COAL FACTS

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From the President's desk

West Virginia Coal 2015: Weathering the Storm

BY BILL RANEY
PRESIDENT
WEST VIRGINIA COAL ASSOCIATION

There is no question West Virginia's coal industry is in the most challenging time in its history. Over the past six-and-a-half years of the Obama Administration, West Virginia's coal industry has seen production decline by 29 percent. Direct mining employment has dropped from 23,000 to just 14,000 and tax collections are now falling.

The reasons for this decline have been discussed in detail over the past several years and those include, among others, the reduced demand for electricity because of the sluggish economy, both here in America and across the world, the unrealistic and unsustainable low price of natural gas, and at the heart of it all is the ongoing regulatory assault of the Obama Administration and its EPA.

The EPA's regulations have forced the closure of hundreds of coal-fired power plants around the country – many of them in the traditional markets for West Virginia's coal. These EPA regulations have given unfair advantage and favoritism to natural gas and renewables, forcing our affordable, dependable coal-generating utilities to look at alternatives for their baseload generation. In addition, the coal market is further complicated and depressed because of the sluggish domestic and world economies that have led to decreased demand for steam and metallurgical coal, which is the coal needed to make steel and other metals. Meanwhile, the concern is that everyone's electric bills will increase substantially because as soon as these coal-generating plants are switched to gas, the price of gas will have to increase, because that industry cannot continue to sell their gas for less than it is costing them to produce it! The good news is for the past 100 years, your Association, representing the best coal miners, managers, vendors and companies in the world have collectively strived to overcome physical, market and operational challenges while continuing to produce and sell West Virginia coal. In addition to this tough resiliency, West Virginia has plenty of steam and metallurgical coal remaining to be mined. However, the challenges posed by imbalanced government interference must be addressed so our coal, America's Fuel of Choice for centuries, is given a fair chance to compete.

In those reserves that we have remaining to be mined, we produce approximately 60-70 million tons of the finest quality metallurgical coal which accounts for about 40% of our historic annual tonnage. We are the leading producer of underground mined coal in the nation with several longwall mining operations that are highly competitive, located very close to coal-fired power plants and key transportation points, which includes truck, rail and an efficient system of river transport. Although less tonnage than in years past, we continue to have highly efficient surface operations that can, in conjunction with our underground operations, compete if given some tax and regulatory relief at the state level.

We are hopeful, the recent United States Supreme Court decision to remand EPA's MATS rule back to the lower court for further consideration and require EPA to complete an economic impact analysis before promulgating comprehensive regulations will help stem the "runaway bureaucratic tide" in Washington that has been running so strongly against coal! We are further hopeful that the next president will be more positive toward coal mining, coal miners and managers and coal-fired electricity generation. We are confident our State leaders, gubernatorial as well as legislative, will remain strongly supportive of our industry as we "cross our fingers" that the world and domestic economies will strengthen over the next few years and with that, we will see an increased demand for reliable, affordable energy, meaning coal, West Virginia coal. When it does, we'll be ready to fill the need as we always have.

Bill

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A Refreshing Change: Professionalism and Progress On Key Issues Characterize New Legislature

BY CHRIS HAMILTON
Vice President
West Virginia Coal Association

Given the tide-turning November 2014 elections and the exceptional class of incoming legislators, expectations were high for the 81st Legislature. With the completion of the 2015 session in March, it is the opinion of many Capitol-watchers that we witnessed the most productive and efficiently run 60-day legislative session the state has experienced in recent memory.

Senate President Bill Cole and House Speaker Tim Armstead assembled leadership teams comprised of hard-working, dedicated leaders from around the state. Our legislators focused on jobs, educational initiatives, legal fairness and the state's economy.

Legislative leadership ran the session like a good business. They outlined priorities, assigned work efficiently between the two bodies – the Senate and House – and they worked together to get things done. In fact, unlike most legislative sessions, consideration on major pieces of legislation began immediately upon session kickoff on January 14 and didn't end until midnight March 14, and the work has continued through the summer in preparation for the upcoming 2016 session.

Gone was the mentality of spending the first 30 days socializing and easing into the work of session. This new Legislature took the voters' charge seriously. The lawmakers -- and their dedicated, talented staff members -- worked hard from the beginning.

While leadership within the minority party tried to thwart progress on several major initiatives, most rank-and-file Democrats worked cooperatively and tirelessly with their Republican counterparts to pass pro-jobs, pro-business legislation that will move the state forward. And Gov. Earl Ray Tomblin deserves praise for his willingness to work across party lines to do what is in the best interest of the state and its people.

Looking for ways to help the coal industry weather the storm brought on by the policies of the Obama Administration, a more difficult reserve base and the general economy was one of the primary focuses of this legislative session.

Before the session even began, the new legislative leadership team moved to elevate the energy committee to major committee status, which set the tone for much of the rest of the session. And the first bill that was passed was one to overturn the state's Alternative and Renewable Energy Act, which mandated increased use of alternate forms of energy in the state's energy portfolio.

The bill with the most impact, both in the short and long term, is the Coal Mining Jobs and Safety Act of 2015. This bill was essentially an omnibus piece of legislation that made several key reforms to state mining laws, including:

Moving of Mining Equipment

This current law was written in the early 1970s in response to a mining accident with fatalities. Since then mining designs have changed (only 6 have trolley wire like the 1970s mine), mining equipment now has fire suppression devices, power supply lines have emergency shut off designs to prevent fires, and the airflow design is much safer. An update to the current federal standards is responsible.

Diesel Commission

Currently we have a commission that approves the use of diesel equipment in mines. However, the Office of Miners Health Safety and Training (OMHST) completes all the testing of equipment. In fact, in his testimony to the House Energy Committee, Gary Trout (UMWA appointee to the Commission) stated that nobody on the commission is diesel certified and that he himself has no underground diesel mining experience. This is unacceptable. We are asking for the OMHST to assume the commission's responsibilities to keep mine safety decisions in the hands of mine safety experts.

Drug Testing

There are two drug testing processes for coal miners, one for union miners and one for non-union miners. In the case of a union miner a positive drug test may never be acted on by the OMHST because it goes through arbitration. Non-union miners' drug tests go directly to the OMHST. All miners should be handled in the same manner when it comes to drugs in coal mines.

