

Charles E. Venus 2012

Presentation on Natural Gas Severance Tax Issue

Thank you for being here. I suspect that you were all very anxious to attend! It has been a long time since I attended or participated in a press conference.

In fact, at an institute presentation not long ago an old acquaintance from the Bumpers administration, not to mention names, but his initials are Archie Shaffer, walked up to me and said: "Hey, didn't you used to be somebody?" I thought, but did not say to him: "Yeah, and so did you!" Each of our fifteen minutes of fame came years ago.

I have been asked to discuss today an issue that seems to be drawing hard sides, both yea and nay, but I have neither heard nor read much, if any, actual analysis of the natural gas severance tax situation here in Arkansas.

You all probably know that the natural gas market in the United States has swung from shortage to surplus to glut in just the last few years, and the price has dropped from four-plus dollars per thousand cubic feet to two dollars or less. It has been predicted that much more gas is to be discovered, both here in the U.S. and abroad, and that the glut is going to last for awhile, even as other fuel uses are being switched to natural gas.

So much for common knowledge.

Natural gas is a generally deregulated commodity that you, or I, can bid for and buy on the open market. Prices are set daily. Utilities and businesses can buy natural gas anywhere and have it shipped to wherever they want to use it. There are both short-term and long-term contracts for gas supplies.

But....and you just knew that there were going to be buts! But, there are wrinkles in the market when you consider Arkansas and the concept of the severance tax.

Of Production, Consumption, and Prices

In 2010, some 926,638 million cubic feet of natural gas was produced in Arkansas, which was about 4.1% of total U.S. production. Natural gas consumption in Arkansas was only 271,512 million cubic feet, or just 29.3% of our production. So at least 70.7% of the natural gas produced in Arkansas is exported to other states, probably by pipeline to the east coast.

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But...that overall net figure also includes natural gas bought and consumed in Arkansas from producers in Oklahoma, Texas, and Louisiana, which means that all or nearly all of the natural gas produced in Arkansas is actually consumed in other states.

But...when you review prices of natural gas you find that the wellhead price, the price gotten by producers, is \$3.84/mcf in Arkansas compared to \$4.48/mcf for the U.S. average, or some 17% lower in Arkansas. But...residential natural gas prices in Arkansas are \$12.59/mcf, while national prices are \$10.59/mcf, making Arkansas prices that you and I pay 19% higher than the national average

I might mention at this juncture that Arkansas electricity prices for residential, commercial, and industrial uses are all below national average prices.

To summarize then, quite a lot of natural gas is produced in Arkansas, but little or none of it is actually consumed here. The producers get below national average willhead prices for it, while Arkansas natural gas consumers pay above national average prices for the gas we do use.

You might be tempted to jump ahead of me here and conclude that, regardless of the severance tax rate in Arkansas, we wouldn't pay any of it because we don't consume that gas. And you might even conclude that we are paying the severance tax levied on the Oklahoma, Texas, and Louisiana gas that we do use. And you might be absolutely correct, but....let me continue.

Of Rates and Players

The opponents of this referendum measure have stated that they don't want Arkansas to have non-competitive severance tax rates for natural gas, and I heartily agree with them! But the fact of the matter is that we already have non-competitive rates... we have give away rates!

Last year Mr. Ernest Dumas wrote an interesting article in the Arkansas Times about the history of the severance tax in Arkansas, and explained that the severance tax legislation passed by the legislature in 2008 was deeply flawed. The tax rate of 5% actually worked out to be a tax of one and one-half percent.

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Presently, 28 states have a natural gas severance tax, with Alaska having the highest rate at 25%, Montana at 12.16%, Alabama at 10%, and Kansas at 8.3%. Around our area, the Texas gas severance tax rate is 7.5%, Oklahoma is 7.1%, and Louisiana is at 4.48%.

An interesting feature of some of the severance tax laws is that the product is exempt from most of the tax until all costs of the well are recovered...in other words, until the producer is making a profit! That is comparable to saying that your new car doesn't have the sales tax applied unless the car manufacturer is profitable. Arkansas' present severance tax law has this feature, and the proposed referendum removes it.

So Arkansas has a relatively low natural gas severance tax that is not working as expected, and the proposed new rate will still be below both Texas' and Oklahoma' rates; and since a lot of the natural gas actually consumed in Arkansas is produced in Texas, Oklahoma, and Louisiana, which has been taxed at their rates, while our gas is shipped East bearing our lower tax rates. I'm certainly glad that we got that all cleared up!

For the opposition to the referendum, the "Stop the Gas Tax AR", "Arkansas For Jobs and Affordable Energy", and the State Chamber of Commerce are merely the stalking horses for the real players that have been consolidated to only three: BHT Billiton, which paid \$4.74 billion dollars for Chesapeake's assets in Arkansas, is one of the largest companies in the world, and is based in Australia; Southwestern Energy Company, based in Houston, Texas; and which, at the end of 2011, had income of \$962 million, which was a 24% return on equity; and Exxon Mobil, usually rated the largest company in the world, based in Irving, Texas, which reported 2011 income of some \$41 billion, which was a 26.6% return on equity. What are our CD's paying now? Oh yes, less than 1%.

