Legislative Council Staff
Nonpartisan Services for Colorado's Legislature

Memorandum

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TO: Interested Persons

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SUBJECT: Effective Severance Tax Rates on Oil and Natural Gas

Contents

Summary

This memorandum provides information concerning Colorado's severance tax structure and estimated effective severance tax rates, along with a comparison of effective rates for eight other western oil and gas producing states from 2018 to 2022.

Colorado's Oil & Natural Gas Severance Tax Structure

Colorado's statutory severance tax is imposed on the gross income of oil and gas producers based on the value of oil and natural gas severed, or removed, from the earth and sold.[1] Gross income is calculated from the value of oil and natural gas sold at the wellhead, or net of transportation, manufacturing, or processing costs if sold elsewhere.[2] Severance tax is imposed at a graduated rate depending on gross income. Statutory severance tax rates for oil and gas production are shown in Table 1.

[1] Section 39-29-105 (1)(b), C.R.S.

[2] Section 39-29-102 (3)(b), C.R.S.

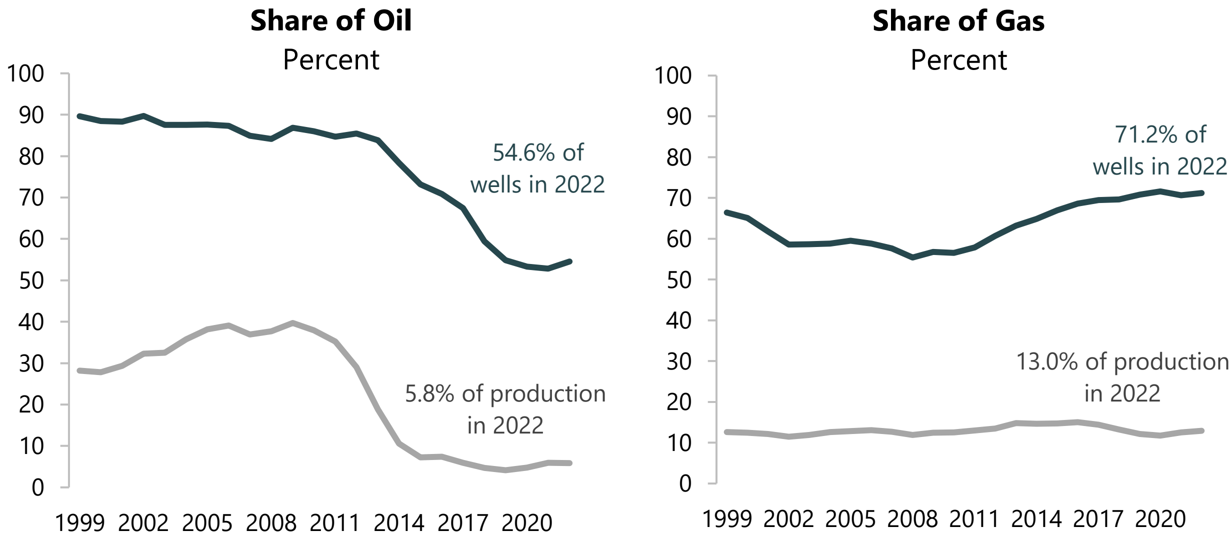
Table 1
Severance Tax Rates for Oil and Gas

Gross Income	Rate
Under $25,000	2.0%
$25,000 to $100,000	3.0%
$100,000 to $300,000	4.0%
$300,000 and over	5.0%

Stripper Well Exemption

Colorado law exempts oil and gas produced from small, low-producing wells, often referred to as the stripper well exemption.[3] The exemption applies to oil wells with an average daily production of less than 15 barrels per day and gas wells with an average daily production of less than 90,000 cubic feet, or 90 MCF. In 2022, stripper wells comprised less than 6 percent of the state's oil production and 13 percent of the state's gas production. While stripper wells account for a fairly steady supply of the state's natural gas, stripper wells have declined as a share of oil wells and production. In 1999, 89.6 percent of the state's oil wells were stripper wells, producing 28.2 percent of the state's oil. Figure 1 shows the number of oil and gas stripper wells and their share of production since 1999.

Figure 1
Stripper Wells and Production in Colorado



Source: Colorado Energy and Carbon Management Commission.

