Colorado's Severance Tax and Amendment 58

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Executive summary

Severance taxes are taxes levied on minerals removed, or "severed," from the ground. States apply such taxes to compensate for the extraction of non-renewable resources and to mitigate the impacts of drilling and digging on local communities.

Colorado has the lowest effective severance tax of any top energy-producing state in the nation, and it is the only state that allows oil and natural gas companies to claim a significant "ad valorem" tax credit for the amount they pay in county property taxes.

Amendment 58 would end the "ad valorem" tax credit, and the increased severance tax revenue would be used for a scholarship fund, to improve wildlife habitat, for research into renewable energy and to help communities impacted by mining and drilling with transportation and water-treatment projects.

Opponents of the amendment have said that it will increase energy costs for Colorado consumers and that it will drive energy companies out of the state, leading to a loss of jobs.

Our analysis shows that those claims are not supported by the facts.

Prices for oil and gas are governed by the laws of supply and demand in a broad and diverse marketplace, and severance taxes, as one part of the cost of production, are not a factor in the price-setting mechanism.

An increase in severance taxes will not prompt energy companies to leave the state for one fundamental reason: Colorado has abundant supplies of natural gas, and energy companies will drill where it is easiest to tap into supplies. Also, research shows that severance tax rates do not figure in drilling decisions.

And even with an increase in severance taxes, Colorado's effective rate is projected to rise from 1.3 percent to 4.1 percent – still the lowest rate among the nation's top energy-producing states.

For 30 years, energy companies have enjoyed a tax credit that has allowed them to keep billions of dollars. It makes sense that Colorado should follow other energy-producing states in securing a broader benefit for the loss of non-renewable resources.

Introduction

Amendment 58 on the Colorado ballot this November would significantly change the state's severance tax laws and increase revenues by approximately $300 million a year to support a variety of programs, including additional funding for scholarships.

Severance taxes are taxes that states levy on minerals "severed," or removed, from the ground. Every major energy-producing state, including Colorado, levies severance taxes to make up for the permanent loss of a natural resource and to mitigate the impacts of energy and mineral development on predominantly rural communities.

Specifically, Amendment 58 would:

- Eliminate an existing state tax credit that oil and gas producers receive to offset local property taxes.
- Expand the number of oil and gas wells subject to the state severance tax.
- Replace the existing sliding rate scale with a flat 5 percent rate for all wells subject to the severance tax.
- Use the additional revenues generated by these changes to fund college scholarships, support wildlife and renewable energy projects, and fund transportation and water-treatment efforts in impacted communities.

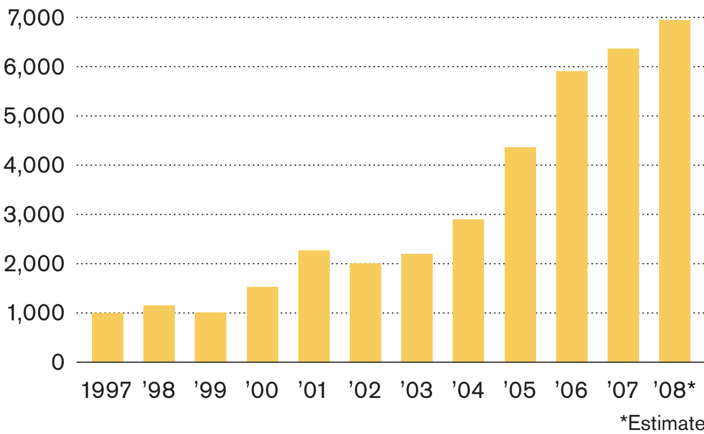
This paper explores two claims that have been made in opposition to Amendment 58:

- That it will reduce the number of wells drilled in Colorado and, therefore, the number of Colorado jobs created by the industry.
- That it will increase energy prices paid by Colorado consumers.

The oil and gas industry in Colorado

Oil and gas production in Colorado is booming. Drilling permits have increased almost seven-fold in the past decade, and have more than doubled since 2004 (Chart 1). Energy companies took in almost $11 billion in gross income from oil and gas production in Colorado in fiscal year 2008 and are on track to gross an all-time high[1] of more than $12 billion in fiscal year 2009. That's a million dollars worth of oil and gas pulled out of the ground in Colorado every 43 minutes.[2]

Chart 1: Colorado oil and gas drilling permits



Source: Colorado Oil and Gas Conservation Commission[1C]

Rising energy prices are driving the boom. Crude oil hit a record high of $147.27 a barrel on July 11, 2008 [3], and natural gas hit $13.31 per thousand cubic feet (Mcf) on July 2 [4], just shy of a December 2005 record.

Colorado is the seventh-largest producer of natural gas in the nation.[5] It produces about 6 percent of the nation’s natural gas and is moving up in the rankings.[6]

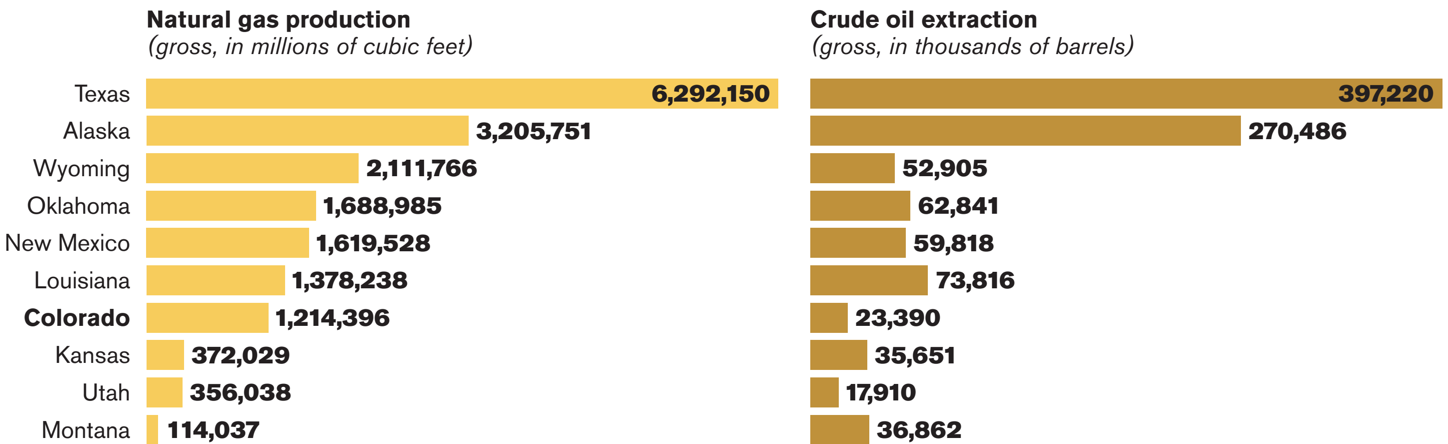
Colorado was named the best place in the world to drill in a survey of oil and gas company executives in December 2007 [7] because of its vast and mostly untapped reserves. Indeed, some industry experts say that Colorado is in the early years of what is likely to be a long-term drilling boom.[8] (Chart 2)

That boom brings many benefits to Colorado. Oil and gas extraction is one of the state’s largest industries, and it directly employs about 7,500 workers statewide.[9] Most of those jobs are relatively high-paying – the average salary of a natural gas extraction worker is $80,000 [10] – and local economies get a boost from energy development.

