TAXPAYERS for COMMON SENSE

O&G REPORT

August 2023

Losing on Leasing II:

Oil and Gas Development on Federal Lands Costs Colorado

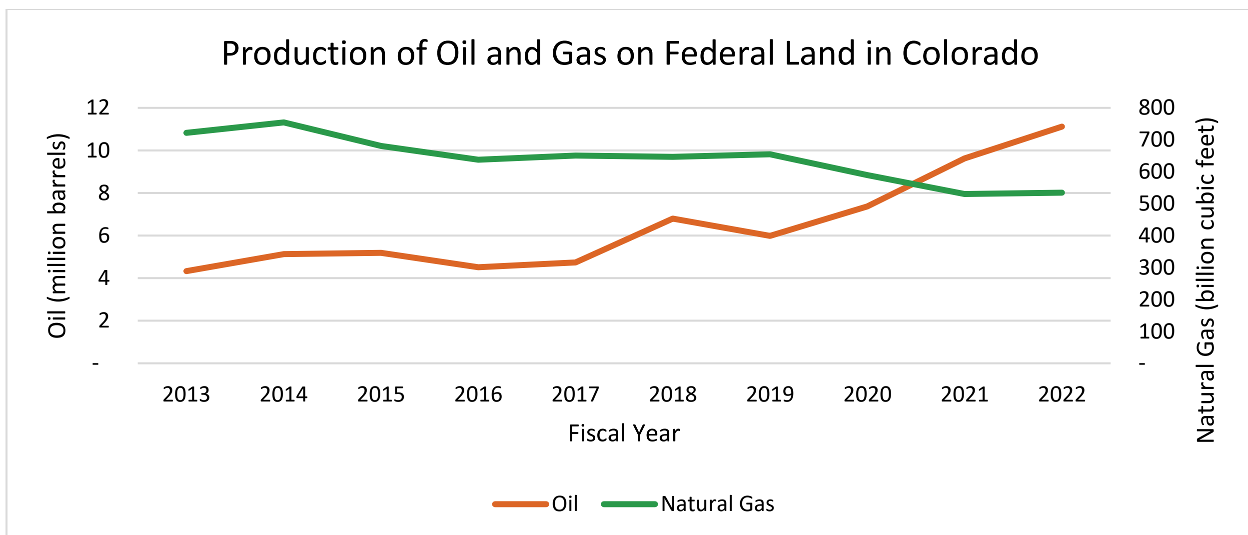
Federal taxpayers own vast amounts of land across the United States and the resources contained within them. The Bureau of Land Management (BLM), under the Department of the Interior (DOI), oversees one in every 10 acres of land in the United States (245 million acres) and approximately 30% of the nation's minerals (700 million acres).[1]

The federal government is mandated to protect the value of these resources and ensure taxpayers a fair return for their use, but current federal policies fail to achieve this goal. Outdated leasing terms, including the onshore royalty rate and rental rate, have lost taxpayers $838 million in Colorado over the last decade. Insufficient oil and gas bond requirements, which are meant to ensure the cost to clean up and plug wells on federal lands are paid for by operators, have instead left taxpayers with $371 million in potential reclamation liabilities in the state. Without reform, federal and Colorado taxpayers will continue to lose valuable revenue and shoulder the mounting liabilities from orphaned oil and gas wells.

[1] "What We Manage." Bureau of Land Management, n.d. https://www.blm.gov/about/what-we-manage.

Oil and Gas Production in Colorado

At the end of Fiscal Year (FY) 2022, BLM oversaw 3,103 active oil and gas leases in Colorado, covering 2.25 million acres of federal land across the state.[2] Between FY2013 and FY2022, Colorado was the country's 3rd largest producer of federal gas – behind New Mexico and Wyoming – and 6th largest producer of federal oil.[3] Over the past decade, Colorado produced 18.7% of all gas and 3.4% of all oil extracted on U.S. federal lands. While the state has seen a slight decrease in the production of gas on federal lands (-26%), oil production on federal land has increased by more than 1.5 times over the last ten years.



This production of oil and gas should have generated sizeable revenues for federal and Colorado taxpayers alike, since revenue for royalties and other leasing terms are shared with the state. However, outdated and below-market leasing terms have not only limited much-needed revenue for taxpayers, but have also allowed oil and gas operators to skirt the responsibilities of reclaiming (cleaning up) well sites after operations cease, leaving taxpayers to cover the costs.