[3] For more information concerning the stripper well exemption, please reference the report from the Colorado Office of the State Auditor. https://leg.colorado.gov/sites/default/files/2020-te22_stripper_well_exemption.pdf

Assuming stripper wellhead prices were consistent with oil and gas sales prices at nonexempt wells, the state's stripper well exemption applied to an estimated 9 percent of Colorado's oil and gas production in 2022 (Table 2). The estimated share of exempt stripper well production has declined from an estimated high of around 21 percent in 2012 with the declining share of oil produced from stripper wells. Assuming ad valorem tax credits would represent the same share of gross severance tax liability as nonexempt wells, the value of the stripper well exemption was an estimated $26.7 million in 2022, and has averaged $17.8 million over the past ten years (Table 2). Taxpayers cannot claim the ad valorem credit, discussed below, on exempt stripper well production.

Table 2
Estimated Value of Stripper Well Exemption

Year	Net Tax Liability Nonexempt Production	Share of Exempt Production	Value of Exemption
2013	$197,077,279	16.8%	$39,759,993
2014	$258,927,136	12.5%	$37,082,409
2015	$23,268,339	10.8%	$2,808,951
2016	$45,952,977	11.2%	$5,782,184
2017	$129,429,438	9.8%	$14,092,862
2018	$186,766,223	7.8%	$15,867,056
2019	$75,363,974	6.9%	$5,574,139
2020	$16,076,348	7.8%	$1,352,350
2021	$305,490,155	8.7%	$29,119,609
2022	$268,969,602	9.0%	$26,686,058
Average	**$150,732,147**	**10.6%**	**$17,812,561**

Source: Colorado Department of Revenue; Colorado Legislative Council Staff.

Ad Valorem Tax Credits

Severance taxpayers are allowed to claim a credit against their severance tax liability. Through 2023, the credit was equal to 87.5 percent of the property taxes assessed or paid on oil and gas production.[4] For tax years 2024 to 2025, the ad valorem credit is reduced to 75 percent.[5] The credit is not refundable and can reduce severance tax liability to $0 for the year. Table 3 shows gross tax liability before the ad valorem credit and its impact on net tax liability from tax years 2013 to 2022.[6]

[4] Section 39-29-105 (2)(b)(I) C.R.S.

[5] Section 39-29-105 (2)(b)(II) C.R.S.

[6] For more information concerning the ad valorem tax credit, please reference the report from the Colorado Office of the State Auditor, https://leg.colorado.gov/publications/oil-and-gas-severance-tax-ad-valorem-credit

Table 3
Gross Severance Tax Liability, Ad Valorem Credit Claimed, and Net Tax Liability

Year	Gross Tax Liability	Ad Valorem Credit	Percent of Gross Liability	Net Tax Liability
2013	$388,121,572	$191,045,636	49.2%	$197,077,279
2014	$543,794,057	$284,876,842	52.4%	$258,927,136
2015	$325,109,120	$301,843,159	92.8%	$23,268,339
2016	$260,674,621	$214,726,300	82.4%	$45,952,977
2017	$378,724,058	$249,453,562	65.9%	$129,429,438
2018	$561,575,341	$374,857,974	66.8%	$186,766,223
2019	$506,117,578	$430,785,163	85.1%	$75,363,974
2020	$281,857,637	$265,788,764	94.3%	$16,076,348
2021	$628,236,792	$322,781,747	51.4%	$305,490,155
2022	$771,076,738	$520,579,818	67.5%	$268,969,602
Average	**$464,528,751**	**$315,673,897**	**68.0%**	**$150,732,147**

Source: Colorado Department of Revenue.

The ad valorem tax credit significantly increases the volatility of oil and gas severance tax collections, which are more volatile than the value of production or gross liability (Figure 2). Since 2013, the credit has ranged from a low of 49.2 percent of gross tax liability in 2013 to a high of 94.3 percent in 2020. Over time, the ad valorem credit has increased relative to gross severance tax liability partly due to higher effective mill levies on the value of oil and natural gas production.[7]

The incidence of production on property taxes and when credits are claimed can lag up to two years. For instance, severance taxes paid in 2022 for tax year 2021 depended on property taxes assessed and paid in 2021, which are based on property tax year 2020 for the value of production in 2019.

