DCTA). DCTA, administered by the U.S. Department of Housing and Urban Development (HUD) is designed to build capacity of local governments experiencing economic distress and assist local governments and their nonprofit partners in alleviating persistent poverty in specific areas (census tracts). Through DCTA, HUD provides technical assistance directly to entities serving smaller communities with populations under 50,000. DCTA considers good fiscal health, strong financial performance, and effective financial management practices to be the foundation for successful implementation of projects and

[146] PFM was one of the four major providers of technical assistance under the Network and a PFM managing director served as the Network's executive director.
[147] Quotes are from a National Resource Network PowerPoint, A Record of Results: 2013-2020.

progression towards goals. Therefore, these are central components of the TA offered through this program."[148] In New Mexico, 17 cities and 13 counties are eligible for assistance under DCTA.

Another component of a place-based strategy might focus on efforts to directly attract new residents to the state with relocation grants. This could be a means of bolstering targeted areas that are experiencing population decline and thereby harming the local economy. Efforts are relocation would need to be weighed to insure that they do not have the consequence of making certain areas less affordable or desirable to existing residents – especially low income residents.

Nevertheless, a relocation strategy would be a means of taking advantage of some of New Mexico's most important natural assets and the benefits of the coming investment in broadband infrastructure. If many workers are now able to work anywhere because of work from home policies and remote access to work, New Mexico already has a lot to offer. Its unique beauty and relative low cost when compared to other Intermountain states could make it an attractive place for relocation. New Mexico's cost of living (based on the Bureau of Economic Analysis Regional Price Parity index) was the tenth lowest nationally among states in 2020 at 91.6: of its neighbors, only Oklahoma (91.3) had a lower cost of living while Arizona (99.1), Colorado (102.9), Texas (99.5) and Utah (95.3) were all higher.[149]

That, however, has not been the case to date. In part, that may be due to a lack of an active strategy to seek relocating workers. It may also be that those individuals relocating are deterred by the quality of life factors – schools and crime among others – detailed above.

Those quality of life factors also influence state ratings. For example, U.S. News and World Report regularly ranks states based on a number of factors. Over the last three years of the survey, New Mexico has ranked 48th in 2021 (ahead of just Mississippi and Louisiana); 46th in 2019 (ahead of Mississippi, Louisiana, Alabama, Mississippi, and West Virginia); and 48th in 2018 (ahead of Mississippi and Louisiana).[150]

[148] "Distressed Cities and Persistent Poverty Technical Assistance Program," U.S. Department of Housing and Urban Development, accessed at https://www.hud.gov/program_offices/comm_planning/cpdta/dcta
[149] "Real Personal Consumption Expenditures and Personal Income by State, 2020" U.S. Bureau of Economic Analysis, 14 December 2021, accessed at https://www.bea.gov/news/2021/real-personal-consumption-expenditures-and-personal-income-state-2020
[150] "Best States Rankings," U.S. News & World Report, accessed at https://www.usnews.com/news/best-states/rankings

2021 U.S. News Best States Rankings, Bottom Five States

Rank	State	Health Care	Education	Economy	Infrastructure	Opportunity	Fiscal Stability	Crime & Corrections	Natural Environment
46	Alabama	45	47	38	28	37	22	43	37
47	West Virginia	47	45	48	50	18	28	23	36
48	**New Mexico**	**33**	**50**	**44**	**45**	**49**	**35**	**47**	**31**
49	Mississippi	50	43	49	48	44	41	33	22
50	Louisiana	46	48	47	47	48	42	50	49

Source: U.S. News & World Report

But it is possible that an active campaign to attract higher income workers from elsewhere could be an effective strategy for place-based economic and population growth. The number of places offering incentives for relocation has grown during the pandemic. But two programs – a statewide initiative in Vermont and a local initiative in Vermont – have undergone program evaluations that suggest material benefits.

In Vermont, PFM conducted an evaluation of the Vermont Worker Relocation Grant Program. Since 2018, the state legislature has adopted three different versions of the program that has brought more than 400 workers and their families to the state; in 2022, the legislature made further modifications to the program. The cost to the state has been slightly less than $1.8 million.[151]

The PFM evaluation looked at the impact of the initial three versions of the program:

- The New Remote Worker Grant Program (2018 Program) focused on recruiting remote workers relocating to Vermont on or after January 1, 2019. The program provided grants of up to $10,000 per individual and had an overall budget of $500,000.

- The New Worker Relocation Incentive Program (2019 Program) targeted relocating workers becoming residents on or after January 1, 2020. With overall funding of $670,000, the Program provided base grants of up to $5,000 and enhanced grants of up to $7,500 for workers who relocated to economically distressed areas of the state.

- The New Relocating Employee Incentives Program (2021 Program) combined elements of the 2018 and 2019 Programs, allocating $480,000 for grants to relocating workers who move to the state on or after July 1, 2021, and $130,000 for grants to remote workers who become residents on or after February 1, 2022. The Program provides base grants of up to $5,000 and enhanced grants of up to $7,500 for workers residing in economically distressed areas.[152]

[151] "Relocation Incentives," State of Vermont Agency of Commerce and Community Development, accessed at https://accd.vermont.gov/economic-development/newrelocatingworkergrant
[152] "Study on Effectiveness of Incentive Programs in Attracting New Workers," State of Vermont Department of Financial Regulation, 15 December 2021, accessed at https://dfr.vermont.gov/sites/finreg/files/doc_library/dfr-legislative-report-act51-worker-incentive-program-study.pdf

The PFM evaluation found that recipients of the grants rarely moved to the state solely because of the incentive. But the grants clearly had an impact: based on a survey of grantees, 60 percent of 2018 grantees and 47 percent of 2019 grantees reported that the grants were either somewhat important or very important to their decision to relocate to Vermont.

Forty four percent of 2018 grantees and 30 percent of 2019 grantees earned more than $100,000 annually: by comparison, Vermont's median household income is just below $62,000. The PFM report went on to note the need for an integrated approach to inducing population relocation: incentive grants should be considered as part of an overall economic development strategy rather than a "silver bullet" approach to reversing population decline. In particular, the enhanced incentives under the 2019 and 2021 program for workers residing in economically distressed areas alone may be insufficient.

The PFM report notes that "Grant recipients of the 2018 and 2019 Programs indicated that offering more money (56 percent), providing housing assistance (59 percent), providing childcare assistance (49 percent), and aggregating information regarding business/work support programs (41 percent) would be effective options for encouraging moves to economically disadvantaged areas."

The Tulsa Remote program was also launched in 2018. Participants were incentivized to relocate to Tulsa with payments totaling $10,000 over the course of a year, discounts on co-working spaces and apartments, and the promise of a community of newcomers. An economic impact analysis by the Economic Innovation Group (EIG) found that the program was responsible for millions in new local earnings and bringing just under 600 new jobs to the Tulsa area in 2021 alone.[153]

A recently released study of Tulsa Remote by the Brookings Institution highlighted three findings in comparing Tulsa Remote grantees to those referred to as "near Tulsa Remote" and defined as "individuals who were accepted into the Tulsa Remote program but did not join the program for idiosyncratic reasons or individuals who were accepted into the program and that will soon join the program."[154] Tulsa Remote participants:

- Have a higher chance of staying in their new communities in the mid-to-long-term;
- Have higher pro-social engagement in the community; and

- Have higher real income growth without a (perceived) drop in productivity.

The Kansas Rural Opportunity Zone program offers a more targeted version of the Vermont worker relocation program. Launched in 2012, the program was designed to incentivize

[153] "Lessons from a Leading Remote Work Incentive in Tulsa, Oklahoma," Economic Innovation Group, accessed at https://eig.org/tulsa-remote/
[154] Prithwiraj Choudhury, Evan Starr, and Thomaz Teodorovicz, "Work-from-anywhere as a public policy: 3 findings from the Tulsa Remote program," The Brookings Institution, 15 September 2022, accessed at https://www.brookings.edu/research/work-from-anywhere-as-a-public-policy-three-findings-from-the-tulsa-remote-program/

relocation to an initial set of 50 counties through student loan repayment assistance and waiver of state income taxes. Over the last ten years, the program was gradually expanded to 92 counties.[155]

Individuals were eligible for the income tax waiver if they met the following criteria:

- Establish domicile in a ROZ county on or after the date the county was included in the program;
- Lived outside the State of Kansas for at least five years prior to establishing domicile in the ROZ county;
- Earned less than $10,000 in Kansas-source income in each of the five years immediately prior to establishing domicile in the ROZ county; and
- Reside in the county from January 1st to December 31st of the year the waiver is requested.

Similar criteria were in place for student loan assistance. By 2019, a total of 1,724 individuals participated in the student loan program and up to 533 individuals per year had received the tax credit benefit.

A 2019 analysis, however, raised questions about the program's impact concluding that "the majority of program participants would have moved to a Rural Opportunity Zones county even without the program's financial incentives. Only a minimal number of counties even had participants who indicated the program was their primary factor for relocation."[156] Like PFM's evaluation of the Vermont program, the Kansas Department of Commerce highlighted the fact that worker relocation assistance could not be a silver bullet: as the state was incentivizing relocation to rural counties, it had simultaneously been cutting other economic development programs targeted at rural areas.

