

**Education and Jobs, Jobs and Education: A proposal for funding economic redevelopment
in Central Appalachia**

An Essay Submitted to the Central Appalachian Prosperity Project, January 4, 2010 by

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A statement of the challenge and opportunity

The 10 developmental principles created for the Central Appalachia Prosperity Project are replete with phrases that emphasize both economic and educational development. Consider the following phrases taken from these principles:

- *“An educated populace”*
- *“A modern education system”*
- *“Diverse economic opportunities”*
- *“Building educational....and career opportunities”*
- *“Economic development ...in collaboration with the diverse array of people, industries and communities”*
- *“Locally owned enterprises”*
- *“Development should create educational ...and career opportunities for young people.”*

These phrases emphasize the need for locally controlled and diversified economic development in conjunction with improvements in the educational system to provide a better future for the region’s population. Education and jobs, in fact, go hand in hand. Educational development without economic opportunity will fail, for educated people will leave the region for better opportunity elsewhere. Likewise, economic development cannot be successful if residents do not possess the skills and talents to carry Appalachia into a modern and sustainable 21st century economy.

To date, both the economic strength of the region and the education of its people have fallen far short of ideal. Our challenge is to find ways to redress these shortcomings. This essay will describe the educational and economic disadvantages experienced in Central Appalachia, and show how those disadvantages originate from the region's overdependence on coal. The essay will also show that these disadvantages result in pervasive and severe health problems for the population. Then, the essay will propose a specific policy initiative based on redirecting funds from the coal severance tax to provide the financial and operational resources necessary to overcome these disadvantages and create a healthy, educated, productive population that will serve as the foundation for a renewed and sustainable economy for Central Appalachia.

Background

Jobs and education are the best means to creating a strong and healthy population. To cite one example, a recent study compared the power of a college education versus the power of medical science in preventing premature death, and found that a college education was *eight times* stronger than medical science (1).

There are many benefits of a good education (2). Education leads to better job opportunities. Better job opportunity in turn means that people have less stress in their lives, access to better food and housing, and work in settings that are generally cleaner and safer. Education also teaches the value of health-promoting behaviors, like the benefits of eating a good diet and not smoking. And acquiring an education exposes people to other good role models who practice healthy behaviors.

Education is a powerful tool to fight not only poverty and poor health, but also social and environmental injustice. Populations with high levels of educational attainment have more

economic and political power, and are better able to fight off threats to their environments. Pollution sources like power plants or industrial sites are less likely to be located in communities or neighborhoods that have educated populations (3).

Corresponding to education is the need for good work. Good work opportunities are those that provide families with livable incomes, that is, incomes not merely above poverty but far enough above poverty that families are able to have good diets, safe and healthy housing, quality medical care, reliable transportation, good schools, and healthy and safe neighborhoods and communities. Poverty and low income are very powerful predictors of poor health (4), and the best way out of poverty is good work opportunity.

Unfortunately, in Central Appalachia, levels of educational and economic development lag behind other parts of the region, and these inequalities are concentrated in areas where there is coal mining. Table 1 was prepared by the author and is based on data from the 2000 US Census. It compares three groups of counties in Appalachia: counties in Central Appalachia (eastern Kentucky and West Virginia) where coal mining takes place, other counties in eastern Kentucky and West Virginia without coal mining, and the rest of the Appalachian region. All of these differences are statistically significant.

Table 1.

	Eastern KY and WV With Coal	Eastern KY and WV Without Coal	Rest of Appalachia
Poverty rate	21.3%	14.3%	13.5%
Average household income	\$25,627	\$33,751	\$33,905
Unemployment rate	7.2%	5.1%	5.1%

High school education rate	64.8%	71.5%	72.8%
College education rate	10.4%	12.4%	13.9%

Areas in West Virginia and Appalachian Kentucky without coal are doing pretty much as well as the rest of Appalachia, but areas with coal do worse. Although not shown in this table, these differences are present year after year after year. Arguments made by government officials or representatives of the coal industry that coal contributes to a strong economy don't make much sense. Coal is integral to a chronically weak economy.

A counter argument might be raised that these areas of Central Appalachia where coal mining takes place would be even worse off without coal. At least there is coal, the argument goes, and coal provides some jobs. To disentangle these effects (does coal mining cause poor economies, or are areas with poor economies offset by coal), we need to ask, "*Which comes first?*" One of the basic requirements to understand cause and effect is that the cause has to happen first, and then the effect follows. The answer to this question, then, is clearly that coal comes first. It was not that poor economies developed and then coal came along to help them. Rather, coal has been in the ground in parts of Appalachia long before humans were ever there, and the economies developed in response to the coal either being there or not being there. Other areas of Appalachia that don't have coal but are similar in other ways – hilly terrain, limited agricultural opportunity, small populations – developed alternative economies over time independent of coal, and as the evidence in Table 1 shows, those areas without coal do better.

