PROMOTING LONG-TERM INVESTMENT IN APPALACHIAN KENTUCKY: A PERMANENT COAL SEVERANCE TAX FUND

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MACED
Mountain Association for Community Economic Development

KCEP
KENTUCKY CENTER for ECONOMIC POLICY

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Report authored by Jason Bailey with additional research by Melissa Fry Konty.

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Debate in the legislature about shifting some eastern Kentucky coal severance tax dollars to higher education raises key questions about how to build a future for Appalachian Kentucky. What strategies and investments make the most sense to diversify and improve the region's economy? How should citizens and leaders in the region go about identifying priorities? And how long can we expect the coal severance tax to be a substantial resource for investment?

Recent trends and official projections about the decline of coal production in Central Appalachia heighten the need for a public conversation on these questions. That conversation should include consideration of a permanent severance tax fund, as other natural resource-dependent states have created, as a piece of an overall plan to address the region's long-term economic challenges.

Central Appalachian Coal is in Decline

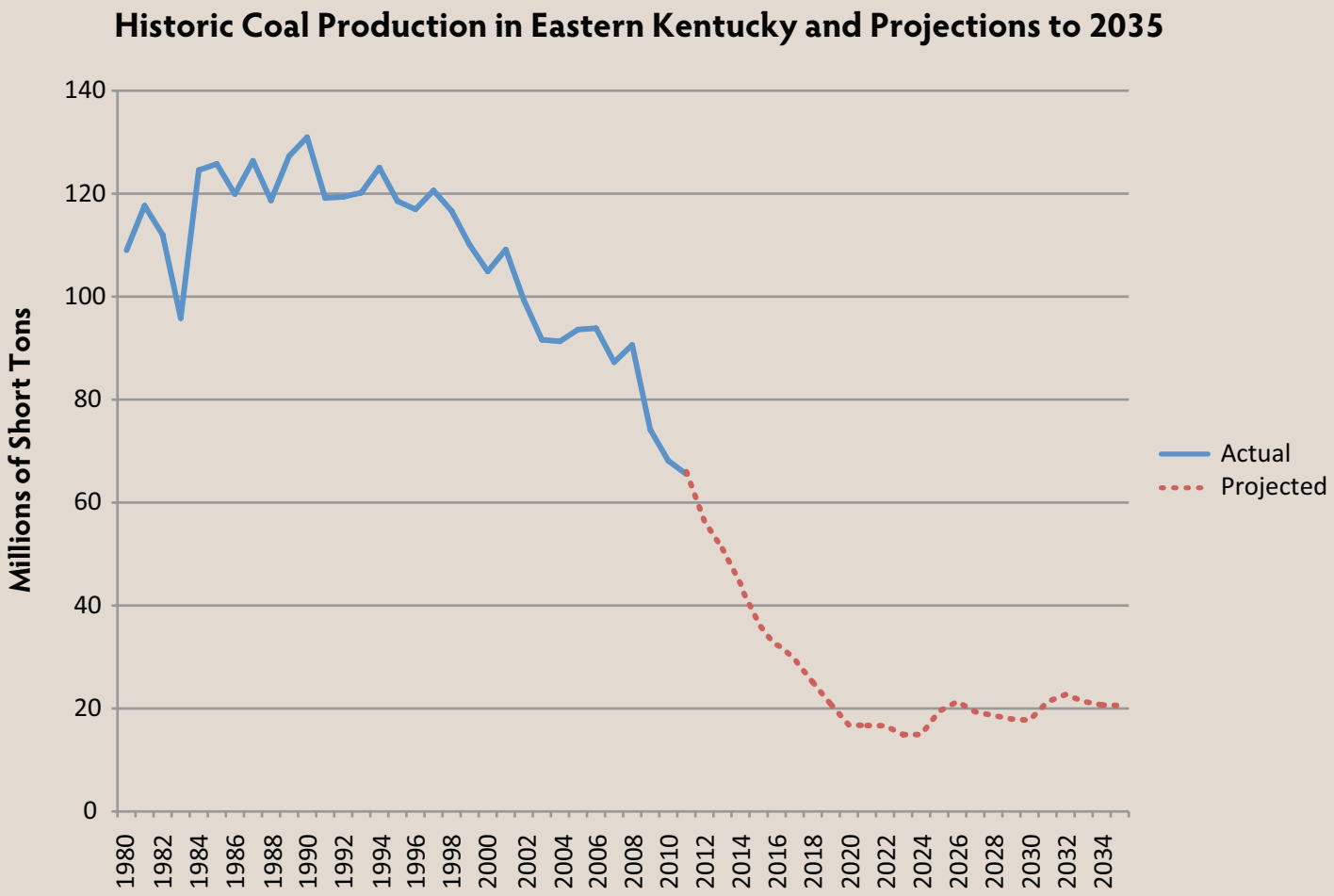
There are many factors that will determine the future of Central Appalachian coal production, including the viability of alternatives to coal and changes in technology and public policy. While projections always include a significant degree of uncertainty, official estimates should be understood in order to make good decisions about the future. The Energy Information Administration's (EIA) Annual Energy Outlook includes a projection of regional coal production and prices each year. According to recently released estimates for 2012, Central Appalachian coal production is expected to decline from 175 million tons in 2012 to 77 million tons in 2020.[1] That decline is driven by diminishing coal reserves in Central Appalachia, cheaper coal in other regions, a shift away from coal to natural gas and other energy sources, and regulations that address coal's health and environmental impacts.[2]