New Mexico's investments under the Infrastructure Investment and Jobs Act can also use a place-based strategy to address equity issues. An equity-based strategy might target investments to those parts of the state with the greatest economic challenges – where local resources alone are unlikely to meet infrastructure need. A December 2021 Brookings Institution paper detailed a series of strategies for the federal government to increase the use of IIJA to address equity issues and they are equally applicable to state governments:[157]

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[155] Rachèll Rowand, "Rural Opportunity Zones 2021 Overview / Updates," State of Kansas Department of Commerce, accessed at https://www.kansascommerce.gov/wp-content/uploads/2021/05/ROZ-Overview.-5.26.2021.pdf

[156] "Kansas Rural Opportunity Zones: Program Evaluation and Recommendations," State of Kansas Department of Commerce, accessed at http://www.kslegislature.org/li/b2021_22/committees/ctte_h_financial_institutions_and_rural_developm_1/documents/testimony/20210317_03.pdf

[157] Carlos Martín, Andre M. Perry, and Anthony Barr, "How equity isn't built into the infrastructure bill—and ways to fix it," The Brookings Institution, 17 December 2021, accessed at https://www.brookings.edu/blog/the-avenue/2021/12/17/how-equity-isnt-built-into-the-infrastructure-bill-and-ways-to-fix-it/

- “[P]rioritize equity-promoting projects and processes.”

- “Proposal review and scoring rubrics should be weighted to prioritize disinvested communities.”

- “Requiring authentic community engagement—and evidence of it—in proposal narratives and subsequent awards should be standard.”

- [P]rovide extensive technical assistance programs targeted at low-capacity communities to help them advance community-driven, technically feasible projects and prepare competitive applications.”

- “[E]ncourage local community benefits agreements for individual projects—particularly competitive grants—as well as showcase examples in which diverse worker programs and procurements combine to produce infrastructure that positively benefits disinvested communities.”

- “Existing worker training and apprenticeship funds should also better channel underrepresented people into the jobs that are opening soon.”

- “[G]rant administrators can simply ask proposals to make the case for how disinvested communities will benefit or be directly served.”

IIJA’s significant investment in broadband – with a minimum of $100 million going to New Mexico – will be a critical to making some of the high poverty, more rural parts of the state more competitive going forward.

Finally, an example of a place-based and people-based approach that builds on the state’s sectoral strategy can be found in one of New Mexico’s two proposals that were selected as finalists under the Economic Development Administration’s Build Back Better program. The Create New Mexico proposal called for a $72 million investment to create a workforce development system focused on STEM professions and “boost private sector investment, bridge urban-rural divides, and foster equitable opportunities for historically underserved populations across New Mexico, including former and current coal communities.”[158]
Creative technology is at the center of the proposal – with a goal of job creation in film, TV, gaming, data visualization, 3D manufacturing, and AR/VR/metaverse technologies. By 2026, the proposal called for the creation of nearly 6,000 new jobs, growing to more than 10,000 jobs by 2030. The proposal envisioned a partnership between the Albuquerque Hispano Chamber of Commerce, the University of New Mexico, New Mexico State University, New Mexico Tech, the New Mexico Film Office, the Institute of American Indian Arts, Creative Startups and DreamSpring.

[158] “Create New Mexico” American Rescue Plan Act Build Back Better Regional Challenge Narrative, accessed at https://www.eda.gov/archives/2022/files/arpa/build-back-better/finalists/narratives/Create_New_Mexico.pdf

While the goal for the initiative was for it to be statewide, Create New Mexico's geographic and income focus is clear and explicit: "Create New Mexico will serve 100% of counties with concentration on rural and former/current coal counties…. (and focus on) empowering the economic potential of the creative technology sector for Native Americans, BIPOC, and women…these projects represent a once-in-a-generation opportunity to translate cultural heritage to economic opportunity and advance equitable projects that directly benefit historically impoverished communities."

Appendices

Appendices

Appendix A: PFM Project Team

David Eichenthal, Engagement Manager

David Eichenthal joined PFM in 2011 and became a Managing Director in the firm's Management and Budget Consulting practice in 2014. He served as the Engagement Manager for PFM's 2020 study of the State of New Mexico tax structure. Both as a consultant and as a former local government CFO, Mr. Eichenthal has led a variety of projects related to revenue and economic development.

Ryan McNeely, Project Manager

Ryan McNeely is a Director in the Management and Budget Consulting practice in PFM's New Orleans office. He has led multi-year financial planning and operational reviews for local governments around the country and previously served as an analyst with the New Jersey Office of Management & Budget.

William Fulton, Senior Advisor

Bill Fulton is a former director of Rice University's Kinder Institute for Urban Research. He previously served as mayor of Ventura, California and director of planning & economic development for the city of San Diego – and has written multiple books and articles on economic development.

Economist Dr. Kelly O'Donnell served as an independent advisor to the project team.

Appendix B: Stakeholders Interviewed

- Jon Clark, New Mexico Economic Development Department
- New Mexico State Land Office Staff
- Johanna Nelson, New Mexico Economic Development Department
- Stephanie Schardin Clarke, Cabinet Secretary, New Mexico Taxation and Revenue Department
- Dan Schlegel, Office of Governor Michelle Lujan Grisham
- Ismael Torres and Legislative Finance Committee Staff
- Peter Wirth, State Senator
- Angelica Rubio, State Representative
- Sanders Moore, Chief of Staff for State Senator Mimi Stewart
- Javier Martínez, State Representative
- Antonio Maestas, State Senator
- Carrie Hamblen, State Senator

- Christine Chandler, State Representative
- Melinda Allen, New Mexico Partnership
- Marco Gonzalez Harsha and Margaux Murali, U.S. Department of Energy – Office of Technology Transitions
- Michael Guerrero and Lan Sena, Center for Civic Policy
- Mark Haggerty, Center for American Progress
- Tom Hilliard, The Hope Center
- Neil Kleiman, New York University – Marron Institute
- Lisa Kuuttila, University of New Mexico – Rainforest Innovations
- Suzanne Mattei, Institute for Energy Economics and Financial Analysis
- Mo O'Donnell, University of New Mexico – Bureau of Business and Economic Research
- Kelly O'Donnell, O'Donnell Economics & Strategy
- Peter Rice, Downtown Albuquerque News
- Tom Singer, Western Environmental Law Center
- Karl Stauber, former President of Danville Regional Foundation
- Amber Wallin, New Mexico Voices for Children

Appendix C: Model Inputs – Projected Values

Cushing, OK WTI Spot Price FOB (Dollars per Barrel)

Fiscal Year	Reference Case	High Economic Growth Case	Low Price	High Price
2023	64.78	64.42	33.20	120.55
2024	64.73	64.18	34.47	132.10
2025	69.41	68.93	36.68	140.79
2026	72.21	71.56	38.36	148.47
2027	75.79	75.10	39.05	157.45
2028	79.58	78.66	40.36	165.81
2029	82.96	81.65	42.39	174.49
2030	86.22	85.09	44.03	182.17
2031	89.82	88.68	45.81	187.48
2032	93.55	92.26	47.47	193.81
2033	96.90	95.23	49.34	201.25
2034	99.84	97.85	50.88	209.34
2035	102.83	100.90	52.93	218.22
2036	106.45	103.42	55.28	228.68
2037	110.29	106.53	56.92	240.53

New Mexico Crude Oil First Purchase Price (Dollars per Barrel)

Fiscal Year	Reference Case	High Economic Growth Case	Low Price	High Price
2023	62.20	61.86	31.88	115.76
2024	62.16	61.63	33.10	126.85
2025	66.65	66.19	35.22	135.19
2026	69.34	68.72	36.84	142.57
2027	72.77	72.11	37.49	151.19
2028	76.41	75.53	38.76	159.22
2029	79.67	78.40	40.70	167.55
2030	82.79	81.71	42.28	174.92
2031	86.25	85.16	43.99	180.03
2032	89.83	88.59	45.58	186.10
2033	93.05	91.45	47.38	193.25
2034	95.87	93.96	48.86	201.02
2035	98.74	96.89	50.82	209.54
2036	102.22	99.31	53.08	219.58
2037	105.91	102.30	54.65	230.97

New Mexico Field Production of Crude Oil (Millions of Barrels)

Fiscal Year	Reference Case	High Economic Growth Case	Low Supply	High Supply
2023	436.0	435.8	428.4	435.9
2024	450.0	456.9	431.2	466.0
2025	464.2	470.2	414.1	512.2
2026	476.2	484.6	394.4	564.3
2027	492.6	496.3	386.6	598.7
2028	499.7	499.2	381.8	618.1
2029	498.1	503.0	375.2	634.9
2030	505.8	506.8	366.3	650.0
2031	504.4	505.0	356.1	659.6
2032	502.0	501.7	346.3	665.8
2033	497.8	496.8	336.0	669.9
2034	492.9	495.6	326.7	673.9
2035	495.2	494.4	318.6	675.6
2036	489.0	489.8	315.0	676.9
2037	484.3	486.2	313.8	679.1

Appendix D: Detailed Analysis of New Mexico's Targeted Industries

Aerospace

Aerospace has long been viewed as a major opportunity for the New Mexico economy. As the SRI report noted, significant state research is conducted at the National Labs, especially through the Air Force Research Laboratory's New Mexico Branch, including the Directed Energy and Space Vehicles directorates, which are headquartered in New Mexico. In addition, the state has made an investment of more than $200 million in Spaceport America, located in rural southeast New Mexico, which was the first spaceport in the United States. Aerospace is one of the industries for which EDD has already created an industry council.

New Mexico has a significant concentration of employment in aerospace. According to PFM's own NAICS code analysis of the aerospace industry in New Mexico, the industry is small but growing rapidly. Aerospace manufacturing is widely viewed as a potentially strong part of the New Mexico economy.

However, despite a major state and local investment, it is generally agreed that Spaceport America has not achieved its economic potential. An economic impact analysis by Moss Adams in 2020 estimated the actual direct economic impact of Spaceport at about $33 million in 2019, generating about $1.9 million in gross receipts tax. Moss Adams predicted that economic activity would increase dramatically starting in 2020, reaching $101 million by 2023, with GRT totaling $6.7 million. The overall direct, indirect, and induced impact was estimated to be $56 million in 2019 and Moss Adams predicted this would double by 2023.