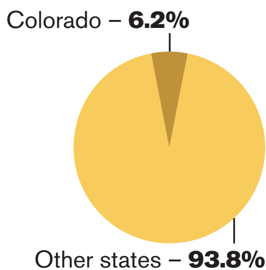
Energy development also imposes significant costs on state and local infrastructures. Heavy drilling equipment damages roads, necessitating repairs, and increased traffic requires improvements.

Towns, counties and school and water districts must make other improvements, hire more people and increase budgets because of the growth. For example, the town of Rifle estimates it will need $67 million for infrastructure improvements in the next five years, and Garfield County estimates it will need hundreds of

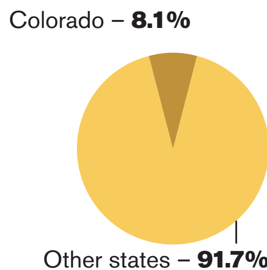
Chart 2: Top states for natural gas production and crude oil extraction (2006)



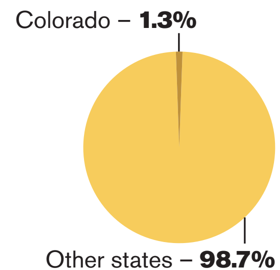
U.S. natural gas production



Dry natural gas reserves

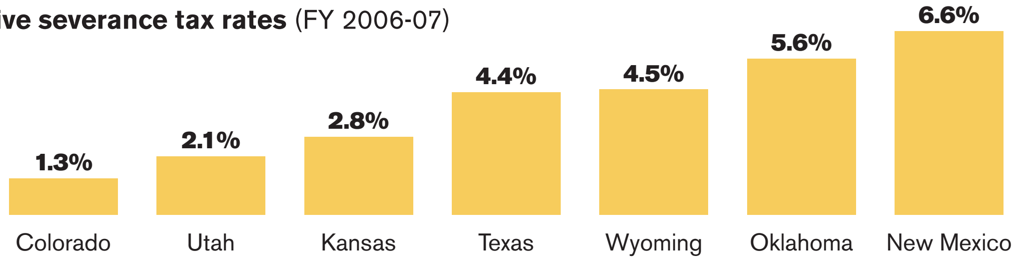


U.S. crude oil production



Sources: U.S. Energy Information Administration [2C]

Chart 3A: Effective severance tax rates (FY 2006-07)



Source: Colorado Legislative Council 3C

millions of dollars for similar improvements.[11]

Demands on public safety agencies have increased, too. The Rio Blanco Sheriff's Department responded to five calls from the gas-rich Piceance Basin in 2003 – and 1,675 in 2007.[12]

In Rifle, Parachute and other towns in energy-producing areas, increases in population have boosted home prices and added to the cost of living. As real estate prices fell last year during the nationwide housing crisis, the cost of an average house in Rifle increased from $250,000 to $300,000. That has made it difficult for support personnel such as teachers, police officers and hospital workers to find affordable housing.[13]

Severance taxes in Colorado

The severance tax on oil and gas production in Colorado was adopted in 1977,[14] and Colorado is the only state that has a significant property tax (or "ad valorem") credit for producers.[15]

Colorado's severance tax rates increase on a sliding scale based on gross income, with a maximum rate of 5 percent. But Colorado's tax code also allows energy companies several exemptions and deductions, the most significant of which is an 87.5 percent tax credit for local property taxes. As a result, Colorado has the lowest effective severance tax rate (the percentage of gross income from oil and gas production that producers pay in severance taxes) of any state in the region – 1.3 percent[16] (Charts 3A and 3B).

Under the property tax (or "ad valorem") credit, if a natural gas producer owes the state $100 in severance tax and also owes Las Animas County $100 in property tax, it deducts 87.5 percent of its property tax bill ($87.50) from its severance tax bill. The company pays Las Animas County the full $100, but the state gets only $12.50.[17] (See sidebar on tax inequity among gas-producing basins.)

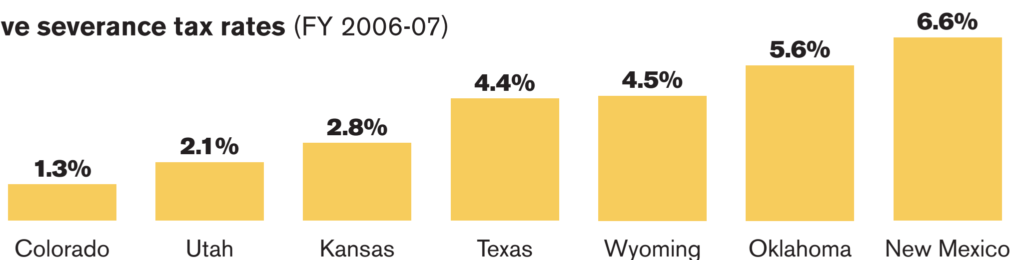
Because of the property tax credit, Colorado's severance tax revenues have been reduced by more than $1 billion since FY 1990, with $650 million of that lost in the last five years.[18] The credit is expected to be worth $241 million in FY 2009-10.[19]

Exempt from severance taxes altogether are low-producing "stripper" wells. In 2006, more than 95 percent of the state's oil wells and nearly 75 percent of its natural gas wells fell into the stripper category – under 15 barrels of oil per day or less than 90,000 cubic feet of gas per day. These wells produce 60 percent of the state's oil and 20 percent of the state's natural gas.[20] Some of them bring in more than $400,000 a year.[21] The state is forgoing more than $62 million in revenues each year because of the stripper well exemption.[22]

Amendment 58 would make three structural changes to the severance tax on oil and gas extraction:

- Eliminate the ad valorem tax credit and the exemption for stripper wells.

