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Summary of Testimony

1. The new American energy boom associated with shale oil and natural gas extraction has led to significant increases in high-paying jobs in the energy sectors of the U.S. economy.
2. The energy boom has stimulated certain long-stagnant rural economies.
3. It is not just the energy sectors that have benefited. Employment and wages have increased more than expected in many other industries. These other industries include workers with a wide variety of education, skill and training.
4. Higher wages and stronger rural economies—along with policies on energy royalties and other revenue distribution and impact planning and assistance—can better enable counties and states adjust to energy projects that may have periodic peaks before they stabilize.

The new American energy boom has been a bonanza for federal and state government revenues. In my home state of Montana, the oil and gas industry paid about $282.1 million in taxes, royalties, leases, and other payments to state and federal governments in 2013.

But the energy boom is not simply about taxes. It is also about people, their jobs and their wages. Increased energy-related activity is impacting the U.S. economy and certain regional economies that have long been mired in stagnation. Employment in the U.S. energy industry has provided many new high-paying jobs while other sectors of the economy have experienced stable or even declining employment. In addition, certain localities across the country that had stable or declining economies are now experiencing welcome growth because of new energy developments. It not just people in energy industries that are benefitting; workers in industries such as construction, professional services, and accommodations now have greater employment opportunities and higher wages.

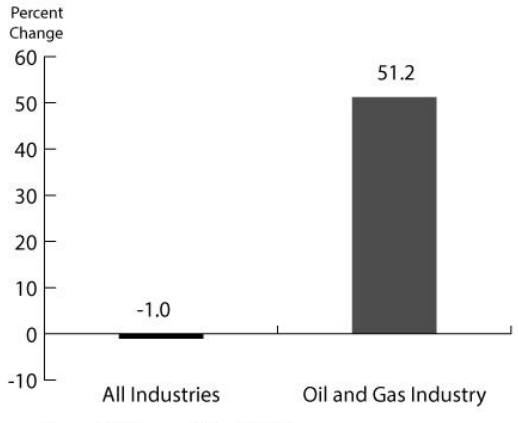
The U.S. Economy

The U.S. economy has been mired in a deep recession and a jobless recovery since 2007. The U.S. Bureau of Labor Statistics (BLS) reports that total nonfarm employment in the U.S. has not regained its prerecession peak by 2013. Overall, the number of nonfarm jobs declined about 1.0 percent between 2007 and 2013.

The oil and gas industry (technically part of mining), on the other hand, increased employment during the same period. Between 2007 and 2013 the number of oil and gas workers increased almost 51.0 percent.

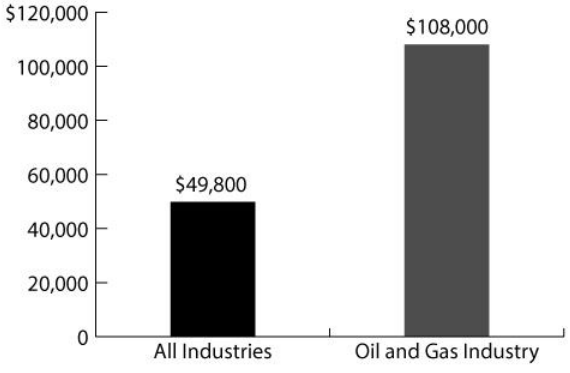
The oil and gas jobs are high paying. The BLS reports that the U.S. average annual wage (which excludes employer-paid benefits) in the oil and gas industry was about $108,000 during 2013, the latest full year available. That is more than double the average of $49,800 for all workers.

Figure 1
Percent Change in U.S. Employment, 2007-2013



Source: U.S. Bureau of Labor Statistics

Figure 2
Average Wages and Salaries per Worker, U.S., 2013



Source: U.S. Bureau of Labor Statistics

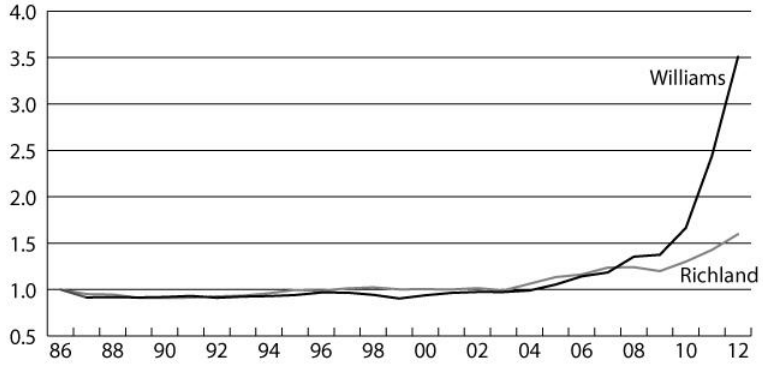
The Bakken Shale Play

The economic impacts of the new American energy boom are more dramatic when we look at a specific location. On the Montana-North Dakota border-- which includes the western edge of the Bakken formation-- is one of the newer oil-technology plays that is based on the latest advances in geophysics, nanotechnology, engineering and production management and has led to the shale-energy revolution. Small rural communities are the idea laboratory for economic analysis because the economic impacts of energy developments are not masked by other influences and trends.

