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Must-read new report: The decline of Central Appalachian coal production will continue

May 14, 2013 by Ken Ward Jr.



Gazette photo by Kenny Kemp

” ... While it is generally accepted that the CAPP coal industry faces a substantial and continued overall decline, it is difficult to know exactly what the future holds for the region’s coal industry, and even more difficult to know how individual coal-producing counties will be affected.”

That’s one of the conclusions from a brand new and very important report from the folks at the Morgantown-based consulting group [Downstream Strategies](#). It called “*The Continuing Decline in Demand for Central Appalachian Coal: Market and Regulatory*

Influences” and it’s just out this morning. You can read it [here](#).

The most significant among a long list of key findings:

Central Appalachian coal production has declined significantly in recent years and will continue to decline — Central Appalachian coal production reached an all-time peak of 294 million tons in 1990 and peaked a second time at 291 million tons in 1997. Since then, production has declined by 55% in Tennessee, 44% in eastern Kentucky, 37% in Virginia, and 29% in southern West Virginia. As of 2011, regional coal production amounted to 185 million tons—17% of total United States coal production.

The federal Energy Information Administration projects that regional production will decline by 53% from 2011 through 2040, representing 98 million tons of annual production. Most importantly, 86% of this decline is projected to occur by 2020. This fact alone highlights the importance of identifying where the decline may have the greatest negative impact on local coal production, in order to understand which coal-producing communities face the greatest economic challenges in the coming years as a result of the decline.

But there’s also important finding:

Employment and tax trends will not necessarily follow production trends — In recent years, employment has grown—despite the continuing decline in production. In 2011, direct mining employment totaled 37,800 jobs. **Even as coal production declines in the future across the region, coal mining jobs are projected to increase due to a decline in labor productivity.** Employment and tax trends will not necessarily follow production trends. However, as a result of the overall decline in coal production, the job and revenue benefits will not be spread evenly across all counties. **Some coal-producing counties may experience significant declines in both jobs and revenues, while other counties may experience increases. The resulting expectation is that the benefits of coal production may become more concentrated in fewer counties.**

This may seem like a new idea to many folks. But Coal Tattoo readers [may recall that it’s a possibility raised before](#) by the West Virginia Center for Budget and Policy, which [reported last September](#):

The projected decline of Central Appalachian coal production is one of the biggest challenges facing the state in the near future. While there are many reasons for the decline, some are irreversible, as much of the easy to reach coal has been mined out. This has prompted a great deal of concern in the state, chiefly regarding the potential loss of coal mining jobs, as it is assumed that as coal production falls, so will employment.

But that may not necessarily be the case. Some numbers suggest that while there may be an initial decline in employment, the job numbers may bounce back, and actually increase in the future. The reason? Falling productivity.

As Ted points out in his post, and again in the 2012 SWWV when mining productivity falls, employment can actually go up, as it takes more miners to mine the same amount of coal. And coal mining productivity has been falling in West Virginia as easy to

mine coal is mined out. In 2000 the state mined 10,000 tons per worker, while in 2010, productivity had fallen to 6,600 tons per worker.

More on that in a minute. But let's first remember that Downstream Strategies [produced an initial look at this same issue back in January 2010](#). It was called The Decline of Central Appalachian Coal and the Need for Economic Diversification and you can read it [here](#). In a press release this morning, Downstream Strategies principal Evan Hansen said:

Since we released our 2010 report, the decline of the region's coal industry has been publicly acknowledged by both industry leaders and state policymakers. Our new report illustrates how the industry's many challenges will likely lead to even lower production levels in the future.

And lead report author Rory McIlmoil said:

Numerous factors influence demand for Central Appalachian coal, each of which has had—and will continue to have—a significant impact on the local economies where the coal is mined. In 2010, we recommended that state and local leaders take immediate steps to help diversify coalfield economies. To a large extent, that has not happened. However, it is vital that public officials begin making the political and financial investments necessary to build the foundation for new economic development opportunities in coal-producing counties.

Now, there's a lot in this 140-page report, and we'll be talking more about it in coming days, weeks and months. But for now, let's go back and look at this issue of how coal production in the region could decline, but tax revenues and jobs from the industry actually head the other direction.

You have to first understand the recent and long-term trends in this regard:

Coal mining jobs have been significantly impacted by demand for CAPP coal in various ways since 1985. Even as demand grew from 1985 to 1990—and then again from 1993 to 1997—the number of coal mining jobs decreased. This was the result of sharp improvements in labor productivity, which reflected a shift toward greater mechanization of the mining process, both for surface and underground mines. At the same time, production was shifting toward surface mining, which requires less labor to produce each ton of coal than underground mining. As a result of these changes, direct coal employment declined from approximately 70,000 coal miners in 1985 to 35,600 miners by 1997, representing a nearly 50% decline in only 12 years. This decline in employment occurred during the same period that CAPP coal production increased to its peak.

Since peak production in 1997, a decline in demand combined with a continued shift toward surface mining has placed continued downward pressure on direct coal employment. However, declines in labor productivity and a recent shift back to underground mining have countered the impact on employment as more labor has been required to produce each ton of coal.

And most recently:

In 2006, the number of coal mining jobs stood at 36,500, slightly higher than the 35,600 jobs that existed at peak production in 1997, even though total production had fallen by 54.5 million tons. As of 2011, despite an additional production decline of 51.5 million tons, direct mining employment was higher than in 2006, amounting to 37,800 jobs. These trends suggest that as demand for CAPP coal continues to decline, direct coal employment may still increase if labor productivity continues to decline.

The report continues:

As production declines in the future, more underground mining and/or continued declines in labor productivity will dampen the employment impact of the decline in production, and may even result in an increase in coal mining jobs.

But that doesn't mean that policymakers can just ignore the way production trends are heading:

... With the future uncertainty of markets for CAPP coal and visible shifts in demand toward coal from other basins and fuels such as natural gas (and to a smaller extent, renewable energy), the possibility of increasing coal jobs with decreasing coal production should not prevent policymakers from laying the foundation for new economic opportunities in the communities most vulnerable to declines in coal production.

Downstream Strategies did some calculations to try to begin to pinpoint where in the Central Appalachian coalfields communities are most vulnerable going forward. In West Virginia, counties listed as the most vulnerable included Boone, Kanawha, Lincoln, Mingo, Nicholas. The report concludes:

The decline in CAPP coal production has been consistent in recent years and is projected to continue into the future. Since its most recent peak of 291 million tons in 1997, production declined to 185 million tons in 2011 and is projected to fall to 128 million tons by 2020.

The impact of this decline on coal mining jobs and local economies, however, is less straightforward. In recent years, more labor has been needed to mine each ton of coal; therefore, even as coal production decreased, employment increased. In fact, direct mining employment in 2011 was higher than it was during peak production in 1997. However, while some counties have experienced an increase in employment, many counties have seen coal mining jobs decline.

These conclusions are vital for both state and local officials in determining where development efforts and financial resources should be focused. Indeed, comprehensive, focused policies and investments will be needed in order to build the foundation for new economic alternatives in coal-producing counties—especially those in which coal-related jobs will decline.

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