



# The Policy Institute

## “Montana’s Oil and Gas Tax Holiday: Analysis and Recommendation for Change”

A Report of The Policy Institute

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*The Policy Institute blends authoritative research and hands-on political engagement to create public policy based on economic justice, fair taxation, corporate accountability and environmental responsibility.*

## **SUMMARY**

Over the past 30 years, the Montana Legislature has steadily reduced the tax responsibility of the oil and gas industry in the state. Decisions by the 1999 Legislature alone reduced tax revenue to the state and counties by hundreds of millions of dollars in subsequent years. The most influential of tax reduction methods has been the oil and gas tax "holiday," which discounts tax rates on new wells for defined periods of time.

This analysis finds that academic research, empirical data, and the actions of other oil- and gas-producing states collectively refute the assertion that the level of taxation is a significant factor in decisions related to oil and gas development, and that questions of reserve quantities, market prices, technological advances, and access to markets are more important considerations. The analysis concludes with a recommendation for a new structure of oil and gas taxation in Montana that will both increase revenue to state and local governments and assure fairness through tax rates that vary with market prices of the resources.

## **BACKGROUND**

Taxation of the oil and natural gas industry by local, state, and federal governments has long been used to generate revenue for the support of public programs. This analysis examines oil and gas taxation by the State of Montana, with particular emphasis on a policy currently in place and known as the oil and gas tax "holiday."

Oil and gas taxation takes many forms, including severance (production) taxes (usually applied to the gross taxable value of the produced resource), ad valorem taxes, excise taxes, indemnity taxes, net proceeds taxes, and various kinds of fees. Several oil- and gas-producing states apply a mix of taxation methods, and many states utilize different formulas or tax rates for oil and gas, respectively.

Over the years, Montana has utilized several forms of oil and gas taxation. The idea of a tax "holiday," or a period of time during which the production from an oil or gas well, usually a newly drilled one, is allowed a discount from the standard severance tax rate, dates to at least 1979, when the Montana Legislature exempted production from natural gas wells drilled to depths of 5,000 feet or more.

Another useful benchmark is 1981, when the Legislature increased the state's severance tax on oil from 2.65 to 5 percent for 1982-83 and to 6 percent thereafter. Montana's severance tax on oil had not been increased since 1962, and the 1981 increase was proposed to offset a reduction in vehicle license taxes.

Since 1981, however, the predominant theme in the modification of oil and gas taxation in Montana has been to reduce the tax responsibility of oil and gas producers. In several of the legislative sessions since that year, Montana lawmakers have enacted various tax "incentives" for the oil and gas industry, justified as necessary to promote exploration and development during times when prices, especially for oil, had fallen from the levels of preceding years. Those changes usually took the form of reduced severance tax rates for new wells, stripper wells (those

approaching the end of their economic life), horizontally drilled wells, and enhanced oil recovery projects (those utilizing new methods or technology to extend production). In addition to generally reducing taxes for the oil and gas industry during this period, the changes enacted by the Montana Legislature often contributed to the complexity of the state's oil and gas taxation structure.

By 1995, Montana had, in addition to a State Severance Tax (for support of the state's general fund), a Privilege and License Tax (to support the operation of the State Board of Oil and Gas Conservation), a Resource Indemnity and Groundwater Assessment Tax (for a reclamation trust fund), a Local Government Severance Tax (to finance county governments), and a Net Proceeds Tax (a flat severance tax in lieu of property tax on oil and gas used to fund local governments). In that year's legislative session, Montana lawmakers enacted Senate Bill 412, which consolidated the state's various oil and gas taxes and, according to the bill's promoters, simplified the state system. In the same year, Senate Bill 338 expanded the holiday concept by providing a 24-month exemption from state severance tax on production for oil and gas wells drilled after March 31, 1995.

