Kentucky Coal Facts

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Kentucky Energy and Environment Cabinet

Department for Energy Development and Independence

In Partnership with the

Kentucky Coal Association

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Cover Photo taken at River View Coal Mine, in Union County, Kentucky in March, 2010 by Aaron Camenisch, University of Kentucky, for the Kentucky Energy and Environment Cabinet

Executive Summary

Overview

After more than two centuries of commercial mining operations, Kentucky's domestic supply of coal remains an important component of the Commonwealth's economy. In 2014, Kentucky ranked as the third-highest coal producer in the United States producing 77.4 million tons that was sold for $4.6 billion plus transportation costs. Coal continued to supply a majority of energy in Kentucky and remained the largest source of domestic energy production in the Commonwealth. At the end of 2014, coal mines in Kentucky directly employed 11,586 people and mining directly contributed billions of dollars to the economy of Kentucky. Over 33 percent of the coal produced in Kentucky was consumed within the Commonwealth. The largest market for Kentucky coal remains the generation of electrical power across the United States, primarily in the southeast.

Production

Kentucky coal production decreased in 2014 by 3.6 percent from 2013, to 77.4 million tons, the lowest level since 1962. Eastern Kentucky coal production decreased in 2014 by 4.9 percent from 2013 to 37.5 million tons—the lowest level since 1961. Production slowed at both underground and surface mines. Eastern Kentucky production has declined by 65 percent since the year 2000, and by 71.4 percent since peak production at 131 million tons in 1990. Western Kentucky coal production decreased by 2.2 percent from 2013 to 39.9 million tons. Union County remained the largest coal-producing county in Kentucky in 2014, out-producing the second largest, Pike County. However, Pike County still holds the record for greatest cumulative production at 1.5 billion tons. Total annual production in 2014 in western Kentucky, where thicker, more productive coal seams yield cheaper coal, was greater than in eastern Kentucky in 2013 and 2014 for the first time since 1911.

Employment

At the end of 2014, Kentucky coal mines employed 11,586 persons, 6,610 underground coal miners, 3,139 surface miners, 1,458 preparation plant workers, and 379 on-site office staff. Compared to previous years, employment at Kentucky coal mines remained relatively stable, decreasing by 2.6 percent from 11,890 at the beginning of the year, to an average of only 11,586 by December—a one-year loss of 304 employees. In addition to these direct jobs, a total of 13,030 other employment opportunities were created in Kentucky as a result of the money spent by coal companies and their employees including.

Markets

The markets and destinations for Kentucky coal during 2014 were concentrated in 17 states, with a small market for international exports. Approximately 33 percent of the coal mined in Kentucky during 2014 was consumed in the Commonwealth—primarily by electric utilities—making Kentucky the largest single market for Kentucky coal. The vast majority of Kentucky coal—63.5 million tons or 82 percent—was shipped to electric power plants in 17 different states, including Kentucky, principally located in the southeast. Following Kentucky, the states of Florida, South Carolina, Georgia, North Carolina, Virginia, and Ohio were the largest consumers of Kentucky coal during 2014. Coal-fired power plant closures in these states have significantly reduced domestic demand for Kentucky coal. Impending coal-fired power plant closures scheduled in 2015-2016, can be expected to further reduce demand for Kentucky coal. However, Kentucky coal exports to foreign countries have increased in recent years.

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In order to provide the public with timely access to these data, this report uses the best-available estimate for each factor at the time of publication. However, as a result of data revisions, confidentiality, rounding, and reporting errors, the table values may not precisely equal the sum of the included components and certain indicators may be subject to change. Please direct all data-related inquiries to Aron Patrick (Aron.Patrick@ky.gov) or Adam Blandford (Adam.Blandford@ky.gov) or by calling the Kentucky Department for Energy Development and Independence at 502-564-7192.

History of Coal in Kentucky

Kentucky coal has been commercially mined for over two centuries. In 1750, Dr. Thomas Walker was the first known person to discover and use coal in what would later become Kentucky. The earliest-known commercial coal production was 20 tons in 1790 in Lee County—two years before the Commonwealth of Kentucky became a state. Although small quantities of coal would continue to be mined across the state, it was not until 1855 that annual production would exceed one hundred thousand tons. The Civil War briefly diverted coal production from Kentucky to other coalfields in Pennsylvania, Maryland, Ohio, and Illinois. However, after a near-stoppage during the Civil War, coal mining resumed and production exceeded one million tons for the first time in 1879.

Photo: Big Sandy Operators stand at a coal mine tipple, used to load coal onto railcars on March 26, 1914. Jenkins, Kentucky Photographic Collection, University of Kentucky Special Collections.

As the American economy grew in the late 19th and early 20th centuries, so too did demand for Kentucky coal. From the 1870s to the end of the century, railroads were built in both the eastern and western Kentucky coalfields, which significantly improved the efficiency of producers to deliver coal to urban and industrial consumers and opened up areas to development. The expansion of railroads across the United States also increased demand for coal; Kentucky's deposits of bituminous coal were used to power steam locomotive engines and used in iron and steel mills to produce the metals the railroads and other industries required. Coal's central role in the railroad industry would continue until the 1930s, when railroads were increasingly fueled by diesel.

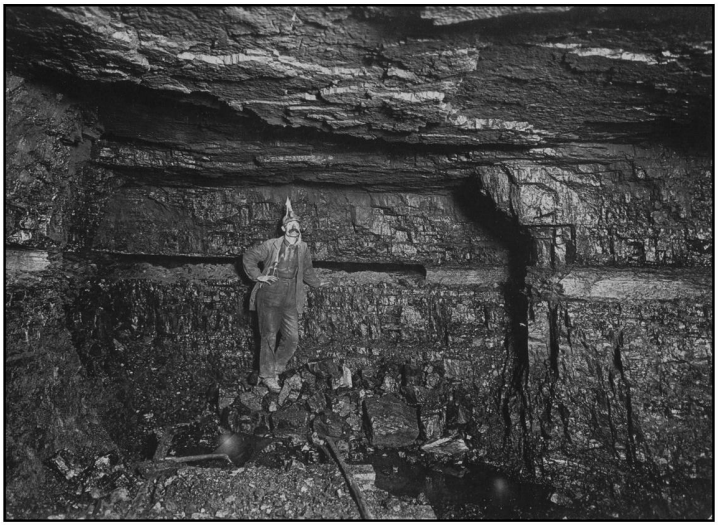


Photo: Face of room in No. 205 Mine in Jenkins, Letcher County, Kentucky between 1911 and 1913. In 1911, the Consolidation Coal Company purchased one hundred thousand acres of coal lands in Pike, Letcher and Floyd counties, Kentucky. Jenkins, Kentucky Photographic Collection, University of Kentucky Special Collections.

The industrialization of the early 20th Century brought the expansion of the eastern Kentucky coal industry, as bituminous coal became the primary energy source for the continually-growing cities throughout the Midwest. The Appalachian Mountains divided the anthracite cities of New York, Philadelphia, and Boston, and bituminous-dependent cities west of the mountains, including Pittsburgh, Chicago, and Cincinnati. In turn, this industrialization granted the United States the highest economic growth rate in the world during that period.

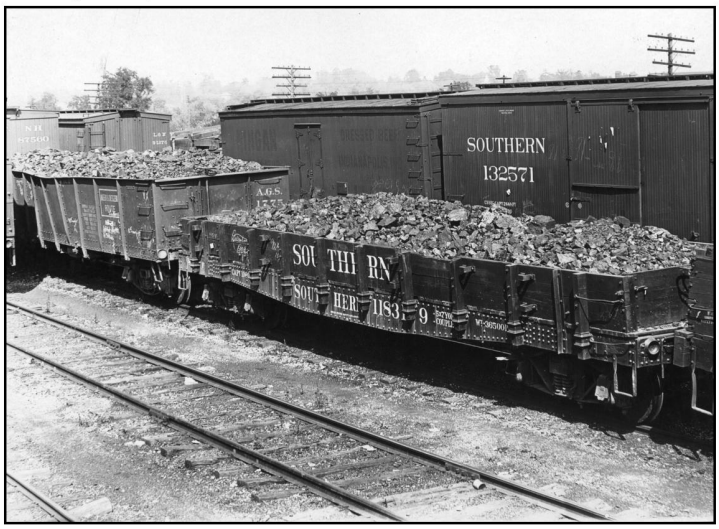


Photo: Southern Railroad car shipping coal. Louis Edward Nollau Photographic Print Collection, University of Kentucky Special Collections.

History of Coal in Kentucky

Photo: Coal miners changing shifts at Inland Steel Company mine in Wheelright, Floyd County, 1946. Russell Lee Photographic Collection, University of Kentucky Special Collections.

Numerous towns and coal camps, such as those in Letcher and Harlan counties, grew along the railways that crisscrossed eastern Kentucky. Many miners came from within the region, as subsistence farming gave way to the industrial age, but much of the growing population included immigrants searching for a better life from southern and eastern Europe as well as African-Americans from the southern United States.[1]

1. Estep, Bill. 100 years of coal mining in Harlan County.

Photo: Coal pile at Farmers Supply Company at 325 East Vine Street, Lexington, 1933.
University of Kentucky Special Collections

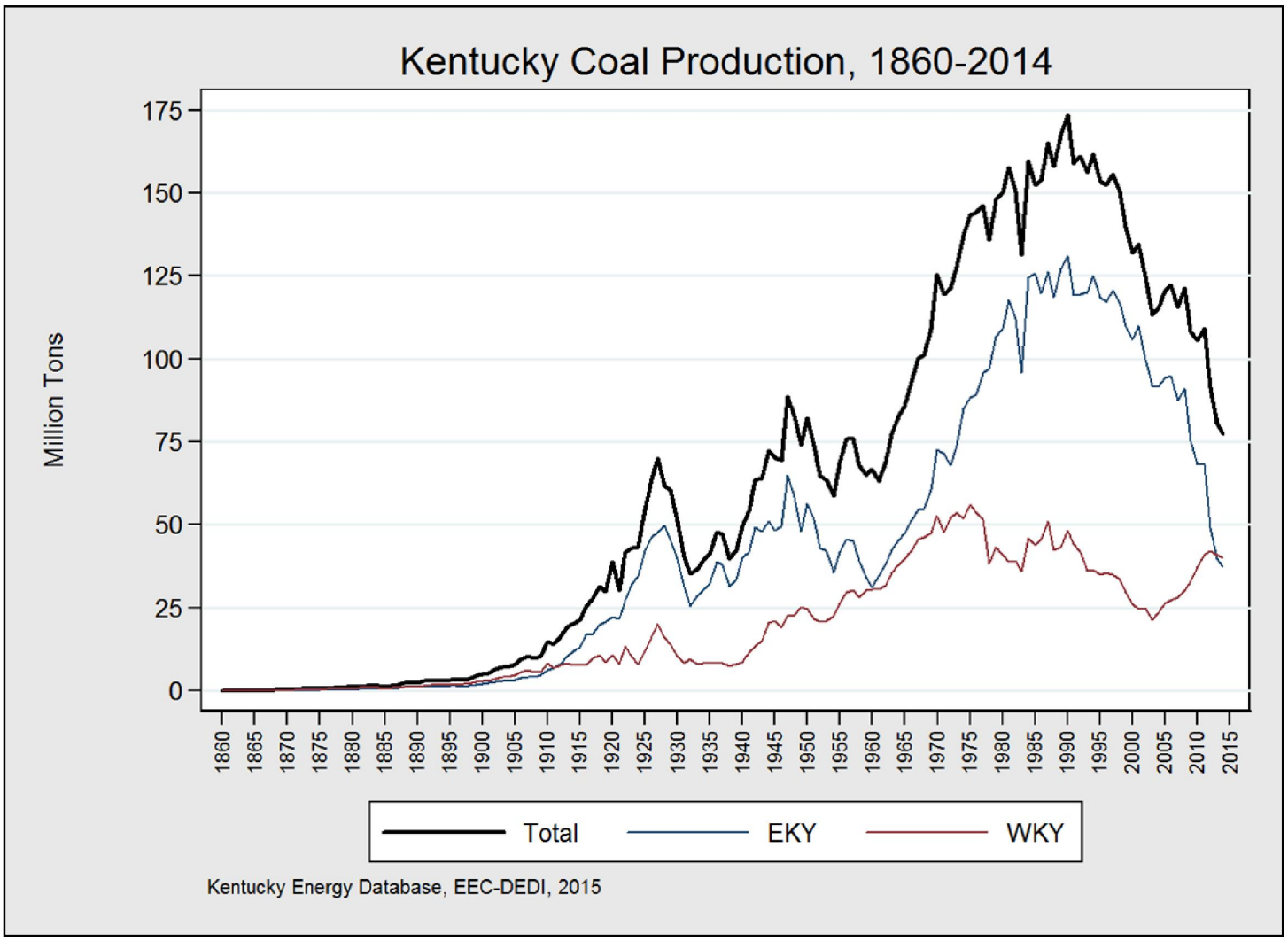
Photo: A coal miner's child studies in grade school in Harlan County, September 15, 1946. Russell Lee Photographic Collection, University of Kentucky Special Collections.

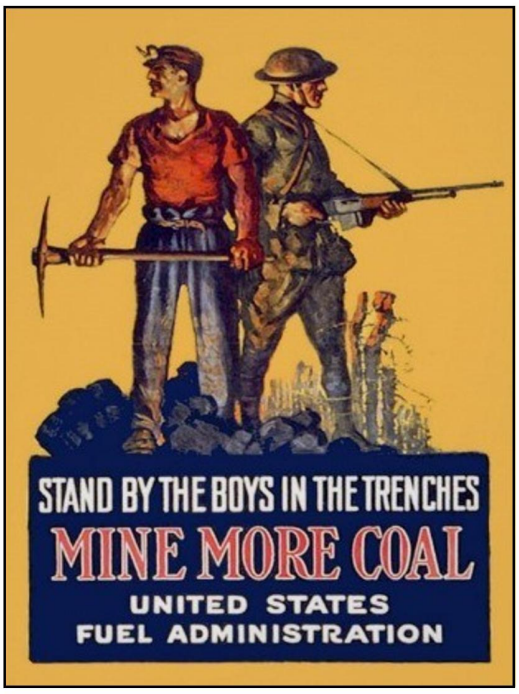
Photo: J. W. Hardy, President of The North Fork Coal & Iron Company. The company, owned and operated entirely by African-Americans, began mining coal in Morgan County in 1911 and held offices at 256 East Short Street, in Lexington. Sallie Price Family Papers, University of Kentucky Special Collections.

Segregation, backed by state law, was pervasive within the coal camps well into the early 20th century, with some communities segregated between new immigrants, blacks, and native whites. Other camps segregated the communities while integrating the mines.

All photographs from the University of Kentucky Special Collections may be found at http://exploreuk.uky.edu/

History of Coal in Kentucky





In 1917, the United States formally declared war on Germany. After one of the coldest winters ever recorded, coal supplies were low, and more coal was desperately needed to continue production of guns, munitions, and ships for the war. President Woodrow Wilson created the United States Fuel Administration to encourage increased coal production. Kentucky coal production continued to rise with the economic growth of the post-World War I expansion until the Great Depression beginning in 1929. In the 1940s, coal production increased once again as the nation armed for war. In the 1940s through 1970s, bituminous coal began to be phased out of the railroad industry, but was increasingly utilized for electricity generation. To meet rising electricity demand, large-scale surface mining operations began in western Kentucky that led to rapid expansion of production. In the 1970s, significant surface mining operations also began in the Appalachian Mountains of eastern Kentucky, and accounted for half of the production. Wyoming, with thick seams of low sulfur Powder River Basin coal, displaced Kentucky as the United States' leading coal producer in 1988. Kentucky coal production peaked in 1990 at over 173 million tons and has declined thereafter. West Virginia overtook Kentucky as the second-largest coal producer in 1994.

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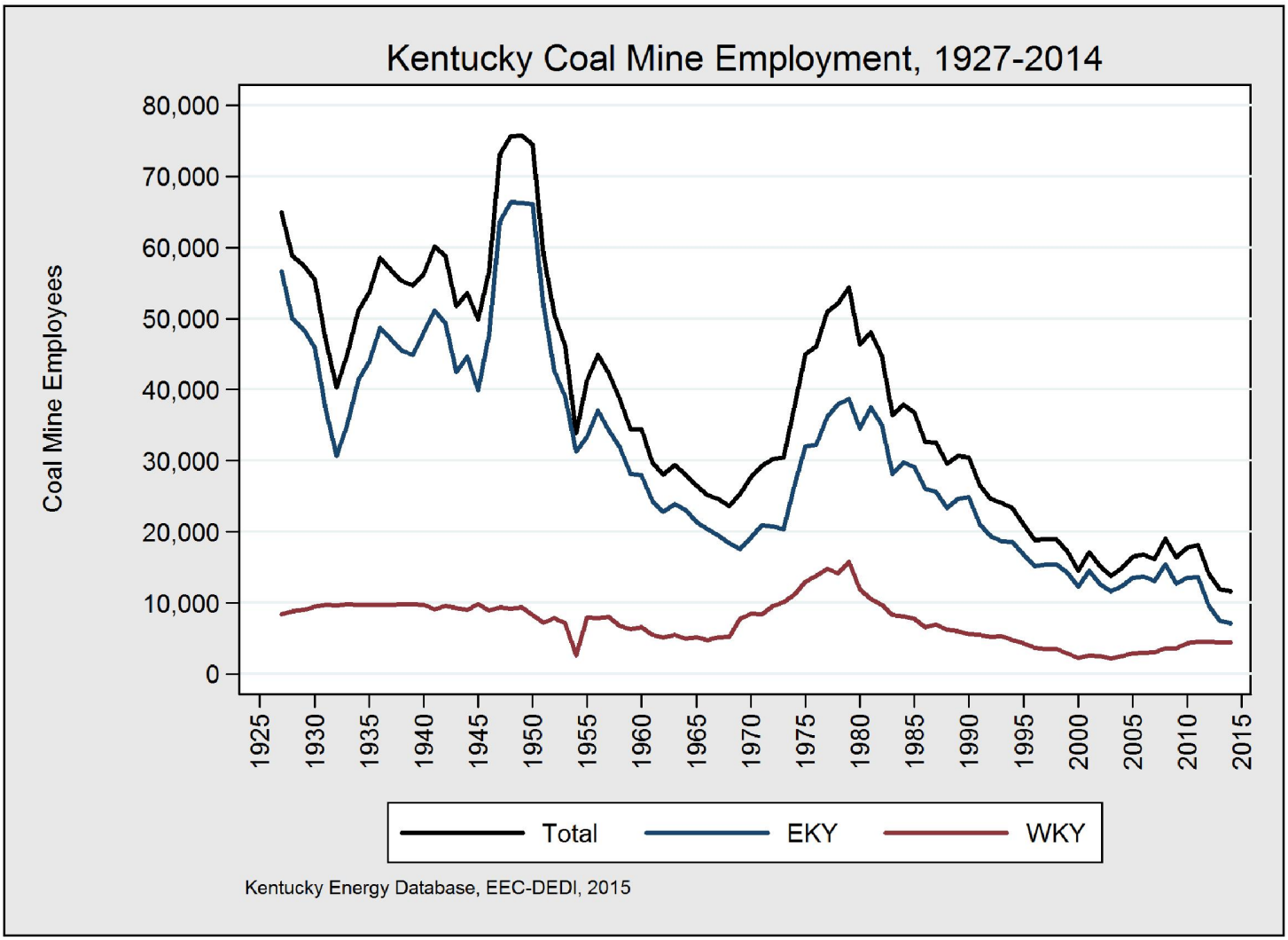
History of Coal in Kentucky



The earliest official statistic on record for statewide coal mine employment is from 1927 when 64,969 "men" working at 622 mines produced 69.9 million tons. Known Kentucky coal mine employment peaked in 1948 after the Second World War at 75,633, with 66,410 in eastern and 9,223 in western Kentucky, respectively. Coal mine employment has declined over the past century due primarily to automation and mechanization of mining processes, which have improved mining productivity—the amount of coal produced per labor hour. Since the year 2000, however, diminishing reserves of thick and easily accessible coal seams in eastern Kentucky have made coal more difficult, labor-intensive, and costly to mine, which has resulted in reductions in price competiveness of Kentucky coal vis-à-vis coal from other regions and alternative sources of energy. Kentucky coal has been under increased competition from cheaper Powder River Basin coal since the 1980s and from natural gas produced through advances in hydrologic fracturing technology since the 2010s. Federal environmental regulations targeting mercury, sulfur dioxide, nitrogen oxide, and recently carbon dioxide, have further impeded the market competiveness of coal for domestic electricity generation versus alternative energy sources.

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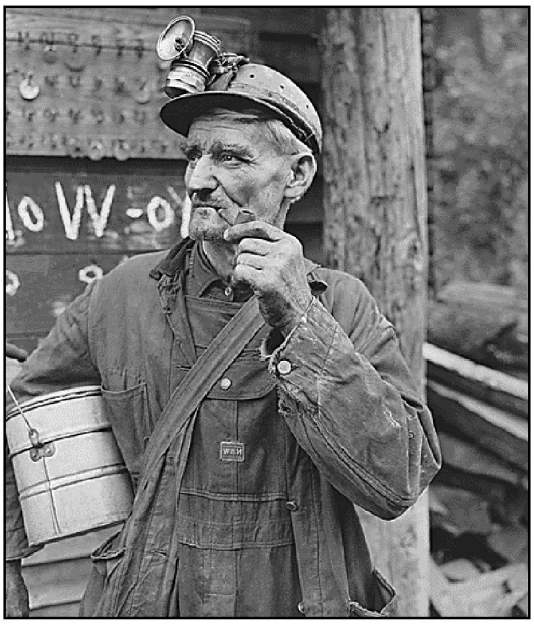

Photo: Miner in Lejunior, Harlan County. 9/13/1946
University of Kentucky Special Collections
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History of Coal in Kentucky

1000 Although the first use of coal in Kentucky is unknown, Hopi Indians, living in what is now Arizona, are known to have used coal to bake pottery made from clay more than 1,000 years ago.

1673 Among the first known instances of European settlers finding coal in the United States – Louis Jolliet and Father Jacques Marquette encounter "charbon de terra" (coal) at a point on the Illinois River during their expedition on the Mississippi River.

1701 Coal is found near what is now Richmond, Virginia.

1748 First recorded United States coal production occurs near Richmond, Virginia.

1750 Dr. Thomas Walker was the first known person to discover and use coal in what would later become Kentucky.

1755 Lewis Evan's map is made; showing coal in what is now the Greenup County and Boyd County area of Kentucky.

1758 First known commercial U.S. coal shipment occurs.

1790 First recorded Kentucky commercial coal production begins in what would later become Lee County, with annual production of 20 tons, two years before the Commonwealth of Kentucky became a state.

1792 **The Commonwealth of Kentucky became the 15th state to join the United States.**

1800 **Kentucky produces over 100 tons for the first time.**

1813 **Kentucky produces over 1,000 tons for the first time.**

1825 First recorded western Kentucky coal production begins in newly-founded Daviess County, Kentucky with annual production of 3,000 tons.

1828 **Kentucky produces over 10,000 tons for the first time.**

1838 At the request of the General Assembly, W. W. Mather conducts the first geological survey of Kentucky.

1848 First coal miner's union is formed in Schuylkill County, Pennsylvania.

1854 David Dale Owen establishes the Kentucky Geological Survey (KGS).

1855 **Kentucky produces over 100,000 tons for the first time.**

1861-1865 Kentucky coal production collapses with the onset of the Civil War.

1870 St. Louis & Southern Railroad is completed from Henderson to Earlington, Kentucky.

1872 **Hopkins County is the first Kentucky county to mine over 100,000 tons in a single year.**

First train off the Big Sandy Railroad.

1877 Coal is mined with a steam-powered shovel.

1879 **Kentucky produces over 1 million tons for the first time.**

1880 Mechanical stokers are introduced.

First coke ovens used in western Kentucky.

First train from Williamson, West Virginia, to Pike County, Kentucky.

Coal mining machines come into general use to undercut coal beds.

1890 **Hopkins County in western Kentucky is the leading coal producer in the state for 18 straight years.**

N&W Railroad's first mine at Goody in Pike County.

Miner Pay Law enacted.

United Mine Workers of America formed.

Machines developed to undercut coal beds.

5,000 kilowatt steam turbine generates electricity.

1891 First federal law regarding mine safety is enacted, establishing minimum ventilation requirements at underground mines and prohibiting the employment of children less than 12 years of age.

1899 **Hopkins County is the first Kentucky county to mine over 1 million tons of coal in a single year.**

1900 Edgewater Coal Company has its first production in Pike County.

First train off the Lexington and Eastern Railroad.

1907 **Kentucky produces over 10 million tons of coal for the first time.**

1910 United States Bureau of Mines is established, charged with conducting research to reduce coal mining accidents.

First train travels on the Cumberland Valley Railroad.

Pike-Floyd Coal Company has its first production at Betsy Layne.

History of Coal in Kentucky

1911 **Coal production in eastern Kentucky exceeds 6.9 million tons, displacing western Kentucky as Kentucky's leading coalfield.**

1914 World War I increases demand for coal; Kentucky produces 20.3 million tons.
Short-flame or "permissible" explosives developed.

1916 Child Labor Act is passed, prohibiting the interstate sale of goods produced by miners under the age of 16.

1918 First pulverized coal fired generator is used in electric power plants.

1920 Federal Mineral Leasing Act becomes law, creating a system of leasing and development for mining on federally owned land

1923 **All-time high U.S. employment of 704,793 bituminous coal and lignite miners is recorded.**
First dragline excavators built especially for surface mining are introduced.

1925 **Harlan County produces 11.8 million tons of coal, becoming the first Kentucky county to produce more than 10 million tons in a single year.**

1927 **Kentucky coal mines employ 64,969 miners, the earliest known official employment statistic.**
Kentucky coal production reaches 69.9 million tons

1931 Great Depression reduces demand for coal; Kentucky produces 40.4 million tons.

1932 Walking dragline excavators are developed.

1933 Congress creates the Tennessee Valley Authority (TVA).

1935 Congress passes the Rural Electrification Act to promote electricity distribution across the United States.

1940 Auger surface mining is introduced.

1941 United States Bureau of Mines is granted inspection authority.

1942 Republic Steel Company has its first production in Road Creek, Kentucky.
Kentucky Water Contamination Legislation is enacted.

1944 World War II increases demand for coal; Kentucky produces 72.4 million tons.

1947 Kentucky Coal Association is founded.
First federal regulation for mine safety is enacted.

1949 **Kentucky coal mines employ 75,707 miners—the highest number ever recorded.**

1950 Post-War Marshall Plan increases demand for coal; Kentucky produces 82.2 million tons.

1952 Federal Coal Mine Safety Act is passed, allowing annual inspections in underground mines and civil penalties against mine operators for noncompliance with withdrawal orders or refusing access to inspectors of mines.

1956 Fish and Wildlife Coordination Act becomes law, requiring federal agencies to determine how proposed mines could affect bodies of water.
Railroads begin converting from coal to diesel fuel.
Roof bolting introduced in underground mines.

1960 Railroads begin using unit coal trains, enabling transportation of larger volumes with increased efficiency.
First longwall mining with powered roof supports.
Kentucky Surface Mining Legislation is enacted.

1961 **Muhlenberg County replaces Hopkins County as the leading coal-producing county.**

1966 Congress extends coverage of 1952 Federal Coal Mine Safety Act to all underground mines.
National Historic Preservation Act becomes law, governing the preservation of historic properties.
C&O Railroad to John's Creek is constructed in Pike County.

1967 **Kentucky produces over 100 million tons for the first time.**

1969 Federal Coal Mine Health and Safety Act enacted, creating what would become the Mine Safety and Health Administration (MSHA). The law requires two annual inspections of every surface mine, four at every underground mine; establishes mandatory monetary fines for all violations and criminal penalties for "knowing and willful" violations; requires more stringent health and safety standards; and provides compensation for miners disabled as a result of pneumoconiosis, or black lung.

1970 Federal Clean Air Act is passed, which regulates the discharge of pollutants into the air.

History of Coal in Kentucky

1970 Federal Clean Air Act is passed, which regulates the discharge of pollutants into the air.

The Hurricane Creek Mine Disaster occurs, in which 38 miners are killed in Leslie County, following a mine explosion—the deadliest mine disaster since the implementation of the Coal Mine Health and Safety Act of 1969.

Surface mines in Muhlenberg County produce nearly 21.5 million tons of coal, more surface production than any county in Kentucky history.

1971 **Kentucky becomes the leading coal producer in the United States, with surface mines in Muhlenberg County leading the state.**

Surface production becomes Kentucky's primary means of coal production, led by large surface mines in Muhlenberg County in western Kentucky.

1972 Kentucky Coal Severance Tax is established.

Clean Water Act is passed, regulating the discharge of pollutants into water sources.

1973 Endangered Species Act becomes law, which governs the protection of endangered species.

Brookside Strike occurs, during which 180 miners in Harlan County strike, demanding safer working conditions, higher wages, and amended labor practices.

OPEC (Oil Producing and Exporting Countries) oil embargo—coal production and prices rise.

1976 Federal Coal Leasing Amendments Act enacted, requiring all public lands available for coal leasing to be leased competitively.

15 coal miners and 11 rescue workers die in Scotia Mine accident in Letcher County.

1977 Federal Surface Mine Control and Reclamation Act is passed, regulating active mines and creating the Office of Surface Mining to oversee reclamation efforts for reclaiming closed mine lands.

Mine Safety and Health Act (Mine Act) is enacted, amending Coal Mine Safety and Health Act of 1969 to consolidate all coal and non-coal mine safety and health regulations into one regulatory body. The act amends miner protections and transferred authority for overseeing mine health and safety from the Department of Labor to the Mine Safety and Health Administration (MSHA).

Pike County in eastern Kentucky replaces Muhlenberg County in western Kentucky as the leading coal-producing county.

1978 **Underground mining again becomes Kentucky's primary means of coal production.**

1980 Congress enacts the National Acid Precipitation Assessment Program (NAPAP) Study, a 10-year research program, which invests $550 million for the study of acid rain.

Industries spend over $1 billion on air pollution control equipment during 1980.

1983 United States Clean Coal Technology Demonstration Program establishes $2.5 billion in federal matching funds committed to develop and demonstrate improved clean coal technologies.

1986 Clean Coal Technology Act is passed, intended to construct new coal generation technologies at scale.

1988 **Wyoming overtakes Kentucky as the leading coal producer in the United States.**

Kentucky Supreme Court rules that the unmined minerals tax on coal is subject to the same state and local property tax rates as other real estate.

1990 United States Clean Air Act Amendments of 1990 are passed, establishing emissions limits for sulfur dioxide and nitrous oxide from coal-fired power plants.

Kentucky coal production peaks at over 173 million tons. Eastern Kentucky production peaks at nearly 131 million tons.

United States coal production exceeds 1 billion tons.

1992 United States Energy Policy Act of 1992 is passed.

1994 **West Virginia overtakes Kentucky as the second-highest coal producer in the United States.**

Workers' Comp Reform Laws are passed in Kentucky.

1996 Energy Policy Act goes into effect, increasing competition in utility markets among fuel providers.

Coal production in Pike County peaks at nearly 36 million tons of coal in a single year, more than any county in Kentucky history.

History of Coal in Kentucky

1997 The Kentucky Fish and Wildlife Commission votes to reintroduce elk into 14 eastern Kentucky counties on post-mined lands, citing mountaintop mining areas and old mine benches as good elk habitat.

1998 Federal synthetic fuel tax credit for use of coal fines begins.

2005 East Kentucky Power Cooperative's Gilbert coal-fueled fluidized-bed power plant begins operation.

Energy Policy Act of 2005 passed, which promotes the use of Clean Coal Technologies.

EPA adopts Clean Air Mercury Rule (CAMR) to reduce power plant mercury emissions to 15 tons by 2018.

2006 An explosion in Darby Mine No. 1 in Harlan County kills five miners—three from carbon monoxide poisoning and two from the initial blast.

Kentucky Energy Security National Leadership Act is passed, which calls for strategy for producing fuels from Kentucky coal.

Kentucky Coal Academy founded to train new coal miners.

Kentucky becomes the first state to adopt a drug-testing program for certification of coal miners.

Congress passes Mine Improvement & New Emergency Response Act (MINER Act), requiring mine-specific emergency response plans in underground mines, amending regulations for mine rescue, requiring rapid notification of mine accidents, and increasing civil penalties for mine violations.

2007 First year with no underground coal mining fatalities in Kentucky since records began.

Kentucky House Bill I is enacted, providing incentives for development in Kentucky of industries for producing transportation fuels and synthetic natural gas by gasification of coal.

United States Air Force flies aircraft on a blend of jet fuel containing gasified coal.

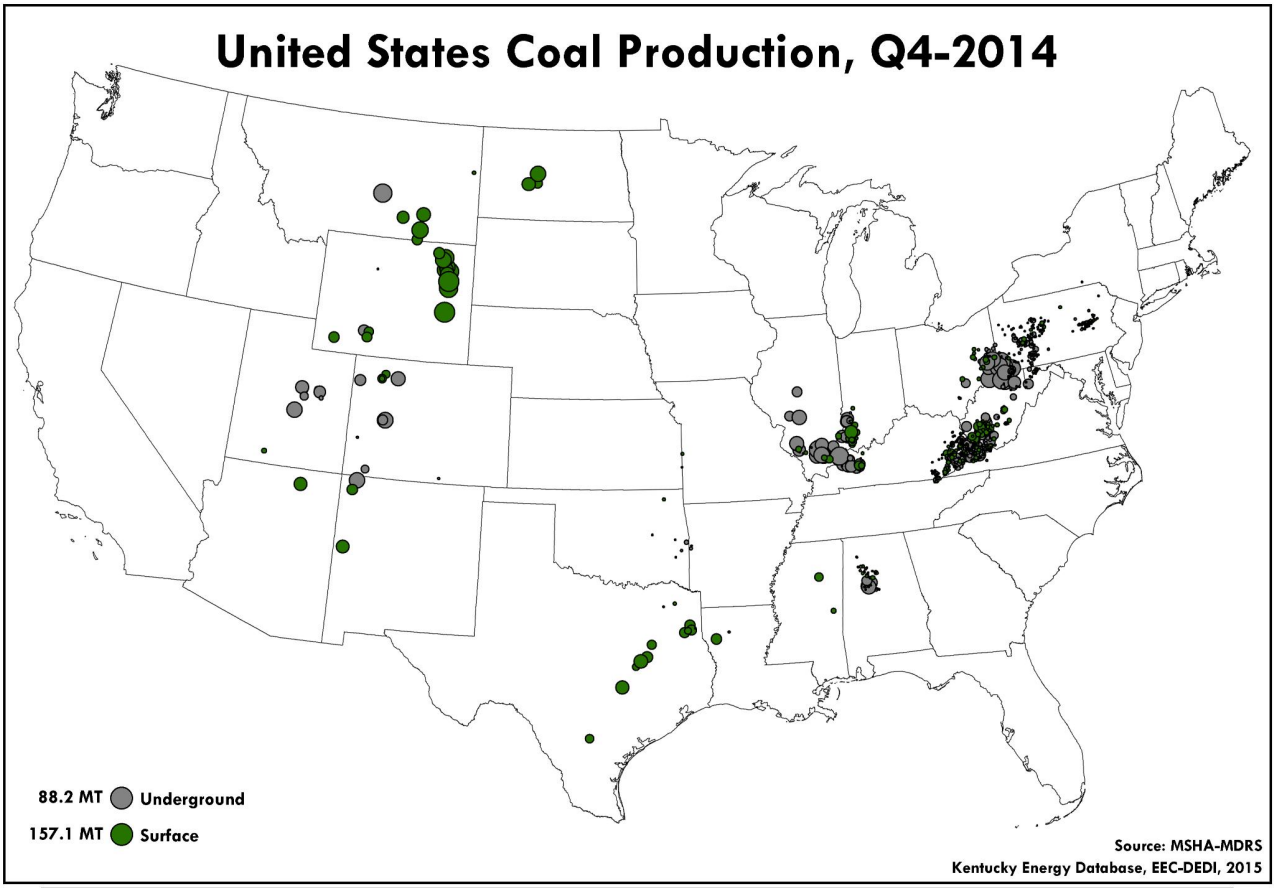
2010 Kentucky's most efficient coal-fired power plant, an Advanced Super Critical Pulverized Power Plant, begins operation in Trimble County.

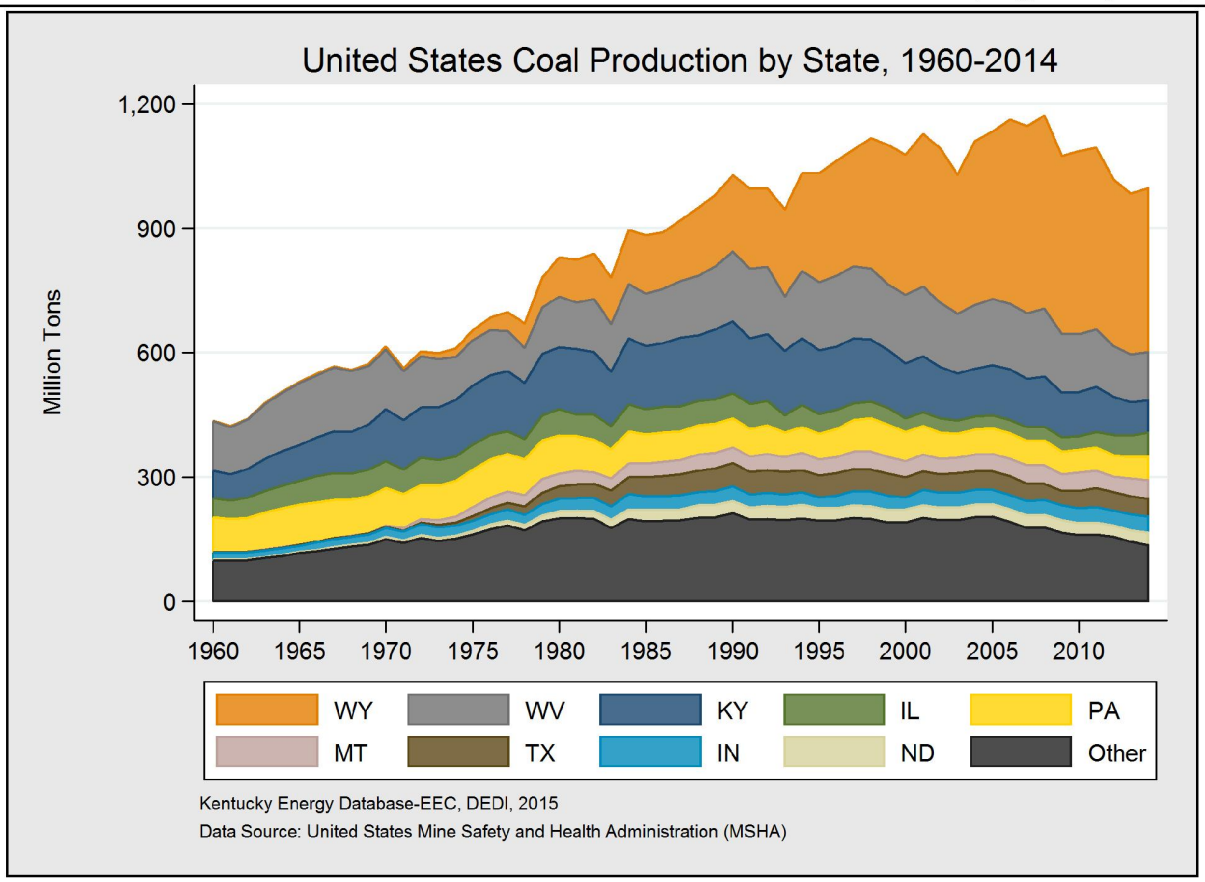
2012 **Union County in western Kentucky replaces Pike County as Kentucky's leading coal-producing county.**

2013 **Coal production in western Kentucky exceeds coal production in eastern Kentucky for the first time since 1911.**

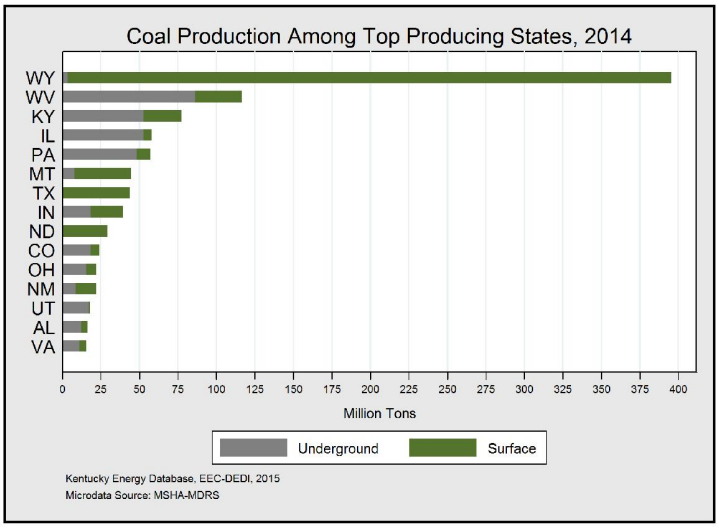
Photo: Coal miners on a mining cart leaving a mine entrance, 1939. Part of Harlan County Mine Strike Photographic Collection, University of Kentucky Special Collections http://exploreuk.uky.edu/

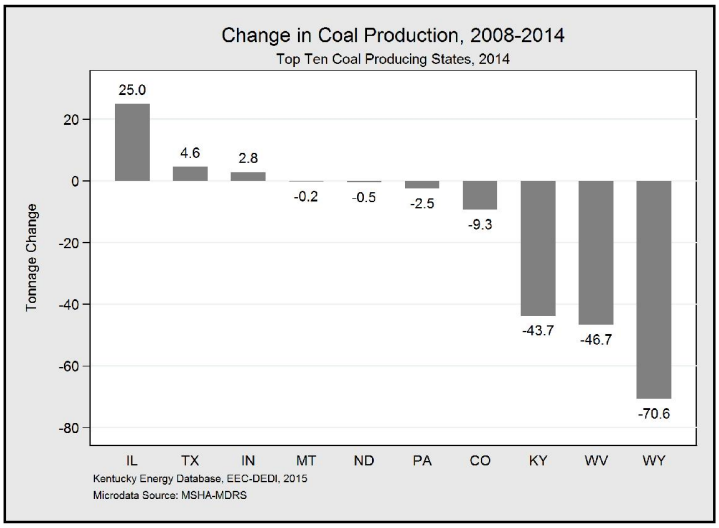
United States Coal Production





United States Coal Production





U.S Coal Production by State, 2014				
State	Rank	Thousand Tons	1 Year Change	Percent
United States	-	1,000,107	+1.6%	100%
Wyoming	1	395,665	+2.0%	39.6%
West Virginia	2	116,719	+1.0%	11.7%
Kentucky	3	77,427	-3.6%	7.7%
Illinois	4	58,025	+11.0%	5.8%
Pennsylvania	5	57,304	+10.2%	5.7%
Montana	6	44,562	+5.5%	4.5%
Texas	7	43,654	+1.9%	4.4%
Indiana	8	39,270	+0.4%	3.9%
North Dakota	9	29,157	+5.5%	2.9%
Colorado	10	24,007	-0.9%	2.4%
Ohio	11	22,258	-11.4%	2.2%
New Mexico	12	21,963	+0.0%	2.2%
Utah	13	17,942	+6.8%	1.8%
Alabama	14	16,468	-11.6%	1.6%
Virginia	15	15,559	-9.1%	1.6%
Arizona	16	8,051	+5.9%	0.8%
Mississippi	17	3,737	+4.5%	0.4%
Louisiana	18	2,605	-7.3%	0.3%
Maryland	19	1,957	-3.0%	0.2%
Alaska	20	1,502	-2.0%	0.2%
Oklahoma	21	912	-19.7%	0.1%
Tennessee	22	839	-23.6%	0.1%
Missouri	23	363	-12.3%	0.0%
Arkansas	24	94	+125.8%	0.0%
Kansas	25	66	+199.6%	0.0%

Coal production in the United States increased in 2014 by 1.6 percent compared to 2013 with more than one billion tons mined. Since 2008—the year with the highest coal production in the United States—total coal production has declined by 172 million tons, or 15 percent, as shown above.

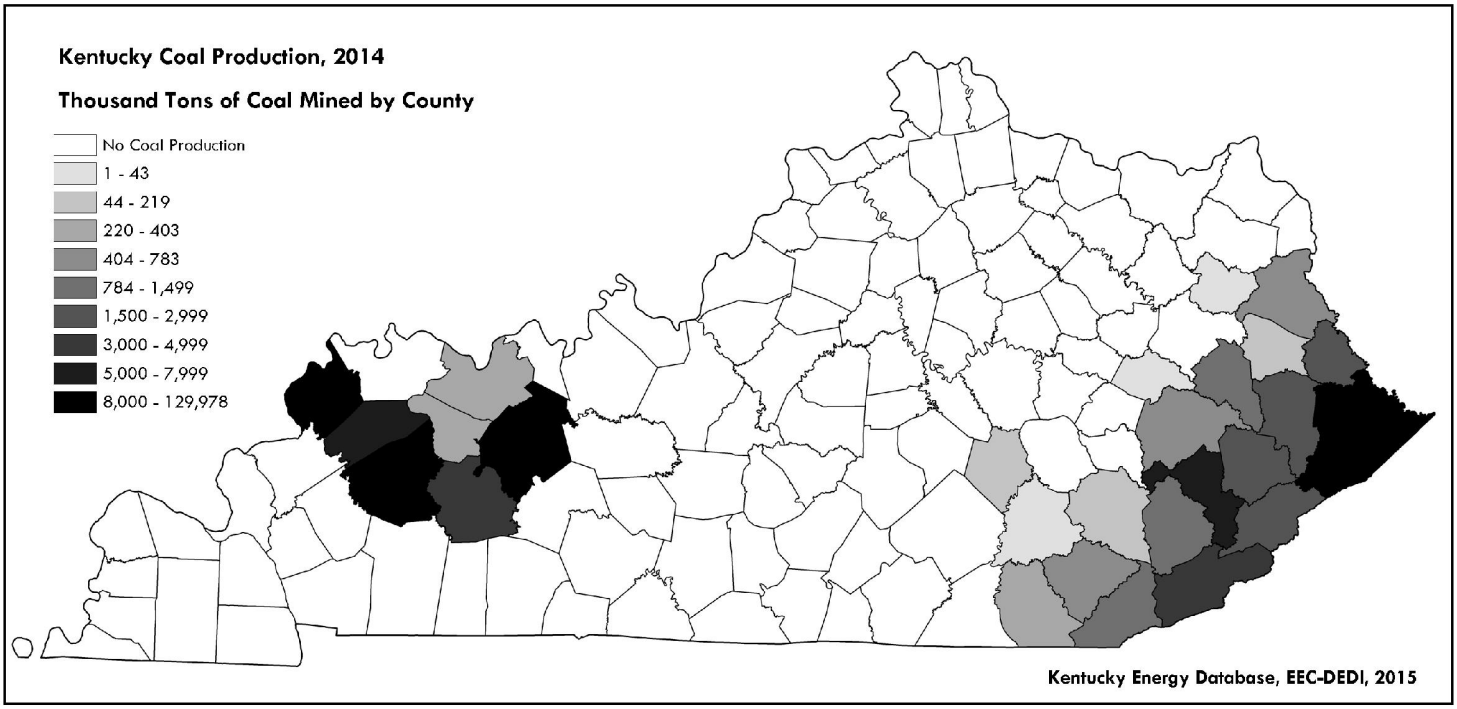
In 2014, coal mines in Wyoming mined approximately 40 percent of national production with 396 million tons of Powder River Basin coal. Wyoming has produced more coal annually than any other state since overtaking the top producer at the time, Kentucky, in 1988.

The second-largest coal producer during 2014, West Virginia, accounted for 12 percent of national production and supplied consumers with 117 million tons of low-sulfur, Central Appalachian Basin coal. West Virginia overtook Kentucky as the second-largest producer in 1994.

Kentucky, currently the third-largest producer, with eight percent of national production in 2014, provided coal from deposits of the Central Appalachian Basin in the eastern portion of the state and the Illinois Basin in the western portion of the state. Coal production in Kentucky decreased by four percent in 2014 to 77 million tons. Peak coal production in Kentucky was reached in 1990 when the Commonwealth mined 173.3 million tons of coal, and has decreased by 55 percent since.

Illinois was the fourth-largest coal producer in 2014 with 58 million tons of coal mined. Illinois coal production has grown by 71 percent in five years, or by 24 million tons.

Kentucky Coal Production



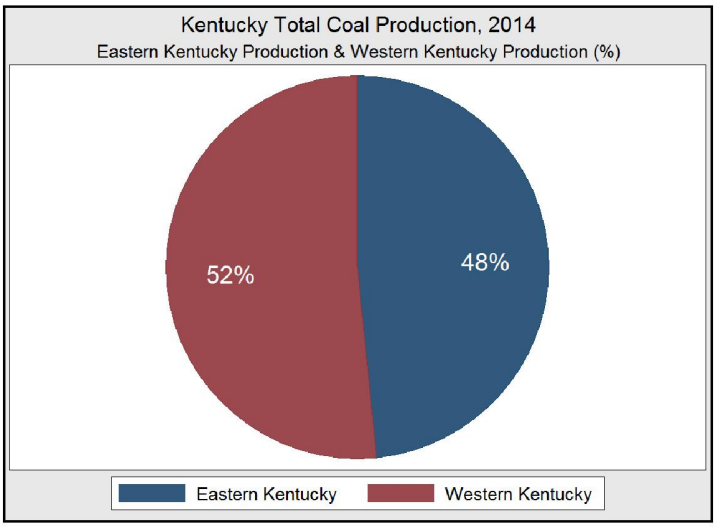
County	Tons	1 Year Change	Percentage
Total	77,427,361	-3.6%	100%
Union	12,977,904	-2.2%	16.8%
Pike	10,373,272	-3.9%	13.4%
Ohio	8,336,969	+1.7%	10.8%
Hopkins	8,080,823	-9.9%	10.4%
Perry	7,475,878	-1.1%	9.7%
Webster	6,398,494	+8.8%	8.3%
Harlan	4,779,629	+4.7%	6.2%
Muhlenberg	3,630,122	-10.9%	4.7%
Floyd	2,528,209	+8.3%	3.3%
Martin	2,043,375	-31.6%	2.6%
Knott	1,990,109	+4.6%	2.6%
Letcher	1,648,782	-25.5%	2.1%
Bell	1,418,107	+22.6%	1.8%

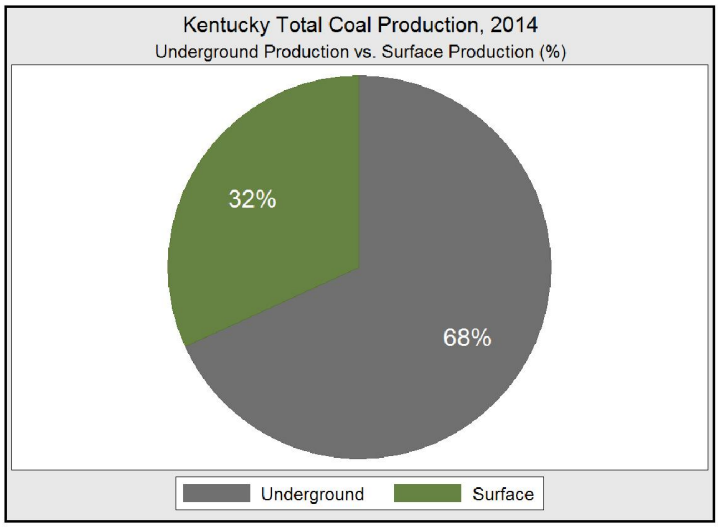
County	Tons	1 Year Change	Percentage
Leslie	1,403,285	-34.3%	1.8%
Magoffin	1,204,438	-22.4%	1.6%
Lawrence	783,698	+21.7%	1.0%
Breathitt	564,817	+213.4%	0.7%
Knox	404,407	+6.4%	0.5%
Whitley	381,602	+33.5%	0.5%
Daviess	323,807	-33.2%	0.4%
McLean	220,910	—	0.3%
Johnson	203,359	-38.6%	0.3%
Clay	174,620	-3.8%	0.2%
Rockcastle	44,336	+229.9%	0.1%
Wolfe	15,540	—	<0.1%
Laurel	12,185	-49.6%	<0.1%
Elliott	8,684	-81.3%	<0.1%

During 2014, coal production in the Commonwealth decreased to 77.4 million tons, the lowest level of recorded annual production since 1962. In 2014, Union County remained the top producer of coal in Kentucky throughout the entire year. Pike County, the largest producer from 1978 to 2011, mined the most in eastern Kentucky.

In Kentucky, coal mining is divided between two different geologic basins—the Central Appalachian Basin of eastern Kentucky and the Illinois Basin of western Kentucky. Kentucky is the only major coal exporting state to span two geologic basins, and the chemical composition and accessibility of the coal from each is distinct. Eastern Kentucky has recorded coal mining since as early as 1790 and western Kentucky is known to have had mining operations in 1820. The coalfield of eastern Kentucky has coal with a relatively higher heat content and lower sulfur content than western Kentucky. Eastern Kentucky coal is also more difficult to mine. As a result of differences regarding the extractability and quality of the coal, eastern Kentucky is overall more expensive than western Kentucky coal. The difference in the delivered price of coal between the two coalfields is a result of numerous factors that affect both the supply of and demand for coal, including transportation costs, the ease of accessing coal and the subsequent mining techniques employed, and the chemical properties and heat content of the coal.

Kentucky Coal Production



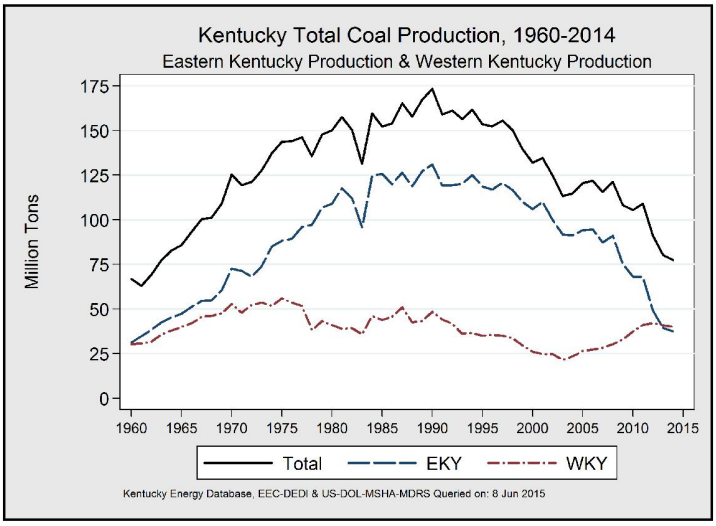


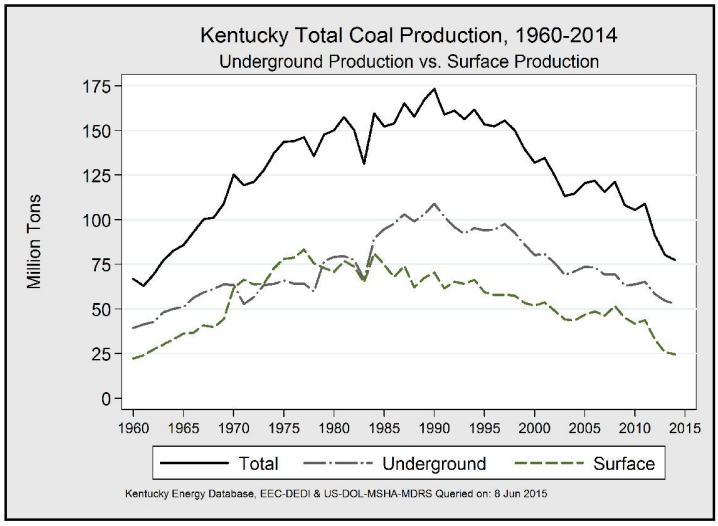
Region	2014 Tonnage	Annual Change
Total	77,427,361	-3.6%
Western Kentucky	39,969,029	-2.2%
Eastern Kentucky	37,458,332	-4.9%

Mine Type	2014 Tonnage	Annual Change
Total	77,427,361	-3.6%
Underground	52,807,276	-3.3%
Surface	24,620,085	-4.0%

Kentucky coal mines produced 77.4 million tons in 2014, a decrease of 3.6 percent from 2013. Production declined in both the eastern and western coalfields in 2014.

The majority of Kentucky coal production has been from underground operations since 1979, following the passage of the Surface Mine Control and Reclamation Act of 1977.

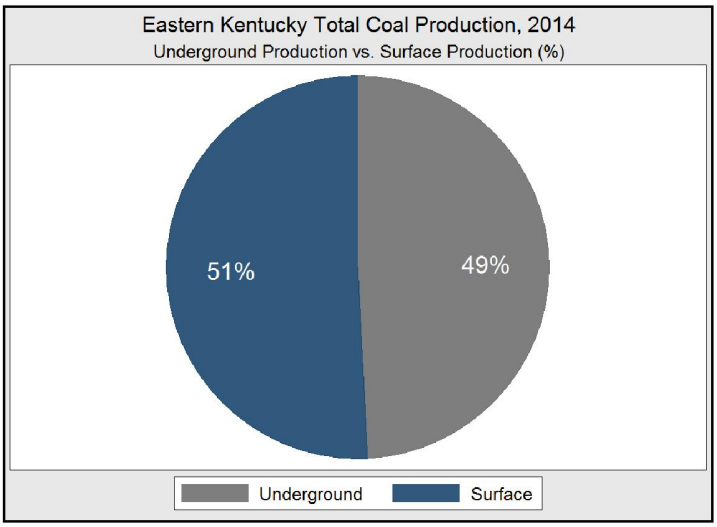


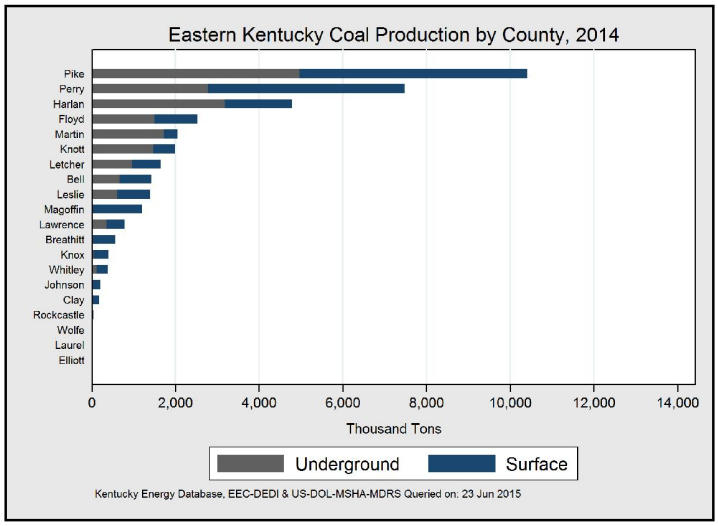


Eastern Kentucky has been the top-producing region in Kentucky since 1912, when eastern Kentucky overtook western Kentucky. Western Kentucky coal mines have produced the majority of coal in the Commonwealth since the third quarter of 2013 and were the main source of Kentucky coal from 1886 to 1911.

Underground coal mines produced 52.8 million tons of coal, or 68 percent of total Kentucky production in 2014, a decrease of 3.3 percent from 2013. Surface mining operations, which mined 24.6 million tons of coal, decreased production by four percent since 2013. Production declines in both surface and underground mining since 1990 have been concentrated in the eastern coalfield.

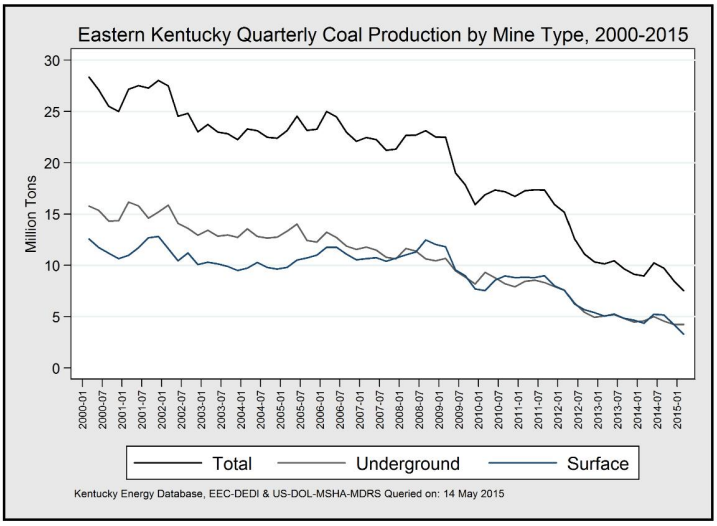
Eastern Kentucky Coal Production





Mine Type	2014 Tonnage	Annual Change
Total	37,458,332	-4.9%
Surface	19,044,387	-3.9%
Underground	18,413,945	-5.9%

Eastern Kentucky coal production decreased in 2014 by 4.9 percent to 37.5 million tons of coal—51 percent from surface mines and 49 percent from underground mines.

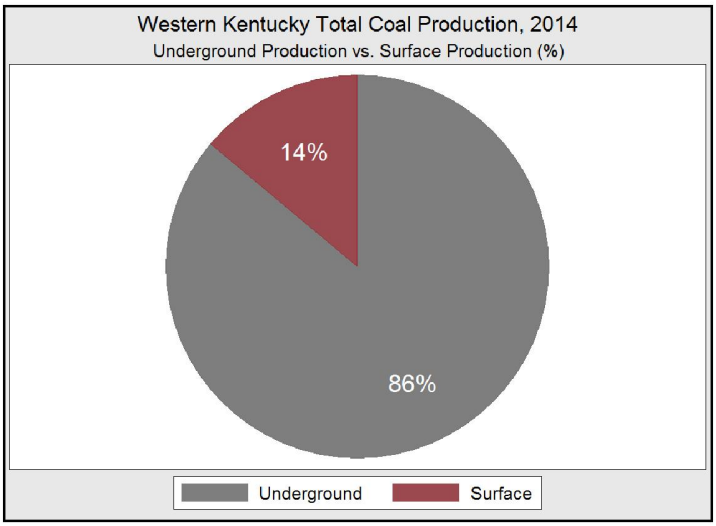


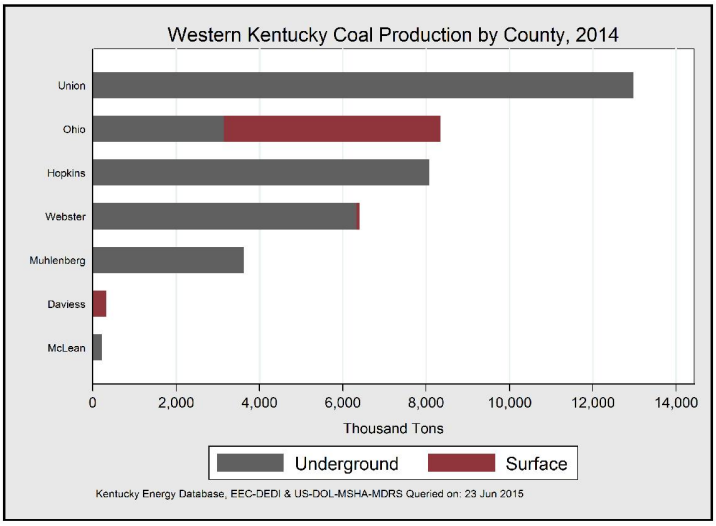
Eastern County	2014 Tonnage	Annual Change
Pike	10,373,272	-3.9%
Perry	7,475,878	-1.1%
Harlan	4,779,629	+4.7%
Floyd	2,528,209	+8.3%
Martin	2,043,375	-31.6%
Knott	1,990,109	+4.6%
Letcher	1,648,782	-25.5%
Bell	1,418,107	+22.6%
Leslie	1,403,285	-34.3%
Magoffin	1,204,438	-22.4%
Lawrence	783,698	+21.7%
Breathitt	564,817	+213.4%
Knox	404,407	+6.4%
Whitley	381,602	+33.5%
Johnson	203,359	-38.6%
Clay	174,620	-3.8%
Rockcastle	44,336	+229.9%
Wolfe	15,540	—
Laurel	12,185	-49.6%
Elliott	8,684	-81.3%

Production decreased at both surface and underground mining operations in 2014 by 3.9 and 5.9 percent, respectively. Eastern Kentucky coal production has decreased by 65 percent since 2000 and by 71 percent since peak Kentucky production in 1990.

Pike County yielded the most coal of any county in eastern Kentucky and was the second-largest producing county overall, mining approximately 10.4 million tons during 2014. Pike County was the highest coal producing county in Kentucky from 1978 to 2012 and produced the most coal of any county in Kentucky history in 1996 with 36 million tons of coal mined.

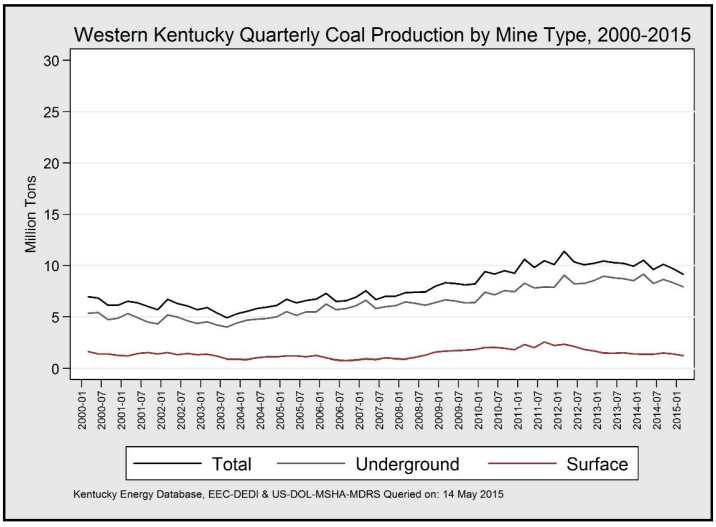
Western Kentucky Coal Production





Mine Type	2014 Tonnage	Annual Change
Total	39,969,029	-2.2%
Underground	34,393,331	-1.9%
Surface	5,575,698	-4.4%

Western Kentucky mined 40 million tons in 2014, a decrease of 2.2 percent from the year prior. Of this, 86 percent of regional coal production was from underground mines.



Underground mining in western Kentucky decreased by two percent in 2014, while surface mining decreased by 4.4 percent. Western Kentucky annual coal production has decreased by 17.4 percent since 1990, but has increased by 53.4 percent since 2000.

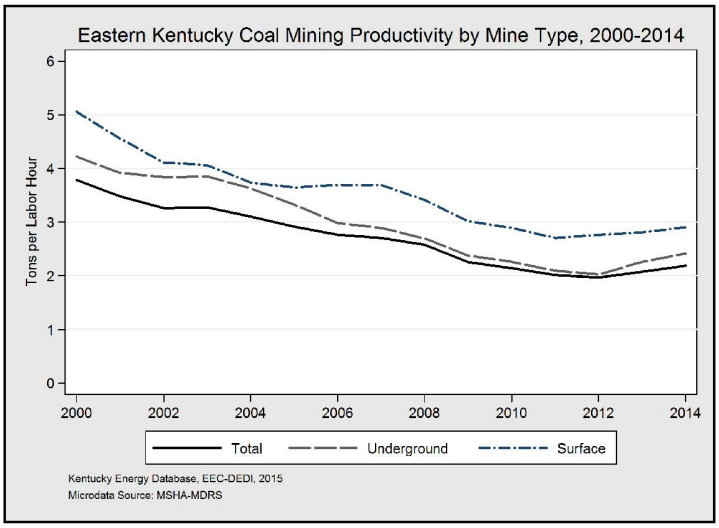
Western County	2014 Tonnage	Annual Change
Union	12,977,904	-2.2%
Ohio	8,336,969	+1.7%
Hopkins	8,080,823	-9.9%
Webster	6,398,494	+8.8%
Muhlenberg	3,630,122	-10.9%
Daviess	323,807	-33.2%
McLean	220,910	—

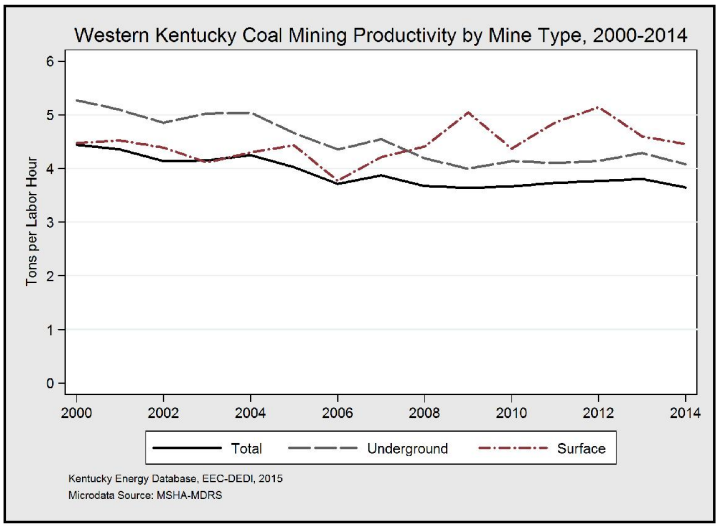
Union County remained Kentucky's leading coal producing county, mining nearly 13 million tons during 2014, though production in the county decreased by two percent from the year prior.

Most western Kentucky mining since 1985 has been underground. As a result of the topography and basinal structure of the Illinois Basin, surface coal production is relatively more accessible on the edges of the coalfield, further from the Ohio River, where much of the economically viable coal has been extracted in years past. The topography, in part, explains the relative increase in underground mining in the region since 1983 and the relative decrease in surface mining since peak regional surface production in 1972.

The majority of western Kentucky coal production was excavated by surface mining until 1985. In fact, Muhlenberg County was the Commonwealth's leading coal producer from 1961 to 1978, predominantly through the utilization of surface mining techniques.