Chart 3A: Effective severance tax rates (FY 2006-07)



Source: Colorado Legislative Council 3C

Chart 4: Structure of Colorado's severance tax

	Current Structure	Structure Under Amendment 58
Rate	Payments based on sliding rate of: • 2 percent on gross income under $25,000 • 3 percent on gross income between $25,000 and $100,000 • 4 percent on gross income between $100,000 and $300,000 • 5 percent on gross income above $300,000	• 5 percent rate for all producers with gross income above $300,000 • Producers with gross annual income below $300,000 would be exempt
Deductions	Transportation, processing and manufacturing expenses are deductible from gross income	Transportation, processing and manufacturing expenses deductible
Credits	Producers can claim as a credit 87.5 percent of the property taxes paid on oil and gas production	
"Stripper wells"	Wells that produce 15 barrels or fewer of oil per day or 90,000 cubic feet or less of natural gas per day are exempt from severance taxes	Wells that produce 7.5 or fewer barrels of oil a day or 45,000 cubic feet or less of natural gas would be exempt
Effective rate*	**1.3 percent average, all producers**	**4.1 percent average, all producers**

* Includes all exemptions and deductions

Sources: Colorado Legislative Council, Colorado Secretary of State [4C]

• Set a flat tax rate of 5 percent on companies that produce gross income above $300,000 per year.

• Exempt smaller producers, those with gross incomes below $300,000, from paying severance taxes.[23] (Chart 4)

Spending of severance tax revenues

In FY 2007-08, Colorado collected approximately $142.2 million in severance taxes from oil and gas operations, which put Colorado lowest among major energy-producing states for per-capita benefit derived from energy extraction. While Colorado received $30 per resident in severance taxes in 2006, New Mexico realized $400 and Wyoming $1,600[24] (Chart 5).

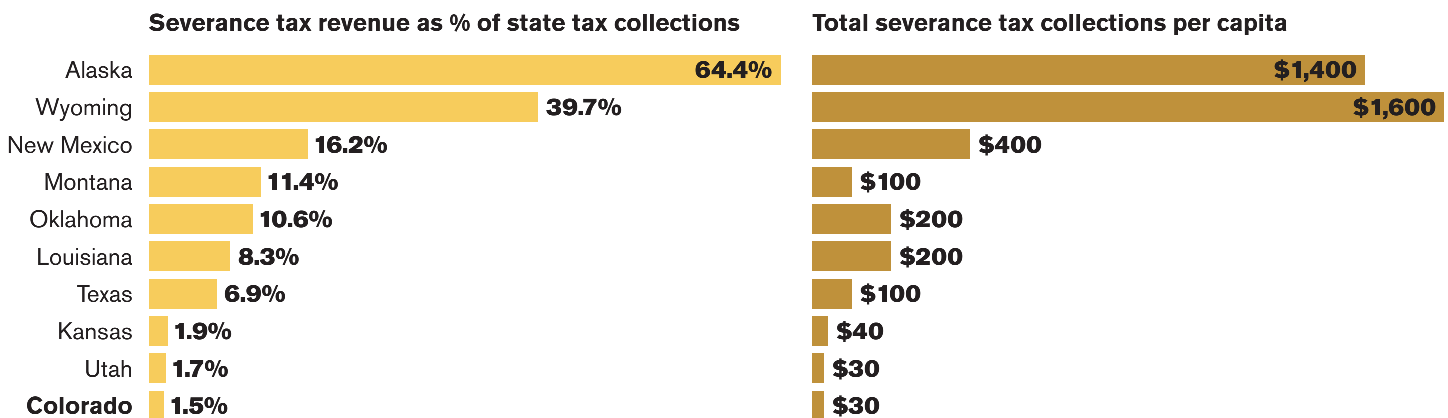
Under the current formula, half of all severance tax revenue goes to the Department of Local Affairs (DOLA) and half to the Department of Natural Resources (DNR).

The DOLA portion pays for grants that help communities deal with the social and economic impacts of drilling. The half that goes to the DNR helps fund water conservation projects, low-income energy assistance, clean energy development and programs related to mineral extraction.

Amendment 58, in FY 2009-10, would add $304 millon in severance tax revenue to $213 millon under the current formula, for a total of $517 million.[25]

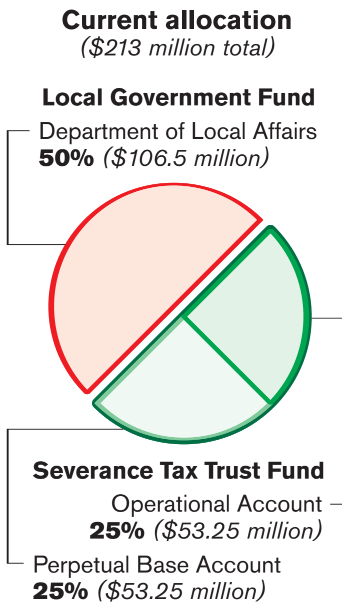
Current programs funded through the DNR and DOLA would see an increase in funding, and new revenues would:

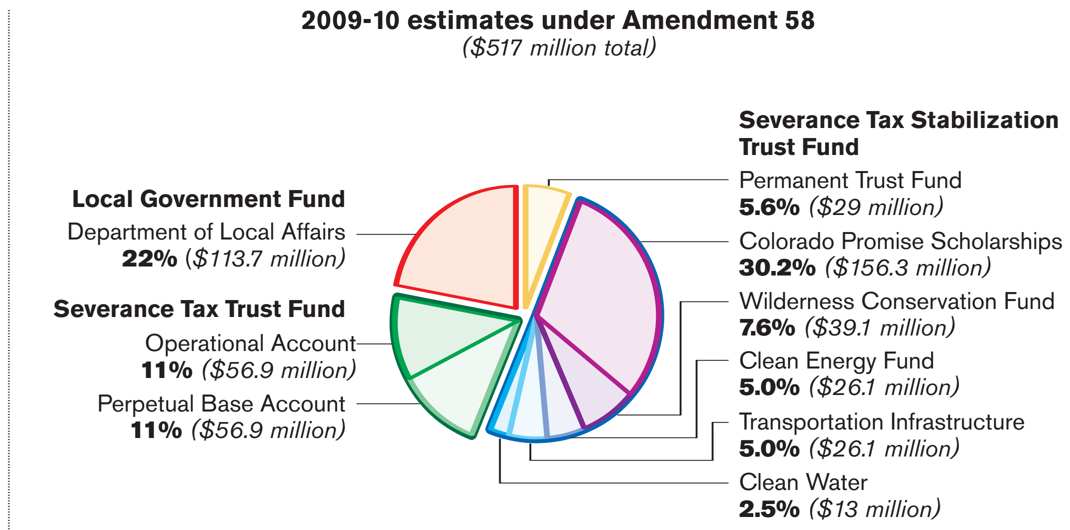
Chart 5: State by state – severance and per capita tax collections (2006)



Sources: Colorado State Auditor, National Conference of State Legislatures [5C]

Chart 6A: Severance tax revenues (2009-10 estimates)





Source: Colorado Legislative Council [6C]

• Create the Colorado Promise Scholarship Fund, which would put about $160 million a year toward scholarships for lower- and middle-income families.