In 1999, again under the banners of "simplification" and "incentive," the Montana Legislature reduced tax rates for various methods of oil and gas production. With enactment of Senate Bill 530, severance tax rates for all oil wells drilled before 1985 were reduced from 13.9 to 12.5 percent (natural gas was reduced from 18.55 to 14.8 percent). For new wells, i.e., those drilled after 1999, the basic severance rate on oil was reduced from 12.5 to 9.0 percent (natural gas from 14.8 to 9.0 percent). For horizontally drilled wells, the top severance rate on oil was reduced from 12.5 to 9.0 percent for wells drilled after 1999 (natural gas from 15.5 percent to 9.0 percent). The defined size of stripper oil wells was expanded from 10 to 15 barrels per day, and the severance rates for stripper wells were also reduced.

In addition, the 1999 Legislature redefined the tax holiday for oil and natural gas. Applying to wells drilled after 1999, the holiday period was set at 12 months for vertical wells and 18 months for horizontal wells. During the holiday period, the severance rate is 0.5 percent (for both oil and gas); upon expiration of the holiday period, the rate returns to the basic level of 9.0 percent (both oil and gas).

In 2005, the Legislature enacted a "bonus" tax reduction for oil stripper wells producing 3 barrels per day or less, dropping the severance rate from 12.5 to 6 percent when the price of West Texas Intermediate crude oil was above \$38 per barrel. (Note: Unless otherwise noted, oil prices provided in this analysis are for West Texas Intermediate, the most common benchmark for U.S. oil prices. Montana-produced oil typically sells for less than West Texas Intermediate because of transportation and marketing factors.)

## **RATIONALE FOR THE HOLIDAY**

Senate Bill 530 was the 1999 bill that defined the current holiday terms. At the time (and for all reductions in Montana tax rates since the 1980s), the case for lowering tax rates for oil and gas production was that the tax breaks would create jobs and promote economic growth in the state.

The tax incentive was needed, the argument continued, because of low oil and gas market prices (oil was selling for about \$20 per barrel in 1999).

Promoters and defenders of oil and gas tax incentives in Montana have offered little evidence to demonstrate a direct connection between lower oil and gas tax rates and job creation or economic growth. The advocates for incentives frequently argue that increased oil production in Montana since the mid-1990s reflects the tax breaks passed in that period by the Legislature. Indeed, oil production in Montana ended several years of decline around 1995, when significant tax breaks were enacted, held steady for about six years (at 1.4 million barrels per month), then rose dramatically to its 2007 level (approximately 3 million barrels per month). In addition, the number of new horizontal wells, a category that received particular attention in tax rate reductions, rose from a negligible level in 1995 to a level that produced about two thirds of all oil production in Montana by 2007.

Thus, a correlation exists between tax incentives and oil production, but is it causal, and if so, to what degree? At least three other factors explain the pattern of Montana's oil production since 1995:

- 1) Price: Oil, selling for less than \$20 per barrel (in 2007 dollars) in 1994, experienced a two-year rise, then dipped in 1996-97. In 1998, oil prices began the sharp and generally steady rise that led to a 2007 average price of \$66 per barrel and to a June 2008 high of \$147 per barrel.
- 2) Discovery: Around 1995, the East Lookout Butte field began to produce, and the Cedar Creek Anticline Re-Development began in 1997. The biggest discovery, however, was the Elm Coulee Field, in Richland County, which began producing in 2000 and by 2005 had doubled Montana's total oil output, meaning that this one new field was producing more oil in Montana than all other fields in the state combined.
- 3) Technology: Drilling methods and equipment evolved markedly during the 1990s. The use of horizontal drilling, though not new to oil extraction, increased rapidly as technology advanced, oil prices rose, and the geology of Montana's predominant new field, Elm Coulee, proved highly suitable for the horizontal approach.

Another argument given for lowering Montana's oil and gas tax rates is that lower production rates in neighboring states draw development away from Montana. This is the established race-to-the-bottom approach to taxation wherein taxing jurisdictions (states, local governments) compete for business investment by vying to be the most generous and least demanding host. Currently, for example, industry representatives and local boosters in eastern Montana have complained that oil and gas tax rates in North Dakota are now lower than those of Montana and are thus attracting most available oil rigs, leaving Montana with too few rigs to adequately develop new resources.