Coal Mine Productivity





Region	Mine Type	Tons/Hour
Eastern Kentucky	All*	2.19
	Underground	2.42
	Surface	2.90

Region	Mine Type	Tons/Hour
Western Kentucky	All*	3.64
	Underground	4.08
	Surface	4.45

Total Labor Hours*	Underground	Surface
17,136,548	7,626,037	6,550,982

Total Labor Hours*	Underground	Surface
10,969,199	8,431,851	1,252,000

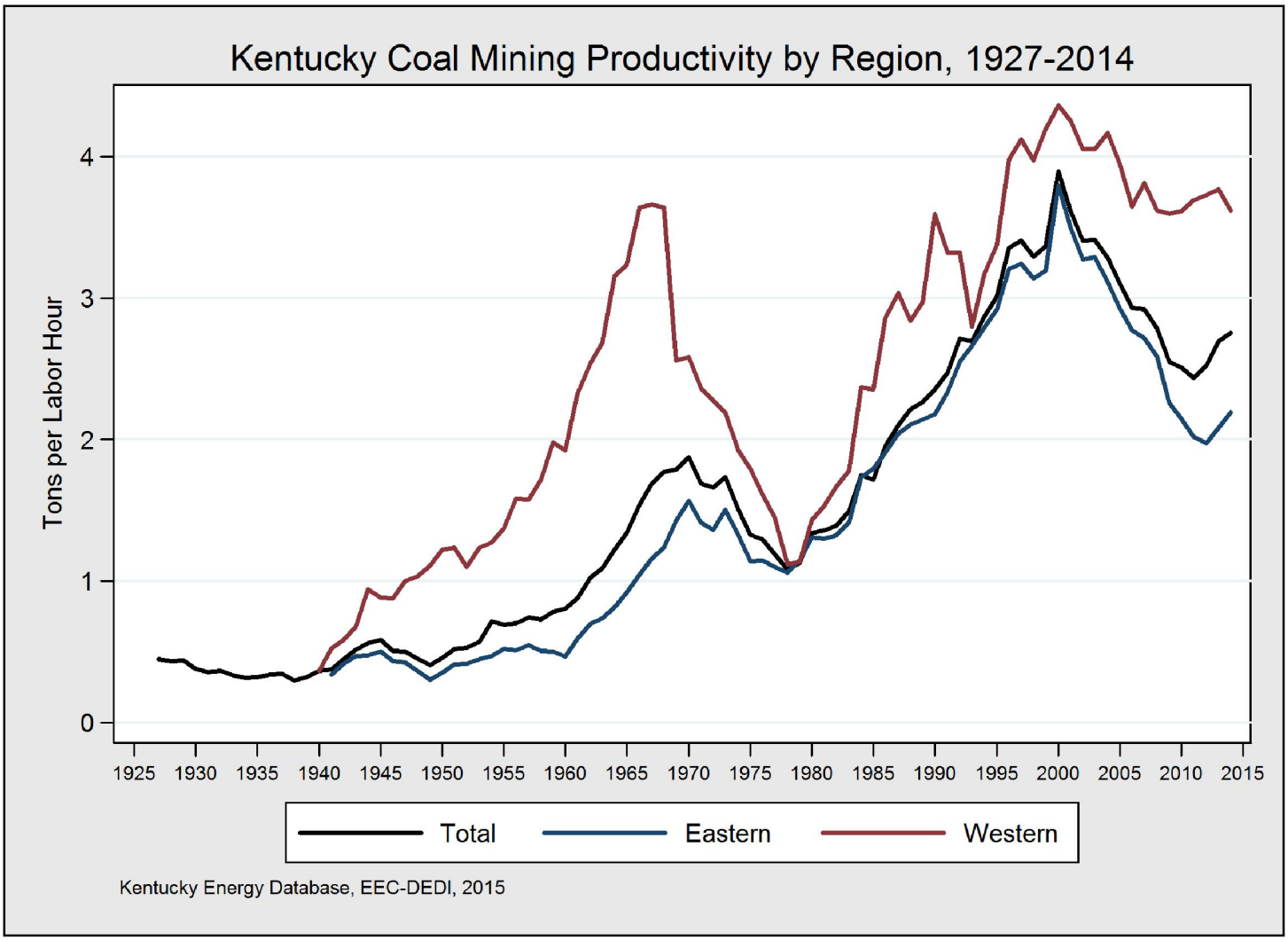
Source: U.S. Department of Labor, Mine Safety and Health Administration, "Quarterly Mine Employment and Coal Production Report" (MSHA Form 7000-02). ***Coal mine productivity is defined as total coal production (tons) divided by total employee labor hours. Total labor hours include the combination by mine site of direct miner hours, preparation plant hours, and on-site office employee hours.** Historical and current reporting on mine productivity statewide and nationwide indicates a trend of declining productivity across all coalfields in the United States since the year 2000.

Coal mining productivity throughout Kentucky has decreased since 2000, but western Kentucky productivity levels have remained relatively consistent while eastern Kentucky productivity has dropped more considerably. These productivity differences arise largely as a result of different geologic and hydraulic conditions as well as the methods of coal production employed.

At an average of 2.19 tons per labor hour in 2014, productivity in the eastern coalfield was up for the year as less productive mines were closed. However, productivity is down 42 percent from the year 2000, when production was 3.8 tons per labor hour. Productivity for both surface mines and underground mines in eastern Kentucky fell consistently from 2000 to 2012, but overall rose by 5.3 percent in 2013 and by 5.5 percent in 2014. Surface mines in eastern Kentucky remained the more efficient form of coal mining in the region.

At 3.64 tons per labor hour in 2014, average coal mining productivity in western Kentucky was 67 percent higher than eastern Kentucky. While surface mines produced at a rate of 4.5 tons per hour in 2013, surface mine production accounted for only 14 percent of regional production. Therefore, western Kentucky productivity was most influenced by underground operations. Surface productivity in western Kentucky decreased by three percent in 2014 and underground productivity decreased by five percent since 2013. Total coal mine productivity in western Kentucky has fallen by 18 percent since 2000. Increases in preparation plant and office employment since 2000 have decreased total productivity numbers in the region.

Coal Mine Productivity



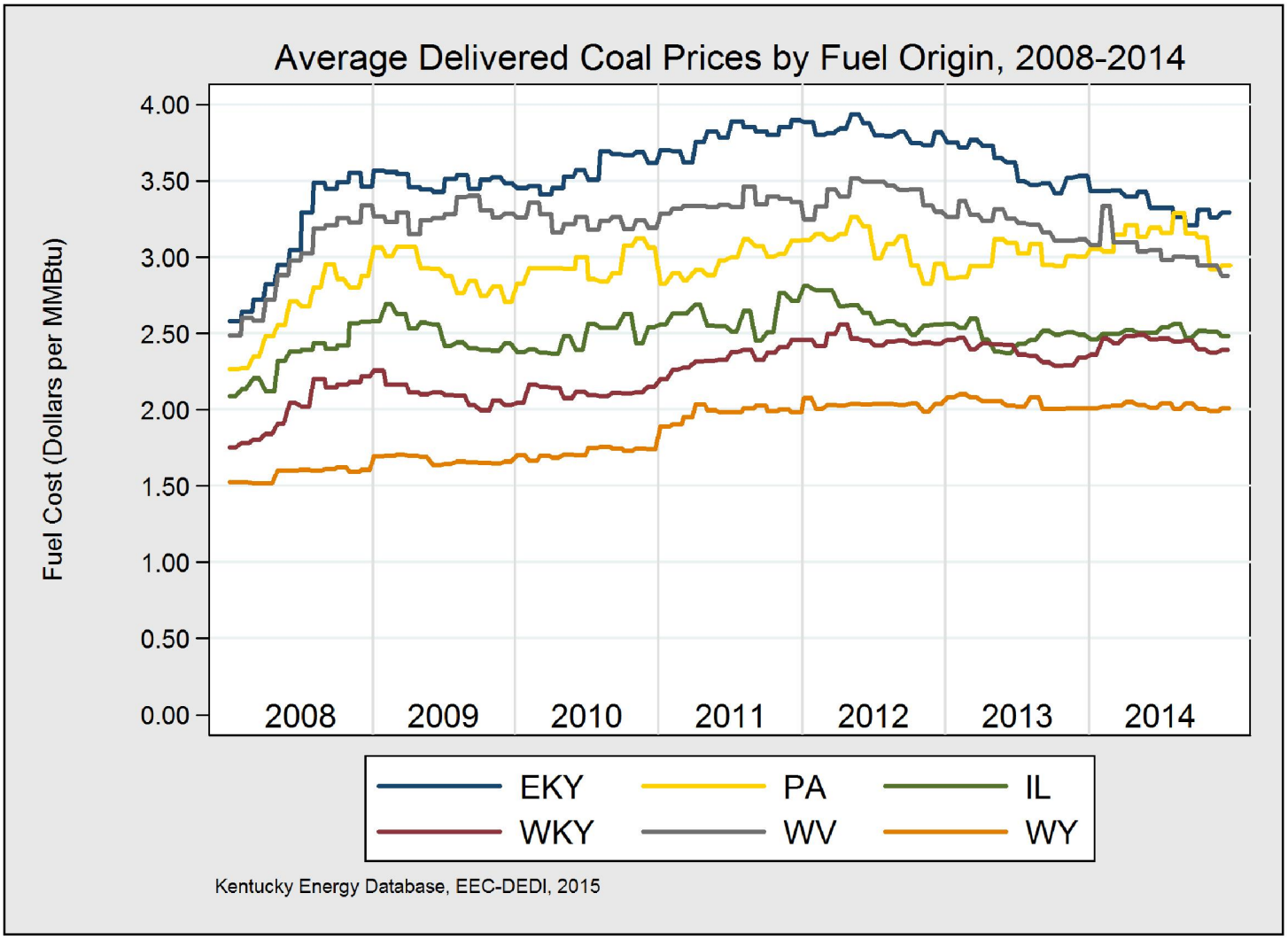
Coal mining productivity increased alongside greater adoption of mechanization from the 1940s to 2000, and have declined thereafter as coal resources have become more scarce. Recent increases in productivity in eastern Kentucky result as adverse economic conditions have forced less productive mines to close.

The initial rise in western Kentucky productivity between 1940 and 1966 resulted from the two highest-producing counties in the region—Hopkins and Muhlenberg. The region's increasing productivity began in Hopkins County in the 1940s, but increased in tandem with surface mining production in Muhlenberg County through the 1950s and 1960s. As coal production in Muhlenberg County began to decline in the late 1960s and early 1970s, regional productivity also decreased. Western Kentucky's increased coal mining productivity after 1980 resulted from increased production and decreased employment in both surface and underground mining operations throughout the region.

In eastern Kentucky, historical productivity has risen and fallen alongside underground mining production. Though surface mining operations took longer to take hold in eastern Kentucky relative to western Kentucky, by 1977 surface operations were widespread and kept a steady rate of production until 2008. Underground mining operations increased in production and productivity from the 1970s to 1990 and declined until 2012, when productivity increased again.

Historical productivity, shown above, were determined by dividing regional coal production by the estimated number of labor hours. From 2000-2014, miner hours are known, and before 2000, they have been estimated. In the years prior to 2000, hours are the equivalent of coal mine employment times 2,412, which was the average number of hours worked annually by coal miners in Kentucky from 2000 to 2014.

Coal Price by Producer State



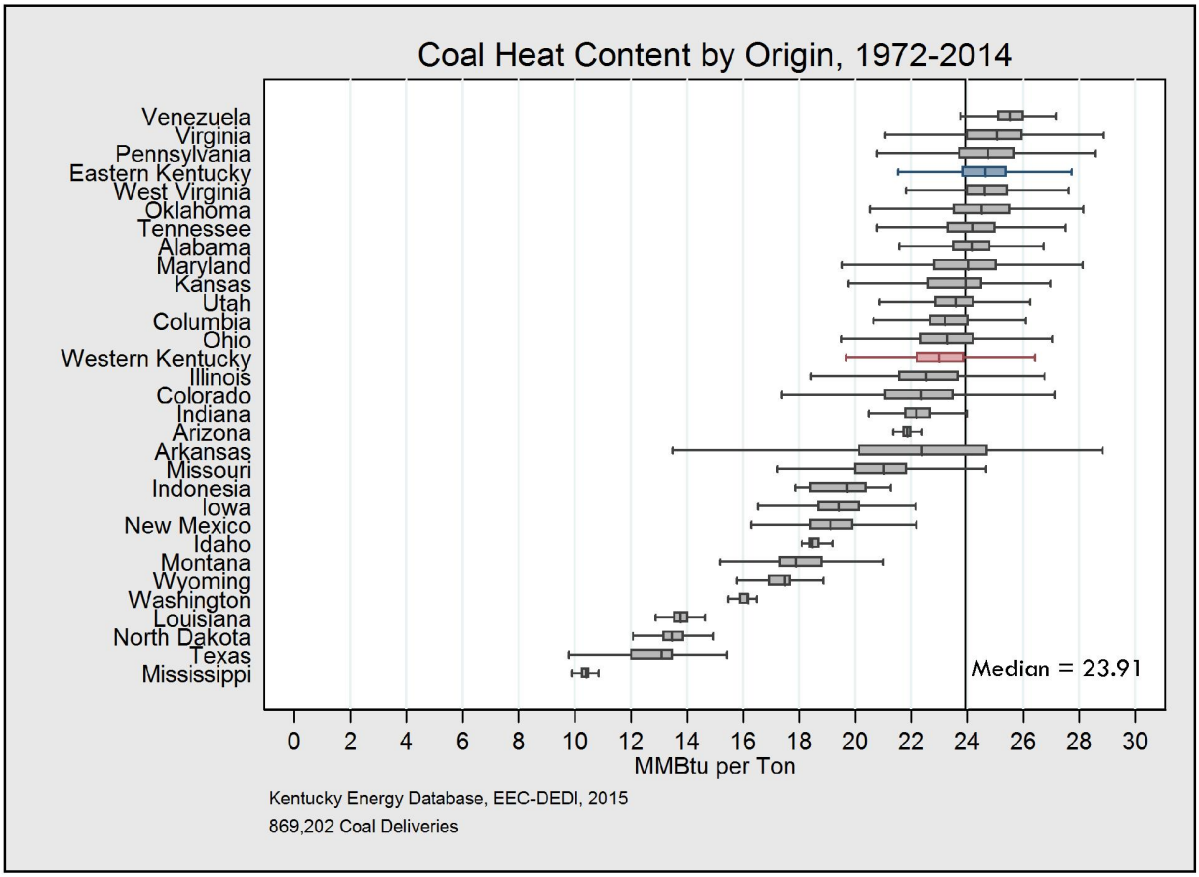
Origin	2014 $ per MMBtu	5 Year Change
Eastern Kentucky	3.30	-2.2%
West Virginia	2.98	-4.8%
Pennsylvania	3.20	+19.8%
Western Kentucky	2.35	+25.2%
Illinois	2.29	-8.8%
Wyoming	2.02	+21.3%

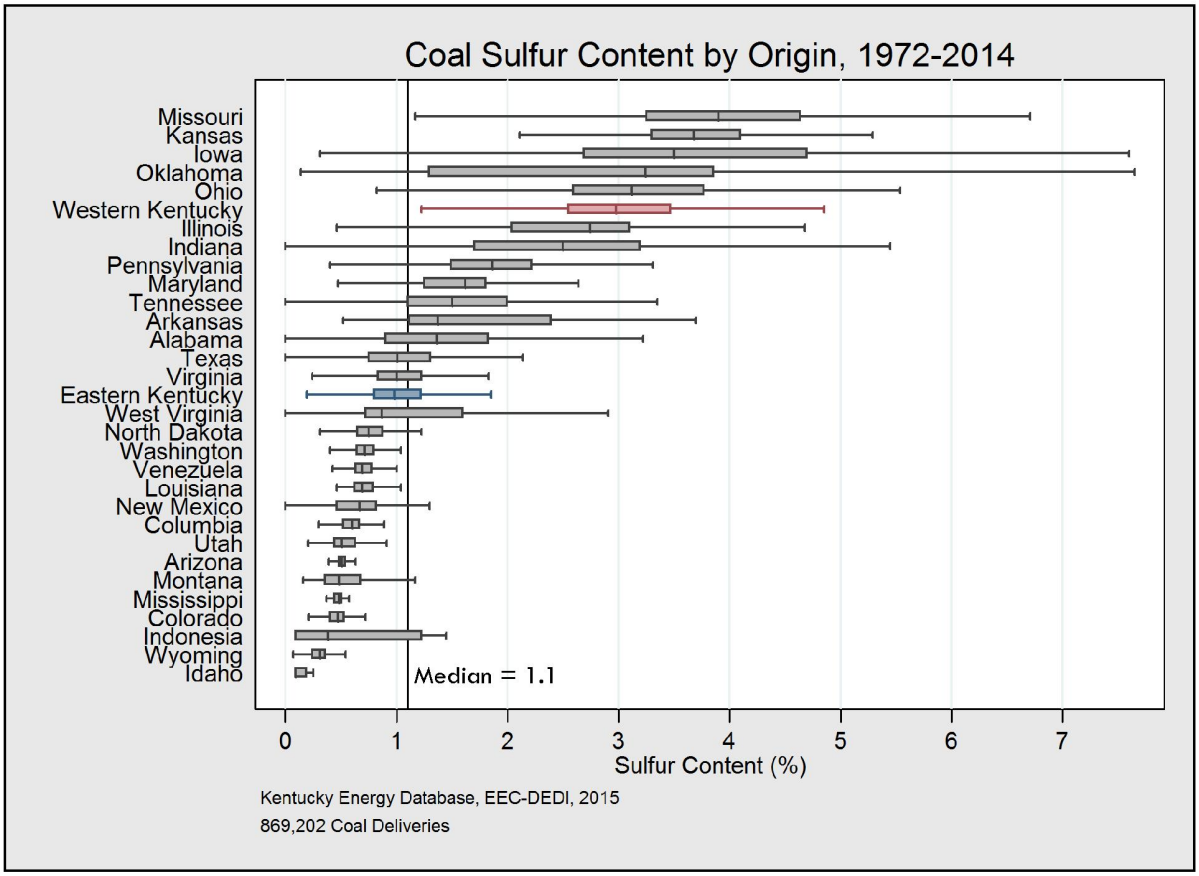
In 2014, Wyoming, West Virginia, Kentucky, Pennsylvania, and Illinois produced 71 percent of coal mined in the United States. A group of 20 states accounted for the remaining 29 percent of coal production; yet, no single state within this group represented more than six percent of national production.

Of the five largest coal-producing states in 2014, coal mined in eastern Kentucky was, on average, the most expensive coal delivered to electric utilities in the United States. West Virginia and Pennsylvania, which produce bituminous coal from the Central Appalachian Basin, supplied the second and third-most expensive coal to electric power facilities. Wyoming, which was the nation's largest producer of coal in 2014 and mines sub-bituminous coal in the Powder River Basin, offered the least expensive coal, on average, to power plants during the year.

Factors such as market demand, coal mine productivity, heat content, sulfur content, spot pricing, and transportation costs all combine to affect the delivered cost of any shipment of coal.

Coal Properties by Producer State





Coal Properties by Producer State

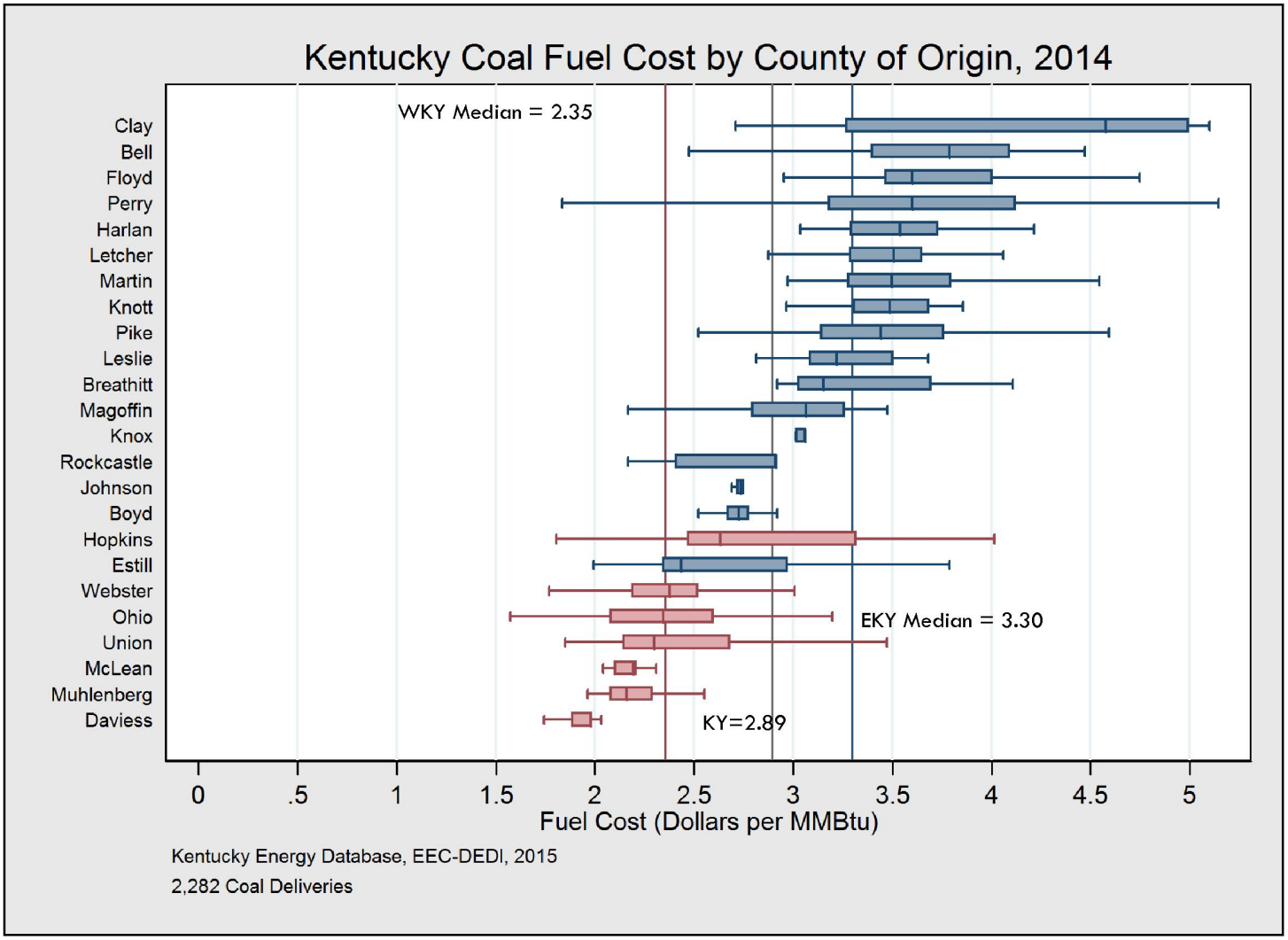
State	Mean Heat Content (MMBtu per Ton)	Median Sulfur Content (%)	Median Ash Content (%)	2014 Mean Delivered Price ($ per MMBtu)	2014 Median Delivered Price ($ per Ton)
Alabama	24.16	1.36	12.80	3.60	86.09
Arizona	21.88	0.51	9.80	2.13	46.00
Arkansas	22.38	1.37	17.30	—	—
Colorado	22.37	0.47	9.09	2.68	60.84
Columbia	23.20	0.60	6.30	3.50	79.64
Eastern Kentucky	24.64	0.98	10.30	3.30	80.63
Illinois	22.52	2.74	9.20	2.29	53.78
Indiana	22.18	2.50	9.21	2.38	54.26
Indonesia	19.72	0.39	4.15	0.00	
Kansas	23.95	3.68	12.90	2.46	55.84
Louisiana	13.78	0.69	13.40	1.75	23.61
Maryland	24.03	1.62	14.50	2.39	56.90
Mississippi	10.40	0.48	14.40	—	—
Missouri	21.02	3.90	13.35	2.49	55.21
Montana	17.90	0.48	6.60	2.12	36.93
New Mexico	19.13	0.67	15.60	2.24	41.71
North Dakota	13.47	0.75	8.40	1.42	18.73
Ohio	23.30	3.12	11.90	2.07	49.25
Oklahoma	24.50	3.24	11.20	5.15	125.59
Pennsylvania	24.74	1.86	12.30	3.20	83.04
Tennessee	24.20	1.50	12.40	3.49	93.80
Texas	13.11	1.01	16.10	2.36	25.37
Utah	23.60	0.51	9.60	2.02	45.49
Venezuela	25.54	0.69	6.90	—	—
Virginia	25.07	1.00	11.21	3.20	81.82
Washington	16.20	0.71	14.90	—	—
West Virginia	24.61	0.87	11.60	2.98	73.58
Western Kentucky	22.97	3.00	11.00	2.35	54.46
Wyoming	17.50	0.31	5.11	2.02	35.44

Steam Coal Properties

Coal from different states and coalfields across the country have distinct characteristics. For example, eastern Kentucky coal has one of the highest average heat contents in the United States. This table and previous graphics show the average chemical and cost properties for Kentucky coal, separated by region, relative to all other major sources of coal consumed in the United States. The properties were calculated from federal fuel shipment receipts as reported by electric utilities across the United States in EIA Form 923 and FERC Form 423.

The preceding and subsequent box and whisker plots summarize the range of heat content or sulfur content of coal by state or country. The box represents the range of observations within the 25th and 75th percentiles, or 50 percent of the data. The median value is marked in the center of the box with a vertical line. The whiskers, the horizontal lines extending from each box, illustrate the range of approximately 99.7 percent of the data, or ± 2.698 standard deviations from the median.

Coal Price by Kentucky County

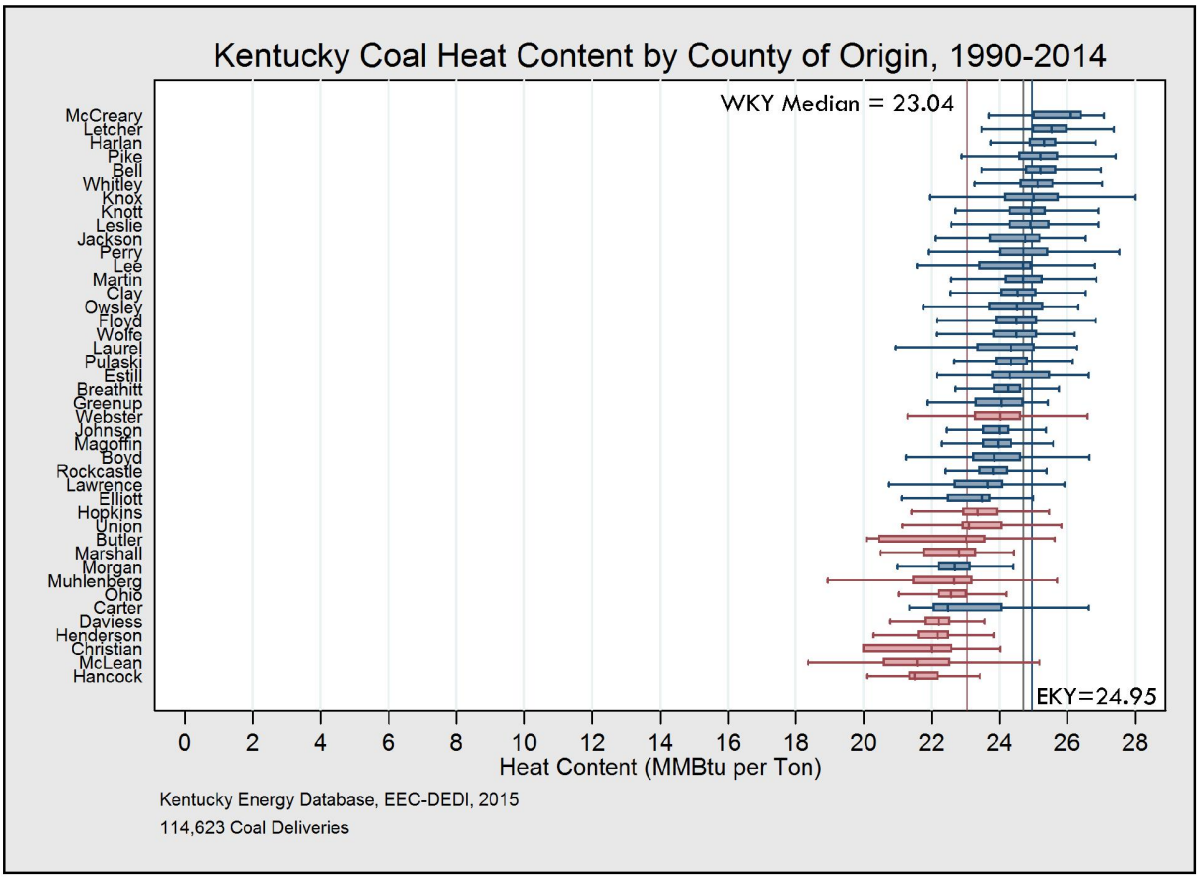


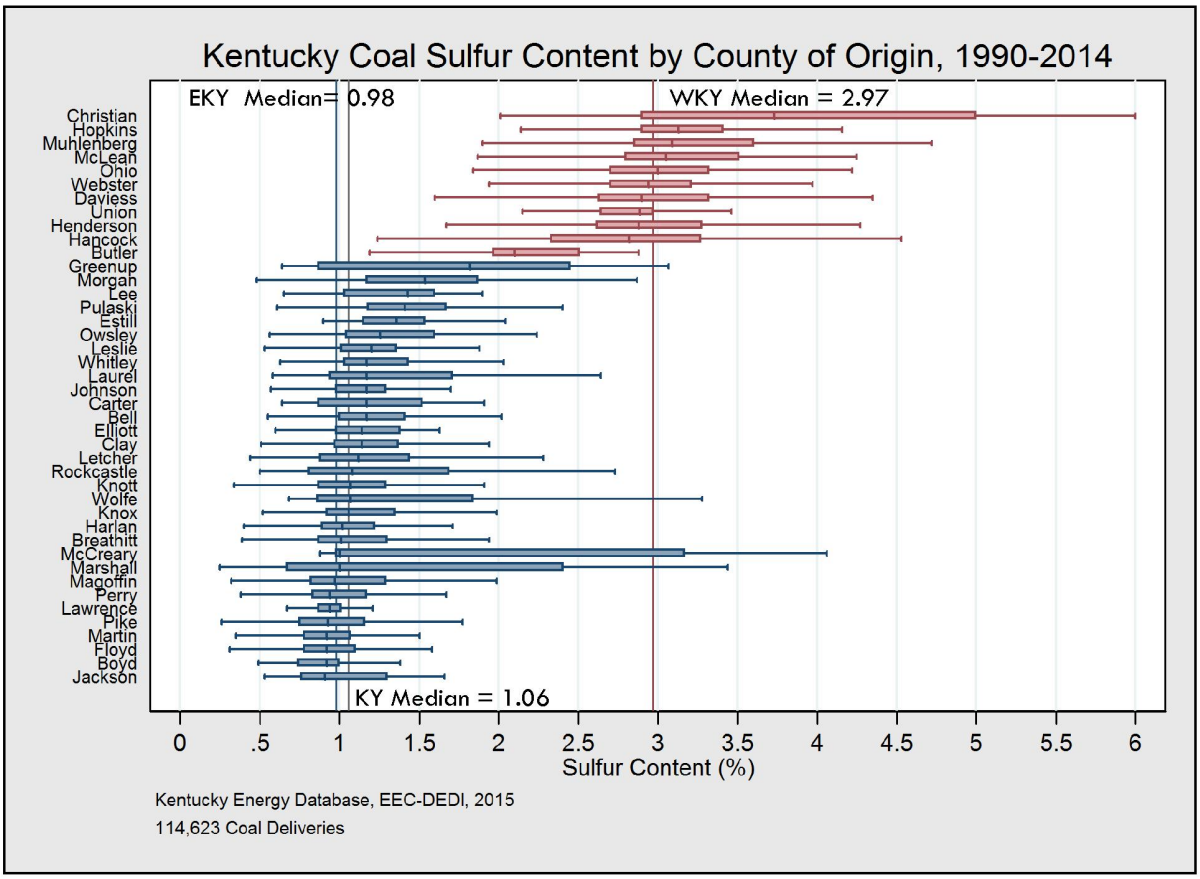
The above chart summarizes the range of delivered prices for coal by coal mining county. The whiskers (horizontal lines) on each plot denote the minimum and maximum prices for each county, while the box component represents the 25th percentile through the 75th percentile of price values (or 50 percent of the data). The vertical line within the box component marks the median delivered price.

Eastern Kentucky Coal Prices, 2014			Western Kentucky Coal Prices, 2014		
Range	County	Median (Dollars per MMBtu)	Range	County	Median (Dollars per MMBtu)
Max	Clay	4.58	Max	Hopkins	2.63
Average	All	3.30	Average	All	2.35
Min	Estill	2.43	Min	Daviess	1.98

Overall, the median delivery price of coal mined in eastern Kentucky counties is higher than that of coal mined in western Kentucky counties. The range of prices within a county as well as the difference in prices between counties are a function of several factors such as mine productivity, coal sulfur content, coal heat content (Btu content), coal ash content, terms of a delivery contract, and the transportation costs connected to delivery. Ultimately, the interaction of all these major variables affects the delivery price of any coal available on the market.

Kentucky Steam Coal Properties





Kentucky Steam Coal Properties

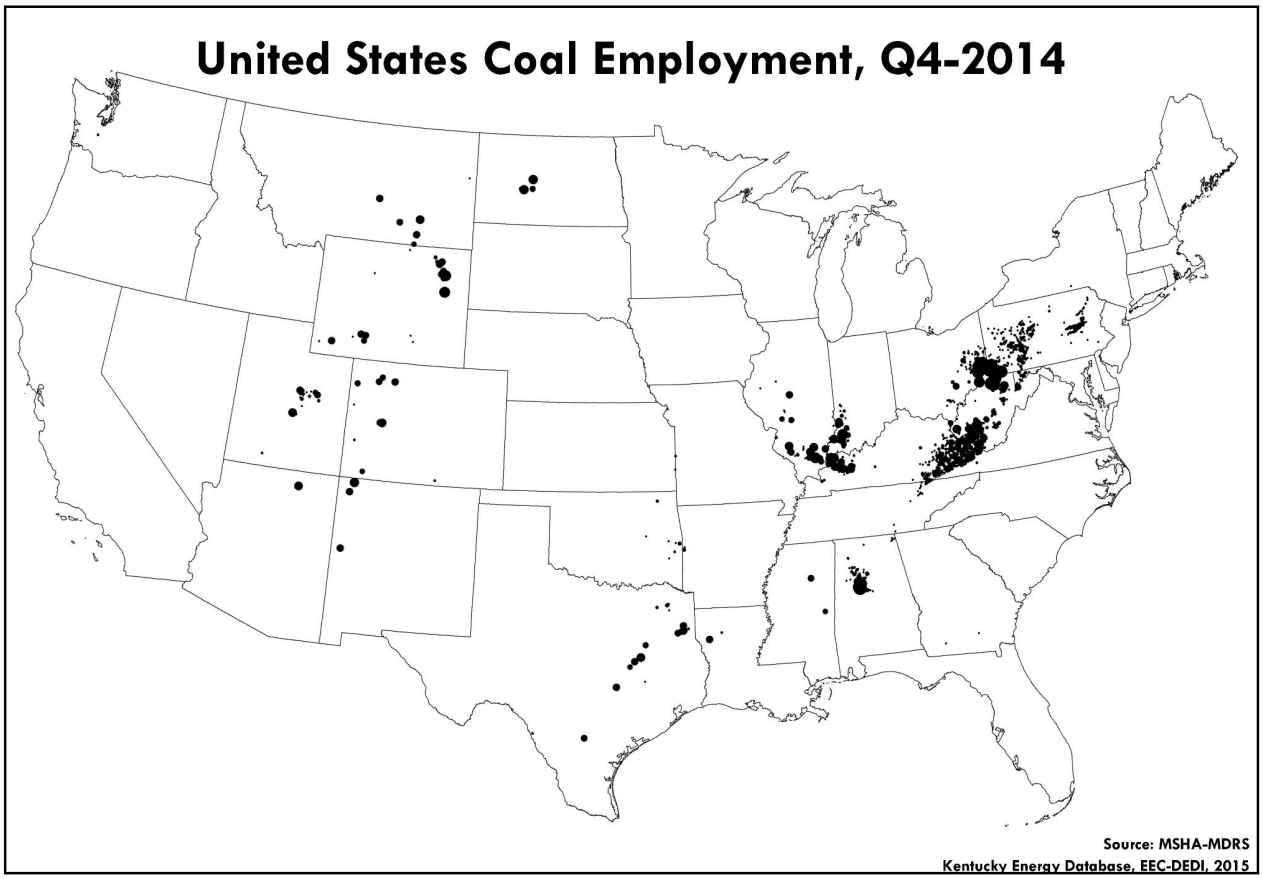
Region	Median Heat Content (MMBtu per Ton)	Median Sulfur Content (%)	Median Ash Content (%)	2014 Median Delivered Price ($ per MMBtu)	2014 Median Delivered Price ($ per Ton)
Kentucky	**24.67**	**1.06**	**10.50**	**2.89**	**69.63**
Eastern Kentucky	**24.95**	**0.98**	**10.30**	**3.44**	**85.53**
Bell	25.22	1.17	8.94	3.79	95.69
Boyd	23.85	0.92	11.40	2.72	64.98
Breathitt	24.26	1.01	10.40	3.15	75.12
Clay	24.54	1.14	10.60	4.58	112.19
Estill	24.30	1.36	10.70	2.43	58.94
Floyd	24.50	0.92	10.60	3.60	90.45
Harlan	25.33	1.02	9.20	3.54	89.30
Johnson	24.01	1.17	10.60	2.74	65.98
Knott	24.95	1.07	10.01	3.49	84.36
Knox	25.00	1.06	9.60	3.06	75.37
Leslie	24.91	1.20	9.80	3.22	76.47
Letcher	25.54	1.12	8.70	3.51	87.64
Magoffin	23.97	0.98	11.50	3.06	75.25
Martin	24.69	0.92	9.70	3.50	86.47
McCreary	26.09	1.01	5.59	—	—
Perry	24.72	0.94	10.20	3.60	86.96
Pike	25.22	0.93	9.60	3.44	85.52
Rockcastle	23.81	1.08	10.20	2.91	70.24
Western Kentucky	**23.04**	**2.97**	**11.00**	**2.36**	**54.82**
Daviess	22.21	2.90	9.80	1.98	42.49
Henderson	22.18	2.88	9.5	—	—
Hopkins	23.35	3.13	10.30	2.63	65.12
McLean	21.58	3.05	12.70	2.19	49.05
Muhlenberg	22.67	3.09	10.60	2.16	49.66
Ohio	22.57	3.00	9.80	2.34	52.62
Union	23.11	2.89	8.50	2.30	53.00
Webster	24.02	2.94	10.10	2.38	56.64

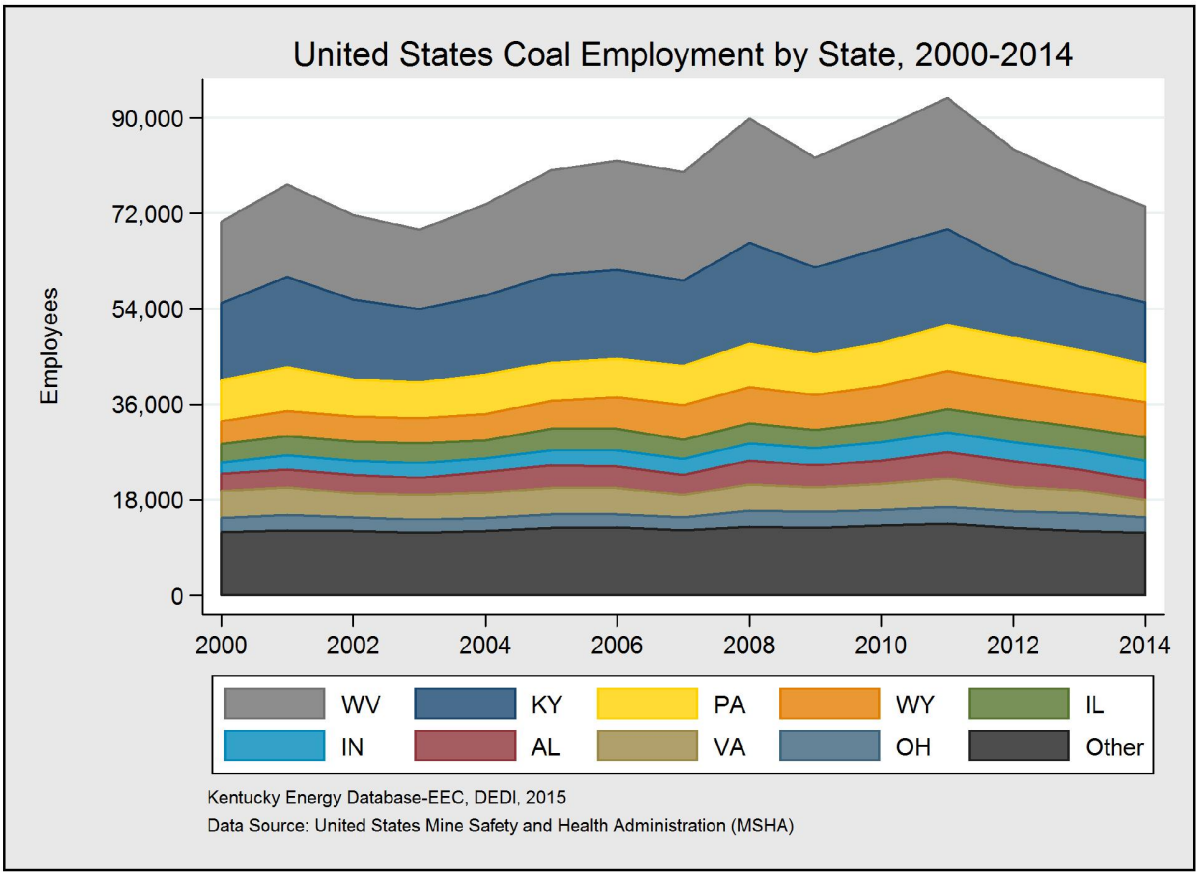
Kentucky Steam Coal Chemical Properties

In Kentucky, coal mining is divided between two distinct geologic basins: The Central Appalachian Basin of eastern Kentucky, and the Illinois Basin of western Kentucky. This table and previous graphics display the median chemical and cost properties for Kentucky steam coal by county as reported by electric generating stations across the United States. Relative to western Kentucky, coal mined in eastern Kentucky between 2008 and 2014 had a nine percent higher heat content per ton, 65 percent less sulfur, and in 2014, nominal delivered costs that were 56 percent higher per MMBtu. Since the Clean Air Act Amendments of 1990, demand for eastern Kentucky coal has been, in part, driven by demand for lower sulfur coal that reduces the emission of sulfur dioxides. However, in order to comply with increasingly stringent sulfur dioxide limits, many coal-fired power plants have elected to install desulfurization equipment that enables them to burn higher sulfur and lower cost coal such as the coal mined in western Kentucky.

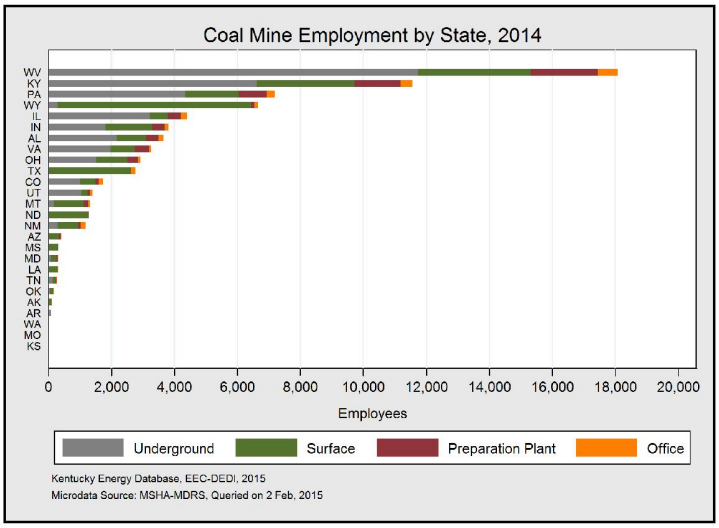
The preceding box and whisker plots summarize the range of heat or sulfur content of coal by county. The whiskers denote the minimum and maximum values for each county, while the box component represents the 25th percentile through the 75th percentile of values (or 50 percent of the data). The vertical line within the box component marks the median value.

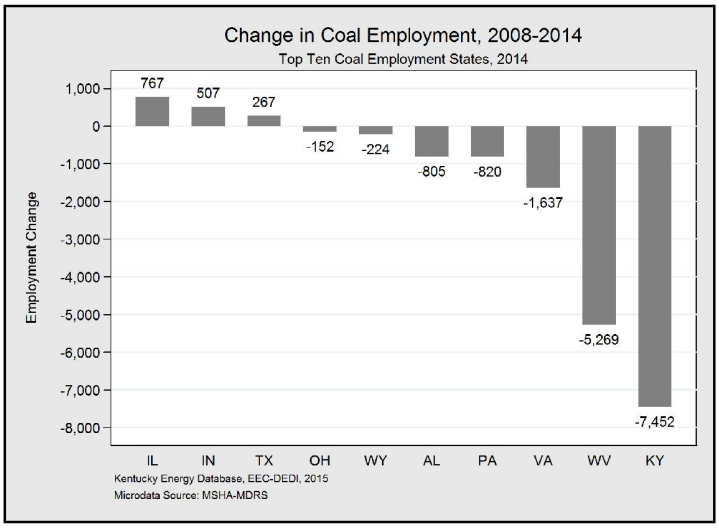
United States Coal Employment





Coal Mine Employment by State





U.S Coal Employment by State, 2014				
State	Rank	Employment	1 Year Change	Percent
United States	-	73,728	-6.0%	100%
West Virginia	1	18,163	-10.0%	24.6%
Kentucky	2	11,586	-2.6%	15.7%
Pennsylvania	3	7,353	-9.0%	10.0%
Wyoming	4	6,652	-0.1%	9.0%
Illinois	5	4,411	+5.5%	6.0%
Indiana	6	3,808	+3.3%	5.2%
Alabama	7	3,685	-6.3%	5.0%
Virginia	8	3,303	-23.0%	4.5%
Ohio	9	2,911	-11.4%	3.9%
Texas	10	2,770	-2.5%	3.8%
Colorado	11	1,744	-14.8%	2.4%
Utah	12	1,415	+0.4%	1.9%
Montana	13	1,329	+2.5%	1.8%
North Dakota	14	1,294	+2.5%	1.8%
New Mexico	15	1,173	-8.5%	1.6%
Arizona	16	411	+3.3%	0.6%
Maryland	17	393	+6.2%	0.5%
Mississippi	18	324	-1.2%	0.4%
Louisiana	19	307	+12.5%	0.4%
Tennessee	20	269	+19.6%	0.4%
Oklahoma	21	168	-15.2%	0.2%
Alaska	22	119	-2.5%	0.2%
Arkansas	23	86	+4.9%	0.1%
Washington	24	27	-12.9%	<0.1%
Missouri	25	16	-33.3%	<0.1%
Kansas	26	11	+83.3%	<0.1%

Coal employment in the United States decreased in 2014 by six percent compared to 2013, with 73,728 full-time workers employed. Since 2011total coal employment has declined by 20,019 jobs, or 21.4 percent.

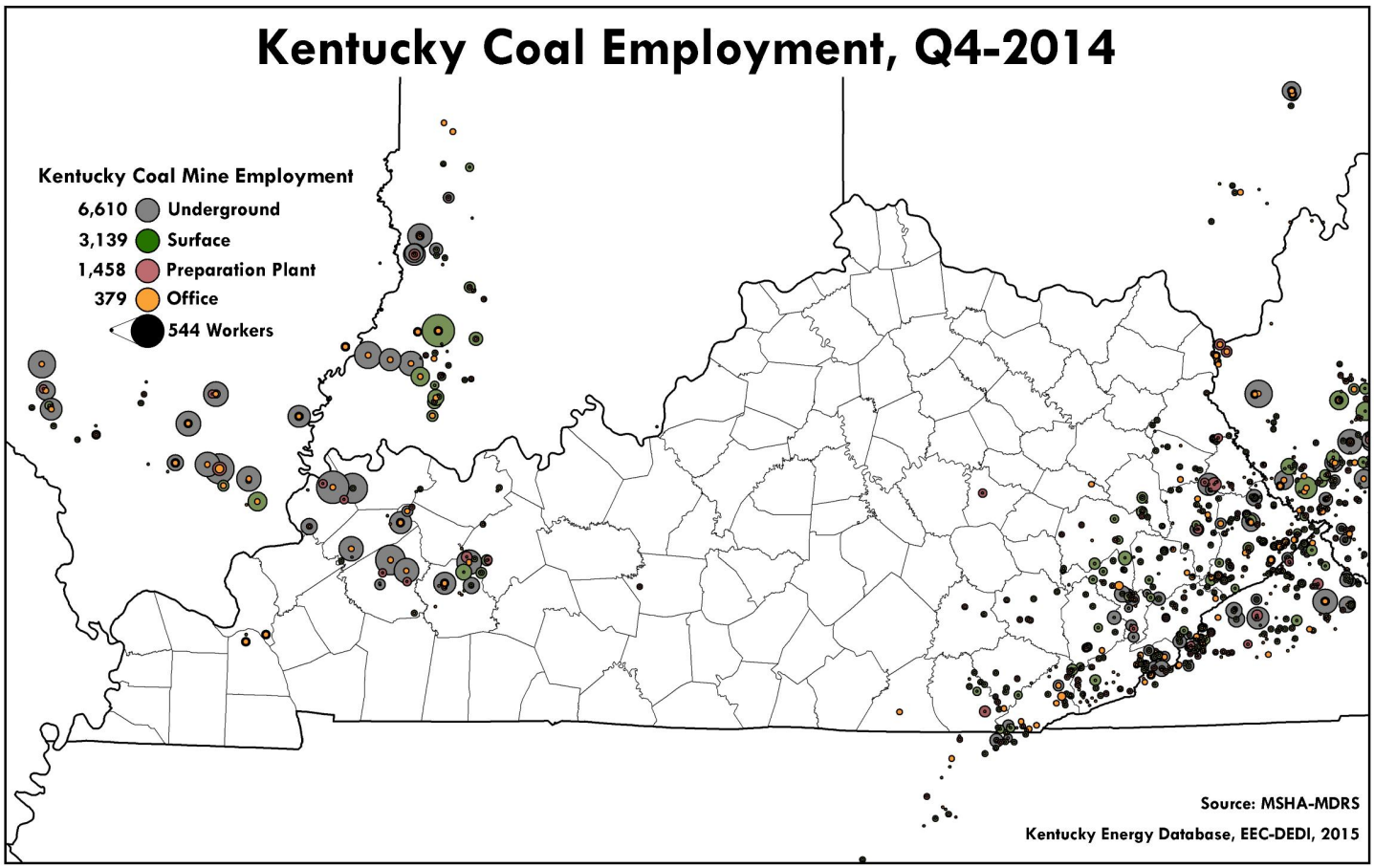
The largest coal employer during 2014, West Virginia, accounted for nearly a quarter of national direct-coal employment, with 18,163 workers. West Virginia has lost 6,574 coal mining jobs and has decreased employment by 27 percent since 2011.

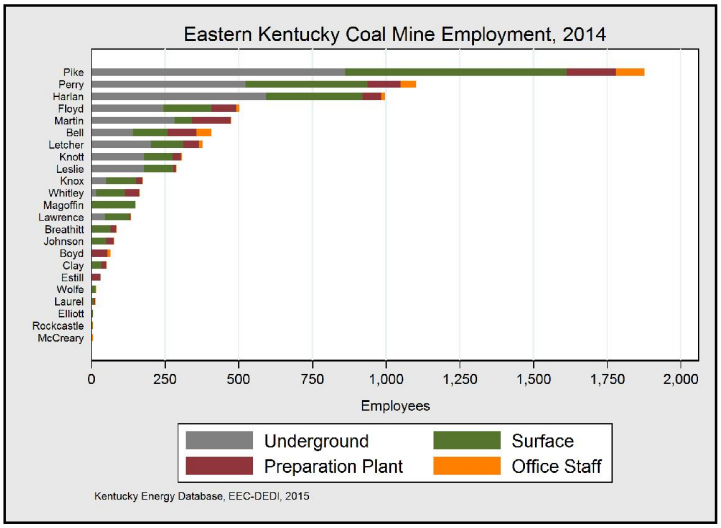
Kentucky has the second-highest number of coal workers, with 15.7 percent of national employment in 2014. Coal employment in Kentucky decreased by 2.6 percent in 2014 to 11,561 workers.

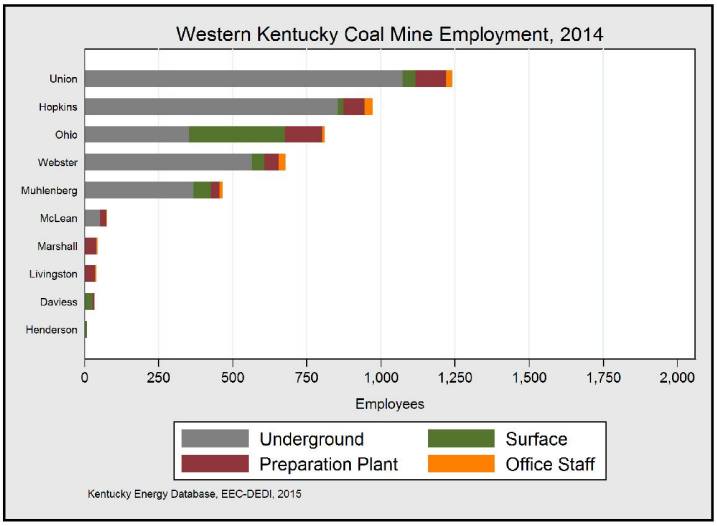
Pennsylvania, the third-highest coal-employment state in 2014, had 7,353 direct coal employment jobs. Pennsylvania coal employment has decreased by 15 percent since 2011.

Wyoming hosted the fourth-most direct coal employees despite producing approximately 40 percent of the coal in the United States, with 6,652 working coal miners.

Kentucky Coal Mine Employment







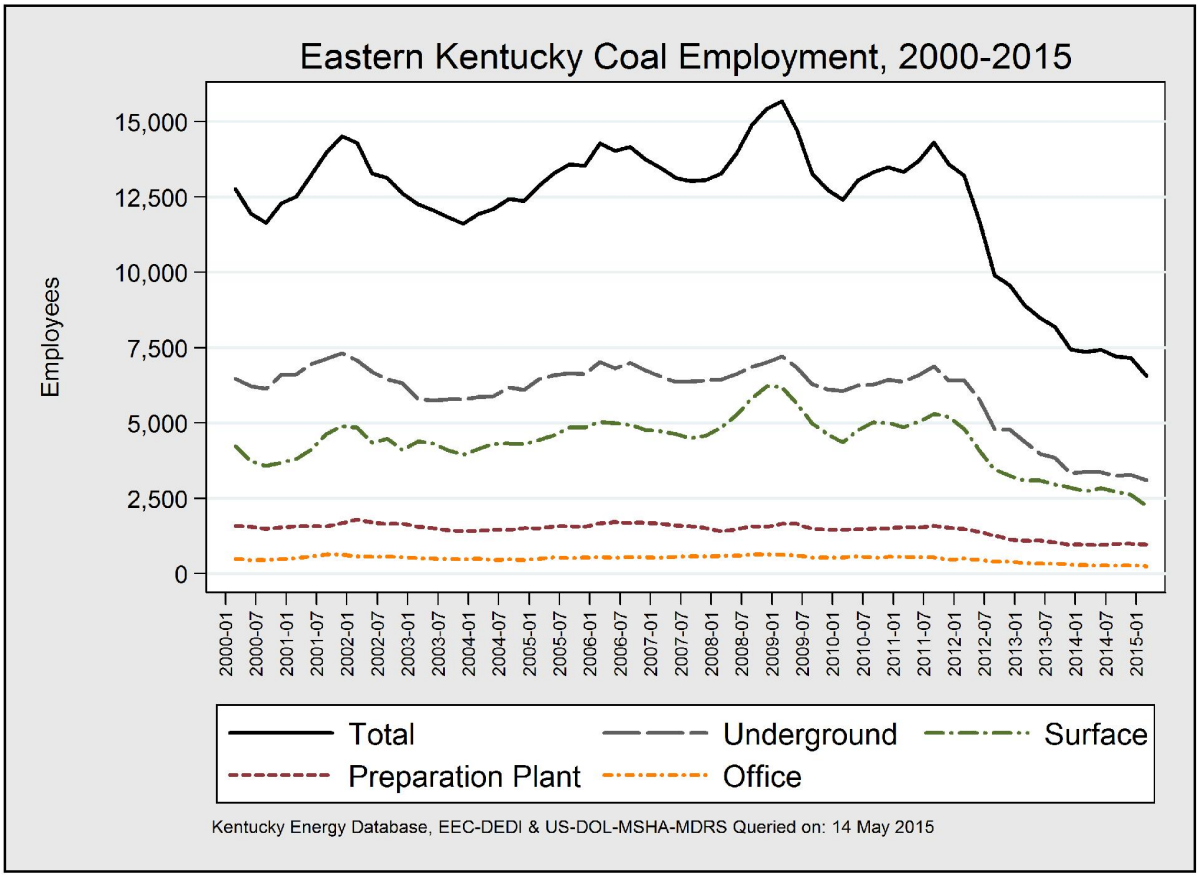
Kentucky Coal Mine Employment

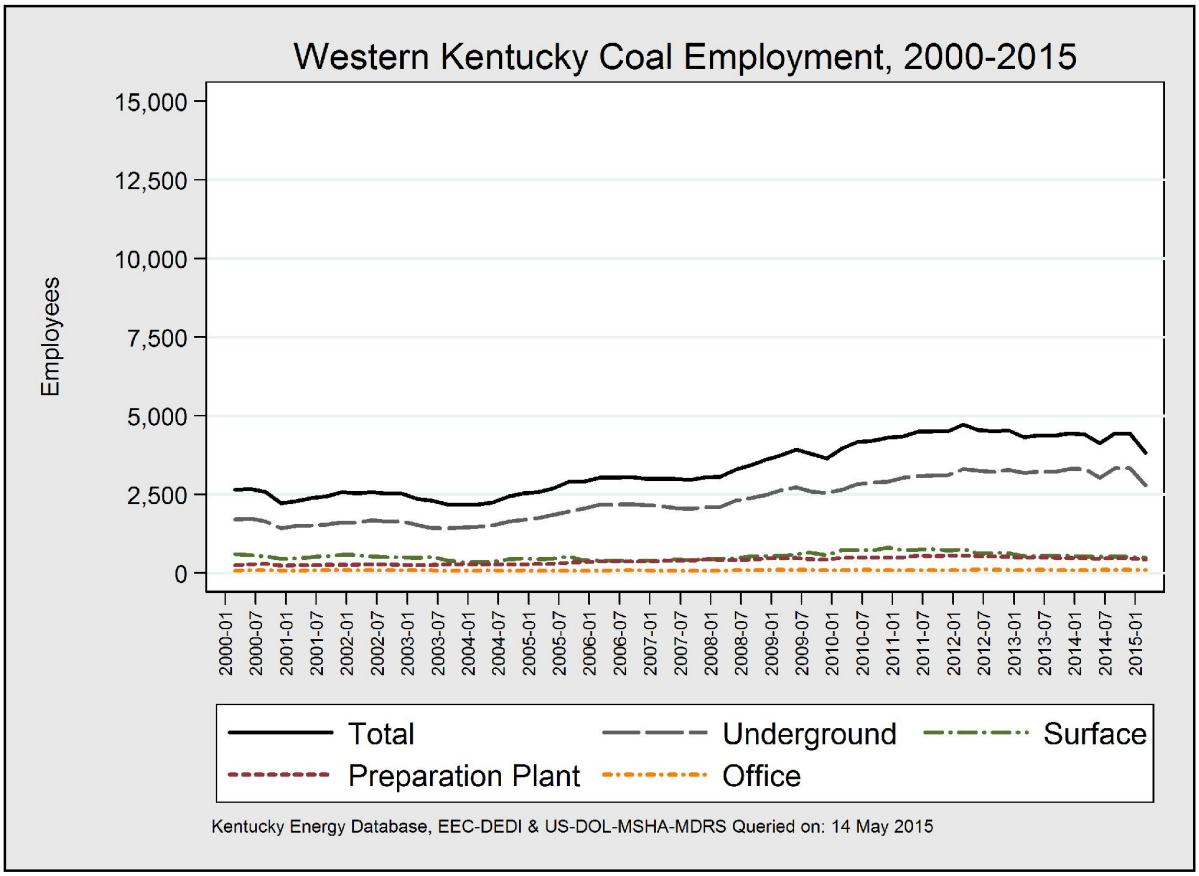
Region and County	Direct Employment at Coal Mines	Underground Miners	Surface Miners	Preparation Plant Workers	Mine Office Staff	Percent of Total Employment
Kentucky	**11,586**	**6,610**	**3,139**	**1,458**	**379**	**0.5%**
Eastern Kentucky	**7,185**	**3,274**	**2,617**	**1,019**	**275**	**4.2%**
Pike	1,900	910	713	175	102	8.6%
Perry	1,097	506	436	108	47	8.8%
Harlan	979	606	300	59	14	14.5%
Martin	497	312	53	131	1	18.5%
Bell	467	154	160	102	51	5.3%
Floyd	438	240	107	81	10	3.9%
Leslie	307	196	96	10	5	17.3%
Knott	296	162	104	22	8	11.4%
Letcher	271	110	92	54	15	6.0%
Whitley	175	18	100	55	2	1.5%
Magoffin	129	-	129	-	-	6.4%
Knox	124	16	86	22	0	1.5%
Lawrence	114	44	66	4	0	3.5%
Breathitt	96	-	73	22	1	2.9%
Johnson	75	-	46	27	2	1.3%
Boyd	62	-	-	55	7	0.2%
Clay	50	-	32	17	1	1.2%
Estill	41	-	-	40	1	1.7%
Livingston	32	-	-	30	2	1.0%
Wolfe	17	-	15	-	2	1.4%
Laurel	14	-	9	4	1	0.1%
McCreary	4	-	-	1	3	0.1%
Western Kentucky	**4,401**	**3,336**	**522**	**439**	**104**	**3.6%**
Union	1,283	1,107	44	111	21	22.2%
Hopkins	980	856	24	72	28	5.5%
Ohio	802	340	330	121	11	11.0%
Webster	680	566	42	49	23	19.1%
Muhlenberg	476	387	52	26	11	5.1%
McLean	103	80	1	18	4	5.4%
Marshall	43	-	-	38	5	0.4%
Daviess	26	-	21	4	1	0.1%
Henderson	8	-	8	-	-	<0.1%

†Sources: MSHA Mine Data Retrieval System (MSHA-MDRS) and Bureau of Labor Statistics (BLS) *Quarterly Census of Employment and Wages [June 2014 County Estimates].*

Note: The direct mining employment classification includes persons employed at a Kentucky coal mine and/or registered MSHA permitted mine sites, but does not include direct employment involving coal transportation by trucks, trains, barges, nor the administrative and professional employees of coal companies located in Kentucky metropolitan areas such as Lexington and Louisville. These employment figures also do not include the many private services or indirect employment induced by the economic activity of coal extraction, preparation, and sales.

Kentucky Coal Mine Employment





Coal Mine Safety and Training

Basic Regulations and Overview

Safety and health standards are regulated by the federal Mine Safety and Health Administration (MSHA) and the Kentucky Division of Mine Safety.

All surface and underground mines are inspected. Larger mines may have inspectors at the mine site every day. All certifications and mining specialties, as established by the Kentucky Mining Board, must be signed by the Director (KDMS) verifying the holder has completed the requirements for certification. All coal miners must be drug tested prior to being issued any new certification.

Training for Surface Miners

New miners must have 24 hours of training and pass a written exam before being eligible for employment at a surface mine. Workers at prep plants, rail sidings, and river terminals must also meet these training requirements. The inexperienced miner must work a minimum of 45 days at a surface mine before becoming a certified experienced miner. After the initial training, each surface mine employee is required to receive eight hours of retraining annually.

To obtain a Surface Mine Foreman Certification, a miner must have three years of surface mining experience achieved after age 18. To obtain certification, a surface mine foreman must specialize in either coal extraction or post mining activities (coal preparation or coal handling). The applicant must have at least one year of practical experience in the specialty category. To become a blaster in a surface coal mine, the applicant must attend 30 hours of training and pass both a licensing and certification test. Two years of additional work experience under a licensed blaster is required.

Training for Underground Miners

New miners are required to have a minimum of 40 hours of training and pass a written exam prior to starting work as an inexperienced miner. A newly hired (inexperienced) underground miner must receive eight hours of mine site-specific training prior to working in an underground mine; for an experienced miner the mine-site specific training is as needed. An inexperienced miner must work a minimum of 45 days in an underground mine before becoming a certified experienced miner.

A minimum of 16 hours of annual retraining is required to maintain the miner certification and continue to work at an underground mine.

To receive an Underground Mine Foreman Certification, a miner must have five years of practical underground coal mining experience gained after age 18, with at least one year at the face of an active working section of a coal mine. An Assistant Mine Foreman Certification requires three years practical experience.

Each miner receives new work assignment training (Task Training) to become certified for each new job classification.

To maintain their certification, and qualifications, certified electrical workers must satisfactorily complete annual electrical retraining classes.

Only certified shot-firers can detonate explosives within a mine.

Underground Miner Classifications and Training	
Experience Required	Mining Position
5 Years	Electrical Inspector* Mine Inspector/Mine Safety Analyst* Mine Foreman* Electrical Instructor*
3 Years	Asst. Mine Foreman* Instructor
1 Year	Electrical Worker* Hoisting Engineer* Solid Blasting
45 days	Shot Firer* Certified Miners
Special Training	
MET	Mine Emergency Technician
EMT	Emergency Medical Technician

Source: Kentucky Division of Mine Safety (KDMS).

NOTE: More than 20,000 persons are trained or retrained annually for one or more surface and/or underground miner classification by the KDMS to maintain the current Kentucky miner workforce of 11,586 miners.

*Tests are required in addition to years of experience.

Economic Impact of Kentucky Coal

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	11,586	$1,117,977,088	$2,172,141,000	$4,589,572,096
Indirect Effect	5,073	$340,745,408	$584,781,700	$1,177,433,216
Induced Effect	7,957	$308,925,312	$564,326,800	$977,695,616
Total Effect	**24,616**	**$1,767,647,808**	**$3,321,249,500**	**$6,744,700,928**

Direct Benefits

The Kentucky coal industry provides direct benefits to the Commonwealth in terms of revenue, jobs, and wages to miners. Some of the direct economic benefits of Kentucky coal production are as follows:

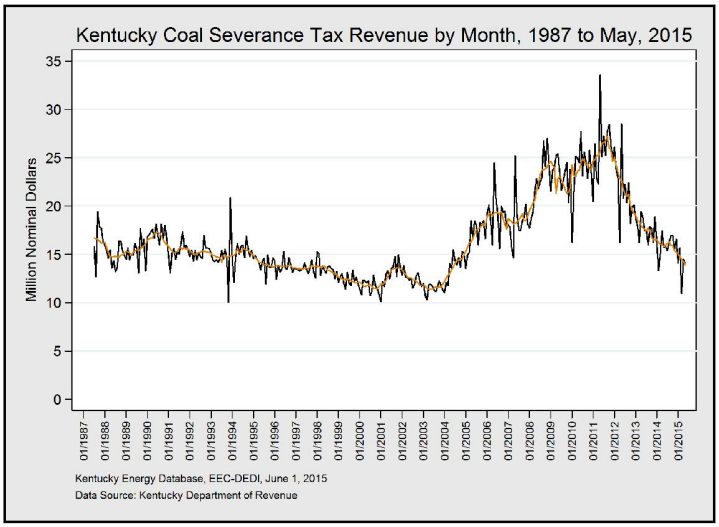
- Kentucky coal sold in 2014 for $4,589,572,000—$2,664,732,000 in the east and $1,924,840,000 in the west.
- Kentucky coal mines employed 11,586 miners in 2014, with 7,185 in eastern Kentucky and 4,401 in western Kentucky.
- Coal producers paid wages of $1,117,977,088 in 2014, which is an average of $96,493 per employee.
- Coal producers in Kentucky paid the state a total of $191,291,869 in severance taxes in calendar year 2014.
- A total of $61.3 million in coal severance tax receipts were returned to coal-producing counties for infrastructure improvements and economic development projects in FY2014.
- A total of $22.9 million in unmined mineral taxes were collected in FY2014.

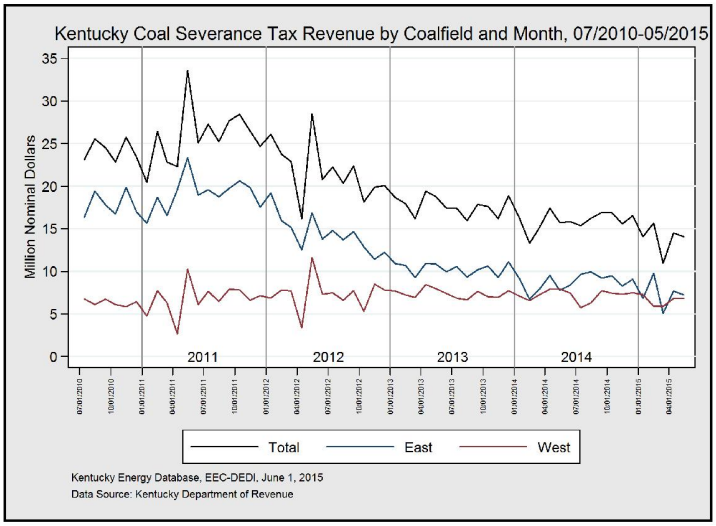
Induced and Indirect Benefits

The coal industry also provides other economic benefits to Kentucky in addition to the direct benefits mentioned above. Much of the $4.6 billion of new income flowing into the Kentucky coal industry from coal sales is re-spent in the local economy creating a multiplier effect of other induced and indirect benefits. We estimate that an additional $2.16 billion of spending was induced by coal production. In addition to the 11,586 employees working directly for the coal industry in Kentucky, a total of 13,030 other employment opportunities were created in Kentucky as a result of the money spent by coal companies and their employees including; 2,482 jobs in trade and retail stores; 1,336 in healthcare; 1,016 jobs in food services; 427 truck drivers; 377 teachers and child care workers; 304 engineers; 254 lawyers and legal assistants; 219 railroad workers; among others. In sum, the total number of jobs—including direct, indirect, and induced jobs—by the economic activity of the Kentucky coal industry was 24,616 in 2014. On average, we estimate that 1.13 other jobs were created for each employee working for the Kentucky coal industry.

This economic impact analysis was conducted by Kentucky Energy and Environment Cabinet staff using direct data from the Kentucky Energy and Environment Cabinet, Kentucky Department of Revenue, and Kentucky Department of Local Government. Induced and indirect effects were calculated using MIG Implan economic impact model.

Kentucky Coal Severance Receipts





Region	CY 2014 Receipts	1 Year Change
Total	$191,291,869.26	-10.0%
Eastern Kentucky	$104,544,086.10	-15.6%
Western Kentucky	$86,747,783.16	-2.1%

Slowing coal production in eastern Kentucky drove down total 2014 Kentucky severance tax receipts to 191.3 million dollars, which is a decrease of 9.69 percent from 212 million dollars in 2013 and of 38.4 percent from 310.5 million dollars in 2011. Eastern Kentucky coal severance tax receipts decreased by 15.55 percent during 2014 while western Kentucky receipts increased by a marginal 2.0 percent. The closure of coal-fired power plants across the southeastern United States has significantly reduced demand for Kentucky coal, which has lowered exports, created surplus coal stockpiles, and lowered the average price that Kentucky coal could be sold for. Coal-fired power plant closures are anticipated across the United States between calendar years 2014 to 2018 in response to changes in federal environmental regulation, energy policies in other states, low electricity demand growth, as well as lower cost alternatives, including natural gas and coal from other regions. These power plant closures can be expected to place additional downward pressure on coal demand, prices, and thus coal severance tax revenue.