This relatively modest economic performance is the result of several factors, including competition from other spaceports, the remote location (which in theory could allow for additional development over time), and the slow ramp-up of one of Spaceport America's most important partners, Virgin Galactic, a space tourism company.

Subsidies and Incentives

As stated above, the State of New Mexico, in conjunction with Dona Ana and Sierra counites, has provided more than $200 million in funding for Spaceport America.

According to the SRI report, the GRT has been viewed as a significant drag on aerospace manufacturing – though, ironically, part of the money to build Spaceport America came from an additional GRT tax in Dona Ana and Sierra counties.

The state does have a GRT deduction for Spaceport-related activities, but there is no reporting requirement so its usage is unclear. The state also has a space vehicle fuel tax exemption, which is rarely used. Some aerospace manufacturers may use the manufacturing tax credit, but reporting is not done at that level of detail.

Prospects For Growth

It is likely that aerospace manufacturing will remain a small but fast-growing part of the New Mexico economy. However, Spaceport America may not grow as fast as predicted. For example, Virgin Galactic recently announced that its space vehicles would be manufactured in Arizona.[159] Virgin Galactic's recent announcement that it would build an astronaut training center in Sierra County is an encouraging sign.[160]

Impact on State Revenue

The impact of the aerospace industry on state revenue is difficult to assess but it is not likely to be large. To the extent that aerospace businesses are producing high-wage jobs, they are adding to the PIT revenue, but the industry as a whole is still quite small. Similarly, GRT revenue is likely small. The Moss Adams study estimated that GRT receipts related to Spaceport totaled $1.9 million in 2019, with extremely optimistic predictions for the future. PFM's NAICS analysis estimated aerospace GRT in 2020 at $428,000 – a 562% increase over 2015, but still quite small.

Biosciences and Cybersecurity

Both biosciences and cybersecurity have been targeted by the state as potentially important industries, in large part because of their connection to the Los Alamos and Sandia National Labs.

The Labs themselves play an important role in the New Mexico economy; among other things, they are part of the reason why New Mexico, which otherwise has a poorly educated population, has a high percentage of doctoral degrees per capita. The significance of the Labs to the state's economy is further illustrated by the fact that the median income in Los Alamos County, where Los Alamos National Lab is located, is double that of any other county in New Mexico. Economic impact analyses for Los Alamos and Sandia Labs, as well as the University of New Mexico, show a significant impact on the state's economy. Los Alamos claims to generate $1.54 in tax revenue for every $1 spent.

But tech transfer from the public to the private sector remains nascent. SRI reported that it can be difficult to transfer technology out of the National Labs because of national security considerations – a fact others have pointed out but that the Labs claim they are working to improve. UNM has created the Rainforest Innovations complex in downtown Albuquerque, but the university's own economic impact report found that tech transfer, which runs through Rainforest, accounts for only 1% of the university's $5 billion impact on the state's economy.

[159] "Virgin Galactic Announces New Spaceship Manufacturing Facility in Mesa, Arizona," Virgin Galactic, 14 July 2022, accessed at https://www.virgingalactic.com/news/virgin-galactic-announces-new-spaceship-manufacturing-facility-in-mesa

[160] Rose Dykins, "Virgin Galactic To Build Astronaut Training Campus In New Mexico" Globetrender, 23 September 2022, accessed at https://globetrender.com/2022/09/23/virgin-galactic-to-build-astronaut-training-campus-in-new-mexico/

Though both biosciences and cybersecurity are growing fast as economic sectors, cybersecurity is much bigger, in part because of successful businesses such as RiskSense and Decartes Labs. (RiskSense, a spinoff from New Mexico Tech, was acquired by Utah-based Ivanti in 2021.) PFM's NAICS analysis estimated that the cybersecurity industry accounted for $1.7 billion in gross receipts in 2020, while biosciences accounted for approximately $200 million. Both have grown by an average of 30-40% per year since 2015. Though this analysis likely underestimates these industries' overall economic impact, it does show that cybersecurity is a much bigger industry at this point.

Subsidies and Incentives

The state is encouraging growth in the innovation sectors such as biosciences and cybersecurity primarily through direct state initiatives such as Rainforest and New Mexico Tech's Center for Cybersecurity Excellence. However, there are two state incentives that encourage the national labs to work with businesses. One is a GRT credit that encourages the national labs to work with small businesses, which is limited to $2.4 million per year for each national lab. This is one of the more heavily used credits in the state's stable of incentives, as the labs have consistently drawn on it for about $4.5 million per year in credits. The other is a credit to national labs that help businesses with technology readiness, which was first enacted in 2020 and has not yet been heavily used.

Prospects For Growth

The prospects for continued rapid growth in both biosciences and cybersecurity are strong. According to SRI, Cybersecurity jobs grew by 50% between 2010 and 2020, but this growth added only 2,500 jobs. Biosciences jobs also grew significantly in percentage terms, but according to SRI this amounted to only 900 jobs between 2010 and 2020. Much depends on the ability of the national labs to spin off research to commercial activity within the state.

It is worth noting, however, that PFM's interviews with innovation and economic development leaders in the state highlighted another problem that the SRI report identified in several sectors: the lack of large-scale capital in the state. New Mexico does have in-state funding for startups from angel and early-stage investors, but later-stage, larger investors typically are located out of state and often want the companies to move from New Mexico to locations proximate to them. RiskSense, for example, obtained financing from Silicon Valley and opened a Silicon Valley office before being purchased by a Utah firm.

Impact on State Revenue

The impact on state revenue will largely be accrued in the PIT. Biosciences and cybersecurity jobs pay well – more than $75,000 per year on average. To have a significant impact on PIT revenue, however, these industries will have to add jobs far more rapidly than they have in the past, even though they have experienced significant percentage growth.

Film & Television

There is no question that film and television activity is increasing rapidly in New Mexico. Like many states, New Mexico has a state film office housed in the Economic Development Department and a robust state tax credit program. A 2021 economic impact study for the New Mexico film office estimated that direct, indirect, and induced economic activity from the film and television industry was $933 million.[161] (Direct spending was $628 million.) The overall economic activity represents approximately 1% of the state's GDP.

Subsidies and Incentives

The state offers a tax credit that can offset between 25% and 35% of either PIT or CIT, depending on the situation. After limiting the spending cap to $50 million per year for several years, a backlog had been created. In 2019 the state cleared out the backlog and set a new cap of $110 million, which on a per-capita basis is one of the highest in the country. The state also provides tax credits to "partner" entertainment companies that make other commitments, such as building studios and training works; the estimated cost of the partners is $45 million. Thus, the state's total incentive packages to the entertainment industry is approximately $150 million.

In addition, the state recently committed $40 million to build a film, television and digital academy in Albuquerque to ensure that the state has a sufficiently trained workforce.[162]

Prospects For Growth

If the use of tax credits increases, the amount of filming in New Mexico is likely to increase as well. The most important question is whether tax-credit-induced filming will help stimulate a permanent industry in the state. The literature is mixed on whether this evolution is possible, with one recent journal article suggesting that the evidence is inconclusive.[163]

The SRI Strategic plan did suggest that the state should focus on training of "below the line" talent (day-to-day film production workers) because they are more likely to live locally than "above the line" talent (for example, actors or directors). The investment in the academy is certainly a move in this direction.

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[161] "Economic Impact of the New Mexico Film Production Tax Credit: A Study for the New Mexico Film Office by Olsberg SPI," Olsberg SPI, 19 November 2022, accessed at https://nmfilm.com/assets/uploads/migrated/2021/11/NMFO_EconomicImpactStudy_NMFilmProductionIncentiveProgram_2021.pdf

[162] Diana Lodderhose, "New Mexico Set To Build $40 Million Media Academy With Sound Stages," Deadline, 16 March 2022, accessed at https://deadline.com/2022/03/new-mexico-set-to-build-40-million-film-academy-with-sound-stages-1234980540/

[163] Mark F Owens and Adam D Rennhoff, "Motion picture production incentives and filming location decisions: a discrete choice approach," Journal of Economic Geography, accessed at https://academic.oup.com/joeg/article-abstract/20/3/679/5205905?redirectedFrom=fulltext

But there may be an upper limit to potential growth. In Georgia, which expends twice as much per capita in film credits as New Mexico, the most optimistic estimate is that film and television activity accounts for 3% of the state's GDP.[164]

Impact on State Revenue

No recent analysis has been done to determine whether there is a net positive revenue impact on the state government, but it is extremely unlikely that this is the case. The only analysis conducted to date is contained in a report to the LFC in 2008, which found that $38 million in tax credits at that time generated about $5 million in tax revenue, about 14% of the total invested.[165]

This is consistent with the few other studies conducted on this topic. A 2019 study by the State of Connecticut found that, in on average, the state provides the film and television industry with $72 million in tax credits per year but resulted in a net loss of $46 million in tax revenue – a loss of 64 cents for every dollar in tax credits issued.

The film and television industry pays relatively high wages and therefore could have an impact on PIT, assuming the recipients of those wages live in New Mexico. The Film Office's most recent presentation to the legislature's Tax Policy and Revenue Stabilization Committee estimated that the industry generates the equivalent of approximately 2,800 full-time jobs at an average wage of $29 per hour. PFM's high-level analysis estimates that such employment most likely produces approximately $8 million a year in PIT.

Notably, the 2021 Film Office economic impact report did not discuss tax revenue at all.

Outdoor Recreation

Given the state's natural wonders, outdoor recreation should have great potential to contribute to the state's economy. Nevertheless, New Mexico's outdoor recreation economy is small compared to other states in the Intermountain West.