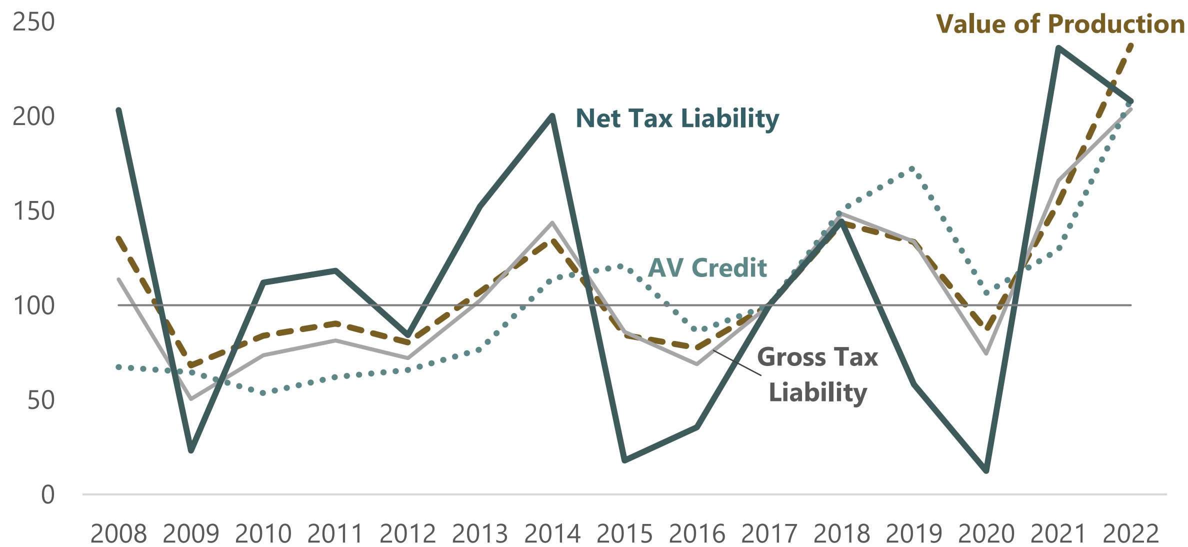
Volatility associated with the ad valorem credit can interact with an individual well's production cycle, as well as with overall market conditions. For example, in the first few years of production, a producer has little to no ad valorem credit to claim on a well. When production increases, the ad valorem credit is based on the lower value of production from the previous year, with a smaller relative impact on severance taxes. After oil and gas production at the well peaks, the ad valorem credit is based in the higher value from the previous year and allows the oil and gas

[7] The estimated statewide weighted average mill levy on oil and gas production increased from 40.960 mills in 2008 to 70.786 mills in 2023. Reference https://leg.colorado.gov/sites/default/files/r20-130_property_taxes_on_oil_and_gas_production.pdf for an analysis of 2008 to 2018 and detailed estimation methodology.

producer to reduce severance taxes by a relatively larger amount. At the market level, a dip in prices can significantly lower the value of production from a prior year, resulting in a large ad valorem credit against lower severance tax liability.

Ad valorem tax credit volatility can also interact with required estimated payments and withholding from producers, resulting in refunds further offsetting tax collections.

Figure 2
Oil & Gas Production, Severance Taxes, and Ad Valorem Credit
Index 2017 = 100



Modified Ad Valorem Tax Credit

For tax year 2026, the current ad valorem tax credit will be modified from a percent of ad valorem taxes paid, to 65.625% of gross income for the taxable year multiplied by the total mill levy for the preceding calendar year at the well's location.[8] The modified calculation reduces the lag between the incidence of production on the credit and severance tax liability. The percentage of gross income used to calculate the credit is equal to the value of the assessment rate on oil and gas of 87.5 percent multiplied by 75.0 percent.

In 2027 and future tax years, the severance tax credit will increase to 76.56 percent of gross income multiplied by the total mill levy at the well's location, or 87.5 percent multiplied by 87.5 percent.

[8] Section 39-29-105 (2)(c) C.R.S.

Effective Oil & Gas Severance Tax Rates

The effective tax rate factors in the impact of deductions, exemptions, and credits on the amount of severance taxes collected compared with statutory tax rates. Table 4 shows the impact of the graduated tax structure and ad valorem tax credit on effective tax rates for all taxpayers from 2013 to 2022. As most oil and gas is produced by producers with gross income of more than $300,000, gross severance tax liability for all taxpayers has averaged 4.9 percent of gross income, weighted close to the top rate of 5.0 percent. However, the ad valorem credit results in a widely varying effective tax rate from year to year. From 2013 to 2022, the effective tax rate for all taxpayers has averaged 1.6 percent, and has ranged from 0.3 percent to 2.5 percent.