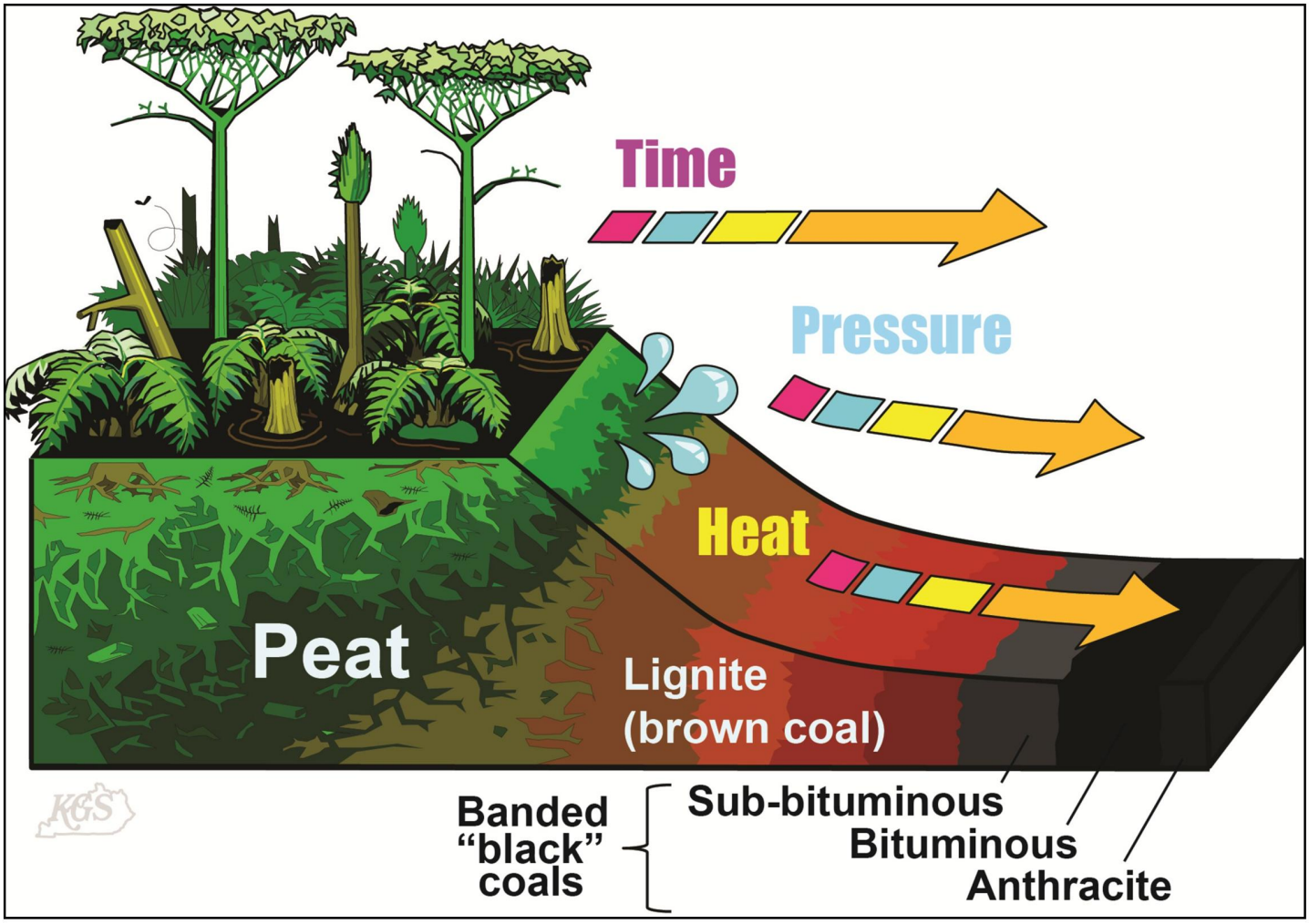
Coal Severance Tax Calculation

A tax of 4.5 percent is levied on the sale price of every ton of coal mined in Kentucky. For example, if a ton of coal mined in Kentucky sells for $50, then the coal severance tax revenue for the Commonwealth from this sale will be $2.25. (1 Ton X $50 X 0.045 = $2.25). Coal severance tax revenues varies from month to month with coal production and the value of the coal produced, as illustrated in the graphic above.

Coal Severance Tax Programs and Outlays

Severance tax revenue generated through the production of coal is distributed to several state budgetary programs including the Kentucky General Fund, the Local Government Economic Assistance Fund (LGEAF), and the Local Government Economic Development Fund (LGEDF).

Coal Formation and Properties



Formation of Coal

Coal forms from organic material that is buried and subsequently altered by a combination of time, pressure, and heat in a process called coalification. The process starts with peat that is formed from vegetation in waterlogged wetlands sometimes called mires. Stagnating water in mires creates anaerobic (low-oxygen) conditions that allow plant debris to be preserved. Coalification requires the peat to be buried by sediment, expelling the water and compacting what remains. Continual pressure and heat over time change the chemical composition and increase the rank, or energy potential, of the coal.

Coal in Kentucky

Significant coal deposits are located in 57 of Kentucky's 120 counties—20 counties in the western coalfield and 37 in the eastern coalfield. Coal may be extracted from approximately 45 different seams of varying thickness in eastern Kentucky and from about 10 seams in western Kentucky. Coal resources, the amounts of coal estimated to be in the ground, are classified by rank, the thickness of rock overlying the coal, and the thickness of the coal bed. All of the mineable coal in Kentucky is bituminous in rank and contains less than 15 percent ash content after processing. Eastern Kentucky coal is typically lower in sulfur (less than two percent), than western Kentucky coal (greater than two percent). The economically important coal beds found in Kentucky formed from plants living during the Pennsylvanian period, which lasted between 320 and 280 million years ago. During this period, Kentucky existed near the equator and possessed large forests that were intermittently covered by shallow seas, slowly generating the peat that became coal. Lignites occur in the Jackson Purchase area, but these are not economic to mine. Kentucky lignites formed during the Eocene Epoch, between 60 and 50 million years ago.

Coal Formation and Properties

Coal Rank and Grade

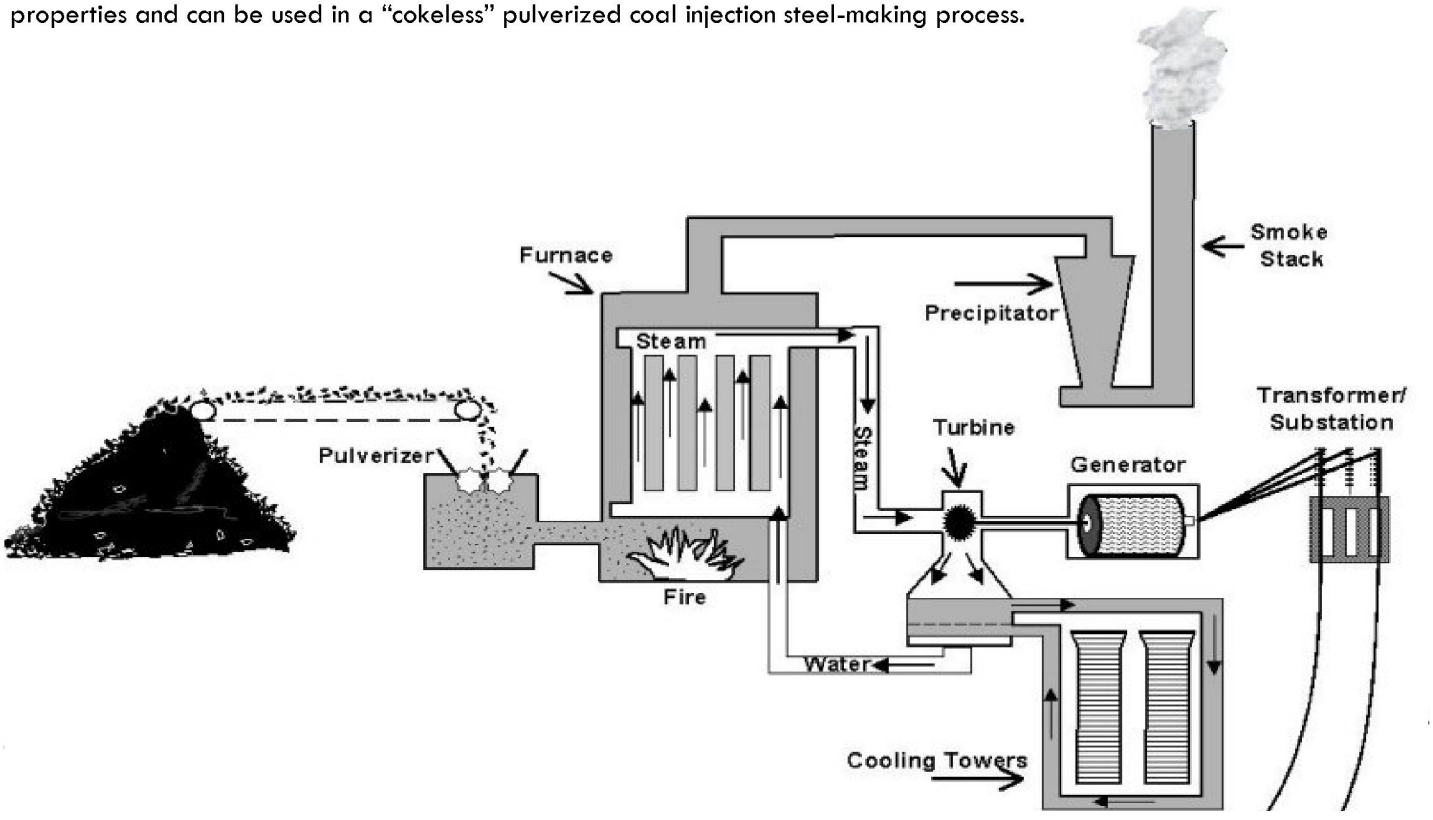
Coal is generally classified in terms of rank and grade. While no two coal deposits are the same in terms of chemical composition, coal generally consists of varying levels of carbon, oxygen, hydrogen, nitrogen, sulfur, ash, moisture content, and mineral material (silicon, aluminum, iron, calcium, and others). Rank refers to the level of metamorphism, or alteration, the organic material in the original peat was subjected to after burial. Rank increases alongside increased levels of fixed carbon and heat content and decreased levels of moisture and volatile matter. Low-rank coal is called lignite. Higher rank coal is classified as either sub-bituminous, bituminous, or anthracite, depending on their calorific value (Btu content) and (in higher rank coal) fixed carbon and volatile matter contents. Grade refers to the amount and type of impurities in coal, specifically ash and sulfur. The rank and grade of a coal deposit partly determine its potential uses and marketability.

Steam Coal

Steam coal, or thermal coal, is coal used by electric utilities to burn in large furnaces and generate electricity. Typically, coal is pulverized, (to ensure carbon molecules are able to react with oxygen during combustion) blown into a boiler unit, and combusted at high temperatures. The heat produced by the combustion of the coal yields very high temperature/high pressure steam that drives generators with turbines to produce electricity. The vast majority of the coal mined in Kentucky is sold as steam coal.

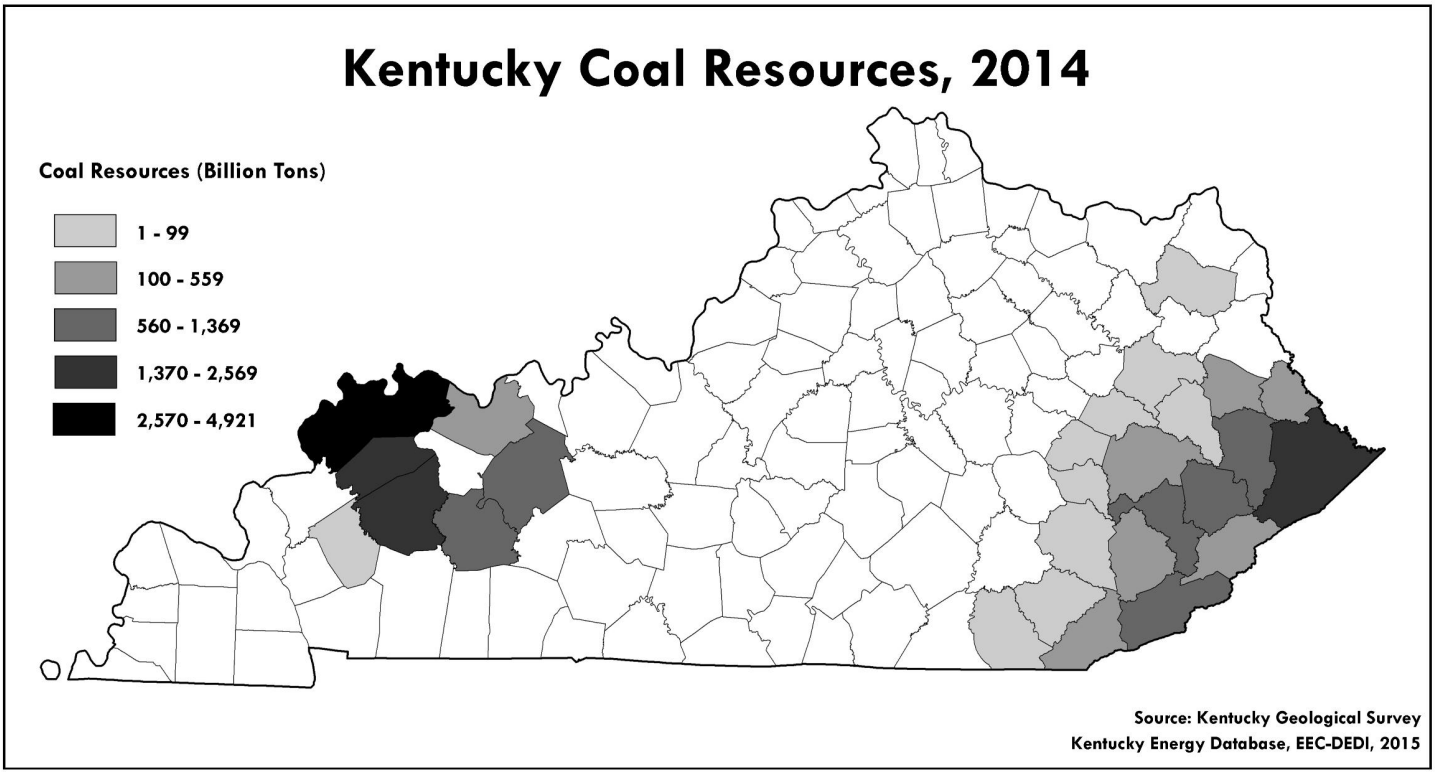
Metallurgical Coal

Metallurgical coal is used by the steel industry to produce "coke", a necessary component of steel production. Coke is a carbon-rich material produced by heating coal to very high temperatures in an oxygen deprived furnace. In this process, volatile components of the coal are driven off, concentrating the carbon portion of the coal. Metallurgical coal must contain very low amounts of both ash (less than 10 percent) and sulfur (less than one percent), and have acceptable amounts of both "reactive" and "inert" organic components. A small proportion of Kentucky coal has hybrid steam and metallurgical properties and can be used in a "cokeless" pulverized coal injection steel-making process.



Kentucky Geological Survey. Coal Information. Retrieved from KGS website: www.uky.edu/KGS/coal/coal_information.htm

Kentucky Coal Resources



Previous versions of the Coal Facts publication have reported coal resource information derived from estimates conducted in the 1970's and early 1980's by the Kentucky Geological Survey. These estimates were done at the peak of Kentucky coal production and focused on identifying all existing coal resources, even those that were not technically or economically mineable. These estimates tabulated over 105 billion tons of original resources. Beginning in 1995, a new assessment program began using updated methodology and newly acquired resource data. This USGS program, named National Coal Resource Assessment, focused only on the productive mineable beds across the nation.

Sixteen coal beds in Kentucky's two coal basins have been assessed using the new methodology, encompassing the majority of productive coal for the state. Although a small number of additional coal beds still need to be assessed, the KGS believes these data are the best available information for evaluating remaining resources. The remaining resources were tabulated using available mined-out areas as of 2012. The remaining resources should be considered an absolute maximum available resource, because a portion of this coal may not be technically or economically feasible to develop.

Coal seams that are considered able to be mined are part of the Demonstrated Reserve Base (DRB). Coal less than 28 inches in thickness is not considered to be mineable according to the U.S. DOE Energy Information Administration methodology, and that is generally consistent with mining practices in Kentucky. The estimates of original resources in this volume do include coal between 14 and 28 inches, but report remaining resources both with and without those tonnages.

Please visit http://kgs.uky.edu/kgsmap/kcrim/ for more information on coal resources by coal bed and county. The coal beds and counties on the following page contain hyperlinks to their specific coal resource web page.

Kentucky Coal Resources

Eastern Kentucky Resources by County, 2012				
County	Original (>14")	Mined (2012)	Remaining (>14")	Remaining (>28")
EKY	44,484	7,247	37,237	7,902
Bell	1,212	269	944	253
Boyd	544	-	544	-
Breathitt	2,459	22	2,437	240
Carter	585	0	585	1
Clay	1,196	25	1,172	25
Elliott	489	0	489	-
Floyd	3,249	700	2,549	786
Greenup	429	-	429	-
Harlan	3,169	701	2,468	1,369
Jackson	6	-	6	-
Johnson	1,243	100	1,143	107
Knott	3,390	590	2,800	934
Knox	1,016	86	930	77
Laurel	32	1	32	-
Lawrence	1,654	-	1,654	-
Lee	28	-	28	1
Leslie	2,993	411	2,582	326
Letcher	2,855	969	1,886	557
Lewis	0	-	0	-
Magoffin	1,644	16	1,629	92
Martin	1,996	103	1,892	325
McCreary	50	0	50	-
Menifee	4	-	4	-
Morgan	1,132	6	1,127	26
Owsley	452	0	452	12
Perry	2,874	355	2,519	678
Pike	8,946	2,852	6,094	2,054
Rowan	6	-	6	-
Whitley	473	42	431	27
Wolfe	358	1	358	12

Western Kentucky Resources by County, 2012				
County	Original (>14")	Mined (2012)	Remaining (>14")	Remaining (>28")
WKY	29,006	4,867	24,140	17,441
Butler	2	-	2	-
Caldwell	2	-	2	1
Crittenden	0	-	0	0
Daviess	967	93	874	332
Henderson	5,744	267	5,477	4,390
Hopkins	5,113	1,456	3,657	2,184
McLean	2,347	25	2,322	1,335
Muhlenberg	3,117	1,229	1,888	1,009
Ohio	1,509	320	1,188	700
Union	6,141	806	5,335	4,921
Webster	4,065	671	3,395	2,569

Kentucky Geological Survey. Kentucky Coal Resource Information: http://kgs.uky.edu/kgsmap/kcrim/

Eastern Kentucky Resources by Coal Bed, 2012				
Coal Bed	Original (>14")	Mined (2012)	Remaining (>14")	Remaining (>28")
EKY	44,484	7,247	37,237	7,902
FCR	553	97	456	456
FCL	5,780	1,719	4,060	1,087
AMB	5,805	550	5,255	1,480
UE3B	8,049	395	7,654	501
UE3A	9,628	1,784	7,845	1,846
UE2	3,800	698	3,102	1,045
LEK	7,932	1,767	6,165	1,060
CLN*	512	114	398	149
GLM*	1,542	69	1,474	159
HGY*	585	20	564	80
SPD*	298	34	264	40

The Eastern Kentucky Coal Field covers 10,500 square miles in 30 counties. Eleven major coal beds have been assessed having about 44.4 billion tons of original resources. Remaining resources greater than 28 inches thick for these beds in 2012 were 7.9 billion tons.

More than 80 coal beds have been identified in eastern Kentucky, but most of the important resources are associated with about 25 beds. Eleven of the most productive beds have been assessed at this time. Approximately 7.2 billion tons of coal have been mined or lost in mining from these beds through 2012 comprising 16 percent of original resources.

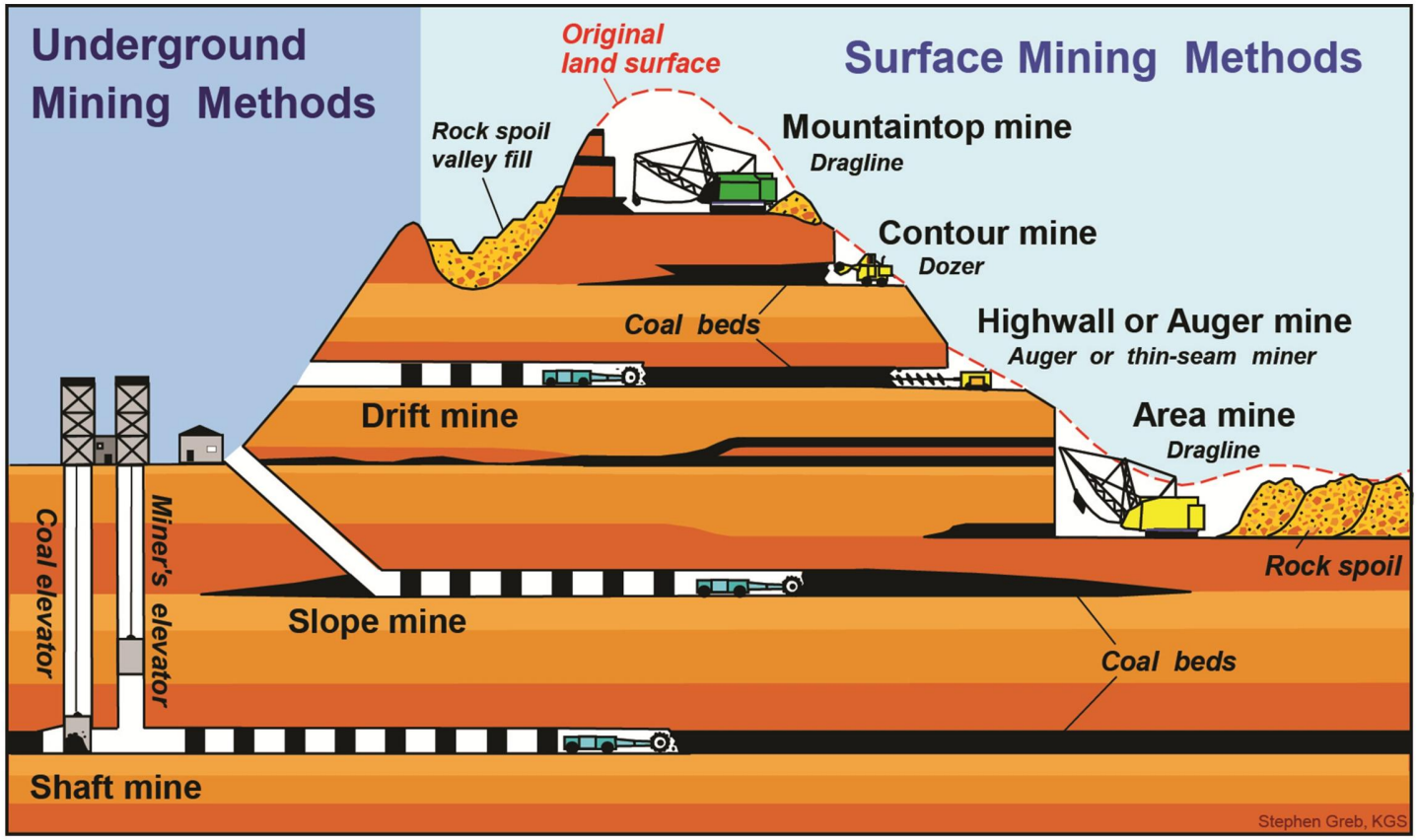
Western Kentucky Resources by Coal Bed, 2012				
Coal Bed	Original (>14")	Mined (2012)	Remaining (>14")	Remaining (>28")
WKY	29,006	4,867	24,140	17,441
W13	3,933	234	3,698	2,511
W11	4,964	1,286	3,678	2,398
WK9	10,216	3,256	6,959	6,951
WK7	3,080	2	3,078	1,456
WK6	6,814	88	6,726	4,125

The Western Kentucky Coal Field covers 6,400 square miles in 11 counties. Five major coal beds have been assessed having about 29 billion tons of original resources. Remaining resources greater than 28 in thick for these beds in 2012 were 17.4 billion tons.

As many as 35 coal beds have been identified in western Kentucky, but most of the measured resources are associated with only seven of them. Most of the active mining is restricted to three of those – the Baker (no. 13), Herrin (no. 11), and Springfield (no. 9) coal. Approximately five billion tons of coal have been mined or lost in mining from these beds through 2012 comprising 17 percent of original resources.

*This estimate is limited to Pike County.

Types of Coal Mining



Several different mining methods are used in the Commonwealth to access coal deposits in the Central Appalachian Basin of eastern Kentucky and the Illinois Basin of western Kentucky. The chosen mining approach, or combination of mining approaches, at a given mine site largely results from local geography, hydrology, and the amount of soil and rock overburden above a coal seam. Coal mines are generally divided between surface operations and underground operations, though there are several sub-categories that describe exact mining approaches and mine permitting conditions. Mining techniques continue to change as a result of technological changes in order to ensure improved productivity, health and safety, and to reduce the environmental impact.

Underground mine operations accounted for 68 percent of coal production in Kentucky in 2014, with room and pillar systems being the most common mining method. Surface mines accounted for 32 percent of statewide production. Whereas drift, contour, and auger mining are more common in eastern Kentucky, slope and shaft mining are more common in the western Kentucky coalfield. Throughout most of history, underground mines have provided the majority of employment and coal production in the Commonwealth. During 2014, combined coal production from underground operations and surface operations was more than 77 million tons with a slight majority of production in western Kentucky.

Kentucky Coal Production by Mining Method, 2014*

Mine Type	Auger	Refuse Pile	Dredge	Strip/Quarry/Open Pit	Underground	Total
State	1,171,678	133,612	4,790	23,310,005	52,807,276	77,427,363
WKY	4,279	0	0	5,571,419	34,393,332	39,969,030
EKY	1,167,399	133,612	4,790	17,738,586	18,413,944	37,458,333

*Source: U.S. Department of Labor, Mine Safety and Health Administration, "Quarterly Mine Employment and Coal Production Report" (MSHA Form 7000-02). The above table summarizes the five types of mining methods—as categorized by MSHA—that registered coal production in Kentucky during 2014.

Types of Coal Mining

A continuous-mining machine

An excavator loading coal into a haul truck

Underground Mining: Underground mining techniques differ in terms of the mode of access and the mining method. Drifts, slopes, and shafts are among the modes of accessing a coal bed at depth. Once accessed, the coal is removed in underground mines by either room and pillar mining or longwall mining.

Room and pillar mining is the most common underground mining method in Kentucky. "Rooms" refer to the areas where coal is mined and the "pillars" are the coal left behind to support the roof. The coal can be extracted by either a continuous miner (shown above) or by conventional means in which the coal is cut, drilled, blasted, and loaded onto shuttle cars. Room and pillar mining reduces the amount of recoverable coal, since much of the coal is left underground to serve as the pillars.

Longwall mining utilizes a longwall mining machine to cut parallel to the face of the coal in long tunnels without the need for pillars. During mining, temporary roof supports allow the mining to take place and the unsupported roof behind the longwall machine is then allowed to collapse naturally, leaving large cavities in the working mine.

Surface Mining: Surface mining occurs when the earth above the coal seam (called overburden) is removed to access the coal bed. Surface mining operations include "strip mines", like area and contour mines, auger, and excavations like quarries or open pits.

Area mining is a mining method where miners remove shallow coal over a broad area typically where the land is fairly flat. Dragline shovels are often utilized to remove the materials overlying the coal and place the materials in previously mined pits. Often, area mines access multiple coal seams within the same pit.

Contour mining occurs on hillsides. A wedge of overburden is removed along the coal outcrop on the side of a hill, forming a shelf, or bench, at the level of the coal. Contour mining is often followed by auger or highwall mining to extract coal from further within the coal seam without needing to remove the overburden—a hybrid mining technique.

Auger mining operates on surface-mine benches, before they are covered up by previously removed overburden. Auger mining targets the coal in the hillside that can't be reached by contour mining because of the overburden thickness and uses a large drill to cut horizontally into the hillside and remove coal. Similarly, highwall mining is a remote, unmanned method of underground coal extraction where a mining machine is advanced from the surface up to 1,000 feet underground in cuts that are 10 to12 feet wide.

Other Types of Mining: Coal is sometimes recovered from the wastes of other mining operations. Culm banks are refuse piles of fine coal material accumulated at coal preparation plants. In Kentucky, coal is washed, or "prepped," to remove ash and sulfur. These wastes are stored in settling ponds and can be reprocessed for energy products. Waste coal fines can also be recovered from rivers or streams by dredging.

Mines and Licensing

Number of Kentucky Mine Licenses, 1985-2014					
Mine Type	Underground		Surface		State
Year	EKY	WKY	EKY	WKY	Total
1985	1,153	31	1,548	139	2,871
1990	799	27	860	83	1,769
1995	456	28	665	48	1,197
2000	309	14	256	26	605
2001	359	16	336	26	737
2002	300	18	310	20	648
2003	268	17	240	16	541
2004	282	14	298	14	608
2005	278	16	281	19	594
2006	287	15	329	16	647
2007	239	15	282	14	550
2008	263	11	338	14	626
2009	233	12	329	18	592
2010	207	12	281	13	513
2011	200	14	305	11	530
2012	184	14	268	10	476
2013	132	12	215	10	369
2014	223	13	123	6	365

Source: Kentucky Division of Mines & Minerals, Annual Reports, 1960-2002; Kentucky Department of Natural Resources, Division of Mine Safety, Annual Reports, 2003-2014. (The number of actual mines is smaller than the final number of mine licenses issued each year. For example, a new license is required when a company name or ownership changes.)

Number of Kentucky Coal Mines, 1985-2014					
Mine Type	Underground		Surface		State
Year	EKY	WKY	EKY	WKY	Total
1985	897	24	836	101	1,858
1990	601	26	301	59	987
1995	339	22	201	36	598
2000	234	12	148	14	408
2001	253	11	187	16	467
2002	219	14	180	14	427
2003	201	12	174	13	400
2004	212	11	185	11	419
2005	211	13	193	15	432
2006	214	13	202	13	442
2007	191	10	203	13	417
2008	205	11	241	12	469
2009	186	12	239	12	449
2010	161	13	214	15	403
2011	153	13	218	13	397
2012	130	13	213	13	369
2013	82	12	173	12	279
2014	85	13	154	9	261

Source: U.S. DOE-Energy Information Administration, Coal Production, 1984-1992; U.S. DOE-Energy Information Administration Coal Industry Annual, 1993-2009; U.S. Department of Labor, Mine Safety and Health Administration, "Quarterly Mine Employment and Coal Production Report" (MSHA Form 7000-02), 2010-2014.

Mines and Licensing

Kentucky Coal Production and Active Mine Counts by County and Mine Type, 2014						
Location	Underground		Surface		Total	
Area/County	Active	Production	Active	Production	Active	Production
Statewide	98	52,807,276	163	24,620,085	261	77,427,361
EKY	85	18,413,945	154	19,044,387	239	37,458,332
Pike	26	4,960,580	43	5,412,692	69	10,373,272
Perry	6	2,779,273	16	4,696,605	22	7,475,878
Harlan	12	3,184,075	12	1,595,554	24	4,779,629
Floyd	11	1,507,373	12	1,020,836	23	2,528,209
Martin	3	1,728,535	4	314,840	7	2,043,375
Knott	3	1,472,629	7	517,480	10	1,990,109
Letcher	6	963,537	11	685,245	17	1,648,782
Bell	5	678,182	9	739,925	14	1,418,107
Leslie	3	609,717	5	793,568	8	1,403,285
Magoffin	-	-	4	1,204,438	4	1,204,438
Lawrence	6	358,355	1	425,343	7	783,698
Breathitt	-	-	4	564,817	4	564,817
Knox	3	46,853	7	357,554	10	404,407
Whitley	1	124,836	6	256,766	7	381,602
Johnson	-	-	4	203,359	4	203,359
Clay	-	-	3	174,620	3	174,620
Rockcastle	-	-	1	44,336	1	44,336
Wolfe	-	-	1	15,540	1	15,540
Laurel	-	-	3	12,185	3	12,185
Elliott	-	-	1	8,684	1	8,684
WKY	13	34,393,331	9	5,575,698	22	39,969,029
Union	3	12,977,904	-	-	3	12,977,904
Ohio	2	3,152,960	4	5,184,009	6	8,336,969
Hopkins	3	8,080,823	-	-	3	8,080,823
Webster	2	6,334,891	2	63,603	4	6,398,494
Muhlenberg	2	3,625,843	1	4,279	3	3,630,122
Daviess	-	-	2	323,807	2	323,807
McLean	1	220,910	-	-	1	220,910

Source: U.S. Department of Labor, Mine Safety and Health Administration, "Quarterly Mine Employment and Coal Production Report" (MSHA Form 7000-02).

Nearly two-thirds of active coal mines in eastern Kentucky in 2014 were broadly defined as surface operations. However, the combined annual production of eastern Kentucky surface mines was only slightly higher than underground production: 19 million tons compared to 18.4 million tons. During 2014, there were 20 counties in the eastern coalfield that had active mine sites and licenses.

Though there were nearly as many active underground mines as surface mines in western Kentucky in 2014, 86 percent of regional production was from underground operations. During the year, seven counties in the region registered coal production. Mines in western Kentucky tend to produce more tons of coal then eastern mines: 1.8 million tons, on average compared to 157 thousand tons, respectively.

Mine Reclamation

Kentucky Mine Reclamation Status and Primacy Bond Releases, 1990-2014									
Status	Phase I			Phase II			Phase III		
Year	Releases	Acres	Bond Amount	Releases	Acres	Bond Amount	Releases	Acres	Bond Amount
1990	533	15,383	$ 28,108,146	260	7,298	$ 6,221,870	51	1,697	$ 1,569,147
1991	626	14,642	$ 28,373,662	428	12,667	$ 11,200,897	130	2,958	$ 6,890,877
1992	670	18,278	$ 33,822,612	477	13,338	$ 11,489,035	255	8,101	$ 6,811,872
1993	498	13,893	$ 25,386,134	416	12,661	$ 11,242,965	448	15,986	$ 8,629,089
1994	452	15,933	$ 27,423,038	319	10,828	$ 9,768,647	406	14,098	$ 8,709,946
1995	525	16,650	$ 32,343,224	427	13,141	$ 12,399,017	517	18,419	$ 16,338,524
1996	619	23,968	$ 47,602,996	419	14,784	$ 17,378,599	784	27,018	$ 22,365,232
1997	393	13,179	$ 23,571,000	373	13,323	$ 13,463,098	806	30,768	$ 29,923,783
1998	351	12,646	$ 28,589,902	255	8,104	$ 9,370,064	747	21,387	$ 18,859,893
1999	357	11,259	$ 20,644,178	192	5,971	$ 6,719,383	602	19,774	$ 23,043,414
2000	285	10,237	$ 18,529,971	206	6,380	$ 9,449,942	587	20,678	$ 17,215,050
2001	268	9,837	$ 13,321,034	175	7,963	$ 12,064,790	439	13,274	$ 14,176,508
2002	398	14,380	$ 19,236,198	142	5,929	$ 6,130,207	449	15,384	$ 16,013,176
2003	396	12,296	$ 16,879,563	143	5,855	$ 5,424,044	367	10,462	$ 11,291,162
2004	328	11,974	$ 18,229,856	136	3,941	$ 3,581,106	412	10,772	$ 13,163,416
2005	243	9,325	$ 15,142,951	151	5,336	$ 4,535,338	333	12,922	$ 12,687,628
2006	428	15,558	$ 24,028,630	113	4,724	$ 8,563,414	259	7,823	$ 9,135,598
2007	276	11,578	$ 15,743,391	213	5,920	$ 27,299,927	298	8,875	$ 10,958,667
2008	286	11,015	$ 18,958,373	155	6,620	$ 5,512,376	316	9,139	$ 11,283,135
2009	249	9,685	$ 16,916,494	167	12,462	$ 9,730,824	292	8,151	$ 9,795,266
2010	365	12,325	$ 20,912,926	225	11,538	$ 13,797,106	306	10,449	$ 8,559,124
2011	425	9,991	$ 18,364,773	189	7,180	$ 8,219,910	222	8,645	$ 6,886,853
2012	434	13,187	$ 24,863,908	146	5,892	$ 6,397545	427	15,356	$ 14,060,545
2013	801	29,745	$ 42,247,303	199	6,375	$ 8,900,948	422	15,301	$ 15,886,028
2014	591	2,845	$ 25,463,830	147	183	$ 5,342,383	446	12,132	$ 12,453,471
Total	10,797	339,809	$604,704,093	6,073	208,413	$244,203,435	10,321	339,569	$326,707,404

In accordance with the federal Surface Mining Control and Reclamation Act of 1977 (SMCRA), mined land must be returned to its approximate original contour, with the exception of mountaintop mining operations. Stringent regulations govern the design, operation, and environmental impact of every mine. Mining and reclamation sites are inspected on a regular basis by state inspectors. Federal inspectors also conduct random oversight inspections. The Kentucky coal industry (through FY 2014) has contributed $1.3 billion to the Abandoned Mine Land (AML) Reclamation Fund.

Before surface mining begins, Kentucky coal operators must post bonds to ensure the costs of reclamation are available should a coal mine operator go out of business. Under Kentucky's 1984 Permanent Program or "Primacy Program", bonds are not fully released until a coal operator has demonstrated five years of consecutive successful reclamation. As of March 2014, the Kentucky mining industry had a total of 8,929 outstanding bonds valued at $920 million. The bonds assure timely and successful reclamation. Mining reclamation bonds are released in the following phases:

Kentucky Mine Reclamation Phases and Criteria			
Bond Release	Reclamation Release Type	Percent Released	Time/Phase Requirements
Phase I	Grading, Drainage, Seeding	60%	Complete Landscaping
Phase II	Vegetation	25%	Two Years of Successful Reclamation
Phase III	Final	15%	Five Consecutive Years of Successful Reclamation

Mine Reclamation

Abandoned Mine Land Reclamation Fund (Millions), 1985—2014				
Year	Kentucky Collection	Kentucky State Share	AML Grant Disbursement	State Share Balance
1985	$36.91	$17.30	$32.30	$31.40
1990	$38.40	$19.41	$6.40	$43.30
1995	$35.49	$17.61	$15.50	$77.10
1996	$33.98	$16.90	$16.00	$83.60
1997	$34.66	$17.24	$16.10	$90.10
1998	$35.04	$17.45	$15.70	$97.40
1999	$32.38	$16.15	$16.50	$103.40
2000	$30.49	$15.19	$17.00	$108.00
2001	$29.42	$14.71	$18.80	$111.90
2002	$30.16	$15.03	$16.70	$116.90
2003	$26.71	$13.35	$16.40	$120.50
2004	$26.38	$13.19	$16.00	$124.40
2005	$26.00	$13.00	$15.00	$124.40
2006	$26.20	$13.10	$13.80	$128.80
2007	$27.68	$13.84	$13.80	$134.80
2008	$26.00	$13.00	$30.80	$136.60
2009	$24.60	$12.30	$31.10	$117.10
2010	$23.00	$11.50	$37.50	$97.60
2011	$20.25	$10.13	$37.72	$78.74
2012	$22.20	$11.10	$46.99	$58.56
2013	$19.14	$9.57	$42.43*	$39.04
2014	$13.66	$6.83	$39.45*	$0.00
Total	$618.75	$307.90	$511.99	$2,023.64

Abandoned Mine Land (AML) Reclamation

The federal Surface Mining Control and Reclamation Act of 1977 (SMCRA) established authority for the AML Fund. Production fees of $0.28 per ton for surface-mined coal and $0.12 per ton for underground-mined coal are collected from coal producers at all active coal mining operations. These funds are used to reclaim pre-SMCRA sites left abandoned, un-reclaimed, or insufficiently reclaimed, as well as certain sites under interim programs (1977-1982).

The Kentucky coal industry (through FY 2014) has contributed $1.3 billion to the Abandoned Mine Land (AML) Reclamation Fund since 1978. Nationally, over $10.4 billion (through FY 2014) has been paid by active coal operators across the United States. Fifty percent of the total Kentucky AML fees go directly to the state share account. In 2006, Congress passed amendments to SMCRA that provided for mandatory distribution of all unappropriated state share balances over a seven-year period and increased grant funding to states like Kentucky with many high-priority AML problems remaining on inventory. The result has been an increase in the Kentucky AML Grant over the past seven years. The July, 2014 grant contained the last of the seven equal payments of the unappropriated state share balance. After sequestration it was $18.1 million, about half of the total grant of $36.6 million. In July 2015, Kentucky's AML's entire grant will be $18.2 million. The AML program's federal grant funding is set to expire in 2021, unless Congress acts to extend the program.

*$2.28 million in 2013 and $2.84 million were sequestered in 2014 from AML Grant Disbursement.

Abandoned Mine Land Reclamation Accomplishments Through 2014	
145 Water Line Projects ($123.4 million)	2,622 Mine Portal Closures
Over 36,328 Linear Feet of High Wall Eliminated	218 Vertical Shafts Sealed
Over 285 Hazardous Structures Removed	47.8 Miles of Stream Restoration
Over 2,452 Acres Landslide Projects Stabilized	289.7 Acres of Mine Fires Controlled
$537 Million in Construction Expenditures	131,761 Acres Reclaimed (GPRA Acres)

Post-Mining Land Use

Regional Airports	
Big Sandy Regional Airport	Martin
Hatcher Field Airport	Pike
Carroll Field Airport	Breathitt
Ford Airport	Perry
Ohio County Airport	Ohio
Correctional Facilities	
Federal Correctional Institute	Clay, Martin
East Kentucky Correctional Complex	Morgan
Otter Creek Correctional Center	Floyd
Juvenile Boot Camp	Breathitt
Government Facilities	
Earle C. Clements Job Corps Ctr.	Muhlenberg
Army National Guard Training Ctr.	Muhlenberg
U.S. Postal Service	Laurel
County Park	Ohio
Madisonville South By-Pass	Hopkins
Solid Waste Landfills	Daviess, Greenup, Ohio, Hopkins, Perry, Lee
Hazard Armory	Perry
Jail and State Police Barracks	Perry
Veterans' Nursing Home	Perry
Fish and Wildlife	
Duck Refuge Areas	Ohio, Perry, Breathitt, Knott, Martin, Muhlenberg
Catfish Farming	McLean
Wildlife Management Area	Muhlenberg, Ohio, Perry
Wetland Development	Muhlenberg

Several old coal haul rails have been removed to make walking trails in Hopkins, Muhlenberg, Union, and Webster counties. These efforts are also known as "Rails-to-Trails".

Farms	
Starfire Project	Perry
MAPCO / Morehead Agriculture Ctr.	Martin
Martin County Coal Corp. Farm	Martin
D&R Brangus Farm	Perry
Hog Farm	Hopkins, Knox
Avian Farms	Wayne
Agricultural Projects / Sites	Daviess, Pike
Chicken / Broiler Houses	Hopkins, McLean, Muhlenberg, Webster
Livestock Feed	Greenup, Harlan, Lee, Johnson, Wolfe, Whitley

Free-ranging elk were re-introduced to the mountains of eastern Kentucky, with reclaimed mountaintop removal areas, old reclaimed mine benches, and hardwood forests serving as their home once again. The first hunter in more than 150 years to legally harvest an elk in Kentucky did so in 2001.

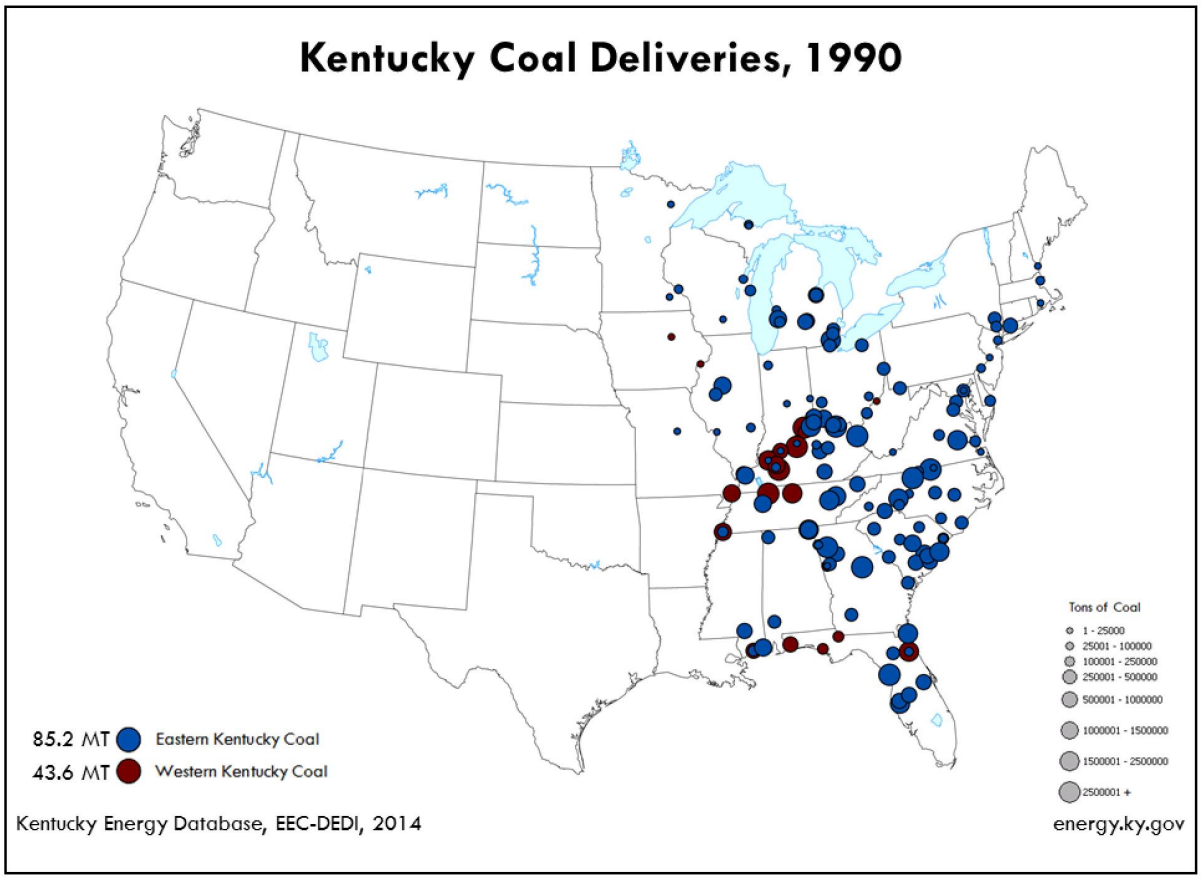
Source: Kentucky Coal Association.

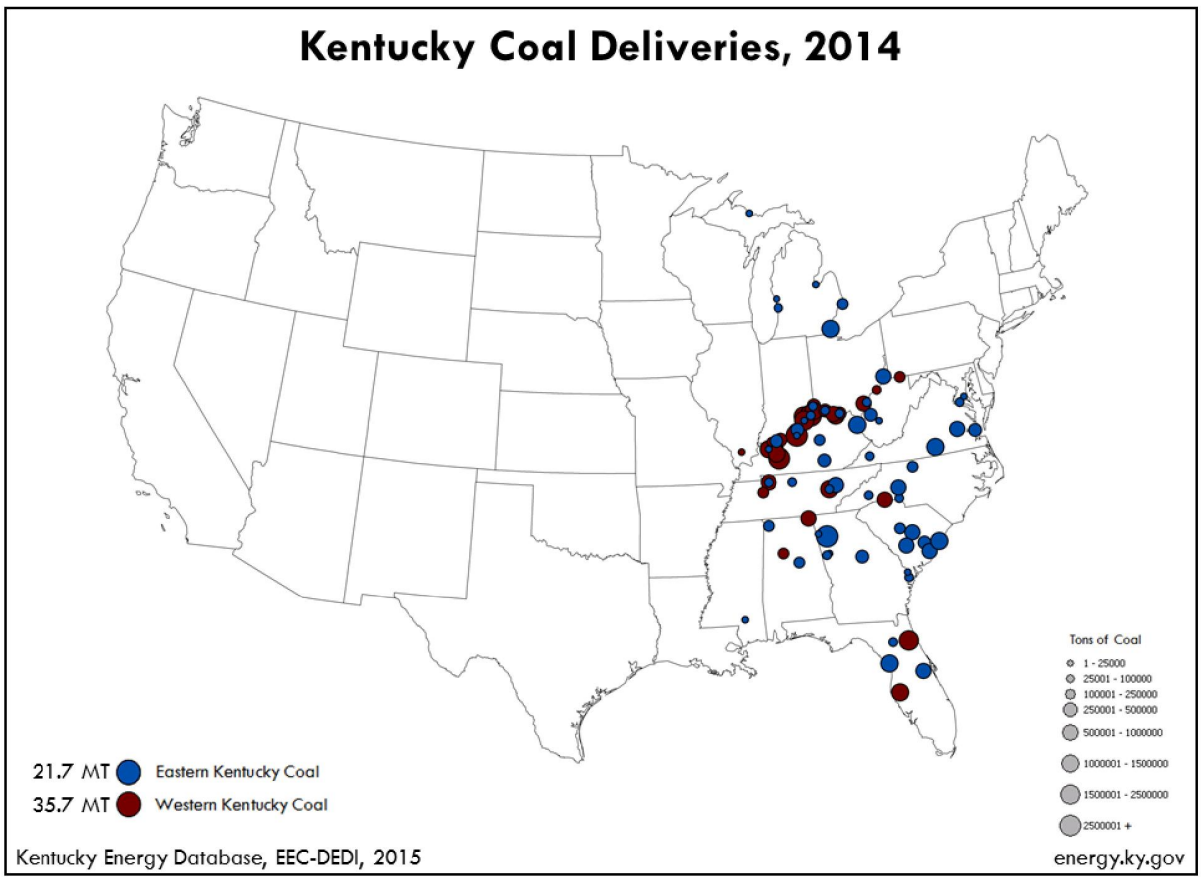
Post-Mining Land Use

Sports and Recreational Facilities	
Baseball Fields	Boyd
Coal Hollow Park	Floyd
Elkhorn Educational Recreation Park	Floyd
Golf Courses	Clay, Laurel, Letcher, Floyd, McLean
Recreational Area	Lee, Greenup
Red Fox Resort	Knott
Stonecrest Golf Course	Floyd
Wayland Park	Floyd
Golf (drive and putt)	Webster
Recreational Area and Fishing Lake	Pike
Athletic Facilities	Letcher
Fairgrounds	Morgan
Riding Stables and Trails	Muhlenberg
Campground	Hopkins
Hunting Reserve	Webster
Mine 18 Blue Heron	McCreary
Portal 31	Harlan
Structural Building Sites	
High Schools	Pike
Elementary School	Boyd
Flea Market	Perry
Athletic Complexes	Letcher, Pike
Appalachian Regional Hospital	Perry
Housing Developments	Bell, Boyd, Clay, Floyd, Greenup, Harlan, Johnson, Martin
Church, Daycare	Laurel, Perry
Mobile Home Sales	Laurel
Shopping Centers	Breathitt, Clay, Knox, Laurel, Leslie, Letcher, Pike
Car / Truck / Equipment Sales	Perry
Motel / Hotel	Laurel, Perry
Office Complex	Boyd, Greenup, Morgan, Martin, Perry, Pike
Storage Rental Facility	Hopkins, Perry
Off Track Betting	Perry
Telecommunications Call Center	Perry

Industrial / Commercial	
Electrical Construction Office and Shop	Hopkins
Electric Utility Operations Center	Hopkins
Industrial Scrubber Sludge Disposal	Ohio, Daviess, Webster
Explosive Manufacturing	Muhlenberg
Apparel Manufacturing	Perry, Boyd
Mine Shops / Welding / Machine / Equip.	Johnson, Hopkins, Knox, Muhlenberg, Ohio, Union
Trucking Company	Muhlenberg, Boyd
Truck / Equipment Sales	Butler
Explosive Company	Perry, Hopkins
Farm Equipment	Hopkins
Sawmill / Logs / Lumber	Bell, Butler, Clay, Jackson, Laurel, Pike, Whitley, Wolfe
Recycling Facility	Letcher
Blacktop / Concrete Facilities	Laurel, Perry
Oil / Gas Facilities	Clay, Lee, Elliott
Cabinet Factory	Perry
Clay-Leslie Regional Industrial Park	Clay, Leslie
Coalfields Regional Industrial Park	Breathitt, Harlan, Leslie, Perry
Corbin Tri-County Industrial Park	Knox
East Park Regional Industrial Park	Boyd, Carter, Elliott, Greenup, Lawrence
Equipment Rental / Sales	Boyd
Gateway Regional Business Park	Floyd, Knott, Letcher, Pike
Honey Branch Regional Business Park	Floyd, Johnson, Magoffin, Martin, Pike
Little Goose Industrial Site	Clay
Maggie Mountain Industrial Park	Floyd
Paul Coffey Industrial Park	Boyd
Pine Mountain Regional Business Park	Bell, Harlan, Knox, Letcher, Whitley
Retail Outfitters	Clay
Tooling Company	Clay
Uniform Rental Services	Carter
Utility	Boyd, Knott, Perry
Wireless Communications	Carter
Plastic Injection Molding Company	Perry
Mine / Electronics Supply	Martin
Industrial Parkway	Greenup
United Parcel Services	Perry, Boyd
Unified Power Distribution	Martin

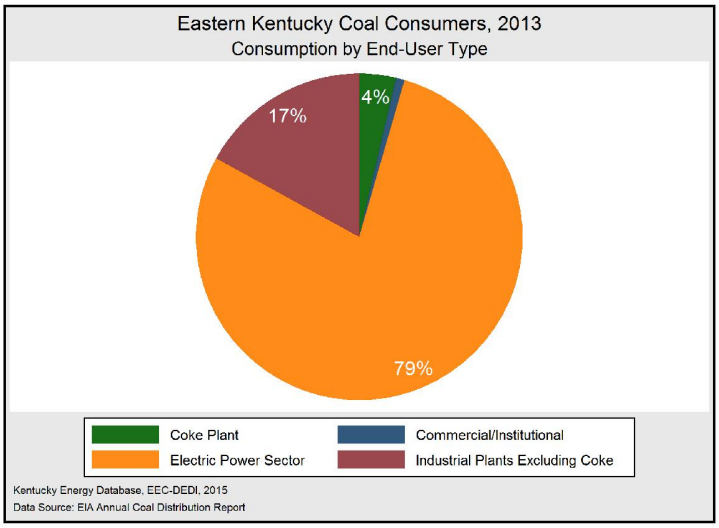
Kentucky Coal Consumers, 1990-2014

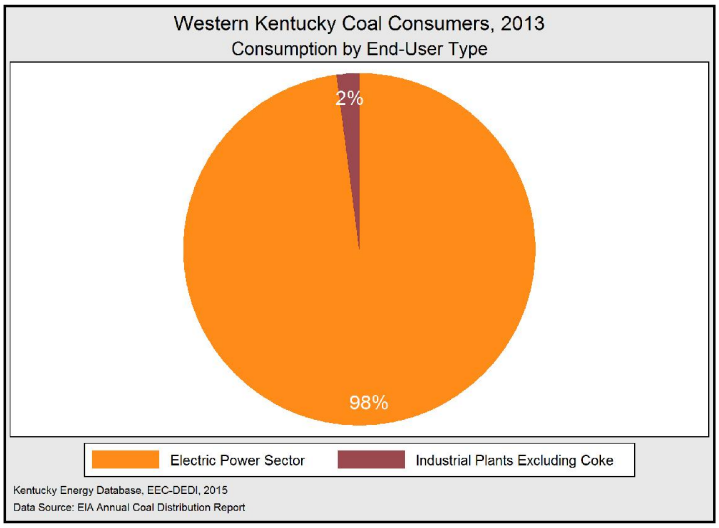




energy.ky.gov
kentuckycoal.com

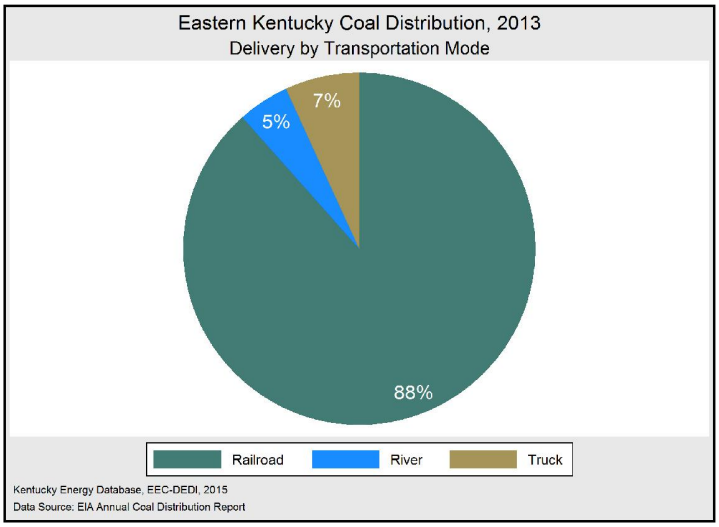
Kentucky Coal Distribution, 2013

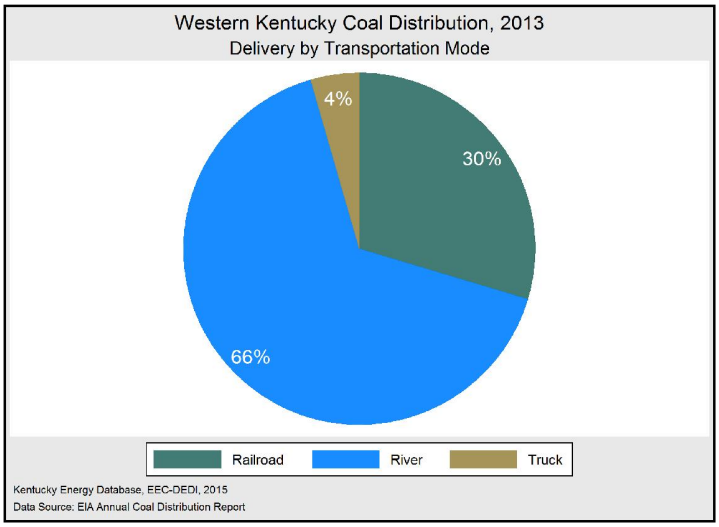




End-User	Tons	Percentage
Total	28,230,739	100%
Electric Power	22,163,956	78.5%
Industrial	4,798,913	17.0%
Coke	1,025,607	3.6%
Commercial	242,263	1.9%

End-User	Tons	Percentage
Total	39,039,194	100%
Electric Power	38,211,416	97.9%
Industrial	807,553	2.1%
Coke	11,145	<0.1%
Commercial	9,080	<0.1%

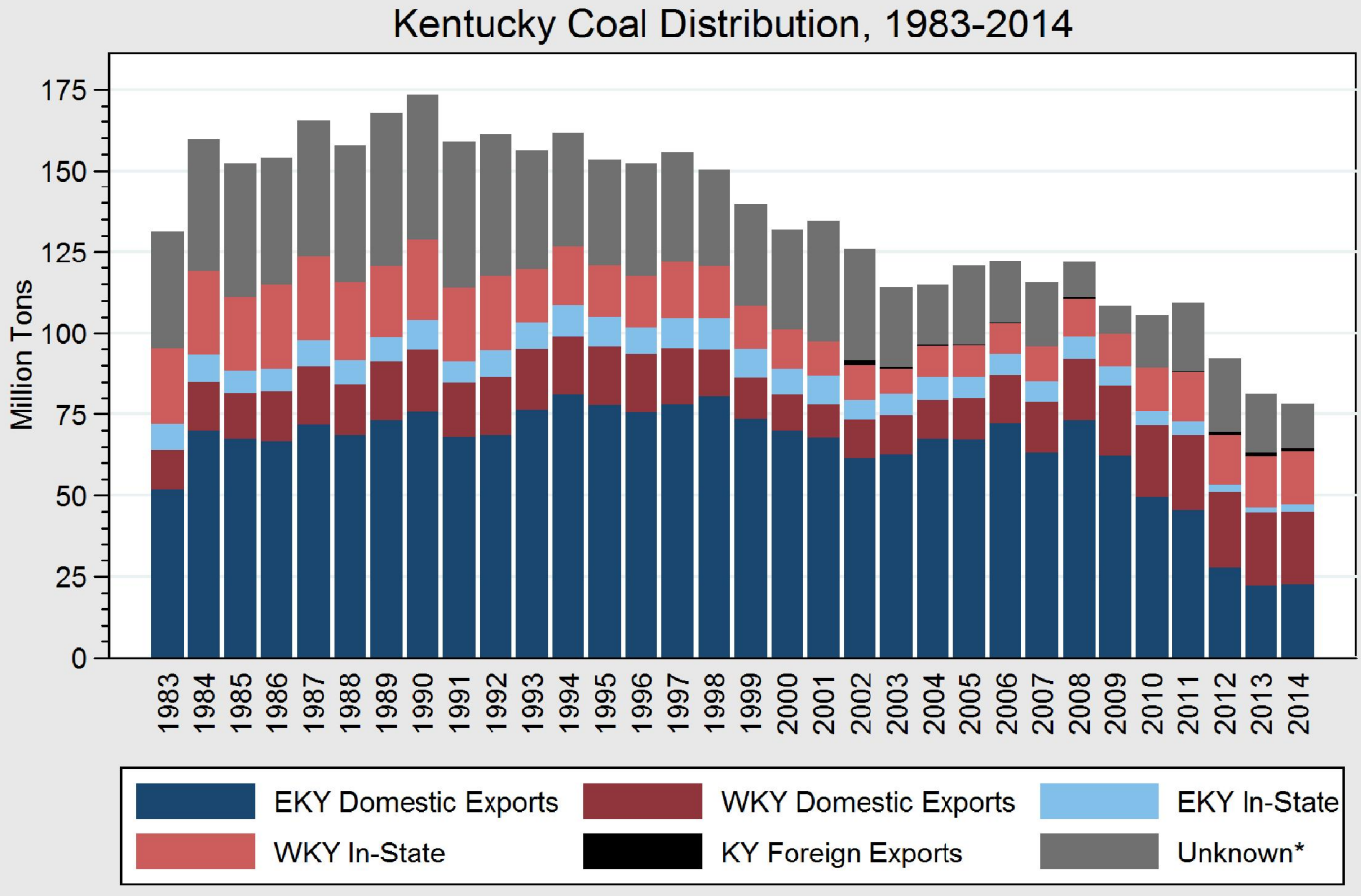




The vast majority of coal shipped from eastern Kentucky in 2013 was loaded onto rail cars and delivered to electric power plants in the United States. Industrial facilities were the next largest consumer of eastern Kentucky coal—17 percent of demand for the commodity. Coke plant deliveries have increased by 18 percent since 2011, from 870 thousand tons of coal shipped to coke plants in 2011. Demand from commercial consumers accounted for approximately two percent of eastern Kentucky coal distribution during the year.

Due to geography and the accessibility of river ports, the majority of western Kentucky coal was loaded onto barges, though slightly less than a third of western Kentucky coal was transported by rail during the same year, and four percent was delivered by truck. In 2013, electric power plants represented 98 percent of the demand for western Kentucky coal.

Kentucky Coal Distribution, 2014



Kentucky Energy Database, EEC-DEDI, 2015

*Combination of Industrial, Institutional, & Unknown

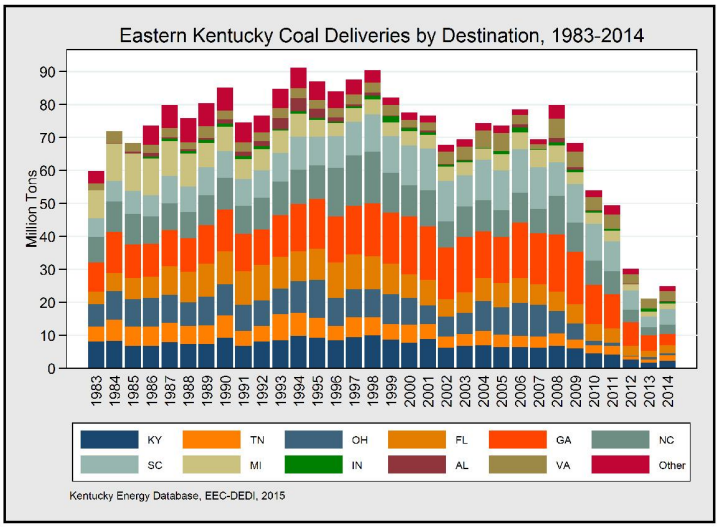
Coal Distribution by Destination, 2014		
Coal and Destination	Thousand Tons	Percentage
Total Production	77,427	100%
EKY Out-of-State†	22,600	29%
WKY In-State	22,275	29%
WKY Out-of-State†	16,448	21%
Industrial/Unknown	12,981	17%
EKY In-State	2,183	3%
Foreign Exports	940	1%

†Totals labeled "Out-of-State" represent shipments of coal to consumers within the United States, and may also be considered domestic exports. A difference of approximately 13 million tons exists between total production and total distribution in the table above—a product of coal stockpiling, lags in data reporting, calendar year parameters, comparison of statistics across multiple data sources, and reporting errors.

The annual distribution of coal mined in Kentucky is a combination of in-state consumers, out-of-state power plants, factories, and foreign exports. Demand from out-of-state consumers has consistently been the largest component of Kentucky coal deliveries since 1990.

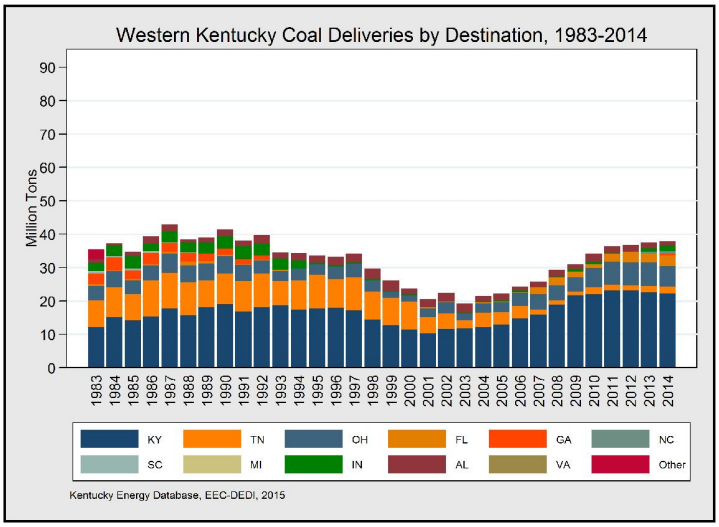
Eastern Kentucky coal has predominantly been sold to states in the southeastern United States. Conversely, western Kentucky coal has mostly been mined for in-state consumption. Kentucky remains the single-largest consumer of Kentucky coal, increasing its consumption as other states have decreased their consumption of coal from Kentucky. Big Sandy (64%), Cooper (22%), and E. W. Brown (10%) power plants consume most of the eastern Kentucky coal consumed in Kentucky. Known foreign exports in 2014 reached 940 thousand tons, or 1.5 percent of known coal deliveries, and decreased by 18 percent from the year prior.

Kentucky Coal Deliveries



Known shipments of steam coal from eastern Kentucky to power plants within the United States increased by 4.4 percent in 2014 from 23.7 to 24.8 million tons. The largest markets for eastern Kentucky coal are traditionally located in the southeast, and were led by South Carolina, Georgia, and Virginia during the year. Overall, coal mined in the region was shipped to 15 different states in 2014.

Eastern Kentucky Coal Deliveries, 2014		
Destination	Tons	Percentage
Total	24,783	100%
South Carolina	4,700	19.0%
Georgia	3,421	13.8%
Virginia	2,906	11.7%
North Carolina	2,767	11.2%
Florida	2,462	9.9%
Kentucky	2,183	8.8%
Michigan	1,703	6.9%
Tennessee	1,681	6.8%
West Virginia	1,261	5.1%
Ohio	631	2.5%
Indiana	617	2.5%
Alabama	282	1.1%
Maryland	71	0.3%
New York	56	0.2%
Mississippi	43	0.2%
Wisconsin	0.5	<0.1%



Known shipments of steam coal from western Kentucky to power plants within the United States increased by one percent in 2014 from 38.3 to 38.7 million tons. The largest market for western Kentucky coal is consistently Kentucky, which represented 57.5 percent of western Kentucky coal deliveries during the year. Overall, coal mined in western Kentucky was shipped to 11 different states in 2014. Western Kentucky shipped 8.2 million more tons than in 2008, or an increase of 27 percent.

Western Kentucky Coal Deliveries, 2014		
Destination	Tons	Percentage
Total	38,723	100%
Kentucky	22,275	57.5%
Florida	5,985	15.5%
Ohio	3,285	8.5%
Tennessee	2,115	5.5%
Indiana	1,731	4.5%
Alabama	1,273	3.3%
North Carolina	732	1.9%
West Virginia	661	1.7%
Georgia	536	1.4%
Mississippi	128	0.3%
Illinois	3	0.0%

Kentucky Coal Deliveries, 2014		
Origin	Thousand Tons	1 Year Change
Total	62,506	+2.3%
WKY	38,723	+1.0%
EKY	23,783	+4.4%

Total Kentucky coal deliveries have decreased by 46.9 million tons, or by 43 percent since 2008, primarily because of reduced shipments from eastern Kentucky.

Eastern Kentucky Coal Deliveries

Eastern Kentucky Coal Deliveries to Electric Power Plants, 2014				
Rank	Plant ID	Power Plant Name	State	Annual Deliveries (Tons)
1	703	Bowen	GA	2,557,543
2	1353	Big Sandy†	KY	1,387,116
3	1733	Monroe	MI	1,292,221
4	6249	Winyah	SC	1,272,047
5	7213	Clover	VA	1,161,454
6	628	Crystal River†	FL	1,131,445
7	3298	Williams	SC	998,071
8	2712	Roxboro	NC	935,177
9	50481	Tennessee Eastman Operations†	TN	855,731
10	3297	Wateree	SC	839,865
11	7210	Cope	SC	818,491
12	2721	James E. Rogers Energy Complex	NC	765,404
13	3797	Chesterfield	VA	738,767
14	564	Stanton Energy Center	FL	679,592
15	3948	Mitchell	WV	675,818
16	3396	Bull Run	TN	651,529
17	2727	Marshall	NC	586,041
18	2872	Muskingum River†	OH	540,293
19	10672	Cedar Bay Generating Company LP†	FL	483,433
20	1384	Cooper	KY	477,513
21	3935	John E Amos	WV	446,297
22	709	Harllee Branch†	GA	358,948
23	50900	Covington Facility†	VA	332,141
24	130	Cross	SC	308,695
25	3809	Yorktown†	VA	307,279
26	1008	R Gallagher	IN	267,984
27	6166	Rockport	IN	265,864
28	54081	Spruance Genco LLC	VA	220,781
29	1355	E W Brown	KY	215,969
30	50398	International Paper Savanna Mill	GA	199,142
31	1743	St Clair	MI	194,192
32	3287	McMeekin†	SC	187,852
33	6250	Mayo	NC	177,635
34	47	Colbert†	AL	146,531
35	26	E C Gaston†	AL	135,099
36	7737	Kapstone	SC	122,423
37	8042	Belews Creek	NC	114,247
38	54101	Georgia-Pacific Cedar Springs	GA	105,954
39	2718	G G Allen	NC	97,438
40	3938	Philip Sporn†	WV	93,779
41	2706	Asheville	NC	90,770
42	733	Kraft†	GA	85,516
43	663	Deerhaven Generating Station	FL	84,702
44	988	Tanners Creek†	IN	83,546

† Announced closure or partial closure of power plant, 2014-2018.