## **ANALYSES OF THE TAX INCENTIVE QUESTION**

There is a diversity of approaches to oil and gas taxation taken by states, and some states tax less than others. Once again, however, one must question how differences in tax rates figure into the investment decisions made by oil and gas companies as compared to other factors, such as

product price, labor availability and quality, the ease of transporting the extracted product to markets, and the quantity, quality, and accessibility of the resource.

Expressed in fundamental terms: How significant a factor is the level of state taxation in decisions by oil and gas companies to develop resources in particular states?

A reasonable answer to the question must transcend both ideological cliches, e.g., "Reducing taxes is always good for the economy," and the too-simple reference to a correlation between higher production with lowered severance taxes that ignore the influential factors of reserves, market price, geology, and technological advances. Yet, given the variety of tax methods in oil- and gas-producing states, together with the sizable state revenue to states generated by the taxes, there are relatively few published analyses of the relative importance of state taxation to company decisions about where, when, and how much to invest in oil and gas development.

One applicable study on the subject is "Mineral Tax Incentives, Mineral Production, and the Wyoming Economy," a paper published in 2000 by the University of Wyoming. One of the questions addressed by that paper resembled the one we posed above:

"[T]o what extent do taxes, tax incentives, and environmental regulations alter employment and other economic activity in Wyoming as compared with what would occur in their absence?"

The study answers this question in the context of various tax-change scenarios, including a once-and-for-all reduction of 2 percentage points in severance tax on oil, a 2 percentage-point reduction for one year and an elimination of the incentive after that time, and a severance tax reduction of 4 percentage points in perpetuity.

Estimated production increases, as well as tax revenue decreases, vary with each scenario, but the outcomes are similar: changes in oil and gas drilling and production attributable to lower tax rates are relatively small, but for state coffers "the overall story is one of a substantial loss of revenue."

"Why is the response of oil and gas output so small when production taxes are changed or tax incentives are applied?" asks the Wyoming study. Four reasons are given:

- 1) "A reduction in production taxes offers no direct stimulus for exploration." Because production is predominantly driven by reserves, a reduction in severance tax does little to increase production, whereas an incentive to drill, as opposed to produce, would lead to greater discovery and more production.
- 2) "Production taxes and tax incentives are deductible against federal corporate income tax liabilities." When severance tax rates are lowered, federal income tax liabilities rise. Thus, to a certain degree, when a state lowers its severance tax, the oil and gas companies are required to yield a certain percentage of their gains in the form of increased federal taxes.
- 3) "A reduction in production tax rates by, say, 2 percentage points has only a small impact on the net-of-tax price received by operators." By the time an oil company accounts for all federal, state, and local taxes, as well as royalties, a reduction in

severance tax rate adds up to a relatively small increase in the after-tax price per barrel of oil.

- 4) "Fourth, and most importantly, production of (as contrasted with exploration for) oil and gas is driven mainly by reserves, not by prices, production tax rates, or production tax incentives. This is a basic fact of geology and petroleum engineering and is easily illustrated by Wyoming's own history of oil production." The study notes that Wyoming's production declined from 1970 to 1997, even during the late 1970s and early 1980s, when oil prices rose by a factor of more than 10. "Thus," the paper concludes, "even comparatively large price increases or tax reductions are not expected to call forth much additional output."

A more recent analysis was published by Headwaters Economics, a nonprofit research group in Bozeman. "Energy Revenue in the Intermountain West: State and Local Government Taxes and Royalties from Oil, Natural Gas, and Coal" compares the taxing strategies of five Intermountain West States - Colorado, Montana, New Mexico, Utah, and Wyoming - and how the respective states direct their revenues to fund public programs and build long-term wealth. Importantly, the study examines the relationship between tax rates, resource development, and tax revenue.

The Headwaters study finds that Montana's effective tax rate is toward the lower end of the five-state scale, which includes Colorado at 6.2 percent, Montana at 9.8 percent, Utah at 12.1 percent, New Mexico at 15.0 percent, and Wyoming at 15.9 percent. Montana's rate has dropped significantly since 2001, when it, along with New Mexico's effective rate, was the highest of the five states.