Table 4
Effective Oil & Gas Severance Tax Rates

Year	Net Gross Income*	Gross Tax Liability	Gross Liability Percent of Income	Net Tax Liability	Effective Rate
2013	$7,969,089,632	$388,121,572	4.9%	$197,077,279	2.5%
2014	$11,115,522,706	$543,794,057	4.9%	$258,927,136	2.3%
2015	$6,704,158,128	$325,109,120	4.8%	$23,268,339	0.3%
2016	$5,378,987,314	$260,674,621	4.8%	$45,952,977	0.9%
2017	$7,767,730,366	$378,724,058	4.9%	$129,429,438	1.7%
2018	$11,452,926,512	$561,575,341	4.9%	$186,766,223	1.6%
2019	$10,339,772,688	$506,117,578	4.9%	$75,363,974	0.7%
2020	$5,810,294,798	$281,857,637	4.9%	$16,076,348	0.3%
2021	$12,795,713,062	$628,236,792	4.9%	$305,490,155	2.4%
2022	$15,685,081,635	$771,076,738	4.9%	$268,969,602	1.7%
Average	**$9,501,927,684**	**$464,528,751**	**4.9%**	**$150,732,147**	**1.6%**

Source: Colorado Department of Revenue.
*Net gross income is income after deductions for manufacturing, processing, and transportation, and for exempt stripper well production.

State Comparison of Effective Tax Rates

In total, 34 states levy some form of severance tax, including 31 states with a tax on the extraction of oil and gas.[9] Table 5 compares Colorado's average severance tax collections from 2018 to 2022 with 9 other major oil-producing states. These states are also among the nation's top oil and gas-producing states. For each state, severance taxes are measured against the estimated average value of oil and gas production, a broader measure that incorporates the

[9] https://www.ncsl.org/energy/state-oil-and-gas-severance-taxes

impact of all exemptions, deductions, and credits on collections. From 2018 to 2022, Colorado has the lowest average effective severance tax rate on oil and gas among these states.

Table 5
Average Annual Estimated Value of Oil & Gas Production and Severance Tax Revenue, 2018 to 2022
Dollars in Millions

State	Oil Production	Gas Production	Total Production	Severance Tax	Tax Percent of Value
Colorado	$10,032.8	$7,346.1	$17,378.9	$156.6	0.9%
Utah	$2,163.4	$1,017.9	$3,181.3	$40.8	1.3%
Kansas	$1,844.1	$641.3	$2,485.5	$47.0	1.9%
Wyoming	$5,469.5	$5,609.1	$11,078.6	$424.2	3.8%
Texas	$111,860.6	$41,319.7	$153,180.3	$6,079.9	4.0%
Oklahoma	$10,994.0	$10,750.1	$21,744.0	$976.4	4.5%
New Mexico	$26,445.0	$8,652.1	$35,097.1	$2,113.1	6.0%
North Dakota	$26,256.3	$3,982.7	$30,239.0	$2,215.3	7.3%
Montana	$1,217.8	$171.4	$1,389.2	$108.1	7.8%
Total	**$196,283.5**	**$79,490.4**	**$275,773.9**	**$12,161.4**	**4.4%**

Source: U.S. Energy Information Administration; individual state reports as follows:
Colorado: Office of the State Controller;
Utah: State Tax Commission, Annual Report, https://tax.utah.gov/commission/reports/fy23report.pdf;
Kansas: Department of Revenue, Annual Report, https://www.ksrevenue.gov/pdf/ar22complete.pdf;
New Mexico: Taxation and Revenue Department, oil and gas severance reports, https://www.tax.newmexico.gov/all-nm-taxes/oil-natural-gas-mineral-extraction-taxes/;
Wyoming: Department of Revenue Annual Report, https://revenue.wyo.gov/annual-reports;
Texas: Comptroller of Public Accounts, Annual Cash Report, https://bivisual.cpa.texas.gov/CPA/opendocnotoolbar.htm?document=documents%5CTR_Master_UI.qvw;
Oklahoma: Tax Commission, Revenue & Apportionment Report, https://oklahoma.gov/content/dam/ok/en/tax/documents/resources/reports/annual-reports/otc/AR-2022.pdf;
North Dakota: Tax Commissioner, State and Local Taxes an Overview and Comparative Guide, https://www.tax.nd.gov/sites/www/files/documents/news-center/publications/2024-Red-Book.pdf;
Montana: Department of Revenue, Revenue Monitoring Report, https://mtrevenue.gov/wp-content/uploads/mdocs/2022%20fiscal%20year%20end%20revenue%20monitoring%20report.pdf.
Value of production based on domestic crude oil first purchase prices by area and the Henry Hub spot price converted to millions of cubic feet. New Mexico includes oil and gas severance tax, oil and gas conservation tax, and the oil and gas emergency school tax. North Dakota includes oil and gas gross production tax and oil extraction tax. Texas includes oil and natural gas production taxes. Utah includes oil and gas severance tax and the oil and gas conservation fee.