EIA's analysis suggests an especially severe decrease in the category of coal used primarily to manufacture electricity, which declines from 123 million tons in 2012 to 32 million tons in 2020—a drop of 74 percent. Premium coal used to make metallurgical coke for the steelmaking process experiences a smaller decline over the forecast period, although it is a much less significant share of the region's coal production at 50-60 million tons a year currently.

In recent years, eastern Kentucky has produced only a small share of the region's metallurgical coal, meaning that future coal production in eastern Kentucky could decrease even more dramatically than Central Appalachia's already steep decline.[3] Figure 1 is an approximate forecast for eastern Kentucky using the EIA Central Appalachian projection and applying recent EIA estimates for the share of Central Appalachian steam and metallurgical coal that is coming from eastern Kentucky. The 70 percent decline in coal production between 2012 and 2020 shown in Figure 1 is consistent with the rate of decline the region has been experiencing in recent years.[4]

Such a steep drop over the next ten years will have serious implications for local economies, coal mining employment and families supported by coal jobs. For example, in 2009 coal mining directly made up nearly 20 percent of private sector jobs and nearly 30 percent of payroll in Pike and Perry counties.[5] An important public policy issue that is outside the scope of this brief is how to assist miners impacted by this decline.

Figure 1

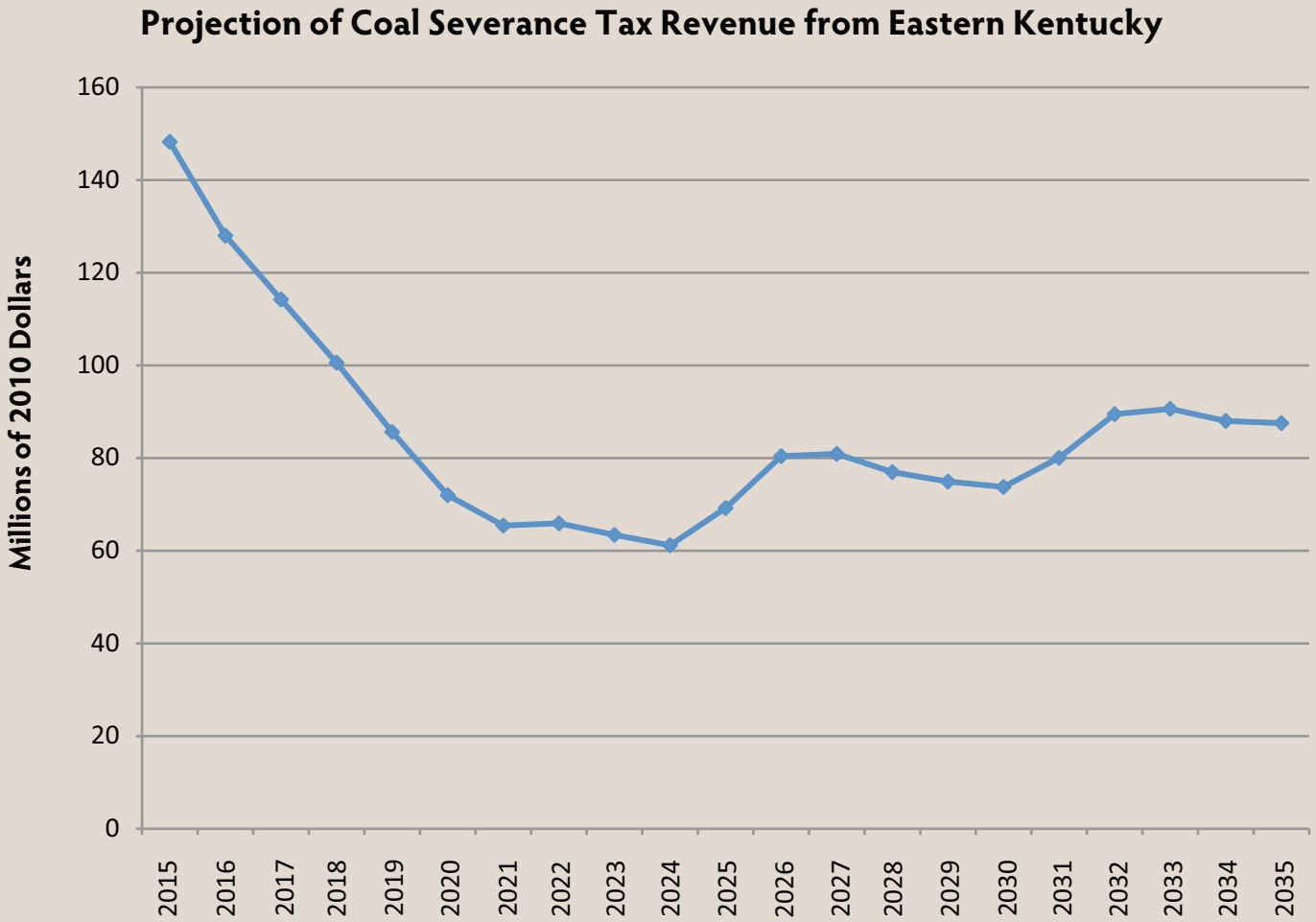


Source: MACED/KCEP analysis using historic data from the Kentucky Department of Energy Development and Independence and the Energy Information Administration Annual Coal Distribution Report and Central Appalachian projections from the Annual Energy Outlook 2012 Early Release.