• Create a new fund for wilderness conservation efforts, to be administered by the board of Great Outdoors Colorado.

• Increase funding for transportation and clean-water infrastructure improvements for communities affected by oil and gas drilling.

• Increase funding for the Clean Energy Fund to boost research into alternative energy.

• Create a trust fund to serve as a "rainy day" account.[26]

(Charts 6A and 6B)

Under Amendment 58, the effective severance tax rate in Colorado would be about 4.1 percent[27] – still lower than the tax rate in every other major gas-producing state. In the region, only Utah and Kansas would have lower effective rates. Both produce much less gas than Colorado (Chart 7).

Finding: Eliminating tax credit will not harm consumers

Opponents of Amendment 58 have said that an increase in the severance tax rate will lead to an increase in the cost of natural gas or the price of gasoline at the pump. Our analysis shows that will not be the case.

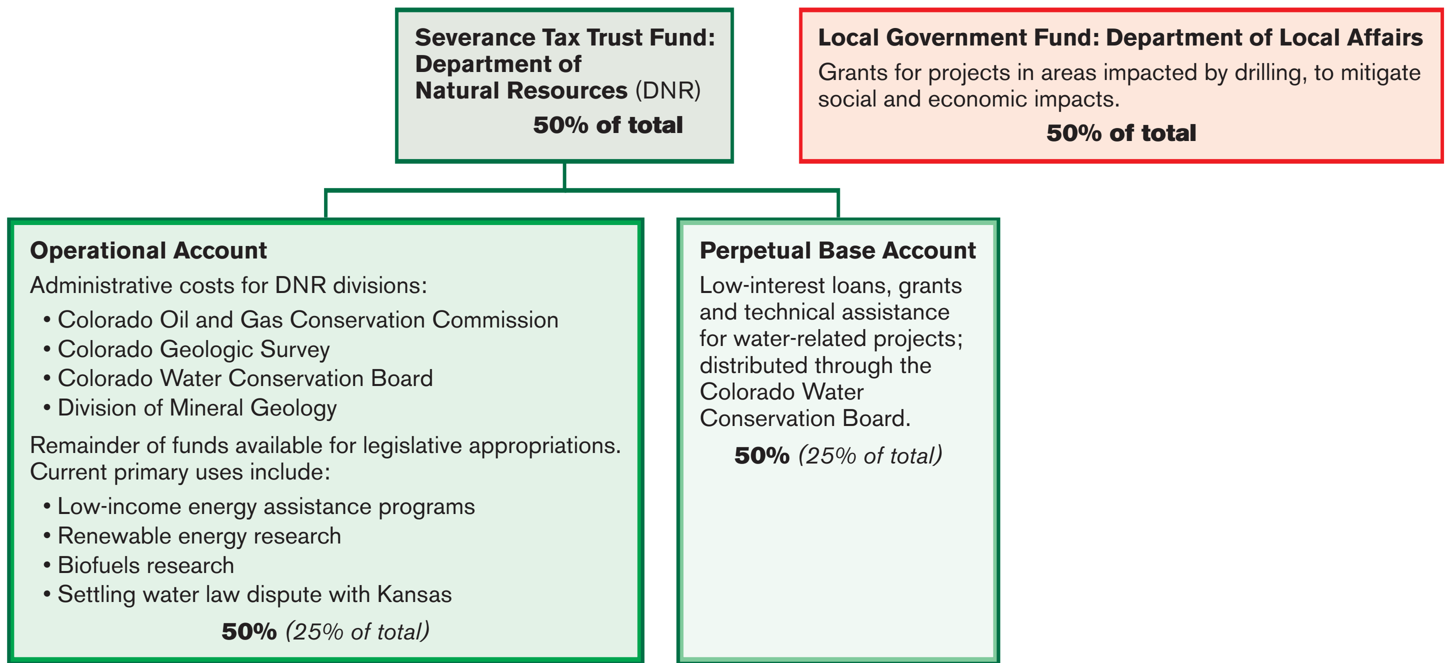
Commodity prices for natural gas and crude oil have been especially volatile in the past year, and further increases are not unlikely, but the reason for higher energy costs can be found in upheavals and fundamental shifts in national and international markets.

Demand in those markets sets the price for natural gas and crude oil, and severance taxes, as but one component in the cost of production, have little to do with the price-setting mechanism.

According to the Sonoran Institute, a public policy research group that focuses on land and energy issues in the Rocky Mountains and Southwest, "Companies selling commodities in competitive markets such as the natural gas market are not able to increase their prices. Natural gas producers do not sell directly to consumers; instead, they sell it to a local distribution company like Xcel Energy … based on regional price indexes such as the Colorado Interstate Gas Index. Companies that tried to sell their gas to utilities for more than the index price would be unable to do so." [28]

In Colorado's case, there has been a significant change in the demand for gas produced in the state. Coloradans historically enjoyed lower relative prices for natural gas because there was much less capacity to

Chart 6B: Current percentage allocation of severance tax revenues



Percentage allocation of severance tax revenues under Amendment 58

Severance Tax Trust Fund: Department of Natural Resources
22% of total

Local Government Fund: Department of Local Affairs
Same as above.
22% of total

Severance Tax Stabilization Trust Fund: Office of the State Treasurer
56% of total

Operational Account
Same as above.
50% *(11% of total)*

Perpetual Base Account
Same as above.
50% *(11% of total)*

Operational Fund: Various Offices
90.0%
(50.4% of total)

Permanent Trust Fund
Accumulates revenue and interest as a rainy day fund.
10.0%
(5.6% of total)

Colorado Promise Scholarships
- Need-based for all Colorado residents attending public institutions in Colorado
- Ranges from $1,000 for middle-income students in community college to about $6,000 for low-income students in four-year research institutions
- Must maintain a 2.0 GPA for the first two years of college and a 2.5 for the remaining time in college