The Federal Oil and Gas Program

The federal government possesses the opportunity to capture fair market value for taxpayers throughout the leasing process. Initially, DOI auctions leases to the highest bidder in a live auction, with the resulting revenue termed as "bonus bid" revenue. Following this, the federal government imposes rent on leaseholders for holding the land before production commences. Once leases begin to produce oil and gas, leaseholders are charged a fixed percentage of the

[2] "BLM Oil and Gas Statistics." Bureau of Land Management, n.d. https://www.blm.gov/programs-energy-and-minerals-oil-and-gas-oil-and-gas-statistics.
[3] "Natural Resources Revenue Data." US Department of the Interior, n.d. https://revenuedata.doi.gov/query-data/.

production's value, known as a royalty. Under the previous leasing system, which has only recently been updated, taxpayers lost valuable revenue at each stage of the process.

For decades, the federal government employed the same, below-market royalty rate, rental rate, and minimum bid for onshore oil and gas leases. The 12.5% royalty rate on federal lands was set by Congress as the legal minimum over 100 years ago, remaining unchanged until last year. This rate was significantly less than what is charged in federal waters (18.75%) or on many state lands (up to 25% in Texas, and typically 20% in Colorado). The previous rental rate for holding land not currently under development – $1.50/acre per year for years 1-5 of the lease and $2/acre per year after – and minimum bid – $2/acre – had remained unchanged for decades before being updated last year.

After production ends, oil and natural gas producers operating on federal land are required to plug their wells and clean up the surrounding sites. To guarantee that the cleanup of these potentially hazardous and environmentally harmful sites is paid for, producers must post a bond before they start drilling. If a company abandons its wells on a federal lease or goes bankrupt, the bond is intended to cover the reclamation expenses. However, for leases on federal land, the required bond amounts have not changed in over 60 years and do not cover the full cost of cleanup. Consequently, taxpayers are left paying millions of dollars to reclaim thousands of abandoned wells scattered across federal lands.

Proposals for Reform

Until last year, the fiscal terms related to leasing remained unchanged for decades. However, over time, various legislative proposals were made to modernize these terms and enhance financial returns for taxpayers. Senators Michael Bennet (D-CO) and John Hickenlooper (D-CO) both introduced legislation aimed at modernizing and upgrading the federal leasing program, and many of the provisions from their initiatives have been codified, either as part of the FY2022 budget reconciliation bill or through regulations proposed by the Department of the Interior (DOI).

Senator Bennet introduced the "Oil and Gas Bonding Reform and Orphaned Well Remediation Act" in June 2021. This would have abolished nationwide bonds and increased the individual lease bond minimum from $10,000 to $150,000 and the statewide lease bond minimum from $25,000 to $500,000.[4]

The "Competitive Onshore Mineral Policy via Eliminating Taxpayer-Enabled Speculation Act" was introduced in October 2021 by Senator Hickenlooper to end noncompetitive leasing. This

[4] Sen. Bennet previously introduced the "Oil and Gas Bonding Reform and Orphaned Well Remediation Act" in September 2020. That proposed bill, S.4642, would have increased the bond minimum for an individual lease to $75,000 and the bond minimum for a statewide lease to $200,000.

practice permits entities to lease federal land that was not sold in a previous competitive auction without meeting the $2 per acre minimum bid. It adversely affects taxpayers by reducing revenue from bonus bids and incentivizing speculation, thus hindering the productive use of valuable federal land. A Government Accountability Office (GAO) analysis of federal oil and gas leases from FY2003 to FY2009 revealed that noncompetitive leases constituted about 38% of all leased acreage but only generated 11% of the revenue.[5] Moreover, only 1.2% of these leases went into production during this period.[6]

Recent Reforms to Fiscal Terms

Recent legislation addressed many of these outdated and below-market fiscal terms, heralding a new era of financial returns for taxpayers. The FY2022 budget reconciliation bill, signed into law in August 2022, included several critical updates to oil and gas leasing rates for the next decade.