Decline Would Also Reduce Severance Tax Revenue

A decline in production would also result in decreases in coal severance tax revenue. The severance tax is based on the value of coal mined and processed in the state, and thus depends both on how much coal is mined and at what price it is sold. A rough estimate of future revenues can be derived by using the above method to forecast eastern Kentucky production, EIA projections for Central Appalachian coal prices and an estimate of the effective severance tax rate.[6] That leads to a projection in which eastern Kentucky severance tax revenue decreases 41 percent (in real dollars) between 2015 and 2035, as declining production outweighs expected rising prices (Figure 2).

Figure 2



Source: MACED/KCEP analysis, see endnote 5.

Demands Grow for Uses of Severance Tax Dollars

For many years after Kentucky created a coal severance tax in 1972, almost all of the revenue was used for general state appropriations rather than specified for use in the coalfields. In 1992, the General Assembly passed legislation to apportion half of the monies back to the coal mining regions of eastern and western Kentucky. The legislation allocated a share of those dollars (15 percent of coal severance receipts) to a revenue-sharing program for local governments to provide basic services (known as the Local Government Economic Assistance Fund (LGEAF)) and a portion (35 percent of receipts) to local funds whose use was restricted to developing industrial parks and sites (the Local Government Economic Development Fund (LGEDF)). The authors of the legislation believed industrial recruitment was key to diversifying the region's economy as coal jobs disappear.