An PFM analysis of data from the Bureau of Economic Analysis estimated New Mexico's "value-added" outdoor recreation economy[166] at approximately $550 million in 2020. By contrast, Colorado's value-added outdoor economy was about $3 billion, Arizona's $2 billion, and Utah's $1.5 billion. The only sub-category in which New Mexico excelled was equestrian activity.

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[164] John Charles Bradbury "Film Tax Credits and the Economic Impact of the Film industry on Georgia's Economy," Bagwell Center for the Study of Markets and Economic Opportunity, Kennesaw State University, 2019.
[165] Anthony V. Popp and James Peach, "The Film Industry in New Mexico and The Provision of Tax Incentives," New Mexico State University – Arrowhead Center, Office of Policy Analysis, 26 August 2008, accessed at https://www.nmlegis.gov/entity/lfc/Documents/Money_Matters/NMSU%20Report%20on%20Economic%20Impact%20of%20Film%20Production%20Tax%20Credit%20-%20August%202008.pdf
[166] BEA defines "value added" as "The gross output of an industry or a sector less its intermediate inputs; the contribution of an industry or sector to gross domestic product (GDP). Value added by industry can also be measured as the sum of compensation of employees, taxes on production and imports less subsidies, and gross operating surplus" – a glossary is available at https://www.bea.gov/help/glossary/compensation-employees-paid

Because of BEA's rigorous definition of "value-added," other estimates of the outdoor economy's contribution are higher. A study by Headwaters Economics found that 1.9% of the state's economy comes from outdoor recreation.[167] This includes 26,000 jobs and wages of about $1 billion as of 2018. The percentage is on par with Arizona, but of course Arizona has a much bigger economy and therefore the total wages in Arizona are about $4 billion. In a short report specifically for the New Mexico Economic Development Department, Headwaters estimated that, overall, outdoor recreation provides $2.4 billion and 33,000 jobs, and that between 2012 and 2017, outdoor recreation GDP grew by 11%, compared to overall GDP of 4%.

Subsidies and Incentives

Although many outdoor recreation businesses may qualify for other incentives, state investment in outdoor recreation remains spotty. The state does spend significant sums on tourism marketing, which is focused in large part on outdoor recreation. However, as the SRI report pointed out, unlike other Western states, New Mexico lacks dedicated funding for statewide land conservation and restoration, which can help improve potential destinations for outdoor tourists.

The only incentive listed in the state's 2021 tax expenditures report with any relationship to outdoor recreation is the state's 50% credit against personal or corporate income tax for land conservation. But outdoor recreation is not the only – or even the primary – purpose of this incentive.

Prospects For Growth

Outdoor recreation should have great growth potential in New Mexico. However, as the SRI report notes, lack of capital for small-business startups is hindering the expansion of the sector. No tax incentive programs are targeted primarily at outdoor recreation small businesses.

Impact on State Revenue
It is not clear that outdoor recreation can have a significant impact on state revenue. Within the context of the state's focus on high-wage job growth, outdoor recreation is not likely to be a major contributor, as the average wage in the sector is $38,000 per year.

Sustainable & Value-Added Agriculture

Agriculture is one of the leading economic sectors in New Mexico. According to an analysis from New Mexico State that is now nearly a decade old, agriculture and food processing accounted for $10.6 billion in 2012, 12% of the state's overall economy, plus 32,000 in direct jobs and 18,000 in indirect jobs.[168] Among other things, New Mexico is the nation's leading producer of

[167] "The Outdoor Recreation Economy by State", Headwaters Economics, November 2021, accessed at https://headwaterseconomics.org/economic-development/trends-performance/outdoor-recreation-economy-by-state/
[168] Joel Diemer, Terry Crawford, and Michael Patrick, "Agriculture's Contribution to New Mexico's Economy," New Mexico State University - Cooperative Extension Service, College of Agricultural, Consumer and Environmental Sciences, December 2014, accessed at https://pubs.nmsu.edu/_circulars/CR675.pdf

chiles and pecans.

However, most of New Mexico's agricultural activity is in the low-value-added growing sector. Growing, as opposed to higher value-added activities such as food processing, generates 60% of the state's economic activity and 80% of the jobs. A 2016 report from New Mexico State and New Mexico Future stated that New Mexico underperforms in food processing compared to peer states.[169]

Subsidies and Incentives

There appear to be no state tax incentives designed to encourage value-added agriculture. It is worth noting that several state purchasing programs, such as programs that purchase food for schools, do provide farmers with a more stable income than they otherwise would have.

Prospects For Growth

As with other target industries, potential growth in the agricultural sector is limited by several factors. Particular to agriculture are two factors: half the state's lands are publicly owned, which restricts the ability to use land for agriculture, and the state has a complicated water rights regime. As with other industries, access to capital is a problem for businesses seeking to add high-value components to the agricultural industry. Sustainable and Value-Added Agriculture is one of the three industries for which EDD has already created an industry council.

Impact on State Revenue

Given the state's emphasis on creating high-value jobs and therefore increasing PIT revenue, the agricultural industry is unlikely to serve as a big contributor. Agricultural jobs typically pay low wages. The authoritative 2014 New Mexico State report, *Agriculture's Contribution to New Mexico's Economy*, found that even though agriculture contributed more than $10 billion and 50,000 jobs to the New Mexico economy, it accounted for only $23 million in PIT and $40 million in CIT, including indirect effects.[170]

Intelligent Manufacturing

Manufacturing is the only one of the targeted industries that decreased overall employment in recent years, even though concentration of manufacturing employment in New Mexico is above the national average. In addition, almost half of New Mexico's manufacturing businesses have fewer than 50 employees. However, much of New Mexico's economic development effort is

[169] "Resilience in New Mexico Agriculture: Opportunities, Challenges and Realities for New Mexico's Farming and Ranching Future," New Mexico First and New Mexico State University, accessed at https://www.thornburgfoundation.org/wp-content/uploads/2019/02/NM-Ag-Plan-Background-Research-Report_2017.pdf

[170] Joel Diemer, Terry Crawford, and Michael Patrick, "Agriculture's Contribution to New Mexico's Economy," New Mexico State University - Cooperative Extension Service, College of Agricultural, Consumer and Environmental Sciences, December 2014, accessed at https://pubs.nmsu.edu/_circulars/CR675.pdf

focused on manufacturing – especially “intelligent” manufacturing, which makes use of real-time data and technology to maximize manufacturing productivity.

Subsidies and Incentives

New Mexico’s financial incentive programs for manufacturers are among the most generous in the United States. Both Job Incentive Training Program (JTIP) and the Local Economic Development Act (LEDA) target manufacturing companies. In addition, the manufacturing apportionment tax credit, which seeks to assist manufacturing companies that export most of their goods out of the state, is one of the most heavily used tax expenditure programs in the state, at $43 million in 2021.

Prospects For Growth

Intelligent manufacturing cuts across several other categories contained in the list of targeted industries, including aerospace and biosciences. In that sense, intelligent manufacturing faces many of the same challenges as other economic sectors, including concern about transfer of technology from the National Labs and the general sluggishness of the space economy. In addition, SRI reported that GRT is seen as a major factor in discouraging manufacturing companies from moving into the state, although the manufacturing tax credit does provide some relief. In addition, the lack of a skilled manufacturing worker base has frequently been cited by many companies as a reason not to move or expand in New Mexico.

Impact on State Revenue

The manufacturing sector’s impact on state revenue is heavily dependent on both the sector’s overall growth and its uses of the manufacturing tax credit and other tax credits. Evidence is mixed that the manufacturing sector is growing. Despite SRI’s finding that manufacturing has declined in recent years, the Department of Taxation and Revenue’s gross receipts figures show a significant increase. (This may be because of the phase-in of the apportionment credit against gross receipts.) Additional growth in the sector will, of course, increase GRT from manufacturing, which would help the state budget. But the lack of a trained workforce – which is, along with the GRT, the biggest brake on increased manufacturing in New Mexico – could limit future growth, which would in turn limit GRT and PIT from the manufacturing sector. At the same time, manufacturing makes heavy use of tax credits – and if the manufacturing sector grows, it is likely that use of this tax credit will grow as well, which would restrain the amount of net tax revenue the sector contributes.

Global Trade

New Mexico’s global trade is increasing rapidly compared to other states, in large part because of border-crossing improvements and industrial development at Santa Teresa, near El Paso and the Mexican border, which was expanded to take pressure off of El Paso. Anecdotally, this has attracted Taiwanese companies thanks to the efforts of state economic development leaders.

Albuquerque has the potential to be a center of logistics and warehousing and should be better connected to Santa Teresa.

Subsidies and Incentives

State and local officials continue to invest in facilities near the Santa Teresa border crossing to encourage reshoring and logistics. For example, Dona Ana County recently received a $1.1 million federal grant to engage in planning for an integrated logistics hub located at the border.

Several incentive programs are available for trade-related businesses but they are not heavily utilized. Trade-support companies located within 20 miles of the border can qualify for a GRT deduction, but so few companies took advantage of that incentive in 2021 that the state could not reliably release public data. An exemption from trip and weight taxes for trucks traveling within 10 miles of the border was more heavily used, costing the state $390,000 in 2021.

Prospects For Growth

SRI found that global trade in the Santa Teresa area is growing fast and this should/could be one of the leading growth sectors of the New Mexico economy, in part because of reshoring from China to Mexico. In 2019, New Mexico led the nation in export growth, with a 31% increase in volume, and exports to Mexico grew by 68% as a direct result of the expansion of industrial operations in Santa Teresa. SRI found that between 2010 and 2020 employment in this sector grew by 38%, and the population in this part of the state is growing faster than anywhere else in the state except in the Permian Basin.

Impact on State Revenue

Continued rapid growth in global trade should provide some benefit to state revenue. The sector is growing rapidly and the average wage is close to $60,000 per year. However, two-thirds of the employment is in warehousing and storage, which tend to produce relatively few jobs.

