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**New Analysis: Is Rocky Mountain Approach to Fossil Fuel Extraction
Maximizing Benefits and Minimizing Costs for States, Communities?**

***Study Shows Performance of Fossil Fuels During Recent Recession,
Importance to Each State's Economy, and the Role of Energy in Local Communities***

BOZEMAN, Mont. – A new study by Headwaters Economics compares the importance of the fossil fuel economy in the five Rocky Mountain energy-producing states—Colorado, Montana, New Mexico, Utah, and Wyoming—and analyzes the relative success that states and communities have had in maximizing benefits and minimizing the costs of energy development. The report concludes with a series of policy recommendations to achieve that goal.

“Fossil fuel development involves enormously valuable resources, but employment and revenue are driven by price which can change rapidly,” said Julia Haggerty Ph.D., the report’s author. “This volatility poses obstacles to stability and long-term economic growth, and the local costs and benefits of fossil fuel energy development are experienced unevenly. Fortunately, policy reforms at the state and local level can help ensure that the public receives a lasting benefit from energy production.”

The Headwaters Economics report—*Fossil Fuel Extraction and Western Economies*—examines the role of fossil fuels at a state level with three important findings. First, fossil fuel extraction plays a limited role in state economies, and energy-related jobs, except for Wyoming, provide less than three percent of both total employment and total personal income.

Second, price—not policy—is the primary driver of oil and gas development activity, making it highly volatile. Employment and income from mining, including energy development, in the five-state region follow commodity price trends, and income compensation from mining shrank by the largest percent—16.1 percent from 2008 to 2009—of any economic sector.

Third, tax revenue from fossil fuel extraction—rather than jobs—is the longest-lasting economic legacy of fossil fuel development. While energy revenue varies because of price volatility it continues to accrue long after most jobs have left a region. By maximizing collection of fossil fuel revenue and ensuring it is adequately distributed, states increase the benefits of energy development.

The study utilizes these and other findings, along with the results from case studies in Colorado and Wyoming, to provide a series of policy recommendations. The full study, summary, and policy recommendations can be found at <http://headwaterseconomics.org/energy/western/maximizing-benefits>.

The findings and policy recommendations are summarized below along with references to graphics and page numbers in the full report:

Fossil Fuels, the Recession, and the Economies of the Five States

Chapter One examines the role of fossil fuel development in the regional economy and contains specifics for each state. Findings include:

- Fossil fuel extraction has a limited influence at the state level on economic indicators such as GDP by State, personal income, and employment (see tables on page iii of the Executive Summary as well as Chapter 1). This means that while small groups of employees and certain mining areas within the Rocky Mountain States are heavily exposed to volatility in the oil and natural gas prices (see Figures ES-1 and 1-7), the performance of state economies overall is tied to the broader economy. In all the states except Wyoming, mining jobs are less than three percent of both total employment and total personal income.
- Price—not policy—is the primary driver of oil and gas development activity, and the report found that employment and income from mining in the five-state region follow commodity price trends (pages v and pages 13-15).
- In the recent recession, jobs in construction, manufacturing, and real estate represented the bulk of lost income compensation in the five states. However, income compensation in mining, including energy development, shrank by the largest percent—16.1 percent from 2008 to 2009—of any sector, demonstrating the continued volatility of this industry (see page iv and page 6).
- The exception is Wyoming, with its heavy specialization on mining. The recession appeared to arrive late in Wyoming and also produced less steep employment losses. During the recession, however, Wyoming experienced the largest percentage decline in personal income of the five states, largely due to its energy-focused economy.

The Role of Fossil Fuel Revenue in State Budgets

Findings from Chapter Two have state-by-state breakdowns. Highlights include:

- Tax revenue from fossil fuel extraction is the longest-lasting economic legacy of fossil fuel development. While revenue varies because of price volatility (see Figures 2-1 and 2-3), it continues to accrue long after most jobs have left a region. By maximizing collection of fossil fuel revenue and ensuring it is adequately distributed, states increase the benefits of energy development.
- Prices for oil, natural gas, and coal remained high for nearly a year after the onset of the recession in 2007 and tax revenues grew well into Fiscal Year 2009, buffering state budgets in energy-producing regions from the early declines in tax revenue felt elsewhere.
- Ultimately, the decline of fossil fuel prices and reduced revenue exposed the study states to the impacts of the recession. In FY 2010, severance taxes declined at a faster rate than other sources of revenue and many energy-producing states then faced significant revenue shortfalls and/or budget gaps.
- Several other factors, including structural and policy issues, exposed energy-producing states to deeper budgetary impacts than might be expected based on the wealth generated through fossil fuel extraction. Each state made decisions that left them exposed to one or more impacts of the recession.
- There is significant room for improvement in each state's energy tax structure. Each does a few things well, and could improve in other areas. Wyoming, for example, has saved a significant amount in a permanent fund that could support the state General Fund for more than six years, but the

state currently shares little with communities where development is taking place. Colorado has done a good job directing revenue back to energy-producing communities, but it taxes at a low rate and has not saved for the future. Colorado's permanent fund would finance the state's General Fund for only two weeks.