The Arkansas natural gas market is insignificant to any and all of these players, although they will surely make substantial efforts to protect their interests. At least Mr. Nelson cannot be accused of jousting with small fry!

The opposition maintains that if we pass the tax increase, the developers will cut back and that we will lose jobs and investment. Since that is the standard response to any tax change, keep in mind that this is a very capital intensive industry, and the jobs are largely temporary. Once the drilling is complete, most of the jobs will go away anyway. And it would be no bad thing if the Arkansas gas was not rushed into the existing market glut, but held back until prices recover.

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Of Economic Impacts

Assessing the economic impacts of any change is fraught with assumptions and speculation. One wonders if Texas oilman George Mitchell knew, when he developed the "fracking" method of natural gas extraction, that he would change the course of the entire energy industry. The United States alone now has over a century's supply of natural gas, at current production rates. The potential for natural gas production may even seriously weaken the OPEC cartel's grip on oil prices.

But, shorter term, the economic impacts of increasing the Arkansas natural gas severance tax rate are reasonably predictable. According to the Arkansas Department of Finance and Administration, the calendar year 2011 natural gas severance tax gas deposits were about fifty-five and one-half million dollars. At a 7% tax rate, this converts to about \$209 million. This would be an increase of about \$155 million dollars annually. That is a lot of money for Arkansas, but Exxon-Mobil makes that in profit in less than one-and-one-half days!

Estimating job creation and overall economic impact is harder, due to the leakages that occur and the variability of multipliers. The direct employment impact of the additional \$155 million will be approximately 6,200 jobs, with indirect and induced employment adding an additional 9,300 jobs, for a total of 15,500 total employment impact.

Of course, if the State highway department uses its 70% of the \$155 million, or about \$108 million, to utilize three for one federal matching, the effect will be a great deal more.

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To summarize this presentation:

The jobs produced by the gas drilling, which have been concentrated in Faulkner and White counties, will not go away until the drilling goes away.

The fifteen thousand jobs created by the proposed severance tax will last as long as the severance tax is collected.

Arkansas gas consumers will not pay the tax because they don't use the gas.

What the proposed severance tax does is require that the large gas producing companies pay about one day's profits, each year, to repair the Arkansas roads that they helped to damage.

Thank you for attending.

Dr. Charles E. Venus: Severance Tax Issue: Exhibit 1

Natural Gas in Arkansas

Marketed Production	926,638 million cubic feet	100.0%
Consumption	271,512 million cubic feet	29.3%
Net Interstate Movements	655,126 million cubic feet	70.7%

Source: "Natural Gas Annual 2010," December 2011, U.S. Dept of Energy

<u>Prices</u>	<u>Arkansas</u>	<u>U.S. Average</u>
Wellhead	\$ 3.84/mcf	\$ 4.48/mcf (2010 data) 17% lower in Arkansas
Residential	12.59/mcf	10.59/mcf (Nov 11, 2011 data) 19% higher in Ark

(Note: Arkansas electricity prices for residential, commercial, and industrial sales are all below national average prices, as of Nov. 11, 2011)

2010 Natural Gas Production = 926,638 million cubic feet or 4.1% of total U.S. production

Source: "Arkansas Energy Fact Sheet," U.S. Energy Information Administration, February 16, 2012

Dr. Charles E. Venus: Severance Tax Issue: Exhibit 2

Severance Tax Rates

28 States have a natural gas severance tax – as of 2009

State	Rate
Arkansas	5% (effectively 1.5%)
Oklahoma	7.1%
Texas	7.5%
Louisiana	4.48%
Missouri	None (no gas produced)
Alaska	25%
Montana	12.16%
Alabama	10%
Kansas	8.3%

(Arkansas deep shale gas is taxed at 1.5% for 2, 3, or more years of production – until costs have been recovered)

Source: Greater Pittsburg Chamber of Commerce, "Benchmarking Pennsylvania: A Summary of Severance Tax on the Natural Gas Industry," February, 2009

Dr. Charles E. Venus

Fayetteville Shale Counties: Employment Payroll Change in the Natural Resources and Mining Sector

<u>County</u>	<u>2001-2010 Change</u>	<u>September 2010 - September 2011 Change</u>
Cleburne	296	59
Conway	105	60
Faulkner	1,626	738
Franklin	66	52
Independence	100	23
Jackson	27	90
Pope	90	-107
Van Buren	-34	130
White	1,425	91
Total	3,701	1,136

There would appear to be some overlap in these series, since Sep-Dec 2010 appears to be in both sets.

Pope County employment in this sector is apparently now in decline.

Source: Revisiting the Economic Impact of the Natural Gas Activity in the Fayetteville Shale: 2008-2012, University of Arkansas, May, 2012.