Sustainable & Green Energy

Although New Mexico's energy sector is best known for oil and gas, the potential for sustainable and green energy is considerable. The state has abundant wind and solar resources. SRI found that sustainable and green energy employment grew by 9.1% between 2010 and 2020. In addition, it is telling that New Mexico's first billionaire, Ron Corio, comes from the Sustainable & Green Energy Sector. His company, Array Technologies, controls 30% of the solar tracker market in the United States.

Subsidies and Incentives

Perhaps most important, the state itself has made a commitment that all electricity generation in the state must come from renewable sources by 2045. (Transitional goals are 40% by 2025 and

80% by 2040.) This “Renewable Portfolio Standard” will push the state’s electrical utilities toward green energy.

In addition, however, the state has several tax credits that apply to the sustainable and green energy sector, including most significantly the Renewable Energy Production Tax Credit, which provides a CIT and PIT credit for producing green energy. At $36 million in 2021, this is one of the three most popular tax incentives in the state, along with film and manufacturing. PFM’s 2020 report highlighted this sector and suggested that New Mexico should consider a refundable tax credit.

Prospects For Growth

Growth potential is considerable. But the biggest obstacle is a lack of transmission infrastructure for alternative energy. It is estimated that creating the necessary transmission infrastructure for sustainable and green energy will cost between $9 billion and $11 billion, though even with that investment, land available for transmission is limited due to the large amount of federal land ownership in the state. SunZia Transmission, the first major alternative energy transmission investment, will connect New Mexico to Arizona, thus opening up the possibility of moving alternative energy to the Southern California market. California’s renewable portfolio standard requires 60% of energy to come from alternative sources by 2030 and 100% by 2045.

Energy is one of the three industries for which EDD has already created an industry council.

Impact on State Revenue

The construction of alternative energy facilities and transmission lines is likely to create a significant number of well-paying jobs, thus assisting the state’s strategy of increasing PIT with high-wage jobs, at least in the short-term. In the long term, however, alternative energy is not likely to create a large number of jobs throwing off PIT.

Appendix E: Additional Economic and Demographic Information

In 2021 dollars, New Mexico’s median household income is the fourth lowest in the country at $53,463, higher only than Arkansas, Mississippi, and West Virginia. New Mexico significantly trails the United States median household income of $70,784.[171]

According to the United States Census Bureau’s Small Area Income and Poverty Estimates (SAIPE), New Mexico ranked third in the country (including the District of Columbia) for the percentage of the population in poverty using 2020 data. New Mexico’s population has 16.8 percent of residents in poverty, nearly five percentage points above the United States as a whole, at 11.9 percent in poverty.

[171] Data accessed at https://fred.stlouisfed.org/release/tables?rid=249&eid=259462&od=#

New Mexico also faces the dual challenges of having one of the highest unemployment rates and one of the lowest rates of labor participation in the country. According to the Bureau of Labor Statistics, the preliminary unemployment rate for the civilian labor force was the fifth highest in the country at 4.7 percent in July 2022.[172] While the rate was the highest in the country a year prior in July 2021 at 7.9 percent, due in large part because of the pandemic and its continued effects on the economy and labor force, New Mexico is still lagging the country. New Mexico also has a labor force participation rate that is dropping, with the July 2022 rate released by the Federal Reserve Bank of St. Louis showing New Mexico to have the third lowest labor participation rate in the country at 56.3 percent, down from 57.2 percent in July 2021.

New Mexico has also begun to lag other states for the percentage of residents 25 years and older who have completed college. Using the 2020 5-year estimate for college completion, New Mexico ranks 42nd in the country at 28.1 percent.

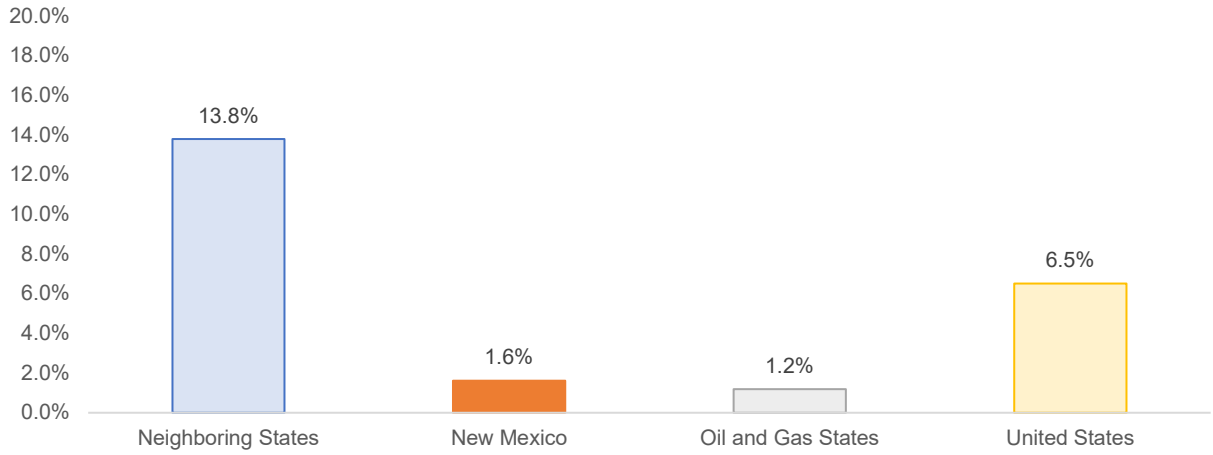
Many of these findings speak for themselves. To provide additional context, PFM also analyzed several of New Mexico's key demographic and economic markers across three sets of comparators – the United States as a whole; the neighboring states, comprised of Arizona, Colorado, Oklahoma, Texas, and Utah; and states where there is a noteworthy presence of the oil and gas industry, comprised of Alaska, Louisiana, and Wyoming.

The United States Census Bureau's American Community Survey (ACS) released 2021 1-year estimates in September 2022, resuming the 1-year data series following the 2020 data release that saw only 5-year estimates released due to the COVID-19 pandemic.[173] This benchmarking uses ACS data to provide both a snapshot of 2021 data and a comparison to a decade ago in 2011, along with other government sources for additional comparisons. The comparison group used to analyze the data consists of New Mexico, the United States as a whole, the average for neighboring states of New Mexico, and the average for states considered "oil and gas" states.

New Mexico's population in 2021 is estimated at 2,115,877 people, an increase of 1.6 percent since 2011. All states in the comparison group saw increases, but only Alaska and Louisiana saw lower growth in that time span, with a median increase for all comparison states of 5.1 percent. Four of the five states that neighbor New Mexico saw increases between 12 percent and 19 percent, while the total population of the United States experienced a 6.5 percent population increase between 2011 and 2021. New Mexico saw population growth in line with the average of the oil and gas states comparison group as opposed to its regional neighbors.

[172] Data accessed at https://www.bls.gov/news.release/laus.t02.htm, which provides non-seasonally adjusted data
[173] "Census Bureau Announces Changes for 2020 American Community Survey 1-Year Estimates," U.S. Census Bureau, 29 July 2021, accessed at https://www.census.gov/newsroom/press-releases/2021/changes-2020-acs-1-year.html

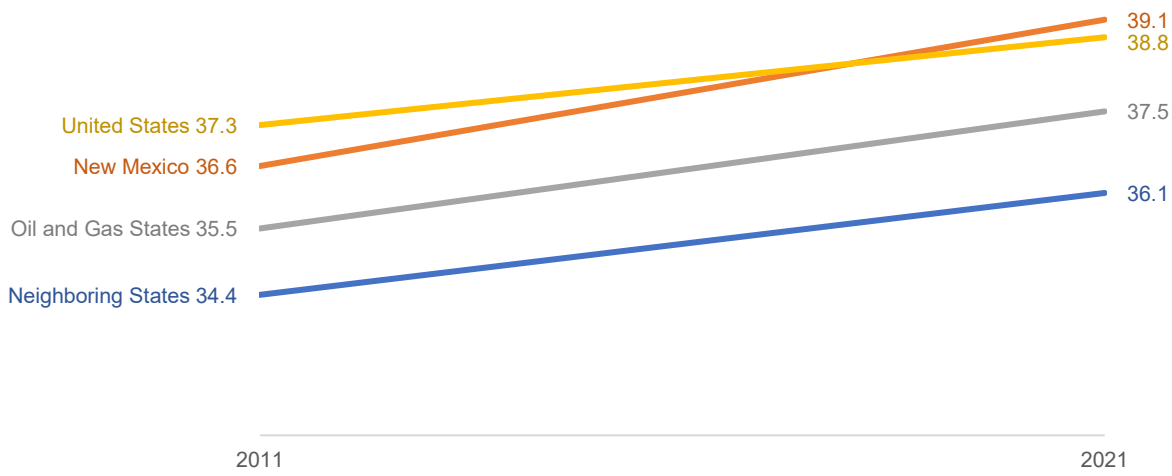
Population Increase, 2011 to 2021



Source: American Community Survey 1-year estimates

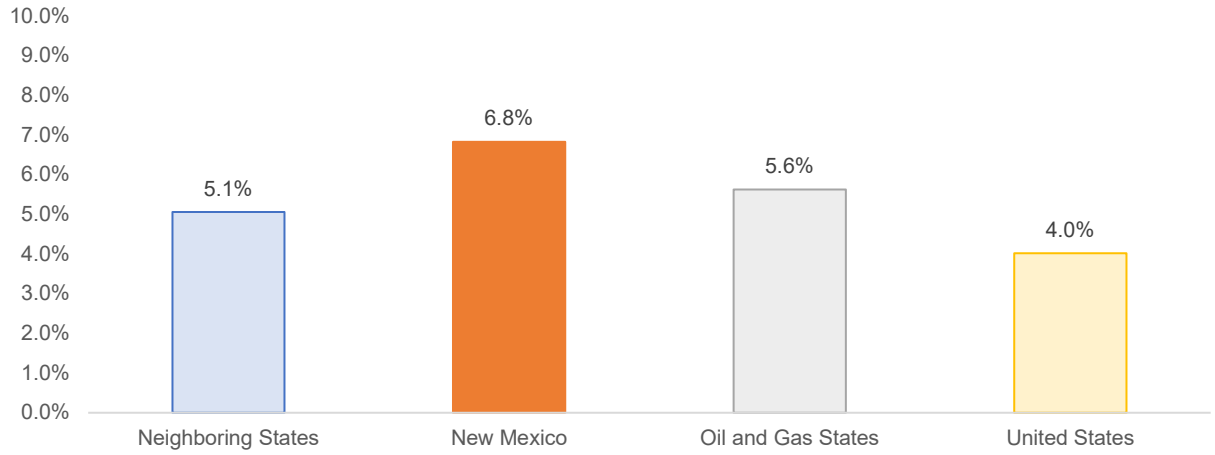
While the United States and all states included in the comparison group saw an increase to the population's median age in the past decade, New Mexico ranked first for highest median age in 2021 at 39.1 years old and second in the percent increase between 2011 and 2021 at 6.8 percent. While the median age for New Mexico in 2021 is not significantly higher than median age of the United States population, it is three years older than the average for the neighboring states.