Eastern Kentucky Coal Deliveries

Eastern Kentucky Coal Deliveries to Electric Power Plants, 2014				
Rank	Plant ID	Power Plant Name	State	Annual Deliveries (Tons)
45	8827	IMT Transfer	FL	82,808
46	1740	River Rouge	MI	81,937
47	1356	Ghent	KY	81,467
48	52151	International Paper Eastover Facility	SC	81,249
49	3399	Cumberland	TN	76,880
50	1573	Morgantown Generating Plant	MD	70,663
51	3803	Chesapeake†	VA	67,364
52	3407	Kingston	TN	67,206
53	6019	W H Zimmer	OH	62,624
54	10025	RED-Rochester, LLC	NY	56,148
55	3775	Clinch River†	VA	51,941
56	50806	Florence Mill	SC	38,061
57	8848	Ceredo	WV	35,397
58	1710	J H Campbell	MI	35,257
59	10361	Savannah River Mill	GA	30,329
60	3403	Gallatin	TN	29,589
61	6031	Killen Station	OH	27,594
62	10208	Escanaba Mill	MI	26,438
63	6052	Wansley	GA	25,358
64	10017	West Point Mill	VA	24,939
65	1745	Trenton Channel	MI	24,248
66	3264	W S Lee†	SC	22,359
67	6061	R D Morrow	MS	21,816
68	8851	Associated Terminals	MS	21,475
69	54358	International Paper Augusta Mill	GA	21,127
70	1769	Presque Isle†	MI	16,520
71	6639	R D Green	KY	14,532
72	708	Hammond	GA	12,765
73	1695	B C Cobb†	MI	12,489
74	728	Yates†	GA	12,459
75	1720	J C Weadock†	MI	11,904
76	6124	McIntosh	GA	11,831
77	54087	International Paper Georgetown Mill	SC	11,294
78	3936	Kanawha River†	WV	9,562
79	10328	T B Simon Power Plant	MI	7,645
80	1364	Mill Creek	KY	3,120
81	6071	Trimble County	KY	3,116
82	56808	Virginia City Hybrid Energy Center	VA	938
83	4125	Manitowoc	WI	494
84	1571	Chalk Point LLC†	MD	112

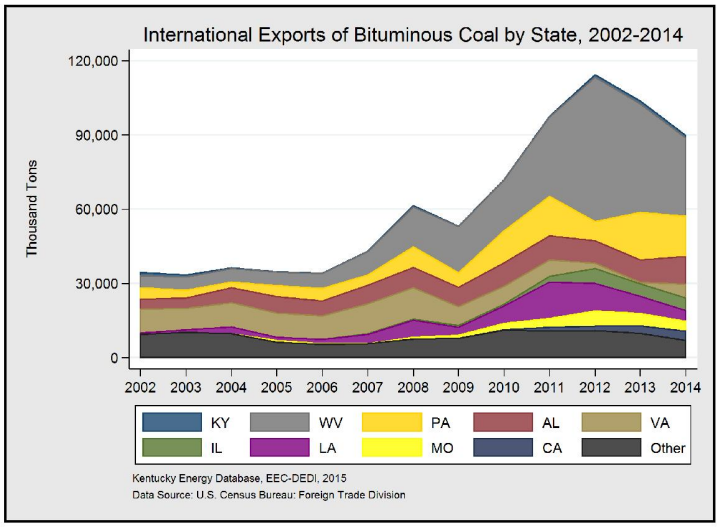
† Announced closure or partial closure of power plant, 2014-2018.

Western Kentucky Coal Deliveries

Western Kentucky Coal Deliveries to Electric Power Plants, 2014				
Rank	Plant ID	Power Plant Name	State	Annual Deliveries (Tons)
1	1378	Paradise†	KY	5,414,270
2	1356	Ghent	KY	3,757,227
3	1364	Mill Creek	KY	3,095,324
4	136	Seminole	FL	2,439,477
5	6071	Trimble County	KY	1,699,398
6	983	Clifty Creek	IN	1,677,037
7	2850	J M Stuart	OH	1,350,214
8	6823	D B Wilson	KY	1,307,770
9	645	Big Bend	FL	1,247,360
10	8827	IMT Transfer	FL	1,162,579
11	6639	R D Green	KY	1,161,670
12	1363	Cane Run†	KY	1,147,537
13	6018	East Bend	KY	1,110,137
14	8816	Davant Transfer	FL	1,090,579
15	1382	HMP&L Station Two Henderson	KY	1,070,604
16	3407	Kingston	TN	1,000,377
17	3399	Cumberland	TN	995,215
18	6041	H L Spurlock	KY	985,592
19	1374	Elmer Smith	KY	953,943
20	50	Widows Creek†	AL	833,973
21	2721	James E. Rogers Energy Complex	NC	718,714
22	8102	General James M Gavin	OH	645,139
23	703	Bowen	GA	536,372
24	8848	Ceredo	WV	488,765
25	6019	W H Zimmer	OH	434,382
26	1381	Kenneth C Coleman	KY	369,730
27	2832	Miami Fort†	OH	366,556
28	6031	Killen Station	OH	359,184
29	1355	E W Brown	KY	201,411
30	26	E C Gaston†	AL	167,249
31	8	Gorgas†	AL	144,464
32	2830	Walter C Beckjord†	OH	129,598
33	8851	Associated Terminals	MS	127,750
34	47	Colbert†	AL	127,370
35	3406	Johnsonville†	TN	113,732
36	3943	First Energy Fort Martin Power Station	WV	100,332
37	6705	Warrick	IN	54,019
38	6004	FirstEnergy Pleasants Power Station	WV	53,601
39	564	Stanton Energy Center	FL	25,498
40	628	Crystal River†	FL	19,074
41	2727	Marshall	NC	13,001
42	6264	Mountaineer	WV	8,674
43	3396	Bull Run	TN	5,502
44	3947	Kammer†	WV	5,305
45	3935	John E Amos	WV	4,700
46	976	Marion	IL	2,753

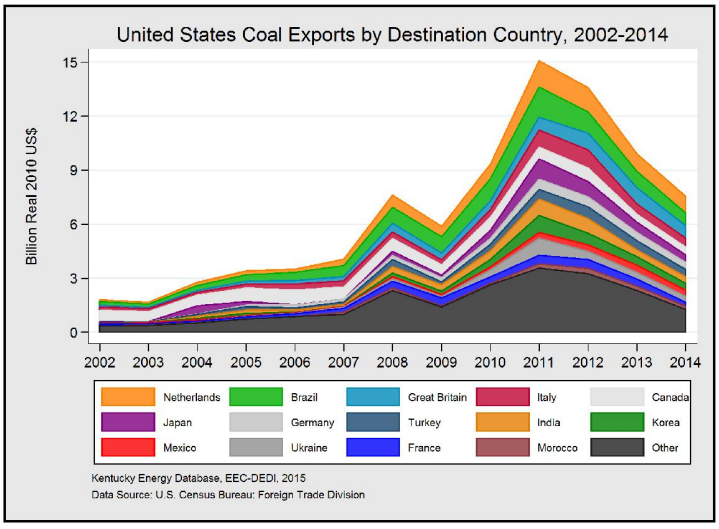
† Announced closure or partial closure of power plant, 2014-2018.

International Exports



Known shipments of bituminous coal from the United States decreased by 14 percent in 2014, but have increased from 35 thousand tons in 2002. The federally available data are complicated by the confusion of export terminals and mining areas. For example, California is ranked eighth above in bituminous coal exports, yet produces no coal.

United States Coal Exports, 2014		
Export State	Thousand Tons	Percentage
Total	89,745	100%
West Virginia	31,708	35.3%
Pennsylvania	16,242	18.1%
Alabama	11,245	12.5%
Virginia	5,579	6.2%
Illinois	4,977	5.5%
Louisiana	4,293	4.8%
Missouri	4,032	4.5%
California	3,866	4.3%
New York	2,873	3.2%
Montana	1,627	1.8%
Texas	1,026	1.1%
Kentucky	940	1.0%
Utah	678	0.8%
Maryland	306	0.3%
Ohio	175	0.2%
Colorado	73	0.1%
Washington	54	0.1%
Wisconsin	51	0.1%

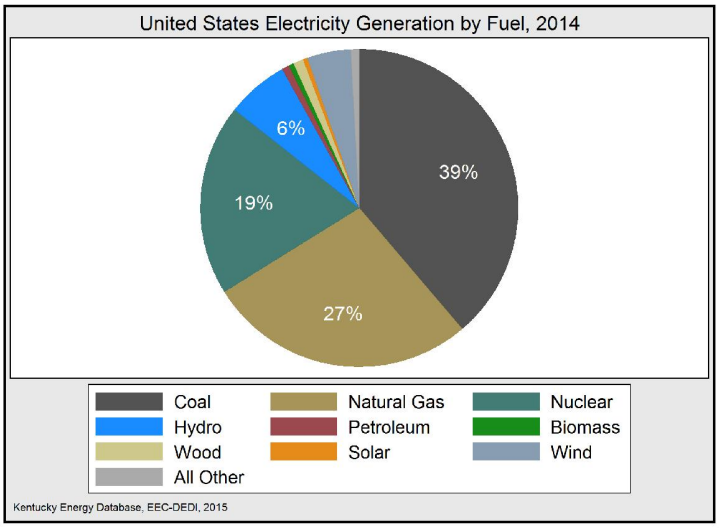


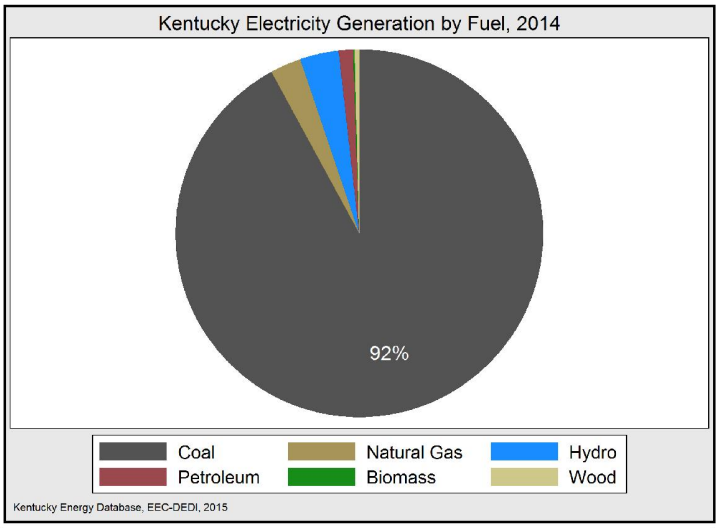
The United States exported coal to 51 countries in 2014, with the 14 countries displayed accounting for 83 percent of the total. In 2002, U.S. coal exports were predominantly sent to Canada. Today, United States coal export destinations are much more diverse, though most countries have decreased purchases of coal in recent years. Whereas the United States received the most dollar value for coal exports in 2011, it exported the most in 2012, reflecting a decrease in the unit price of coal internationally.

United States Coal Exports, 2014		
Destination Country	Thousand Dollars	Percentage
Total*	8,222,977	100%
Netherlands	1,009,170	12.3%
Brazil	784,441	9.5%
United Kingdom	740,063	9.0%
Italy	543,633	6.6%
Canada	467,269	5.7%
Japan	459,530	5.6%
Germany	437,968	5.3%
Turkey	419,226	5.1%
India	417,703	5.1%
South Korea	409,169	5.0%
Mexico	362,242	4.4%
Ukraine	351,625	4.3%
France	233,532	2.8%
Morocco	207,641	2.5%
Croatia	188,715	2.3%
Spain	151,813	1.8%
China	143,096	1.7%
Belgium	108,426	1.3%
Finland	86,514	1.1%

*Exports of less than $86 million have not been listed.

Electricity Generation

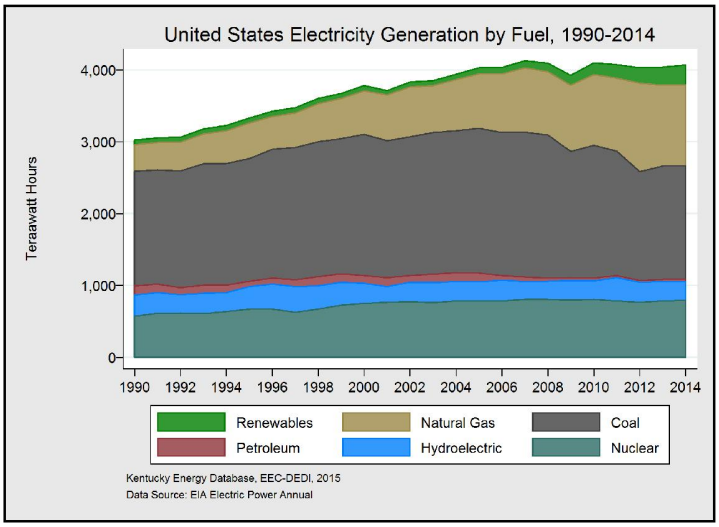


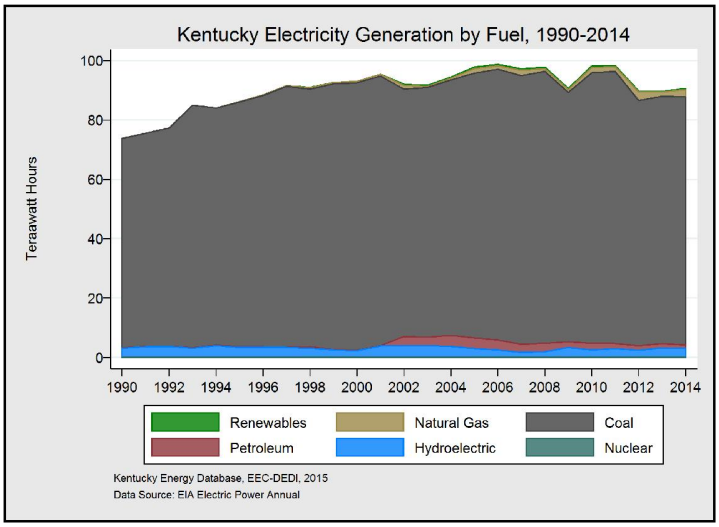


Fuel Type*	Gigawatt Hours	1 Year Change
Total	4,092,934	+0.7%
Coal	1,585,697	+0.3%
Natural Gas	1,121,928	-0.3%
Nuclear	797,068	+1.0%
Hydro	258,748	-3.7%
Wind	181,791	+8.3%

*Only top five sources listed

Fuel Type*	Gigawatt Hours	Annual Change
Total	90,737	+1.1%
Coal	83,497	+2.3%
Hydro	3,090	-5.7%
Natural Gas	2,478	+75.0%
Petroleum	1,161	-17.6%
Wood and Biomass	461	+41.1%

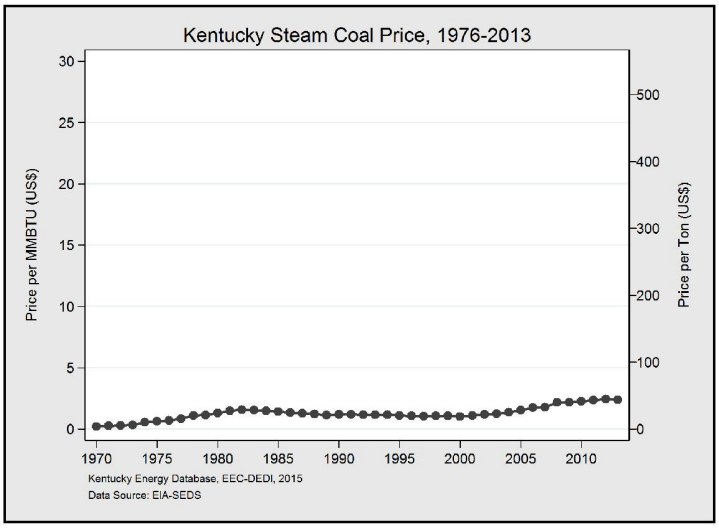




Coal remained the largest fuel source for electricity in the United States in 2014, followed by natural gas, and nuclear power. These three largest generation types are 85 percent of the United States' electricity portfolio. For the last five years, renewables and natural gas facilities have been the fastest growing sources of electricity generation in the United States while coal-fired generation has decreased, from 45 percent of total United States electricity generation to 39 percent of the total portfolio.

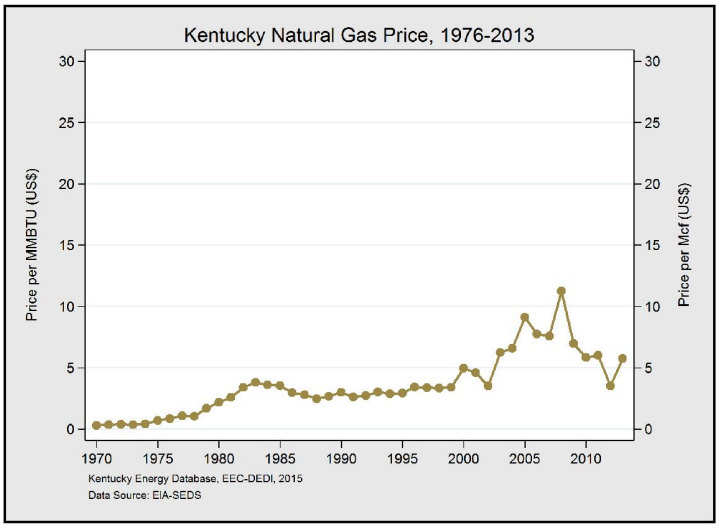
Of the electricity generated in Kentucky in 2014, 92 percent was derived through the combustion of coal. Coal-fired generation continued to grow from the year before and remained the main electricity generating fuel. Hydroelectric power produced the second most of all fuels. Natural gas facilities were the third-largest source of electricity, and have grown by 182 percent in five years. Due to existing coal resources and power plant infrastructure Kentucky has consistently used coal to meet the vast majority of electricity demand within the Commonwealth.

Why Kentucky Uses Coal



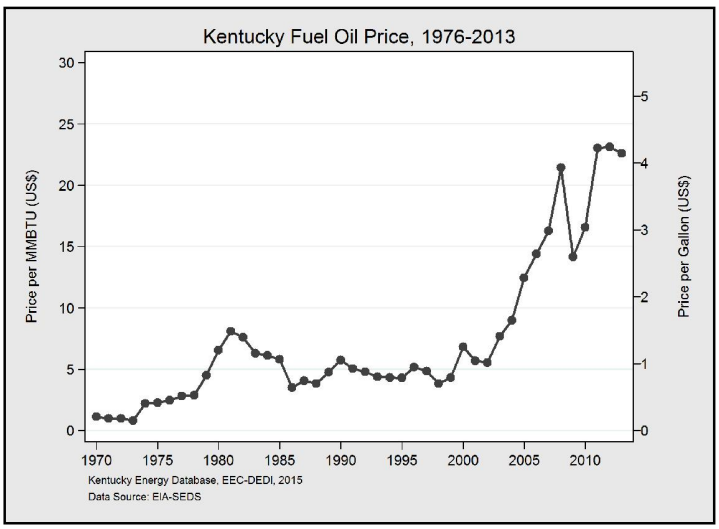
Fuel Type	($US)/MMBtu	($US)/Ton
Coal	2.36	52.97

The price of coal has remained low and stable for decades. The price of coal in 2013 was $2.36 per MMBtu—a 2.5 percent decrease from the year prior. Coal is beneficial because of its ability to be stockpiled and used at any time while natural gas and renewables cannot.



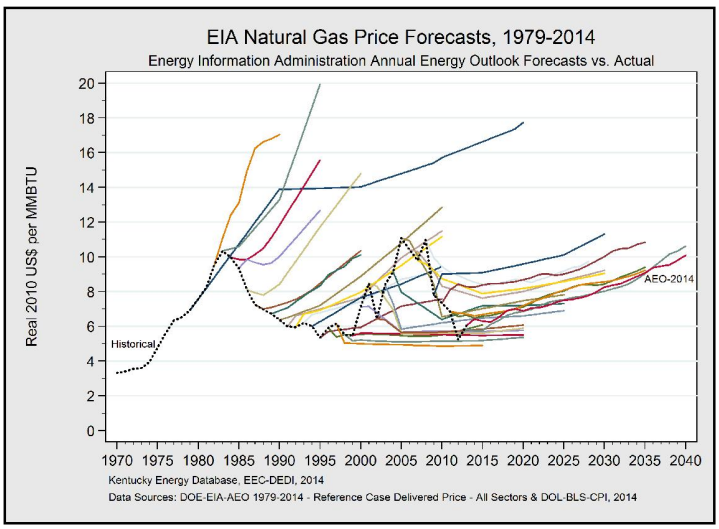
Fuel Type	($US)/MMBtu	($US)/Mcf
Natural Gas	5.74	5.91

The average price of natural gas in Kentucky in 2013 was $5.74 per million Btu, a 63 percent increase from 2012. Natural gas prices have decreased substantially in recent years following the spread of horizontal hydraulic fracturing, but remain more expensive than coal on a unit of heat basis.



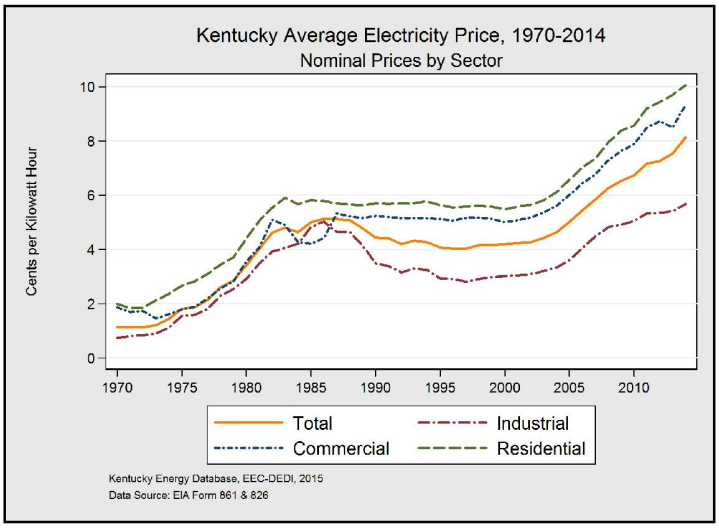
Fuel Type	($US)/MMBtu	($US)/Gallon
Diesel	22.61	4.10

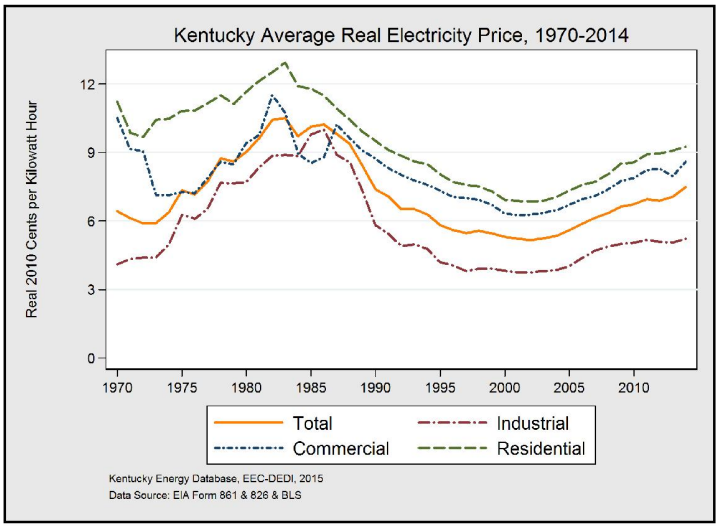
The average price of fuel oil, used in electricity generation, in 2013 was $22.61 per MMBtu in Kentucky, a 22 percent decrease from 2012. Petroleum generators in Kentucky are used primarily for peak-load generation, but are a relatively small source of electricity generation, overall—averaging 1.5 percent of generation since 1990.



Natural gas prices have proven difficult to predict historically. The above graph displays the historical natural gas price (in black) and the yearly natural gas price forecast by the Energy Information Administration.

Kentucky Electricity Prices





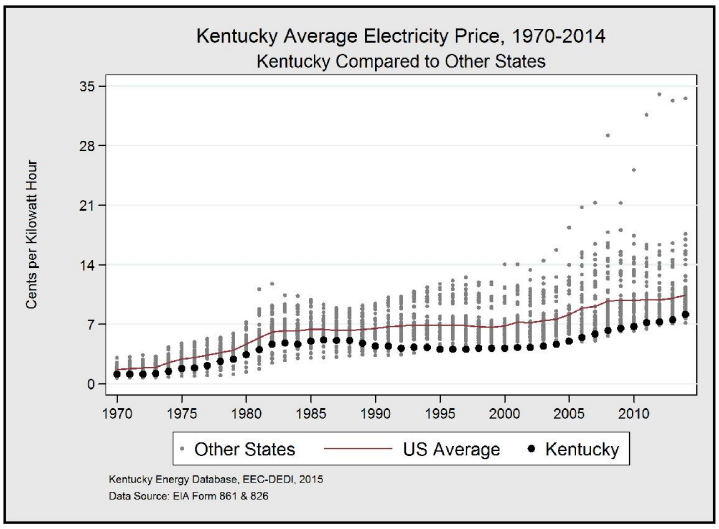
Sector	Nominal Cents/kWh	Since 2000
Average	8.13¢	+94.3%
Residential	10.05¢	+83.7%
Commercial	9.34¢	+86.9%
Industrial	5.67¢	+88.2%

Sector	Real* Cents/kWh	Since 2000*
Average	7.48¢	+41%
Residential	9.25¢	+33.5%
Commercial	8.60¢	+35.8%
Industrial	5.22¢	+36.7%

*Real 2010 $US

In 2014, the average price of electricity across economic sectors in Kentucky was 8.13¢ per kilowatt-hour. This average price ranked Kentucky electricity prices the eighth lowest in the country. The residential sector paid the highest price for electricity at 10.05¢ per kilowatt-hour, followed by the commercial sector at 9.34¢ per-kilowatt hour, and the industrial sector at 5.67¢ per kilowatt-hour, fourth lowest in the country. Since 2000, the average price of electricity in Kentucky has risen by 94 percent.

Adjusting for inflation, the trends of electricity prices in Kentucky between 1970 and 2014 are notably different from the adjacent, nominal graphic. In inflation-adjusted 2010 dollars, the price of electricity in Kentucky actually decreased from 1980 through 2002. However, the real price of electricity in Kentucky in inflation-adjusted dollars has been increasing since 2002. This period of 14 consecutive years of real price increases is contrary to the trend of the 20 years between 1982 and 2002. A major factor driving real electricity prices in Kentucky up since 2002 has been the rising price of steam coal used by electric utilities.

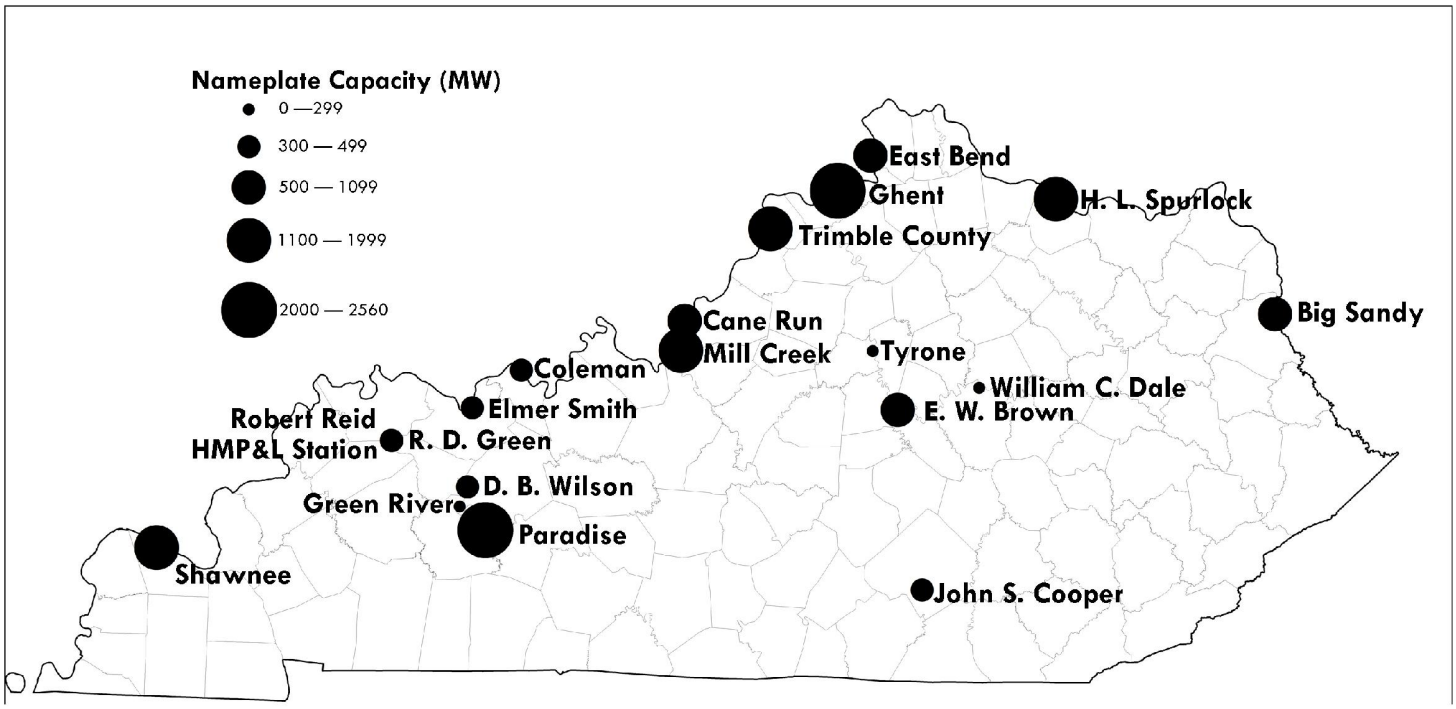


Since 1970, the average price of electricity in Kentucky has been among the lowest in the United States and well below the national average. During this period, Kentucky electricity prices have always been among the eighth lowest. Though the state with the lowest average price of electricity fluctuates year to year, states with very large coal generation portfolios or large hydroelectric portfolios have traditionally maintained the lowest prices of electricity in the United States.

Price of Electricity by State, 2014

Rank	State	Primary Generation Source	Percentage Coal	2014 Price (Cents per kWh)	Inflation Adjusted 1 Year Change	Inflation Adjusted 5 Year Change
1	Washington	Hydroelectric	5.8%	7.15	-0.4%	-1.9%
2	West Virginia	Coal	95.5%	7.65	-5.0%	+4.1%
3	Wyoming	Coal	87.7%	7.78	+1.2%	+15.8%
4	Arkansas	Coal	53.9%	7.85	-1.4%	-6.2%
5	Idaho	Hydroelectric	0.6%	7.95	+2.7%	+10.6%
6	Oklahoma	Coal	42.6%	8.10	+1.9%	+5.6%
7	Louisiana	Natural Gas	18.4%	8.11	-0.4%	+4.0%
8	Kentucky	Coal	92.0%	8.13	+5.9%	+12.9%
9	Iowa	Coal	59.9%	8.24	-0.3%	+1.2%
10	Utah	Coal	76.3%	8.41	+1%	+12.4%
11	North Dakota	Coal	75.1%	8.49	+1.8%	+15.9%
12	Montana	Coal	52.3%	8.62	-1.4%	+3.0%
13	Oregon	Hydroelectric	5.3%	8.78	+2.9%	+6.2%
14	Nebraska	Coal	63.2%	8.80	-0.4%	+10.6%
15	Illinois	Nuclear	43.2%	8.87	+9.0%	-11.6%
16	Indiana	Coal	84.5%	8.97	+2.1%	+6.5%
17	Texas	Natural Gas	33.9%	8.99	+0.6%	-17.6%
18	South Dakota	Hydroelectric	23.3%	9.06	+0.7%	+11%
19	Missouri	Coal	82.6%	9.06	-0.6%	+11.6%
20	Virginia	Nuclear	27.0%	9.25	+0.8%	-6.3%
21	Alabama	Natural Gas	31.5%	9.30	+1.3%	-4.7%
22	North Carolina	Coal	38.7%	9.32	-0.1%	-0.4%
23	Tennessee	Coal	44.7%	9.50	+1.3%	-1.1%
24	South Carolina	Nuclear	29.8%	9.56	+2.8%	+2.8%
25	Minnesota	Coal	50.2%	9.63	-0.6%	+7.1%
26	Mississippi	Natural Gas	19.6%	9.66	+3.7%	-1.2%
27	Ohio	Coal	67.0%	9.67	+3.7%	-2.9%
28	New Mexico	Coal	63.4%	9.69	+3.1%	+8.4%
29	Nevada	Natural Gas	18.1%	9.76	+6.0%	-14.8%
30	Georgia	Coal	35.9%	9.94	+2.4%	+2.1%
31	Colorado	Coal	60.3%	10.04	+0.7%	+9.3%
32	Kansas	Coal	57.5%	10.04	+3.2%	+13.9%
33	Arizona	Coal	38.0%	10.24	-0.9%	-3.0%
34	Pennsylvania	Coal	36.1%	10.29	+2.9%	-3.0%
	United States	Coal	38.7%	10.45	+1.8%	-3.7%
35	Wisconsin	Coal	61.9%	10.73	-0.9%	+3.6%
36	Florida	Natural Gas	22.5%	10.87	+3.6%	-14.4%
27	Michigan	Coal	50.2%	11.10	-3.1%	+6.9%
38	Delaware	Natural Gas	11.3%	11.33	+1.4%	-15.6%
39	Maryland	Coal	46.3%	12.12	+2.2%	-16.1%
	District of Columbia	Natural Gas	0.0%	12.17	+0.9%	-15.1%
40	Maine	Natural Gas	0.6%	12.66	+4.9%	-12.5%
41	New Jersey	Nuclear	3.8%	14.01	+0.5%	-12.7%
42	Vermont	Nuclear	0.0%	14.58	-0.9%	+3.5%
43	California	Natural Gas	0.4%	15.23	+2.8%	+4.1%
44	New Hampshire	Nuclear	6.7%	15.25	+4.7%	-8.8%
45	Massachusetts	Natural Gas	9.4%	15.34	+3.9%	-10.2%
46	Rhode Island	Natural Gas	0.0%	15.57	+10%	-0.9%
47	New York	Natural Gas	3.4%	16.25	+2.3%	-5.2%
48	Connecticut	Nuclear	2.5%	16.98	+6.4%	-14.9%
49	Alaska	Natural Gas	9.2%	17.58	+4.6%	+5.5%
50	Hawaii	Petroleum	15.1%	33.53	-0.9%	+43.0%

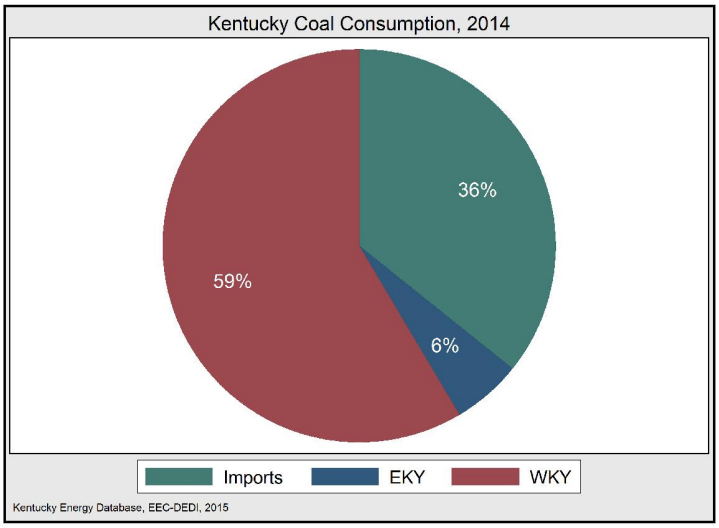
Coal-fired Power Plants in Kentucky

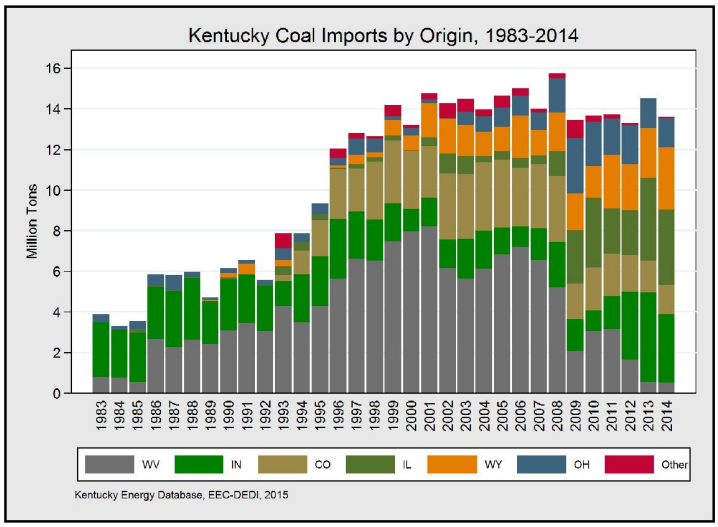


Power Plant	Nameplate Capacity (MW)	Years of Operation	Electric Utility/Operator	County	Phone
Coleman†	455	1969-2014	Big Rivers Electric Corp.	Hancock	(270) 844-6153
D. B. Wilson	420	1984-Present	Big Rivers Electric Corp.	Ohio	(270) 844-6154
R. D. Green	464	1979-Present	Big Rivers Electric Corp.	Webster	(270) 844-6155
Robert Reid†	65	1966-2015	Big Rivers Electric Corp.	Webster	(270) 844-6157
East Bend	669	1981-Present	Duke Energy	Boone	(513) 467-4830
H. L. Spurlock	1,609	1977-Present	East Kentucky Power Co-op	Mason	(859) 745-9452
John S. Cooper	344	1965-Present	East Kentucky Power Co-op	Pulaski	(859) 745-9450
William C. Dale†	216	1954-2015	East Kentucky Power Co-op	Clark	(859) 745-9451
HMP&L Station	312	1973-Present	Henderson Municipal	Webster	(270) 844-6156
Big Sandy†	1,076	1963-2015	Kentucky Power Company (AEP)	Lawrence	(606) 686-1403
E. W. Brown	739	1957-Present	Kentucky Utilities Company	Mercer	(859) 367-1105
Ghent	2,226	1974-Present	Kentucky Utilities Company	Carroll	(859) 367-1106
Green River†	114	1950-2015	Kentucky Utilities Company	Muhlenberg	(859) 367-1107
Tyrone†	71	1953-2012	Kentucky Utilities Company	Woodford	(859) 367-1109
Cane Run†	645	1962-2015	Louisville Gas & Electric Co.	Jefferson	(502) 627-2713
Mill Creek	1,717	1972-Present	Louisville Gas & Electric Co.	Jefferson	(502) 627-2714
Trimble County	1,243	1990-Present	Louisville Gas & Electric Co.	Trimble	(502) 627-2715
Elmer Smith	445	1964-Present	Owensboro Municipal	Henderson	(270) 926-3200
Paradise†	2,558	1970-Present	Tennessee Valley Authority	Muhlenberg	(270) 476-3301
Shawnee	1,750	1953-Present	Tennessee Valley Authority	McCracken	(270) 575-8162

† Facility has been retired, partially retired, is idled, or is in the process of conversion to natural gas-fueled units.

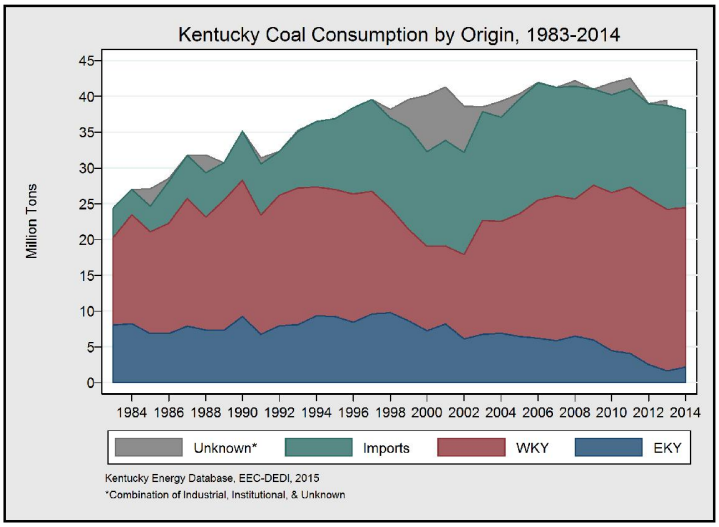
Kentucky In-State Coal Consumption





Origin of Coal	Thousand Tons	1 Year Change
Total	38,063	-1.7%
Western Kentucky	22,275	-1.3%
Imports	13,605	-6.3%
Eastern Kentucky	2,183	+34.2%

All values have been rounded to the nearest thousand tons.

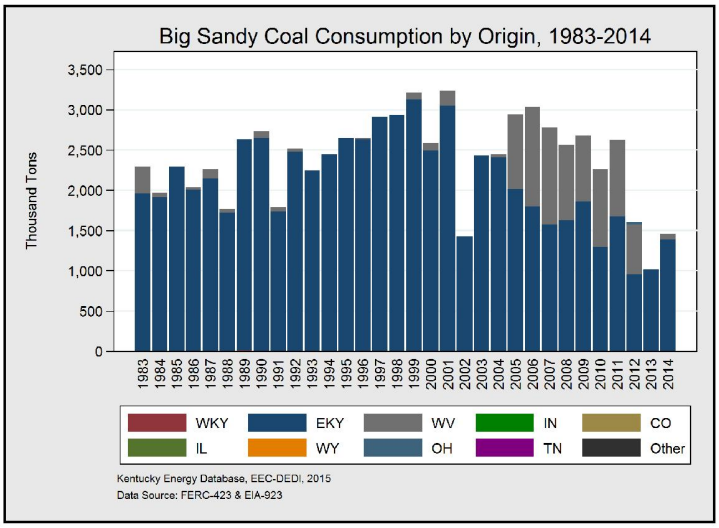


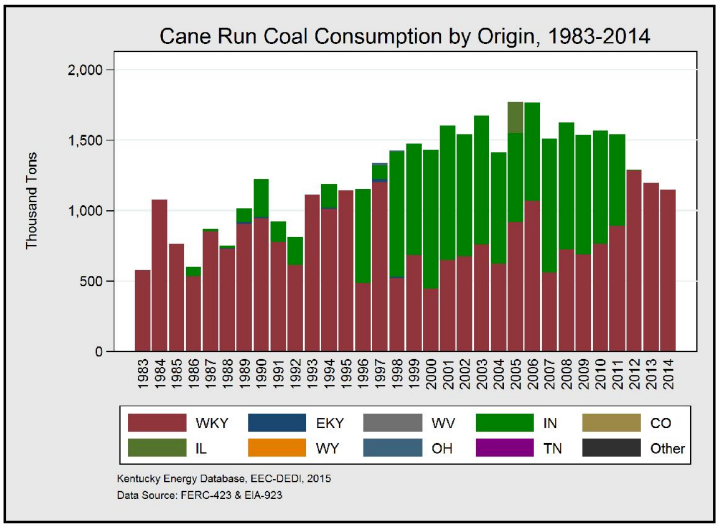
Coal consumption in Kentucky decreased by 1.7 percent in 2014 to 38.1 million tons. Coal mined in western Kentucky was by far the largest source of coal used within the Commonwealth, representing 59 percent of coal consumption. Conversely, coal from eastern Kentucky accounted for six percent of the coal consumed in Kentucky in 2014. Kentucky imported coal from eight different states during 2014, totaling 13.6 million tons, or 35 percent of coal consumption.

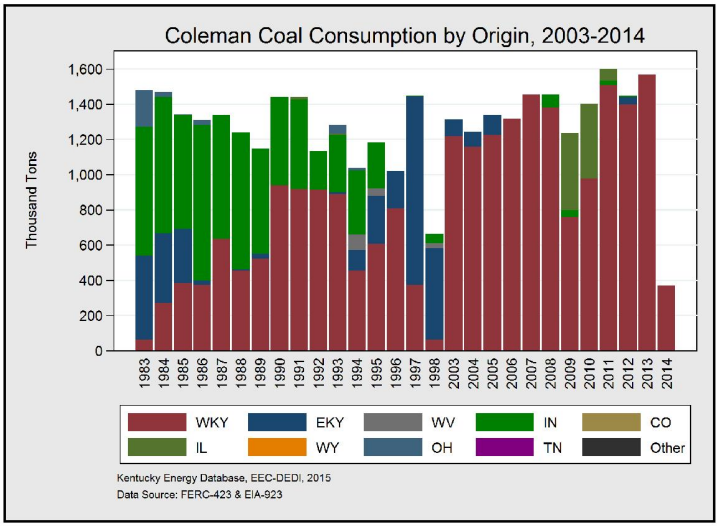
Imported Coal	Thousand Tons	1 Year Change
Total Imports	13,605	-6.3%
Illinois	3,722	-8.6%
Indiana	3,395	-23.1%
Wyoming	3,088	+26.7%
Ohio	1,432	-3.5%
Colorado	1,408	-10.3%
West Virginia	505	-6.4%
Pennsylvania	52	—
Tennessee	3	+70.5%

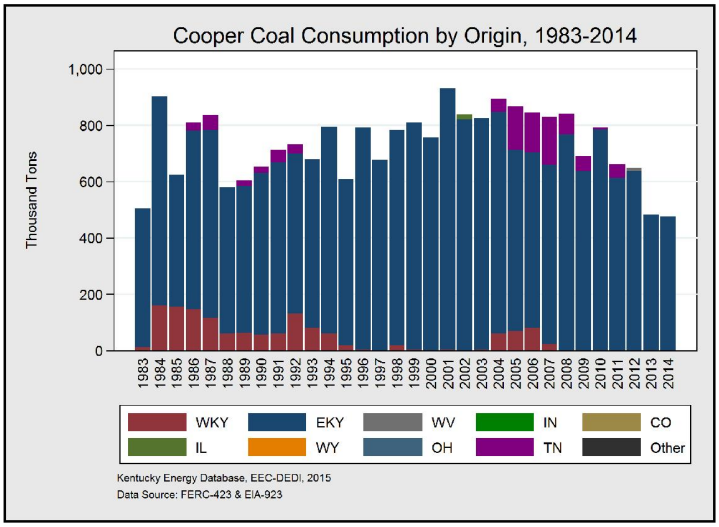
Several factors affect the use of imported coal in Kentucky including the price, delivery cost, heat content, and the sulfur content of a particular coal. For electrical power generation, utilities must balance the economic and environmental costs of these factors when purchasing coal. As a result, electric utilities, municipalities, and power producers often blend coal from a variety of sources to maintain a diversified cost-effective fuel resource while complying with environmental regulations. Since 1990, electric utilities in Kentucky have increasingly used coal containing relatively higher sulfur content, a trend accelerated through the installation of sulfur dioxide scrubbers on many coal-fired generators throughout the state. Nationally, many other electric utilities have elected to install similar environmental control systems, thereby altering traditional coal sourcing requirements. The net result of these recent decisions in Kentucky has meant an increasing reliance on western Kentucky coal supplies, and a diminishing demand for eastern Kentucky coal. The relatively low price of coal from several western states has also increased imports for electric power generation.

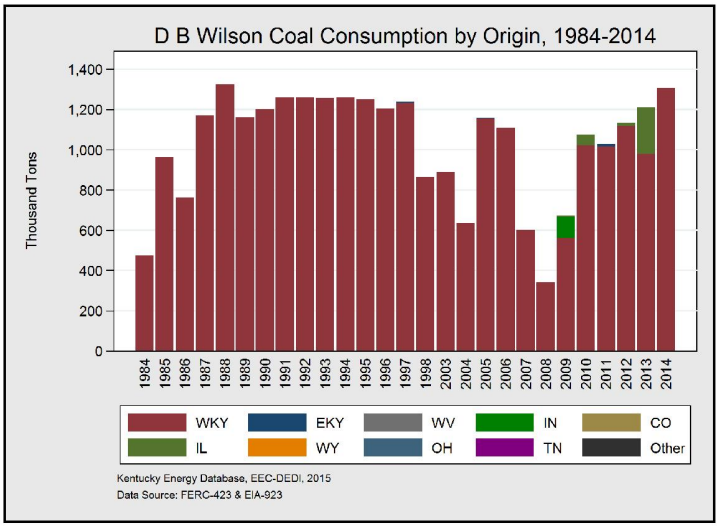
Kentucky In-State Coal Consumption

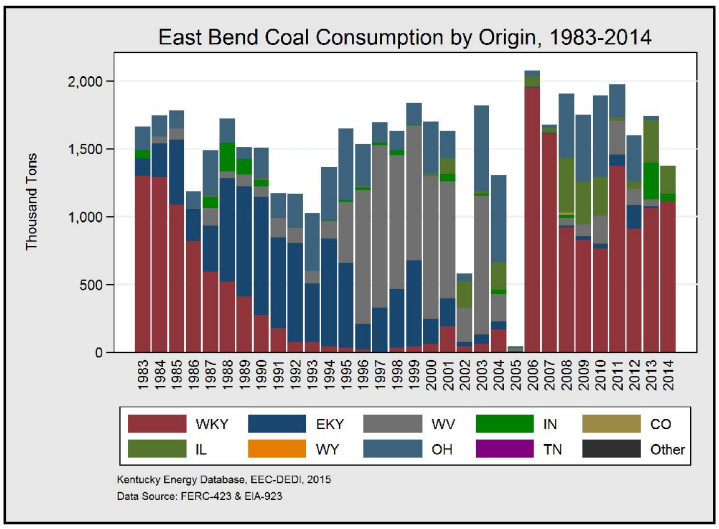




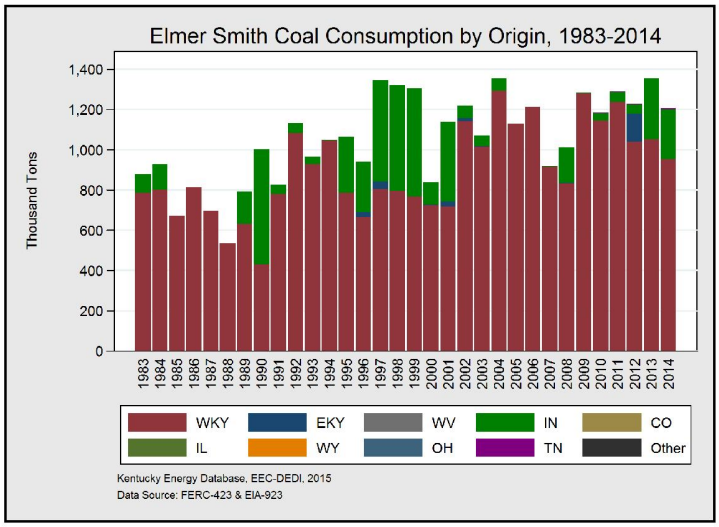


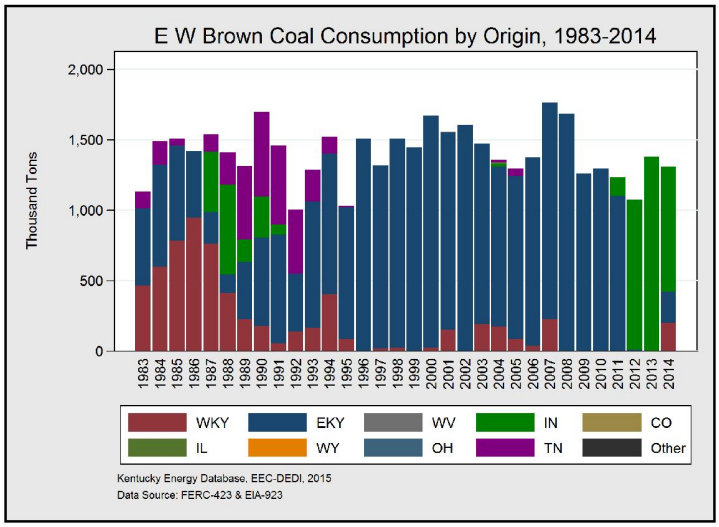


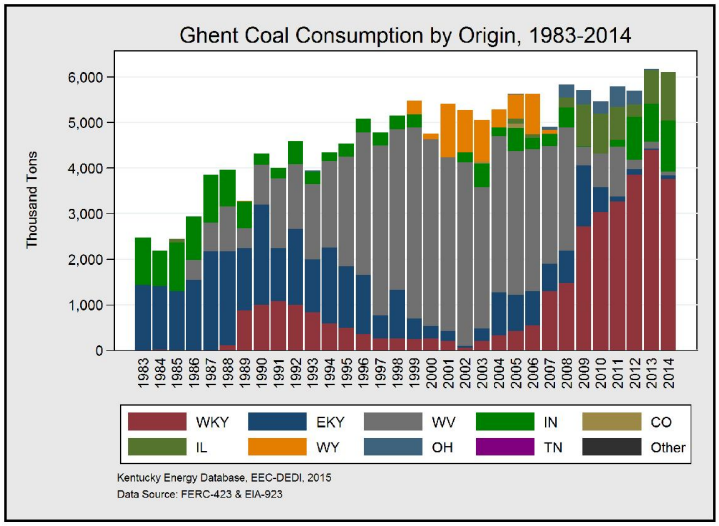


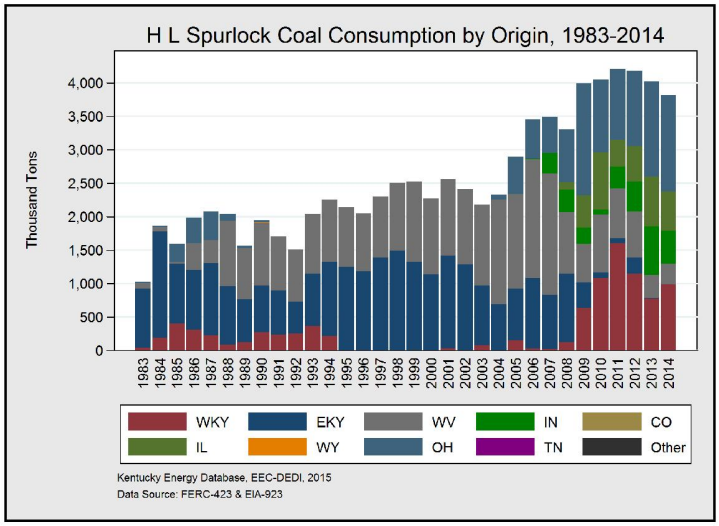


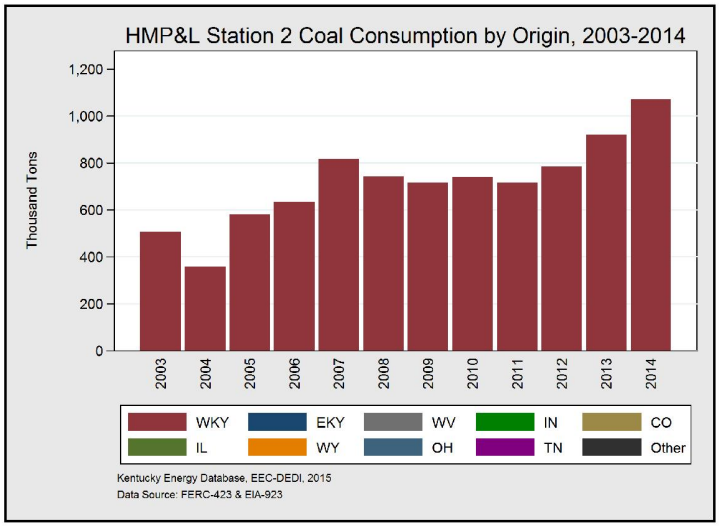
Kentucky In-State Coal Consumption

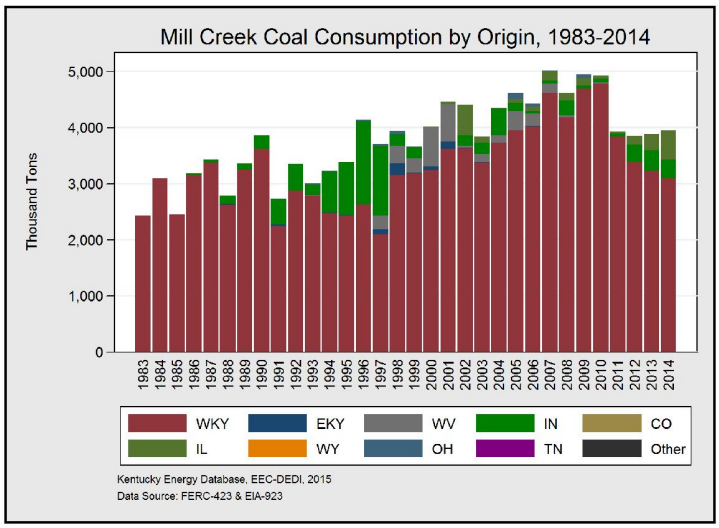




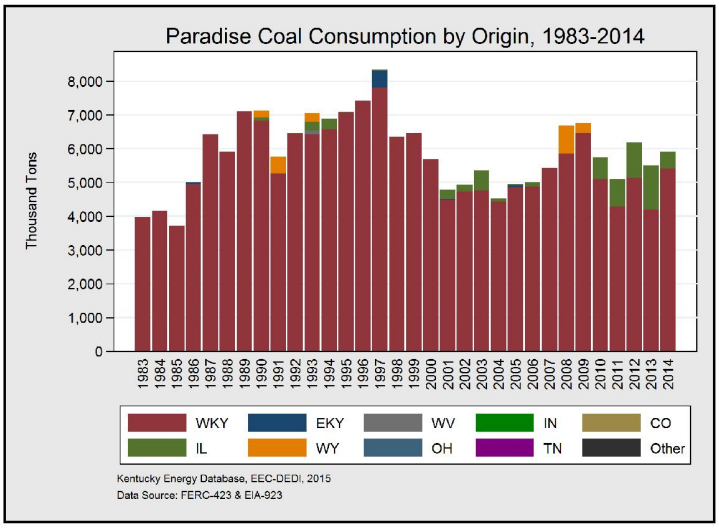


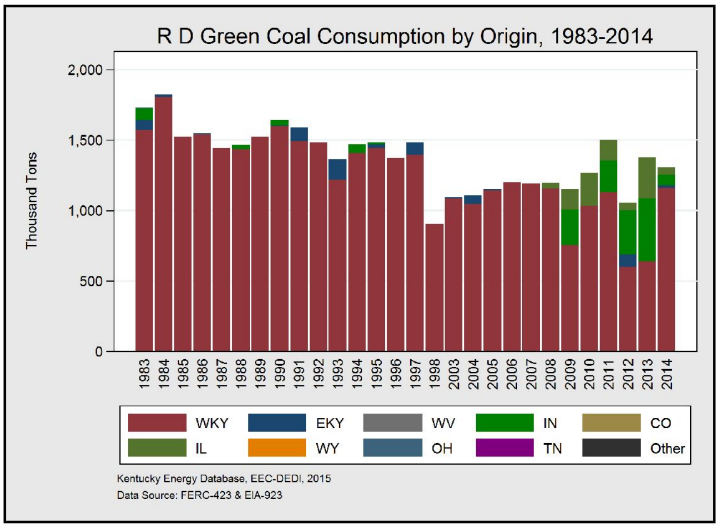


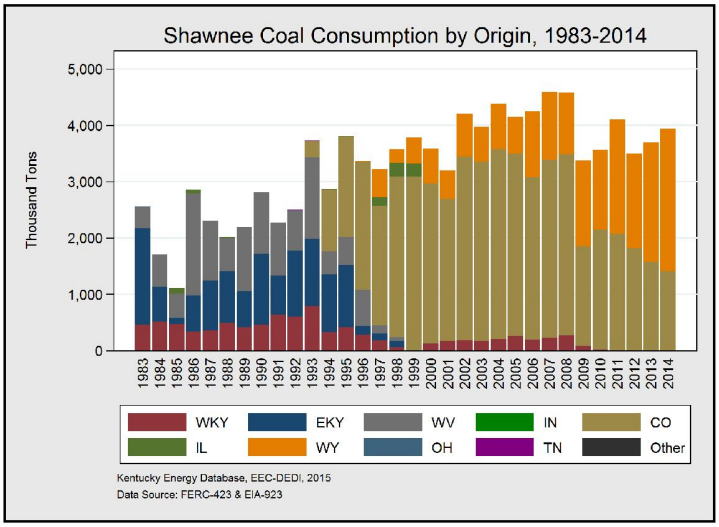


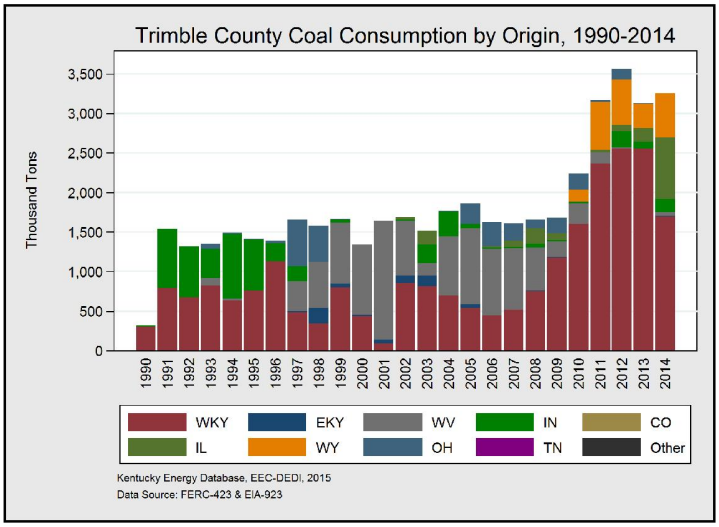


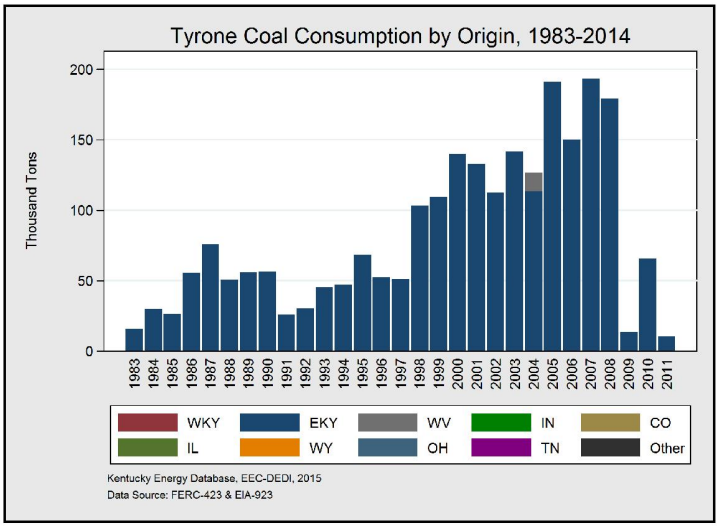
Kentucky In-State Coal Consumption

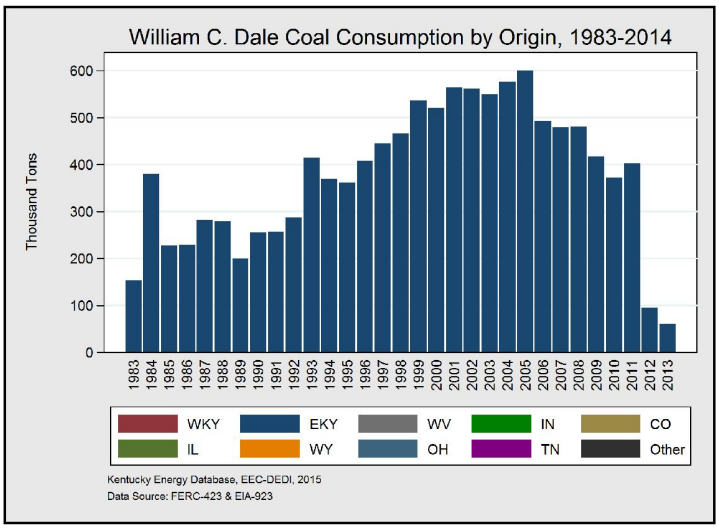




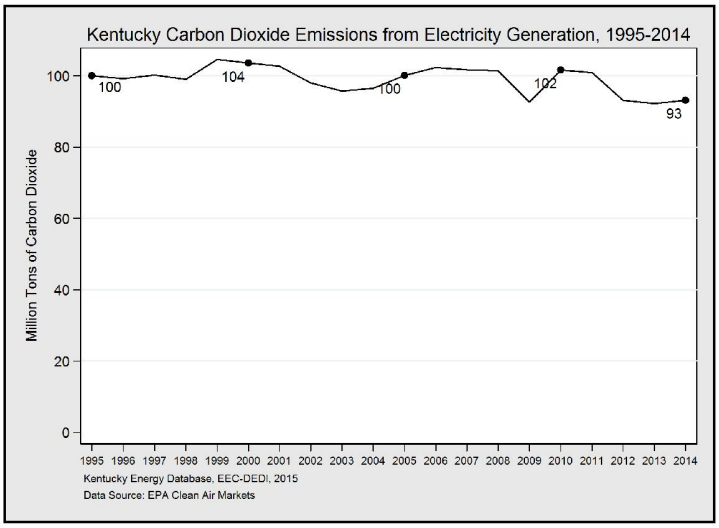


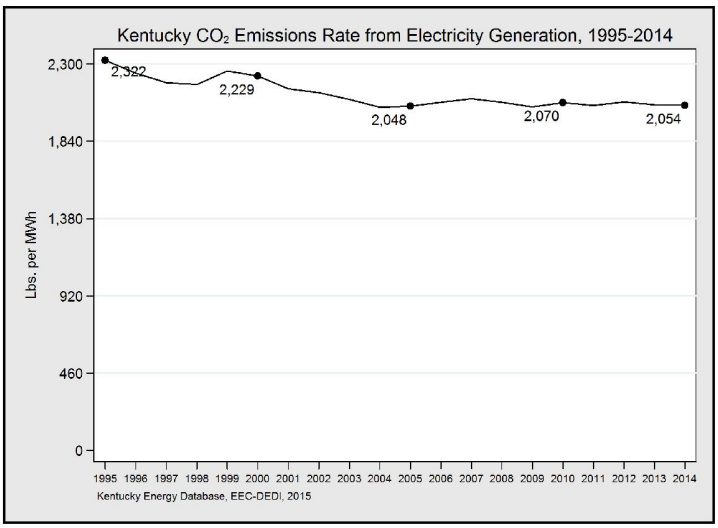






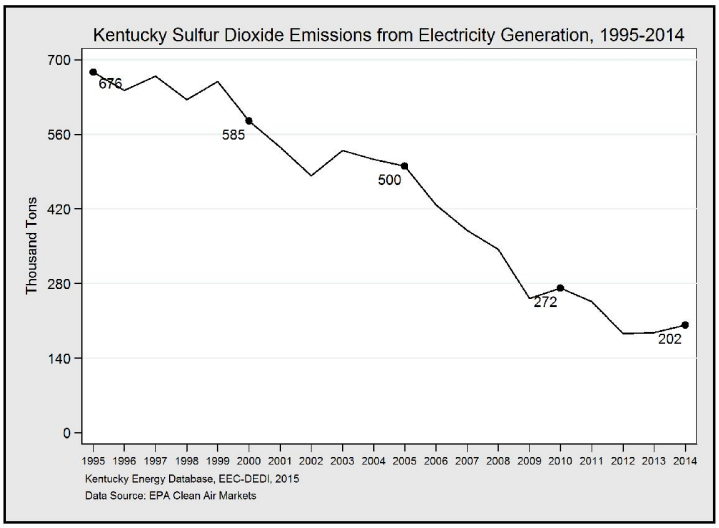
Kentucky Electric Power Emissions



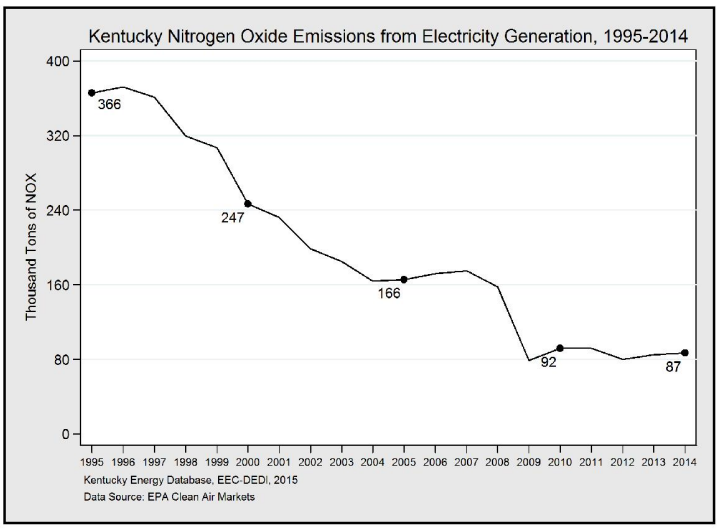


Emission	Tons	Since 1995
Carbon Dioxide	93,176,296	-6.8%
Sulfur Dioxide	202,041	-70.1%
Nitrogen Oxide	86,879	-76.2%

In 2014, power plants in Kentucky emitted 93 million short tons of carbon dioxide, an increase of 1 percent compared with 2013. In terms of emissions rate, power plants emit almost 12 percent less carbon dioxide as they did in 1995.

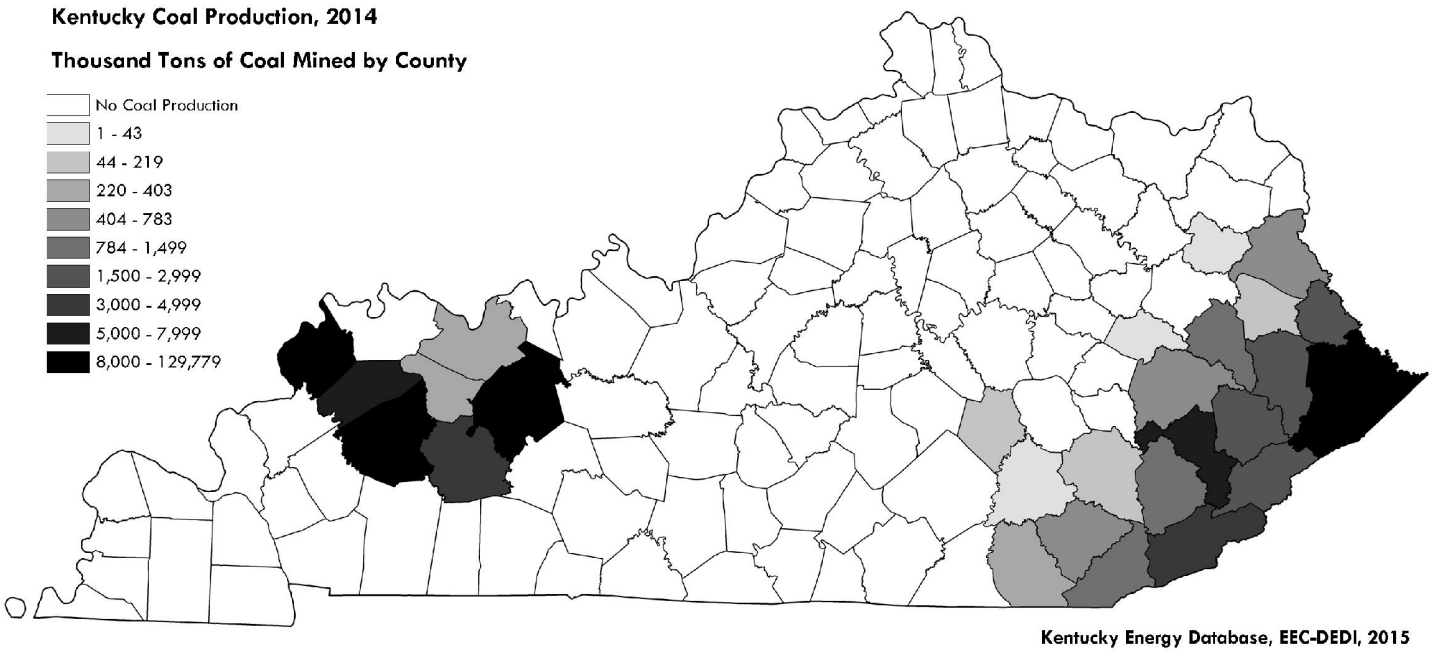


Sulfur dioxide (SO_2) is a highly reactive gas and major pollutant that is monitored and regulated by the state and federal government due to its connection to acid rain, incidence of asthma, and other respiratory problems. In 2014, the electric power sector of Kentucky emitted 202,041 tons of sulfur dioxide, a 70.1 percent decrease from 1995, but a seven percent increase from 2013.



Nitrogen oxides (NO_x) are a group of highly reactive regulated pollutants: Nitric Oxide (NO), Nitrogen Dioxide (NO_2), and Nitrous oxide (N_2O). Nitrogen oxide, which is displayed here, has been shown to cause acid rain and exacerbate respiratory disease, while nitrous oxide, or laughing gas, is a greenhouse gas 312 times more potent than carbon dioxide. In 2014, the electric power sector of Kentucky emitted 86,879 tons of nitrogen oxide, a decrease of 76.2 percent from 1995, but an increase of two percent from 2013.