Inactive Status

The WV DEP restricts to three years the amount of time a coal mine may remain on inactive status before reclamation must commence. Given the current market, we are asking the DEP to adopt rules that loosen this requirement like the federal regulations do. Why? Mines that may not be competitive in this market might be in five or six years. If we reclaim now, we can never mine that coal again.

Aluminum Standards

Recent studies have shown that the potential effect aluminum has on toxicity of water directly correlates to the hardness of a stream's water. The DEP was poised to change its standards to a hardness-based standard last year and is supportive of pursuing this year. In fact, speaking to all the proposed environmental provisions of S.B. 357, Randy Huffman (Secretary of the DEP) said in the Senate Judiciary Committee that he sees no problem with any of the recommendations in S.B. 357.

The reforms will allow coal companies to reduce costs while streamlining regulations to match federal standards and improving overall safety for our miners.

Legal reform was a key agenda item this session, and the results are nothing less than historic. A few of the major pieces of legislation that passed – most with significant bi-partisan support – include: Comparative Fault & Joint/Several Liability, Deliberate Intent, Medical Professional Liability, Non-Partisan Election of Judges, Open & Obvious Doctrine, Punitive Damage Caps, Trespasser Liability, and Asbestos Trust Fund Reform.

Make no mistake, these "legal fairness" initiatives bring West Virginia's laws in line with other states, make us more competitive and send the message that the state is open for business.

A host of significant legislation passed on the business and industrial development front. Just a few of these initiatives include: Prevailing Wage Reform, Auto Dealer Franchise Protections, Environmental Regulatory Updates, Industrial Property Protection, Storage Tank Regulation, Teacher Certification Expansion, and Wage Payment Updates.

These laws remove barriers to competitiveness, incentivize job growth and instill fairness into West Virginia's regulatory programs. Granted, those who oppose change and progress are singing a different tune to any media outlet that will listen. But take it from those of us who know a little something about providing jobs, making payroll and competing on an increasingly national and international scale – what the Legislature accomplished this year is remarkable.

As is unfortunately always the case, not all important legislation passed this session. After receiving the support of farmers, mineral and land owners and the natural gas industry and passing both chambers, the Lease Integration, aka Fair Pooling, bill died on the last night of the session, and this death was far more about politics than policy, as often is the case in the final hours of session. Legislation to allow charter schools and other education reform also failed to make it to the finish line. These and other important bills that did not make it to passage remain goals for next year. We need our legislative leaders to continue their efforts to pass these bills for the continual improvement of our state and its people.

All in all, President Cole and Speaker Armstead deserve high praise for their efforts, as do most all members of the 81st Legislature. Remember, this leadership team did not have decades of experience running the Legislature and years to refine their agendas. In a matter of weeks, Cole and Armstead created a structure that exceeded all expectations. And now that these folks have experience under their belts, their pro-West Virginia agenda has momentum to move the state forward. ♦

Contents

Have You Ever Wondered Just Who are The Friends of Coal?

The Friends of Coal: Speaking with One Voice

"So what exactly is the "Friends of Coal?"

Friends of Coal got its start in 2002 as a grass roots organization of people across West Virginia who wanted some way to show their support for the state's leading industry – coal mining – and the tens of thousands of jobs it provides. Today, just 13 years later, the organization has spread out across the country, with members in West Virginia, Kentucky, Virginia, Ohio, Pennsylvania, North Carolina, Wyoming, Tennessee and other states. You see the now familiar logo – the blue and black Friends of Coal swoosh – on cars from Florida to Alaska, from California to Maine.

That logo is on helmets, license plates, and the back windows of pickup trucks. It's on lunch boxes, shirts, yard signs, pens, pencils and football games. It's on every state championship trophy given out by the West Virginia Secondary Schools Athletic Commission, race cars, boats and even rubber coal. You hear the jingle … "Coal is West Virginia…" on radio stations, in stadiums and televisions across the state.

Friends of Coal has grown to include a thriving Ladies Auxiliary, sponsored events like the Friends of Coal Auto Fair, the Friends of Coal Relays and other events. We have supplemented other groups like United Citizens for Coal, the Logan Coal Vendors Association, Remember the Miners and others. Each of these groups maintains their independence but we are tied together as a single family — the family of coal. We work together for a common purpose — defending the jobs of our state's working coal miners and their families.

Today, the Friends of Coal has spread to almost 100,000 people, with members in almost every state and several foreign countries. Friends of Coal has a thriving social media presence nationwide, with more than 2 million views each month.

Friends of Coal is no longer "just a name" but has morphed into an army of coal miners, their families, friends, neighbors, local and state business leaders, elected officials, doctors, lawyers, teachers, pizza delivery guys and students, taking the message of coal to the people.

That message is simple: Coal mining is vital to West Virginia and to our nation.

When Friends of Coal started in 2002, research indicated that a little more than 45 percent of West Virginia's people expressed support for the industry. Today, that number has moved well past 70 percent. The credit for that success belongs to each and every one of you who has taken the time to become a member. The credit also belongs to the tens of thousands who visit our web pages and come to our events.

For the past six years our industry has been under attack like no other time in our history. The Obama Administration, through its regulatory agencies has waged a war against coal -— against coal mining, against coal transportation and against the use of coal to power our economy.

Where would we be without the support of our coal mining family?

Would they hear our message as loudly in Charleston and Washington?

2014 was an especially difficult year – the combined effects of the Obama regulatory assault on coal, the glut of natural gas in the marketplace combined to become a "perfect storm." Coal production in West Virginia is down by 32 percent and we have now lost about 7,000 direct coal mining jobs.

It's frequently noted that every coal mining job creates another five to eight jobs somewhere in the economy. The converse is also true. When a coal mining job is lost, another five to eight jobs are also likely lost. The Friends of Coal know this.

Anyone who has ever visited a coal mining community in West Virginia would have no hesitation in believing that statistic. It is likely no other state and industry are as closely identified as West Virginia and coal.

Friends of Coal is based on the simple premise West Virginia is full of people who understand and appreciate the value and the importance of coal to the Mountain State and its people.

These people have always been around, but they have never before been asked to demonstrate just how many West Virginians are directly and indirectly involved with the coal industry.

Friends of Coal also was born out of a desire to correct the impression that coal's time has passed in West Virginia.