To illustrate its findings on how state tax rates affect mineral exploration and government revenue, the Headwaters study compared the policy paths taken by Montana and Wyoming in the late 1990s, when energy prices were low and production levels were flat in both states. In 1999, Montana lowered its basic tax rates and enacted the holiday rates, and Wyoming also lowered its severance tax rate by 2 percent.

In 2000, however, Wyoming repealed the 2 percent tax break it had enacted in 1999, and in subsequent years made other changes that elevated its effective tax rate the subject minerals to 15.9 percent, the highest of the five profiled states. Thus, Wyoming opted to increase oil and gas tax rates, while Montana chose to lower them. This is how the Headwaters study characterized the results of the two approaches:

"Both states have experienced a surge in natural gas drilling and an increase in commodity prices since 2000. Wyoming added over \$10 billion in production value and Montana about \$2 billion between 2000 and 2006. New drilling continues in Wyoming at a faster pace than in Montana, and Wyoming's energy economy is significant. There is little evidence in the overall figures to suggest that firms fled Wyoming's higher tax climate and moved to Montana."

Like the Wyoming study cited earlier in this analysis, the Headwaters report raises the "caution about drawing too many conclusions about industry activities from tax rates alone." Yet it offers this summary finding on the subject:

"The oil, natural gas and coal industries are guided chiefly by the location of reserves, and are less able to relocate than are industries with mobile capital resources (such as textile mills or auto-makers). Other factors such as price, access to markets (e.g., oil and natural gas pipelines), and technology have more significant effects on industry activities. We also find no evidence to suggest that the dramatically different effective tax rates in the Intermountain West have led to more or less investment from state to state... . Wyoming has captured proportionately higher benefits than Montana from the current surge in energy production value, and there is no evidence that Montana's tax breaks worked - Montana has stimulated less, not more energy development than Wyoming and left more than a half a billion in revenue on the table."

## **TWO OTHER STATES**

For oil, North Dakota applies a gross production tax rate of 5 percent and an "extraction" tax rate of 6.5 percent. In 2007, the state's Legislature enacted a tax holiday on oil production by reducing rates for new wells in the Bakken Formation (from 11.5 to 7 percent for the first 75,000 barrels of production or the first 18 months, whichever occurs earlier). In addition, the state offers various reduced rates or exemptions for new horizontal wells, new wells drilled on Indian land, workover wells, stripper wells, enhanced recovery wells, and other qualifying wells.

In 2007, the Alaska Legislature approved a major tax increase on the oil industry. In the fiscal year ending June 30, 2008, it raised an estimated \$6 billion and doubled the tax revenue from the previous year. The tax, applied to the net profit of oil produced from state-owned land, is highest in Prudhoe Bay, where the state collects 25 percent of the net profit when oil is selling at or below \$52 per barrel. The tax percentage then increases with the price of oil, so that the state gets \$49 when oil is at \$120 per barrel. ConocoPhillips, the oil company, has said that, with all taxes and fees considered, the state collects about 75 percent of the value of a barrel of oil.

## **COST OF THE HOLIDAY IN MONTANA**

When the Headwaters Economics report stated that Montana "left more than a half a billion in revenue on the table" (as referenced above), it was referring to the tax revenue lost as a result of tax breaks awarded by the Montana Legislature. In September 2008, the Montana Department of Revenue released an analysis of impacts on state tax revenue from oil and gas tax changes passed by the 2009 Montana Legislature and signed by then-Governor Marc Racicot. Spanning the five-year period, 2003-2007, the analysis addresses not only the holiday element of the changes, i.e., the reduced rates on new wells, but the reduced basic severance tax on all wells drilled after 1999.

According to the Department of Revenue analysis, Montana's state government, together with its oil- and gas-producing counties, experienced a loss of \$515 million in revenue during the five-year period, 2003-2007, as a result of the 1999 tax changes. In that period, the state and counties collected \$584 million through oil and gas taxation; had the 1999 changes not been made (and assuming constant production levels), the state would have collected \$944 million.