Coal Producing Counties, 2014



Kentucky Energy Database, EEC-DEDI, 2015

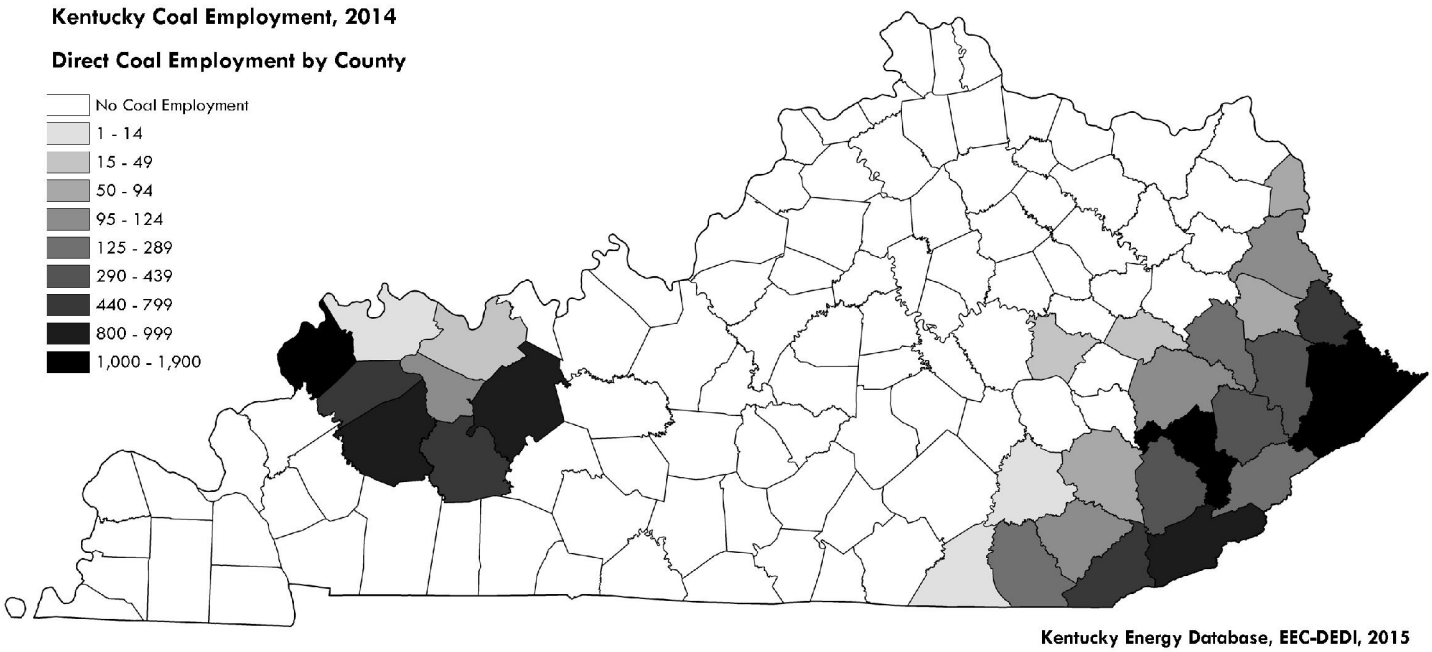
Western Kentucky Coal Producing Counties, 2014			
Rank	County	Production (Tons)	1 Year Change
1	Union	12,977,904	-2.2%
3	Ohio	8,336,969	+1.7%
4	Hopkins	8,080,823	-9.9%
6	Webster	6,398,494	+8.8%
8	Muhlenberg	3,630,122	-10.9%
20	Daviess	323,807	-33.2%
21	McLean	220,910	—

During 2014, there were 27 counties in Kentucky that registered coal production—seven in the western coalfield and 20 in the eastern coalfield—the same number of counties as produced coal in 2013. The two counties that stopped production in 2014 were Henderson and McCreary while Wolfe and McLean counties both resumed coal production.

56 of Kentucky's 120 counties have at some time registered some coal production since coal mining records began tracking coal mining in 1790, but within the past five years, just 35 counties have had coal mining operations.

Eastern Kentucky Coal Producing Counties, 2014			
Rank	County	Production (Tons)	1 Year Change
2	Pike	10,373,272	-3.9%
5	Perry	7,475,878	-1.1%
7	Harlan	4,779,629	+4.7%
9	Floyd	2,528,209	+8.3%
10	Martin	2,043,375	-31.6%
11	Knott	1,990,109	+4.6%
12	Letcher	1,648,782	-25.5%
13	Bell	1,418,107	+22.6%
14	Leslie	1,403,285	-34.3%
15	Magoffin	1,204,438	-22.4%
16	Lawrence	783,698	+21.7%
17	Breathitt	564,817	+213.4%
18	Knox	404,407	+6.4%
19	Whitley	381,602	+33.5%
22	Johnson	203,359	-38.6%
23	Clay	174,620	-3.8%
24	Rockcastle	44,336	+229.9%
25	Wolfe	15,540	—
26	Laurel	12,185	-49.6%
27	Elliott	8,684	-81.3%

Coal Employment, 2014



Kentucky Energy Database, EEC-DEDI, 2015

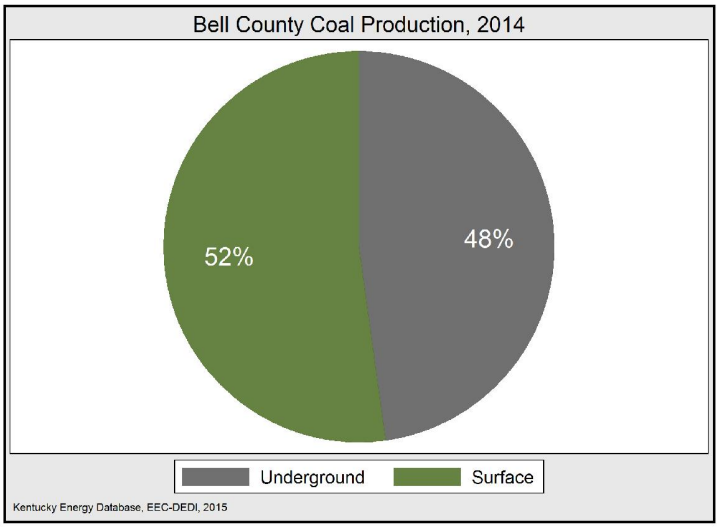
Western Kentucky Coal Producing Counties, 2014			
Rank	County	Employment	1 Year Change
2	Union	1,283	-3.4%
4	Hopkins	980	+0.5%
6	Ohio	802	-4.3%
7	Webster	680	+1.6%
9	Muhlenberg	476	-0.2%
19	McLean	103	+368.2%
24	Marshall	43	-14.0%
27	Daviess	26	-39.5%
30	Henderson	8	-20.0%

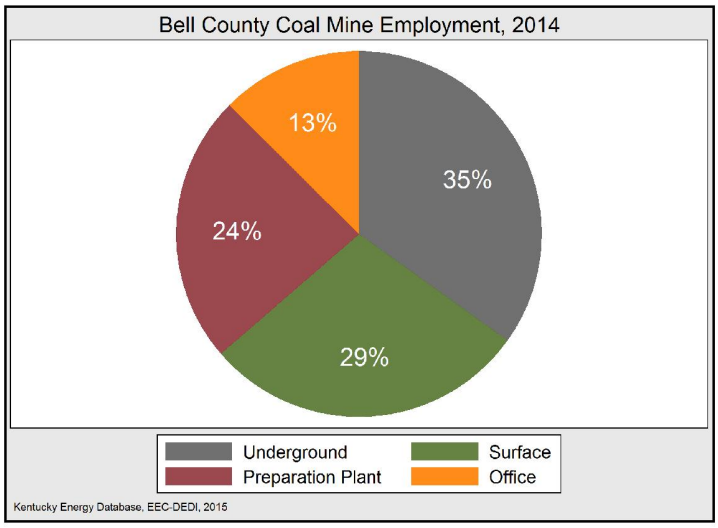
31 counties registered direct coal employment in the fourth quarter of 2014 with nine counties registering in western Kentucky and 22 in the east. The discrepancy in counties with coal employment and production results from five counties with preparation plants but no active mining. The following counties recorded coal-related labor hours, such as coal processing, in 2014, but produced no coal: Boyd, Estill, Livingston, Marshall, and McCreary.

Historically, 56 of the 120 counties in Kentucky have recorded direct coal employment. In the past five years 36 counties recorded direct coal employment.

Eastern Kentucky Coal Producing Counties, 2014			
Rank	County	Employment	1 Year Change
1	Pike	1,900	+0.6%
3	Perry	1,097	-10.3%
5	Harlan	979	+5.0%
8	Martin	497	-23.8%
10	Bell	467	+28.3%
11	Floyd	438	-12.6%
12	Leslie	307	+20.9%
13	Knott	296	+6.9%
14	Letcher	271	-33.4%
15	Whitley	175	+13.6%
16	Magoffin	129	-26.3%
17	Knox	124	-29.1%
18	Lawrence	114	-21.4%
20	Breathitt	96	+140.0%
21	Johnson	75	+0.0%
22	Boyd	62	-18.4%
23	Clay	50	-10.7%
25	Estill	41	+583.3%
26	Livingston	32	-13.5%
28	Wolfe	17	—
29	Laurel	14	+133.3%
31	McCreary	4	-84.0%

Bell County

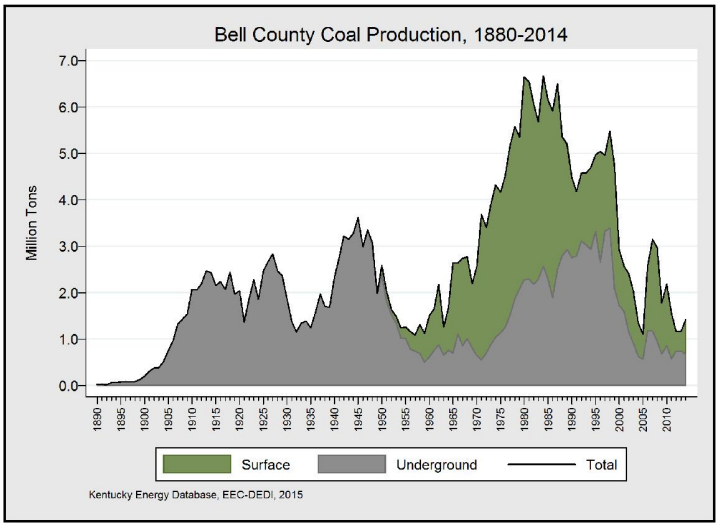


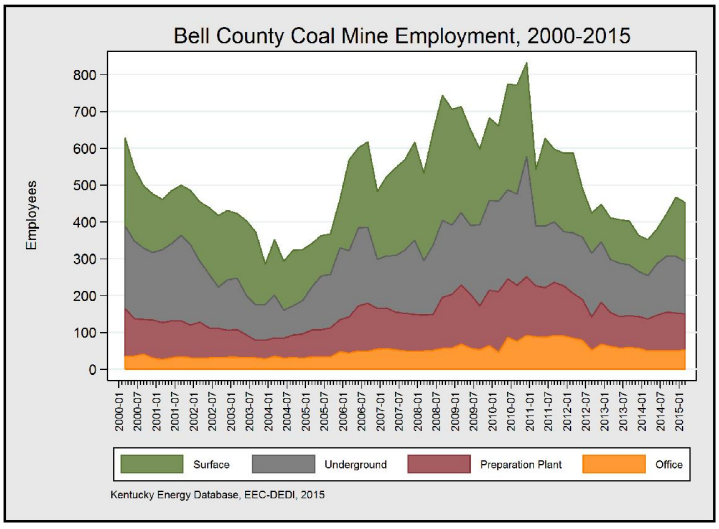


Production Method	Mines	Production	Annual Change
Total	14	1,418,107	+22.6%
Surface	9	739,925	+79.3%
Underground	5	678,182	-5.7%

On-Site Activity	Employment	Annual Change
Total	467	+28.3%
Surface	160	+63.3%
Underground	154	+25.2%
Preparation Plant	102	+18.6%
Office	51	-10.5%

In 2014, 14 coal mines produced 1.42 million tons of coal in Bell County, valued at $104 million. Just over half of the coal mined in the county came from surface mining operations.

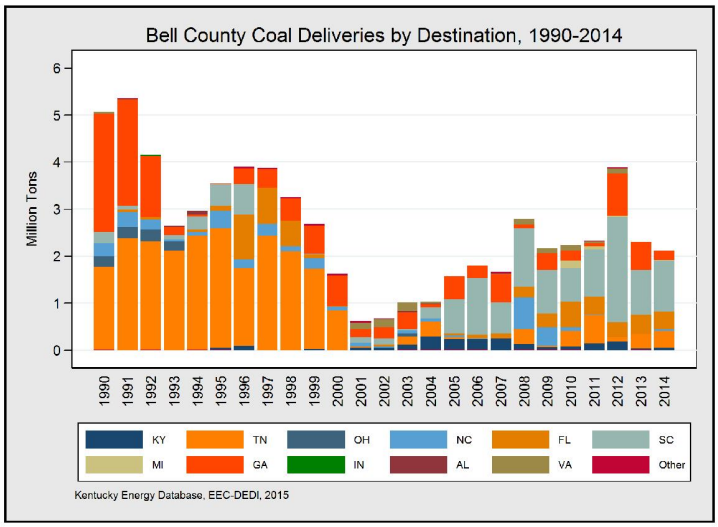


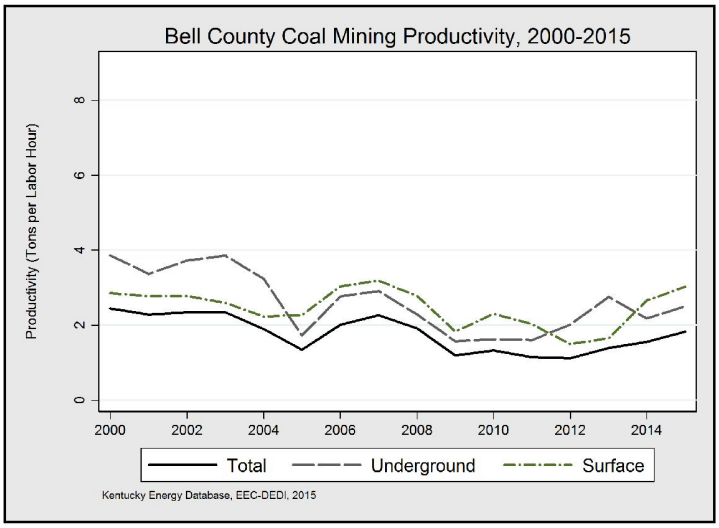


In 2014, Bell County increased coal production by 22.6 percent. All of this increase was from surface mining operations, where production rose by 79.3 percent. Underground operations decreased production by 5.7 percent in 2014. Coal has been mined in Bell County since 1879 when the first 272 tons of coal were extracted. Between 1879 and 2014, more than 316 million tons of coal have been extracted in Bell County. By 2014, coal production has declined by 79 percent since peaking 30 years prior in 1984 at 6.7 million tons.

Coal mines and preparation plants in Bell County employed an average of 467 full-time employees at the end of 2014, an increase of 28 percent from 2013. There were 154 underground miners in 2014, an increase of 25 percent from 2013, and 160 surface miners, an increase of 63 percent from 2013. Coal mine employment in Bell County peaked in 1948 at 4,806 employees, which was more than ten times the number of coal mine employees in 2014.

Bell County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**2,114,504**	**100%**
South Carolina	**1,090,033**	**51.6%**
Williams	403,731	19.1%
Winyah	363,248	17.2%
Cope	235,363	11.1%
Wateree	74,712	3.5%
Cross	12,979	0.6%
Florida	**370,265**	**17.5%**
Cedar Bay Generating Company LP†	370,265	17.5%
Tennessee	**363,784**	**17.2%**
Tennessee Eastman†	363,784	17.2%
Georgia	**197,180**	**9.3%**
Bowen	171,400	8.1%
Harllee Branch†	25,780	1.2%
Kentucky	**47,516**	**2.2%**
Cooper	47,516	2.2%
North Carolina	**38,081**	**1.8%**
James E. Rogers Energy Complex	38,081	1.8%
Michigan	**7,645**	**0.4%**
T B Simon Power Plant	7,645	0.4%

Bell County Coal Severance Taxes

Bell County paid $4,673,779 in coal severance taxes in 2014. Of this amount, Bell County Government was allocated $664,295.

Chemical Composition and Cost

Coal mined in Bell County had a median sulfur content of 1.17 percent, a median ash content of 8.94 percent, and a median heat content of 25.22 MMBtu per ton. The mine-mouth cost of extracting coal in the county in 2014 had an average price of $61.97 per ton, processing costs of $8.42, and average transportation costs of $25.30. The average delivered price per ton was $95.69 and ranged from $59.77 to $112.48 per ton. The average delivered price per MMBtu of Bell County coal was $3.79 and ranged from $2.47 to $4.47.

Bell County Coal Market

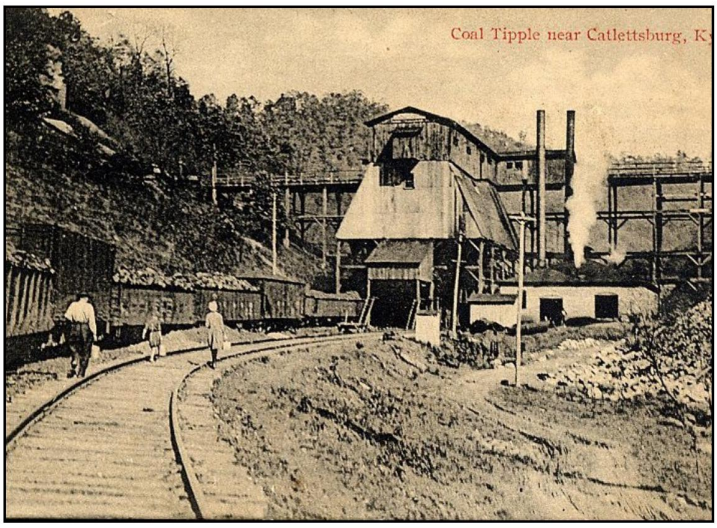
The largest market for coal mined or processed in Bell County for the last six years has been South Carolina, where five power plants received nearly 1.1 million tons in 2014, or 52 percent of total Bell County shipments. In 2012, Bell County sent 2.2 million tons to nine plants in South Carolina. Overall, coal shipments decreased by eight percent from 2013.

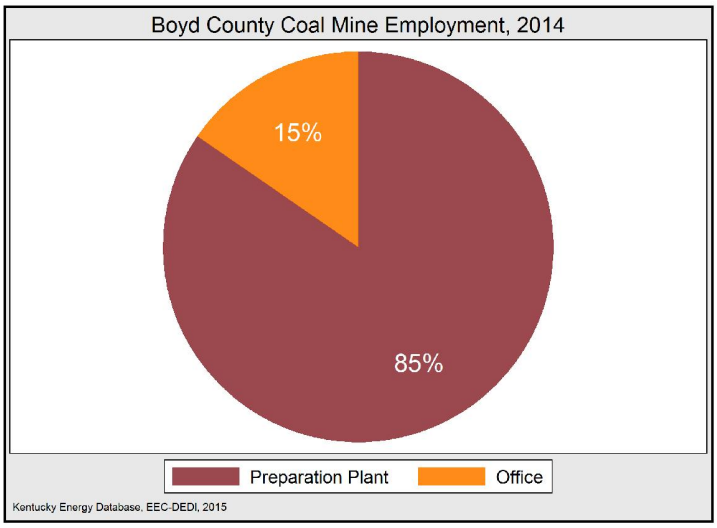
Bell County Coal Mining Productivity

Bell County productivity, the amount of coal produced per labor hour, has steadily increased since 2012 as the less competitive and more costly coal mines in the county have closed. Despite these increases, however, 2014 productivity in Bell County was the sixth lowest of any Kentucky county at 1.83 tons per labor hour.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Boyd County

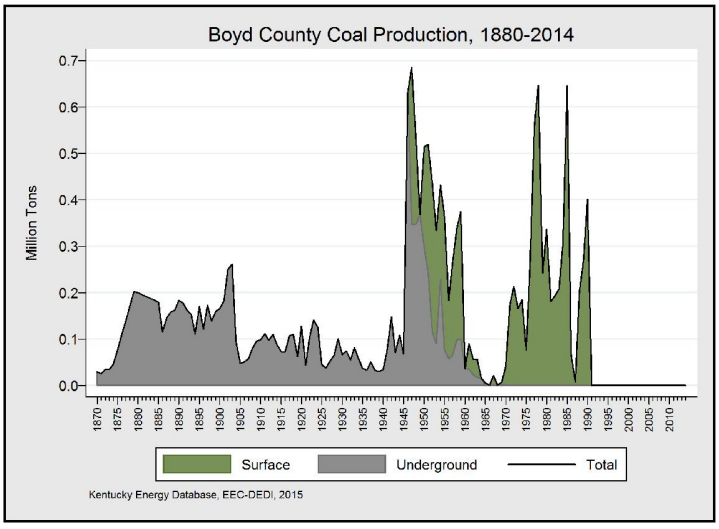


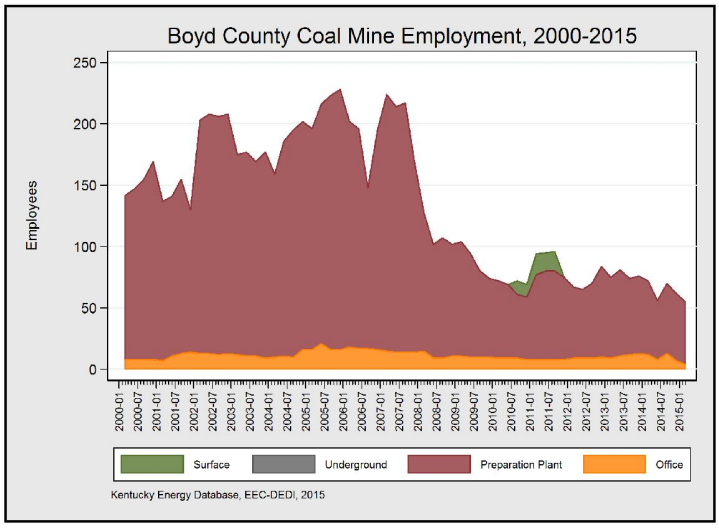


The motto of Boyd County is "Where Coal Meets Iron." The area that would become Boyd County was ideally located for both coal and iron production to begin in the 1830's with access to the eastern coalfield, the Ohio River, and major railroads. *Pictured above: a postcard of a coal tipple in Boyd County near Catlettsburg. Tipples are used to load extracted coal from the mines onto train cars. Mine cars literally tip their coal into railroad hopper cars.*

On-Site Activity	Employment	Annual Change
Total	62	-18.4%
Preparation Plant	55	-12.7%
Office	7	-46.2%

Since 1990, preparation plants and terminals have been the largest source of direct coal industry employment in Boyd County as the county no-longer produces coal.

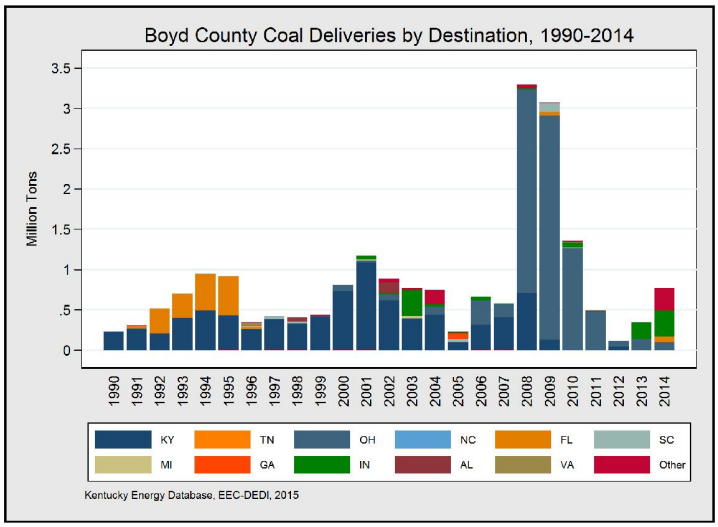


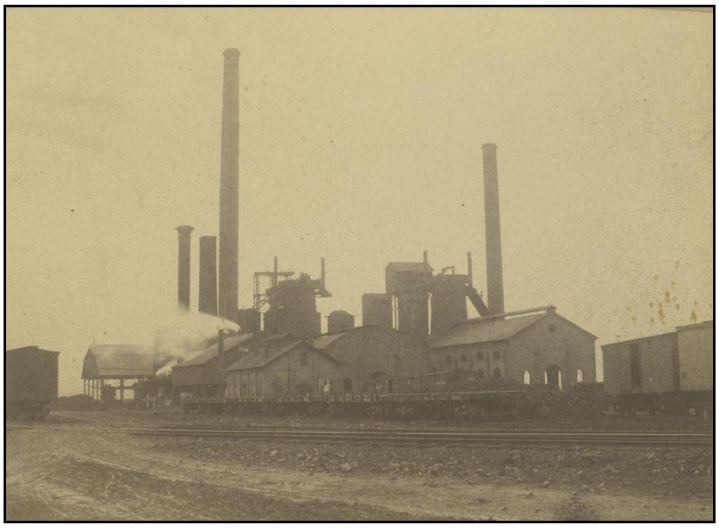


Although Boyd County has not mined coal since 1990, more than 19.9 million tons have been mined since 1838. Prior to becoming a county, the area that would become Boyd County produced roughly 1,000 tons a year from 1838 to 1860, which was used to power local iron furnaces. After stopping during the Civil War, coal production increased to 200,000 tons annually by 1879. Production peaked after World War II in 1947 at 686,145 tons. Large scale surface production began in 1970 and peaked in 1985 at 645,885 tons.

To this day, Boyd County continues to process and export coal, although significantly less than a decade ago. Several coal transportation terminals remain active in Boyd County in 2014 and employed 62 individuals full-time, a decrease of 18.4 percent from 2013 and 73 percent from 2005. There were 55 employees operating coal preparation plants, a decrease of 12.7 percent from 2013. Steel production continues in Boyd County and employs 1,083 workers in 2014.

Boyd County





Picture: Ashland Coal and Iron Company's Furnace circa late 19th Century.

State and Power Plant	Deliveries (Tons)	Percentage
Total	**768,826**	**100%**
Indiana	**327,838**	**42.6%**
R. Gallagher	267,984	34.9%
Tanners Creek†	56,700	7.4%
Rockport	3,154	0.4%
West Virginia	**255,452**	**33.2%**
Mitchell	218,442	28.4%
Ceredo	37,010	4.8%
Ohio	**94,383**	**12.3%**
W H Zimmer	91,236	11.9%
Killen Station	3,147	0.4%
Florida	**69,678**	**9.1%**
IMT Transfer	69,678	9.1%
Mississippi	**21,475**	**2.8%**
Associated Terminals	21,475	2.8%

Boyd County Coal Severance Taxes

Coal severance taxes paid in Boyd County in 2014 were $96,299. The Boyd County Government was allocated $223,740 in coal severance tax distributions.

Boyd County Coal Market

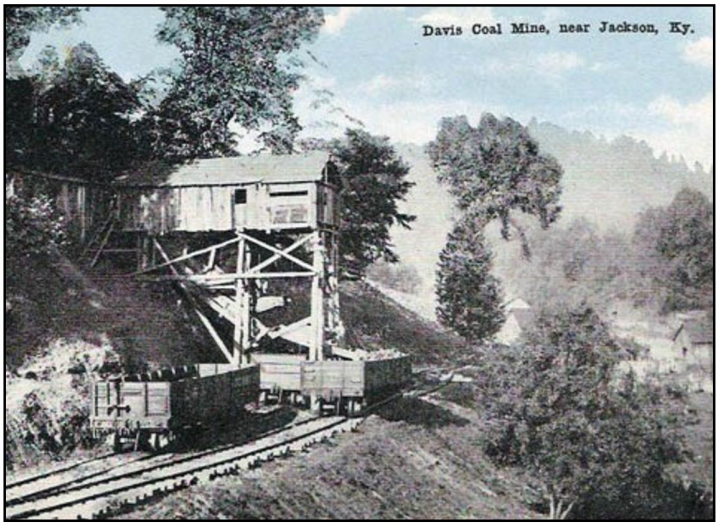
Though Boyd County no-longer mines coal, it did prepare and ship coal from surrounding counties to customers outside of Kentucky. Coal shipments from the county more than doubled since 2013 to 769 thousand tons in 2014. This growth in coal exports results from more coal being shipped on the Ohio River to Indiana, from no shipments in 2012. Of the coal shipped from Boyd County during 2014, 35 percent was delivered to R. Gallagher Generating Station in New Albany, Indiana.

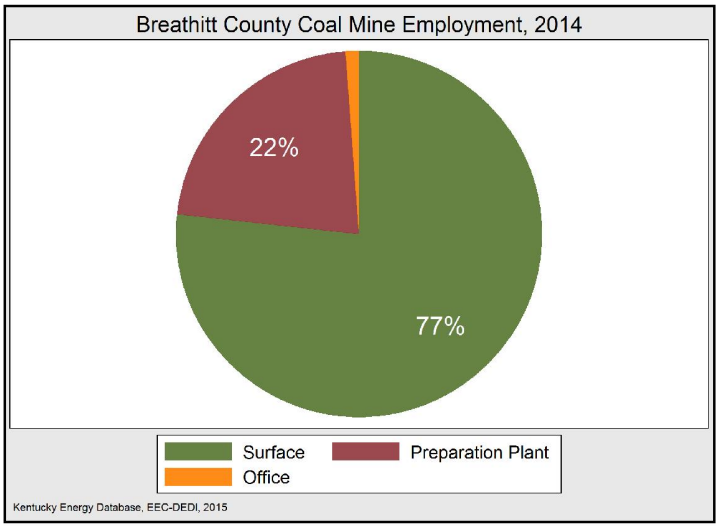
Chemical Composition and Cost

On average, coal exported from Boyd County had a median sulfur content of 0.92 percent, a median ash content of 11.4 percent, and a median heat content of 23.85 MMBtu per ton. The average delivered price per ton for Boyd County coal in 2014 was $64.98, and ranged from $58.90 to $75.44 per ton. The average price per MMBtu of Boyd County coal was $2.72 per MMBtu and ranged from $2.52 to $3.16 per MMBtu.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Breathitt County

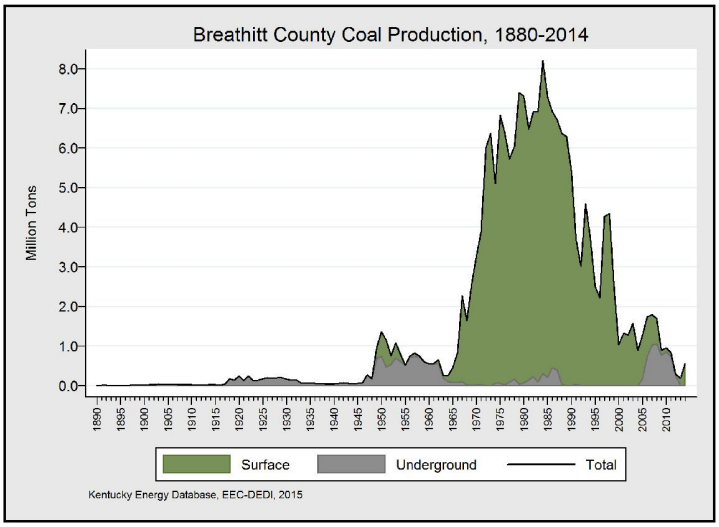


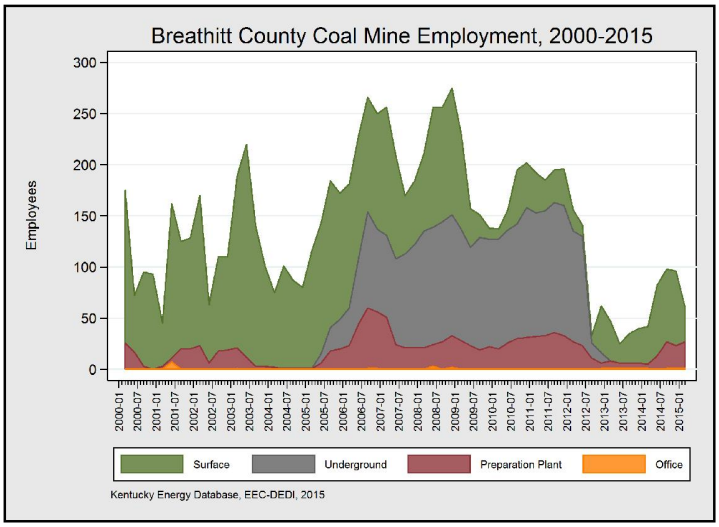


Production Method	Mines	Production	Annual Change
Total	4	564,817	+213.4%
Surface	4	564,817	+213.4%
Underground	0	0	—

On-Site Activity	Employment	Annual Change
Total	96	+140.0%
Surface	73	+114.7%
Preparation Plant	22	+340%
Office	1	+0%

Four strip mines in Breathitt County produced 564,817 tons of coal in 2014 valued at $108 million. *Pictured above: Davis Coal Mine tipple near Jackson in Breathitt County.*

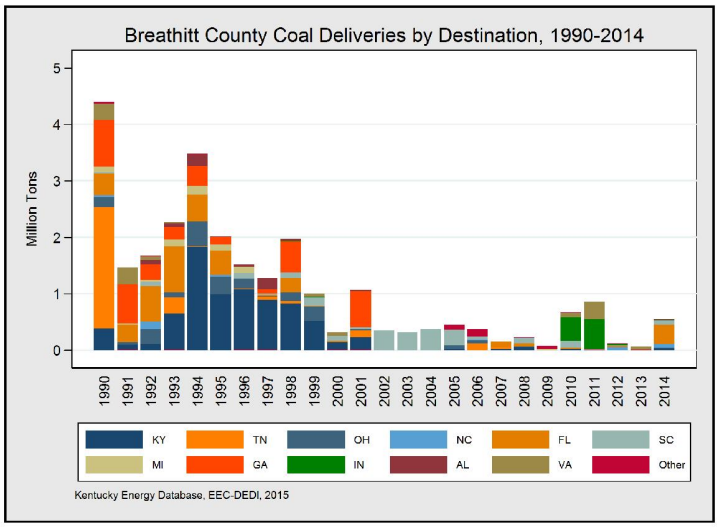


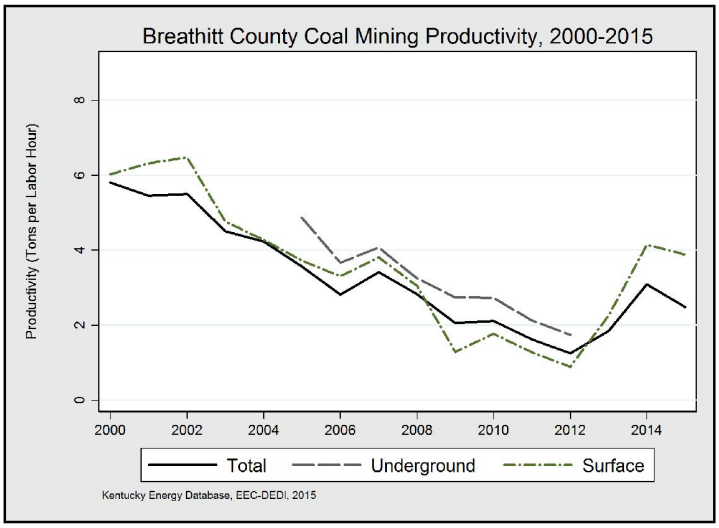


Total coal production in Breathitt County more than doubled in 2014 from 2013 due to surface mining operations. Breathitt County production accounted for 0.73 percent of production statewide in 2014. The first recorded coal production in Breathitt County was 200 tons in 1837. During 177 years of coal mining, 203 million tons of coal were extracted from the county. Surface operations excavated most of the coal from the county from 1964 to 2007. Coal production peaked at 8.2 million tons in 1984 and has declined by 93 percent thereafter.

Breathitt County coal mines and preparation plants employed an average of 96 on-site employees in 2014, an increase of 140 percent from 2013. The majority of these jobs were held by 73 surface miners, followed by preparation plant operators and office staff. The county lost 36 of the newly added mining jobs during the first quarter of 2015. Underground mining in Breathitt County stopped in 2013. County level coal mine employment peaked at 1,163 in 1950 and has declined by 92 percent through 2014.

Breathitt County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**544,060**	**100%**
Florida	**346,767**	**63.7%**
Stanton Energy Center	284,042	52.2%
Cedar Bay Generating Company LP†	62,725	11.5%
South Carolina	**75,974**	**14.0%**
Cope	38,334	7.0%
Williams	37,640	6.9%
North Carolina	**60,975**	**11.2%**
James E. Rogers Energy Complex	48,388	8.9%
Marshall	12,587	2.3%
Kentucky	**36,791**	**6.8%**
R D Green	36,791	6.8%
Virginia	**11,034**	**2.0%**
Chesterfield	11,034	2.0%
Indiana	**6,238**	**1.1%**
Tanners Creek†	6,238	1.1%
Ohio	**3,589**	**0.7%**
Muskingum River†	3,589	0.7%
West Virginia	**2,692**	**0.5%**
Kammer†	2,692	0.5%

Breathitt County Coal Severance Taxes

Coal producers in Breathitt County paid $4,800,874 in coal severance taxes in 2014. The Breathitt County Government was allocated $656,132 in coal severance tax distributions in 2014.

Breathitt County Coal Market

In 2013, Breathitt County shipped coal to just two power plants: Chesterfield Power Station in Virginia and Tanners Creek Plant in Lawrenceburg, Indiana; however, coal shipments increased to 544 thousand tons in 2014. Breathitt County steam coal exports are more than eight times their quantity from 2013, but a decrease of 37 percent relative to 2011. More than half of the coal shipped from the county in 2014 was transported to Stanton Energy Center, near Orlando, Florida.

Breathitt County Coal Mining Productivity

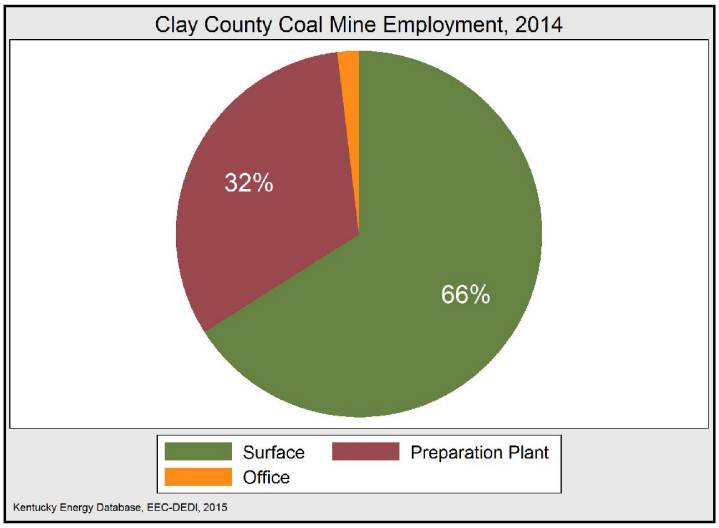
Breathitt County's productivity in 2014, including labor hours at the county's four preparation plants, increased to 3.089 tons per labor hour from a low of 1.25 in 2012. County productivity has decreased by more than 47 percent from the year 2000. The county's three surface mines alone, not counting the preparation plants, averaged 4.15 tons per labor hour.

Chemical Composition and Cost

Coal mined in Breathitt County had a median sulfur content of 1.01 percent, a median ash content of 10.4 percent, and a median heat content of 24.26 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $54.30, processing costs of $0.54, and average transportation costs of $20.28. These costs resulted in a median delivered price per ton of $75.12—ranging from $68.77 to $98.19 per ton. The price per MMBtu of Breathitt County coal had a median of $3.15 per MMBtu and ranged from $2.92 to $4.11 per MMBtu.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

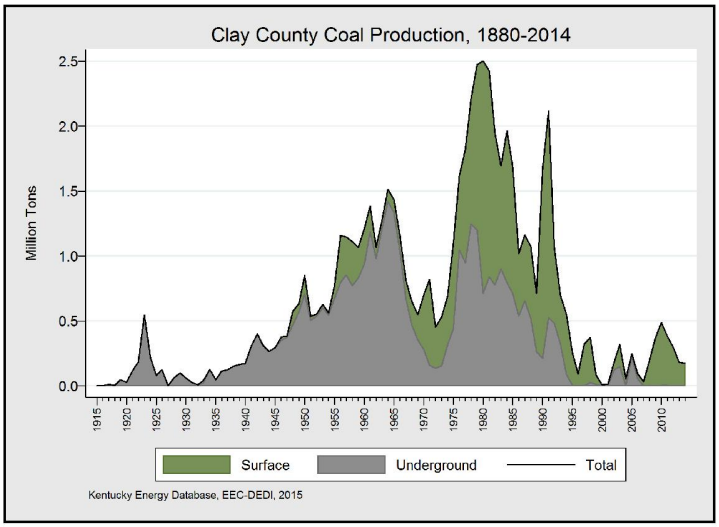
Clay County

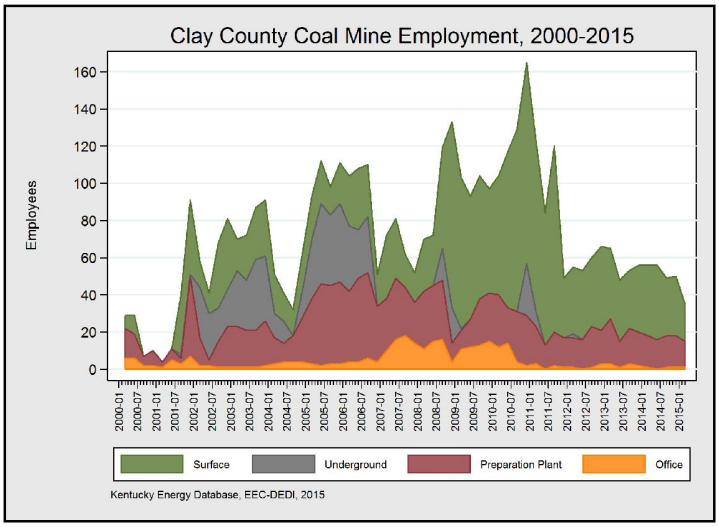


Production Method	Mines	Production	Annual Change
Total	3	174,620	-3.8%
Surface	3	174,620	-3.8%

On-Site Activity	Employment	Annual Change
Total	50	-10.7%
Surface	32	-11.1%
Preparation Plant	17	-5.6%
Office	1	-50.0%

The three active coal mines in Clay County mined 174,620 tons of coal valued at $19.9 million. *Pictured above: a Clay County coal tipple and railroad in 1969, courtesy of the University of Kentucky Libraries.*

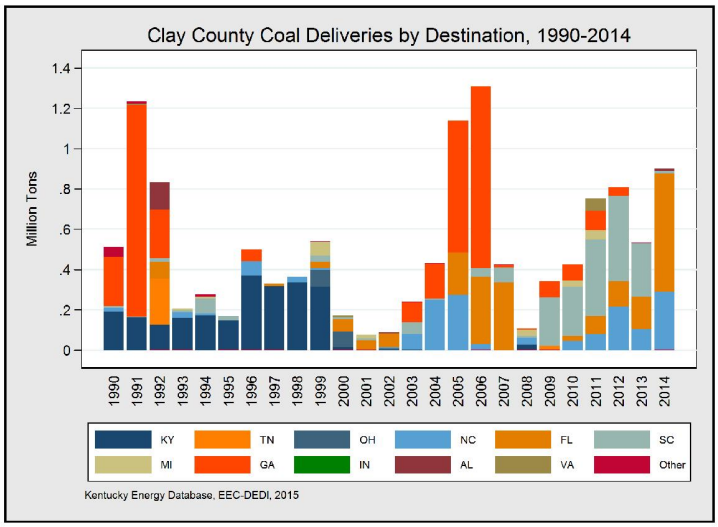


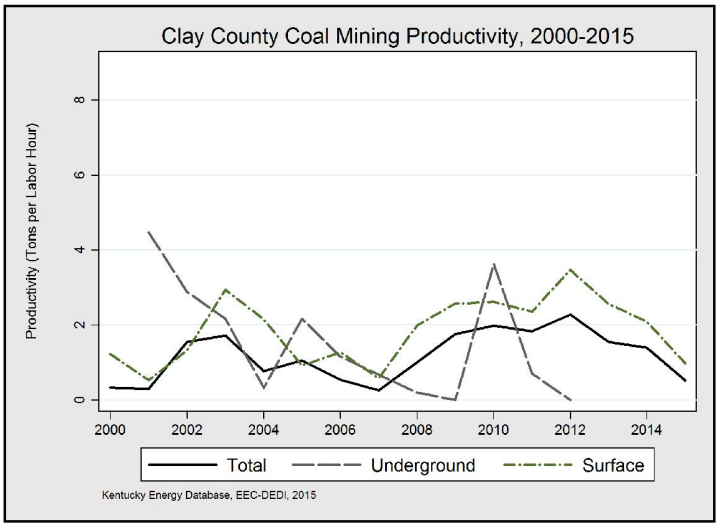


Coal mines in Clay County produced more than 174 thousand tons of coal in 2014, a decrease of 3.8 percent from 2013, and 0.23 percent of the Kentucky total. Clay County has mined coal since 1829, but production did not exceed 10,000 tons annually until 1917. Production peaked at 2.5 million tons in 1980 and has declined by 93 percent through 2014. All of the coal mined in Clay County in recent years has come from surface mines.

Clay County coal mines employed an average of 56 on-site employees in 2014, which was a decrease of 10.7 percent from 2013. The majority of these jobs were held by 32 miners working on the surface. 17 employees worked full-time in coal preparation plants and one person worked in an on-site office. From 1950 to 1987, 1,200 coal miners were employed in Clay County, on average. Coal mining employment has decreased by 98 percent since peaking at 2,411 in 1984.

Clay County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**900,087**	**100%**
Florida	**587,161**	**65.2%**
Crystal River†	563,155	62.6%
Cedar Bay Generating Company LP†	12,836	1.4%
Stanton Energy Center	11,170	1.2%
North Carolina	**288,975**	**32.1%**
Marshall	190,639	21.2%
James E. Rogers Energy Complex	98,336	10.9%
South Carolina	**13,308**	**1.5%**
Cope	13,308	1.5%
Alabama	**10,643**	**1.2%**
E C Gaston†	10,643	1.2%

Clay County Coal Severance Taxes

Coal severance taxes paid in Clay County in 2014 are confidential per KRS-131.190; however, the Clay County Government was allocated $309,191 in coal severance tax distributions in 2014.

Clay County Coal Market

Of the 900,087 tons of steam coal exported from Clay County in 2014, more than 50 percent was delivered to power plants in Florida. The Crystal River Generating Station, which is expected to close in 2016, was the single largest customer for Clay County coal, receiving 63 percent of all known shipments from the county that year. North Carolina was also a significant consumer of Clay County coal in 2014.

Clay County Coal Mining Productivity

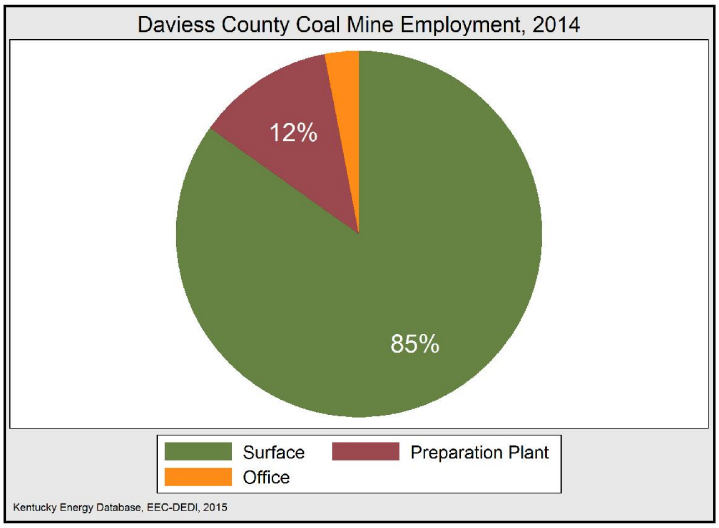
Clay County's overall coal mining productivity in 2014 was 1.39 tons per labor hour, which is higher than the historical average of 1.23, a decrease of 9.73 percent from 2013. Clay County surface mines alone yielded 2.09 tons per labor hour, down from 2.56 tons per labor hour the year before.

Chemical Composition and Cost

On average, coal mined in Clay County had a median sulfur content of 1.14 percent, a median ash content of 10.6 percent, and a median heat content of 24.54 MMBtu per ton. The average delivered price per ton for Clay County coal in 2014 was $112.19, and ranged from $66.61 to $125.84 per ton. The delivered price per MMBtu of coal from Clay County had a median of $4.58 per MMBtu and ranged from $2.71 to $5.10 per MMBtu. Other financial data derived for Clay County are confidential.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

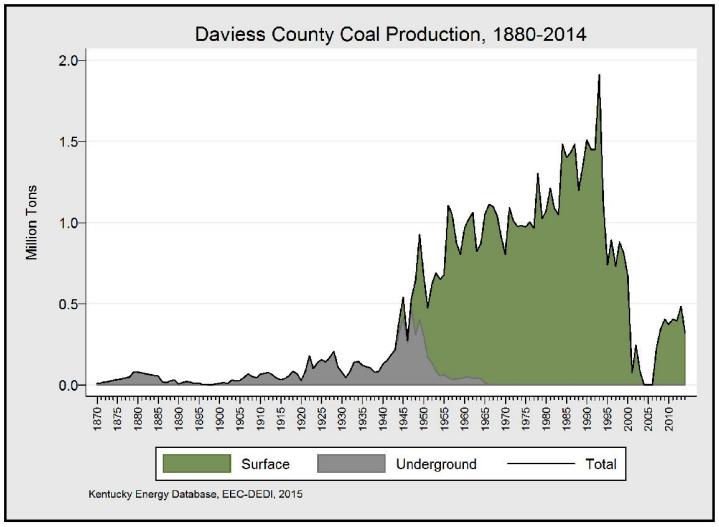
Daviess County

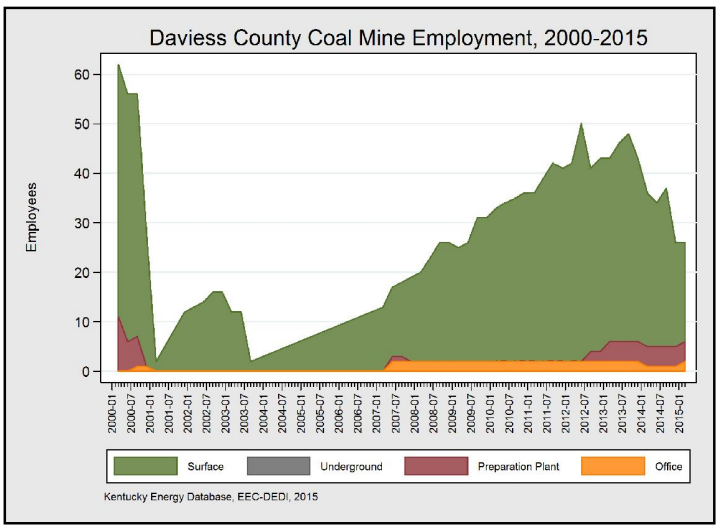


Production Method	Mines	Production	Annual Change
Total	2	323,807	-33.2%
Surface	2	323,807	-33.2%

On-Site Activity	Employment	Annual Change
Total	26	-39.5%
Surface	21	-43.2%
Preparation Plant	4	+0.0%
Office	1	-50.0%

Daviess County mined 323,807 tons of coal in 2014, a one-third decrease from 2013. *Pictured above: Owensboro coal dock circa 1985 from the Kentucky Energy and Environment Cabinet archives.*

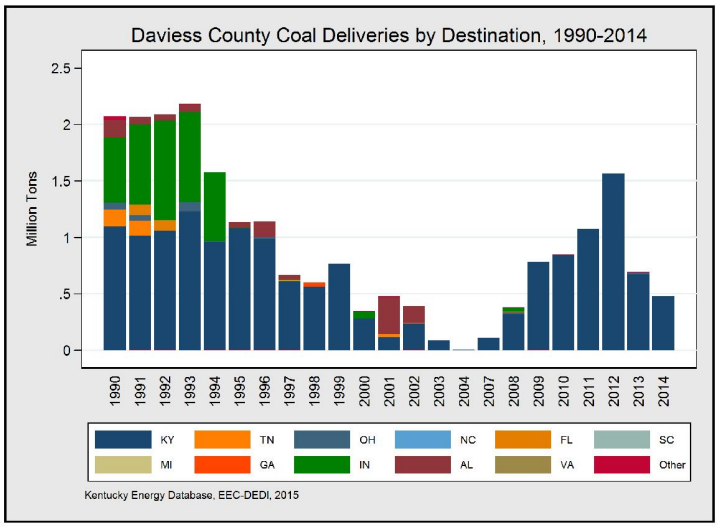


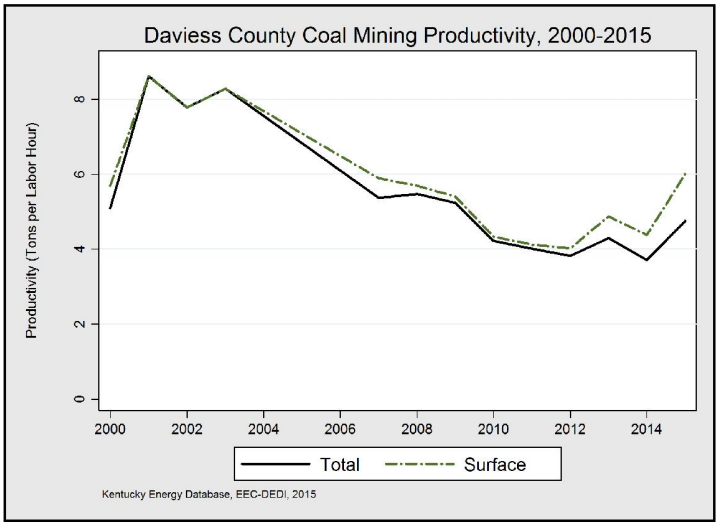


Underground coal mining began in Daviess County in 1825 at 3,000 tons and peaked in 1955 at 615,873 tons. Since 1966, all of the coal mined in Daviess County has come from surface mines. Coal production in Daviess County peaked at 1.9 million tons, from surface mines, in 1993 and declined by 83 percent through 2014. Coal production stopped in 2004 but resumed in 2007.

In January 2014, there were two surface mines producing coal; however, with the closure of Joe's Run Mine that has employed up to 40 people, only the North Knottsville Mine continued producing at the end of the year. At the end of 2014, there were 26 persons employed in coal production in Daviess County, 21 miners, four preparation plant operators, and one in an on-site office. During peak production in 1991 -1992, there were up to 342 persons employed at coal mines in Daviess County.

Daviess County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**479,638**	**100%**
Kentucky	**479,638**	**100%**
Elmer Smith	431,535	90.0%
R D Green	27,927	5.8%
D B Wilson	10,476	2.2%
Ghent	9,700	2.0%

Daviess County Coal Market

Since 2002, the vast majority of coal mined in Daviess County has been used in Kentucky to generate electricity. In all, four different power plants in Kentucky received a total of 480 thousand tons of steam coal from Daviess County during 2014. Shipments of coal from Daviess County decreased by 30 percent from 2013. Elmer Smith, operated by Owensboro Municipal Utilities and within Daviess County, received 90 percent of known coal shipments from the county in 2014. Elmer Smith, R D Green, and Ghent Generating Station all decreased consumption of coal from Daviess County in 2014.

Daviess County Coal Severance Taxes

Coal severance taxes paid in Daviess County in 2014 are confidential per KRS-131.190; however, the Daviess County Government was allocated $485,259 in coal severance tax distributions in 2014.

Chemical Composition and Cost

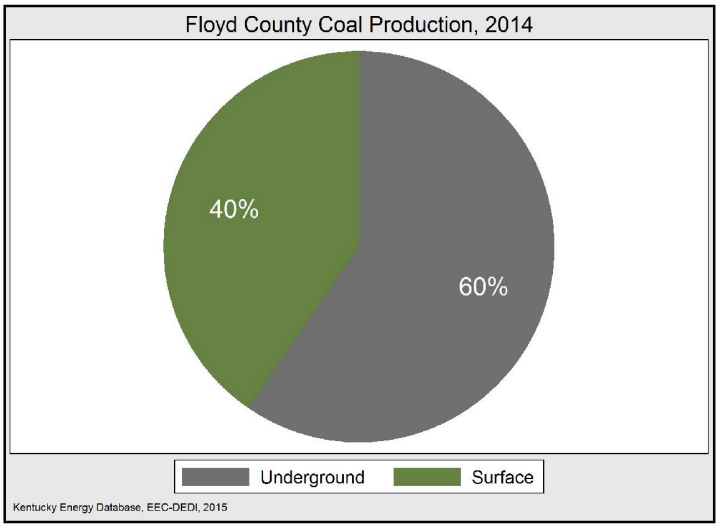
On average, coal mined in Daviess County had a median sulfur content of 2.9 percent, a median ash content of 9.8 percent, and a median heat content of 22.21 MMBtu per ton. The average delivered price per ton for Daviess County coal in 2014 was $42.49, and ranged from $22.21 to $48.58 per ton. The delivered price per MMBtu of coal from Daviess County had a median of $1.98 per MMBtu and ranged from $1.24 to $2.21 per MMBtu. Since there is only one-remaining coal producer in Daviess County, other financial data derived from confidential taxpayer information—including average mine mouth price, processing costs, shipping costs, total value, and total taxes paid—cannot be disclosed pursuant to KRS-131.190.

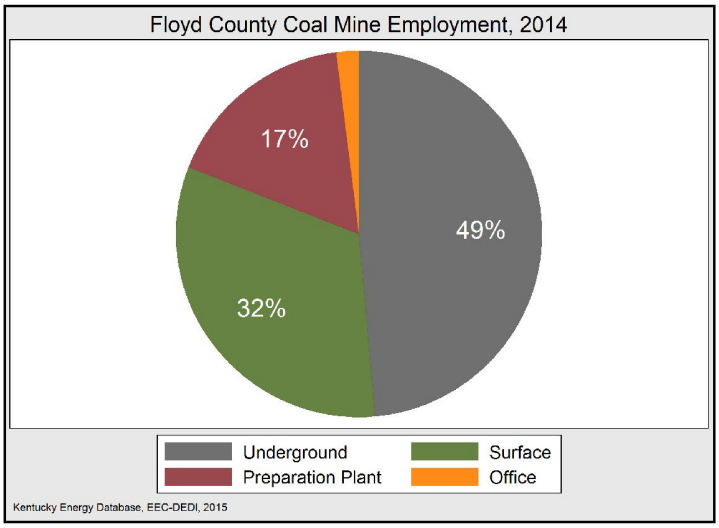
Daviess County Coal Mining Productivity

Although Daviess County in western Kentucky had the fourth-highest mine productivity in the Commonwealth in 2014, productivity is less than half of its recent peak in 2001. Overall productivity was 3.71 tons per labor hour, while surface productivity averaged 4.38 tons per labor hour. In 2013, total productivity was 4.29 tons per labor hour, while surface productivity averaged 4.89 tons per labor hour.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Floyd County

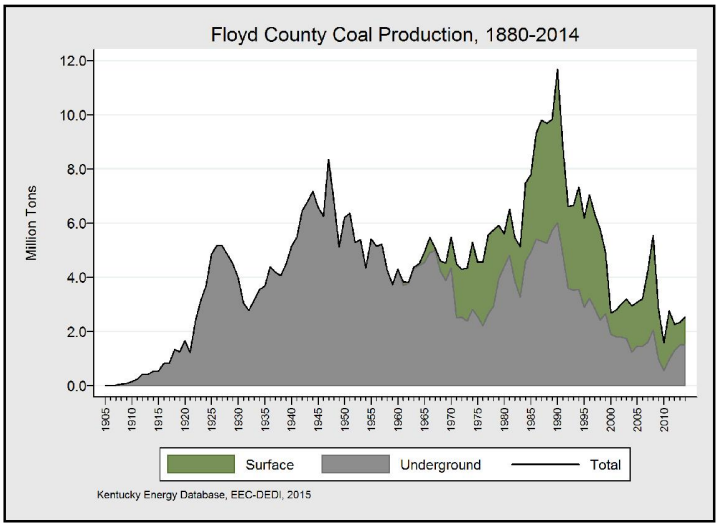


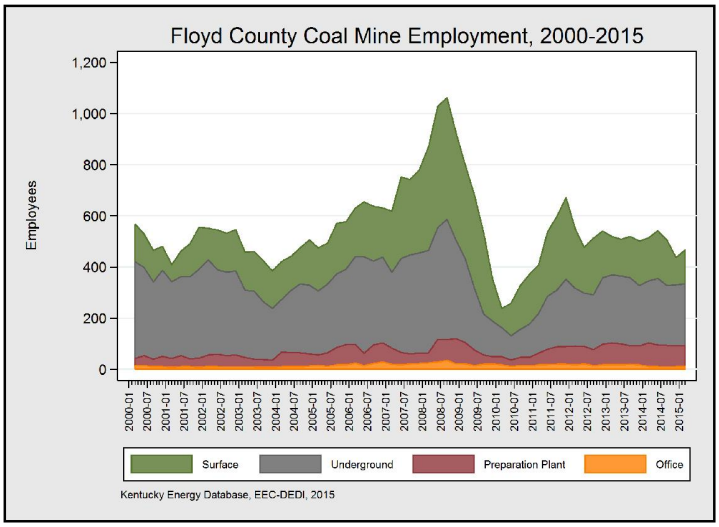


Production Method	Mines	Production	Annual Change
Total	23	2,528,209	+8.3%
Underground	11	1,507,373	+0.2%
Surface	12	1,020,836	+22.7%

On-Site Activity	Employment	Annual Change
Total	438	-12.6%
Underground	240	+1.7%
Surface	107	-38.5%
Preparation Plant	81	+9.5%
Office	10	-41.2%

The 23 active coal mines in Floyd County in 2014 produced 2.5 million tons of coal valued at $206 million. Underground mines produced 60 percent of county production that year.

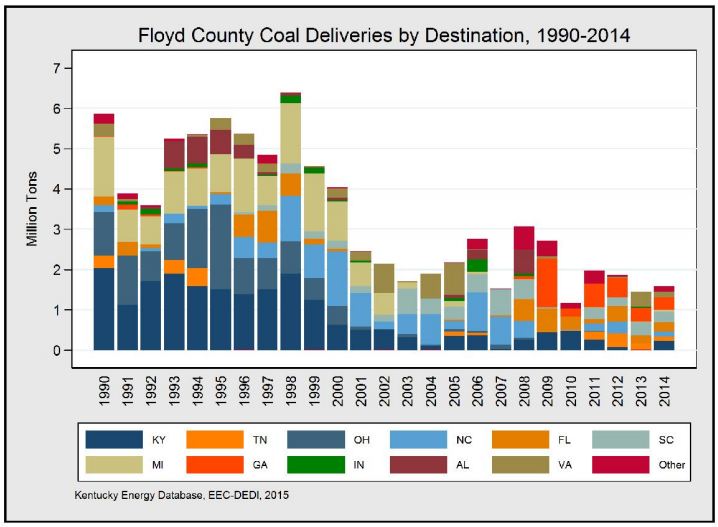


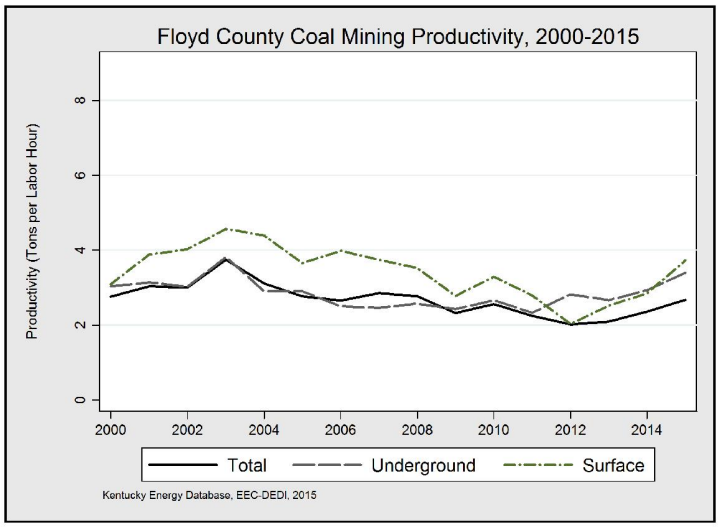


Coal production in Floyd County began in 1889 with 2,236 tons. Between 1889 and 2014, 485 million tons of coal have been extracted in Floyd County, which is five percent of all coal ever produced in Kentucky. The production time series above shows that Floyd County responded to calls for increased coal production during the first and second world wars. Production peaked at 11.7 million tons in 1990 and has declined by 78 percent thereafter.

Coal mines and preparation plants in Floyd County employed 438 persons on-site in 2014, which was a decrease of 12.6 percent from 2013. Underground mines were the largest source of direct coal mine employment in 2014 with 240 jobs, followed by surface mines at 107 jobs, and coal preparation plants at 81 jobs. Coal mines in Floyd County paid $7,269,985 in 2014 in coal severance taxes of which Floyd County received $1,079,880 back.

Floyd County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**1,588,711**	**100%**
Georgia	**303,505**	**19.1%**
Bowen	265,171	16.7%
Harllee Branch†	38,334	2.4%
South Carolina	**257,172**	**16.2%**
Kapstone	122,423	7.7%
Cope	86,297	5.4%
Wateree	37,355	2.4%
McMeekin†	11,097	0.7%
Florida	**235,973**	**14.9%**
Crystal River†	168,468	10.6%
Cedar Bay†	37,607	2.4%
Stanton Energy Center	29,898	1.9%
Kentucky	**231,788**	**14.6%**
Big Sandy†	231,788	14.6%
Virginia	**150,731**	**9.5%**
Chesterfield	127,974	8.1%
Yorktown†	22,757	1.4%
West Virginia	**128,497**	**8.1%**
John E Amos	113,841	7.2%
Mitchell	14,656	0.9%
North Carolina	**123,751**	**7.8%**
James E. Rogers	123,751	7.8%
Tennessee	**100,618**	**6.3%**
Tennessee Eastman†	100,618	6.3%
Michigan	**44,357**	**2.8%**
River Rouge	32,453	2.0%
J C Weadock†	11,904	0.7%
Maryland	**12,319**	**0.8%**
Morgantown Plant	12,319	0.8%

Floyd County Coal Market

Floyd County shipped coal to 10 states in total during 2014. Of the 1.59 million tons of steam coal exports tracked from Floyd County in 2014, Plant Bowen in Georgia consumed 265 thousand tons, or 17 percent of Floyd County's known shipments. Floyd County's second largest consumer in 2014, consuming 14.6 percent of known shipments, was Kentucky's Big Sandy power plant, which is scheduled to close in 2015. Floyd County's third-largest consumer, Crystal River in Florida, consumed 10.6 percent of known shipments, is also scheduled to close in the near future. In all, coal power plant closures have been announced at seven coal plants the county shipped coal to—37 percent of 2014 total shipments.

Floyd County Coal Mining Productivity

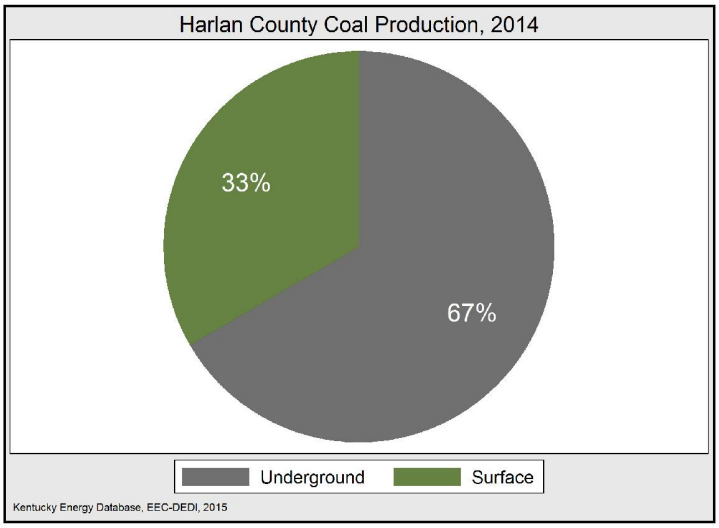
Floyd County mining productivity increased to 2.36 tons per labor hour in 2014. Underground operations averaged 2.93 tons per labor hour, while surface operations produced at a rate of 2.85 tons per labor hour.

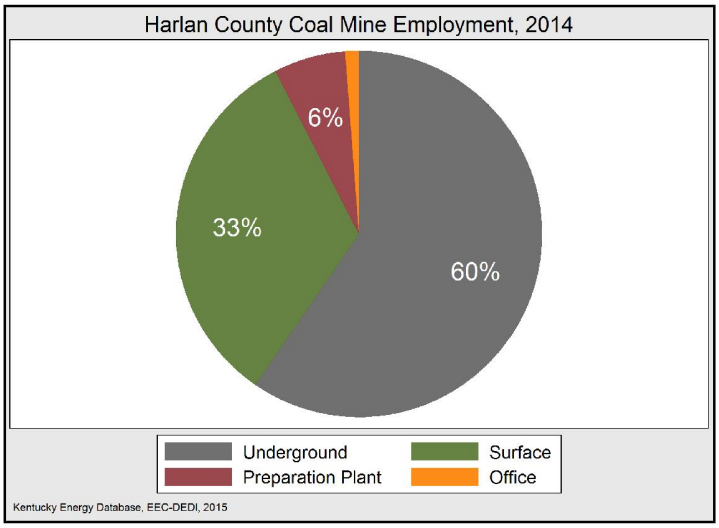
Chemical Composition and Cost

Coal mined in Floyd County had a median sulfur content of 0.92 percent, a median ash content of 10.6 percent, and a median heat content of 24.5 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $55.01, processing costs of $8.26, and transportation costs of $27.18. These costs resulted in a median delivered price per ton of $90.45—ranging from $67.06 to $118.65 per ton. The delivered price per MMBtu of coal from Floyd County had a median of $3.60 per MMBtu and ranged from $2.66 to $4.75 per MMBtu.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Harlan County

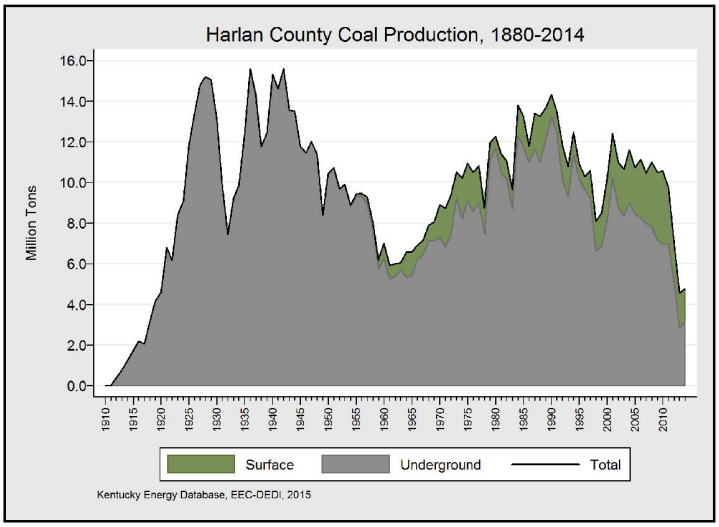


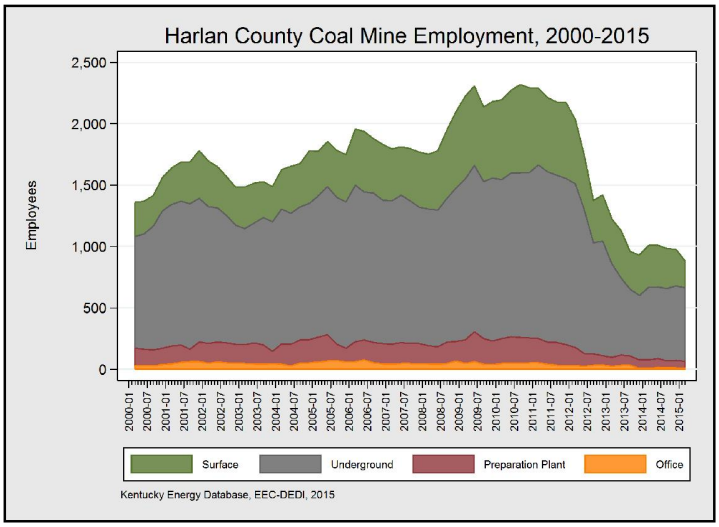


Production Method	Mines	Production	Annual Change
Total	24	4,779,629	+4.7%
Underground	12	3,184,075	+8.2%
Surface	12	1,595,554	-9.1%

On-Site Activity	Employment	Annual Change
Total	979	+5.0%
Underground	606	+15.2%
Surface	300	-9.1%
Preparation Plant	59	-14.5%
Office	14	+100%

In 2014, Harlan County mined 4.8 million tons of coal valued at $276 million. Historically, Harlan County has produced a billion tons of coal, the second-most of any Kentucky county.