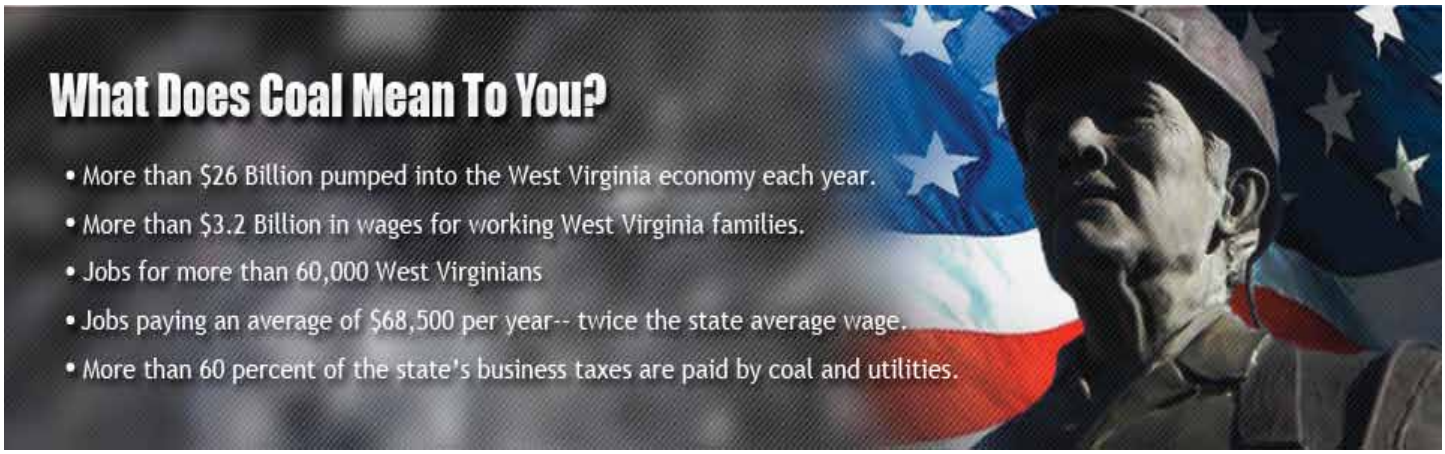
Coal still supplies about 40 percent of this country's electrical power demand, and West Virginia is the nation's second largest coal producer. There is no danger that demand for energy will cease.

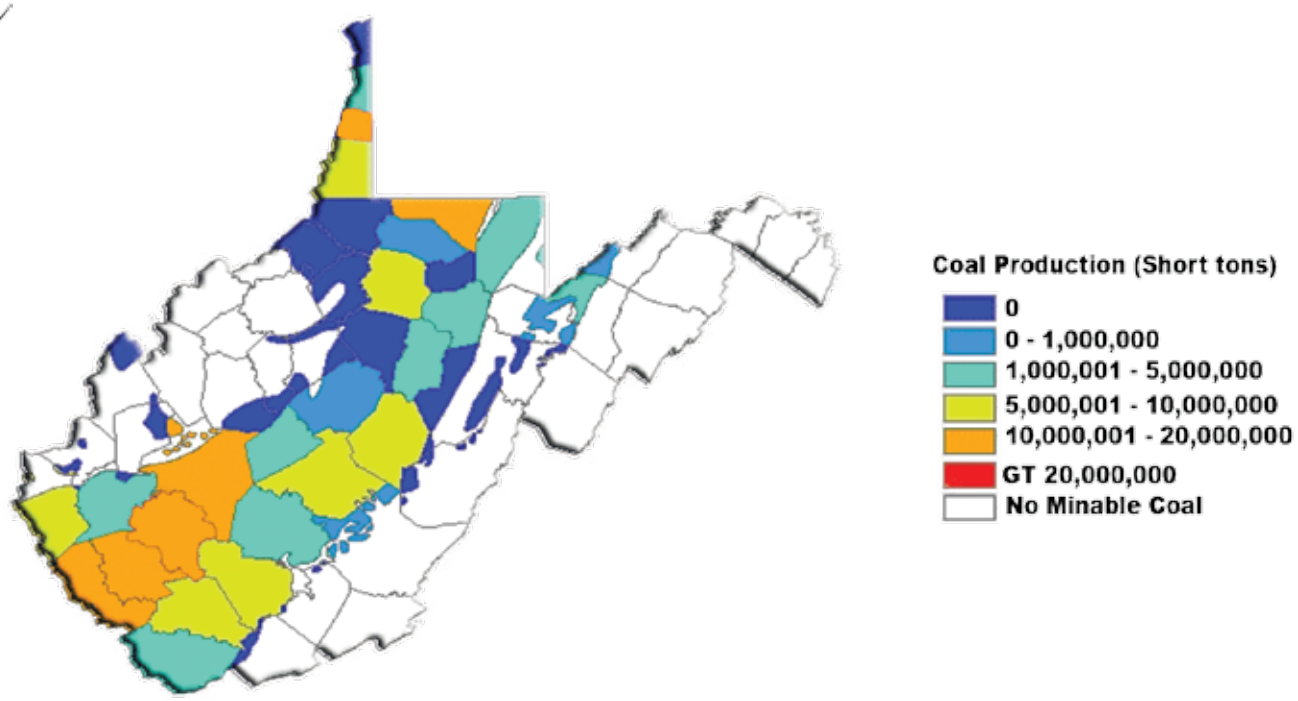
West Virginia's greatest advantages have always been the quality of its coal, its relative proximity to the markets and most important, its hard-working, highly skilled and productive workforce.

As the industry streamlines and adapts to meet our challenges, it is increasingly important the Friends - the FAMILY - of Coal in West Virginia unites to speak with one voice. Friends of Coal will continue to clearly demonstrate that coal must be a major consideration in the establishment of public policy in the state and in the nation.

For more information, visit the Friends of Coal website at www.friendsofcoal.org. or visit us at Friends of Coal – West Virginia on Facebook. And, if you haven't already done so, take a moment and fill out an application for our Friends of Coal official state license plate, which is also available at the Friends of Coal website.

Let the world know you are a Friend of Coal.





West Virginia Coal Facts at a Glance

Sources: Energy Information Agency and West Virginia Office of Miners' Health and Safety (expressed in short tons) All values expressed in tons except for dollar figures and employment. Discrepancies in the data are due to different reporting standards from the sources (eg. number of mines).

