



INDEPENDENCE INSTITUTE ISSUE BACKGROUNDER

UNREALIZED VALUE: COLORADO'S ENERGY DEVELOPMENT ON FEDERAL LAND

BY BRANDON RATTERMAN • IB-F-2013 • SEPTEMBER 2013

Relative to other states in the Rocky Mountain region, Colorado is underutilizing its federal land for energy development, specifically for oil and gas development. On average, the states in the Mountain West region produce 40 percent of their oil, and 50 percent of their natural gas on federal land. Meanwhile, Colorado produces 10 percent of its oil, and 20 percent of its natural gas on federal land. While Colorado does have a smaller portion of federal land—36.6 percent—than all other Mountain West states except Montana,¹ the opportunity cost to the state is significant:

- If Colorado increased its oil and gas development on federal land, the state could add thousands of jobs, hundred of millions of dollars in tax revenue, and billions in total value to Colorado's economy.
- The economic benefits from oil and gas development on federal land are estimated to be an order of magnitude larger than the economic benefits from renewable energy development.
- Colorado's missed opportunities in oil and gas development are largely due to delays from regulatory hurdles and related litigation.

A recently released report titled "The Economic Value of Energy Resources on Federal Lands in the Rocky Mountain Region," by Dr. Timothy Considine,² shows that over the past eight years, Colorado has lagged the Mountain West region in the proportion of oil and gas production that comes from its federal land. This missed economic opportunity is due largely to Colorado's tight regulatory environment and the decision to pursue renewable energy development instead.

In the report, Dr. Considine compared the payoffs from developing renewable and non-renewable energy projects in each of the Mountain region

states, which includes Colorado, Wyoming, Utah, New Mexico, Montana, Nevada, and Idaho.³ The results for Colorado show a tremendous opportunity to increase jobs, tax revenue, and value across the state by increasing non-renewable energy development on federal land.

METHODOLOGY

Dr. Considine's method to compare renewable and non-renewable resource development involved two stages. First, the development of each resource has impacts on jobs and tax revenues during construction of the energy-producing facilities. During the second phase, the economic impacts arise from the income generated during the operation of those facilities. The income is put back into the economy through consumer spending. Together, these two stages shed light on the amount of benefit that each resource provides.

The non-renewable benefits were estimated using input-output models from INPLAN Group, LLC. These models are based off of data from the Bureau of Economic analysis and are widely used to estimate inter-industry transactions between various sectors of the economy. The renewable energy benefits were taken from the National Renewable Energy Laboratory's (NREL) Jobs and Economic Development Impact Models, which are also derived from the services of IMPLAN Group, LLC.

THE RESULTS

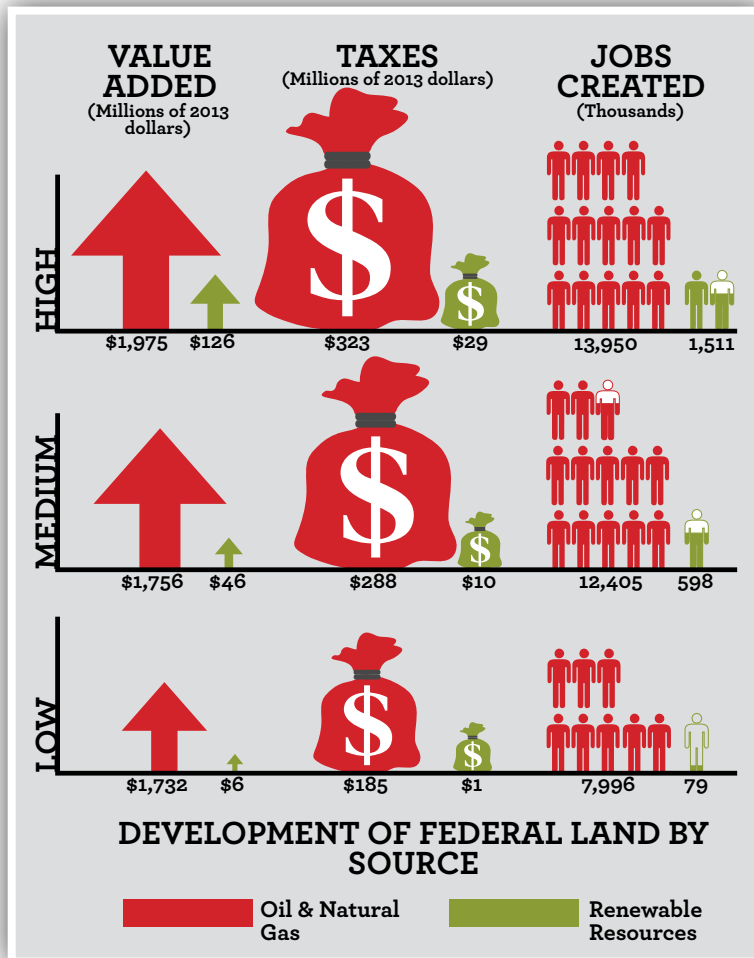
Dr. Considine compared the economic benefits of non-renewable and renewable energy in low, medium, and high development scenarios over the next 10 years. Under the medium scenario, 363 new wells would be drilled on federal land each year. That development would result in \$1.7 billion in value to Colorado's economy, \$286 million in tax revenue, and over 12,000 jobs. Conversely, developing the medium scenario for renewable

energy—2.5 percent annual growth in wind energy capacity and an additional 25 MW of solar power capacity per year—would result in \$45.7 million in economic value, \$9.8 million in taxes, and 598 jobs.

on Federal Lands in the Rocky Mountain Region,” Interstate Policy Alliance (June 2013).

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The major results of the study are illustrated in the infographic. In almost every category of all three scenarios, the economic benefits of oil and natural gas development are at least one order of magnitude larger than the benefits of renewable energy development. Yet, despite these economic incentives, Colorado foregoes energy development by producing only 20 percent of its oil and 10 percent of its natural gas on federal land. As shown, increasing these levels would provide an economic boost to Colorado’s economy. Instead, Colorado federal lands seem to be closed for business.



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ADDITIONAL RESOURCES can be found at: <http://www.i2i.org/>.

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ENDNOTES

¹ *New York Times* “The Open West, Owned by the Federal Government” <http://www.nytimes.com/interactive/2012/03/23/us/western-land-owned-by-the-federal-government.html>.

² Dr. Considine earned his PhD from Cornell University and has since been published in many of the top economics journals. Currently he is a Professor of Economics and the Director for the Center for Energy Economics and Public Policy, at the University of Wyoming. In August 2013, the University of Wyoming Department of Economics and Finance ranked 30th overall for institutions in the field of Energy Economics. “Top 10% Institutions and Economists in the Field of Energy Economics, as of August 2013,” Federal Reserve Bank of St. Louis (September 2013), <http://ideas.repec.org/top/top.ene.html>

³ Considine, T.J. “The Economic Value of Energy Resources