Figure 2
The Bakken Shale Oil and Gas Play

There are boom town atmospheres in towns like Sidney, Montana, and Williston North Dakota. As shown in Figure 3, these towns are located in the adjacent counties of Richland in Montana and Williams in North Dakota. In both counties, the oil drillings rigs sprout like wild flowers, the traffic is astonishing, and there are no vacancies in the few motels. To put things into perspective, before the energy boom began, Richland County had a 2001 population of 9,424 persons with total employment of 6,057 while Williams County had 19,610 residents and 12,822 workers.

Figure 4
Nonfarm Wage and Salary Employment Richland County, MT, and Williams County, ND1986 to 2013 (1986 = 1.00)



Source: U.S. Bureau of Economic Analysis

Richland and Williams counties weren't always booming. As shown in Figure 4, both counties experienced stagnation during most of the last 30 years. From 1986 until just a few years ago, the total number of nonfarm jobs in each county remained stable. Then,

both began to grow beginning about 2004, corresponding exactly to the onset of new drilling activity. The upward trend began slowly and even stopped during the recession years of 2008 and 2009. With the onset of technological advances in horizontal drilling and other factors, employment growth accelerated dramatically beginning in 2010.

The growth has been greater in Williams County than in Richland County. Although there are small differences in the resource taxes and regulations between Montana and North Dakota, most experts do not believe they are the cause of the differential development. Instead, they point to the quality of the deposits, economies of scale, and other technical factors leading to the interstate differences.

The streets of Sidney and Williston are crowded with petroleum engineers, drilling managers, environmental specialists and other natural resource workers. But these high-paying specialties are not the only ones to benefit from the boom. Almost all sectors of the local economies are experiencing greater than expected growth in employment opportunities and wages due to the energy boom. The following paragraphs look at employment and wage trends in three specific industries in Richland and Williams counties that represent a wide variety of sectors in the local economies.

The construction industry (NAICS 23) consists of skilled craftsmen building a variety of industrial, commercial and residential projects. As shown in Table 1, statewide employment grew 3.6 percent in Montana and 105.0 percent in North Dakota between 2003 and 2013. In Richland and Williams counties, the corresponding figures are a 109.0 and 900.2 percent increases. Average wages per worker increased 42.1 percent in Montana and 85.0 percent in North Dakota from 2003 to 2013. The growth was 105.9 percent in Richland County and 178.1 percent in Williams County during the same period.

Table 1
Percent Change in Employment and Average Wages per Worker
Construction Industry (NAICS 23)
2003 to 2013

Area	Change in Employment	Change in Wages/Worker
Montana	3.62%	42.1%
Richland County	109.0%	105.9%
North Dakota	105.0%	85.0%
Williams County	900.2%	178.1%

Source: U.S. Bureau of Labor Statistics

Professional, scientific, and technical services (NAICS 54) contain highly educated professionals such as lawyers, accountants, architects, and computer specialists. Table 2 reports that Montana employment in that sector increased 21.1 percent between 2003 and 2013 while the corresponding figure for North Dakota was 44.7 percent. Employment growth in Richland County was 130.0 percent and in Williams County it was 410.6 percent. Average wages per worker increased 86.7 percent in Montana and 54.3 percent in North Dakota. Wages per worker rose about twice as fast as their respective statewide averages in Richland and Williams counties; 169.0 percent in the former and 140.1 percent in the latter.

Table 2 Percent Change in Employment and Average Wages per Worker Professional, Scientific and Technical Services (NAICS 54) 2003 to 2013		
Area	Change in Employment	Change in Wages/Worker
Montana	21.1%	86.7%
Richland County	130.0%	169.0%
North Dakota	44.7%	54.3%
Williams County	410.6%	140.1%
Source: U.S. Bureau of Labor Statistics		

The accommodation industry (NAICS 721) has traditionally paid low wages and is often mentioned as providing entry-level positions for those with few skills. As shown in Table 3, Montana employment increased 17.3 percent from 2003 to 2013, while the corresponding growth in North Dakota was 67.4 percent. In Richland County the growth was 209.3 percent, and in Williams County the increase was 355.7 percent. Average wages in Montana increased 44.0 percent during the 10 year period, and the figure for North Dakota was 93.1 percent. Once again, the increase in Richland and Williams counties were well about the statewide figures; 191.1 percent in the former and 292.1 in the latter.

Table 3 Percent Change in Employment and Average Wages per Worker Accommodation Industry (NAICS 721) 2003 to 2013		
Area	Change in Employment	Change in Wages/Worker
Montana	17.3%	44.0%
Richland County	209.3%	191.1%
North Dakota	67.4%	93.1%
Williams County	355.7%	292.1%
Source: U.S. Bureau of Labor Statistics		

Summary

What does all this mean? Simply put, the economic impacts of the energy boom are being felt in all sectors of the economy.

Employment and wage increases have been significant in the energy sectors, of course, but also in industries with workers that have a wide variety of education, skill, and training. Each of the specific industries we examined earlier now has average wages per worker above their respective statewide figures, and several are well above.

It is rare for rural wages to exceed state averages that may be dominated by higher urban wages. However, such trends in energy producing areas can have powerful effect in strengthening rural economies.

In addition, higher wages and stronger rural economies—along with good state-level policies on energy royalties and other revenue distribution, and impact planning and assistance—can better enable communities, counties, and states adjust to energy projects that may have periodic peaks before they stabilize.