During the same five-year period, 2003-2007, the decreased revenue to state and county governments due to just the holiday element of the tax structure was \$258 million (\$205 million for oil and \$53 million for gas).

The state takes about 55 percent of the revenue from oil and gas taxation, while the share for oil- and gas-producing counties is 45 percent. Ninety percent of the state's revenue share goes to the General Fund, and the remaining 10 percent is distributed to the Coal Bed Methane, Research and Development Grants, University SSR, and Orphan Share accounts.

To put the revenue loss to the General Fund in perspective, the revenue loss from the 1999 oil and gas tax breaks in Fiscal Year 2007 was approximately \$73 million, or about 4 percent of the 2007 General Fund revenue of \$1.8 billion.

## **RESTORING BALANCE TO OIL AND GAS TAXATION IN MONTANA**

Any equitable proposal for changing the structure of oil and gas taxation in Montana should reflect these precepts:

- While it may be desirable to provide incentives through the tax system to promote specific forms of economic development, such incentives should be established with evidence that they will serve as central motivating factors in the investment deliberations of the beneficiaries of the incentives. Because tax incentives can either decrease public revenue or increase tax burdens on others - and oftentimes both - they should be established only with a compelling rationale for their effectiveness, and they should be continued only with proof that they are functioning as intended.
- Because energy issues reverberate so powerfully in people's lives - from the cost of heating a home to the question of climate change to concerns about national security - it is tempting to focus anxiety about the volatility and impacts of energy issues on the oil and gas industry. Yet, while the oil and gas industry should be held fully accountable for its role in the economic, environmental, and diplomatic problems of our time, no tax policy should be enacted for punitive reasons. Tax policy for the oil and gas industry should be based on the same, fairness-based standards used for other taxpaying constituencies.

With regard to the first precept, there is evidence, e.g., the Wyoming academic analyses, that oil and gas severance tax rates are not a major factor in the development decisions of industry; rather, the question of resource reserve quantities is the predominant factor in development decisions. The situation in Alaska since that state enacted large tax increases in 2007 appears to corroborate this idea, in that the oil and gas industry, which vigorously opposed those tax hikes, has neither departed the state nor visibly relaxed its development objectives because of higher taxes. Alaska's sizable resource reserves and the escalation of global oil and gas prices in recent years (until mid-2008) appear to have dictated the scale and pace of development in the state. The history of Alaska's 2006 tax policy changes is still in its initial stage, however, so any forthcoming analyses on the ramifications of the state's severance tax increase should be illuminating.

In Montana, with no evidence to demonstrate that the holiday element of tax-reducing legislation enacted in 1999 significantly affected resource development, and with data showing that the holiday has cost state and county governments \$500 million from 2003 to 2007, the reasonable course of action is for the Montana Legislature, at its next opportunity, to repeal the holiday statute and reinstitute the basic production tax rate to all new wells. (For wells currently paying taxes at holiday rates, it is fair to allow them to continue paying those rates until the expiration of their holiday periods.)

With regard to the second precept, i.e., maintaining fairness in taxation, a tax structure for oil and gas production should account for both the cost of production and the volatility of product prices. These two factors suggest that a sliding scale for a production tax is appropriate, so that as the market price for the product rose, the tax rate would rise also. This approach would minimize the tax burden on producers when prices and, thus, industry profits were lower, and it would ensure a fair industry contribution to the public weal when prices, and profits, were high.

Our recommendation for sliding-scale taxation of oil and gas production in Montana is below:

| <b>OIL – Market Price</b> | <b>Tax Rate</b> | <b>GAS – Market Price</b> | <b>Tax Rate</b> |
|---------------------------|-----------------|---------------------------|-----------------|
| Less than \$40/barrel     | 9.0%            | Less than \$6/mcf         | 9.0%            |
| \$40-\$80/barrel          | 12.5%           | \$6-\$8/mcf               | 12.5%           |
| \$80-\$100/barrel         | 15.0%           | \$8-\$10/mcf              | 25.0%           |
| \$100-\$120/barrel        | 20.0%           | \$10-\$12/mcf             | 20.0%           |
| \$120-\$150/barrel        | 25.0%           | \$12-\$14/mcf             | 25.0%           |
| Greater than \$150/barrel | 30.0%           | Greater than \$14/mcf     | 30.0%           |

The effect of the above structure is twofold: 1) it removes the tax holiday for all new wells; and 2) it applies a lower tax rate when product price is low and increases the rate as prices increase. The recommended structure leaves the reduced production tax rates set by the 1999 Legislature in place for oil and gas when prices are below \$40/barrel and \$6/mcf, respectively.