Total Production	**116,900,140**
Underground	86,848,069
Surface	30,052,071
Coal Companies Operating in W.Va.	**141**
Number of Mines	205
Underground	106
Surface	99
Record Production Year - 1997	**181,914,000**
Recoverable Coal Reserves	**51,070,634,757**
West Virginia Coal Employment 2014	**18,159**
Underground	14,073
Surface	4,086
Independent Contractors	28,940
Coal Handling Facilities	1,940
Total Employment	49,039
Transportation (tons)	**88,705,966**
Rail	48,052,667
River	16,892,193
Truck	23,761,186
Estimated Average Annual Coal Wage	**$71,000**
Estimated Production Value 2014	**$7,357,830,480***
Coal Severance Tax	**$407,000,000**
Leading Coal Producing County	
Total Tonnage - Marshall	16,891,996
Underground - Marshall	16,891,996
Surface - Logan	5,580,890
Highest Employment by County - Boone	**2,215**
County With Most Coal Reserves - Boone	**3,589,414,636**
Largest Underground Mine	
Marshall County Mine (Murray Energy)	10,307,075
Largest Surface Mine	
Holden 22 Surface (Phoenix Coal-Mac Mining, Inc.)	2,753,637
Largest Mine Employment	
Marshall County Mine (Murray Energy)	1,035
Largest Producing Mining Method	
Underground	92,578,437
Largest Producing Coal Seam	
Pittsburgh	48,763,014

Note: Employment figures for coal handling facilities are based on West Virginia Office of Miners' Health, Safety and Training inspection reports. Figures for Independent Contractors are based on either monthly reports, inspection reports, or information provided by the individual companies on their permit application (or renewal) with this agency. Only these contractors with valid permits are included in the totals. Independent Contractors include companies providing the following types of services (not all categories are listed): Site Preparation, Construction, Electrical, Explosives, Vendors, Drainage, Maintenance, Trucking, Welding, Cleaning, Security, Painting, Drilling, Sampling and Demolition.

* Based on $54 per ton estimated average market value of coal. Reflects WVOMHST data. There may be discrepancies between tonnage reported and actual tonnage.

Key Contacts

National Mining Association
Phone (202) 463-2600
FAX (202) 2666
www.nma.org

WV Office of Miners' Health, Safety & Training
Phone (304) 558-1425
FAX (304 558-1282
www.state.wv.us/mhst

West Virginia Coal Association
Phone (304) 342-4153
FAX (304) 342-7651
www.wvcoal.com

WV Department of Environmental Protection
Phone (304) 926-0440
FAX (304) 926-0446
www.dep.state.wv.us

Office of Surface Mining - Charleston
Phone (304) 347-7162
FAX (304) 347-7170
www.osmre.gov

U.S. Coal Facts at a Glance

Total Production - 2014	**984,842,000**
Underground	341,685,000
Surface	641,191,000
East	269,672,000
West	530,210,000
Interior	182,994,000
Refuse Recovery (included in total)	1,966,000
Number of Mines - 2014	**1,061**
Underground	395
Surface	637
Employment - 2014	**80,396**
Underground	49,504
Surface	30,705
Recoverable Reserves - 2014	**484,784,259,000**

Source: U.S. Energy Information Administration, Annual Coal Report. Released April 23, 2015. (Calendar year 2013).

U.S Coal Basins

Source: Energy Information Administration, Annual Energy Review 1999. DOE/EIA-0384(99) (Washington, DC, July 2000). Projections: Figure 76.

County by County Rankings - 2014

County	Employment
Boone	2,215
Marshall	1,735
Kanawha	1,686
Logan	1,676
Raleigh	1,583
Marion	1,297
Monongalia	1,245
McDowell	1,074
Wyoming	1,053
Mingo	964
Fayette	522
Ohio	483
Taylor	424
Wayne	416
Greenbrier	306
Barbour	258
Tucker	234
Nicholas	222
Lincoln	196
Webster	189
Upshur	142
Harrison	92
Braxton	84
Clay	29
Mercer	25
Mineral	6
Grant	3
TOTAL	**18,159**

County	Underground Tonnage
Marshall	16,891,996
Marion	13,119,584
Monongalia	8,507, 817
Kanawha	6,488,453
Boone	5,547,726
Ohio	5,400,000
Logan	4,931,246
Wyoming	4,604,542
Raleigh	4,152,143
Taylor	2,820,875
Wayne	2,309,634
McDowell	2,162,733
Tucker	1,907,274
Barbour	1,849,304
Mingo	1,505,125
Fayette	1,379,455
Upshur	786,540
Webster	692,052
Nicholas	602,675
Greenbrier	449,113
Harrison	411,836
Braxton	327,946
Clay	0
Grant	0
Lincoln	0
Mercer	0
Mineral	0
TOTAL	**86,848,069**

County	Surface Tonnage
Mingo	5,580,890
Boone	5,514,908
Logan	4,886,909
Kanawha	3,825,815
Raleigh	3,152,412
Lincoln	2,014,289
Fayette	1,247,820
McDowell	1,217,793
Webster	1,042,530
Greenbrier	677,475
Monongalia	426,131
Mercer	221,858
Marion	124,825
Nicholas	32,588
Wyoming	30,680
Upshur	26,832
Harrison	16,710
Mineral	6,186
Tucker	5,200
Taylor	220
Barbour	0
Braxton	0
Clay	0
Grant	0
Marshall	0
Ohio	0
Wayne	0
TOTAL	**30,052,071**

County	Total Tonnage
Marshall	16,891,996
Marion	13,244,409
Boone	11,062,634
Kanawha	10,314,268
Logan	9,818,155
Monongalia	8,933,948
Raleigh	7,304,555
Mingo	7,086,015
Ohio	5,400,000
Wyoming	4,635,222
McDowell	3,380,526
Taylor	2,821,095
Fayette	2,627,275
Wayne	2,309,634
Lincoln	2,014,289
Tucker	1,912,474
Barbour	1,849,304
Webster	1,734,582
Greenbrier	1,126,588
Upshur	813,372
Nicholas	635,263
Harrison	428,546
Braxton	327,946
Mercer	221,858
Mineral	6,186
Clay	0
Grant	0
TOTAL	**116,900,140**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST)
Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