60% *(30.2% of total)*

Wilderness Conservation Fund: Great Outdoors Colorado Board
Grants for the direct purchase of land for wildlife protection
15%
(7.6% of total)

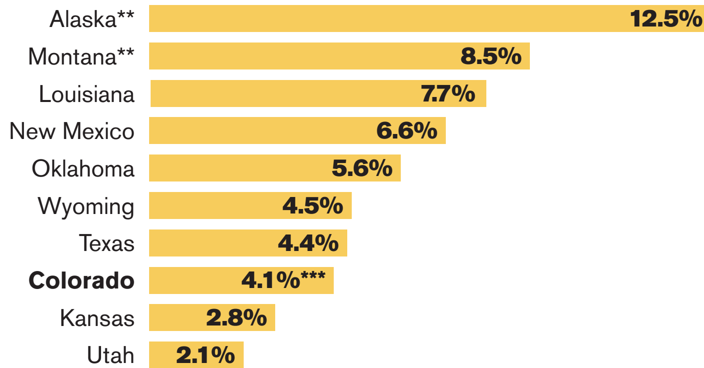
Clean Energy Fund: Governor's Energy Office
Grants for research on renewable and clean energy
10%
(5.0% of total)

Transportation Infrastructure: Department of Transportation
Funds transportation projects in areas impacted by oil and gas extraction
10%
(5.0% of total)

Clean Water: Department of Public Health and Environment, Water Quality Control Division
Grants to communities impacted by oil and gas extraction, to clean up drinking water and treat wastewater
5%
(2.5% of total)

Sources: Colorado Revised Statues, Colorado Water Conservation Board, Colorado Legislative Council, The Daily Sentinel, Grand Junction, Colorado Secretary of State's Office.

Chart 7: Effective rates, top energy states* (FY 2006-07)



* Ranking based on gross natural gas withdrawals.
** Rates are for calendar year 2006.
*** Rate if Amendment 58 passes.

Sources: Louisiana Department of Revenue, Colorado Legislative Council and Oil and Gas Accountability Project. [7C]

ship the gas out of state than there is today – the state was a local, mostly self-contained market with vast supplies. But with the opening of new multi-state pipelines, Colorado's natural gas supplies now are more integrated into the national market.

Almost two-thirds of Colorado's natural gas is exported to other states (Chart 8), notably the energy-poor Southwest and Midwest. Heavily populated California has a large appetite for natural gas, and as gas reserves in the Appalachians are rapidly depleted, demand has increased from Midwestern utilities. With the opening of new pipelines to areas with high demand, prices, in turn, have increased.

In particular, the opening of the Rockies Express natural gas pipeline in January has put a great deal of Colorado gas on the national market. When it reaches capacity, it will transport 1.8 billion cubic feet a day of natural gas 1,678 miles from the Meeker Hub in Rio Blanco County to the Clarington Hub in eastern Ohio.[29] That's about $19.5 million worth of natural gas a day.[30]

Thus, the price of natural gas in Colorado will be based on supply and demand in a wide market that stretches from Ohio to California.

In analyzing consumer prices in other states, there appears to be little or no connection between severance tax rates and prices. Residents of Arizona, with an effective severance tax rate of 0.4 percent, paid $17.41 per thousand cubic feet of natural gas last winter, while residents of Alaska (12.5 percent) paid $8.45. In Colorado (1.3 percent), the price was $8.61. (Chart 9)

Unlike natural gas, Colorado acquires most of its petroleum from out of state. In 2006, Colorado produced 24 percent of the crude oil consumed by residents (Chart 8; corrected Oct. 9, 2008). Most of the crude oil consumed in the state comes from pipelines originating in Texas, Oklahoma and Wyoming.[31]

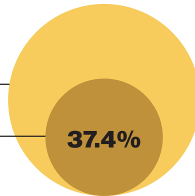
Prices paid at the pump are set on a national level, often based on refining and other post-production factors, as well as supply and demand fluctuations on the international market.

For both oil and natural gas, then, severance taxes are one small component in the cost of production and

Chart 8: Colorado production and consumption (2006)

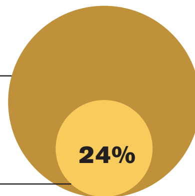
Volume of natural gas **produced** in Colorado:
1,202,821 million cubic feet

Natural gas **consumed** in Colorado
449,830 million cubic feet



Volume of crude oil **consumed** in Colorado:
95.8 million barrels

Crude oil **produced** in Colorado
23.4 million barrels



Source: U.S. Energy Information Administration [8C] (Corrected Oct. 9, 2008)

Chart 9: Effective rates and consumer prices

State	**Effective severance tax rate**	**Average residential natural gas costs,** October 2007-March 2008 *($ per 1,000 cubic feet)*
Arizona	0.43%	$17.41
Colorado	1.3%	$8.61
Utah	2.1%	$8.64
Kansas	2.8%	$12.82
Texas	4.4%	$13.40
Wyoming	4.5%	$8.55
Oklahoma	5.6%	$12.46
New Mexico	6.6%	$11.91
Louisiana	7.7%	$14.27
Montana	8.5%	$10.07
Alaska	12.5%	$8.45
U.S. average	**5.88%**	**$12.79**

Sources: Louisiana Department of Revenue, U.S. Energy Information Administration, Colorado Legislative Council, Oil and Gas Accountability Project and Mary Ellen Denomy, CPA. [9C]

are not part of the price-setting mechanism. There is no credible evidence to suggest that a change in the severance tax rate will lead to changes in consumer prices.

Finding: Eliminating tax credit will not drive producers out of state

Opponents of Amendment 58 have said that an increase in the severance tax rate will force producers to leave the state, reducing oil and gas production and eliminating jobs. Our analysis shows that will not be the case.

Amendment 58 would increase the amount paid in severance taxes by an estimated $304 million a year, or 2.4 percent of the more than $12 billion in gross income that oil and gas companies are projected to make in Colorado in 2010. That $304 million would be spread across dozens of oil and gas producers. The question is whether this marginal change in the cost of production will negatively affect the level of production in Colorado.

Economists have extensively studied the manner in which severance taxes are levied,[32] and a team of researchers from the University of Wyoming and elsewhere has authored several papers on the economics of severance taxes.