During the 1990s, LGEDF monies built a series of regional industrial parks. After mixed success recruiting industry, the legislature began utilizing coal severance monies for a wider range of purposes, including the following:

Educational and social programs that serve coal mining areas

The budget has funded specific programs in areas like education (the Read to Achieve program in coalfield counties; education technology in schools; the Robinson Scholars program; scholarships to the medical school at Pikeville College); health (Trover Clinic in western Kentucky); and drug abuse (Operation UNITE, the drug courts program).

Debt service on infrastructure and buildings

State budgets since 2002 have included debt for coal county capital projects, including expansion of water and sewer services and the construction and renovation of schools. The state issued bonds, and a growing share of coal severance revenue goes to paying debt service on those bonds. In the governor's proposed budget for 2013-2014, over $30 million in coal severance revenue is reserved for debt service payments.[7]

Local projects

In several legislative sessions, the legislature approved earmarks using monies that had built up in single-county LGEDF accounts for a variety of specific local projects, including senior centers, veterans memorials, recreation and sports facilities, tourism projects, community centers, library supplies, fire trucks and other public safety expenditures, and more.

Coal and energy-related expenses

A portion of severance tax dollars has been allocated to coal industry-related expenses and spending. For a while, $19 million a year was allocated to pay workers' compensation liabilities for injured coal miners. Recent budgets have also included monies for a mining engineering scholarship program, mine safety enforcement, and energy-related economic development projects in coal counties.

Proposals to fund college scholarships or make the University of Pikeville a public university would be an additional use of coal severance monies. The region needs a good debate about how to best use these dollars, but that debate must take into account the likelihood of their future decline.

Permanent Fund Could Extend Investment and Create Regional Asset

Experts often note that since severance taxes apply to resources that will eventually be depleted, it is important to consider permanent funds that would allow an ongoing revenue stream even after the resource is gone. Permanent funds are built by saving a portion of severance tax revenues each year and investing those dollars so that the principal balance grows over time. Four states have longstanding permanent funds—Alaska, Montana, Wyoming and New Mexico—while Utah created a fund in 2008 and North Dakota in 2010.[8]

According to the previously mentioned estimates, approximately $2.2 billion (2010 dollars) will be collected from eastern Kentucky coal severance taxes between 2013 and 2035. Creating a fund now would assure that a small portion of the wealth created as coal declines is turned into a permanent financial asset for the region.[9] Severance tax revenues from other nonrenewable resources, such as natural gas, could also go into the fund.[10]