2014 WV Monthly Coal Employment and Production

EMPLOYMENT				PRODUCTION		
Month	Underground	Surface	Total	Underground	Surface	Total
January	13,849	3,593	17,442	7,239,694	2,425,260	**9,664,954**
February	13,995	3,579	17,574	7,795,947	2,407,008	**10,202,955**
March	13,803	3,609	17,412	8,250,633	2,596,378	**10,847,011**
April	13,756	3,573	17,329	8,315,797	2,863,519	**11,179,316**
May	13,605	3,516	17,121	7,183,641	2,775,800	**9,959,441**
June	13,523	3,763	17,286	7,782,198	2,859,216	**10,641,414**
July	13,334	3,360	16,694	6,866,273	2,471,498	**9,337,771**
August	13,377	3,491	16,868	8,213,727	2,808,604	**11,022,331**
September	13,131	3,270	16,401	7,579,141	2,652,177	**10,231,318**
October	12,972	3,142	16,114	8,687,928	2,523,749	**11,211,677**
November	13,023	2,817	15,840	7,248,041	1,741,855	**8,989,896**
December	12,880	2,719	15,599	7,415,417	1,927,007	**9,342,424**
TOTAL				**92,578,437**	**30,052,071**	**122,630,508**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST)
Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

WV's Highest Production Surface Mines - 2014

Company	Mine	Emp	Production	County
Phoenix Coal-Mac Mining, Inc.	Holden No. 22 Surf.	297	2,753,637	Mingo
Catenary Coal Co.	Samples Mine	275	2,485,450	Kanawha
Consol Of Kentucky, Inc.	Twin Branch Surface	126	2,133,009	Mingo
Hobet Mining LLC	West Ridge III	196	2,014,289	Lincoln
Elk Run Coal Co., Inc.	Black Castle No. 4	195	1,510,532	Boone
Independence Coal Co.	Twilight Mtr/ Progress	154	1,467,964	Boone
Elk Run Coal Co.Inc Dba Rep.En.	Republic Energy	161	1,123,659	Raleigh
Brooks Run Mining Co., LLC	Seven Pines	85	1,042,530	Webster
Cliffs Logan County Coal, LLC	Toney's Fork Surface	69	944,419	Logan
Alex Energy Inc.	Edwight Surface Mine	110	920,789	Raleigh
Highland Mining Co.	Reylas Surface	88	872,795	Logan
Simmons Fork Mining, Inc.	Ewing Fork No. 1	78	717,047	Raleigh
Highland Mining Co.	Rockhouse Branch Surface	84	656,013	Logan
Eagle Creek Mining, LLC	Spruce No. 1 Mine	46	635,228	Logan
Extra Energy, Inc.	Easter Ridge Surface	94	608,716	McDowell
Hobet Mining, LLC	West Ridge Surface	72	586,279	Boone
Raven Crest Contracting, LLC	Boone North No. 2	51	574,148	Boone
Coal River Mining, LLC	Mine No. 6	62	571,757	Boone
Maple Coal Co.	Maple Coal No. 1	43	500,641	Fayette
Revelation Energy, LLC	S7 Surface Mine	33	496,005	Fayette

WV's Highest Production Underground Mines - 2014

Company	Mine	Emp	Production	County
Murray Energy	Marshall County Mine	1,035	10,307,075	Marshall
Murray Energy	Marion County Mine	686	6,744,989	Marion
Murray Energy	Ohio County Mine	716	6,584,921	Marshall
Murray Energy	Harrison County Mine	585	6,374,595	Marion
Alliance Resource Partners	Tunnel Ridge	483	5,400,000	Ohio
Murray Energy	Monongalia County Mine	527	4,695,938	Monongalia
ACI Tygart Valley	Leer Mine	421	2,820,875	Taylor
Pinnacle Mining Co., LLC	Pinnacle Mine	474	2,747,256	Wyoming
Speed Mining, LLC	American Eagle Mine	465	2,732,344	Kanawha
Eastern Associated Coal Corp.	Federal No 2	487	2,484,399	Monongalia
Rockspring Development, Inc.	Camp Ck. Mine No. 1	393	2,308,211	Wayne
Mingo Logan Coal Co.	Mountaineer II Mine	322	1,950,162	Logan
Mettiki Coal, LLC (WV)	Mettiki E Mine	225	1,907,274	Tucker
Wolf Run Mining Co., Inc.	Sentinel	255	1,849,304	Barbour
Midland Trail Energy, LLC	Bc No. 1	125	1,230,989	Kanawha
Pocahontas Coal Co., LLC	Affinity Mine	272	1,097,167	Raleigh
Aracoma Coal Co., Inc.	Aracoma Alma No. 1	202	1,096,971	Logan
Spartan Mining Co.	Ruby Energy	178	1,091,579	Mingo
Dana Mining Co., LLC	Prime No. 1	161	979,434	Monongalia
ICG Beckley, LLC	Beckley Pocahontas	272	973,859	Raleigh
Remington, LLC	Winchester Mine	165	965,050	Kanawha
Mammoth Coal Co.	Slabcamp	104	939,270	Kanawha

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST)
Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

* Murray American Energy purchased these mines in December 2013 from Consolidation Coal Co..
*1-McElroy; *2-Shoemaker Mine; *3-Robinson Run Mine; *4-Loveridge; *5-Blacksville

See Production and Employment by Seam on Page 18

2014 Coal Production and Employment by County

County	Employees	Underground Tonnage	Surface Tonnage	Total Tonnage
Barbour	258	1,849,304	0	**1,849,304**
Boone	2,215	5,547,726	5,514,908	**11,062,634**
Braxton	84	327,946	0	**327,946**
Clay	29	0	0	**0**
Fayette	522	1,379,455	1,247,820	**2,627,275**
Grant	3	0	0	**0**
Greenbrier	306	449,113	677,475	**1,126,588**
Harrison	92	411,836	16,710	**428,546**
Kanawha	1,686	6,488,453	3,825,815	**10,314,268**
Lincoln	196	0	2,014,289	**2,014,289**
Logan	1,676	4,931,246	4,886,909	**9,818,155**
McDowell	1,074	2,162,733	1,217,793	**3,380,526**
Marion	1,297	13,119,584	124,825	**13,244,409**
Marshall	1,735	16,891,996	0	**16,891,996**
Mercer	25	0	221,858	**221,858**
Mineral	6	0	6,186	**6,186**
Mingo	964	1,505,125	5,580,890	**7,086,015**
Monongalia	1,245	8,507,817	426,131	**8,933,948**
Nicholas	222	602,675	32,588	**635,263**
Ohio	483	5,400,000	0	**5,400,000**
Raleigh	1,583	4,152,143	3,152,412	**7,304,555**
Taylor	424	2,820,875	220	**2,821,095**
Tucker	234	1,907,274	5,200	**1,912,474**
Upshur	142	786,540	26,832	**813,372**
Wayne	416	2,309,634	0	**2,309,634**
Webster	189	692,052	1,042,530	**1,734,582**
Wyoming	1,053	4,604,542	30,680	**4,635,222**
TOTAL	**18,159**	**86,848,069**	**30,052,071**	**116,900,140**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST) Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