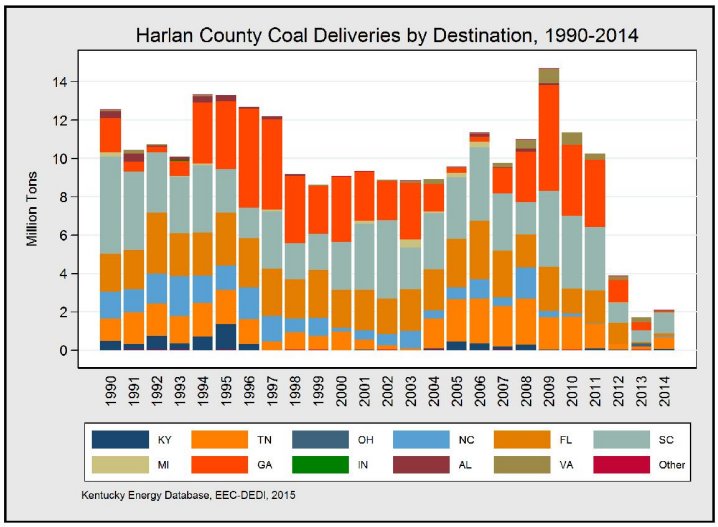


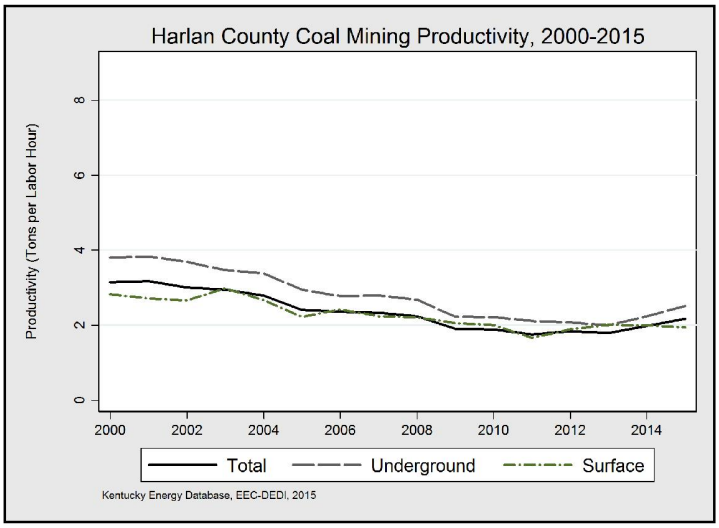


The earliest known commercial coal production in Harlan County was 4,100 tons in 1833. Coal production rose from 25,814 tons in 1910 to 15.2 million in 1929, which was 25 percent of total production in Kentucky that year. Coal production peaked at 15.6 million tons in 1942 during World War II. Mining in the county has been predominantly underground. Harlan County has extracted over one billion tons of coal, or 10.4 percent of all coal ever mined in Kentucky, and was the highest-producing county from 1923 to 1946, even during the miner strikes of 1930's.

On site employment in Harlan County increased by five percent in 2014 to 979 employed, which was the sixth highest in the Commonwealth in 2014. Underground mines were the largest source of mining employment at 606 miners, followed by surface operations at 303 miners. Coal mine employment in Harlan County peaked at 16,795 in 1941, when 28 percent of all Kentucky coal miners worked in Harlan County, and has declined by 94 percent through 2014.

Harlan County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**2,058,834**	**100%**
South Carolina	**1,087,971**	**52.8%**
Wateree	386,928	18.8%
Williams	352,422	17.1%
Cope	229,311	11.1%
International Paper Eastover Facility	81,249	3.9%
Florence Mill	38,061	1.8%
Tennessee	**609,177**	**29.6%**
Bull Run	406,229	19.7%
Tennessee Eastman Operations†	135,742	6.6%
Kingston	67,206	3.3%
Florida	**131,910**	**6.4%**
Stanton Energy Center	121,605	5.9%
Deerhaven Generating Station	10,305	0.5%
Georgia	**76,999**	**3.7%**
Georgia-Pacific Cedar Springs	46,670	2.3%
Savannah River Mill	30,329	1.5%
North Carolina	**74,449**	**3.6%**
James E. Rogers Energy Complex	61,936	3.0%
Marshall	12,513	0.6%
Kentucky	**53,250**	**2.6%**
E W Brown	53,250	2.6%
Virginia	**25,078**	**1.2%**
West Point Mill	24,939	1.2%
Virginia City Hybrid Energy Center	139	0.0%

Harlan County Coal Market

The states of South Carolina and Tennessee consumed nearly 82 percent of the steam coal shipped from Harlan County in 2014. Four plants, Wateree, Williams, Cope, and Bull Run purchased two-thirds of Harlan County coal in 2014. The largest consumer state was South Carolina., receiving 53 percent of Harlan County coal shipments. Coal shipments have increased by 21 percent from the county in 2014 compared to 2013.

Harlan County Coal Mining Productivity

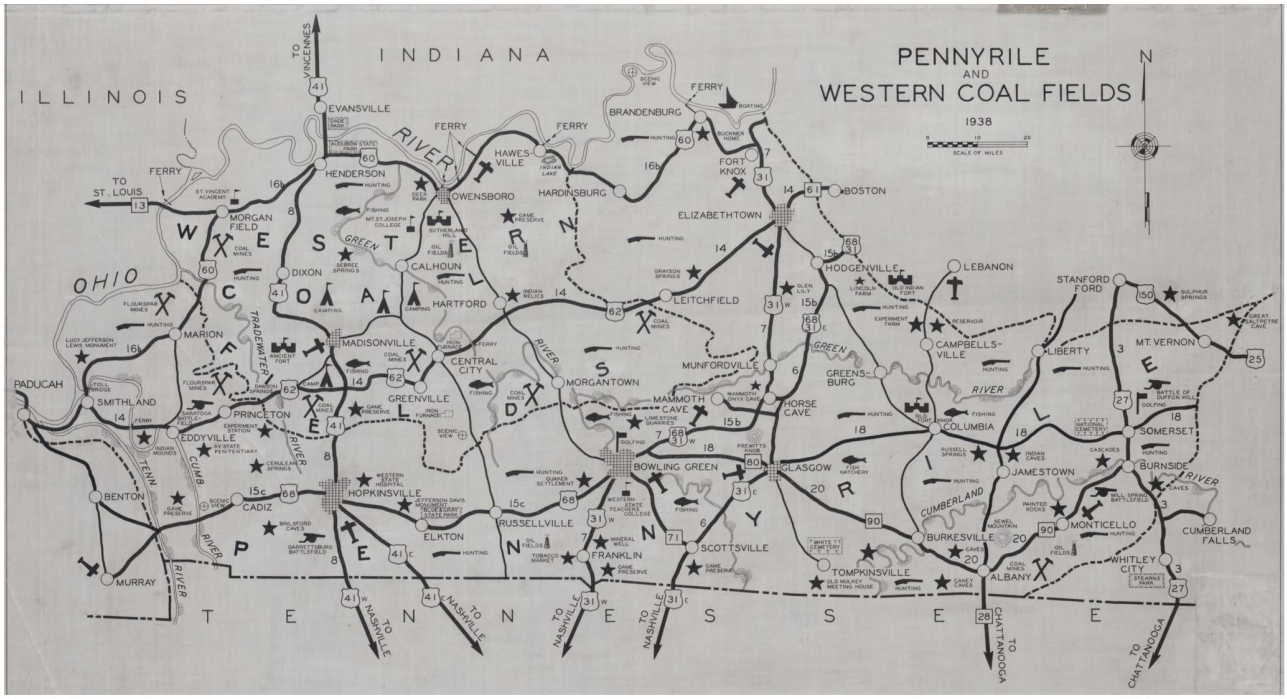
Harlan County's productivity in 2014 was 1.98 tons per labor hour, an increase of 10 percent from 2013, but a decrease of 37 percent since the year 2000. Surface mines in Harlan County historically have not been as productive as the county's underground mines. In 2014, underground mines on average yielded 2.24 tons per labor hour while surface mines yielded 1.99 tons per labor hour.

Chemical Composition and Cost

Coal mined in Harlan County had a median sulfur content of 1.02 percent, a median ash content of 9.2 percent, and a median heat content of 25.33 MMBtu per ton. The mine-mouth cost of extracting coal in the county in 2014 had an average price of $59.56, processing costs of $5.27, and transportation costs of $24.47. These costs resulted in a median delivered price per ton of $89.30—ranging from $35.75 to $107.10 per ton. The delivered price per MMBtu of coal from Harlan County had a median of $3.54 per MMBtu and ranged from $2.06 to $4.22 per MMBtu.

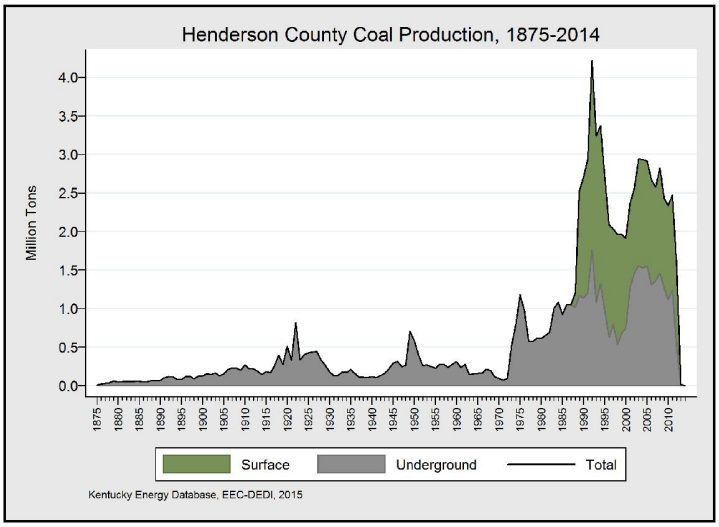
† The closure, or partial closure, of this power plant has been announced for 2014-2018.

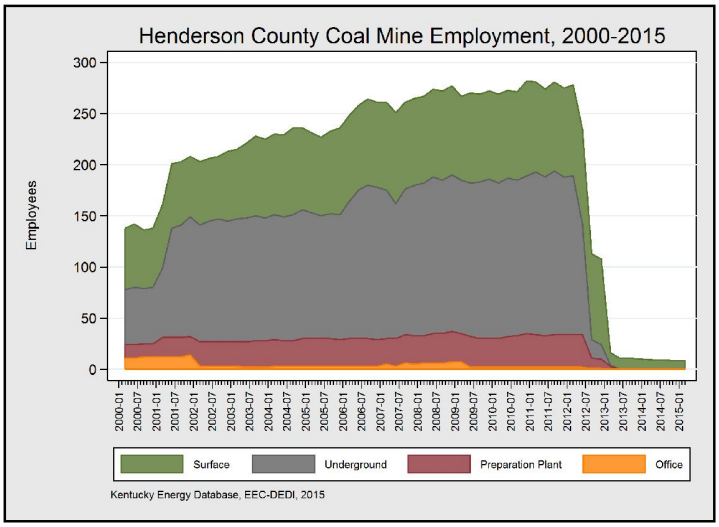
Henderson County



Pictured above: a map of the western Kentucky coal field by the Work Projects Administration for the State of Kentucky, 1939.

On-Site Activity	Employment	Annual Change
Total	8	-20.0%
Surface	8	-20.0%

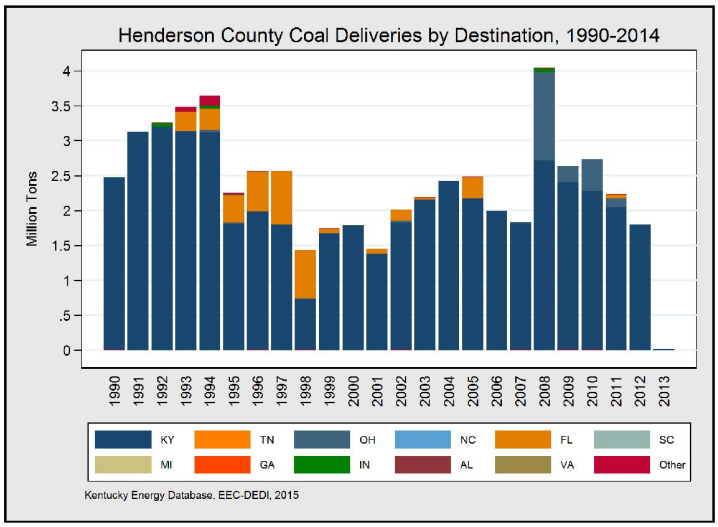


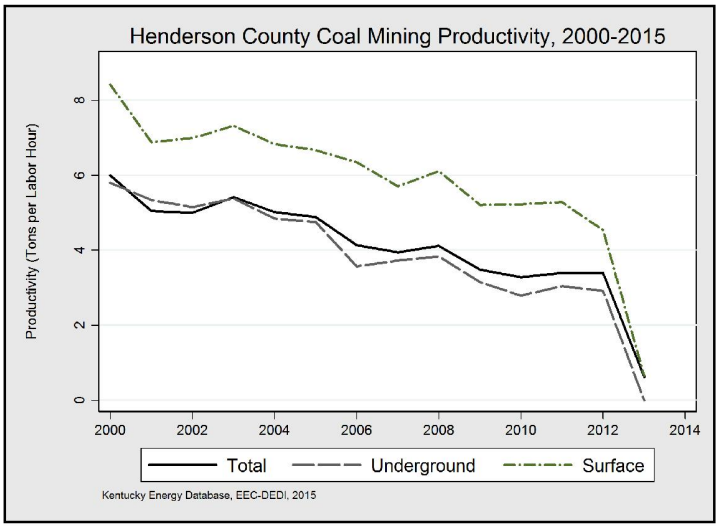


Henderson County produced 14 thousand tons of coal in 2013, which was less than one percent of total production across the Commonwealth and a decrease of over 99 percent from 2012. Most of Henderson County coal production had been from underground mines until 1988, when both types of mining were used.

Coal mines in Henderson County employed an average of eight persons full-time in 2014. Total mining employment in the county decreased by 100 jobs, or by 93 percent compared with 2012. From 2001 to 2012, underground mines were the largest source of coal mine employment in Henderson County. However, from 2012 through 2013, direct employment at underground mines, then surface mines, decreased drastically.

Henderson County





Henderson County Coal Market

Henderson County registered no coal shipments in 2014. Elmer Smith Station, operated by Owensboro Municipal Utilities, was the only known recipient of Henderson County coal in 2013.

Chemical Composition and Cost

On average, coal mined in Henderson County since 1990 had a median sulfur content of 2.88 percent, a median ash content of 9.5 percent, and a median heat content of 22.18 MMBtu per ton. The average delivered price per ton for Henderson County coal in 2013 was $40.10, and ranged from $38.24 to $41.95 per ton. The delivered price per MMBtu of coal from Henderson County had a median of $1.92 per MMBtu.

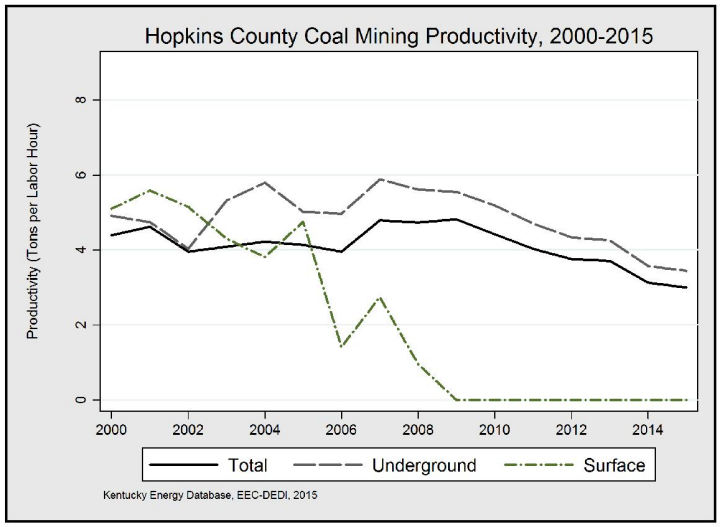
Coal Reserves

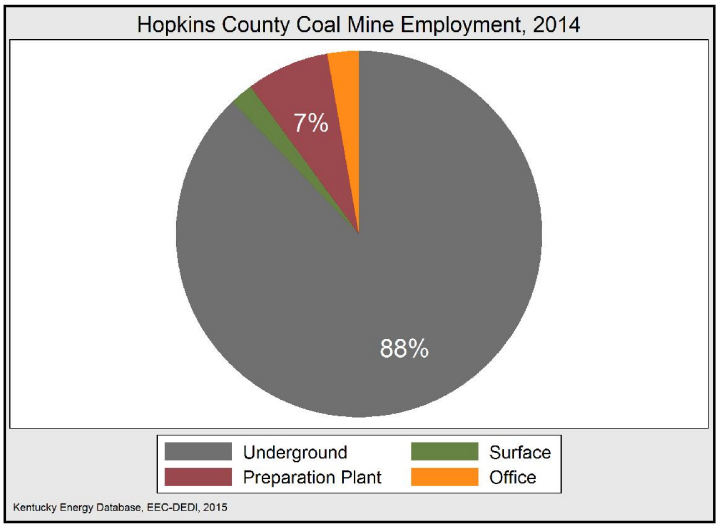
Despite having no coal production in 2014, Henderson County has the second most mineable coal of all Kentucky counties, according to the Kentucky Geological Survey. The county has 4,390 billion tons, or 17 percent of Kentucky's 25,343 billion tons in its Demonstrated Reserve Base.

Henderson County Coal Mining Productivity

Mining productivity in Henderson County averaged 0.62 tons per labor hour in 2013, a decrease of almost 82 percent from the year prior. The rapid drop of productivity in Henderson County is largely a result of the near complete stoppage of coal production in the county. From 2000 to 2013, Henderson County was typically among the top five most productive coal mining counties and was fifth-most productive in 2012 with 3.39 tons of coal mined per labor hour.

Hopkins County

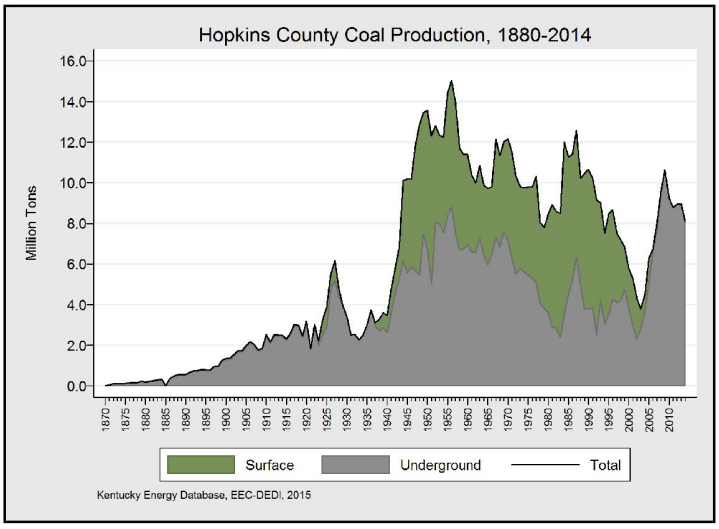


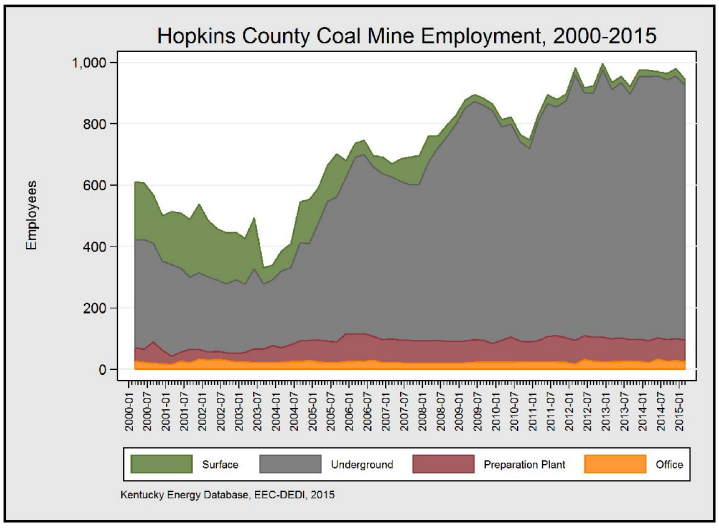


Production Method	Mines	Production	Annual Change
Total	3	8,080,823	-9.9%
Underground	3	8,080,823	-9.9%

Coal mines in Hopkins County produced eight million tons of coal in 2014, which was fourth highest of all counties in Kentucky that year.

On-Site Activity	Employment	Annual Change
Total	980	+0.5%
Underground	856	-0.1%
Preparation Plant	72	+0.0%
Office	28	+7.7%
Surface	24	+20.0%

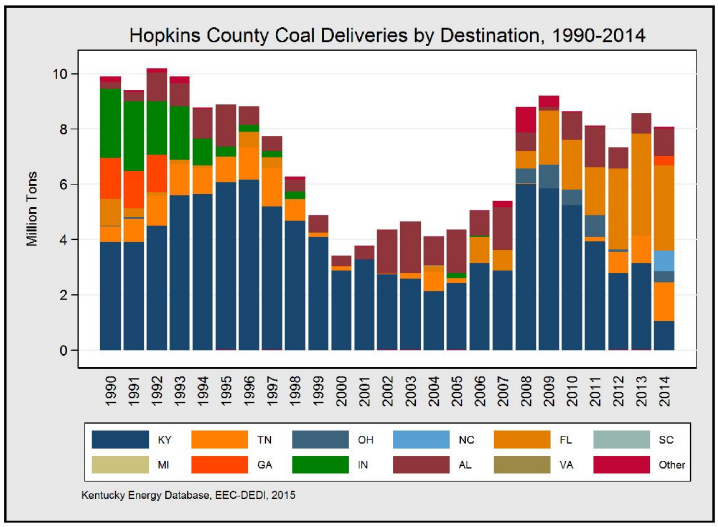




Historically, Hopkins County is the third largest coal-producing county in Kentucky, producing 846 million tons to date, or 8.8 percent of all coal produced in Kentucky. The earliest known coal production in Hopkins County was in 1866 with 500 tons. Coal production quickly increased to 100,000 tons in 1872, and one million tons by 1899. Production increased during both world wars. Since 1899, Hopkins County has averaged 7.2 million tons annually, peaking at 15 million in 1956.

980 people were employed full-time in three active coal mines and two preparation plants in Hopkins County in the fourth quarter of 2014. Coal mine employment peaked in Hopkins County at over 4,236 miners in 1947 and has declined by 77 percent through 2014. Employment has been strong in Hopkins County since reaching its lowest point of 339 miners in 2003. However, coal production and employment in Hopkins County can be expected to decline by 43 percent if the Elk Creek Mine closes in 2015-2016.

Hopkins County



Hopkins County Coal Market

Coal shipments from Hopkins County decreased by six percent from 2013 to 8.1 million tons in 2014. Florida remained the single-largest market for Hopkins County steam coal in 2014, followed by Tennessee. The Seminole Generating Station itself received approximately 23 percent of coal shipped from Hopkins County during 2014, which was about 58 percent of all coal deliveries to Seminole Generating Station in 2014. The Big Bend Power Station, outside Tampa, Florida, purchased 59 percent of its coal in 2014 from Hopkins County.

State and Power Plant	Deliveries (Tons)	Percentage
Total	**8,080,578**	**100%**
Florida	**3,091,616**	**38.3%**
Seminole	1,870,212	23.1%
Big Bend	1,195,906	14.8%
Stanton Energy Center	25,498	0.3%
Tennessee	**1,387,892**	**17.2%**
Cumberland	840,007	10.4%
Kingston	432,017	5.3%
Johnsonville†	110,366	1.4%
Bull Run	5,502	0.1%
Kentucky	**1,056,864**	**13.1%**
HMP&L Station Two Henderson	389,567	4.8%
Paradise†	253,813	3.1%
R D Green	201,910	2.5%
Mill Creek	120,312	1.5%
Cane Run†	80,046	1.0%
E W Brown	11,216	0.1%

Hopkins County Coal Mining Productivity

Hopkins County produced 3.13 tons of coal per labor hour and 3.57 tons per miner hour in 2014. Total coal mine productivity has declined by 35 percent since 2009 at 4.81 tons. Miner productivity has declined by 39 percent since 2007 at 5.88 tons per miner hour.

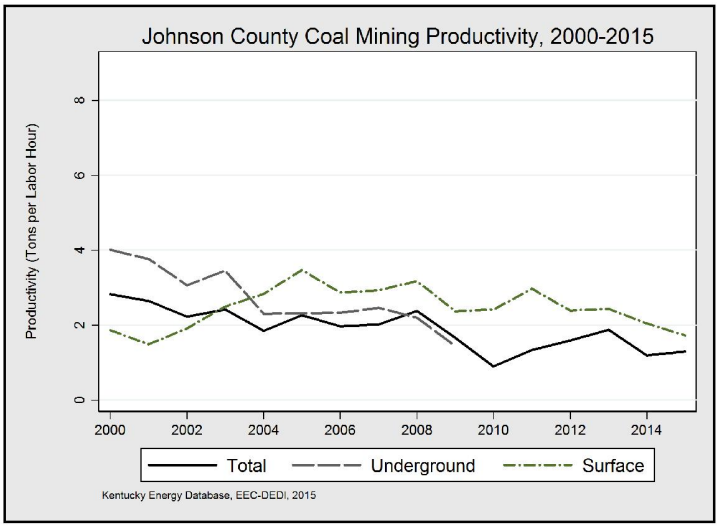
State and Power Plant	Deliveries (Tons)	Percentage
Alabama	**1,014,162**	**12.6%**
Widows Creek†	818,238	10.1%
Colbert†	123,850	1.5%
E C Gaston†	72,074	0.9%
North Carolina	**731,715**	**9.1%**
James E. Rogers Energy Complex	718,714	8.9%
Marshall	13,001	0.2%
Ohio	**418,873**	**5.2%**
General James M Gavin	417,145	5.2%
Miami Fort†	1,728	0.0%
Georgia	**322,878**	**4.0%**
Bowen	322,878	4.0%
West Virginia	**56,578**	**0.7%**
Ceredo	56,578	0.7%

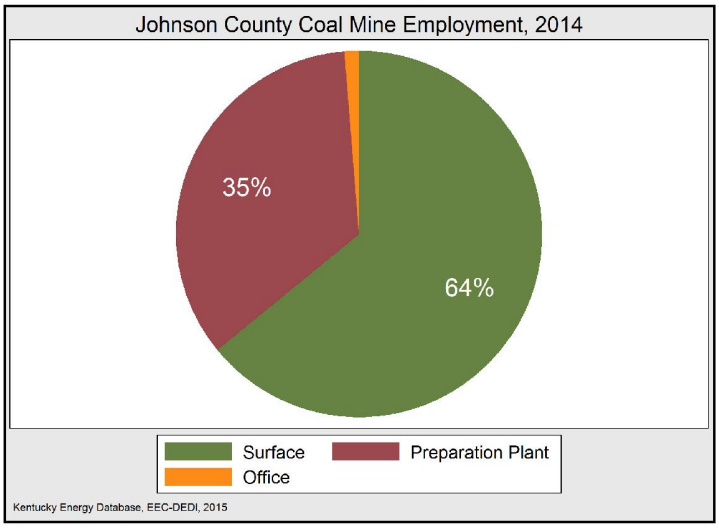
Chemical Composition and Cost

On average, coal mined in Hopkins County had a median sulfur content of 3.13 percent, a median ash content of 10.3 percent, and a median heat content of 23.35 MMBtu per ton. The average delivered price per ton for Hopkins County coal in 2014 was $65.12, and ranged from $39.82 to $99.00 per ton. The delivered price per MMBtu of coal from Hopkins County had a median of $2.63 per MMBtu and ranged from $1.81 to $4.01 per MMBtu. Other financial data for Hopkins County are confidential due to the small number of tax payers.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Johnson County

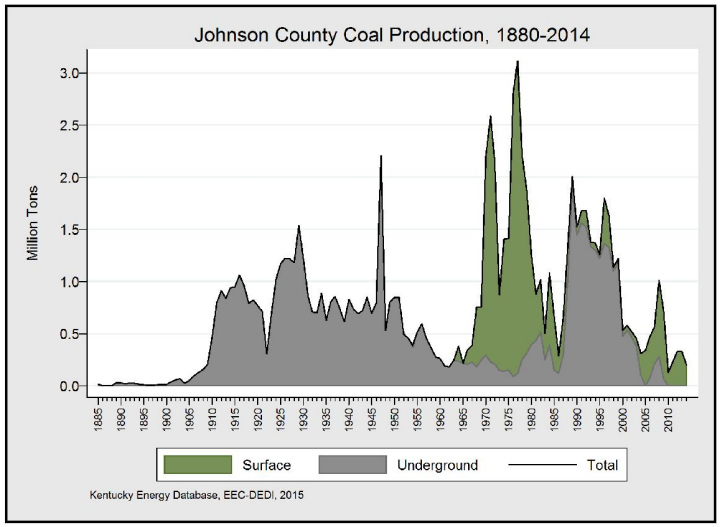


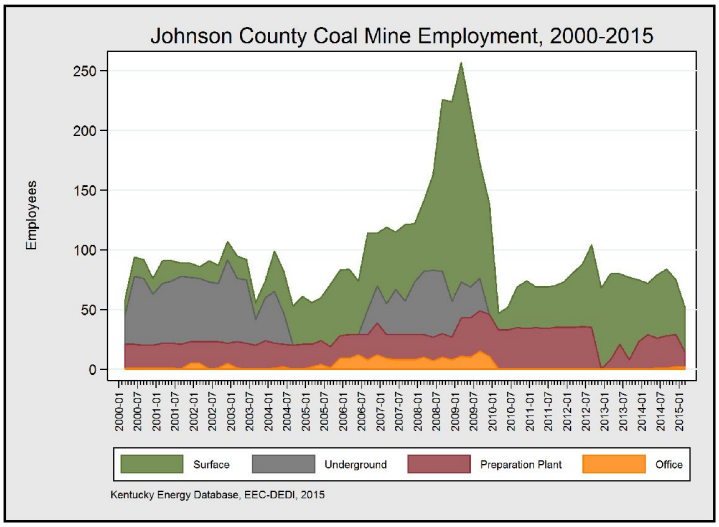


Production Method	Mines	Production	Annual Change
Total	4	203,359	-38.6%
Surface	4	203,359	-38.6%

On-Site Activity	Employment	Annual Change
Total	75	+0.0%
Surface	46	-11.5%
Preparation Plant	27	+17.4%
Office	2	—

Johnson County mined 203 thousand tons of coal in 2014, valued at $14.7 million. All of this coal was shipped to the Big Sandy Power Plant in neighboring Lawrence County.

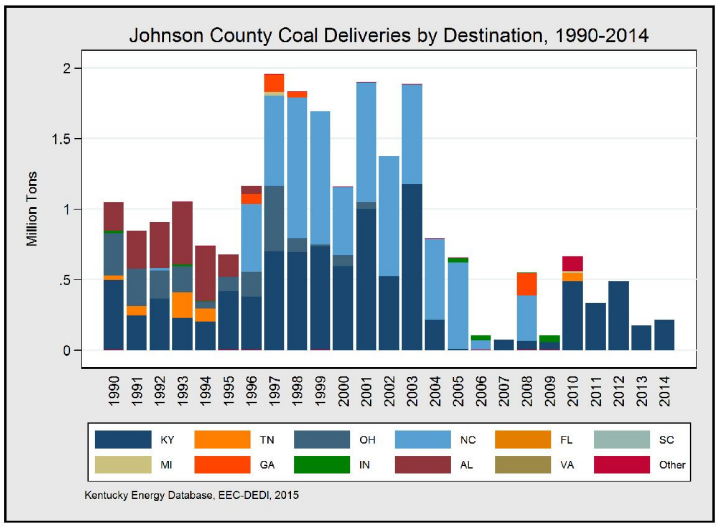




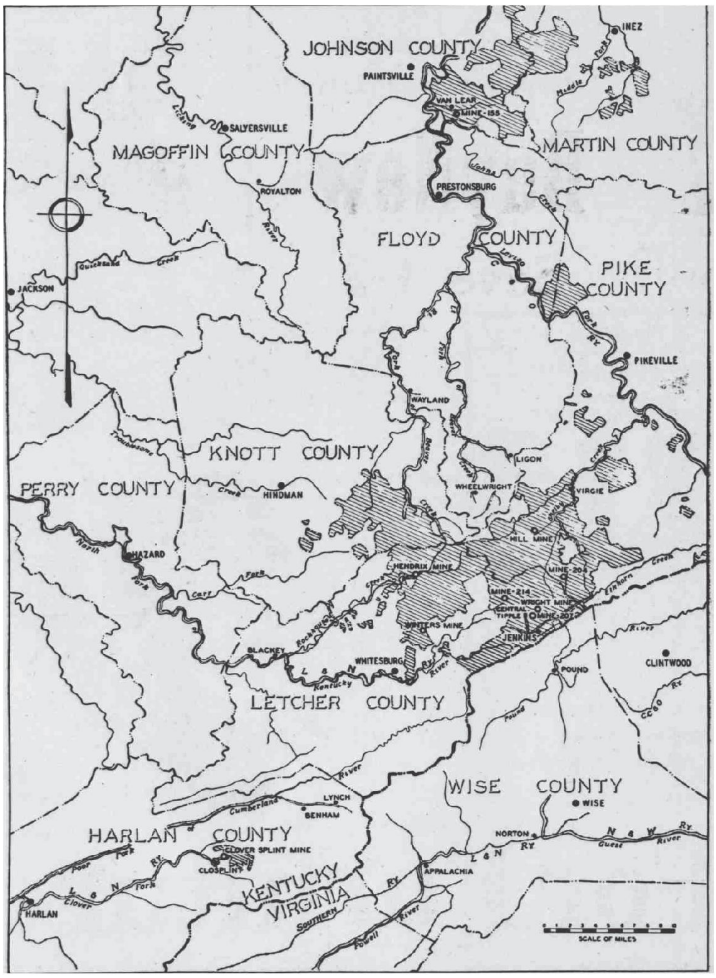
The earliest known commercial coal production in Johnson County was 169 tons in 1869. Underground coal production increased to one million tons by 1916 and peaked at 2.2 million tons in 1947. Total coal production peaked in 1977 at 3.1 million tons due largely to surface production. In all, Johnson County has produced 97 million tons of coal since 1869. Johnson County produces high quality coal with a median sulfur content of 0.95 percent and a median heat content of 24.13 MMBtu per ton.

In 1950, there were 2,465 people employed at coal mines in Johnson County. At the end of 2014, there were only 75 people employed in coal production in Johnson County, a decrease of 97 percent since 1950. At the beginning of 2015, the time of publication of this report, there were 51 people employed in coal production, a decrease of one-third from 2014. Unless new markets are identified, the closure of the Big Sandy Power Plant in 2015 will place significant negative pressure on demand for coal from Johnson County.

Johnson County



State and Power Plant	Deliveries (Tons)	Percentage
Total	**212,696**	**100%**
Kentucky	**212,696**	**100%**
Big Sandy†	212,696	100%



Picture: Properties Operated by Consolidation Coal Company, 1949 in The Mountain Eagle of Whitesburg, Kentucky. The above map displays mines in Johnson, Letcher, and Harlan counties and the mineral lands owned by the Consolidation Coal Company.

Johnson County Coal Market

The Big Sandy Power Plant in Louisa Kentucky, whose coal units are closing or converting to run on natural gas, has been the sole purchaser of Johnson County coal since 2011. In 2010, coal from the county was shipped to plants in West Virginia, Tennessee, and Michigan.

Johnson County Coal Mining Productivity

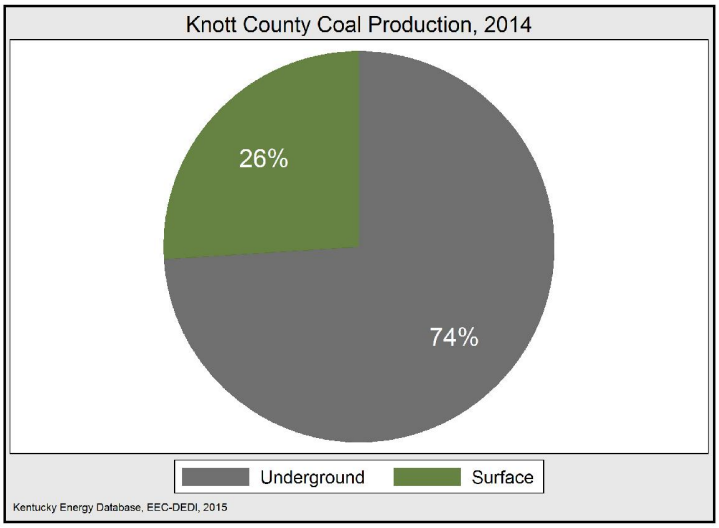
Johnson County's overall coal mining productivity in 2014 was 1.19 tons per labor hour, which is a decrease of 37 percent from 2013. Johnson County surface mines alone yielded 2.05 tons per labor hour, down from 2.44 tons per labor hour the year before.

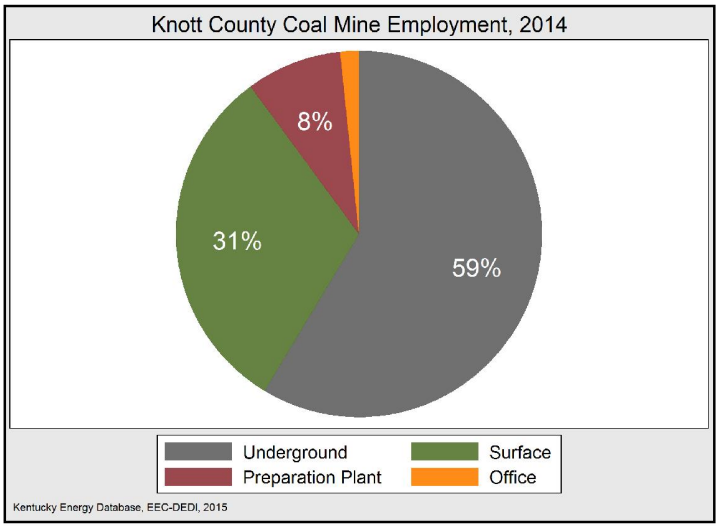
Chemical Composition and Cost

Coal mined in Johnson County had a median sulfur content of 1.17 percent, a median ash content of 10.6 percent, and a median heat content of 24.01 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $49.36, processing costs of $0.42, and transportation costs of $16.20. These costs resulted in a median delivered price per ton of $65.98—ranging from $64.74 to $78.99 per ton. The delivered price per MMBtu of coal from Knott County had a median of $2.74 per MMBtu and ranged from $2.69 to $3.22 per MMBtu.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Knott County

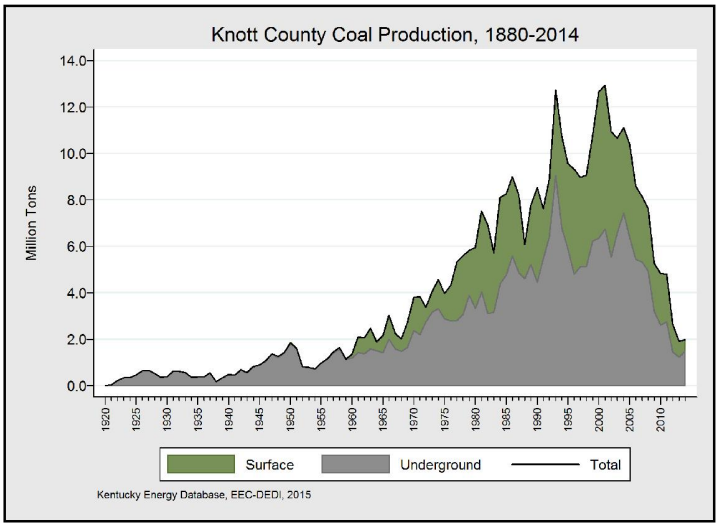


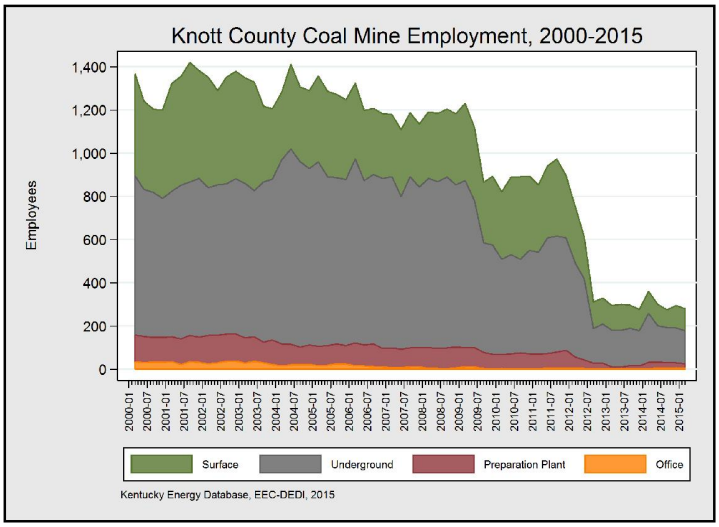


Production Method	Mines	Production	Annual Change
Total	10	1,990,109	+4.6%
Underground	3	1,472,629	+12.8%
Surface	7	517,480	-23.1%

On-Site Activity	Employment	Annual Change
Total	296	+6.9%
Underground	162	-1.2%
Surface	104	+6.1%
Preparation Plant	22	+69.2%
Office	8	+300.0%

Mines in Knott County increased coal production by nearly five percent from 2013 to produce more than 1.99 million tons of coal in 2014, valued at $191 million.

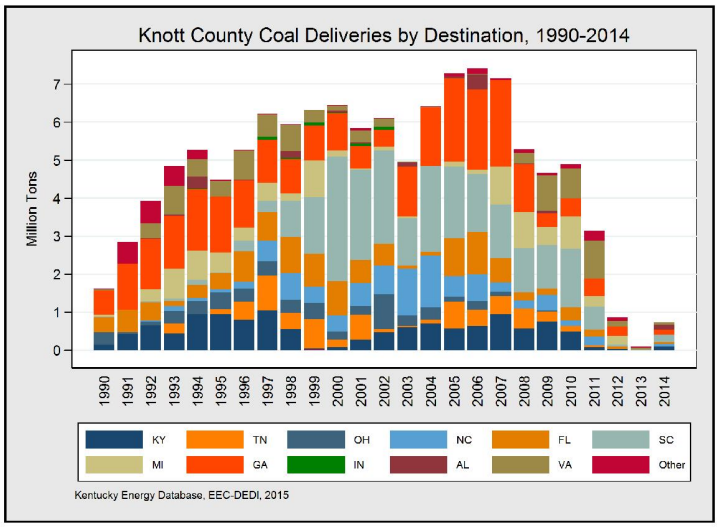


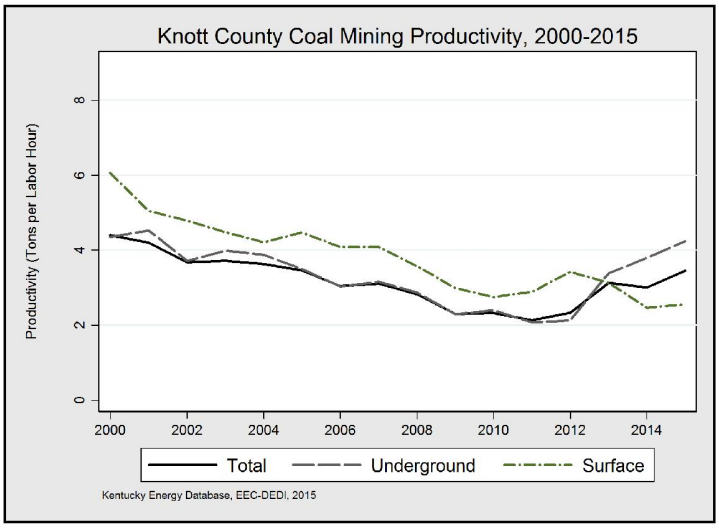


While the earliest-known coal production in Knott County was 1,158 tons in 1889, production did not begin in earnest in Knott County until 1921 when production increased from 34 thousand tons to one million in 1946 and peaked at 12.9 million in 2001. Coal production in Knott County has been on a steady trajectory of decline since 2001, decreasing by 85 percent through 2014. Over the past 125 years, Knott County has produced 380.3 million tons of coal, which is four percent of all coal ever mined in Kentucky.

Coal mines in Knott County employed an average of 296 persons full-time at the end of 2014. Coal mine employment in Knott County peaked at 1,817 in 1950, but as recently as 2004, there were over 1,412 coal miners in Knott County. Most coal miners in Knott County work underground. The largest employer in Knott County in 2014 is Alpha Natural Resources underground operation Mine #9A.

Knott County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**734,563**	**100%**
South Carolina	**188,034**	**25.6%**
Winyah	163,356	22.2%
Cross	24,678	3.4%
Georgia	**144,844**	**19.7%**
Bowen	85,687	11.7%
Harllee Branch†	38,030	5.2%
International Paper Augusta Mill	21,127	2.9%
Alabama	**124,456**	**16.9%**
E C Gaston†	124,456	16.9%
Kentucky	**89,090**	**12.1%**
E W Brown	89,090	12.1%
North Carolina	**71,859**	**9.8%**
James E. Rogers Energy Complex	59,559	8.1%
Marshall	12,300	1.7%
Virginia	**69,074**	**9.4%**
Chesterfield	69,074	9.4%
Florida	**47,206**	**6.4%**
Stanton Energy Center	47,206	6.4%

Knott County Coal Market

Knott County shipped 734 thousand tons to seven states in 2014, a marked increase from 2013, when the county shipped 95 thousand tons to five plants in five states. Nevertheless, coal shipments from the county have decreased by 86 percent since 2008.

Knott County Coal Mining Productivity

Knott County's productivity in 2014 was 3.1 tons per labor hour, a decrease of 16 percent from 2013, but an increase of more than 29 percent from the 2012. Underground mines in Knott County gained appreciably in productivity and were more productive than underground mines, yielding 3.8 tons per labor hour, from 2.38 tons per labor hours the year before.

Chemical Composition and Cost

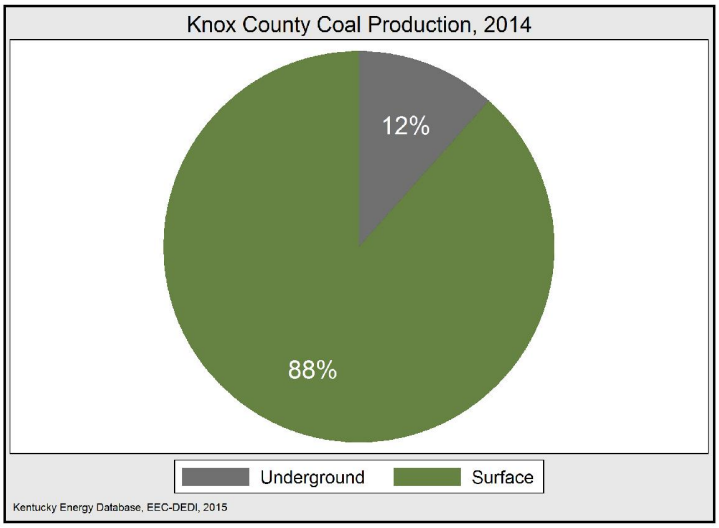
Coal mined in Knott County had a median sulfur content of 1.07 percent, a median ash content of 10.01 percent, and a median heat content of 25 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $52.77, processing costs of $3.55, and transportation costs of $28.04. These costs resulted in a median delivered price per ton of $84.36—ranging from $64.26 to $100.05 per ton. The delivered price per MMBtu of coal from Knott County had a median of $3.49 per MMBtu and ranged from $2.49 to $3.85 per MMBtu.

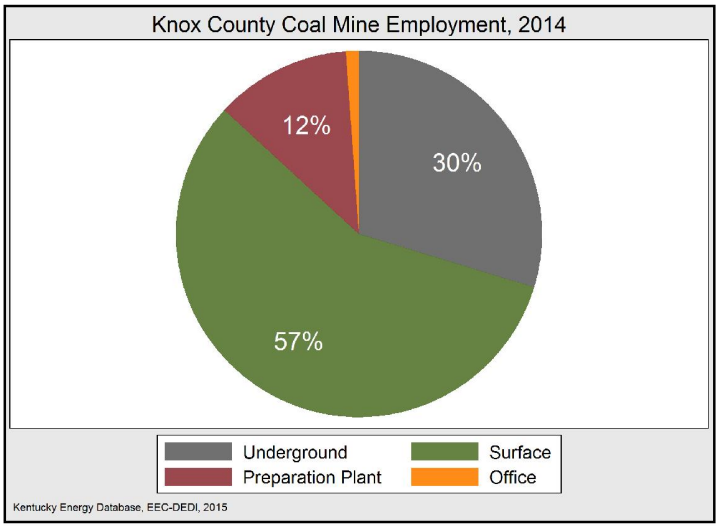
Coal Severance Taxes

Coal producers in Knott County paid $3,390,370 in coal severance taxes in 2014 and the county received $344,825.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Knox County

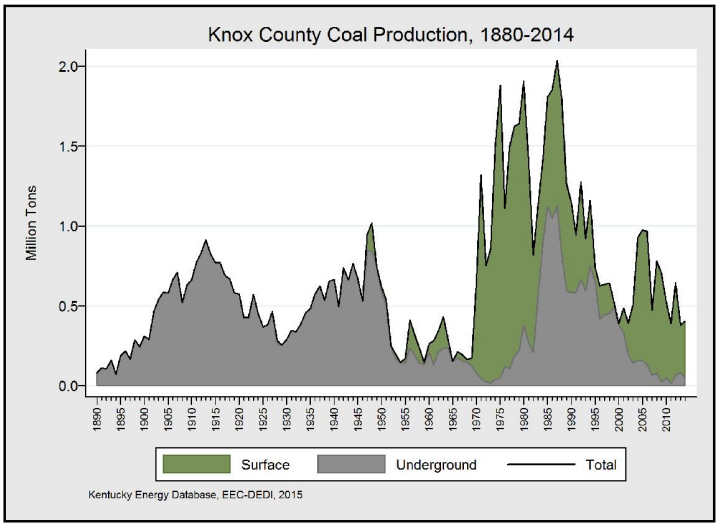


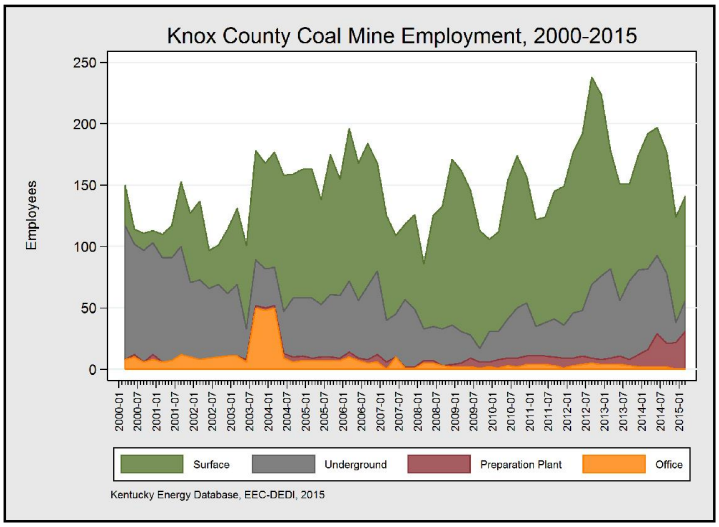


Production Method	Mines	Production	Annual Change
Total	10	404,407	+6.4%
Surface	7	357,554	+20.4%
Underground	3	46,853	-9.5%

Knox County produced 404,407 tons of coal in 2014 primarily from surface mining operations.

On-Site Activity	Employment	Annual Change
Total	124	-29.1%
Surface	86	-8.5%
Underground	22	+120.0%
Preparation Plant	16	-76.8%
Office	0	-100%

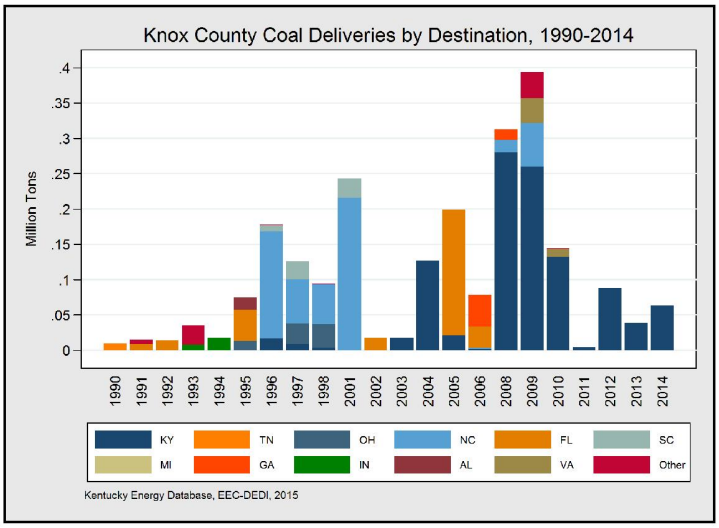


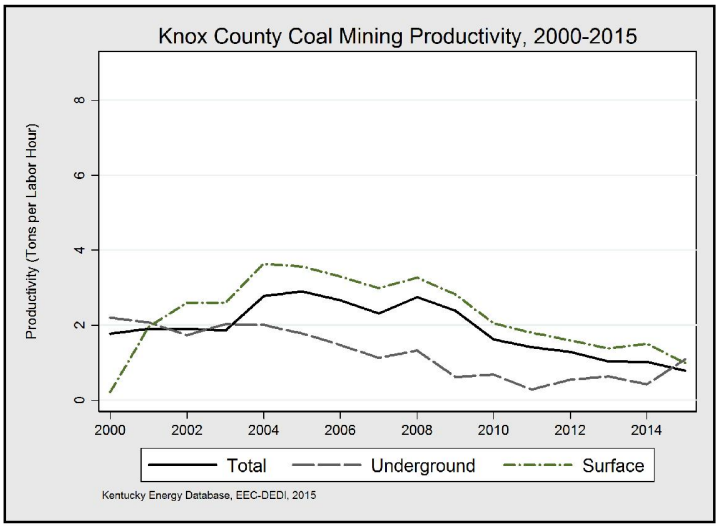


Coal production began in Knox County in 1890 with 80,105 tons and increased steadily to 912,589 tons in 1916. There were three periods of expansion contraction in Knox County coal production, which peaked in 1987 at two million tons and has declined by 80 percent through 2014.

Knox County coal mines employed 124 people at the end of 2014, down 45 percent from 224 miners in 2012. Most coal miners in Knox County work in surface operations. The largest employers were Flat Creek and Tinsley Branch mines and the Mountainside preparation plant. Coal mine employment in Knox County peaked in 1950 at 1,333 and has declined by 91 percent through 2014.

Knox County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**63,371**	**100%**
Kentucky	**63,371**	**100%**
Cooper	63,371	100%

Johnson County Coal Market

The John S. Cooper Power Plant has been the sole purchaser of Knox County coal since 2011.

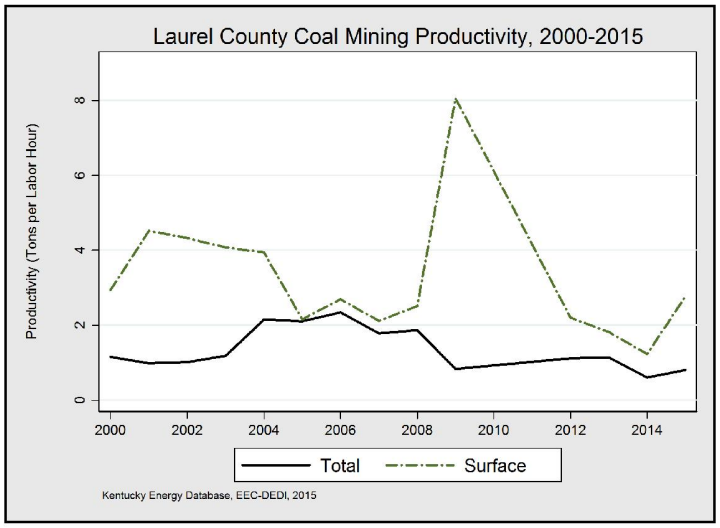
Knox County Coal Mining Productivity

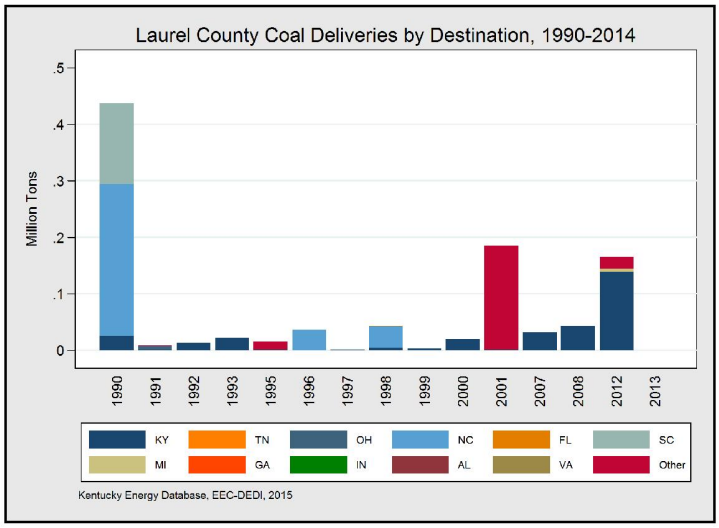
Knox County's overall coal mining productivity in 2014 was 1.02 tons per labor hour, which is a decrease of 12 percent from 2013. Knox County surface mines have continually been more productive than underground mining operations in the county since 2002. In 2014, surface mining operations in Knox county produced at a rate of 1.5 tons per labor hour while underground operations mined 0.43 tons per labor hour.

Chemical Composition and Cost

On average, coal mined in Knox County had a median sulfur content of 1.06 percent, a median ash content of 9.6 percent, and a median heat content of 25 MMBtu per ton. The average delivered price per ton for Knox County coal in 2014 was $75.37, and ranged from $71.85 to $77.05 per ton. The delivered price per MMBtu of coal from Knox County had a median of $3.06 per MMBtu and ranged from $3.01 to $3.06 per MMBtu.

Laurel County

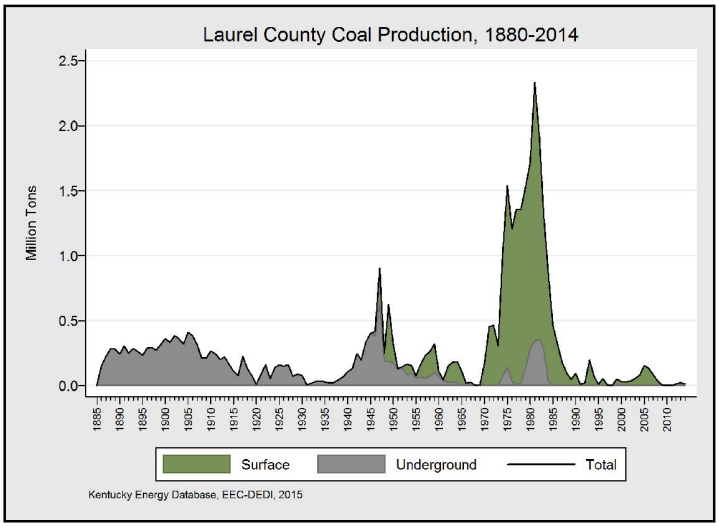


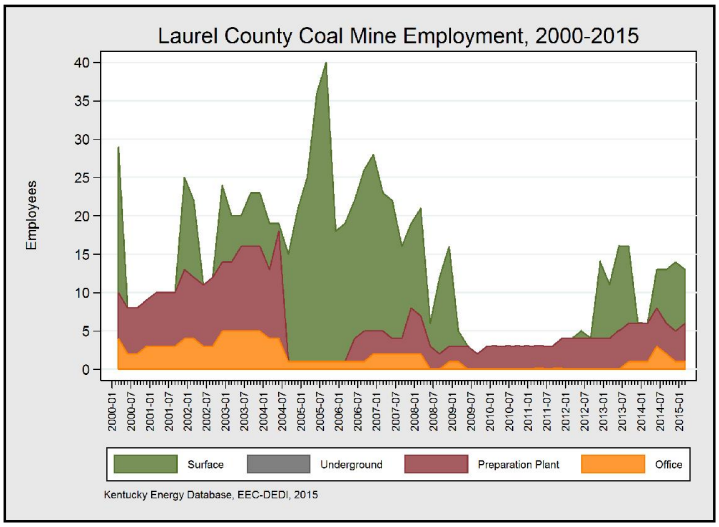


Production Method	Mines	Production	Annual Change
Total	3	12,185	-49.6%
Surface	3	12,185	-49.6%

On-Site Activity	Employment	Annual Change
Total	14	+133.3%
Surface	9	—
Preparation Plant	4	-20.0%
Office	1	+0.0%

Coal production stopped in Laurel County in 2010 and 2011, but small operations resumed in 2012. In 2014, the county produced 12,185 tons from surface mines.

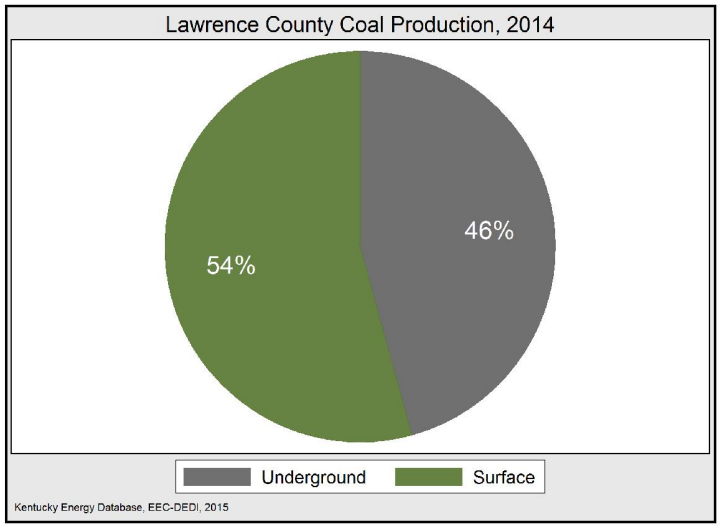


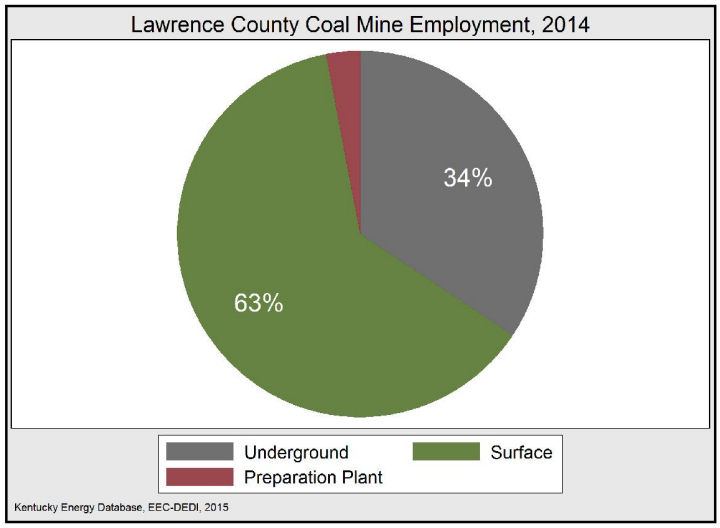


Coal production began in Laurel County in 1886 and peaked at 2.3 million tons in 1981. Since 1886, a total of 36.4 million tons of coal has been mined in Laurel County.

The three small mines in Laurel County employed a total of nine coal miners at the end of 2014, who worked on the surface in strip or auger operations and four people were employed in the preparation plant.

Lawrence County

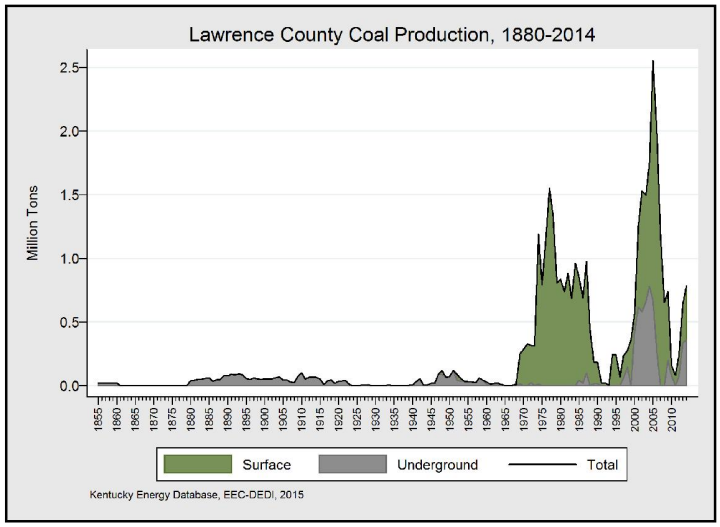


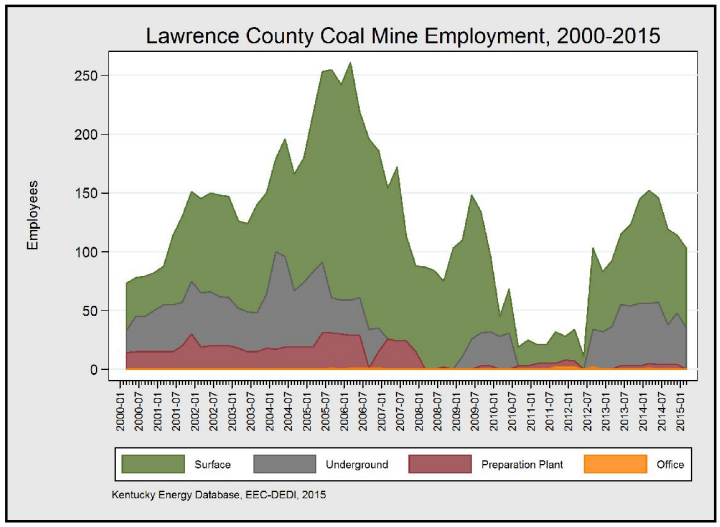


Production Method	Mines	Production	Annual Change
Total	7	783,698	+21.7%
Surface	1	425,343	+38.1%
Underground	6	358,355	+3.5%

On-Site Activity	Employment	Annual Change
Total	114	-21.4%
Surface	66	-25.8%
Underground	44	-17.0%
Preparation Plant	4	+33.3%

In 2014, Lawrence County mined 783,698 tons of coal, valued at $54.5 million, from seven surface and underground mining operations.

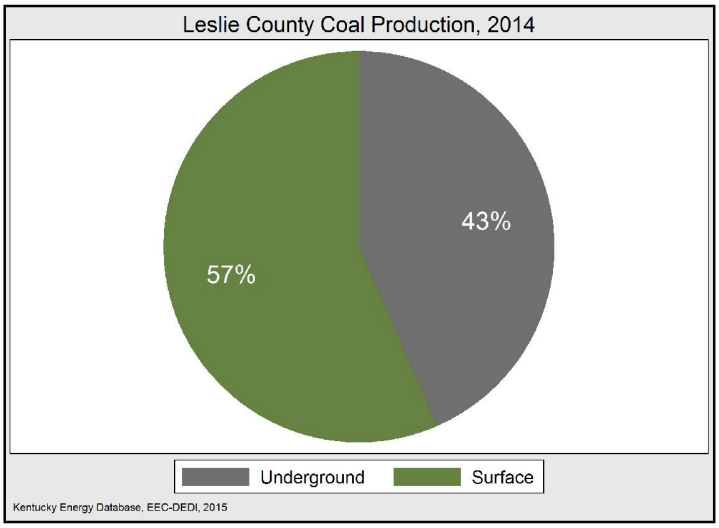


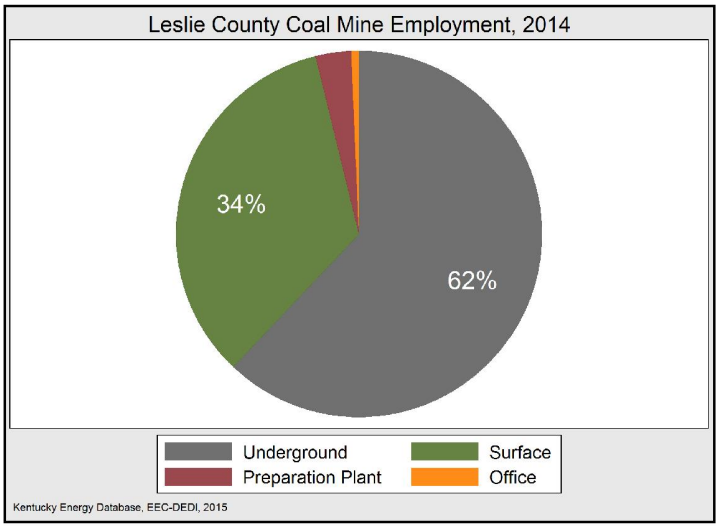


In 1838, the first commercial coal mine in Lawrence County produced 200 tons of coal. While very small underground mines in the county continued to produce coal throughout the 19th Century, it was not until 1894 that the cumulative sum of coal mined in the county would reach one million tons. Annual coal production reached one million tons in 1974 with the advent of large-scale surface mining. Coal production peaked in 2005 at 2.6 million tons.

Coal mine employment in Lawrence County decreased by 21 percent in 2014 to 114 full-time workers, including 66 surface and 44 underground miners. On average, surface mines in Lawrence County were the largest mining employer, followed by underground operations. While average productivity at underground mines in Lawrence County was 2.54 tons per hour in 2014, productivity at surface mining operations was 2.17 tons per labor hour, and productivity at underground mines was 3.47 tons per hour.