Under the new reforms, until August 2032, the federal onshore royalty rate will be 16.67%; rental rates are raised to $3/acre for the first two years, $5/acre for years three to eight, and then no less than $15/acre for years nine and ten; and the minimum bid has been raised to $10/acre. After August 2032, these rates will become the statutory minimum and the rental rates and minimum bids are subject to inflation adjustments. The bill also included language proposed by Sen. Hickenlooper to end the practice of noncompetitive leasing and created a new expression of interest fee for entities nominating federal land for competitive lease sales, two important measures for helping to limit speculative leasing.

While these changes represent a significant step toward fair returns for federal oil and gas resources, current system shortcomings persist, as seen in the below-market royalty rate and policies that permit producers to waste taxpayer-owned natural gas without adequate compensation. Moreover, the existing bonding requirements expose taxpayers to vast reclamation expenses.

DOI's current plans include additional updates to rules and policies to further secure fair returns. In late July, DOI released a proposed rule that would codify reforms made by Congress in the FY2022 budget reconciliation bill, as well as other recommendations from the Department of the Interior’s Report on the Federal Oil and Gas Leasing Program. In tandem with fiscal revisions, the proposed rule would increase the minimum lease bond amounts to levels in line with Sen. Bennet’s bill: raising the minimum lease bond amount to $150,000 and the minimum statewide bond to $500,000, and eliminating nationwide and unit bonds. The rule would also direct oil and gas leasing away from sensitive areas. These continued efforts aim to enhance taxpayer returns,

[5] “Oil and Gas: Onshore Competitive and Noncompetitive Lease Revenues,” Government Accountability Office, November 2020. https://www.gao.gov/products/gao-21-138
[6] Ibid.

protect taxpayers from shouldering the oil and gas industry's liabilities, and potentially further reduce speculative leasing.

In the proposed rule, DOI outlines the minimum royalty rate past the 10-year IRA window at 16.67% even though DOI has previously set higher rates. In June 2022, DOI held an oil and gas lease sale that included a royalty rate of 18.75% specific to those leases. After August 16, 2032, DOI could elevate the royalty rate, thereby better capturing fair returns on federal lands.

Additional agency rulemakings on the horizon will contribute to assuring taxpayers a fair return on valuable oil and gas resources, such as improving the capture and royalty collection of vented and flared methane from federal wells.

Revenue Losses from Onshore Leasing Terms

While recent actions have helped bring the federal onshore oil and gas leasing system into the 21st century, they are still inadequate at protecting taxpayers and ensuring a fair return from the sale of taxpayer-owned resources. Taxpayers have lost millions of dollars and, without permanent reform, may continue to lose millions more from outdated and below-market royalty rates and rental rates. Current federal policies on lost gas and bonding benefit the oil and gas industry at the expense of taxpayers, burdening the nation with growing long-term liabilities.

Royalty Rate

Between FY2013 and FY2022, oil and gas producers were charged a royalty rate of 12.5% for oil and gas extracted on federal lands in Colorado. This is far below what the federal government charges in federal waters (18.75%) and what Colorado charges on state land (16.67% until August 2017, 20% after). Over the past decade, the Office of Natural Resources Revenue (ONRR) collected $1.6 billion in royalties from the sale of oil, gas, and natural gas liquids in Colorado.[7] Natural gas accounted for more than half of this revenue ($938 million), followed by oil ($471 million) and natural gas liquids ($214 million).

[7] "Natural Resources Revenue Data." US Department of the Interior, n.d. https://revenuedata.doi.gov/query-data/.

20% Royalty Rate on Colorado State Land

In Colorado, like many other states, the royalty rate imposed on oil and gas production on state land is far higher than what is charged on federal lands. In May 2011, the Colorado State Land Board – the agency responsible for managing production on state trust lands – raised the state royalty rate from 12.5% to 16.67%. As a result, Colorado state officials reported seeing "no slowdown in interest in new leases as of August 2016," according to an interview with the Government Accountability Office (GAO).

This rate was raised again in February 2016 – but not implemented until August 2017 – with initial leases offered at a 20% royalty rate and unsold parcels available at the next auction under a 18.75% royalty rate. Early evidence suggests that the updated royalty rate has not had a negative impact on leasing nor on production. Colorado has held 21 lease sales on state land since the 20% royalty rate was implemented and leased 602 tracts of state land for oil and gas development. Only 7% of leased tracts have been sold at the lower, 18.75% rate. Royalty revenue from oil and gas production on state lands has also increased since implementation of the new royalty rate.