If coal was part of a strong economy, West Virginia, so heavily dependent on coal as the coal industry is quick to remind us, should have a strong economy compared to the nation. But as we know, this is not the case, as Table 2 using data from the 2000 US Census illustrates:

Table 2.

	WV	Rest of the Nation
Poverty rate	16.7%	13.2%
Average household income	\$29,595	\$36,471
Unemployment rate	6.9%	4.7%
High school education rate	72.6%	77.4%
College education rate	12.1%	16.6%

Albert Einstein was a pretty smart guy. He said, “Insanity is doing the same thing over and over again and expecting to get a different result.” If we agree with this statement, we would have to admit that relying on the same economic strategies as in the past to develop Central Appalachia is insane. Clearly, a different approach is needed.

The need to develop alternatives becomes even more important when we consider two additional related facts. First, employment in the coal industry is declining, and second, recoverable coal reserves in Central Appalachia will peak and then enter permanent decline in less than 20 years (5). In 1985, the number of coal mining jobs in eastern Kentucky and West Virginia was 67,757, but by 2007 this figure had declined to 34,155 (6, 7), a loss of more than 33,000 jobs in just over 20 years. Part of the reason for this decline is explained by increases in mechanization and in surface mining including mountaintop mining, which requires fewer employees per ton of coal than underground mines. To the extent that the coal industry does provide jobs and tax revenues, projections are that those contributions are going to become

smaller once coal in the area passes peak production (5, 8). To prepare for this coming certainty, we must begin to develop alternative economies now.

Disadvantages in education and in economic opportunity translate directly into negative health outcomes. We know this from a large body of scientific evidence that has accumulated over the years (4, 9), but the effects are present when we look at coal mining in Central Appalachia specifically. Table 3 shows significant differences in annual age-adjusted death rates per 100,000 people based on Centers for Disease Control and Prevention (CDC) data for the years 1997-2005.

Table 3.

	Eastern KY and WV With Coal	Eastern KY and WV Without Coal	Rest of Appalachia
Deaths per 100,000	1,067	976	948

Take any state, region, or the nation as a whole, and death rates are higher in places where educational and economic indicators are poorer. Table 4 shows how death rates are correlated to these indicators for the Appalachian region as a whole (a correlation of 0 indicates no relationship, and a correlation of either +1.00 or - 1.00 indicates a perfect relationship.) These data are based on combining US Census data with CDC data at the county level. All of the correlations are strong and statistically significant:

Table 4.

	<u>Correlation of age-adjusted death rate and:</u>
Poverty rate	.67
Household income	-.55
Unemployment rate	.40
High school education rate	-.66
College education rate	-.49

A final piece of evidence has to do with migration patterns. People move into areas where there are good job prospects, and they leave areas with poor job prospects (10). Based on US Census data, in the five years leading up to the 2000 Census (that is, 1995 to 2000), the average coal mining county in eastern Kentucky and West Virginia *lost* 378 people to out-migration. The average non-coal mining county in the same area *gained* 600 people to in-migration.

To learn more about the negative economic and public health impacts of coal mining, visit www.PATHofdestruction.org or www.Bigbadcoal.com.

Summary

Coal mining areas in eastern Kentucky and West Virginia are weak economically compared to other parts of Appalachia or the nation. Weak economic performance translates into premature death. Continued reliance on coal mining as an economic strategy can reasonably be expected to perpetuate these disparities. The decline of the coal mining industry due to mechanization and peak capacity production emphasizes the need to develop stronger and

sustainable economic alternatives for the region now. A conjoint investment in education and jobs is needed to create this strong and sustainable economy.

Recommendations for actions

How can we achieve the necessary investments in jobs and education? State and federal budgets are already tight. New dollars will be hard to find, and outside investments from grants or other sources are uncertain and would probably be of insufficient magnitude. The idea proposed here is revenue neutral (no new taxes), but offers a specific approach to targeting investments where they are most needed based on redirecting the existing coal severance tax.