In a series of papers in 2003 and 2004, the researchers examined whether changes in severance taxes would cause oil and gas companies to change their production habits, or even relocate out of state. They concluded: "Oil production is highly inelastic with respect to changes in production taxes. Policy implications suggest that increases in production taxes on oil risk little loss in future production."[33]

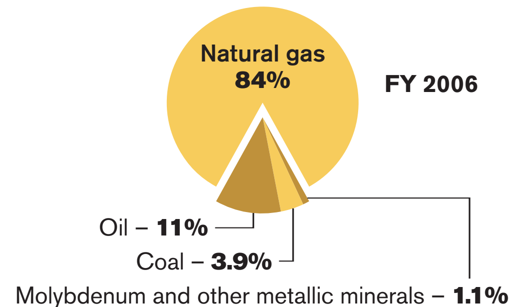
Essentially, the researchers and other economists assert that other factors, such as where oil and gas is located and how accessible it is, are far more important in determining where producers choose to drill than changes in tax rates.

The researchers also created an econometric model of how oil and gas producers react to increases and decreases in severance taxes, and concluded that "state officials may have the incentive to raise severance tax rates, risking little in the way of loss to future oil field activity."[34] Production decisions are more likely to be altered by changes in areas such as environmental regulations, they and others concluded.[35]

Once oil and gas wells are built, there is no economic incentive to abandon them until the oil and gas dry up. Infrastructure is expensive to develop, and a small increase in production costs would not be an incentive to move and rebuild elsewhere.

Chart 10: Colorado severance tax revenue by mineral

Natural gas accounts for the greatest percentage of severance tax revenues, and that will continue given the size of the state's reserves.



Source: Colorado Legislative Council [10C]

But even beyond the costs of production and the economic evidence presented in academic studies, there is a fundamental reality that guides oil and gas company decisions: Drillers will drill where there is natural gas. And Colorado has natural gas – lots of it.

The vast majority of Colorado's mineral production is in the form of natural gas,[36] and that dominant role will only increase over time. Colorado holds a greater percentage of the nation's reserves than the percentage it currently produces, so Colorado is likely to supply a greater percentage of the nation's natural gas in years to come (Chart 2). There is no credible evidence that changes in effective severance tax rates on the order of magnitude proposed in Amendment 58 will alter production.

Conclusion

The two main arguments against Amendment 58 – that it will raise energy prices for Coloradans and that it will drive oil and gas producers out of the state – are not supported by the facts.

Our analysis shows that severance taxes, as part of the cost of production, have no impact on consumer prices, which are set largely by demand in a wide marketplace. And Colorado's abundant supply of natural gas reserves ensures that production companies will continue to operate in the state.

What Amendment 58 will do is provide hundreds of thousands of Coloradans with opportunities by making college more affordable, help communities deal with the impacts of oil and gas extraction, improve wildlife

habitat and increase funds available for low-income energy assistance and other important programs.

For more than 30 years, energy companies have been given a tax credit that has allowed them to keep billions of dollars. Times have changed, and it makes sense for Colorado to follow the practices in other energy-producing states and derive a broader benefit for its residents as energy companies extract non-renewable oil and gas reserves.

It is not a wise financial decision for Colorado to continue subsidizing oil and gas producers with one of the lowest effective severance tax rates in the nation.

Amendment 58 will remove inequity in severance taxes

The property tax credit creates inequities among producers because property taxes vary widely in the various energy-producing sectors of the state, and Amendment 58 would level the playing field.

In Colorado, oil and gas is principally produced in four main regions: the Piceance Basin in the northwest, the Denver-Julesberg Basin in the northeast, the Raton Basin in the southeast and the San Juan Basin in the southwest.

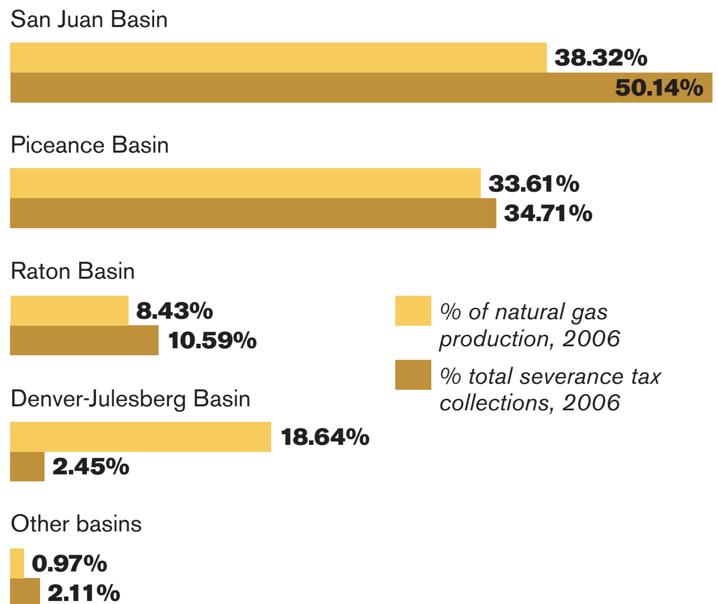
The San Juan Basin has historically been the largest production area in Colorado; La Plata County alone supplies 2 percent of the nation's natural gas.[37] But reserves in the basin, which has been extensively drilled since 1927, are declining. Production peaked in 2003 and has declined by more than 12 percent since.[38]

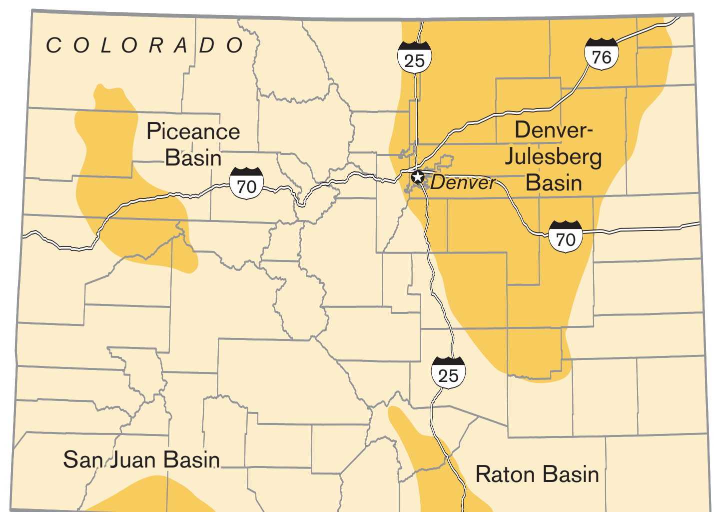
Under Colorado's current severance tax formula, the region's decline would bring lower severance tax revenues for the state. Because of relatively low property taxes, the San Juan Basin supplies a great deal of the state's severance tax revenue – in 2005, 55 percent of the state's severance tax revenue came from producers in La Plata County, even though the county accounted for only 39 percent of the state's gross natural gas production. By contrast, producers in Weld County, which produced 16 percent of the state's natural gas in 2006, paid no severance taxes that fiscal year, because Weld County's property taxes are high relative to other producing areas.[39]

Producers in the San Juan basin pay far more than their share of Colorado's severance taxes, those in northwest and southeast Colorado both pay a little more than their share of severance taxes and producers in northeast Colorado pay significantly less than their share of severance taxes.[40]

Amendment 58 would fix this by requiring producers across the state to pay an equal rate of taxation that is no longer linked to property tax levels, which levels the playing field.