Source: Government Accountability Office [8] and Colorado State Land Board [9] [10]

Had the current onshore royalty rate of 16.67% been applied to this same level of production, taxpayers would have received $541 million more in revenue over the last decade.[11] If a royalty rate more in line with what is charged in federal waters, 18.75%, had been applied over the last decade, taxpayers would have received $811 million more in revenue. And because this royalty rate is equal to or lower than what was charged on nearby state lands, effects on production would likely have been minimal.

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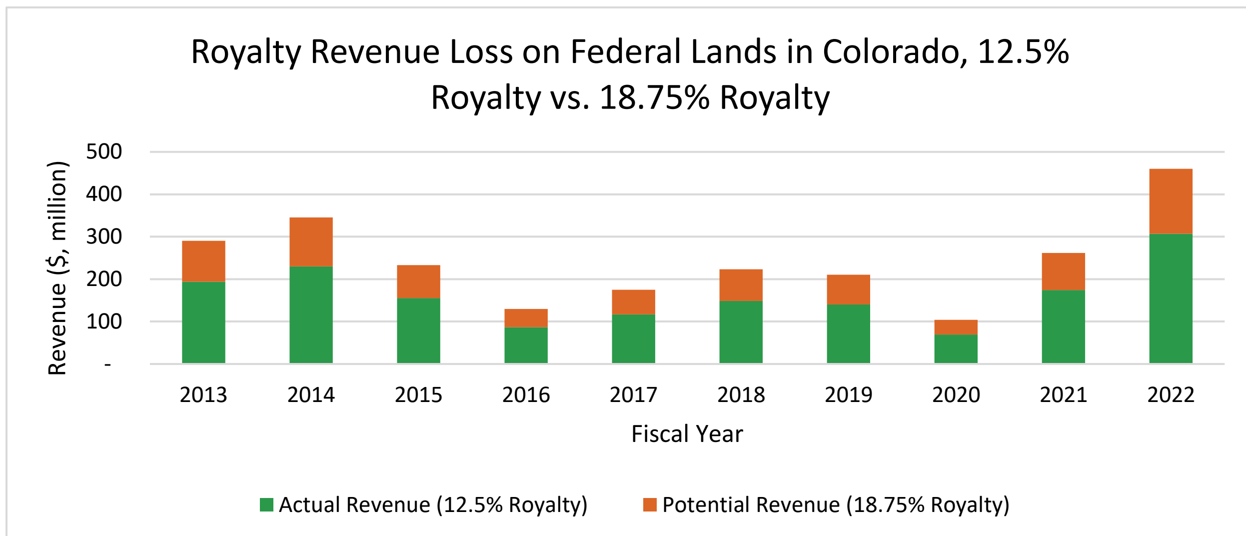
[8] "Oil, Gas, and Coal Royalties: Raising Federal Rates Could Decrease Production on Federal Lands but Increase Federal Revenue." Government Accountability Office, June 2017. https://www.gao.gov/assets/gao-17-540.pdf
[9] "Oil & Gas Auction Information and Results." Colorado State Land Board, May 18, 2023. https://docs.google.com/document/d/1A8yfmfXmcMtx802wRxktdSuzkFeCrF5tE9XT8ms3Qa0/edit,.
[10] "Colorado State Land Board Annual Reports." Colorado State Land Board, https://slb.colorado.gov/reports.
[11] Lost royalty and rental revenue estimates are calculated by TCS using ONNR data.



Rental Rate

The minimum rental rates – and frequently the rental rate applied to a lease – for federal oil and gas leasees over the last decade were $1.50/acre for the first 5 years of the lease and $2/acre for the second half of the lease term. These rates are far lower than what Colorado charges on state land – $2.50/acre for the life of the lease[12] – and had not been updated since 1987. Adjusted for inflation, the federal rental rates should have been $3.69/acre and $4.92/acre, respectively, in 2022.