Leslie County

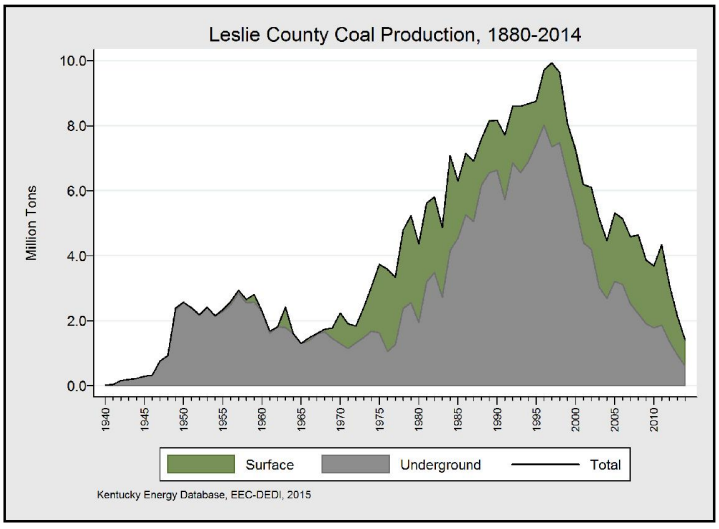


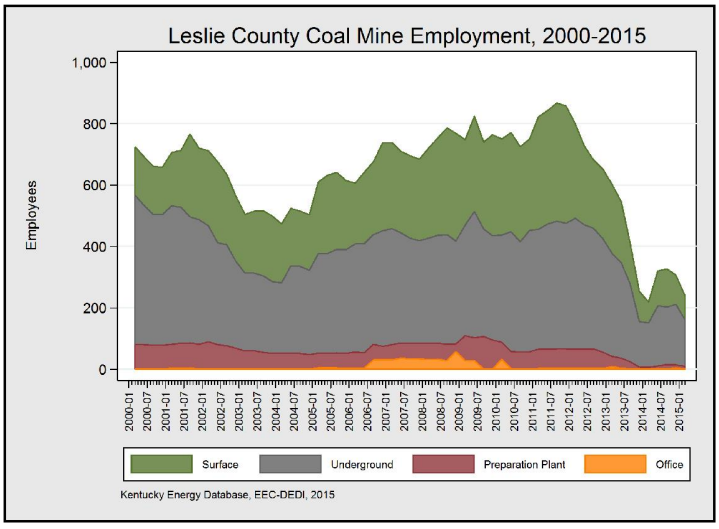


Production Method	Mines	Production	Annual Change
Total	8	1,403,285	-34.3%
Surface	5	793,568	-33.1%
Underground	3	609,717	-15.9%

On-Site Activity	Employment	Annual Change
Total	307	+20.9%
Underground	196	+31.5%
Surface	96	-2.0%
Preparation Plant	10	+150.0%
Office	5	+66.7%

In 2014, Leslie County mined 1.4 million tons of coal, which was valued at $155 million.

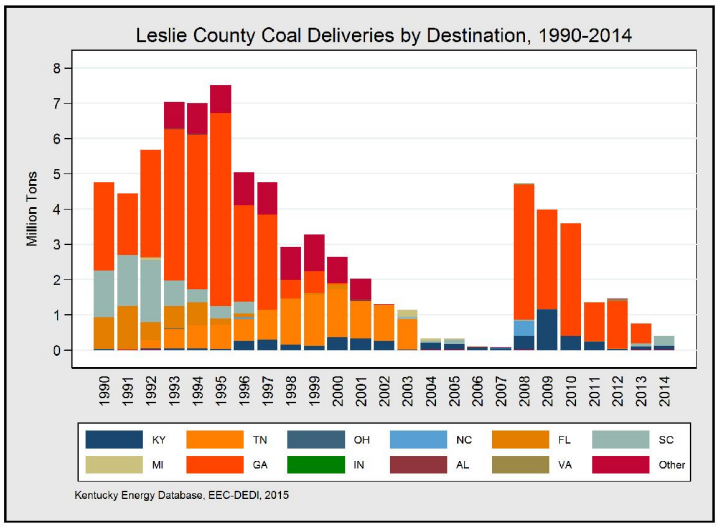


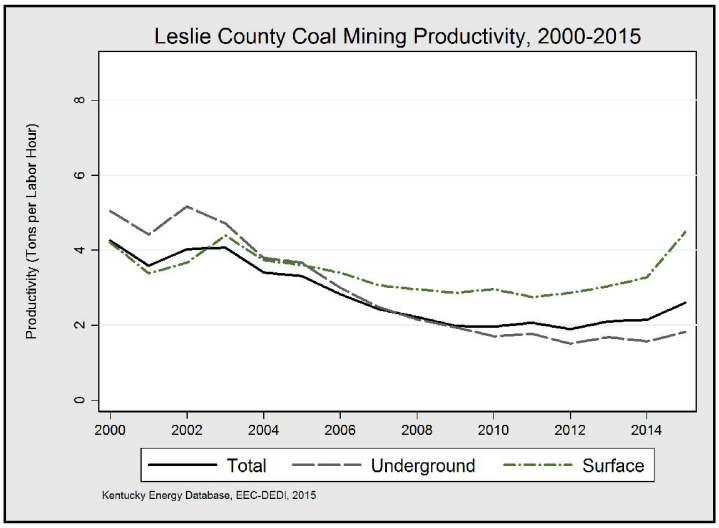


Leslie County did not begin commercial coal production until 1933 with 840 tons, much later than most coal producing counties. During this relatively short coal-mining history, Leslie County has produced more than 299 million tons of coal, or three percent of all coal ever mined in Kentucky. While production in Leslie County in 2014 was 57 percent from surface mining, most of the county's historical production was from underground operations.

Coal mine employment in Leslie County increased by 20 percent in 2014 to 307, but declined by 22 percent in early 2015 to 238. Most coal miners in 2014, 62 percent, worked in underground coal mines. Coal mine employment in Leslie County peaked at 2,267 in 1957, which was equivalent to 20 percent of the entire county population. Coal mine employment has declined by 90 percent through 2015.

Leslie County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**398,116**	**100%**
South Carolina	**269,201**	**67.6%**
Winyah	243,454	61.2%
Cross	25,747	6.5%
Kentucky	**115,242**	**28.9%**
Cooper	115,242	28.9%
Tennessee	**8,639**	**2.2%**
Cumberland	8,639	2.2%
Alabama	**5,034**	**1.3%**
Colbert†	5,034	1.3%

Leslie County Coal Market

398 thousand tons of coal mined in Leslie County was delivered to five power plants in four different states in 2014, a decrease of 47 percent compared with 2013. Two-thirds of coal shipped from Leslie County in 2014 went to South Carolina.

Leslie County Coal Mining Productivity

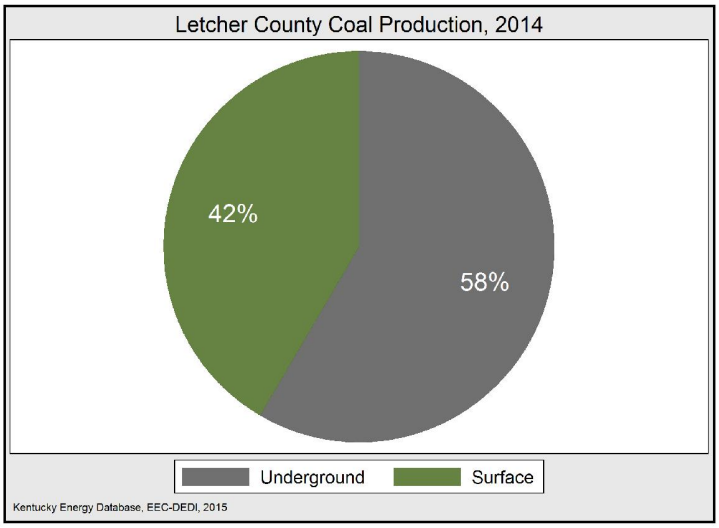
Average mine productivity in Leslie County was 2.15 tons per labor hour in 2014. Overall, county-level productivity was boosted by surface operations, which has been rising since 2011, and averaged 3.28 tons per labor hour. In 2014, underground mines yielded 1.56 tons per labor hour, a decrease from 1.68 the year before.

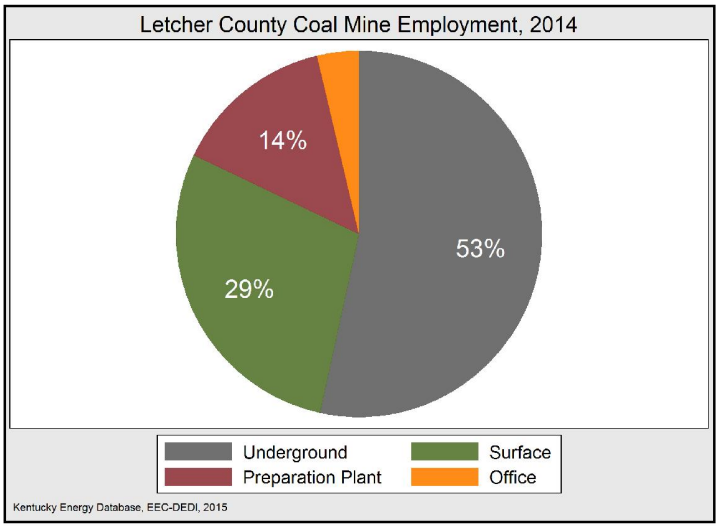
Chemical Composition and Cost

Coal mined in Leslie County had a median sulfur content of 1.2 percent, a median ash content of 9.8 percent, and a median heat content of 24.91 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $54.81, processing costs of $6.01, and transportation costs of $15.65. These costs resulted in a median delivered price per ton of $76.47—ranging from $67.46 to $91.98 per ton. The delivered price per MMBtu of coal from Leslie County had a median of $3.22 per MMBtu and ranged from $2.81 to $3.68 per MMBtu.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Letcher County

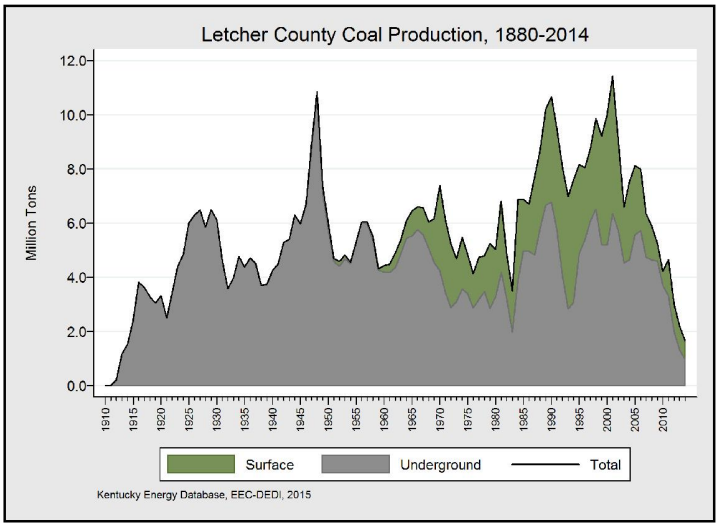


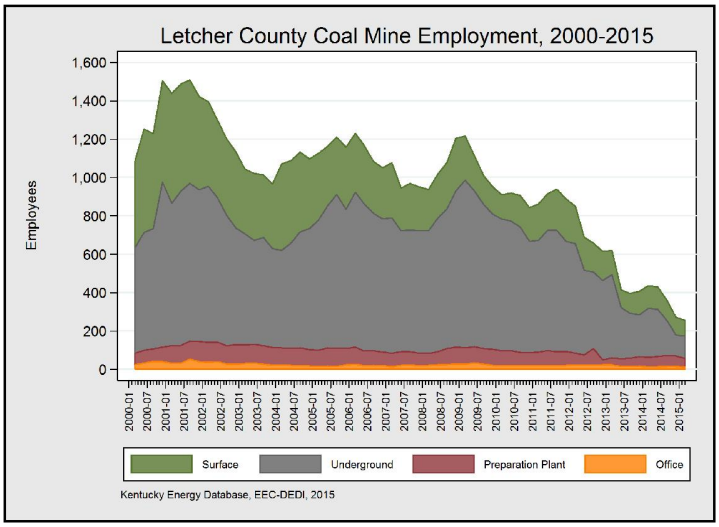


Production Method	Mines	Production	Annual Change
Total	17	1,648,782	-25.5%
Underground	6	963,537	-16.8%
Surface	11	685,245	-22.1%

On-Site Activity	Employment	Annual Change
Total	271	-33.4%
Underground	110	-49.8%
Surface	92	-24.6%
Preparation Plant	54	+10.2%
Office	15	-11.8%

In 2014, the 17 coal mines in Letcher County produced nearly 1.7 million tons of coal, which was valued at $227 million after processing.

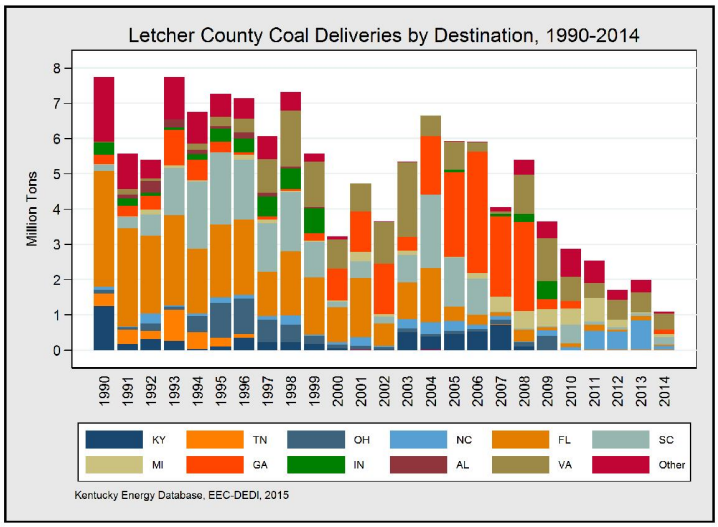


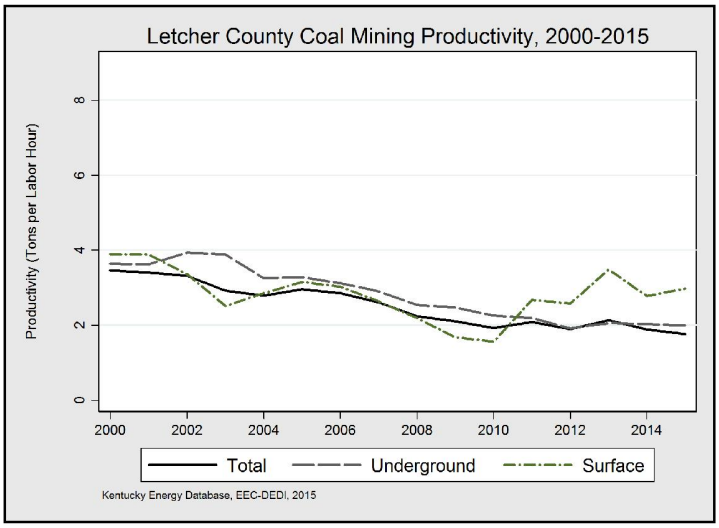


Coal production began in 1889 in Letcher County with 1,573 tons. In the 125 years since 1889, Letcher County has produced more than 588 million tons of coal, six percent of all coal ever mined in Kentucky. In 2014, coal production in Letcher County declined to 1.65 million tons, a decrease of 26 percent since 2013, and a decrease of 86 percent since peak production in 2001 at 11.4 million tons. As it has historically, production in Letcher County continues to come primarily from underground coal mines.

Coal mine operations in Letcher County employed 271 people full-time at the end of 2014, a net loss of one-third of all mining jobs compared to the year prior. Just over half of these workers worked underground. Coal mine employment has declined by 82 percent since the year 2000, when employment reached 1,505. Coal mine employment peaked in 1949 at 9,114 full time miners in Letcher County, which was equivalent to almost one-quarter of the county's population at that time.

Letcher County





Total	**1,094,741**	**100%**
Virginia	**468,244**	**42.8%**
Covington Facility†	332,141	30.3%
Chesterfield	90,072	8.2%
Yorktown†	46,031	4.2%
South Carolina	**198,210**	**18.1%**
Cope	137,928	12.6%
Williams	37,923	3.5%
W S Lee†	22,359	2.0%
Georgia	**111,701**	**10.2%**
Bowen	111,701	10.2%
Michigan	**96,962**	**8.9%**
J H Campbell	35,257	3.2%
Monroe	26,348	2.4%
River Rouge	22,868	2.1%
B C Cobb†	12,489	1.1%
North Carolina	**96,892**	**8.9%**
James E. Rogers Energy Complex	96,774	8.8%
Marshall	118	0.0%
Maryland	**58,456**	**5.3%**
Morgantown Generating Plant	58,344	5.3%
Chalk Point LLC†	112	0.0%
Florida	**47,419**	**4.3%**
Deerhaven Generating Station	37,189	3.4%
Stanton Energy Center	10,230	0.9%
Tennessee	**16,857**	**1.5%**
Tennessee Eastman Operations†	16,857	1.5%

Letcher County Coal Market

Nearly 1.1 million tons of coal mined in Letcher County was shipped to power plants in seven different states during 2014. Virginia and South Carolina were the two largest markets for Letcher County coal in 2014, consuming over 60 percent of coal from the county. Six coal plants, which received 39 percent of Letcher County coal in 2014, have announced coal unit retirements.

Letcher County Coal Mining Productivity

Average coal mine productivity in Letcher County was 1.88 tons per hour in 2014. While underground operations had productivity of 2.03 tons per hour and represented 58 percent of county production, surface operations were more efficient at 2.78 tons per hour.

Chemical Composition and Cost

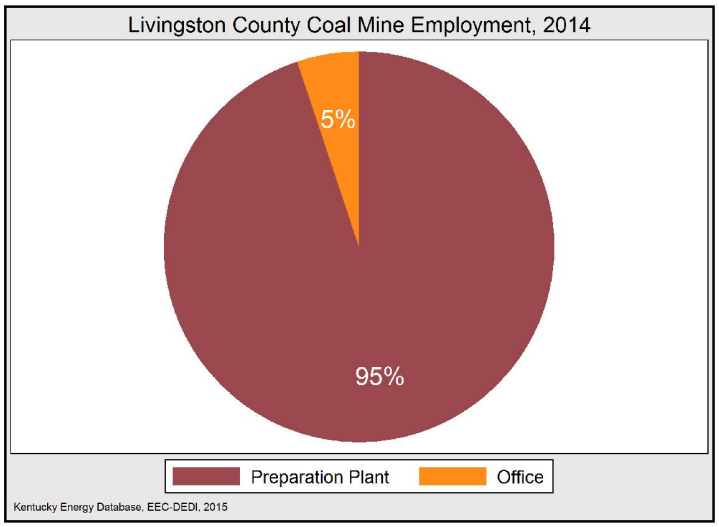
Letcher County produces very high quality coal. Coal mined in Letcher County had a median sulfur content of 1.12 percent, a median ash content of 8.7 percent, and a median heat content of 25.54 MMBtu per ton. On average, the mine-mouth cost of extracting coal in the county in 2014 was $62.13, processing costs of $2.06, and transportation costs of $23.45. These costs resulted in a median delivered price per ton of $87.64—ranging from $66.94 to $116.59 per ton. The median delivered price per MMBtu was $3.51 per MMBtu and ranged from $2.87 to $4.66.

Coal Severance Taxes

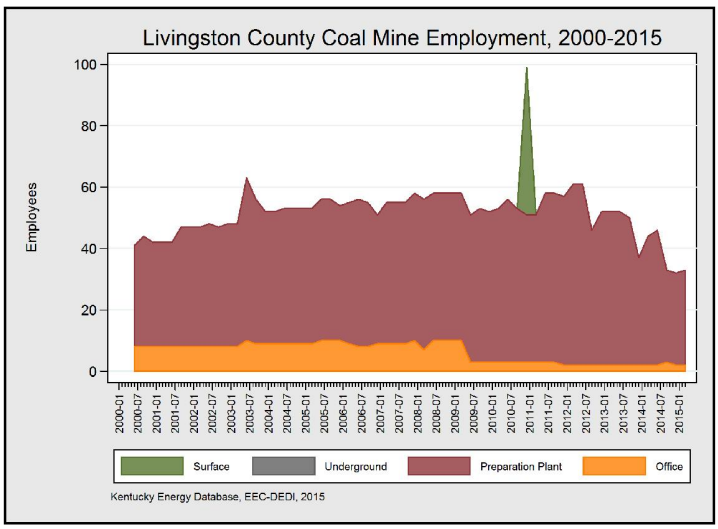
Coal producers in Letcher County paid $7,883,665 in coal severance taxes and the county received $955,887.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Livingston County



On-Site Activity	Employment	Annual Change
Total	32	-28.8%
Preparation Plant	30	-30%
Office	2	0%



Pictured above: The Grand River Terminal in Livingston, County

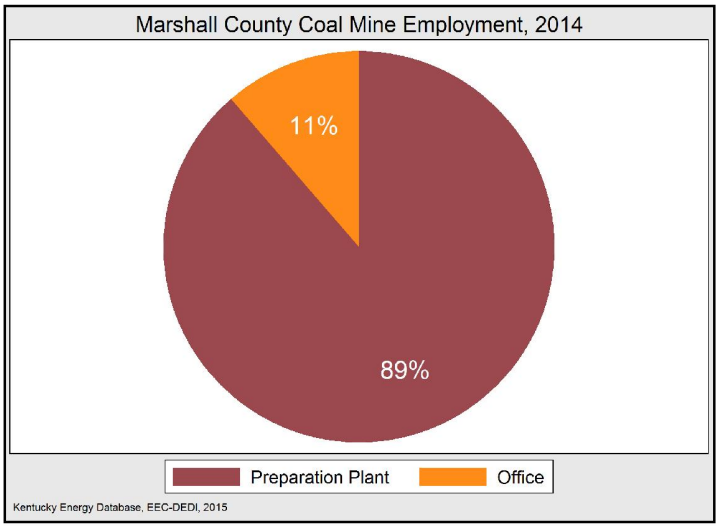
State and Power Plant	Deliveries (Tons)	Percentage
Total	**2,753**	**100%**
Illinois	**2,753**	**100%**
Marion	2,753	100%

Livingston County Coal Shipments

Although Livingston County—in western Kentucky northeast of Paducah—has never registered coal production, its location on Kentucky Lake and near the Ohio River southwest of many of Kentucky's coal producing counties make it a good location to process and ship coal. During 2014, coal preparation and transportation facilities in Livingston County supported 32 full-time employees. 30 of these individuals operated coal preparation plants, cleaning and loading coal for delivery to electric utilities. Two people were employed in office capacities, in direct support of preparation plants. The county shipped 2.7 thousand tons of coal to Marion Plant, in Illinois among other locations.

Marshall County

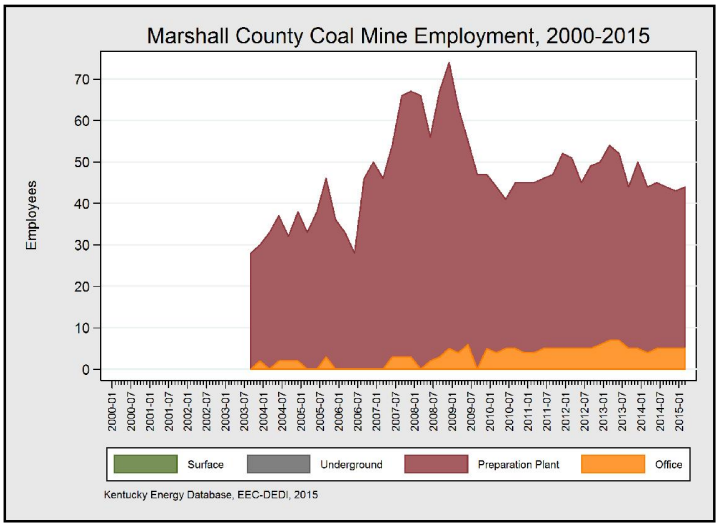
Pictured above: The Calvert City Terminal in Marshall County.



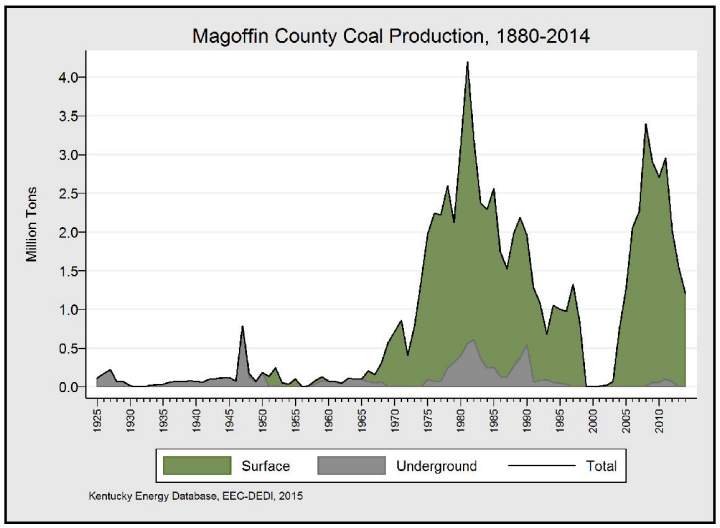
On-Site Activity	Employment	Annual Change
Total	43	-14.0%
Preparation Plant	38	-15.6%
Office	5	+0.0%

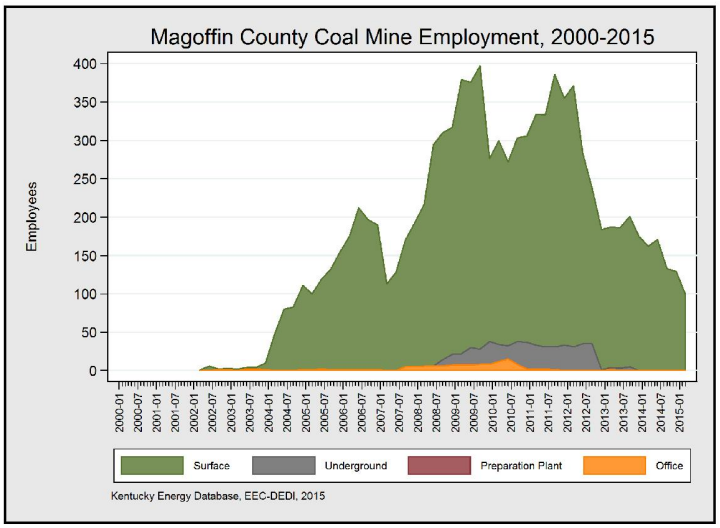
Marshall County Coal Mining Employment

Marshall County, in western Kentucky, has never mined coal. However, the coal mining operations in Marshall County on the Ohio River near Calvert City do prepare and ship coal from neighboring coal-producing counties. During 2014, coal preparation and transportation facilities in Marshall County supported 43 full-time employees. 38 of these individuals operated coal preparation plants, cleaning and loading coal for delivery to electric utilities. Around five people were employed in office capacities, in direct support of preparation plants.



Magoffin County





Production Method	Mines	Production	Annual Change
Total	4	1,204,438	-22.4%
Surface	4	1,204,438	-22.4%

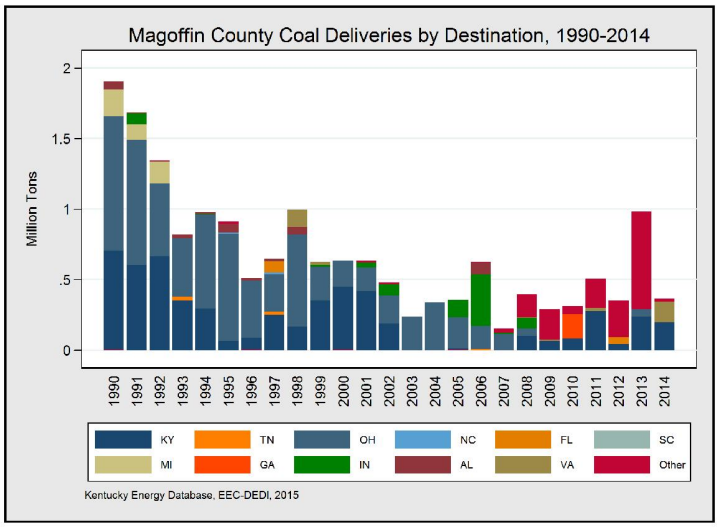
On-Site Activity	Employment	Annual Change
Total	129	-26.3%
Surface	129	-26.3%

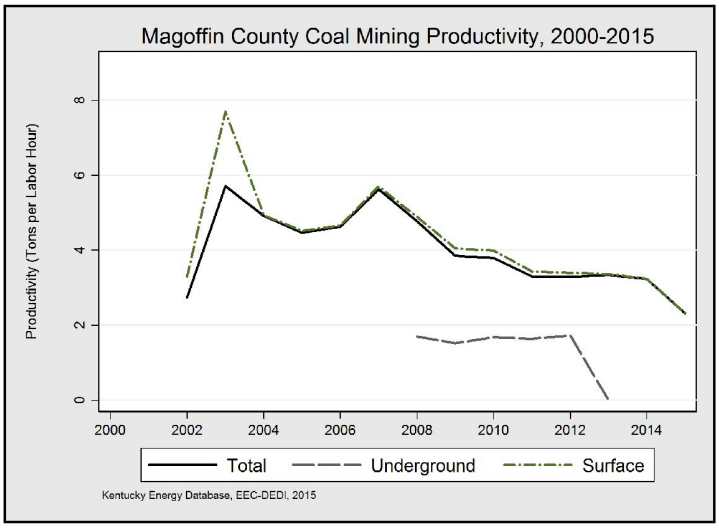
Magoffin County, in eastern Kentucky, has continued to have vast fluctuations in its coal mine production and employment since the 1960s. The first-recorded commercial coal production in Magoffin County was 5,404 tons in 1889. In the 125 years since, Magoffin County has recorded nearly 80 million tons of coal. Throughout its history, coal production in Magoffin County has fluctuated substantially, with coal production decreasing from peak production of 4.2 million tons in 1981 to zero by 1999 and recovering to 3.4 million by 2008. The four producing mines in Magoffin County in 2014 mined 1.2 million tons of coal, a decrease of 22 percent from 2013.

In the year 2000, many areas of Magoffin County were considered mined-out, and no longer supported productive mine operations. However, a substantial increase in the market price of coal starting in 2002 changed the economics of mining in Magoffin County, and new mines were developed on less productive seams. As coal prices have declined, so too has production and employment. In 2014, there were 129 production workers, a decrease of 26 percent from the year prior.

Pictured: Kentucky Coal Facts authors Aron Patrick and Adam Blandford exploring a Kentucky coal mine 900 feet underground.

Magoffin County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**365,857**	**100%**
Kentucky	**199,133**	**54.4%**
Big Sandy†	186,382	50.9%
Ghent	12,751	3.5%
Virginia	**142,522**	**39.0%**
Chesterfield	130,652	35.7%
Yorktown†	11,870	3.2%
West Virginia	**24,202**	**6.6%**
Mitchell	24,202	6.6%

Magoffin County Coal Market

Coal deliveries from Magoffin County decreased by 63 percent in 2014, relative to the year prior. In 2013, Magoffin County registered its highest level of coal shipments during the last five years, but because most coal shipments went to the Mitchell Power Plant in West Virginia, the majority of coal demand was lost when the plant drastically decreased coal shipments from the county in 2014. The majority of coal from Magoffin County was shipped to the Big Sandy Power Plant of Kentucky, which is closing its coal-fired generators.

Magoffin County Coal Mining Productivity

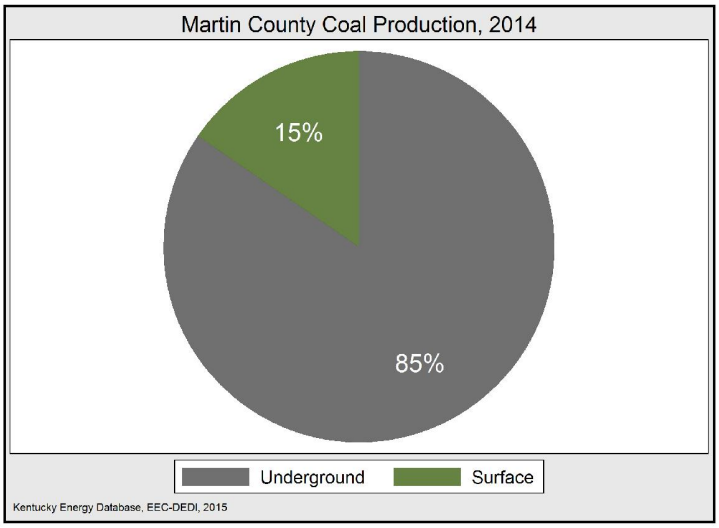
At 3.23 tons per labor hour, average coal mine productivity in Magoffin County was the seventh highest in Kentucky and the third highest of any county in eastern Kentucky in 2014. This level of productivity was influenced entirely by surface mine operations, which represented all coal production in Magoffin County in 2014. Production in the county decreased from 3.34 tons per labor hour in 2013.

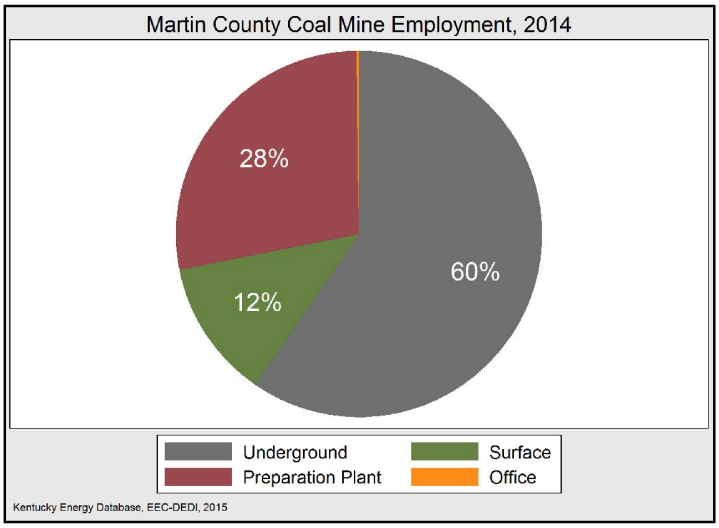
Chemical Composition and Cost

On average, coal mined in Magoffin County had a median sulfur content of 0.98 percent, a median ash content of 11.5 percent, and a median heat content of 23.97 MMBtu per ton. The average delivered price per ton for Magoffin County coal in 2014 was $75.25, and ranged from $51.55 to $104.74 per ton. The delivered price per MMBtu of coal from Magoffin County had a median of $3.06 per MMBtu and ranged from $2.17 to $4.05 per MMBtu.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Martin County

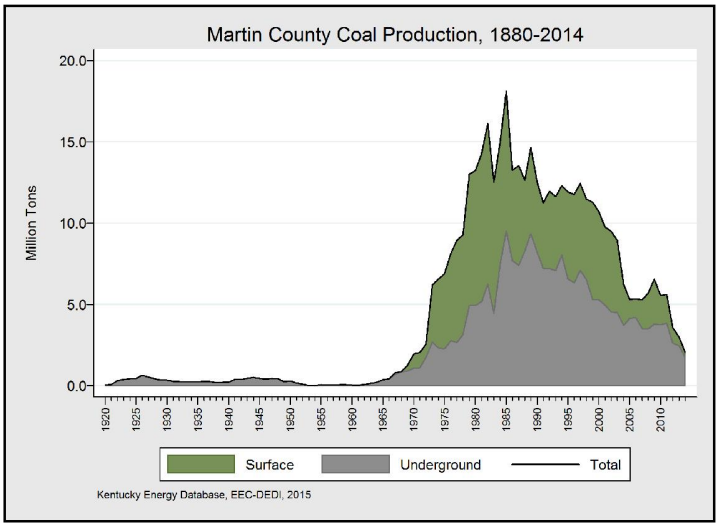


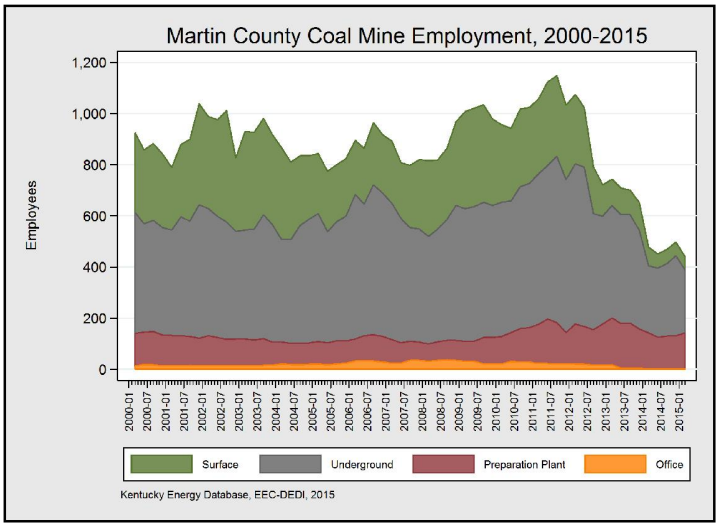


Production Method	Mines	Production	Annual Change
Total	7	2,043,375	-31.6%
Underground	3	1,728,535	-24.4%
Surface	4	314,840	-40.8%

On-Site Activity	Employment	Annual Change
Total	497	-23.8%
Underground	312	-19.0%
Preparation Plant	131	-14.4%
Surface	53	-51.4%
Office	1	-80.0%

Three underground mines and four surface mines produced 2.0 million tons of coal in Martin County in 2014, valued at $58 million and a decrease of 31.6 percent from 2013.

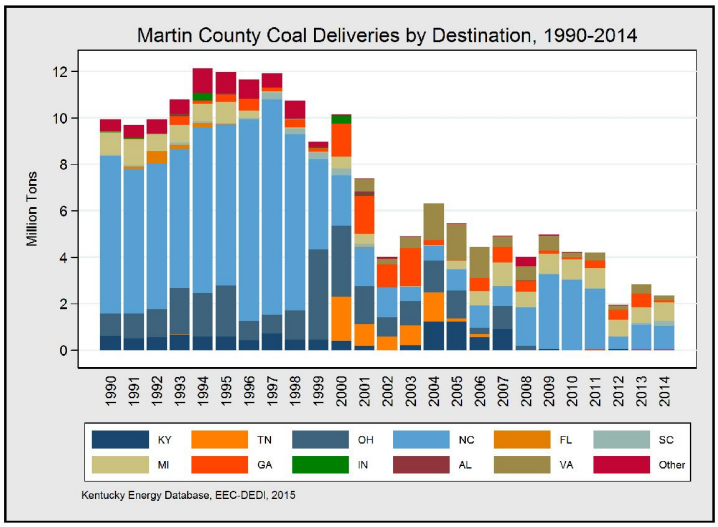


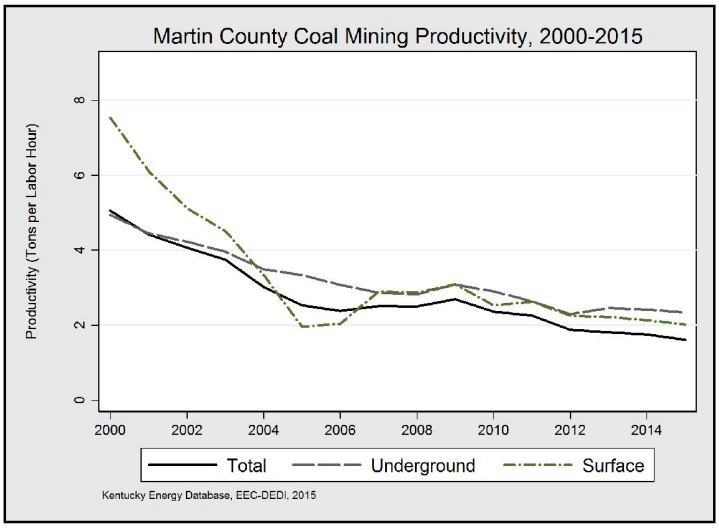


Coal production in Martin County was recorded as early as 1879 at 56 tons. It was not until the First World War that production would be recorded annually when Martin County mined 56,091 tons in 1918. In 1969, the county produced over one million tons for the first time and coal production began to rapidly increase, peaking in 1985 at 18 million tons. Coal production has declined by 89 percent through 2014. Through 2014, Martin County has mined 436 million tons, the eighth most of any Kentucky county.

Coal mines in Martin County directly employed 497 people full-time at the end of 2014, a decrease of 24 percent from 2013 and of 57 percent from 2011. The majority of coal miners in Martin County have been employed in underground operations. Additionally, 131 people worked in coal preparation plants, 53 people worked in surface mining operations, and one individual supported mine operations in office capacities. The Jim Booth Number 1 Mine is the largest coal producer and employer in the county.

Martin County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**2,342,810**	**100%**
North Carolina	**1,035,704**	**44.2%**
Roxboro	765,099	32.7%
Marshall	114,017	4.9%
Mayo	101,042	4.3%
Belews Creek	34,919	1.5%
G G Allen	20,627	0.9%
Michigan	**780,157**	**33.3%**
Monroe	780,157	33.3%
South Carolina	**222,909**	**9.5%**
McMeekin†	176,755	7.5%
Wateree	33,396	1.4%
Williams	12,758	0.5%
Virginia	**205,399**	**8.8%**
Clover	194,259	8.3%
Chesapeake†	11,140	0.5%
Georgia	**98,641**	**4.2%**
Harllee Branch†	85,904	3.7%
Wansley	12,737	0.5%

Martin County Coal Market

Steam coal shipments from Martin County decreased by 18 percent between 2013 and 2014. In total, 2.3 million tons of coal mined in Martin County was shipped to power plants in 2014. The Roxboro Steam Plant of Semora, North Carolina, and The Monroe Power Plant of Monroe, Michigan received almost 66 percent of Martin County coal in 2014.

Martin County Coal Severance Taxes

Coal producers in Martin County paid $1,406,826 in coal severance tax revenues on the $58 million dollars of coal sold. Of this amount, $402,881 was returned to the Martin County Government.

Martin County Coal Mining Productivity

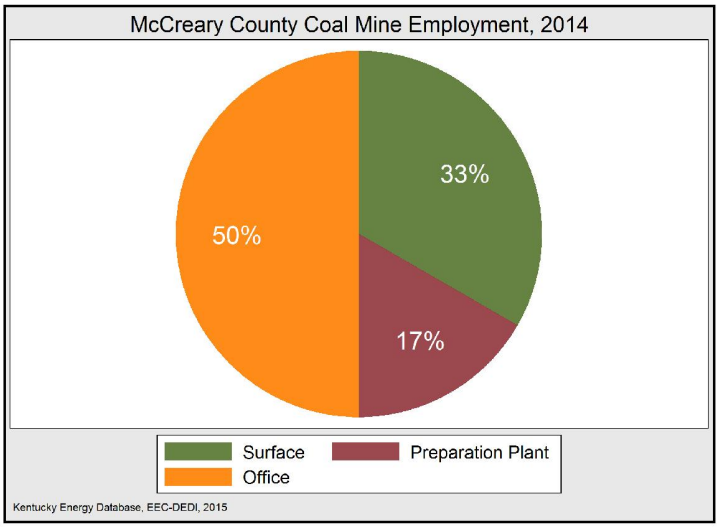
Since, 2000, Martin County coal mine productivity has declined steadily, which has increased the costs of coal production, and decreased cost-competiveness versus alternative sources of energy. Martin County's productivity in 2014 was 1.75 tons per labor hour, a decrease of greater than 65 percent from the year 2000. In 2014, underground mines in Martin County were more productive than surface mines—2.42 tons per hour compared to 2.13 tons per hour. However, the productivity of surface mines in Martin County has fluctuated substantially over time, compared to the relative stability of underground operations.

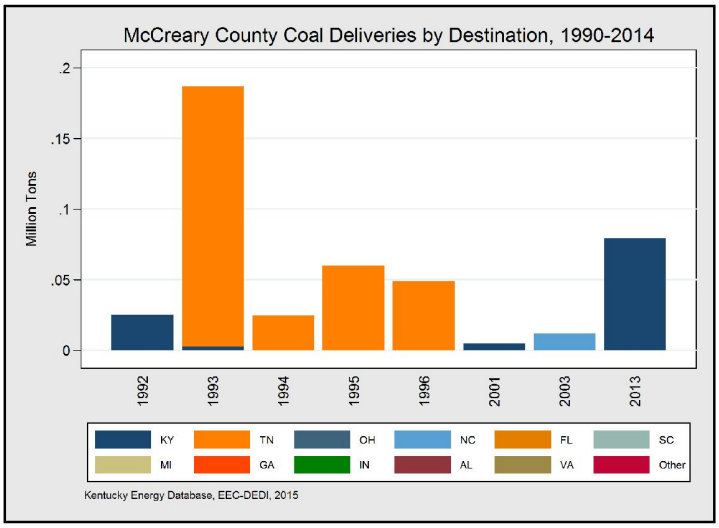
Chemical Composition and Cost

Martin County produces some of highest-grade coal in Kentucky, third to Bell and Knox counties. Coal mined in Martin County had a median sulfur content of 0.92 percent, a median ash content of 9.7 percent, and a median heat content of 24.69 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $52.21, processing costs of $6.32, and transport costs of $27.94. These costs resulted in a median delivered price per ton of $86.47—from $60.35 to $111.13 per ton. The delivered price per MMBtu of coal from Martin County had a median of $3.50 per MMBtu and ranged from $2.39 to $4.60 per MMBtu.

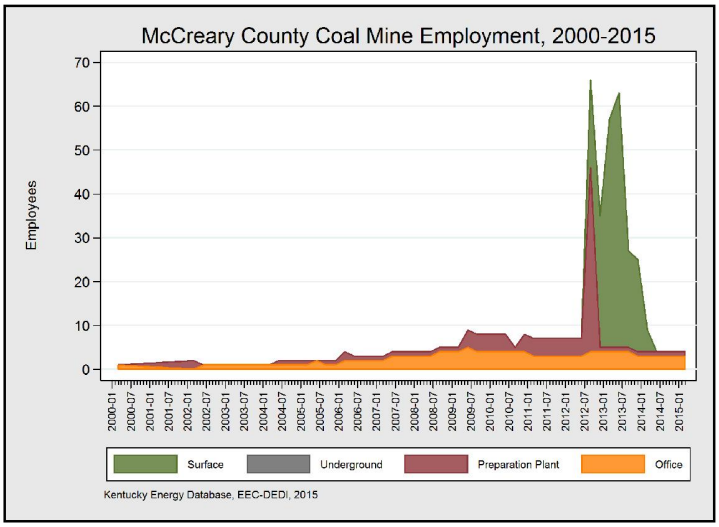
† The closure, or partial closure, of this power plant has been announced for 2014-2018.

McCreary County





On-Site Activity	Employment	Annual Change
Total	4	-84%
Office	3	+0%
Preparation Plant	1	+0%
Surface	0	-100%



Though there was no coal production in McCreary County in 2014, three office workers and one preparation plant worker were employed in the county. In 2013, 21 surface miners worked in the county, but operations ceased by July of 2014.

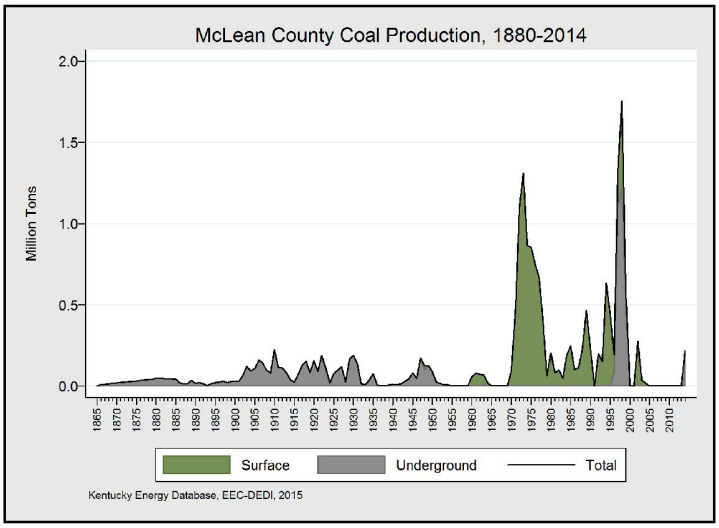
McCreary County Coal Market

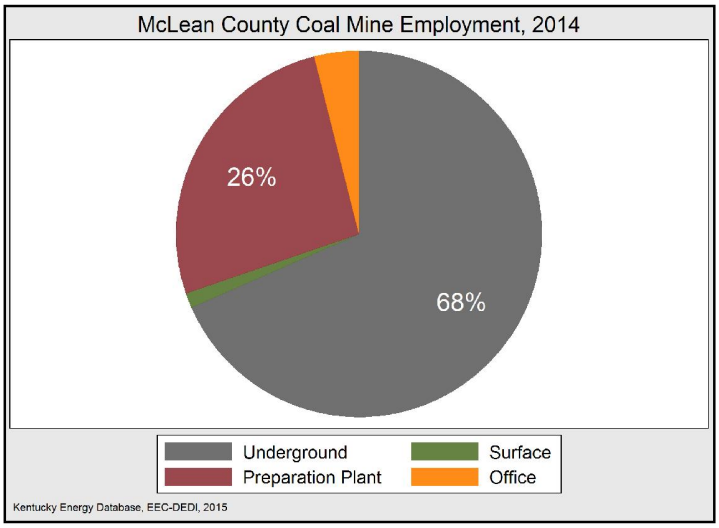
The John S. Cooper Plant in Pulaski County Kentucky received 12 shipments totaling 79 thousand tons of coal in 2013 from McCreary County. The plant was the last plant that recorded coal shipments from the county and the only receiver of coal from the county in the last decade.

Chemical Composition and Cost

Coal mined in McCreary County since 1990 had a median sulfur content of 1.01 percent, a median ash content of 5.6 percent, and a median heat content of 26.09 MMBtu per ton. The average delivered price per ton for McCreary County coal in 2013 was $53.39, and ranged from $48.51 to $54.97 per ton. The delivered price per MMBtu of coal from McCreary County had a median cost of $2.14 per MMBtu and ranged from $2.03 to $2.19 per MMBtu.

McLean County



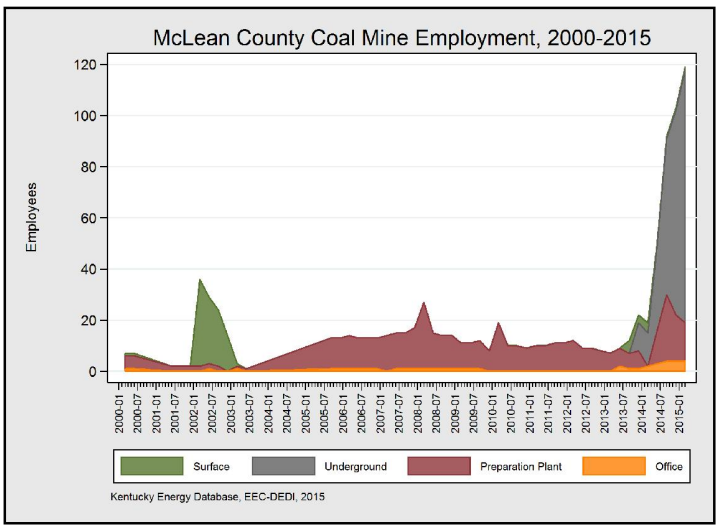


Production Method	Mines	Production	Annual Change
Total	1	220,910	—
Underground	1	220,910	—

McLean County produced 220,910 tons of coal in 2014 from underground mining operations at the Riveredge Mine.

On-Site Activity	Employment	Annual Change
Total	103	+368.2%
Underground	80	+627.3%
Preparation Plant	18	+157.1%
Surface	4	+300.0%
Office	1	-66.7%

State and Power Plant	Deliveries (Tons)	Percentage
Total	**207,280**	**100%**
Kentucky	**189,151**	**91.3%**
Ghent	70,647	34.1%
Paradise†	49,748	24.0%
Trimble County	37,324	18.0%
R D Green	25,174	12.1%
Mill Creek	6,258	3.0%
Ohio	**18,129**	**8.7**
Miami Fort†	18,129	8.7%

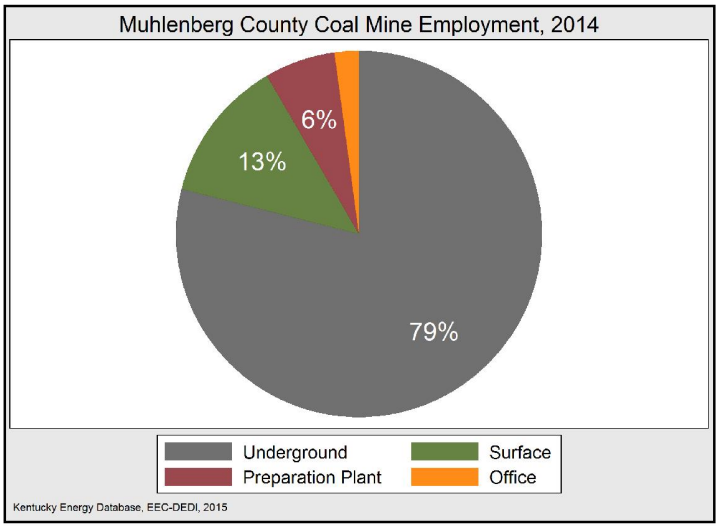


Although McLean County does not produce much coal today, the county began mining coal in 1825, which continues today. No coal was produced in McLean County during the decade between 2004-2013, and while coal was not mined during this period, preparation plants continued to operate in the county.

Coal mines and preparation plants in McLean County employed 103 people in 2014, including 80 underground miners, 18 preparation plant workers, four surface miners, and one person employed full time in an on-site office. The Riveredge Mine is the only producing mine in McLean County and the largest employer.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

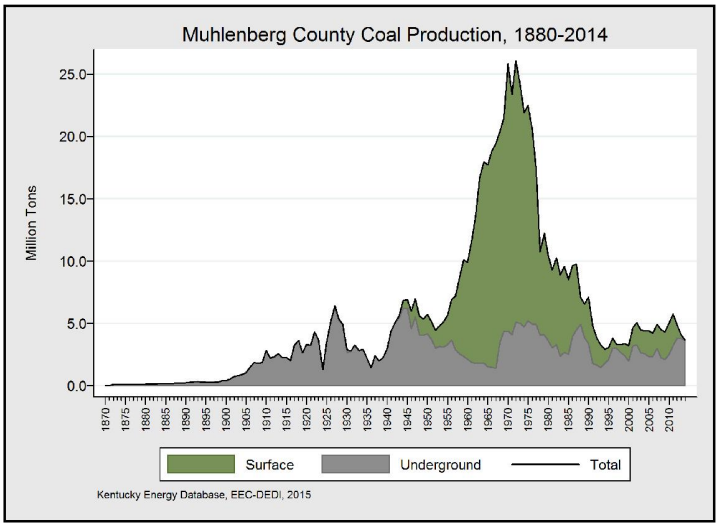
Muhlenberg County

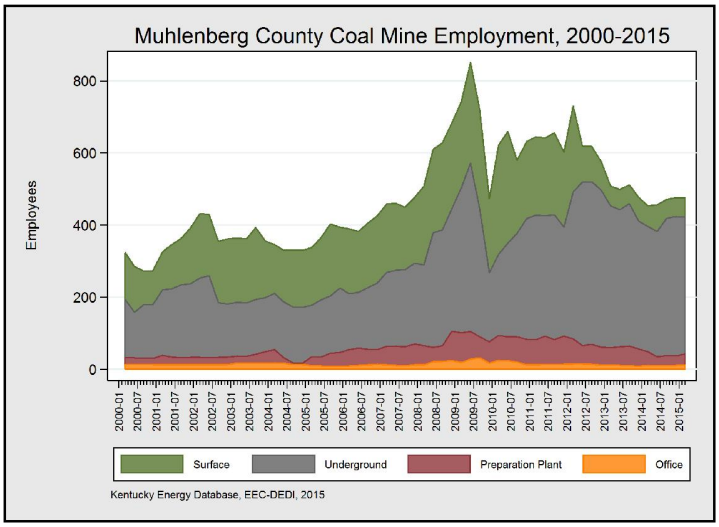


Production Method	Mines	Production	Annual Change
Total	3	3,630,122	-10.9%
Underground	2	3,625,843	-3.4%
Surface	1	4,279	-98.6%

On-Site Activity	Employment	Annual Change
Total	476	-0.2%
Underground	387	+9.3%
Surface	52	-21.2%
Preparation Plant	26	-46.9%
Office	11	+37.5%

Muhlenberg County decreased production by 10.9 percent in 2014 to 3.6 million tons of coal. *Pictured: Peabody's "Big Hog", a Marion 8800 dragline mining near Paradise in 1961.*

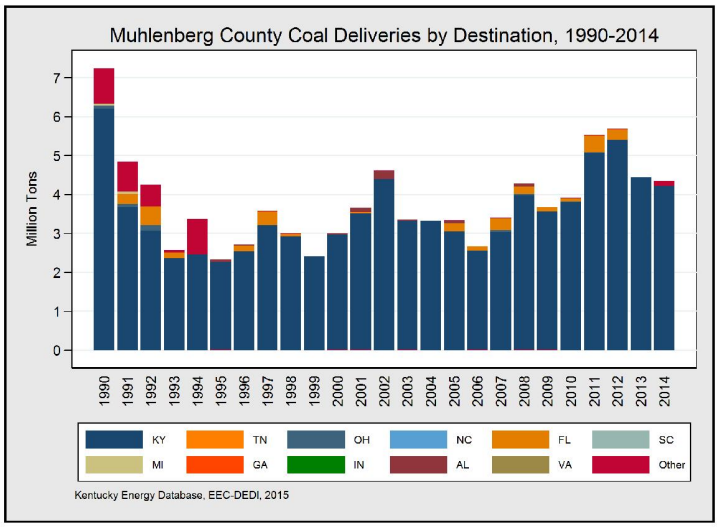


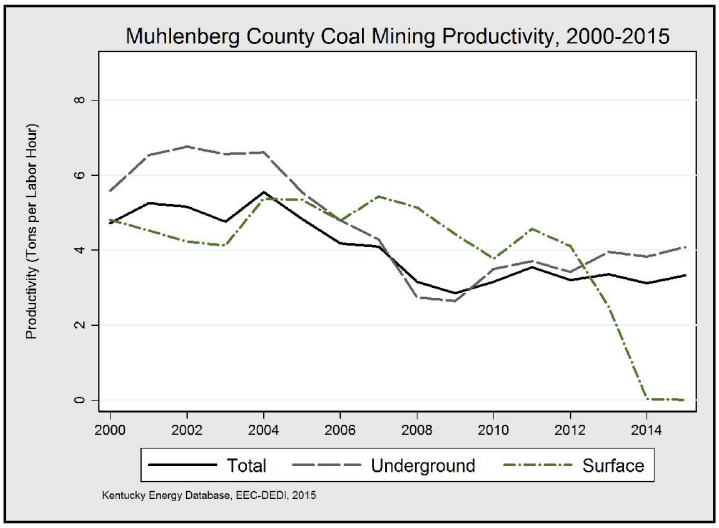


Muhlenberg County is situated on the Green River in western Kentucky and has been mining coal since the year 1820. Muhlenberg County was the largest producing county in Kentucky between 1908-1913 from underground mines, and 1961-1976 from surface mines. Coal production in Muhlenberg County peaked in 1972 at 26 million tons and has declined by 86 percent through 2014. To date, Muhlenberg County has produced 797 million tons, making it the 4th largest coal producing county in Kentucky.

In 1977, shortly after peak production, mines in Muhlenberg County employed 3,765 coal miners full time. In 2014, there were 476 persons employed at coal production facilities. Three coal mines employed 387 underground miners, in two underground mines, and 52 surface miners, while three preparation plants employed 26 people. There were 11 people employed. The Tennessee Valley Authority's coal-fired Paradise Fossil Plant, also in Muhlenberg County, employed 435 people full time in 2014.

Muhlenberg County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**4,354,023**	**100%**
Kentucky	**4,219,972**	**96.9%**
Paradise†	2,731,824	62.7%
D B Wilson	1,231,011	28.3%
Kenneth C Coleman	122,690	2.8%
R D Green	113,804	2.6%
Elmer Smith	20,643	0.5%
West Virginia	**134,051**	**3.1%**
Ceredo	134,051	3.1%

Muhlenberg County Coal Market

Power plants in Kentucky consumed almost all of the coal shipped from Muhlenberg County in 2014, which has been the case since at least the 1960's. In fact, most of the coal is used in Muhlenberg County, which is home to the Paradise Fossil Plant. Paradise is the largest power plant in Kentucky, among the ten largest coal-fired plants in the United States, and the single-largest consumer of Kentucky coal globally. In 2016, the Tennessee Valley Authority will close two of three coal-fired units at Paradise, and begin generating power from a new natural gas combined cycle power plant being built on site. Paradise Fossil Plant alone, where units 1 and 2 will be retired in 2017, received 63 percent of Muhlenberg County's coal shipments. Muhlenberg County has always been among the main sources of coal shipped to Paradise Fossil Plant, situated adjacent to the former town of Paradise, Kentucky.

Muhlenberg County Coal Mining Productivity

While average productivity at mines in Muhlenberg County was 3.12 tons per hour in 2014, productivity at underground mines was 3.84 tons per labor hour and surface mines was 0.03 tons per hour. This contrasts significantly from 2012, when underground mines yielded 3.42 tons per labor hour and surface mines produced at a rate of 4.12 tons per labor hour. Overall productivity for coal mine operations in Muhlenberg County during 2014 was ninth highest in Kentucky, but county level underground productivity ranked third in Kentucky.

Chemical Composition and Cost

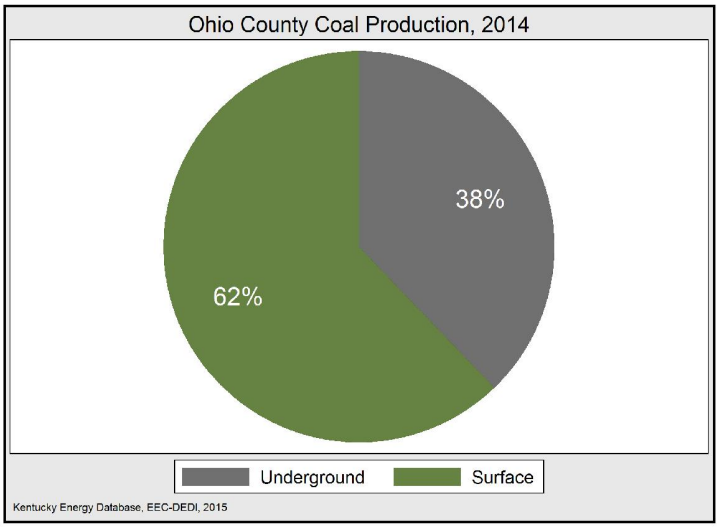
On average, coal mined in Muhlenberg County had a median sulfur content of 3.09 percent, a median ash content of 10.6 percent, and a median heat content of 22.67 MMBtu per ton. The average delivered price per ton for Muhlenberg County coal in 2014 was $49.66, and ranged from $46.29 to $91.31 per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $43.42, processing costs of $4.09, and transportation costs of $2.15. The delivered price per MMBtu of coal from Muhlenberg County had a median of $2.16 per MMBtu and ranged from $1.96 to $3.97 per MMBtu.

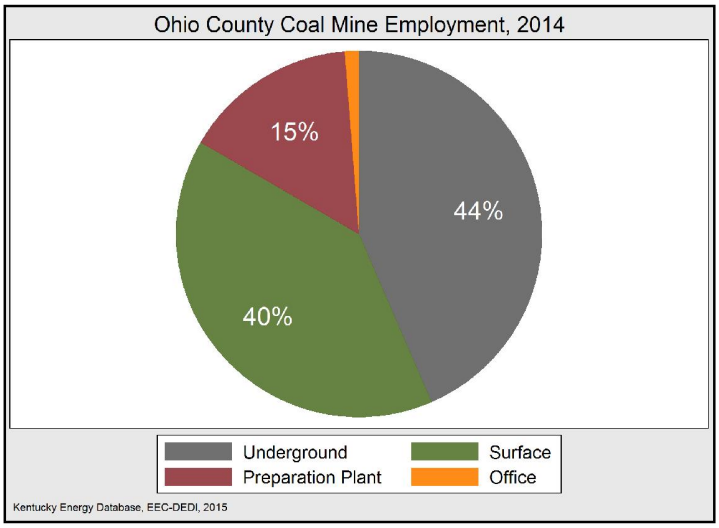
Coal Severance Taxes

Muhlenberg County paid nearly $7.8 in coal severance taxes in 2014. Of this amount, $932,542 was returned to the Muhlenberg County Government.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Ohio County

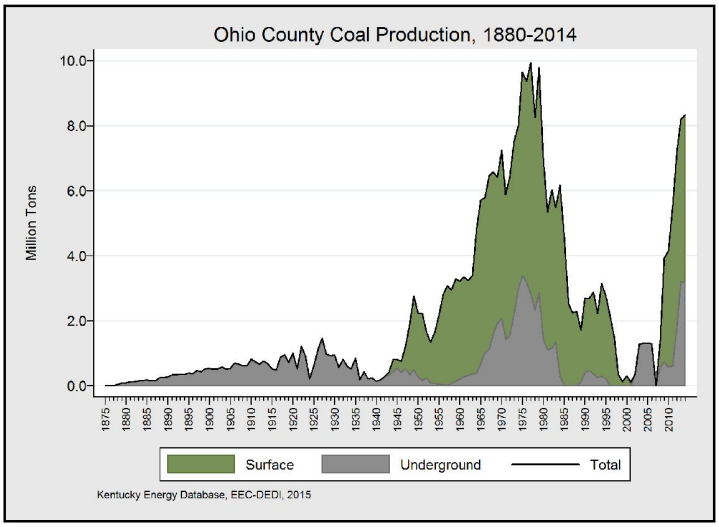


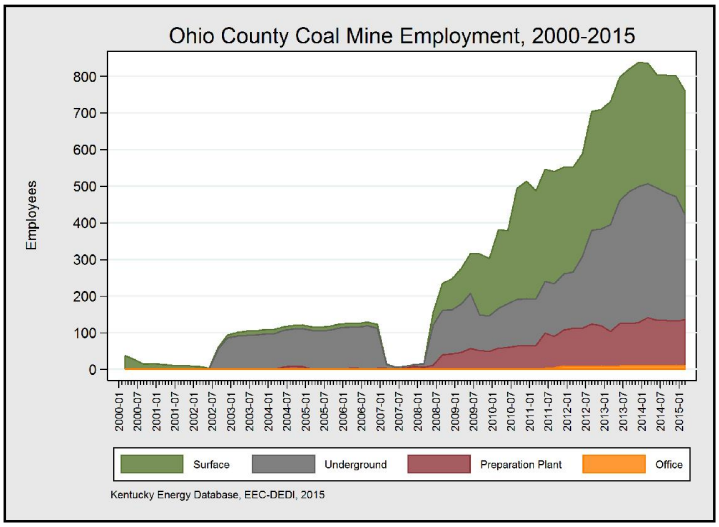


Production Method	Mines	Production	Annual Change
Total	6	8,336,969	+1.7%
Underground	2	5,184,009	+3.9%
Surface	4	3,152,960	-0.7%

On-Site Activity	Employment	Annual Change
Total	802	-4.3%
Underground	340	-8.4%
Surface	330	-2.7%
Preparation Plant	121	+1.7%
Office	11	+22.2%

In 2014, Ohio County mined more than 8.3 million tons of coal. In 2014, Ohio County was the 5th largest coal producing county in Kentucky.

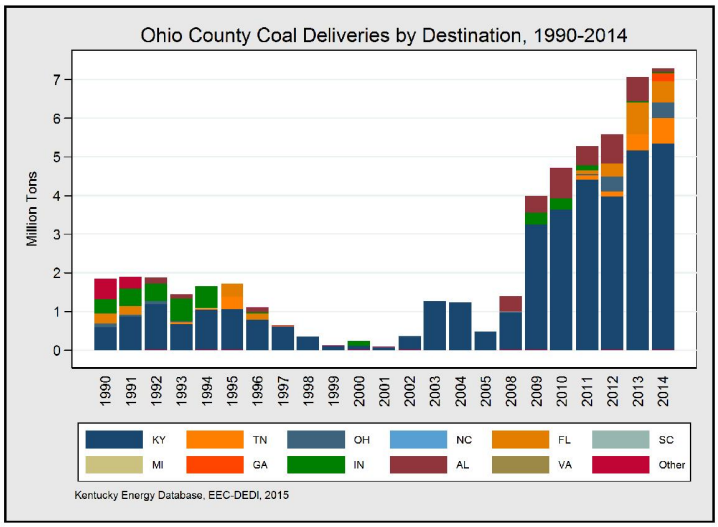


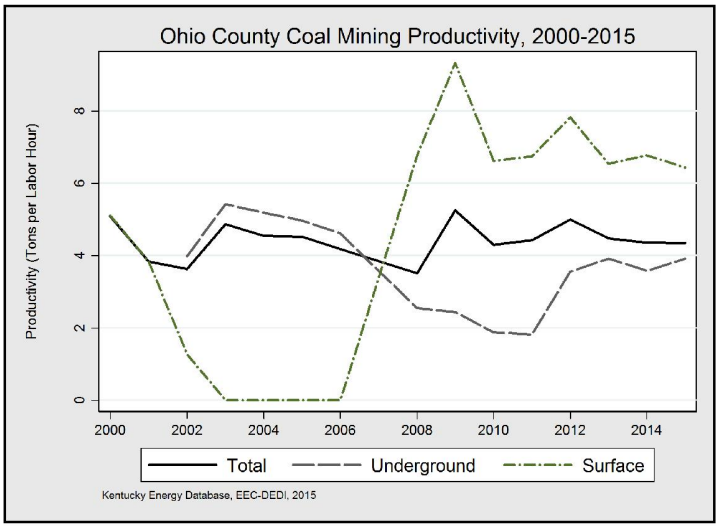


Ohio County coal production in 2014, at more than 8.3 million tons, is near the levels of peak production of more than 9.9 million tons reached in 1977. Coal production has been recorded in Ohio County since 1865, and during 150 years of production, more than 305 million tons of coal have been extracted in Ohio County. The majority of mining production has been from surface operations since 1947 with the exception of 2001 through 2007.

Since 2007, direct employment by coal companies in Ohio County has increased rapidly to 802 full-time employees in 2014. Of the 802 employees, 340 worked in underground mines, 330 in surface mines, 121 in preparation plants, and 11 in on-site offices. In 2014, Armstrong Energy remained the largest coal producer and employer in the county. The Ohio County Government received $1,491,240 in coal severance tax revenues alone in 2014.

Ohio County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**7,298,959**	**100%**
Kentucky	**5,347,274**	**73.3%**
Ghent	1,582,660	21.7%
Paradise†	1,105,877	15.2%
Cane Run†	1,067,491	14.6%
Elmer Smith	500,210	6.9%
H L Spurlock	446,740	6.1%
Trimble County	341,312	4.7%
E W Brown	190,195	2.6%
Mill Creek	112,789	1.5%
Tennessee	**649,148**	**8.9%**
Kingston	568,360	7.8%
Cumberland	77,422	1.1%
Johnsonville†	3,366	0.0%
Florida	**545,973**	**7.5%**
Davant Transfer	494,519	6.8%
Big Bend	51,454	0.7%
Ohio	**412,770**	**5.7%**
W H Zimmer	214,350	2.9%
General James M Gavin	198,420	2.7%
Georgia	**213,494**	**2.9%**
Bowen	213,494	2.9%
Alabama	**114,430**	**1.6%**
E C Gaston†	95,175	1.3%
Widows Creek†	15,735	0.2%
Colbert†	3,520	0.0%
Indiana	**15,870**	**0.2%**
Warrick	15,870	0.2%

Ohio County Coal Market

More than seven million tons of Ohio County coal were delivered to power plants in 2014. Ohio County coal shipments grew by four percent in 2014 and are five times 2008 levels. Kentucky received 73 percent of the market for Ohio County coal in 2014, and coal from the county was delivered to seven different power plants across the state that year. Paradise and Cane Run—30 percent of Ohio County deliveries—are closing within the next two years.