Chart 11: Basin gas production and tax collections





Note: Percentages may not add to 100 percent because of rounding.

Sources: Colorado Legislative Council, Colorado Oil and Gas Conservation Commission, U.S. Geological Survey and Colorado Geological Survey 11C

How it works elsewhere: Two states offer lessons

Wyoming

Wyoming has a much higher effective overall tax rate on oil and gas production than Colorado. For example, in FY 2004-05 Wyoming's total tax rate was 11.2%, compared to Colorado's 5.7% (including severance, property, income and sales taxes levied on oil and gas production), according to the Colorado Legislative Council staff.[41]

Yet oil and gas production continues to boom in Wyoming – producers are not abandoning the state for low-tax states such as Colorado. Wyoming is projected to gross $535 million in severance tax revenues from oil and gas,[42] compared to $142.2 million in Colorado.[43]

According to University of Wyoming researchers, severance taxes don't prevent production – producers drill where the oil and gas is, and producers don't make drilling decisions based on where taxes are lowest.

And Wyoming consumers don't foot the bill for the state's higher taxes. In fact, they pay less for their natural gas than the rest of the country. For the first six months of 2008, residential natural gas prices in Wyoming averaged $9.32 per thousand cubic feet (Mcf)[44] compared to $9.85 in Colorado.[45] By comparison, the U.S. average for the same period was $13.24.[46]

Wyoming is able to capitalize on the extraction of its non-renewable resources to the benefit of its citizens.

It funds a much larger proportion of the University of Wyoming's budget – 44 percent – than Colorado does for the University of Colorado – 8.9 percent.[47] In addition, Hathaway scholarships, established in 2006 and funded by oil and gas revenues, provide up to $3,200 a year in merit-based aid, and need-based scholarships also are availble for eligible Wyoming students attending Wyoming colleges.[48]

According to the most recent data from the State Higher Education Executive Officers, Wyoming ranks first in the nation, at $14,709, in state and local support per full-time equivalent (FTE) college student after adjusting for inflation and enrollment mix. In contrast, Colorado ranks 48th in spending, with $3,434 per FTE student.[49]

Arkansas

Earlier this year, the Arkansas General Assembly convened for a special session to decide how to change the state's severance taxes. Anticipating a boom in energy revenues with the discovery and preliminary exploration of the Fayetteville Shale Play, the legislature decided to make sure that the people of Arkansas would get a piece of the energy revenue pie.[50]

After the three-day special session, state lawmakers overwhelmingly agreed to raise Arkansas' severance tax to 5% – the same rate as Colorado's. Unlike their counterparts in Colorado, the Arkansas legislators did not decide to reduce that rate with a property tax credit.

Industry representatives expressed their approval, saying that the rate was still low enough that it would be acceptable to them. The increase is expected to bring the state of Arkansas about $57 million in 2009, which will mostly be used for transportation improvements.[51]

Natural gas industry experts, including Arkansas' top utility providers, said throughout the debate that any tax increases would not be passed on to consumers, because, like Colorado, Arkansas exports most of its natural gas to other states, and its prices are set by the national market.

Chuck Harder, the director of regulatory policy and external relations at CenterPoint, Arkansas' largest utility provider, said in an interview with the Arkansas Democrat-Gazette: "It's our perception that cost will be borne by producers and not on the price we pay." Larry Bengal, director of the Arkansas Oil and Gas Commission, in the same article, said: "I just don't see where you could pass it on. It just doesn't work that way."[52]

End notes

[1] "Severance Tax Performance Audit, 2006," State of Colorado, Office of the State Auditor, Sally Symanski, CPA, Acting State Auditor

[2] Data on industry profits from calculations based on three Colorado Legislative Council Reports: "Allocation of Severance Tax and Federal Mineral Lease Revenue, 2007," "June 2008 Economic and Revenue Forecast" and "Colorado Ballot Analysis, Amendment 58, Severance Taxes on the Oil and Natural Gas Industry."

[3] "Oil steady after plunging more than $6," *The Denver Post*, July 15, 2008, by Alex Kennedy, The Associated Press

[4] "Henry Hub Natural Gas Prices 2008," Nebraska Energy Statistics, Nebraska Energy Office

[5] "Natural Gas Gross Withdrawals and Production, Annual, by Area, 2006," U.S. Energy Information Administration

[6] "State Energy Profiles: Colorado," U.S. Energy Information Administration, updated July 10, 2008

[7] "Global Petroleum Survey, December 2007," The Fraser Institute, p 24

[8] "Torched and Burned: Why Does Colorado Subsidize It's Most Profitable Industry?" by Randy Udall, Director, Community Office for Resource Efficiency

[9] "Quarterly Census of Employment and Wages," Colorado Department of Labor and Employment, 2008

[10] "Boom, Boom!" by Francisco Tharp, *High Country News*, May 12, 2008

[11] Ibid

[12] Ibid

[13] Ibid

[14] "Railroad Tax Change Vetoed," by Todd Engdahl, *The Denver Post*. June 3, 1977. Accessed courtesy of the Denver Public Library.