The Office of Natural Resources Revenue (ONRR) collected $22.6 million in rental revenue from onshore oil and gas leases in Colorado that had not yet entered production. [13] By not adjusting for inflation, federal taxpayers lost out on $24.7 million in potential revenue from rental fees in Colorado FY2013-2022. [14] A new proposed rule at DOI would require that base rental rates be updated annually for inflation.

Federal Bonding Requirements

Over the past decade, oil and gas operators on federal lands in Colorado were subject to outdated and inadequate bonding requirements. Current federal rates are set at $10,000 for an operator's wells on an individual lease, $25,000 for all wells owned by an operator in one state, and $150,000 for all wells owned by an operator nationwide.

[12] "Oil & Gas." Colorado State Land Board, n.d. https://slb.colorado.gov/lease/oil-gas
[13] "Natural Resources Revenue Data." US Department of the Interior, n.d. https://revenuedata.doi.gov/query-data/.
[14] Lost royalty and rental revenue estimates are calculated by TCS using ONNR data.

Federal bonding requirements are far lower than the financial assurance requirements for oil and gas development on state land in Colorado. The Colorado Oil & Gas Conservation Commission (COGCC) requires financial assurances of between $1,500 and $18,000 per well, depending on both the number of wells and the level of production.[15] Where the Bureau of Land Management currently offers a state-wide bond at a minimum of $25,000, COGCC requires $40 million in financial assurances for statewide coverage. Additionally, COGCC has special financial assurance requirements for low producing wells and inactive wells, which have a high risk of abandonment.

The average federal bond value does not reflect the costs of reclaiming orphaned oil and gas wells. The GAO reported that the average value of bonds held by DOI in 2019 was a mere $2,122 per well.[16] But the COGCC estimates that the average cost to plug an orphaned well in Colorado is $52,141 per well.[17] The average cost to fully reclaim a drilling site with a well – including plugging the well, removing equipment, and performing environmental remediation – is much higher, at $92,710 per site.[18]

Taxpayers are already paying to reclaim orphaned wells; the Infrastructure, Investment and Jobs Act (IIJA) appropriated $250 million for reclaiming orphaned wells on federal lands. Without updating federal oil and gas bonding requirements, taxpayers will continue to be on the hook for current and future reclamation costs. At the end of FY2022, there were 7,427 producible wells on federal lands in Colorado.[19] Using the COGCC average cost to plug wells, these wells carry with them roughly $387 million in future reclamation costs. If we assume the average value of bonds on each of these wells is $2,122, as it was in 2019, DOI would only have $15.8 million in bonds from operators producing on federal lands in Colorado, leaving a potential shortfall of $371 million for taxpayers to cover.

Federal taxpayers are potentially on the hook for more, as the federal government often funds efforts to reclaim orphaned wells on state and private land as well. The IIJA appropriated close to $4.7 billion for orphaned well cleanup, $4.275 billion of which is earmarked for orphaned wells on state and private lands. Colorado received a $25 million Initial State Grant in 2022 to reclaim 140 identified orphaned wells. [20] However there are far more known orphaned wells across the state; as of September 22, 2022, COGCC has identified 494 orphaned well on 968 sites

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[15] "700 Series - Financial Assurance." Colorado Energy and Carbon Management Commission, April 30, 2022. https://ecmc.state.co.us/documents/reg/Rules/LATEST/700%20Series%20-%20Financial%20Assurance.pdf.
[16] "Oil and Gas: Bureau of Land Management Should Address Risks from Insufficient Bonds to Reclaim Wells." Government Accountability Office , September 18, 2019. https://www.gao.gov/products/gao-19-615
[17] "Orphaned Well Program FAQ." Colorado Oil and Gas Conservation Commission, September 22, 2022. https://cogcc.state.co.us/documents/OWE/2022%20OWP%20FAQ.pdf .
[18] ibid
[19] BLM Oil and Gas Statistics." Bureau of Land Management, n.d. https://www.blm.gov/programs-energy-and-minerals-oil-and-gas-oil-and-gas-statistics.
[20] "Through President Biden's Bipartisan Infrastructure Law, 24 States Set to Begin Plugging Over 10,000 Orphaned Wells." U.S. Department of the Interior, August 5, 2022. https://www.doi.gov/pressreleases/through-president-bidens-bipartisan-infrastructure-law-24-states-set-begin-plugging

in need of reclamation.[21] Other groups estimate the number of documented orphaned wells in Colorado to be as high as 1,800,[22] with even more undocumented ones yet to be found. COGCC anticipates receiving $10 million to $15 million annually from the IIJA over the next eight years.[23]