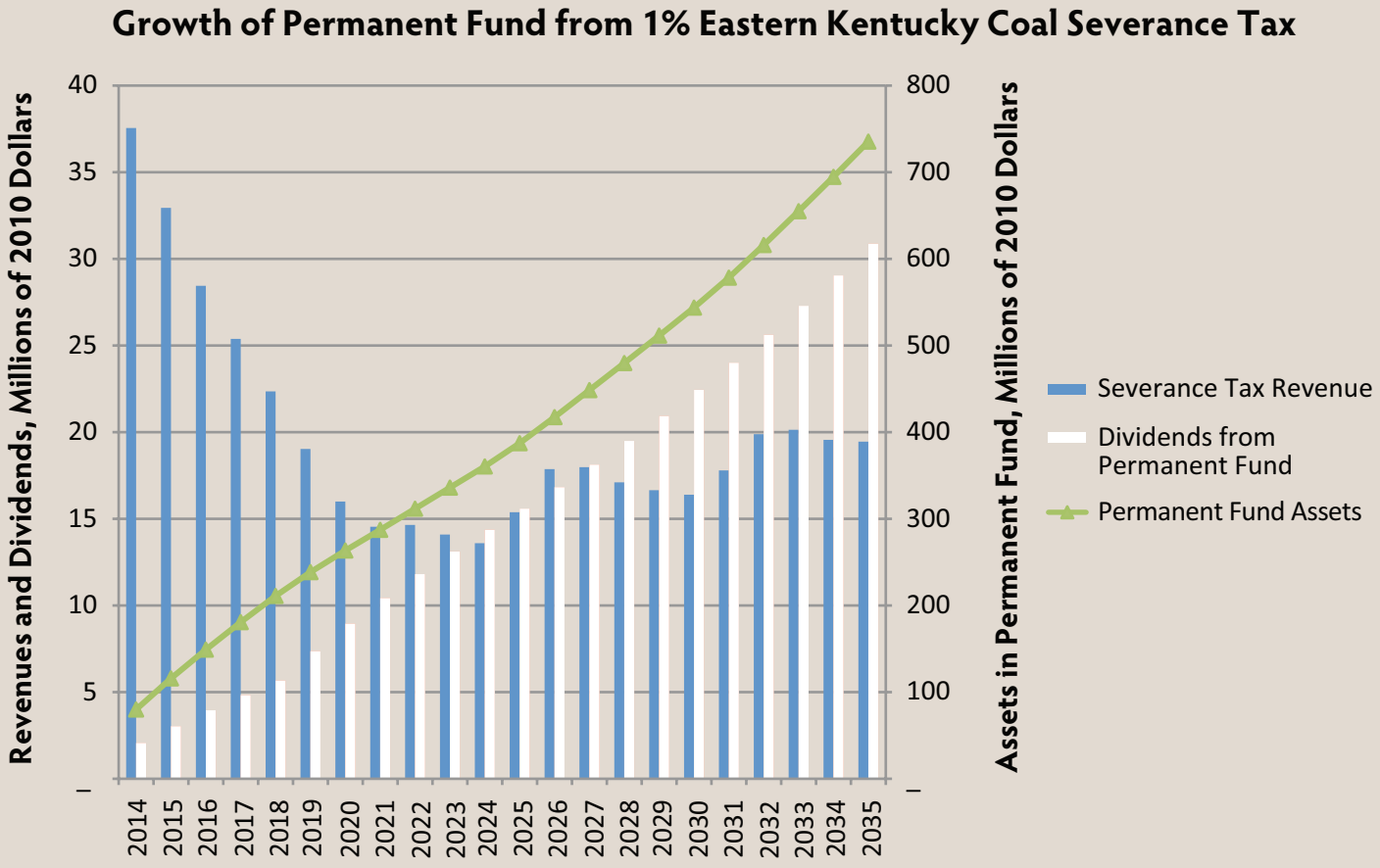
One approach would be for Kentucky to allocate a one percent severance tax to a permanent fund. There are multiple options for doing that, including allocating one-half a percentage point from current revenue (estimated at $19 million

in 2014) and one-half a point from matching West Virginia's coal severance tax rate of 5 percent (Kentucky's rate is 4.5 percent).[11] The state could then invest the funds and take an annual withdrawal of 5 percent of the fund's five-year market value.[12] Assuming a 7.5 percent annual growth rate (what the Wyoming trust fund has earned, and a common assumption of large investment funds), the fund would grow over time while dividends could be paid each year for needed investments in the region.[13]

One percent applied to eastern Kentucky coal production beginning now and using the above projections and assumptions would result in a permanent fund of $735 million by 2035 (2010 dollars).[14] At that time, the annual dividend from the fund would be $31 million for needed education, economic development, human services, infrastructure and/or other purposes. Creation of a permanent fund would mean less revenue for immediate spending from the one percent severance tax in the early years, but dividends paid would equal revenues coming into the fund in approximately ten years. By 2035, dividends would be 59 percent higher than revenues and, as mentioned above, there would be a large corpus that could be partially invested in the region and from which dividends would be paid indefinitely.

See Figure 3 for projections of revenue, annual dividends and assets of the permanent fund using the above assumptions.

Figure 3



Source: MACED/KCEP analysis using the above projections of eastern Kentucky severance tax revenue. See endnote 6.

There are lots of potential and needed uses of severance tax dollars to help finance the region's economic transition, and no one strategy or type of investment by itself will address the region's poverty and guarantee economic development. Also, creating economic development in a region that is among the poorest in the country, and which is losing an industry that provided employment for many years, will take a very long time. While the region needs investment now, it also needs to think about where necessary investment will come from in the future, and how the wealth generated over the next twenty to thirty years by dwindling coal production can help in part seed a financial asset that future generations can use to improve their communities and economies.