First, the essay will present a few “bottom line” figures describing the impact that this policy change would have for a coal mining county in West Virginia, one in Kentucky, and statewide for each state. Then, slightly more detailed calculations will be provided for how the current and proposed figures were obtained, for readers who are interested in “doing the math.” Finally, ideas about how these dollars could be used for job creation and educational development will be described, concluding with some ideas about how the program can be structured and administered.

Using the coal severance tax differently: bottom line results

Of all the counties in West Virginia, Boone County is the highest coal producer and received the greatest share of the coal severance dollars under the current formula. According to the West Virginia Coal Association, in 2007 the county and municipal governments in Boone County received about \$4.6 million in coal severance tax revenues (12).

Under the revised formula to be detailed below, Boone County and its municipalities would retain the \$4.6 million to use as it has in the past. However, based on historical production and population, it would receive an *additional* \$27 million in the first year of the program. As the program matured (over, say, 10 years), county and local governments would be eligible for even more of the funds, such that Boone County at maturity could receive an additional \$53 million.

In Kentucky, the biggest coal producing county is Pike County. In FY 2007, Pike County received more than \$53 million in tax receipts from the severance tax. However, only about \$12 million of this (23%) can be used for economic development unrelated to coal. (The rest is obligated for other coal-dependent purposes as described below.) Under the revised policy, in Year 1 the amount the county could use for non-coal related development would increase from \$12 million to about \$27 million. At maturity, Pike County could receive about \$52 million for these purposes. Under the revised policy, Pike County and others will be able to develop sustainable, healthier economic alternatives, and break their dependence on a dirty fossil fuel economy that perpetuates poverty, environmental degradation, and premature death.

Statewide, county and local governments in West Virginia received about \$24 million from coal severance taxes in 2007. In Year 1 of the new program, they would receive about \$191 million, and at maturity about \$325 million. In Kentucky, the total amount available to county governments in 2007 for non-coal related economic development was about \$51 million. In Year 1 of the new program for Kentucky, this would increase to about \$111 million, and at maturity to about \$215 million. Instead of funding state government programs, the dollars are targeted directly to the people who live in areas of greatest need, and are used for investments with the biggest payoffs.

Details of the current tax

With exceptions, the current coal severance tax is about 5% of the sales price per ton in West Virginia, and 4.5% in Kentucky (11). In other words, if a ton of coal sells for \$50, the tax in West Virginia on that ton is \$2.50. In both states, the majority of the severance tax dollars are obligated back to the coal industry and/or controlled by the state; county and local governments receive and control only a minority of the dollars.

In West Virginia, 93% of these tax dollars support state government programs, and the remaining 7% is provided to county and local governments (12). About 5.25% of the tax ends up in county and local governments that are actually in coal mining counties, which is a very small return for the environmental, public health, and economic damages caused by the industry. In fiscal year 2007 the West Virginia State budget included over \$312 million in revenue from the severance tax (13), and in addition county and local governments received approximately \$23.5 million more. County and local governments use these funds for a variety of purposes at their own discretion. Of the 7% given to county and local governments, specific amounts are based on levels of coal production and population size. Boone County, for example, received 17.5% of the amount given to county and local governments, or about \$4.6 million (12).

In Kentucky, the tax paid during fiscal year 2007 was \$221.4 million (14). About half of the funds go to county governments where coal is mined, and half to the state general fund. However, of the county portion, about 15% is obligated by the state for maintenance on coal haul roads, and about 11% to fund workers compensation. The remaining dollars are divided into Local Government Economic Development Funds (LGEDF) and Local Government Economic

Assistance Funds (LGEAF); only the former (about 23% of the total tax) can be used for non-coal economic development (15).

Details of the proposed change

The policy change proposed here has two major components. First, in Year 1 of the program, 50% of the tax dollars would be returned to coal mining localities at the county and municipal level explicitly for education and economic development, and this amount would eventually increase to 90% as the program matures. Giving more to the coal mining localities over time works as an incentive to develop diversified economies, as will be described in greater detail below. Second, all of the dollars would be restricted to two purposes only: jobs and education. More specifically, investment in jobs should be restricted to development of sustainable, job-creating enterprise that is completely independent of the coal industry. Investment in education should include the range of investments from preschool through graduate school, as described in more detail below.

Although on the surface it would seem that the state governments would have to sacrifice much of the severance tax revenue, this is offset by each mining county receiving large increases in revenue that will reduce state budgetary needs in other areas. Jobs programs and educational development translate into healthier populations and stronger economies. A healthier and gainfully employed population will place less demand on the state for health care services such as Medicaid, workers compensation programs, and public assistance programs such as Temporary Aid to Needy Families (TANF). Medicaid in West Virginia, for example, consumed \$409 million of state general funds in fiscal year 2007 (16). The *state government* loses these dollars, but the *state* does not; the money stays in the state and is directed to areas of greatest

need. As economic conditions in mining areas improve, the state will also generate additional revenue through increases in income and business taxes.