2014 Method of Coal Production by County (Tons)

County	Continuous	Longwall	Underground	Auger	Surface	TOTAL
Barbour	1,849,304	0	1,849,304	0	0	**1,849,304**
Boone	5,547,726	0	5,547,726	0	5,514,908	**11,062,634**
Braxton	327,946	0	327,946	0	0	**327,946**
Fayette	1,379,455	0	1,379,455	0	1,247,820	**2,627,275**
Greenbrier	449,113	0	449,113	0	677,475	**1,126,588**
Harrison	411,836	0	411,836	0	16,710	**428,546**
Kanawha	4,609,278	1,879,175	6,488,453	0	3,825,815	**10,314,268**
Lincoln	0	0	0	0	2,014,289	**2,014,289**
Logan	3,646,111	1,285,135	4,931,246	0	4,886,909	**9,818,155**
McDowell	2,160,735	1,998	2,162,733	0	1,217,793	**3,380,526**
Marion	978,757	12,140,827	13,119,584	0	124,825	**13,244,409**
Marshall	1,355,172	15,536,824	16,891,996	0	0	**16,891,996**
Mercer	0	0	0	0	221,858	**221,858**
Mineral	0	0	0	0	6,186	**6,186**
Mingo	1,505,125	0	1,505,125	0	5,580,890	**7,086,015**
Monongalia	2,087,761	6,813,946	8,507,817	382,581	426,131	**8,933,948**
Nicholas	602,675	0	602,675	0	32,588	**635,263**
Ohio	1,192,082	4,207,918	5,400,000	0	0	**5,400,000**
Raleigh	4,152,143	0	4,152,143	0	3,152,412	**7,304,555**
Taylor	686,374	2,134,501	2,820,875	0	220	**2,821,095**
Tucker	468,372	1,438,902	1,907,274	0	5,200	**1,912,474**
Upshur	786,540	0	786,540	0	26,832	**813,372**
Wayne	2,309,634	0	2,309,634	0	0	**2,309,634**
Webster	692,052	0	692,052	0	1,042,530	**1,734,582**
Wyoming	2,204,068	2,400,474	4,604,542	0	30,680	**4,635,222**
TOTAL	**39,402,259**	**47,445,810**	**86,848,069**	**382,581**	**30,052,071**	**116,900,140**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST) Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

2014 Coal Production by Method - Surface (Tons)

County	Open Pit	Contour	Combination	Auger	Highwall	Area	Contour And Auger	Not Classified	Total
Boone	0	1,477,258	1,526,922	0	0	2,347,264	138,777	24,687	**5,514,908**
Fayette	0	747,179	0	0	0	500,641	0	0	**1,247,820**
Greenbrier	187,414	478,637	0	0	11,424	0	0	0	**677,475**
Harrison	0	16,710	0	0	0	0	0	0	**16,710**
Kanawha	0	116,910	7,232	0	0	3,140,809	560,864	0	**3,825,815**
Lincoln	0	2,014,289	0	0	0	0	0	0	**2,014,289**
Logan	0	2,894,948	0	0	0	1,790,762	201,199	0	**4,886,909**
McDowell	0	318,025	0	43,278	34,575	821,915	0	0	**1,217,793**
Marion	0	0	0	124,825	0	0	0	0	**124,825**
Mercer	0	221,858	0	0	0	0	0	0	**221,858**
Mineral	6,186	0	0	0	0	0	0	0	**6,186**
Mingo	0	425,445	0	0	0	5,071,800	83,645	0	**5,580,890**
Monongalia	21,803	0	0	0	404,328		0	0	**426,131**
Nicholas	0	32,588	0	0	0	0	0	0	**32,588**
Raleigh	0	794,859	0	0	65,554	2,044,448	247,551	0	**3,152,412**
Taylor	0	220	0	0	0	0	0	0	**220**
Tucker	0	0	0	5,200	0	0	0	0	**5,200**
Upshur	0	26,832	0	0	0	0	0	0	**26,832**
Webster	0	0	0	0	0	1,042,530	0	0	**1,042,530**
Wyoming	0	0	0	0	0	30,680	0	0	**30,680**
TOTAL	**215,403**	**9,565,758**	**1,534,154**	**173,303**	**515,881**	**16,790,849**	**1,232,036**	**24,687**	**30,052,071**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST) Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

2014 Coal Transportation by County

Note: Because coal distribution may cross annual year boundaries, total tons produced does not equal total tons distributed in many cases.

County	Rail	River	Truck	Belt	Stock-Piled	TOTAL TONS DIST.
Boone	5,138,066	73,222	2,047,261	917,402	0	**8,175,951**
Braxton	321,160	0	0	0	0	**321,160**
Fayette	306,915	21,369	2,341,291	0	0	**2,669,575**
Greenbrier	828,694	0	201,431	0	0	**1,030,125**
Harrison	0	0	417,527	0	8,368	**425,895**
Kanawha	3,271,383	763,105	5,188,893	263,177	0	**9,486,558**
Lincoln	1,952,831	0	0	0	0	**1,952,831**
Logan	6,779,948	2,757	1,543,670	0	20,692	**8,347,067**
McDowell	1,272,719	0	1,464,880	0	0	**2,737,599**
Marion	8,382,918	0	124,825	4,629,430	0	**13,137,173**
Marshall	0	10,307,075	0	0	0	**10,307,075**
Mercer	173,808	0	415	0	43,126	**217,349**
Mineral	0	0	6,186	0	0	**6,186**
Mingo	179,850	0	2,606,099	101,924	0	**2,887,873**
Monongalia	6,828,772	208	1,742,487	0	11,855	**8,583,322**
Nicholas	612,851	13,186	58,253	3,606	0	**687,896**
Ohio	0	5,618,261	0	0	0	**5,618,261**
Raleigh	4,054,431	0	3,347,316	0	19,332	**7,421,079**
Taylor	2,580,787	0	0	0	0	**2,580,787**
Tucker	231,819	93,010	1,614,526	0	0	**1,939,355**
Upshur	0	0	760,234	0	0	**760,234**
Wayne	0	0	440	0	0	**440**
Webster	1,762,654	0	0	0	29,606	**1,792,260**
Wyoming	3,373,061	0	295,372	0	0	**3,668,433**
TOTAL	**48,052,667**	**16,892,193**	**23,761,106**	**5,915,539**	**132,979**	**94,754,484**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST)
Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