Median Age, 2011 to 2021



Source: American Community Survey 1-year estimates

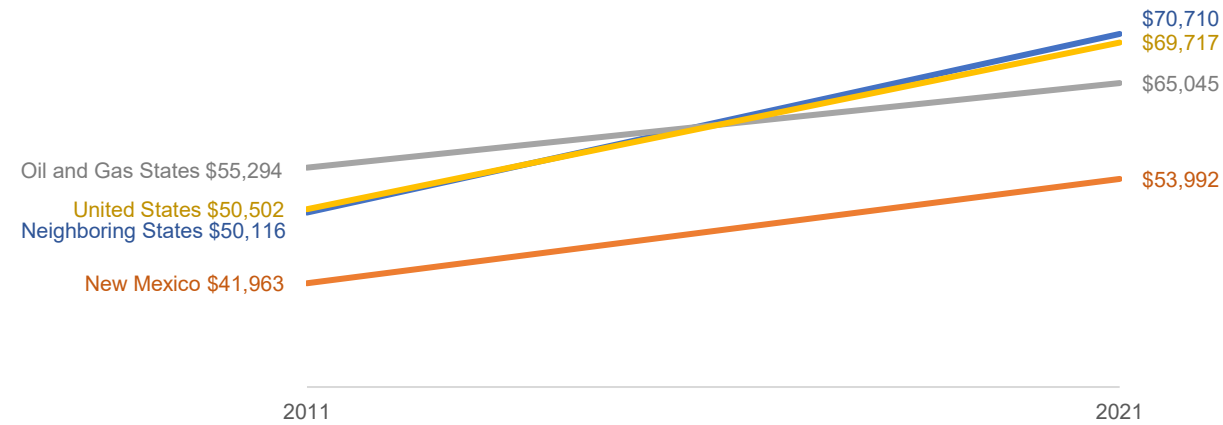
Median Age Percent Increase, 2011 to 2021



Source: American Community Survey 1-year estimates

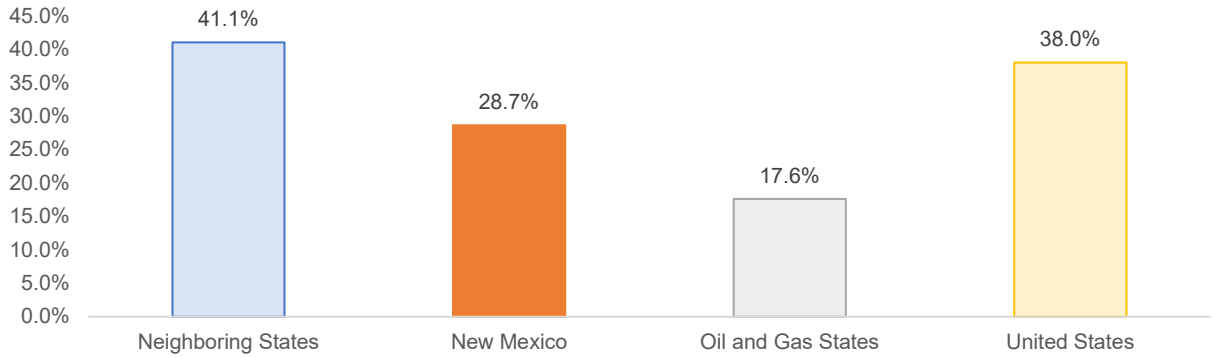
New Mexico also lags most states in the comparison group and the United States for median household income – at $41,963 in 2011 and $53,992 in 2021, only Louisiana had a lower median household income for both of those years. While the average household median income for the neighboring states nearly matched the United States average, New Mexico's saw a smaller increase compared to the neighboring states and remained well below the average of all comparator groups.

Household Median Income, 2011 to 2021



Source: American Community Survey 1-year estimates

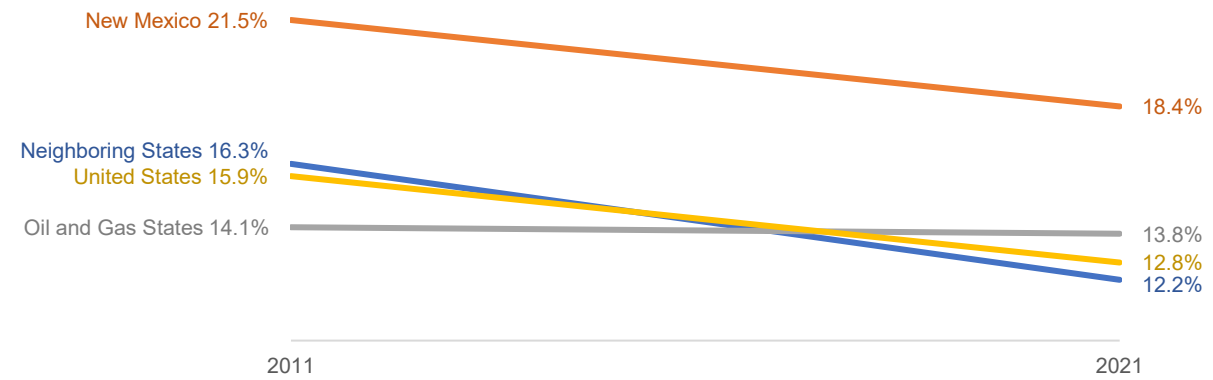
Household Median Income Percent Increase, 2011 to 2021



Source: American Community Survey 1-year estimates

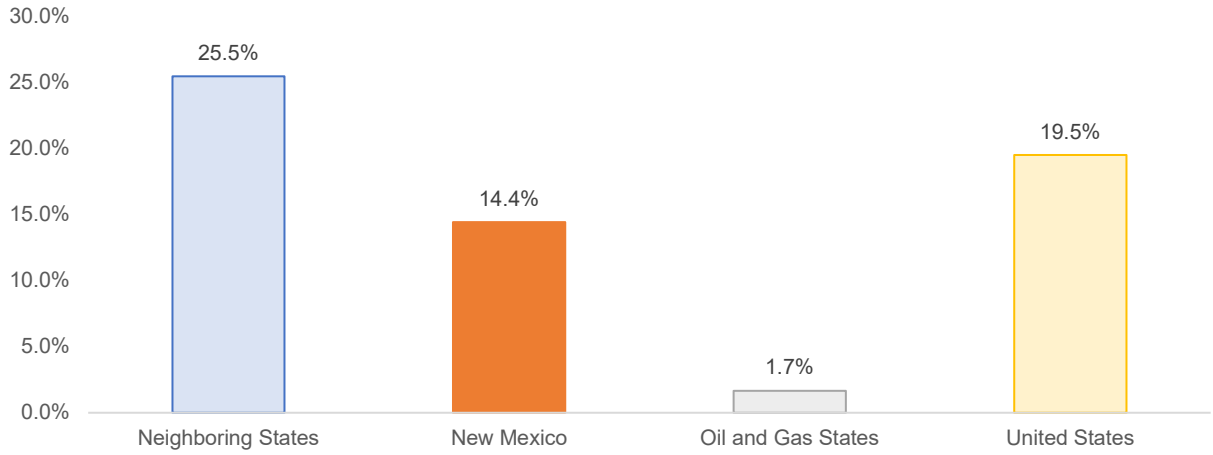
Compared to all 50 states, New Mexico had the second highest number of residents classified by the American Community Survey as in poverty at 18.4 percent in 2021, lower than only Louisiana. However, the state saw a greater reduction in poverty than the oil and gas states in the comparison group – the poverty rate decreased by 3.1 percentage points from 2011 to 2021 compared to the oil and gas states' decrease of 0.3 percentage points. Wyoming was the only state that saw an increase, albeit a small one, while Alaska saw no change and Louisiana saw a slight decrease. In the comparison group of the United States, neighboring states, and oil and gas states, New Mexico has the highest percentage of residents in poverty.