[15] "The Colorado Oil and Gas Severance Tax Break: Eliminating This Subsidy Will Not Affect Consumer Energy Prices," Josef Marlow, Sonoran Institute, July 23, 2008

[16] Two Colorado Legislative Council reports compare Colorado's effective severance tax rate with its neighbors': "Tax Burden for Oil and Gas Producers in Five Western States," November 15, 2006, and "Effective Severance Tax Rates," September 8, 2006

[17] "Property tax credit wipes out much of state's take from oil and gas industry," by Burt Hubbard, *Rocky Mountain News*, December 10, 2007

[18] "Allocation of Severance Tax and Federal Mineral Lease Revenue, 2007," Colorado Legislative Council

[19] "Colorado Ballot Analysis, Amendment 58, Severance Taxes on the Oil and Natural Gas Industry," Colorado Legislative Council, 2008

[20] "Existing Structure of Mineral Revenues in Colorado," Colorado Legislative Council, 2007

[21] "Torched and Burned: Why Does Colorado Subsidize It's Most Profitable Industry?" by Randy Udall, Director, Community Office for Resource Efficiency

[22] "Colorado Ballot Analysis, Amendment 58, Severance Taxes on the Oil and Natural Gas Industry," Colorado Legislative Council

[23] "Text of Amendment 58," Colorado Secretary of State's Office

[24] "Severance Tax Performance Audit, 2006," State of Colorado, Office of the State Auditor, Sally Symanski, CPA, Acting State Auditor

[25] "Colorado Ballot Analysis, Amendment 58, Severance Taxes on the Oil and Natural Gas Industry," Colorado Legislative Council

[26] "Text of Amendment 58," Colorado Secretary of State's Office

[27] $517 million (the projected severance tax revenues from oil and gas for FY09-10 if Amendment 58 passes) is 4.1% of $12.60 billion (estimated revenue from oil and gas production in Colorado in FY09-10). Sources: "Existing Structure of Mineral Revenues in Colorado," Colorado Legislative Council, 2007 and "Colorado Ballot Analysis, Amendment 58, Severance Taxes on the Oil and Natural Gas Industry, "Colorado Legislative Council, 2008

[28] "The Colorado Oil and Gas Severance Tax Break: Eliminating the Subsidy Will Not Affect Consumer Energy Prices," Josef Marlow, Sonoran Institute, July 23, 2008

[29] "Rockies Express Pipeline," Kinder Morgan Co.

[30] Based on June 2008 U.S. average natural gas wellhead price of $10.82/Mcf. Source: "Natural Gas Prices, U.S., Monthly," U.S. Energy Information Administration

[31] "State Energy Profiles: Colorado," U.S. Energy Information Administration, updated July 10, 2008

[32] "State Energy Revenues Update," National Conference of State Legislatures, June 2008

[33] Mitch Kunce, Shelby Gerking, William Morgan and Ryan Maddux, "State Taxation, Exploration and Production in the U.S. Oil Industry," Journal of Regional Science; Vol. 43, Issue 4, p 749-770, 2003

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[36] "Existing Structure of Mineral Revenues in Colorado," Colorado Legislative Council, 2007

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[41] "Tax Burden for Producers in 5 Western States," Colorado Legislative Council, 2006

[42] "Wyoming Severance Taxes and Federal Mineral Royalties," Wyoming Legislative Service Office, 2007

[43] The June 2008 LC Projection lists $172.7 million for severance taxes in FY07-08. Subtracting $30 million provides an estimate of how much of this comes from oil and gas, since about $28.3 million of total severance tax funds in FY06-07 came from non-oil and gas sources, and an increase would be in line with past trends. So, 172.7 – 30 = $142.7 million as a good estimate of severance tax revenue from oil and gas in FY07-08.

[44] "Natural Gas Price Summary, Monthly, Wyoming," U.S. Energy Information Administration

[45] "Natural Gas Price Summary, Monthly, Colorado," U.S. Energy Information Administration

[46] "Natural Gas Price Summary, Monthly, United States," U.S. Energy Information Administration

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[48] "Hathaway Scholarship Program," Wyoming Department of Education

[49] "State Higher Education Finance, FY 2007," State Higher Education Executive Officers, August 2008.

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[4C] "Existing Structure of Mineral Revenues in Colorado," Memorandum to Interim Committee to Study the Allocation of Severance Tax and Federal Mineral Leasing Revenues, June 21, 2007, Colorado Legislative Council; "Colorado Ballot Analysis, Amendment 58, Severance Taxes on the Oil and Natural Gas Industry," June 30, 2008, Colorado Legislative Council;based on Colorado Revised Statues, 39-29-105(1)(a); "Text of Amendment 58," Colorado Secretary of State's Office.

[5C] "Severance Tax Performance Audit, 2006," State of Colorado, Office of the State Auditor, Sally Symanski, CPA, Acting State Auditor; "State Energy Revenues Update," National Conference of State Legislatures, June 2008

"State Energy Revenues Update," National Conference of State Legislatures, December 2007; "Severance Tax Performance Audit, 2006," Office of the Colorado State Auditor.

[6C] Colorado Revised Statues, 39-29-108 through 39-29-110; "Low Interest Loan Program," Colorado Water Conservation Board; 2008 Budget Briefing for the Colorado Department of Natural Resources, before the joint Agricultural and Natural Resources Committee, Operational Fund Budget, p 6; HB 08-1387, provided by the Colorado Legislative Council; "New Energy Assistance Law to Help Lower Heating Bills," by Gary Harmon, The Grand Junction Daily Sentinel, May 27, 2008; "Amendment 58, Severance Taxes on the Oil and Natural Gas Industry," Colorado Legislative Council; "Text of Amendment 58," Colorado Secretary of State's Office.

[7C] "Colorado Ballot Analysis, Amendment 58, Severance Taxes on the Oil and Natural Gas Industry," Colorado Legislative Council; "Mining Taxes in 10 Western States," the Oil and Gas Accountability Project; "Tax Collection Report, 2006-07," Louisiana Department of Revenue.

[8C] "Colorado State Energy Profile," U.S. Energy Information Administration

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[10C] "Existing Structure of Mineral Revenues in Colorado," Colorado Legislative Council

[11C] "Existing Structure of Mineral Revenue in Colorado," Colorado Legislative Council, and "Oil and Gas Operations at a Glance," Colorado Oil and Gas Conservation Commission. (Note: The Denver-Julesberg Basin includes production in Weld, Yuma, Adams, Washington, Boulder, Broomfield, Phillips, Arapahoe, Morgan, Logan, Denver, Elbert, Sedgwick, and Lincoln counties. The Piceance Basin includes production in Garfield, Rio Blanco, Moffat, Mesa, Gunnison, Jackson and Routt counties. The Raton Basin includes production in Las Animas and Huerfano counties. The San Juan Basin includes production in La Plata, San

Miguel, Archuleta, Dolores and Montezuma counties. The "other" category includes counties in southeastern Colorado that lie outside of the Denver-Julesberg and Raton basins: Cheyenne, Baca, Prowers, Kiowa, Bent and Kit Carson counties.)