The design of a permanent fund should include measures that promote strategic use of the monies and guard against political uses. Most permanent funds include protections to keep the principal from being raided, such as a requirement in Montana that principal can only be used with a three-fourths vote of the legislature.[15] A permanent fund needs mechanisms to involve coalfield residents in planning for use of the monies and procedures to evaluate the effectiveness of various uses and audit the funds for accountability.

Region Needs Plan for a Way Forward

The debate over shifting a portion of eastern Kentucky coal severance tax dollars to higher education is the latest in a conversation about how to use these limited resources. Although some coal severance tax dollars in the past have gone to useful ends, many people in the region have serious concerns about other uses—and about the process by which decisions are sometimes made. If coal production and severance tax revenue decline as described here, the clock is ticking on how to maximize the benefit of the coming transition for the economic future of the region.

There is a great need for a regional conversation about what is happening now and what is likely to happen in the future. Serious community engagement in planning and careful evaluation of the options will be required. Moving forward involves creating a vision for the future, developing clearer strategies for economic development and diversification, and identifying sources for long-term investment—of which strategic use of coal severance tax revenue could be one.

[1] Report uses EIA's reference case scenario in the Annual Energy Outlook 2012 (Early Release), http://www.eia.gov/forecasts/aeo/er/.

[2] For a summary, see Rory McIlmoil and Evan Hansen, "The Decline of Central Appalachian Coal and the Need for Economic Diversification," Downstream Strategies, January 19, 2010, http://www.downstreamstrategies.com/documents/reports_publication/DownstreamStrategies-DeclineOfCentralAppalachianCoal-FINAL-1-19-10.pdf.

[3] Coal used to make metallurgical coke has made up a very small portion of eastern Kentucky coal production compared to the rest of Central Appalachia in recent years. Cumulatively for the years 2006-2010, eastern Kentucky produced 43 percent of the region's non-coking coal. But it produced only three percent of the Central Appalachian metallurgical coal shipped domestically, while southern West Virginia produced 79 percent. Similarly, only four percent of eastern Kentucky coal for 2006-2010 was exported internationally (most of which is for metallurgical purposes), and eastern Kentucky produced only 12 percent of Central Appalachia's exported coal. Analysis of eastern Kentucky's share of Central Appalachian coking coal and exported coal comes from the Annual Coal Distribution reports of the Energy Information Administration, http://www.eia.gov/coal/distribution/annual/.

[4] Projections assume that 84 percent of coal exports are of metallurgical coal, which is metallurgical coal's share of exports from the Norfolk, Virginia customs district for the years 2009-2010. In recent years, one-third to one-half of all U. S. coal exports have been through Norfolk. Projections allocate 43 percent of non-coking coal produced in Central Appalachia from EIA's estimates to eastern Kentucky based on eastern Kentucky's share of cumulative non-coke production over the years 2006-2010, which are drawn from the Annual Coal Distribution Report. Also, projections estimate that eight percent of future Central Appalachian metallurgical coal comes from eastern Kentucky based on the share of domestic distribution that has gone to coke plants over the years 2006-2010 and the share of Central Appalachian foreign distribution that comes from eastern Kentucky (and using the 84 percent metallurgical coal portion mentioned above). Source is Energy Information Administration, Annual Coal Distribution Report, http://www.eia.gov/coal/distribution/annual/.

[5] Analysis using 2009 U. S. Census Bureau 2009 County Business Patterns, http://www.census.gov/econ/cbp/index.html.

[6] Projections are derived by creating estimates of the gross value of coal using EIA projections for Central Appalachian coal prices and coal production and identifying eastern Kentucky's share of production as described in endnote 4 above. Estimate assumes that the share of low-sulfur and medium-sulfur bituminous coal is proportional in eastern Kentucky to Central Appalachia as a whole. The projected gross value is then multiplied by 4.5 percent, an estimate of the effective coal severance tax rate, to arrive at the revenue forecast. In this case, the effective rate used is the same as the statutory rate because that is the average effective rate using cumulative EIA data on the gross value of coal mined in Kentucky for the years 1989-2010. Gross value as determined using EIA's forecast is slightly different from the tax base of the coal severance tax, which is defined as the gross value of coal severed or processed minus transportation expenses. Other deductions and credits for the coal severance tax are few—estimated tax expenditures in 2012 are only $2.4 million, or 0.7 percent of expected severance tax revenues. Commonwealth of Kentucky Tax Expenditure Analysis 2012-2014, http://www.osbd.ky.gov/NR/rdonlyres/043EF3FC-B7DC-4B30-9204-53D590ECDE1E/0/2012_2014_TaxExpenditure_Doc.pdf. Additionally, severance tax estimates are averaged across calendar year to arrive at fiscal year estimates.