After committing 90% of the tax dollars to local coal mining communities, 10% remains. County and local governments in both mining and non-mining locations would receive 7% of the total dollars, exactly as they do now in West Virginia. This means that the policy change will not impact how they currently choose to use those dollars. In Kentucky, the money would no longer be used to maintain haul roads or prop up the workers compensation program, but the amount spent for non-coal related economic development would increase markedly. The state would receive the final 3% (over \$10 million in West Virginia and over \$6 million in Kentucky), which it can use to monitor progress toward economic redevelopment and educational improvements, administering the new tax dispersal program, or for other purposes.

A formula would be developed by which proportions of the money are committed to economic development versus educational improvements. Let's say for discussion purposes that the split was 50-50. The implications of this split will be illustrated below using some case examples of how much money would be available for certain counties and certain uses.

A formula would also need to be developed to specify how the money is distributed among the counties and municipalities over time. In both Kentucky and West Virginia, current disbursements are based on the amount of coal mined – more tonnage translates to a greater return, and in West Virginia the size of the population also comes into play. In the case of our new program though, paying more based on greater levels of coal extraction serves as an undesirable incentive to mine more coal. Instead, the amount awarded to each county should be based on population and on *historical* mining levels (e.g., average tons mined over the last 5

years), but moving into the future, tax dollars should be de-coupled from the amount mined so that perverse incentives to mine more coal are no longer in force.

At first, each county and locality would receive 57% of their potential severance tax return (the existing 7% plus 50% for new investments.) Based on the success of initial efforts to promote sustainable job creation and improved education, each locality can earn up to the full 97% of the dollars. This will also be illustrated in the examples below.

How the dollars can be used

In the area of economic diversification, funds could be distributed in the form of grants, or loans with low- or no-interest. These funds could be used to support business start-ups or expansions of existing businesses, investments in technology centers or business parks, infrastructure development, or other economic-diversification investments limited only by the ideas and ingenuity of the local people. The types of businesses supported could be far ranging, as long as they meet conditions of sustainability, job creation, and diversification away from the coal industry. Greater consideration could be given to jobs that are permanent, full-time, benefits-paying, and include jobs for people along the range of professional backgrounds from entry-level to experienced, blue collar to white collar. Funds could be used to take advantage of the unique strengths of local communities but might also include expansion into completely new areas. Although some of the new economic development may include sustainable energy alternatives such as wind or biofuels, other developments in new areas could also be supported. These might include sustainable timber, agricultural development, energy-efficient manufacturing, technology start-ups, and many others. As the loans were repaid, those dollars could reenter the program for disbursement to new investments.

When it comes to education, funds can be used to support the entire range of educational needs from preschool to graduate school. A healthy and stimulating early childhood environment is a predictor of success later in life (2). High quality schools build on those early foundations to equip populations not only with basic pre-employment job skills such as reading and mathematics, but also with the knowledge and skills to found a civil society, one that values justice and community engagement. These skills can be further honed in vocational schools, technical schools, community colleges, and traditional four-year colleges, and for some, college can lead to graduate or professional school in law, medicine, engineering, or other endeavors.

Funds to support these educational investments can be used in a number of ways. Here are a few examples. Head-start type programs can be funded to provide parents with training for preschoolers and to provide good quality daycare and preschool learning environments. Investments in the public school system can include raising teacher pay to attract and retain high quality teachers, hiring more teachers to reduce class sizes, and investing in learning technologies, supplies and equipment. Investments in post-high school experiences can include grants and scholarships for all college types (technical, community and traditional at both undergraduate and graduate levels), and investments in new learning technologies. Programs to support re-training of adults already in the workforce in need of new skills can also be supported. A redirection of the severance tax in which local governments are given the money and the freedom to spend it on economic and educational development, rather than routing it back in service of the coal industry (keeping the state reliant on coal and thereby perpetuating poverty) would do much to raise the overall economic level of the state.

Let's examine Boone County again in West Virginia to see how these new investments might play out. Under the revised formula Boone County would retain the \$4.6 million to use as

it has in the past. But in addition, based on historical production and population, it would receive approximately 17.5% of 50% of the total disbursed tax in the first year of the program. That amount comes to \$27.3 million. A 50-50 split means that Boone County would have about \$13.6 million to invest in education, and \$13.6 million to invest in economic diversification.