2014 Coal Production and Employment by Seam

Seam	Employees	Underground Tonnage	Surface Tonnage	Total Tonnage
Alma	544	3,048,556	0	**3,048,556**
Alma A	28	0	1,840	**1,840**
Bakerstown	3	0	0	**0**
Beckley	142	438,383	227,228	**665,611**
Bens Creek	5	0	0	**0**
Brush Creek	9	0	5,200	**5,200**
Cedar Grove	367	1,184,271	30,680	**1,214,951**
Chilton	43	0	500,641	**500,641**
Clarion	542	1,849,304	2,159,797	**4,009,101**
Coalburg	1,007	68,279	6,071,625	**6,139,904**
Douglas	365	781,345	555,365	**1,336,710**
Douglas A	11	0	43,749	**43,749**
Eagle	917	3,196,687	32,588	**3,229,275**
Eagle A	4	0	1,160	**1,160**
Fire Creek	15	65,790	285	**66,075**
Franklin Rider	5	0	6,078	**6,078**
Gilbert	9	12,978	0	**12,978**
Glenalum Tunnel	124	444,852	0	**444,852**
Hernshaw	221	965,050	574,148	**1,539,198**
Iaeger	47	96,138	11,424	**107,562**
Little Chilton	74	403,252	0	**403,252**
Little Fire Creek	64	0	146,852	**146,852**
Lower Cedar Grove	319	1,424,101	0	**1,424,101**
Lower Freeport	55	259,598	0	**259,598**
Lower Kittanning	1,025	3,581,275	3,504,183	**7,085,458**
Lower War Eagle	299	1,206,926	0	**1,206,926**
Mahoning	7	0	0	**0**
Matewan	11	0	0	**0**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST) Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

Continued on Page 19

2014 Coal Production and Employment by Seam

Seam	Employees	Underground Tonnage	Surface Tonnage	Total Tonnage
Middle Kittanning	32	0	0	**0**
No. 2 Gas	454	1,458,965	2,246	**1,461,211**
Peerless (Campbell's Creek)	843	4,320,585	0	**4,320,585**
Pittsburgh	4,602	48,734,121	28,893	**48,763,014**
Pocahontas 2	43	27,741	0	**27,741**
Pocahontas 3	1,396	5,795,333	40,369	**5,835,702**
Pocahontas 4	8	0	0	**0**
Pocahontas 6	362	847,694	294,382	**1,142,076**
Pocahontas 7	35	112,612	0	**112,612**
Pocahontas 8	7	0	0	**0**
Pocahontas 9	184	172,738	812,513	**985,251**
Powellton	648	2,062,893	968,221	**3,031,114**
Redstone	3	0	0	**0**
Refuse Processing	28	0	404,328	**404,328**
Sewell	354	623,039	556,449	**1,179,488**
Sewell A	133	786,540	0	**786,540**
Sewickley	207	1,327,480	0	**1,327,480**
Stockton-Lewiston (Lower Mercer)	1,390	3,038,306	8,985,744	**12,024,050**
Upper Freeport	283	1,907,274	196,789	**2,104,063**
Upper Kittanning	146	0	1,310,290	**1,310,290**
Washington	9	0	124,825	**124,825**
Waynesburg	4	0	9,948	**9,948**
Waynesburg A	3	0	0	**0**
Welch	39	0	66,721	**66,721**
Williamson	77	0	506,844	**506,844**
Winifrede	594	2,308,211	1,870,666	**4,178,877**
Not Specified	13	28,120	0	**28,120**
Total	**18,159**	**86,848,069**	**30,052,071**	**116,900,140**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST) Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.

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2014 Coal Production and Employment by County

County	Underground Companies	Underground Mines	Surface Companies	Surface Mines	Total Mines	Surface Empl	Underground Empl	Total Employees	Underground Tonnage	Surface Tonnage	Total Tonnage
Barbour	2	2	4	5	7	3	255	**258**	1,849,304	0	**1,849,304**
Boone	21	55	14	28	83	693	1,522	**2,215**	5,547,726	5,514,908	**11,062,234**
Braxton	1	2	0	0	2	0	84	**84**	327,946	0	**327,946**
Clay*	0	0	1	1	1	29	0	**29**	0	0	**0**
Fayette	6	8	8	10	18	135	387	**522**	1,379,455	1,247,820	**2,627,275**
Grant*	1	1	0	0	1	0	3	**3**	0	0	**0**
Greenbrier	5	15	7	11	34	92	214	**306**	449,113	677,475	**1,126,588**
Harrison	2	2	6	7	9	13	79	**92**	411,836	16,710	**428,546**
Kanawha	8	19	19	26	45	660	1,026	**1,686**	6,488,453	3,825,815	**10,314,268**
Lincoln	0	0	1	1	1	196	0	**196**	0	2,014,289	**2,014,289**
Logan	13	19	14	26	45	628	1,048	**1,676**	4,931,246	4,886,909	**9,818,155**
Marion	2	3	5	13	16	26	1,271	**1,297**	13,119,584	124,825	**13,244,409**
Marshall	2	2	0	0	2	0	1,735	**1,735**	16,891,996	0	**16,891,996**
McDowell	26	40	25	49	89	372	702	**1,074**	2,162,733	1,217,793	**3,380,526**
Mercer	0	0	3	5	5	25	0	**25**	0	221,858	**221,858**
Mineral	0	0	2	2	2	6	0	**6**	0	6,186	**6,186**
Mingo	10	25	12	22	47	586	378	**964**	1,505,125	5,580,890	**7,086,015**
Monongalia	4	5	6	8	13	24	1,221	**1,245**	8,507,817	426,131	**8,933,948**
Nicholas	4	7	10	11	18	39	183	**222**	602,675	32,588	**635,263**
Ohio	1	1	0	0	1	0	483	**483**	5,400,000	0	**5,400,000**
Raleigh	9	22	9	17	39	435	1,148	**1,583**	4,152,143	3,152,412	**7,304,555**
Taylor	1	1	1	1	2	3	421	**424**	2,820,875	220	**2,821,095**
Tucker	1	1	3	3	4	9	225	**234**	1,907,274	5,200	**1,912,474**
Upshur	4	4	1	1	5	6	136	**142**	786,540	26,832	**813,372**
Wayne	4	7	1	1	8	0	416	**416**	2,309,634	0	**2,309,634**
Webster	1	2	2	2	4	85	104	**189**	692,052	1,042,530	**1,734,582**
Wyoming	11	13	5	8	21	21	1,032	**1,053**	4,604,542	30,680	**4,635,222**
TOTAL	**141**	**258**	**159**	**258**	**522**	**4,086**	**14,073**	**18,159**	**86,848,069**	**30,052,071**	**116,900,140**