The taxpayer costs of reclamation could be much larger than the current inventory of documented and even undocumented orphaned wells. At of the end of 2022, Colorado had 49,900 active oil and gas wells on state land,[24] which, using the COGCC reclamation cost average of $52,141 per well, could leave future potential cleanup liability of $2.6 billion. While some of these wells will be plugged and reclaimed by responsible parties or state reclamation funds, any shortfall will likely be covered by federal taxpayers.

Royalty-Free Gas

Current federal policies allow oil and gas operators to release (vent) and burn (flare) taxpayer-owned natural gas, much of which is done without compensating taxpayers. Not only do wasteful venting and flaring practices limit taxpayer revenue, but they also keep valuable natural gas from interested consumers and contribute to the increasing taxpayer costs of climate change.

Venting and flaring natural gas, as well as accidental leakage, is fairly common during oil and gas development. Every year, oil and gas companies waste billions of cubic feet of natural gas extracted from federal lands. Not only do federal policies governing oil and gas development fail to prohibit this waste, but they also allow much of the lost gas to escape royalty-free.

Between FY2012-2021, oil and gas operators on federal land in Colorado reported losing 4 billion cubic feet of natural gas with an estimated value of $13.4 million.[25] However, ONNR collected a mere $33,600 in royalties – that would be the same as applying a less than 0.3% royalty rate on all reported lost gas.[26] If the royalty rate at the time, 12.5%, had been evenly imposed on all reported lost gas over the same period, taxpayers would have received $1.6 million more in royalty revenue. If the current royalty rate of 16.67% had been imposed,

[21] "Orphaned Well Program FAQ." Colorado Oil and Gas Conservation Commission , September 22, 2022. https://cogcc.state.co.us/documents/OWE/2022%20OWP%20FAQ.pdf.
[22] "Cross-Industry Partnership Drives Innovative Abandoned Well Clean up; Sen. Hickenlooper Tours Clean-up Site, Touts Unique Collaboration and IRA Support." Environmental Defense Fund, May 25, 2023. https://www.edf.org/sites/default/files/documents/News%20Release%20May%2025%20Abandoned%20Well%20Event.pdf .
[23] "Orphan Wells Mitigation Enterprise | About." Colorado Energy and Carbon Management Commission; https://cogcc.state.co.us/owe.html#/owe .
[24] "Active Well Count by County and Year Report." Colorado Oil and Gas Conservation Commission, August 2023. https://ecmc.state.co.us/documents/data/downloads/statistics/County/CountyActive.html.
[25] All information regarding methane emissions on federal lands was obtained through the Office of Natural Resources Revenue via a Freedom of Information Act Request by TCS. Gas value calculations used monthly average Henry Hub Natural Gas Spot Prices obtained from the Energy Information Administration. Source: htps://www.eia.gov/dnav/ng/hist/rngwhhdM.htm
[26] "Natural Resources Revenue Data." US Department of the Interior, n.d. https://revenuedata.doi.gov/query-data/.

taxpayers would have received $2.2 million more in revenue. And if a royalty rate more in line with what we charge in federal waters and on state land had been imposed, 18.75%, taxpayers would have received $2.5 million more in revenue.

Conclusion

At the end of FY2022, 2.3 million acres of federal land in Colorado were leased for oil and gas development. Taxpayers entrust the federal government to manage federal land in Colorado and across the country in a way that best preserves its value, gives taxpayers a fair return for the use of its resources, and protects taxpayers for long term fiscal and environmental liabilities associated with the use and development of federal resources. A decade of oil and gas leasing in Colorado demonstrates how the federal government has failed to uphold those values. Taxpayers have lost $838 million in potential revenue from outdated leasing terms that benefit the oil and gas industry at taxpayers' expense and may face costs of up to $371 million in potential future reclamation liability. Federal and Colorado taxpayers alike will benefit from common sense reforms to the federal onshore oil and gas leasing system.

Oil Well in Johnstown, CO | Maarten Heerlien