At 10 years, a county could receive its proportionate share of 90% of the tax (100% of the tax minus the pre-existing 7% kept by all county and local governments statewide minus the 3% kept by the state). To achieve this, however, the county would have to demonstrate successful job creation and improvements in the educational system over time. The exact definition of “success” requires further thought and development, but it should be significant enough that it reflects meaningful improvement without being unrealistic. Assuming for purposes of illustration that the amount mined statewide remained constant over those 10 years (an assumption that may or may not bear out), at maturity Boone County would receive approximately \$53 million, or \$26.5 million each for education and for economic investment.

To take the example one more step, what could Boone County do with an extra \$26.5 million for education? According to the West Virginia Department of Education, there are 15 public schools in Boone County in the K-12 system, and they served about 4,600 students in the 2007-2008 academic year with an average student to teacher ratio of 13/1 (17). This translates to about 354 teachers in the county. If every one of them got a \$10,000 raise, that would use \$3.54 million, leaving about \$23 million for other educational purposes, such as bigger bonuses to recruit or retain “super teachers”, investments in cutting edge curricula or technologies, teacher continuing education, college scholarships, preschool, adult retraining, etc. What would an extra \$10,000 per teacher do for teacher morale, effort, and retention of good teachers? Regarding college scholarships, according to US Census data, there are about 350 18-year olds in Boone

County, or in other words, about 350 people annually at an age corresponding to finishing high school and preparing for college or work. If 50% of them want to seek additional post-high school education (175 students), each one could receive \$15,000 for a scholarship or training program of their choice at a total cost of \$2.6 million. If *four years* of scholarship support were provided, the maximum in a year would be \$10.4 million when four years' worth of students were being supported. The tax revenues could provide a college education for everyone who wanted one.

Responsible agencies, organizations or individuals

There is already a model for the administration and operation of this program that comes from Virginia. Coal tax dollars from Virginia are used to support the Virginia Coalfield Economic Development Authority (18). The Authority is managed by a Board, whose members consist of non-elected local business and community leaders. These local leaders determine how the money is to be used. An independent analysis of the impact of this program between 1988-2006 for the seven counties included in the program found that the program created 10,000 direct jobs, \$224 million in wages, with a total employment impact of 122,000 jobs, \$918 million in tax revenues, and reduced regional unemployment (18).

The Virginia program created approximately one job for every \$18,000 investment. Translate that to Boone County in Year 1 (50% of the potential tax and 50% of that committed to economic development) and we can estimate 756 new jobs in the county in the first year that result directly from the tax investment, not counting the jobs that may be created through investments in education. This figure could be almost doubled to about 1,500 when the program reaches maturity. Contrast this with the historical decline in employment in the coal mining

industry (an estimated 3,400 coal mining jobs in Boone County were lost between 1985 and 2007), and the value of these new jobs tailored to sustainable economies becomes even more critical.

The policy proposed here for Kentucky and West Virginia is basically an expansion of the Virginia model, with increased emphasis on non-coal diversification, sustainable economic and energy goals, and public education as cornerstone principles. In West Virginia and Kentucky, the responsible organizations could be a set of Redevelopment Authorities. Each Authority would have jurisdiction over a group of adjacent counties. In West Virginia, for example, one Authority may encompass the southern coalfield region, which may be defined here as including Boone, Lincoln, Logan, McDowell, Mingo, Raleigh, and Wyoming counties. Membership would consist of non-elected local leaders representing business, educational, and other community organizations. Membership would draw on all counties included within the Authority, and would rotate on a fixed term of one to three years. Appointment to the Authority would be made by the Governor with approval in the two states from the West Virginia Environmental Council and Kentuckians for the Commonwealth, or similar organizations, to balance governmental, business and environmental interests.

The next step to develop this idea might be two bills, to be co-sponsored by state legislators in the two states, and introduced into the respective state Houses. Eventually, as mining naturally declines due to the depletion of coal reserves, so will the tax revenues from coal. By then, the counties could complete their transition to a new economy that provides support via other business and income taxes characteristic of a thriving population in a planned way. As it stands now, the coal economy in the region will eventually fade away anyway, so better to plan for it by using the industry itself to prepare for what comes after. We can do

nothing and let the decline occur on its own, or we can use the temporary remaining contributions of the coal industry itself to create a stronger economy and a highly educated population for Central Appalachia.

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