Ohio County Coal Mining Productivity

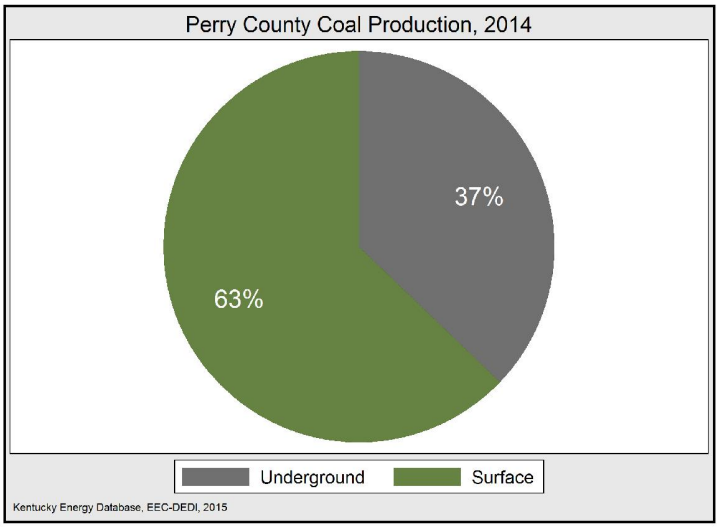
Of all coal mining counties in Kentucky in 2014, Ohio County in western Kentucky had the highest average productivity at 4.36 tons per labor hour. Surface operations, which represented 62 percent of annual production, achieved a statewide high of 6.77 tons per labor hour. Underground operations had an average productivity of 3.58 tons per hour—fifth most productive of Kentucky counties. Productivity has generally risen in tandem with increased production since 2006.

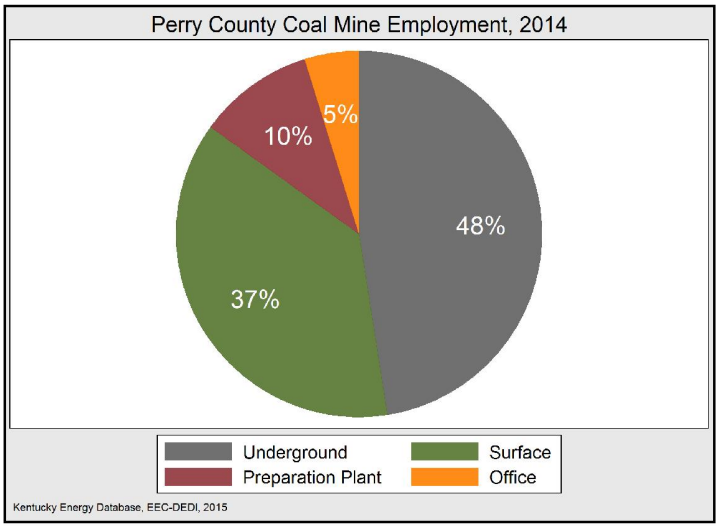
Chemical Composition and Cost

On average, coal mined in Ohio County had a median sulfur content of three percent, a median ash content of 9.8 percent, and a median heat content of 22.57 MMBtu per ton. The average delivered price per ton for Ohio County coal in 2014 was $52.62, and ranged from $24.49 to $82.47 per ton. The delivered price per MMBtu of coal from Ohio County had a median of $2.34 per MMBtu and ranged from $1.06 to $3.55 per MMBtu.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Perry County

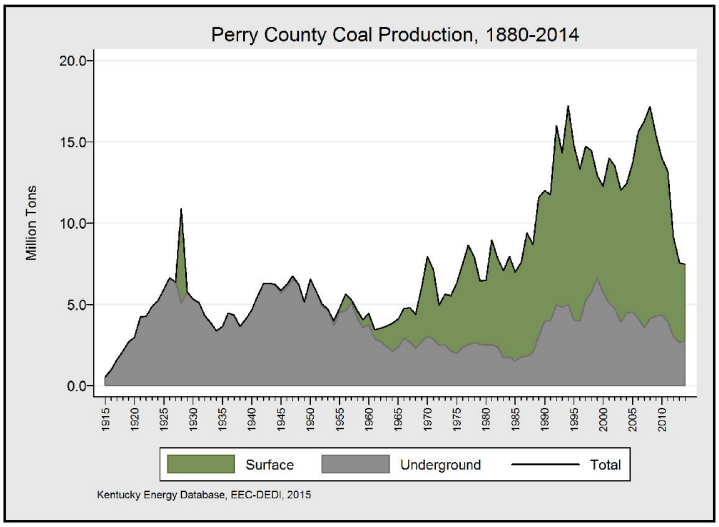


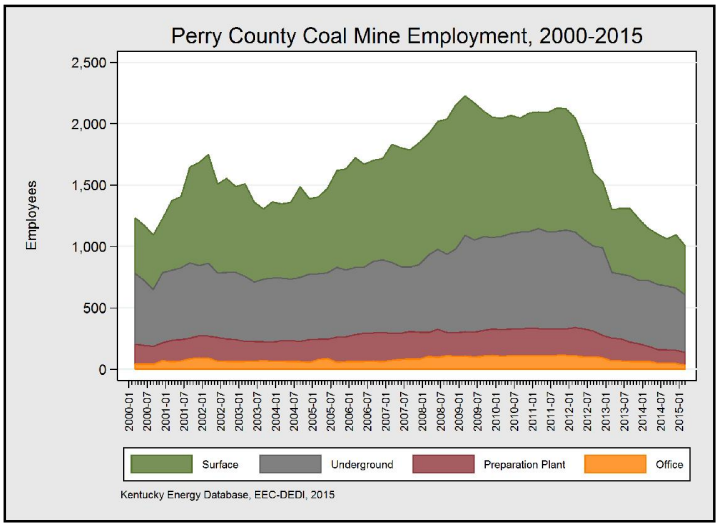


Production Method	Mines	Production	Annual Change
Total	22	7,475,878	-1.1%
Surface	16	4,696,605	-4.2%
Underground	6	2,779,273	+1.6%

On-Site Activity	Employment	Annual Change
Total	1,097	-10.3%
Underground	506	-2.3%
Surface	436	-12.6%
Preparation Plant	108	-25.0%
Office	47	-24.2%

In 2014, Perry County mined 7.5 million tons of coal, which was valued at $567 million, fourth among all Kentucky counties in tonnage, and second in terms of gross value.

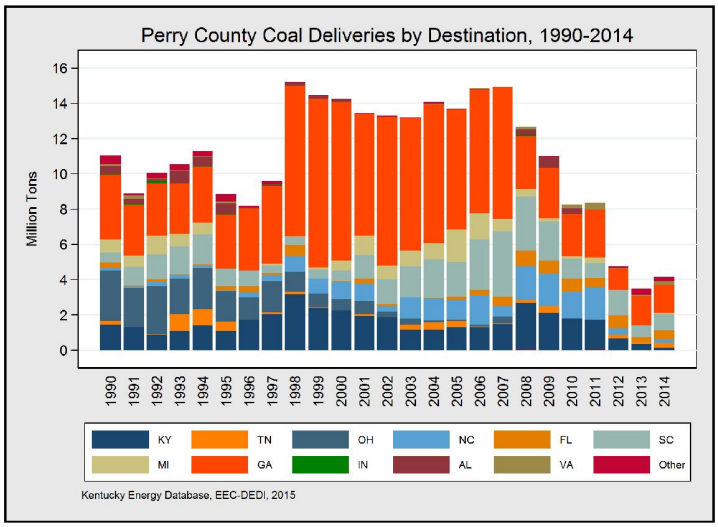


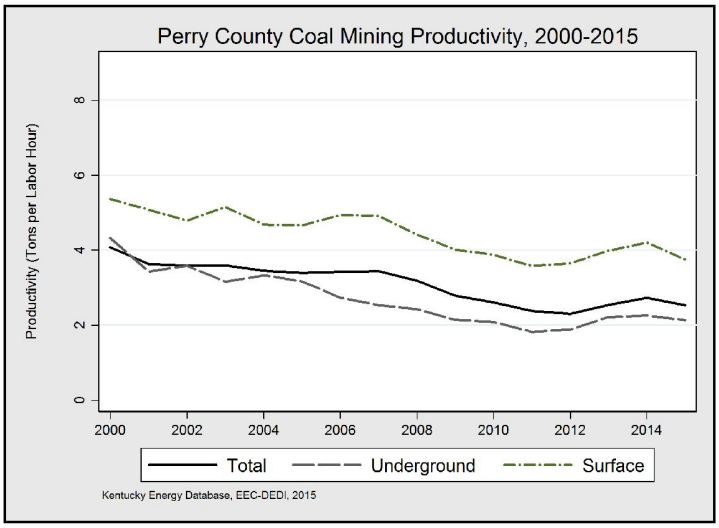


Coal production has been recorded in Perry County since 1889, but it was not until 1917, during the First World War, that production would reach one million tons. Coal production rose again during the Second World War. In 1972, surface mining became the dominant method of coal extraction in Perry County. Production peaked in 1994 at 17.23 million tons, and in 2008 rose again to 17.17 million tons, but has declined significantly since. Coal production has declined by 57 percent since 2008. To date, Perry County has produced 746 million tons, the 5th most of any county.

Perry County had the second-highest number of coal production workers in Kentucky in 2014, with 1,097 employed. A total of 506 miners worked underground, 436 worked above ground, 108 in preparation plants, and 47 in on-site office capacities. Coal mine employment peaked in at 7,451 in Perry County in 1949, which at the time, was equivalent to 16 percent of the county population. Through 2014, coal production employment has declined by 85 percent since 1949.

Perry County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**4,163,674**	**100%**
Georgia	**1,590,590**	**38.2%**
Bowen	1,361,239	32.7%
Harllee Branch†	149,797	3.6%
International Paper Savanna Mill	79,554	1.9%
South Carolina	**924,648**	**22.2%**
Winyah	501,989	12.1%
Cross	243,050	5.8%
Williams	153,597	3.7%
Cope	26,012	0.6%
Florida	**505,191**	**12.1%**
Crystal River†	399,822	9.6%
Stanton Energy Center	105,369	2.5%
Tennessee	**290,635**	**7.0%**
Tennessee Eastman†	211,056	5.1%
Bull Run	79,579	1.9%
West Virginia	**251,266**	**6.0%**
John E Amos	251,266	6.0%
Virginia	**221,837**	**5.3%**
Spruance Genco LLC	210,005	5.0%
Chesterfield	11,832	0.3%

State and Power Plant	Deliveries (Tons)	Percentage
North Carolina	**204,077**	**4.9%**
James E. Rogers	165,521	4.0%
Marshall	38,556	0.9%
Kentucky	**121,276**	**2.9%**
Ghent	68,716	1.7%
Cooper	31,792	0.8%
R D Green	14,532	0.3%
Mill Creek	3,120	0.1%
Trimble County	3,116	0.1%
Michigan	**53,660**	**1.3%**
Monroe	37,140	0.9%
Presque Isle†	16,520	0.4%
Wisconsin	**494**	**0.0%**
Manitowoc	494	0.0%

Coal Severance Taxes

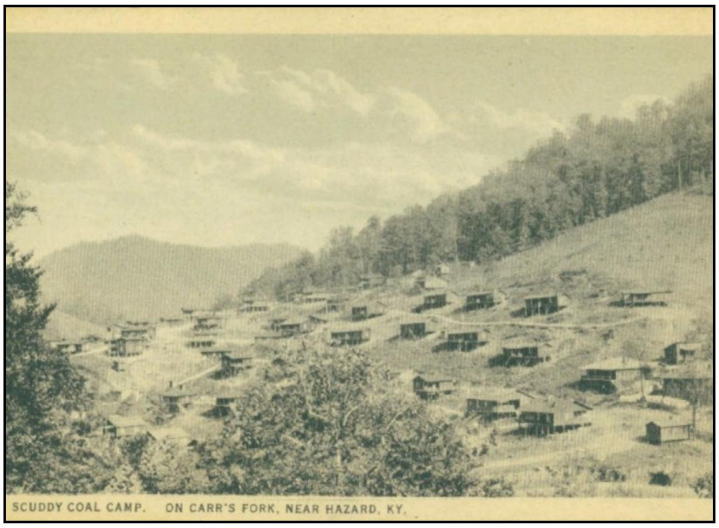
Coal producers in Perry County paid $13.2 million in coal severance taxes in 2014. The Perry County Government received $1,589,580 in coal severance tax revenues in 2014.

Perry County Coal Market

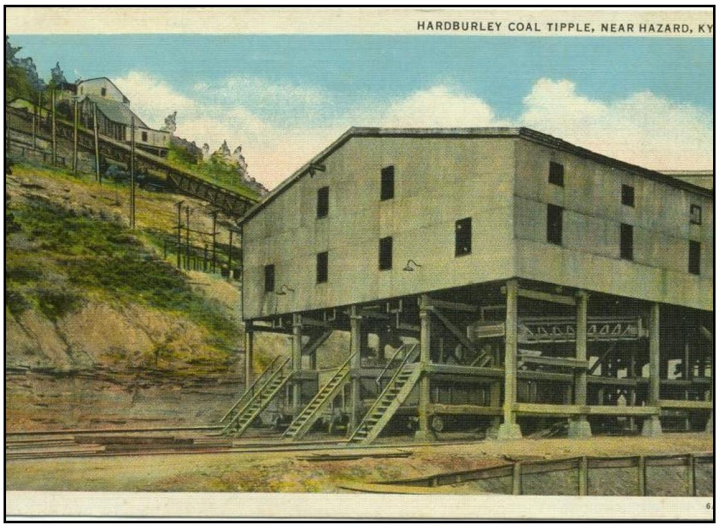
Steam coal from Perry County was delivered to power plants in 10 different states during reporting year 2014. Plant Bowen of Georgia by itself received 33 percent of Perry County coal deliveries—the plant received 22 percent of its 2014 shipments from Perry County. Crystal River, Perry County's third largest coal consumer in 2014 will close half of its coal units by 2018. In all, four plants representing 19 percent of 2014 coal shipments have announced coal unit closures. Total shipments of Perry County steam coal increased by 687 thousand tons since 2013, or by 20 percent.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Perry County



Pictured above: Scuddy Coal Camp on Carr's Fork near Hazard, Kentucky during the 1920s



Pictured above: Hardburley Coal Tipple, near Hazard, Kentucky.

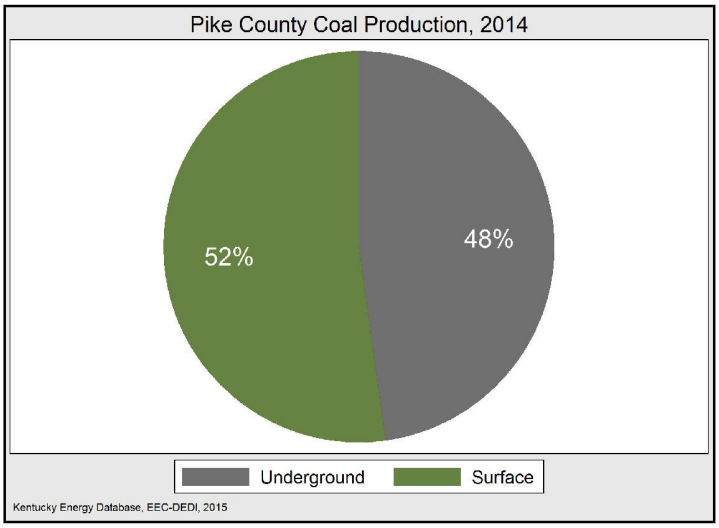
Perry County Coal Mining Productivity

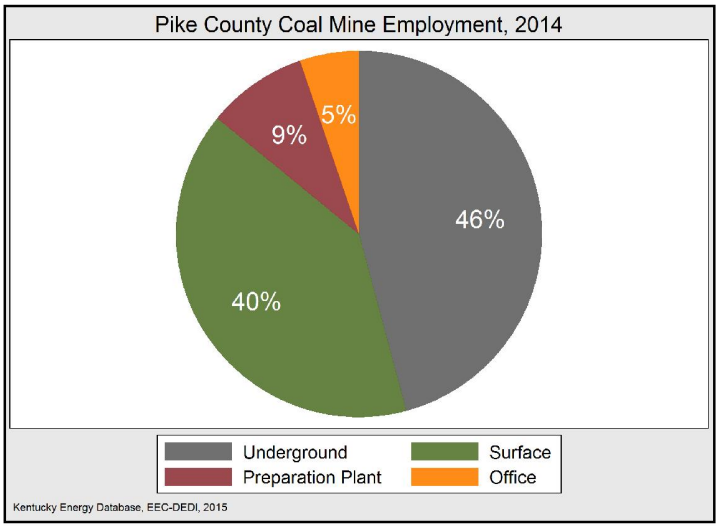
With an average productivity of 2.74 tons per labor hour, Perry County had the twelfth-highest productivity for Kentucky counties in 2014. Surface coal mines in Perry County were more productive than underground coal mines (4.21 compared to 2.26). Perry County had the fourth-highest surface mining productivity rate throughout the state in 2014 and the thirteenth-highest underground mining rate. Since, 2000, Perry County coal mine productivity has declined steadily, which has increased the costs of coal production, and decreased cost-competiveness versus alternative sources of energy. With the closure of less productive mines since 2008, average coal mine productivity increased slightly. Mining productivity in Perry County has remained relatively stable compared to other counties in eastern Kentucky.

Chemical Composition and Cost

Coal mined in Perry County had a median sulfur content of 0.94 percent, a median ash content of 10.2 percent, and a median heat content of 24.72 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $54.53, processing costs of $6.19, and transportation costs of $26.24. These costs resulted in a median delivered price per ton of $86.96—ranging from $37.48 to $126.36 per ton. The delivered price per MMBtu of coal from Perry County had a median of $3.60 per MMBtu, from $1.83 to $5.15.

Pike County

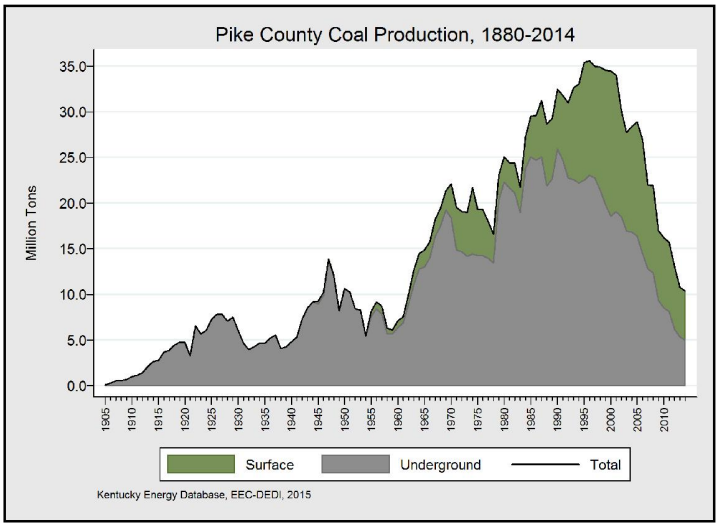


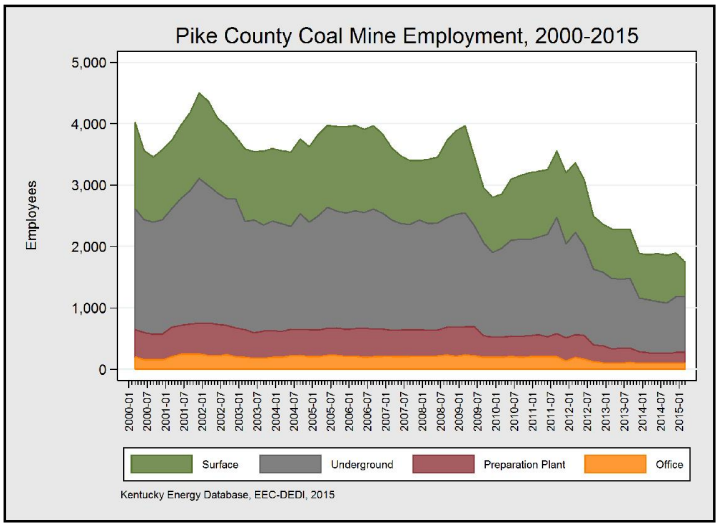


Production Method	Mines	Production	Annual Change
Total	69	10,373,272	-3.9%
Surface	43	5,412,692	-0.5%
Underground	26	4,960,580	-3.6%

On-Site Activity	Employment	Annual Change
Total	1,900	+0.6%
Underground	910	+3.9%
Surface	713	-1.7%
Preparation Plant	175	-4.9%
Office	102	-1.0%

In 2014, Pike County mined 10.4 million tons of coal, which was valued at $912 million dollars, the highest dollar value of any Kentucky county, and the second highest tonnage.

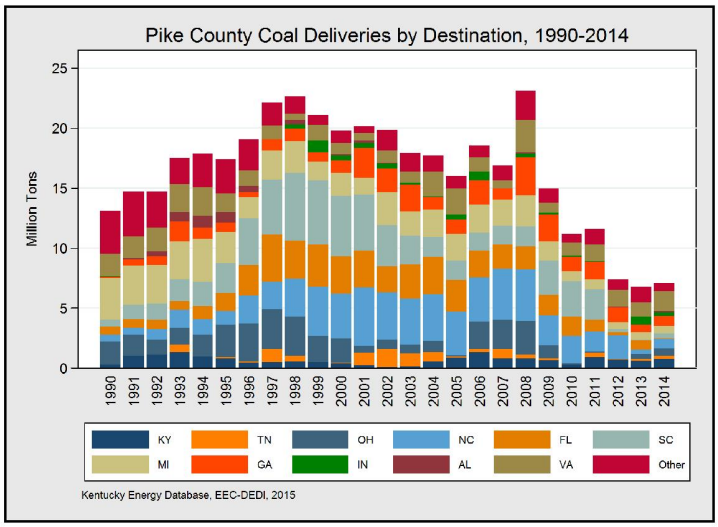


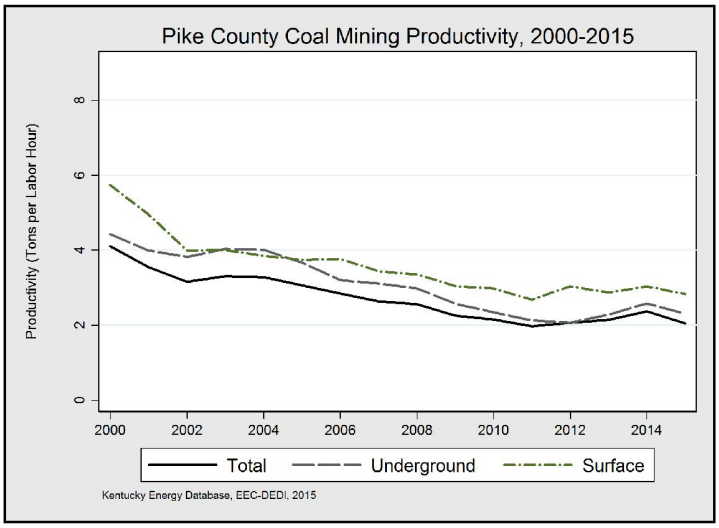


Coal mines in Pike County have produced 1.5 billion tons of coal since 1889, which is more coal than was produced in any other Kentucky county. Even the second largest producer historically, Harlan County, trails by 500 million tons. Annual production peaked in Pike County at 35.6 million tons in 1996, and in the 18 years since has declined by 71 percent to 10.4 million tons in 2014. Historically, the vast majority of Pike County coal has come from underground operations, 52 percent came from surface mines in 2014.

In 2014, coal mines in Pike County employed more coal workers than any other Kentucky county. There was an average of 1,900 persons at coal production facilities, including 1,623 coal miners—910 underground and 713 surface—175 persons employed in coal preparation plants, and 102 working in on-site offices. Since 2001, coal mine employment has decreased by 58 percent. Coal mine employment in the county peaked at 14,392 in 1948, which was 18 percent of the county's population at the time.

Pike County



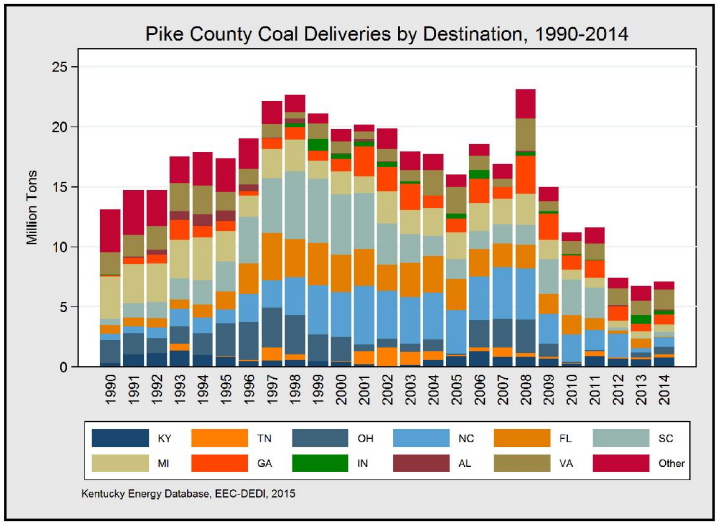


State and Power Plant	Deliveries (Tons)	Percentage
Total	**7,097,623**	**100%**
Virginia	**1,611,685**	**22.7%**
Clover	967,195	13.6%
Chesterfield	298,129	4.2%
Yorktown†	226,621	3.2%
Chesapeake†	56,224	0.8%
Clinch River†	51,941	0.7%
Spruance Genco LLC	10,776	0.2%
Virginia City Hybrid Energy Center	799	0.0%
Georgia	**849,899**	**12.0%**
Bowen	562,345	7.9%
International Paper Savanna Mill	119,588	1.7%
Kraft†	85,516	1.2%
Harllee Branch†	21,103	0.3%
Hammond	12,765	0.2%
Wansley	12,621	0.2%
Yates†	12,459	0.2%
McIntosh	11,831	0.2%
Georgia-Pacific Cedar Springs	11,671	0.2%
North Carolina	**771,949**	**10.9%**
Marshall	205,311	2.9%
Roxboro	170,078	2.4%
Asheville	90,770	1.3%
Belews Creek	79,328	1.1%
G G Allen	76,811	1.1%
Mayo	76,593	1.1%
James E. Rogers Energy Complex	73,058	1.0%

State and Power Plant	Deliveries (Tons)	Percentage
Kentucky	**756,250**	**10.7%**
Big Sandy†	756,250	10.7%
Michigan	**644,986**	**9.1%**
Monroe (MI)	373,492	5.3%
St Clair	194,192	2.7%
River Rouge	26,616	0.4%
Escanaba Mill	26,438	0.4%
Trenton Channel	24,248	0.3%
West Virginia	**616,423**	**8.7%**
Mitchell	418,518	5.9%
Philip Sporn†	93,779	1.3%
John E Amos	85,890	1.2%
Kanawha River†	9,562	0.1%
Mountaineer	8,674	0.1%
Ohio	**590,417**	**8.3%**
Muskingum River†	533,220	7.5%
General James M Gavin	29,574	0.4%
Killen Station	24,447	0.3%
Miami Fort†	3,176	0.0%
South Carolina	**372,947**	**5.3%**
Wateree	307,474	4.3%
Cope	51,938	0.7%
International Paper Georgetown Mill	11,294	0.2%
Cross	2,241	0.0%

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Pike County



Pictured: McCoy Elkhorn Coal Corp., Mine #15, Pike County, Kentucky. (Courtesy of the James River Coal Company).

State and Power Plant	Deliveries (Tons)	Percentage
Tennessee	**291,225**	**4.1%**
Bull Run	165,721	2.3%
Cumberland	68,241	1.0%
Gallatin	29,589	0.4%
Tennessee Eastman Operations†	27,674	0.4%
Indiana	**276,892**	**3.9%**
Rockport	262,710	3.7%
Tanners Creek†	14,182	0.2%
Alabama	**141,497**	**2.0%**
Colbert†	141,497	2.0%
Florida	**95,489**	**1.3%**
Stanton Energy Center	70,072	1.0%
IMT Transfer	13,130	0.2%
Deerhaven Generating Station	12,287	0.2%
New York	**56,148**	**0.8%**
RED-Rochester, LLC	56,148	0.8%
Mississippi	**21,816**	**0.3%**
R D Morrow	21,816	0.3%

Pike County Coal Mining Productivity

In 2014, average coal mine productivity in Pike County was 2.37 tons per labor hour. Surface mines in the county were more productive at 3.03 tons per hour, while underground operations averaged 2.58 tons per hour. Compared with 2013, coal mining productivity improved slightly from 2.14 tons per labor hour, or by 11 percent. Underground mining productivity in Pike County has decreased by 42 percent since 2000 and surface mining productivity is approximately half of 2000 levels.

Pike County Coal Market

A total of 7.1 million tons of coal mined in Pike County was shipped to power plants in 14 different states in 2014. Of this amount, 756 thousand tons were shipped to Louisa's Big Sandy Power Plant, which is retiring one coal unit and converting the other to natural gas. Pike County is relatively insulated from the closure or decreased consumption of any single plant because of the sheer size and diversity of its shipments relative to other Kentucky counties—no single plant consumed more than 14 percent of Pike County coal in 2014. Regardless, fuel shipments from the county have declined over the last five years.

Chemical Composition and Cost

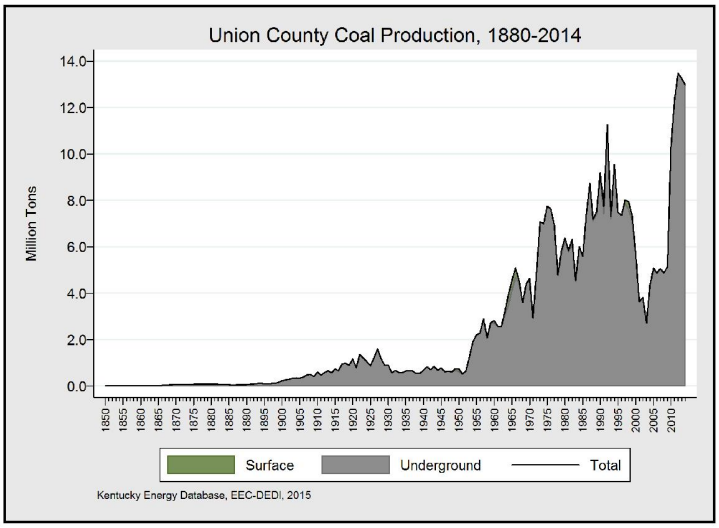
Coal mined in Pike County had a median sulfur content of 0.93 percent, a median ash content of 9.6 percent, and a median heat content of 25.22 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $60.58, processing costs of $7.93, and transportation costs of $17.01. These costs resulted in a median delivered price per ton of $85.52—ranging from $42.43 to $130.89 per ton. The delivered price per MMBtu of coal from Pike County had a median of $3.44 per MMBtu and ranged from $2.14 to $5.28 per MMBtu.

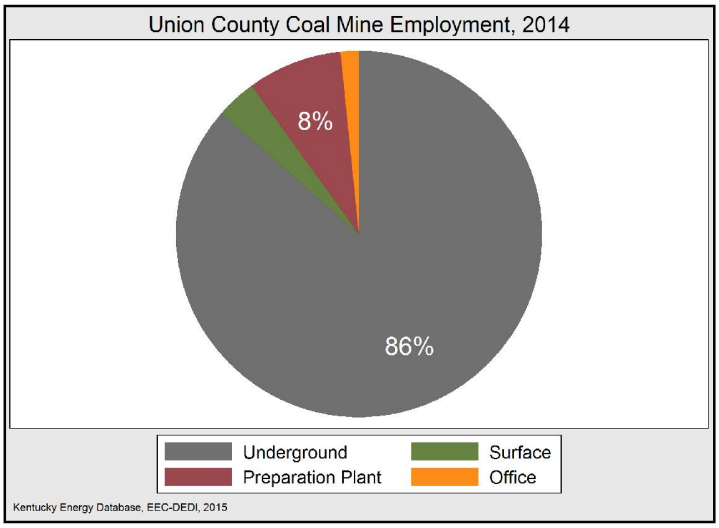
Coal Severance Taxes

Pike County coal producers paid $73 million in coal severance taxes in 2014. Of this amount, the Pike County Government was allocated $3,534,395 in severance revenues.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Union County

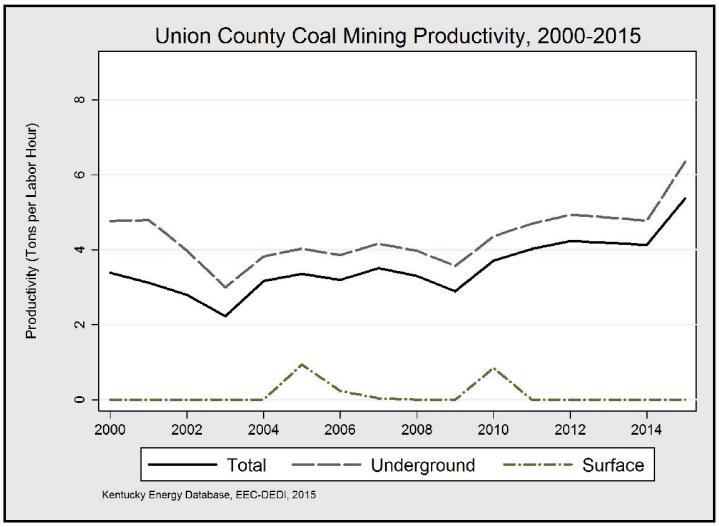


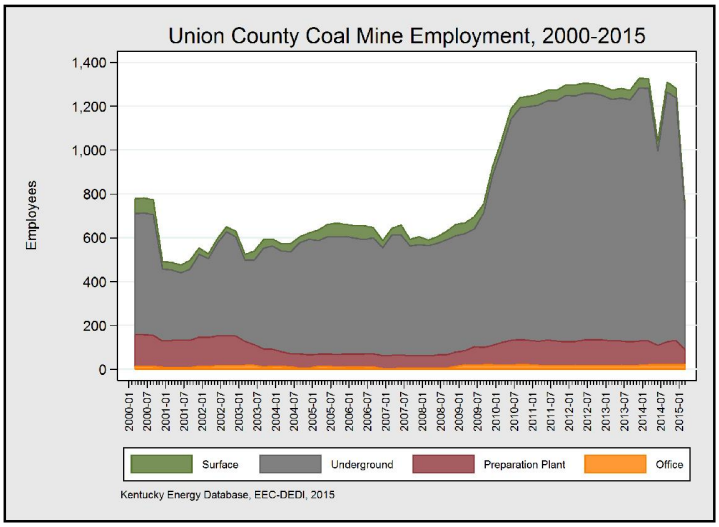


Production Method	Mines	Production	Annual Change
Total	3	12,977,904	-2.2%
Underground	3	12,977,904	-2.2%

On-Site Activity	Employment	Annual Change
Total	1,283	-3.4%
Underground	1,107	-4.2%
Preparation Plant	111	+0.9%
Surface	44	+0.0%
Office	21	+10.5%

Union County, which produced more coal in 2014 than any other Kentucky county, mined 12.98 million tons, which was valued at $540 million—third most of all Kentucky counties.

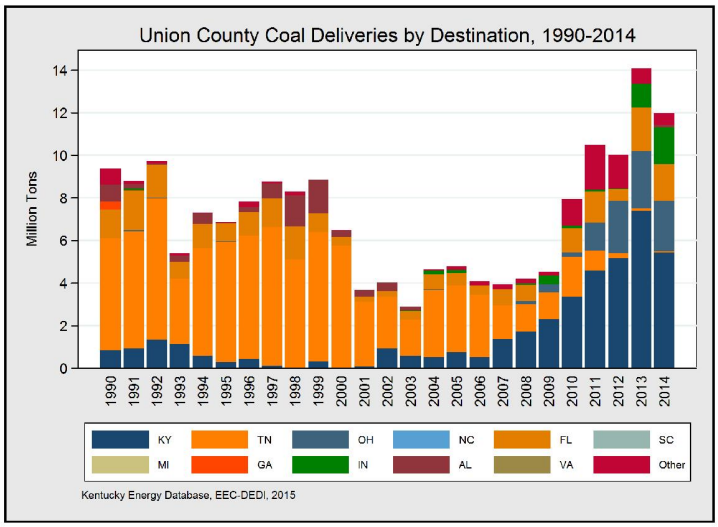




Coal production in 2014 in Union County decreased by 2.2 percent; however, Union County remained the largest coal-producing county in Kentucky. In 2014, Union County mined 16.8 percent of total coal production in Kentucky. The vast majority of Union County's coal production comes from the underground operations at Alliance Resource's River View Mine, which is Kentucky's largest producing coal mine. Coal production began in Union County in 1836 at 500 tons and the county's highest production was 13.5 million tons in 2012.

At the end of 2014, coal mines in Union County on average employed 1,283 workers full-time. However, in early 2015 over 550 miner layoffs occurred in Union County, bringing employment to 731 as of April 1, 2015. The vast majority of direct mining jobs in Union County has always been in underground mine operations with at least 67 percent of mine employment since 2000 and at least 80 percent of mine employment since 2004.

Union County



Pictured above: River View Coal Mine, Union County, 2012.
Photo courtesy of River View Coal, LLC.

State and Power Plant	Deliveries (Tons)	Percentage
Total	**11,980,468**	**100%**
Kentucky	**5,426,167**	**45.3%**
Ghent	2,068,562	17.3%
Trimble County	1,309,768	10.9%
East Bend	647,450	5.4%
H L Spurlock	538,852	4.5%
R D Green	476,040	4.0%
Kenneth C Coleman	167,962	1.4%
Mill Creek	151,250	1.3%
D B Wilson	66,283	0.6%
Ohio	**2,362,994**	**19.7%**
J M Stuart	1,350,214	11.3%
Killen Station	359,184	3.0%
Miami Fort†	343,523	2.9%
W H Zimmer	180,475	1.5%
Walter C Beckjord†	129,598	1.1%
Indiana	**1,715,186**	**14.3%**
Clifty Creek	1,677,037	14.0%
Warrick	38,149	0.3%
Florida	**1,710,517**	**14.3%**
IMT Transfer	1,095,383	9.1%
Davant Transfer	596,060	5.0%
Crystal River†	19,074	0.2%

State and Power Plant	Deliveries (Tons)	Percentage
West Virginia	**450,456**	**3.8%**
Ceredo	296,523	2.5%
FirstEnergy Fort Martin Power Station	100,332	0.8%
FirstEnergy Pleasants Power Station	53,601	0.4%
Alabama	**119,330**	**1.0%**
Gorgas†	119,330	1.0%
Mississippi	**118,032**	**1.0%**
Associated Terminals	118,032	1.0%
Tennessee	**77,786**	**0.6%**
Cumberland	77,786	0.6%

Union County Coal Market

Union county shipped the most coal of any county in Kentucky in 2014. During the year, more than 12 million tons of coal mined in the county were delivered to eight different states, with nearly half going to coal plants in Kentucky. Shipments of steam coal from Union County decreased by 15 percent since 2012, but have nearly tripled since 2008. The largest consumer of Union County coal in 2014, Ghent Generating Station, received approximately 34 percent of the coal it received that year from the county and Trimble County Generating Station was powered with 40 percent Union County coal. While demand for all coal is expected to continue to decline in Kentucky and nationally, as many coal-fired power plants close, the near-term outlook for demand of steam coal produced in Union County is stable because less than six percent of Union County coal consumers are affected by unit closures.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Union County

River View Coal Mine, Union County, 2012.
Photo courtesy of River View Coal, LLC.

Union County Coal Mining Productivity

Unlike most coal-producing counties in Kentucky, mine productivity in Union County had been stable between 2004 and 2009 and has increased since. In 2014, average coal mine productivity in Union County was 4.13 tons per labor hour, the fourth highest of any county. Underground operations averaged 4.78 tons per labor hour, making Union County the most productive county for underground mining. In fact, Union County has had the most productive underground operations in Kentucky since 2012. Compared with 2013, coal mining productivity decreased slightly from 4.19 tons per labor hour and 4.86 tons per labor hour from underground mining.

Chemical Composition and Cost

Coal mined in Union County had a median sulfur content of 2.89 percent, a median ash content of 8.5 percent, and a median heat content of 23.11 MMBtu per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $42.69, processing costs of $5.05, and transportation costs of $5.26. These costs resulted in a median delivered price per ton of $53.00—ranging from $41.74 to $121.77 per ton. The delivered price per MMBtu of coal from Union County had a median cost of $2.30 per MMBtu and ranged from $1.85 to $5.38 per MMBtu.

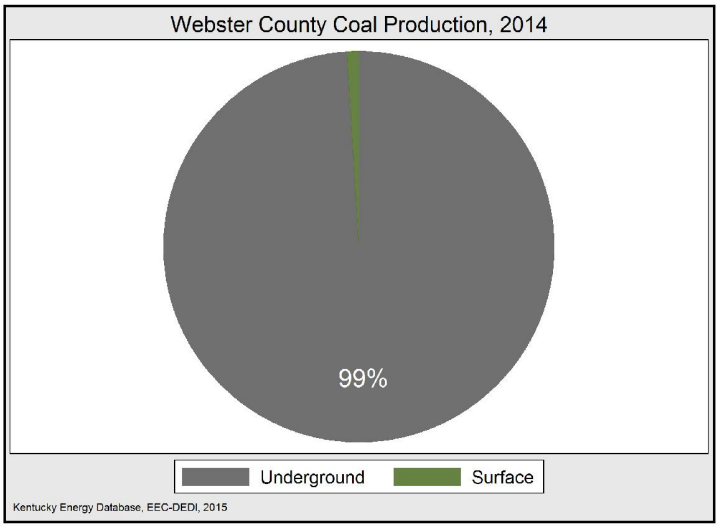
Coal Reserves

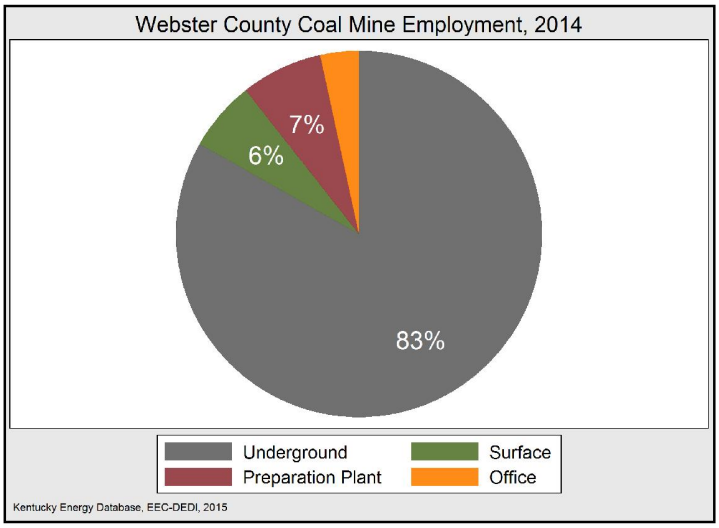
According to Kentucky Geological Survey, Union County has the most mineable coal of all Kentucky counties. The county has 4,921 billion tons, or 19.4 percent of Kentucky's 25,343 billion tons in its Demonstrated Reserve Base.

Union County

Photos taken of underground mining and coal preparation at the River View Coal Mine in March, 2010 by Aaron Camenisch, University of Kentucky, for the Kentucky Energy and Environment Cabinet.

Webster County

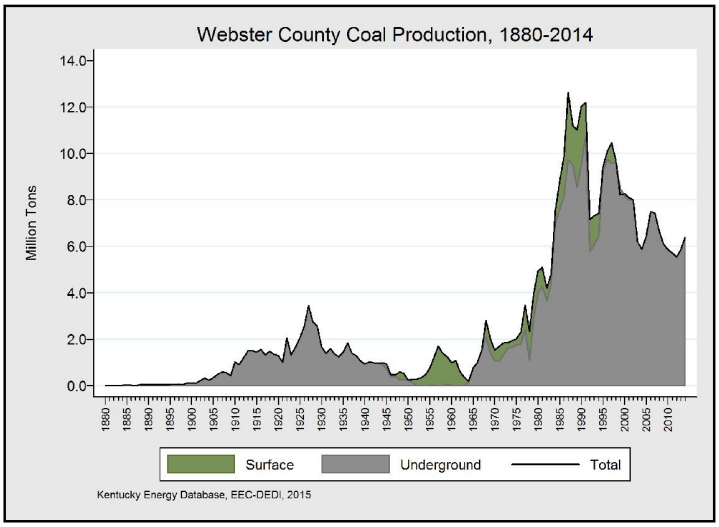


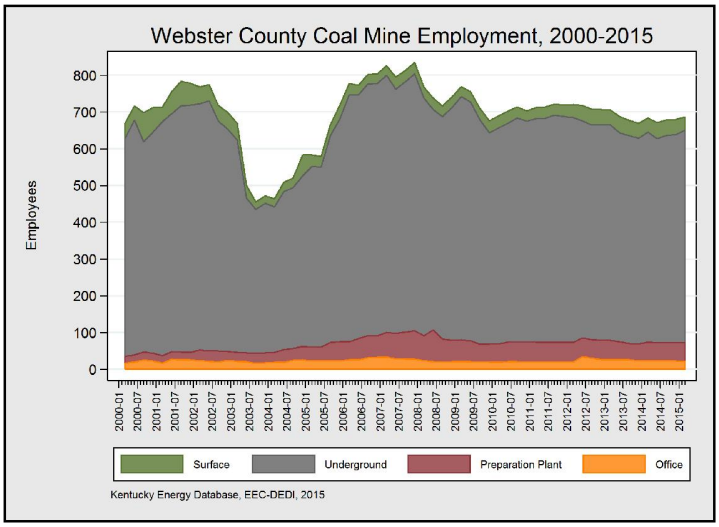


Production Method	Mines	Production	Annual Change
Total	4	6,398,494	+8.8%
Underground	2	6,334,891	+8.4%
Surface	2	63,603	+64.7%

On-Site Activity	Employment	Annual Change
Total	680	+1.6%
Underground	566	+1.1%
Preparation Plant	49	+8.9%
Surface	42	+5.0%
Office	23	-4.2%

In 2014, Webster mined 6.4 million tons of coal, which was an increase of 8.8 percent from 2013, and valued at $323 million. Almost all of this coal came from underground mines.

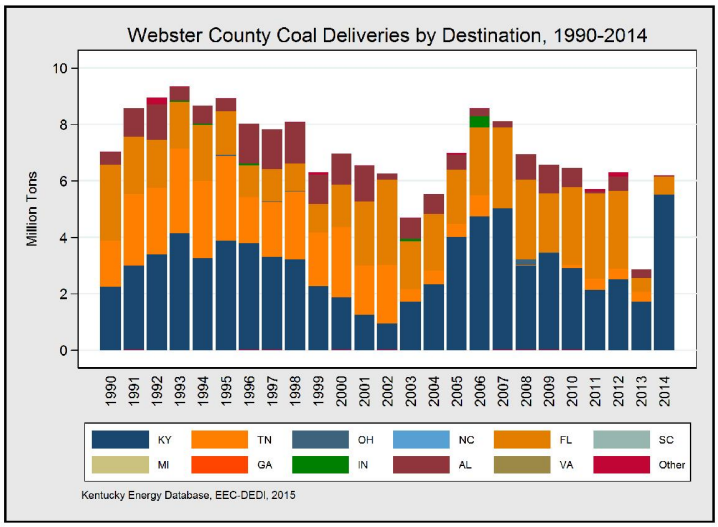


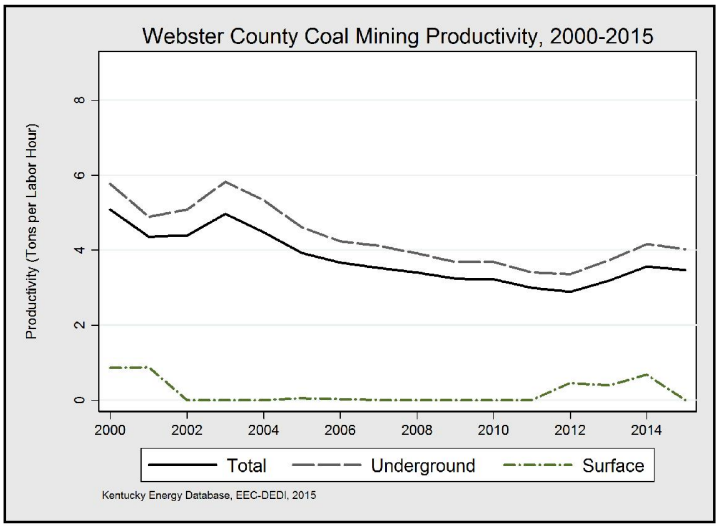


Coal production has been recorded in Webster County since 1869 and would first reach one million tons annually in 1910. Production peaked in Webster County in 1987 at 12.6 million tons and has declined by 51 percent through 2014. The vast majority of coal produced in Webster County comes from Alliance's Dotiki Mine or Onton #9 mine. Until being recently surpassed by Alliance's Riverview Mine, Dotiki was the largest coal mine in Kentucky.

Coal mines in Webster County directly employed 680 people full-time in 2014. Most of these workers, 566 or 83 percent, were underground coal miners. There were also 49 workers employed in preparation plants, 42 surface mine workers, and 23 on-site office staff. Coal mine employment peaked at 1,343 in 1994 and has declined by 50 percent through 2014.

Webster County





State and Power Plant	Deliveries (Tons)	Percentage
Total	**6,188,514**	**100%**
Kentucky	**5,517,201**	**89.2%**
Mill Creek	2,704,715	43.7%
Paradise†	1,273,008	20.6%
HMP&L Station Two Henderson	681,037	11.0%
East Bend	462,687	7.5%
R D Green	280,024	4.5%
Kenneth C Coleman	79,078	1.3%
Ghent	25,658	0.4%
Trimble County	10,994	0.2%
Florida	**636,461**	**10.3%**
Seminole	569,265	9.2%
IMT Transfer	67,196	1.1%
Alabama	**25,134**	**0.4%**
Gorgas†	25,134	0.4%
Mississippi	**9,718**	**0.2%**
Associated Terminals	9,718	0.2%

Webster County Coal Market

Mill Creek Station, located near Louisville, Kentucky, was the largest single consumer of coal shipped from Webster County in 2014, consuming nearly 44 percent of all coal shipped from Webster County that year. Paradise Fossil Plant, which is expected to lose two-thirds of its coal capacity by 2017, bought 21 percent of the coal shipped from Webster County in 2014. Overall, known steam coal shipments had been stable between 2008 and 2012, but decreased by 55 percent in 2013, but more than doubled again in 2014.

Webster County Coal Mining Productivity

Coal mine productivity in Webster County was 3.57 tons per labor hour during 2014. The vast majority of coal production in the county came from underground operations in 2014, and was produced at a rate of 4.16 tons per labor hour, making Webster County the second most productive county for underground mining in the state that year. Conversely, the relatively small-scale surface operations in Webster County in 2014 produced at 0.68 tons per hour, or the second-least productive rate of Kentucky counties for surface mining.

Chemical Composition and Cost

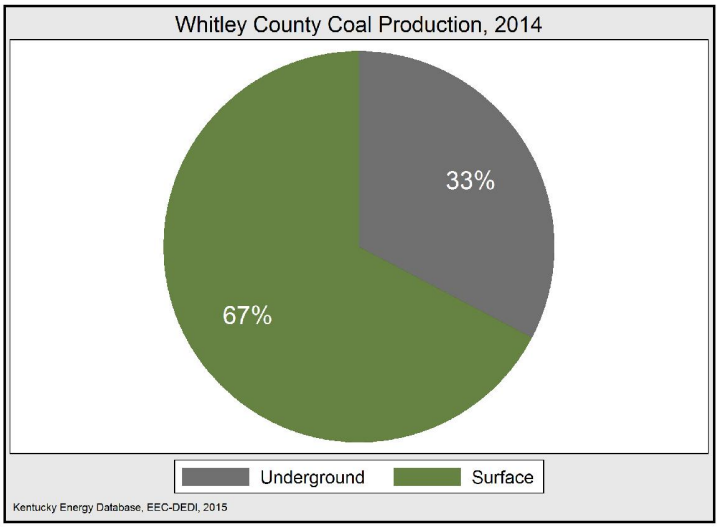
On average, coal mined in Webster County had a median sulfur content of 2.94 percent, a median ash content of 10.1 percent, and a median heat content of 24.02 MMBtu per ton. The average delivered price per ton for Webster County coal in 2014 was $56.64, and ranged from $38.67 to $87.50 per ton. The average mine-mouth cost of extracting coal in the county in 2014 was $46.06, processing costs of $4.98, and transportation costs of $5.60. The delivered price per MMBtu of coal from Webster County had a median of $2.38 per MMBtu and ranged from $1.77 to $3.50 per MMBtu.

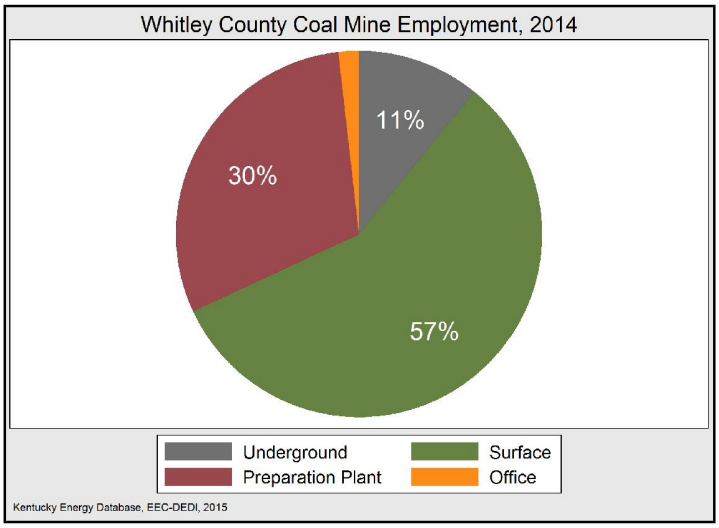
Coal Severance Taxes

Webster County coal producers paid $43 million in coal severance taxes in 2014. Of this amount, the Webster County Government was allocated $1,345,157.15 in severance revenues.

† The closure, or partial closure, of this power plant has been announced for 2014-2018.

Whitley County

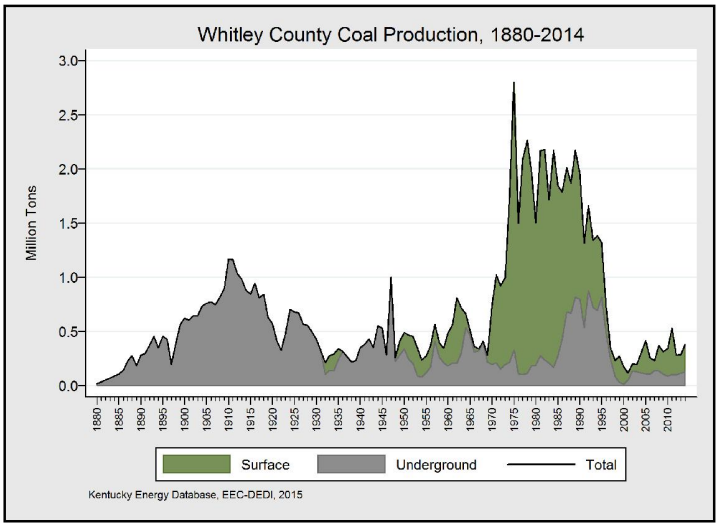


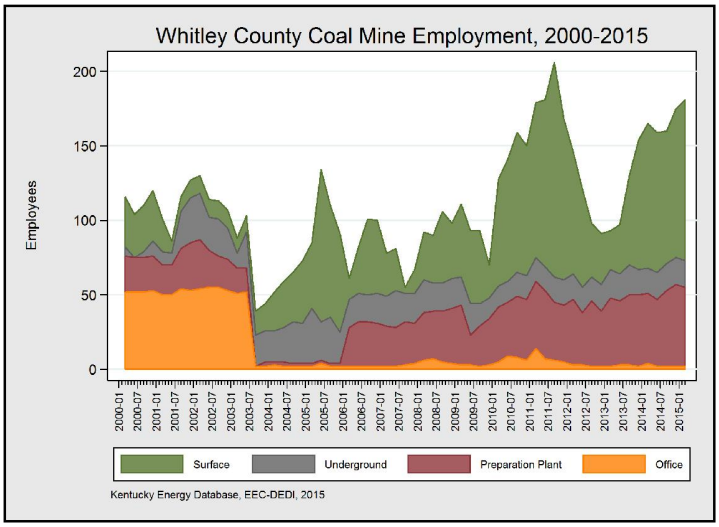


Production Method	Mines	Production	Annual Change
Total	7	381,602	+33.5%
Surface	6	256,766	+52.7%
Underground	1	124,836	+2.5%

On-Site Activity	Employment	Annual Change
Total	175	+13.6%
Surface	100	+14.9%
Preparation Plant	55	+14.6%
Underground	18	+5.9%
Office	2	+0.0%

The seven mines in Whitley County in 2014 produced 382 thousand tons of coal, which was an increase of 33.5 percent from 2013, and was valued at more than $54 million.

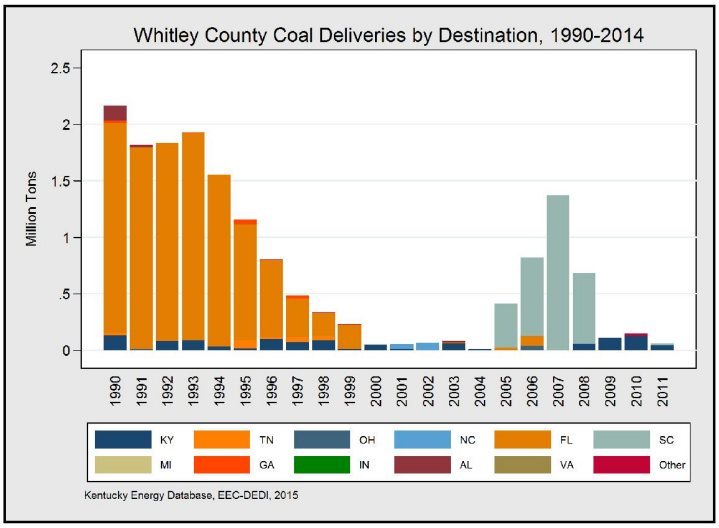


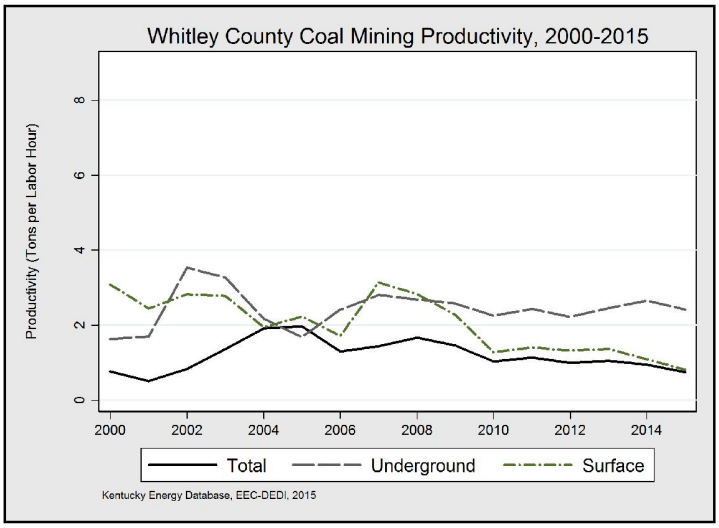


Whitley County began mining coal with 300 tons in 1837. Coal production peaked at 2.8 million tons in 1975, primarily from surface mines, and has declined by 86 percent through 2014. Whitley County has not produced more than 600 thousand tons in one year since 1996. Coal produced in Whitley County today comes primarily from surface mines, while 33 percent comes from underground mines.

In 2014, a total of 175 persons were employed at coal production facilities in Whitley County, an increase of 14 percent from 2013. Surface operations were the primary form of direct employment for Whitley County in 2014, providing 100 full-time jobs—an increase of 15 percent from 2013. Preparation plants in Whitley County employed 55 people. Only 18 coal miners worked underground.

Whitley County





Coal Severance Taxes

Whitley County coal producers paid $5.4 million in coal severance taxes in 2014. Of this amount, the Whitley County Government was allocated $389,729 in severance revenues.

Kentucky Coal Production

Year	Production (1,000 Tons)			Year	Production (1,000 Tons)			Year	Production (1,000 Tons)		
	Total	East	West		Total	East	West		Total	East	West
1790	0.02	0.02	0	1836	40	31	9	1882	1,386	535	851
1791	0	0	0	1837	59	48	11	1883	1,486	581	905
1792	0	0	0	1838	74	62	12	1884	1,576	617	959
1793	0	0	0	1839	64	50	14	1885	1,341	693	648
1794	0.02	0.02	0	1840	62	47	15	1886	1,519	664	855
1795	0	0	0	1841	65	48	17	1887	1,933	951	982
1796	0	0	0	1842	67	48	19	1888	2,401	1,125	1,276
1797	0	0	0	1843	69	49	20	1889	2,399	1,109	1,290
1798	0	0	0	1844	71	49	22	1890	2,532	1,217	1,315
1799	0	0	0	1845	72	49	23	1891	2,963	1,355	1,608
1800	0.1	0.1	0	1846	72	49	23	1892	3,028	1,293	1,735
1801	0.1	0.1	0	1847	73	48	25	1893	3,302	1,502	1,800
1802	0.1	0.1	0	1848	74	48	26	1894	2,957	1,150	1,807
1803	0.2	0.2	0	1849	74	47	27	1895	3,207	1,423	1,784
1804	0.2	0.2	0	1850	76	47	29	1896	3,183	1,421	1,762
1805	0.3	0.3	0	1851	77	47	30	1897	3,304	1,189	2,115
1806	0.4	0.4	0	1852	79	47	32	1898	3,535	1,471	2,064
1807	0.5	0.5	0	1853	82	49	33	1899	4,506	1,765	2,741
1808	0.5	0.5	0	1854	85	51	34	1900	5,021	2,087	2,934
1809	0.6	0.6	0	1855	108	67	41	1901	5,325	2,253	3,072
1810	0.7	0.7	0	1856	114	67	47	1902	6,429	2,785	3,644
1811	0.8	0.8	0	1857	118	69	49	1903	7,198	2,953	4,245
1812	0.9	0.9	0	1858	123	71	52	1904	7,168	3,046	4,122
1813	1.0	1.0	0	1859	127	73	54	1905	8,039	3,357	4,682
1814	1.1	1.1	0	1860	129	75	54	1906	9,598	3,810	5,788
1815	1.2	1.2	0	1861	44	1	43	1907	10,436	4,275	6,161
1816	1.3	1.3	0	1862	4	0	4	1908	9,806	4,171	5,635
1817	1.4	1.4	0	1863	4	0	4	1909	10,294	4,716	5,578
1818	1.5	1.5	0	1864	104	0	104	1910	14,766	6,317	8,449
1819	1.6	1.6	0	1865	107	0	107	1911	13,899	6,939	6,960
1820	2.0	1.7	0.3	1866	139	30	109	1912	15,789	7,993	7,796
1821	2.1	1.8	0.3	1867	114	45	69	1913	18,797	10,359	8,438
1822	2.3	1.9	0.4	1868	175	71	104	1914	19,582	11,789	7,793
1823	2.4	2.0	0.4	1869	229	92	137	1915	20,704	13,119	7,585
1824	3.1	2.6	0.5	1870	282	125	157	1916	24,631	16,893	7,738
1825	6.7	3.1	3.6	1871	345	127	218	1917	27,125	17,187	9,938
1826	7.5	3.6	3.9	1872	530	155	375	1918	30,787	19,988	10,799
1827	8.5	4.2	4.3	1873	528	149	379	1919	29,289	20,657	8,632
1828	9.6	5.0	4.6	1874	583	164	419	1920	32,893	22,177	10,716
1829	16.0	11.1	4.9	1875	666	226	440	1921	29,715	21,596	8,119
1830	18.9	13.6	5.3	1876	732	260	472	1922	40,565	27,302	13,263
1831	21.7	16.1	5.6	1877	800	295	505	1923	42,248	32,273	9,975
1832	23.4	17.5	5.9	1878	889	316	573	1924	42,576	34,450	8,126
1833	26.6	19.5	7.1	1879	1,124	373	751	1925	53,836	42,072	11,764
1834	34.6	27.4	7.2	1880	1,201	458	743	1926	62,661	46,353	16,308
1835	36.0	28.0	8.0	1881	1,292	495	797				

Coal Production and Employment

Year	Production (1,000 Tons)			Employment			Year	Production (1,000 Tons)			Employment		
	Total	East	West	Total	East	West		Total	East	West	Total	East	West
1927	67,768	47,697	20,071	64,969	56,623	8,346	1973	127,518	73,954	53,564	30,505	20,375	10,130
1928	65,794	49,845	15,949	58,775	49,937	8,838	1974	136,769	85,018	51,751	37,716	26,556	11,160
1929	59,395	45,294	14,101	57,445	48,387	9,058	1975	144,202	88,237	55,965	44,961	32,017	12,944
1930	50,065	39,625	10,440	55,424	45,930	9,494	1976	142,932	89,315	53,617	46,097	32,313	13,784
1931	39,804	31,462	8,342	46,984	37,240	9,744	1977	147,575	95,902	51,673	50,922	36,141	14,781
1932	34,987	25,620	9,367	40,282	30,660	9,622	1978	135,281	97,056	38,225	52,115	37,961	14,154
1933	36,447	28,427	8,020	44,963	35,180	9,783	1979	149,834	106,665	43,169	54,407	38,643	15,764
1934	38,455	30,252	8,203	51,148	41,387	9,761	1980	149,969	109,011	40,958	46,395	34,521	11,874
1935	40,933	32,335	8,598	53,631	43,917	9,714	1981	156,537	117,661	38,876	48,050	37,505	10,545
1936	47,094	38,826	8,268	58,494	48,741	9,753	1982	151,278	112,021	39,257	44,860	35,101	9,759
1937	46,468	38,111	8,357	56,810	47,067	9,743	1983	131,596	95,818	35,778	36,433	28,100	8,333
1938	39,031	31,497	7,534	55,322	45,481	9,841	1984	170,678	124,567	46,111	37,876	29,801	8,075
1939	41,496	33,516	7,980	54,693	44,905	9,788	1985	169,571	125,780	43,791	36,814	29,099	7,715
1940	48,572	40,012	8,560	56,293	46,574	9,719	1986	165,607	119,905	45,702	32,654	26,030	6,624
1941	53,354	41,865	11,489	60,160	51,096	9,064	1987	177,259	126,382	50,877	32,590	25,640	6,950
1942	62,531	49,136	13,395	58,815	49,290	9,525	1988	161,209	118,680	42,529	29,559	23,346	6,213
1943	63,231	47,956	15,275	51,777	42,468	9,309	1989	170,516	127,284	43,232	30,656	24,620	6,036
1944	71,394	50,998	20,396	53,586	44,610	8,976	1990	179,373	130,971	48,402	30,498	24,912	5,586
1945	69,290	48,325	20,965	49,855	39,992	9,863	1991	163,293	119,159	44,134	26,642	21,129	5,513
1946	68,493	49,638	18,855	56,623	47,712	8,911	1992	161,068	119,382	41,686	24,624	19,419	5,205
1947	87,556	64,933	22,623	73,091	63,714	9,377	1993	156,299	120,191	36,108	24,063	18,711	5,352
1948	81,384	58,405	22,979	75,633	66,410	9,223	1994	161,637	125,064	36,573	23,368	18,577	4,791
1949	73,278	48,075	25,203	75,707	66,300	9,407	1995	153,493	118,558	34,935	21,125	16,840	4,285
1950	80,988	56,474	24,514	74,457	66,141	8,316	1996	152,425	116,951	35,474	18,826	15,130	3,696
1951	73,036	51,504	21,532	58,991	51,767	7,224	1997	155,551	120,615	34,936	18,937	15,422	3,515
1952	63,826	42,977	20,849	50,555	42,680	7,875	1998	150,295	116,654	33,641	18,927	15,417	3,510
1953	63,318	42,114	21,204	46,109	39,000	7,109	1999	139,626	110,043	29,583	17,211	14,287	2,924
1954	58,055	35,537	22,518	38,658	31,326	7,332	2000	131,985	105,932	26,053	14,508	12,288	2,220
1955	68,165	41,869	26,296	41,291	33,344	7,947	2001	134,584	109,963	24,621	17,093	14,508	2,585
1956	75,328	45,523	29,805	44,935	37,105	7,830	2002	124,634	99,864	24,770	15,131	12,607	2,524
1957	75,394	45,030	30,364	42,261	34,259	8,002	2003	113,306	91,801	21,505	13,791	11,614	2,177
1958	67,252	39,066	28,186	38,693	31,890	6,803	2004	114,674	91,265	23,409	14,899	12,361	2,538
1959	64,468	34,131	30,337	34,488	28,138	6,350	2005	120,529	94,102	26,427	16,461	13,543	2,918
1960	61,612	31,208	30,404	34,473	27,917	6,556	2006	121,808	94,531	27,277	16,756	13,749	3,007
1961	65,395	34,786	30,609	29,765	24,303	5,462	2007	115,505	87,238	28,267	16,112	13,061	3,051
1962	70,050	38,389	31,661	28,015	22,842	5,173	2008	121,138	90,971	30,167	19,028	15,418	3,610
1963	78,183	42,464	35,719	29,445	23,927	5,518	2009	108,169	75,217	32,952	16,378	12,727	3,651
1964	83,238	45,256	37,982	28,066	23,074	4,992	2010	105,466	68,135	37,331	17,796	13,484	4,312
1965	87,207	47,328	39,879	26,501	21,389	5,112	2011	108,933	67,922	41,011	18,085	13,579	4,506
1966	93,189	51,207	41,982	25,114	20,335	4,779	2012	91,201	49,155	42,046	14,105	9,562	4,543
1967	100,106	54,492	45,614	24,643	19,473	5,170	2013	80,277	39,398	40,879	11,890	7,441	4,449
1968	100,976	54,845	46,131	23,667	18,413	5,254	2014	77,427	37,458	39,969	11,586	7,153	4,433
1969	108,026	60,461	47,565	25,297	17,584	7,713							
1970	125,308	72,596	52,712	27,689	19,223	8,466							
1971	119,189	71,337	47,852	29,313	20,912	8,401							
1972	120,271	67,967	52,304	30,221	20,696	9,525							

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In order to provide the public with timely access to these data, this report uses the best-available estimate for each factor at the time of publication. However, as a result of data revisions, confidentiality, rounding, and reporting errors, the table values may not precisely equal the sum of the included components and certain indicators may be subject to change. Please direct all data-related inquiries to Aron Patrick (Aron.Patrick@ky.gov) or Adam Blandford (Adam.Blandford@ky.gov) or by calling the Kentucky Department for Energy Development and Independence at 502-564-7192.

Data Sources

Kentucky Energy and Environment Cabinet
Department for Energy Development and Independence (DEDI)
Department for Natural Resources (DNR)
Department for Environmental Protection (DEP)

Kentucky Geological Survey

United States Department of Energy (DOE)

Energy Information Administration (EIA)

Federal Energy Regulatory Commission (FERC)

United States Department of Commerce (DOC)
Bureau of Economic Analysis (BEA)
Bureau of Labor Statistics (BLS)
U.S. Census Bureau

United States Department of the Interior (DOI)
Environmental Protection Agency (EPA)

United States Department of Labor (DOL)
Mine Safety and Health Administration (MSHA)
Bureau of Labor Statistics (BLS)

Additional Reference and Educational Materials (Not Used in this Document)

U. S. Department of Energy
(www.fossil.energy.gov/education/)

American Coal Foundation
(www.teachcoal.org)

UK Center for Applied Energy Research
(www.caer.uky.edu)

Coal In Kentucky
University of Kentucky, documentary (2010)
(www.coalinkentucky.com)

In order to provide the public with timely access to these data, this report uses the best-available estimate for each factor at the time of publication. However, as a result of data revisions, confidentiality, rounding, and reporting errors, the table values may not precisely equal the sum of the included components and certain indicators may be subject to change. Please direct all data-related inquiries to Aron Patrick (Aron.Patrick@ky.gov) or Adam Blandford (Adam.Blandford@ky.gov) or by calling the Kentucky Department for Energy Development and Independence at 502-564-7192.

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