To understand how this suggested tax matrix would affect revenue to state and local governments, it is instructive to apply it to oil and gas production during the years 2003-2007, the period during which the Department of Revenue estimated a loss of \$500 million in revenue as a result of tax changes made by the 1999 Legislature. When the 1999 tax structure is replaced by the The Policy Institute's matrix, it shows that the revenue loss during the five-year period would have been approximately \$50 million, or \$450 less than what was actually experienced.

The hypothetical increase of \$450 million in revenue from 2003-2007 would have been comprised of \$296.3 million from oil production and \$154.4 million from gas production. Approximately 83 percent of the increased revenue from both oil and gas, respectively, would have been generated by the absence of a holiday rate during the period; 17 percent of the increase would have been generated for both resources, respectively, by the increase in basic, or "regular," production tax rates during periods of higher prices.

The Policy Institute's recommended matrix would have produced no additional revenue from production taxed at the regular, or non-holiday, tax rates in 2003 and 2004, when oil and gas

market prices were moderate (oil averaged approximately \$33/barrel during the period, and gas averaged approximately \$5.17/MCF). In 2005-2007, however, when oil and gas prices climbed significantly, The Policy Institute's matrix would have produced increased regular tax revenue by approximately \$75 million.

Applied to production in 2008, when the average price of oil was \$95/barrel and that of gas was \$8.03/MCF, The Policy Institute's recommended matrix would have generated \$206 million in additional revenue to state and local governments in Montana. Of that total, 57 percent would have come from the rescission of holiday tax rates, and 43 percent from elevated regular production tax rates.

## **VIEW TO THE FUTURE**

Given the number and volatility of variables (resource reserves, discoveries, market prices, access to market, technological advances, and others) that influence oil and gas production, it is difficult to predict tax revenue, no matter what method of taxation is used. As for how The Policy Institute's recommended tax matrix would affect revenue, these relationships can be hypothesized:

- If oil and gas production in Montana declined due to decreasing resource reserves, yet prices remained relatively moderate and constant, tax revenue from The Policy Institute's matrix (and from any other production-based tax mechanism) would decline. If a declining-production scenario were characterized by a smaller percentage of new wells, which, under the existing tax structure, would be eligible for holiday tax discounts, the difference between revenues produced by The Policy Institute's matrix and the existing matrix would narrow over time.
- If oil and gas production in Montana remained relatively constant at 2008 levels and prices remained moderate and stable, it would infer that new discoveries were being made and reserves were not decreasing. In this scenario, The Policy Institute's matrix would produce significant revenue gains, primarily because new wells would not be subject to holiday discounts.
- If market prices for either oil or gas increased significantly - for example, to \$80/barrel or \$8/MCF, respectively - and reserves declined, the revenue gains from The Policy Institute's matrix would be significant. As time passed and the proportion of new wells decreased, the revenue increase would be increasingly attributable to higher regular production tax rates and not to non-holiday taxation of new wells.

Additional scenarios can be conceived, but in most, if not all, of them, The Policy Institute's proposed matrix would result in higher public revenue and, given the evidence cited in this report, no measurable loss in oil and gas development because of higher taxes on production.

Montana's taxation on the extraction of oil and gas should be accomplished through a system that reflects the value and irreplaceability of the resource, recognizes the hierarchy of factors that influence development, and assures fairness by applying variable tax rates over the full spectrum of market price possibilities.

[APPENDIX 1](#)

[APPENDIX 2](#)

[APPENDIX 3](#)