Poverty Status, 2011 to 2021



Source: American Community Survey 1-year estimates

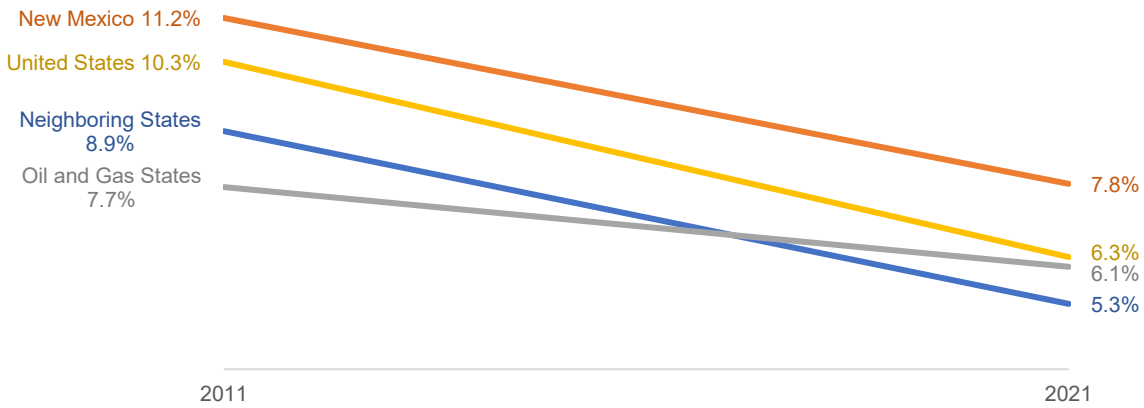
Reduction in Poverty Status Percent Change, 2011 to 2021



Source: American Community Survey 1-year estimates

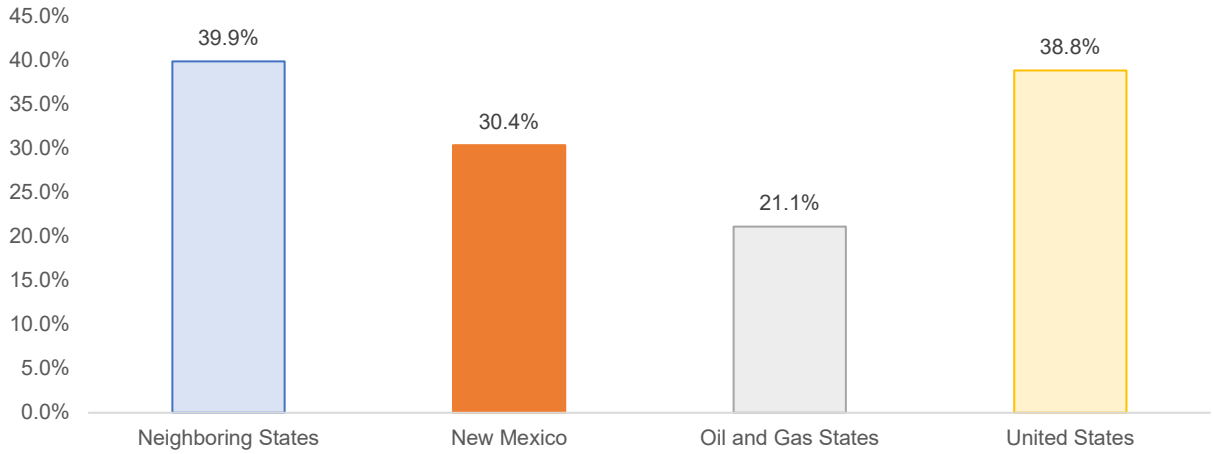
For the civilian labor force unemployment rate, while all benchmarked groups experienced a decrease from 2011, when the country was still facing challenges related to the Great Recession, New Mexico still had the highest unemployment rate in both 2011 and 2021 at 11.2 percent and 7.8 percent, respectively. The state saw a larger percent decrease than the average of both the oil and gas states and the neighboring states but remained above the unemployment rate for the country by 1.5 percentage points.

Civilian Labor Force Unemployment Rate, 2011 to 2021



Source: American Community Survey 1-year estimates

Reduction in Unemployment Rate Percent Change, 2011 to 2021

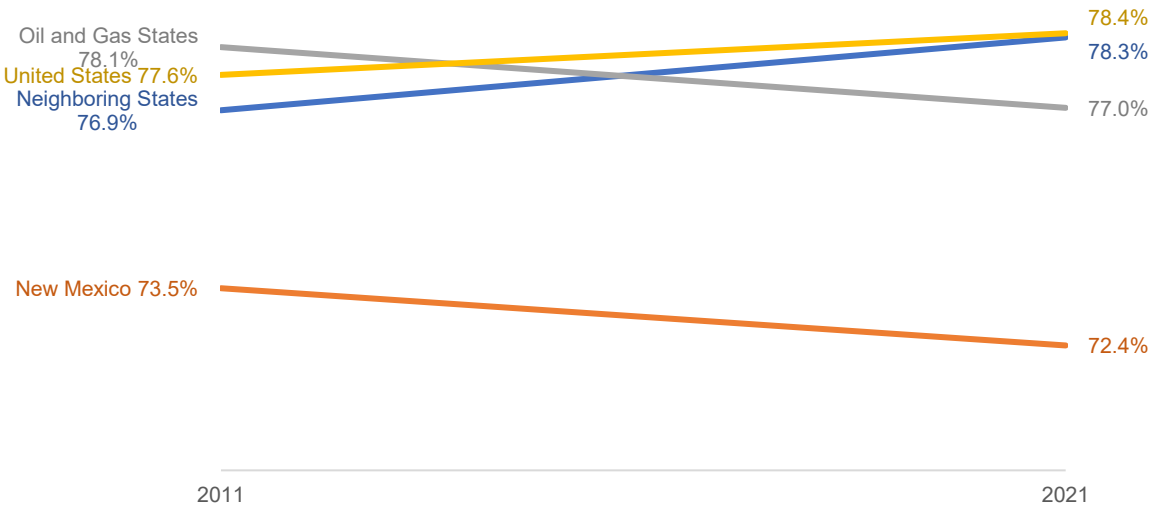


Source: American Community Survey 1-year estimates

Data from August 2022 from the Bureau of Labor Statistics shows that while there has been an improvement from July 2021 to July 2022 – 7.9 percent down to 4.7 percent – New Mexico still has the fifth highest unemployment rate in the country (including the District of Columbia) and the highest in the comparison group, as well remaining one percentage point above the national unemployment rate.

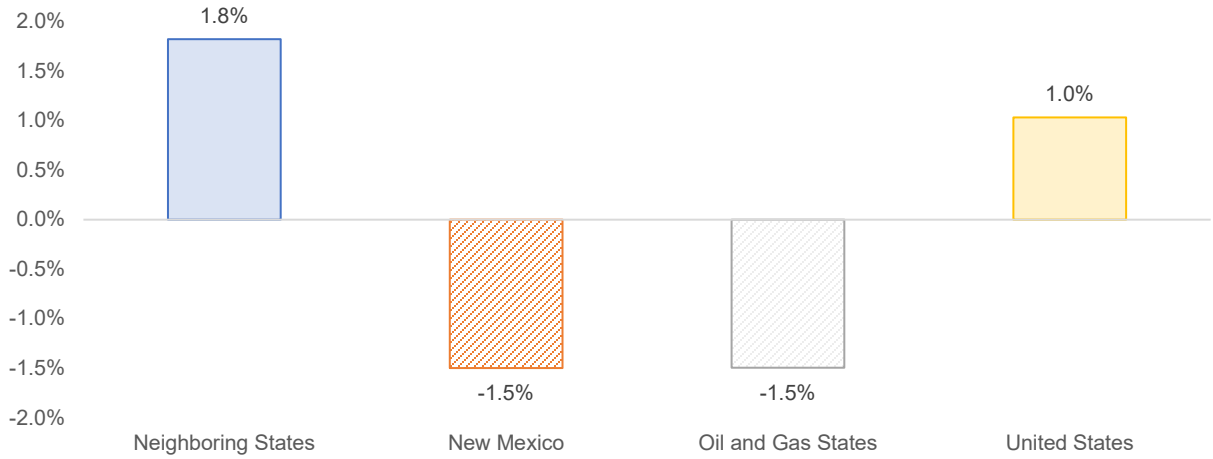
New Mexico has also faced challenges related to a labor force participation rate that is well below the comparison states, ranking the lowest in the group for 2021. Labor force participation is calculated for the population between 25 and 64 years old. New Mexico and the oil and gas states comparison group were the only comparators to have a decrease in the labor force participation rate from 2011 to 2021, with both decreasing by 1.5 percent.