[7] 2012-2014 Executive Budget Operating Budget Volume 1 (Part A), http://www.osbd.ky.gov/NR/rdonlyres/34AD5C45-C328-4A30-B31D-F5360FE2C1B6/0/1214ExecBudVolumeIPartA.pdf.

[8] For an overview of permanent funds in other states, see Ted Boettner, et al., "Creating an Economic Diversification Trust Fund: Turning Nonrenewable Natural Resources into Sustainable Wealth for West Virginia," West Virginia Center on Budget and Policy, January 2012, http://www.wvpolicy.org/downloads/WVEconomicDiversificationTrustFundRpt013012.pdf.

[9] This brief does not address the possible investment of western Kentucky coal severance tax money into a permanent fund. Western Kentucky coal has seen growth in recent years, as its high sulfur content has become more acceptable in the market once many coal-fired power plants installed scrubbers. Between January 2009 and January 2012, western Kentucky monthly coal production increased 47 percent while eastern Kentucky production declined 18 percent.

[10] Kentucky collected $46 million from other severance taxes in 2011, including $25 million from natural gas, $13 million from minerals, and $8 million from oil production. The preponderance of natural gas production is in eastern Kentucky. State natural gas severance taxes increased in 2006-2009 as natural gas prices were high, reaching a peak of $42 million in 2009. Revenues have since decreased as the price has declined. 2012-2014 Executive Budget in Brief, http://www.osbd.ky.gov/NR/rdonlyres/28C22F94-8799-47C4-9627-3CF8B40C388F/0/1214ExecBudBudInBrief.pdf.

[11] West Virginia's coal severance rate is currently higher than five percent because it also includes a tax of 56 cents a ton that is being used to pay off unfunded liability in the state's workers' compensation fund. Once the liability is paid off, the 56 cent/ton tax will be eliminated. Increasing severance taxes in general can make good economic sense. Severance tax changes generally have a low price elasticity, meaning that increases or decreases are associated with only very small changes in production. This is in part because mobility is not possible with natural resources—production is dependent on the location of the reserves. Other issues affecting the cost of production, including proximity to markets, access to distribution infrastructure, cost of extraction, and technology matter much more than taxes. Severance taxes are also deductible against federal corporate income tax liabilities, meaning that the federal government helps subsidize state severance taxes with lower federal tax liabilities for companies that pay them. For further discussion of the literature, see Sean O'Leary, "Investing in the Future: Making the Severance Tax Stronger for West Virginia," West Virginia Center on Budget and Policy, December 2011, http://wvpolicy.org/downloads/SeveranceTax022812.pdf.

[12] Alaska and Wyoming spend five percent of the average five-year market value of their permanent funds, while New Mexico spends 4.7 percent. Boettner, "Creating an Economic Diversification Trust Fund."

[13] Since the intention of permanent funds is to preserve and not use the principal, they can be professionally managed with a long-term time horizon that maximizes returns. Average historic annual investment returns of longstanding permanent funds include: Alaska, 9.1 percent (since 1984); New Mexico, 7.8 percent (between 1990 and 2010); Wyoming, 7.5 percent (since 1975). See Boettner, "Creating an Economic Diversification Trust Fund." These long-term rates of return mirror those of large pension funds. Kentucky Retirement System's historic rate of return is 9.7 percent (even including the impact of two recessions in the last decade), and the system assumes a 7.75 percent rate of return. https://kyret.ky.gov/investments/performance/qtd_jun11.pdf. That system's financial problems are caused by legislative underfunding of its actuarially required contributions, not investment returns.

[14] This assumes no price elasticity of demand, since it is not necessarily the case that the 1 percent would come from a tax increase if current funds are used.

[15] Boettner, "Creating an Economic Diversification Trust Fund."