Do Local Communities Benefit from Fossil Fuel Development?

Chapter Three focuses on the natural gas surge in Garfield and Mesa counties in Colorado and in Sublette and Sweetwater counties in Wyoming.

- The ability of communities and their leaders to use increased revenue to diversify and stabilize their economic future varies based on state revenue distribution systems, and on local politics and decision-making. For example, Mesa and Garfield counties received vastly different levels of revenue during the natural gas surge in western Colorado (see Figure ES-4), despite both playing important roles as bases for employees.
- The local costs and benefits of fossil fuel energy development are experienced unevenly. Cities and towns carry much of the burden of energy development by serving as housing and service centers for oil and gas fields, but typically cannot tap into the property tax revenue that is the backbone of mineral wealth. Mineral-rich, sparsely-populated jurisdictions may have access to more revenue, but are often totally overwhelmed by the build-up phase of an energy boom. This contrast is exemplified in the different experiences with the natural gas surge between Mesa County, a regional population center, and the relatively more rural Garfield County on Colorado's Western Slope.
- Community economic success in energy development also depends on an ability to understand and address cumulative impacts of development on those amenities essential to long-term economic prosperity and diversification such as scenery, water, and air quality. Local, regional, and state governments vary in their capacity and success with anticipating, monitoring, and responding to such impacts.

“Some communities such as Rock Springs, Wyoming have recovered from the impacts of the boom and appear to have entered into a more manageable phase of energy-led economic development,” noted Haggerty. “But these successes are exceptions and may be short-lived. Many local governments face budget shortfalls exacerbated by fossil fuel development to pay for roads, infrastructure and other costs. In addition, cumulative impacts—such as degraded air quality—will be costly at the local, regional, and state level.”

Conclusions and Policy Recommendations

The Executive Summary provides a series of policy recommendations:

Increase Revenue

- Raise base tax rates and remove production incentives. Examples include a Colorado tax incentive that allows producers to write off local property tax against state severance tax liability and Montana's oil and gas tax holiday that reduces rates by either the first 12 months for vertical drilling and by the first 18 months for horizontal drilling.
- Shift state incentives from production to exploration and research and development. Studies have shown that production incentives perform weakly compared to efforts to facilitate exploration and R&D when it comes to actual production levels.
- Avoid a race to the bottom by pursuing comparable tax rates across the region. Effective tax rates on fossil fuel production range from about six to about 16 percent across the five states.

Improve Revenue Management and Distribution

- Reform tax policies that exacerbate the lag between the timing of impacts and actual revenue collection and distribution. Revenue often may not accrue until one to two years after production begins, at which point which many local impacts have already occurred. Montana eliminated local property taxes on production and replaced them with an oil and gas production tax, reducing the lag. However, Montana also introduced a tax holiday on oil and gas production that delays revenue to local governments by 12 to 18 months.
- Avoid the use of severance taxes, which are highly volatile, to fund basic government services.
- Establish permanent funds to dampen the negative effects of revenue volatility. For this reason, permanent funds are a better source of funds for basic government services and can provide principal for grants and loans to address impacts of energy development. Wyoming and New Mexico have established the largest permanent funds in the region, while Montana does not invest any oil and gas revenue into a permanent fund.
- Reform distribution of revenue to ensure state support where needed. Colorado revamped its energy assistance program in 2007, improving local government access to energy revenue for both impact mitigation and long-term economic development efforts. Revenue distribution in Wyoming, in contrast, remains poor.
- Eliminate state imposed revenue and spending limitations that force communities to forgo revenue from oil and natural gas production. Colorado's Taxpayer Bill of Rights (TABOR) has been especially detrimental in Mesa County, Colorado.
- Ensure that local and regional governments have access to energy revenue to support long-term economic diversification and development. For example, the state of Colorado made energy revenue funding available for regional clean energy initiatives. In Garfield County, the funding helped launch an effort that has grown businesses and jobs and has funded clean energy infrastructure.

Avoid Costly Impacts

- Protect air and water quality through a precautionary approach to leasing and development plans.
- Direct oil and gas development to appropriate areas, and permanently protect vulnerable areas, through proactive planning that engages private landowners, local, regional, and state representatives as well as federal agencies.
- Establish threshold measures of cumulative impacts that include biological as well as socioeconomic metrics. Enforce moratoriums or other checks on the pace and scale of development linked to such triggers.
- Set money aside for impact mitigation at multiple scales of government. Impacts such as loss of water quality and air pollution are likely to exceed local resources. Successful mitigation typically requires coordination and funding across agencies.

About Headwaters Economics

Headwaters Economics is an independent, nonprofit research group that assists the public and elected officials in making informed choices about energy and economic development,

<http://headwaterseconomics.org/>.