Labor Force Participation Rate (25 to 64 years of age), 2011 to 2021



Source: American Community Survey 1-year estimates

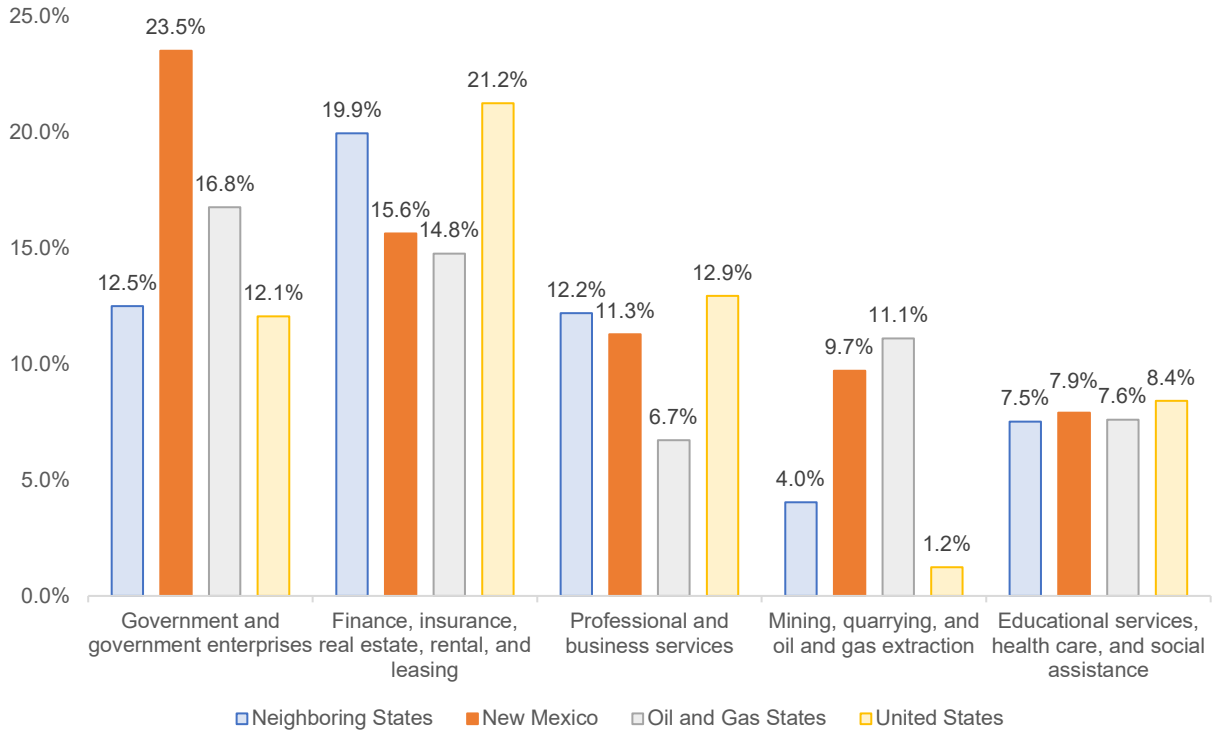
Labor Force Participation Rate (25 to 64 years of age) Percent Increase, 2011 to 2021



Source: American Community Survey 1-year estimates

PFM also examined key contributors to gross domestic product for the state for 2021. New Mexico's five largest industry contributors to GDP are government and government enterprises; finance, insurance, real estate, rental, and leasing; professional and business services; mining, quarrying, and oil and gas extraction; and educational services, health care, and social assistance. These industries comprise almost 70 percent of the state's GDP in 2021. New Mexico exceeds its neighbors, other oil and gas states, and the United States for government and government enterprises as a share of the state's GDP. Like other oil and gas states, a large proportion of New Mexico's GDP comes from mining, quarrying, and oil and gas extraction – over eight times as much as the United States as a whole.

Gross Domestic Product by Industry Share, 2021



And that sector can provide higher than average wages. In the Bureau of Labor Statistics Occupation Employment and Wage Statistics (OEWS) May 2021 Survey, data is provided by states, sectors, and occupations, for employment levels and average and median wages. Data is available as a “research estimate” for individual sectors by state as a supplement to the wider release.

The follow comparisons use the research estimate for occupations in the Mining, Quarrying, and Oil and Gas Extraction sector as defined by the North American Industry Classification System (NAICS), and compares New Mexico’s employment data in those occupations to the United States as a whole.

In nine of the 12 occupation categories analyzed, New Mexico oil and gas sector occupations have the highest annual median wage as compared to all sectors in New Mexico and for the United States as a whole.

May 2021 Annual Median Wages by Occupation

Occupations	United States	New Mexico	New Mexico Oil and Gas Sector	New Mexico Oil and Gas Rank
Building/Grounds Cleaning and Maintenance	$30,240	$27,950	$23,010	3
Office/Administrative Support	$38,050	$36,750	$45,850	1
Construction/Extraction	$48,210	$44,980	$47,800	2
Transportation/Material Moving	$36,860	$30,830	$48,250	1
Installation/Maintenance/Repair	$47,940	$46,450	$61,730	1
Production	$37,710	$37,150	$61,810	1
Sales and Related	$30,600	$29,010	$76,600	1
Computer/Mathematical	$97,540	$77,150	$77,680	2
Life/Physical/Social Science	$72,740	$74,370	$80,100	1
Business/Financial Operations	$76,570	$62,830	$80,630	1
Architecture/Engineering	$79,840	$97,090	$99,040	1
Management	$102,450	$95,040	$126,440	1

Source: Bureau of Labor Statistics Occupational Employment and Wage Statistics

Appendix F: Acknowledging the Perils of a Long-Term Reliance on Fossil Fuels

A baseline scenario by the International Monetary Fund is supported by the United States Energy Information Administration's (EIA) Annual Energy Outlook released in 2022. The purpose of the Annual Energy Outlook is to examine long-term trends for the energy sector, with projections for consumption and production in the United States provided through 2050. Critically, for energy consumption, key points from the baseline scenario projections include the following:[174]

- Petroleum and natural gas remain the most-consumed sources of energy in the United States through 2050, but renewable energy is the fastest growing.
- Motor gasoline remains the most prevalent transportation fuel despite electric vehicles gaining market share.
- Energy-related carbon dioxide (CO2) emissions dip through 2035 before climbing later in the projection years.

[174] "Annual Energy Outlook 2022 with projections to 2050," U.S. Energy Information Administration, March 2022, accessed at https://www.eia.gov/outlooks/aeo/pdf/AEO2022_Narrative.pdf

- Energy consumption increases through 2050 as population and economic growth outweighs efficiency gains.

- Electricity continues to be the fastest-growing energy source in buildings, with renewables and natural gas providing most of the incremental electricity supply.

- Additionally, on the production side, EIA finds that over the projection period: [175] U.S. crude oil production reaches record highs, while natural gas production is increasingly driven by natural gas exports.

- U.S. production of natural gas and petroleum and other liquids rises amid growing demand for exports and industrial uses.

- Driven by rising prices, U.S. crude oil production in the baseline scenario returns to pre-pandemic levels in 2023 and stabilizes over the long term.

- Refinery closures lower domestic crude oil distillation operating capacity, but refinery utilization rates remain flat over the long term.[176]

Concerns that the State is "Doubling Down" on the Recent Permian Basin Boom

New Mexico's underlying geology and high percentage of federally and state-owned land are key factors in the significance of its oil and gas industries within the state and its economy. The United States Energy Information Administration provides an overview of the recent success of New Mexico's crude oil production:

In 2021, New Mexico became the nation's second-largest crude oil-producing state, after Texas, when it surpassed North Dakota's production. New Mexico has about 9% of U.S. total proved crude oil reserves and has the second-largest number of federal leases and the largest number of producing oil and gas wells on federal lands. The state accounted for more than 11% of total U.S. crude oil production in 2021. New Mexico's crude oil production was steady for several decades, but it increased significantly during the past 10 years, including in 2020 when most oil-producing states experienced production declines because of lower petroleum demand and crude oil prices during the COVID-19 pandemic. In 2021, annual production reached an all-time high of about 460 million barrels, more than five times greater than it was in 2012. [177]

The EIA also discusses the state's internal refining capacity – one crude oil refinery remains in New Mexico following the closure of another facility in 2020 – which mainly processes crude oil from the Permian Basin. As noted earlier, the Permian Basin is an oil basin that straddles New

[175] Ibid.
[176] Ibid.
[177] "New Mexico State Energy Profile," U.S. Energy Information Administration, 21 April 2022, accessed at https://www.eia.gov/state/print.php?sid=NM#:~:text=In%202021%2C%20New%20Mexico%20became,U.S.%20proved%20natural%20gas%20reserves.

Mexico and Texas, with a majority of the land area of the basin located in Texas. Production in the Permian Basin is highly profitable and a major driver of in-state oil production and thus New Mexico State revenue:

Most of New Mexico's crude oil production comes from the Permian Basin, which is located in eastern New Mexico and western Texas. The Permian Basin is one of the most prolific crude oil-producing areas in the nation and the world. Advanced drilling and oil recovery technologies have increased production from the Basin's low-permeability shale formations. New Mexico's crude oil production exceeded 1 million barrels per day for the first time in 2020 and rose above 1.2 million barrels per day in 2021. Pipeline operators have accommodated New Mexico's increased crude oil production with pipeline expansions and new construction.

The EIA's overview of natural gas in New Mexico provides a similarly positive assessment of production:

New Mexico is among the top 10 natural gas producers in the nation and has abundant natural gas deposits in the northwestern and southeastern parts of the state. Almost 6% of U.S. proved natural gas reserves are in New Mexico. In 2021, the state's natural gas withdrawals exceeded 2 trillion cubic feet for the first time, and New Mexico accounted for 6% of the nation's total natural gas production.

The EIA also notes that "almost three times as much natural gas leaves the state as enters it," with most going to Arizona and Texas.

The Permian Basin has produced oil and natural gas for about a century over an area of 55 counties in West Texas and New Mexico, with a major uptick in production since 2010. The four New Mexico counties that contain oil production provide 90 percent of the state's supply, and the full region, including Texas, has risen in relative significance to become a major supplier of oil and natural gas for the United States.

A primary reason for the resurgence of production in the Permian Basin since 2010 is the advent and increased use of horizontal drilling, otherwise known as hydraulic fracturing or "fracking," which has allowed access to vast reserves of oil and natural gas. As part of an assessment on national oil reserves, the United States Department of the Interior announced in 2018 that "the Wolfcamp Shale and overlying Bone Spring Formation in the Delaware Basin portion of Texas and New Mexico's Permian Basin province contain an estimated mean of 46.3 billion barrels of oil, 281 trillion cubic feet of natural gas, and 20 billion barrels of natural gas liquids," according to an assessment by the U.S. Geological Survey (USGS). This estimate is for continuous (unconventional) oil, and consists of "undiscovered, technically recoverable resources" and was deemed the "largest oil and gas assessments ever released" by the Director of the United States Geological Survey.[178]

[178] "USGS Identifies Largest Continuous Oil and Gas Resource Potential Ever," U.S. Geological Survey, 28 November 2018, accessed at https://www.usgs.gov/news/national-news-release/usgs-announces-largest-continuous-oil-assessment-texas-and-new-mexico