Source - West Virginia Office of Miners' Health, Safety & Training (WVOHMST)
Note: Slight discrepancies on these pages is due to differences in the measurement methodologies used by the two sources, the EIA and WVOMHST.
* Clay and Grant counties reported no active operations and no production.

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West Virginia Coal Production and Employment (1900-2014)

Editor's Note: It is important to remember that the definition of "mining jobs" used to compile these employment figures has changed greatly since 1900. Until the late-1900s, coal companies maintained their own support staff, including everything from mechanics to construction workers, from machinists to supply clerks. While most of these jobs still exist, many roles have been turned over to mine service companies and are no longer counted as "mining jobs."

The most recent figures show only direct mining jobs. We believe a more accurate comparison of the "mining jobs" reported in the early-to-mid-1900s (which show 100,000 coal mining jobs in West Virginia alone) would be those numbers to the 60,000 direct and indirect jobs identified by the recent joint economic impact study conducted by West Virginia University and Marshall University College of Business.

Year	Production	Emp
1900	22,647,207	29,017
1901	24,088,402	32,386
1902	24,570,826	36,147
1903	29,337,241	39,452
1904	32,406,752	45,492
1905	37,791,580	49,950
1906	43,290,350	53,769
1907	48,091,583	56,256
1908	49,000,000	60,189
1909	49,697,018	62,189
1910	59,274,708	68,135
1911	60,517,167	70,644
1912	66,731,587	69,611
1913	69,182,791	70,321
1914	73,666,981	76,041
1915	71,812,917	81,328
1916	89,165,772	80,058
1917	89,383,449	88,665
1918	90,766,636	92,132
1919	84,980,551	91,566
1920	89,590,271	97,426
1921	90,452,996	116,726
1922	79,394,786	107,709
1923	97,474,177	121,280
1924	156,570,631	115,964
1925	123,061,985	111,708
1926	144,603,574	120,638
1927	146,088,121	119,618
1928	133,866,587	112,715
1929	139,297,148	107,393
1930	122,429,767	107,832
1931	102,698,420	97,953
1932	86,114,506	86,829
1933	94,130,508	95,367
1934	98,441,233	106,590
1935	99,810,908	109,779
1936	118,134,202	111,625
1937	118,965,066	115,052
1938	93,511,099	103,735
1939	108,515,665	104,022
1940	126,619,825	130,457
1941	140,944,744	112,875
1942	156,752,598	112,817
1943	160,429,576	105,585
1944	164,954,218	103,146
1945	151,909,714	97,380
1946	143,977,874	102,393
1947	173,653,816	116,421
1948	168,589,033	125,669
1949	122,913,540	121,121
1950	145,563,295	119,568
1951	163,448,001	111,562
1952	142,181,271	100,862
1953	131,872,563	84,093
1954	113,039,046	64,849
1955	137,073,372	54,321
1956	150,401,233	68,318
1957	150,220,548	66,792
1958	115,245,791	55,065
1959	117,770,002	52,352
1960	120,107,994	48,696
1961	111,370,863	42,557
1962	117,018,419	43,456
1963	128,924,165	44,854
1964	139,361,204	44,205
1965	149,236,013	44,885
1966	148,826,592	43,344
1967	152,461,567	42,742
1968	145,113,560	41,573
1969	139,315,720	41,941
1970	143,132,284	45,261
1971	118,317,785	48,858
1972	122,856,378	48,190
1973	115,239,146	45,041
1974	101,713,580	46,026
1975	109,048,898	55,256
1976	108,793,594	59,802
1977	95,405,977	61,815
1978	84,697,048	62,982
1979	112,380,883	58,565
1980	121,583,762	55,502
1981	112,813,972	55,411
1982	128,778,076	53,941
1983	115,135,454	35,831
1984	131,040,566	39,950
1985	127,867,375	35,913
1986	130,787,233	32,329
1987	137,672,276	28,885
1988	144,917,788	28,100
1989	151,834,721	28,323
1990	171,155,053	28,876
1991	166,715,271	27,479
1992	163,797,710	27,065
1993	133,700,856	22,386
1994	164,200,572	21,414
1995	167,096,211	21,602
1996	174,008,217	18,939
1997	181,914,000	18,165
1998	180,794,012	17,382
1999	169,206,834	14,845
2000	169,370,602	14,281
2001	175,052,857	15,729
2002	163,896,890	15,377
2003	144,899,599	14,871
2004	153,631,633	16,037
2005	159,498,069	17,992
2006	158,835,584	20,533
2007	161,237,538	19,207
2008	165,750,817	20,925
2009	144,017,758	27,892
2010	143,247,932	22,590
2011	139,424,080	20,334
2012	129,538,515	21,807
2013	117,518,279	19,427
2014	116,900,140	18,159

Source - West Virginia Office of Miners' Health, Safety & Training

The Coal Severance Tax

In 1987, West Virginia enacted a severance tax on coal. The tax amounts to 5% of the selling price of mined coal. Of this amount, the State retains 93%. The remaining 7% is apportioned among the State's 55 counties and it's 228 incorporated municipalities.

Three-fourths of the 7% share is divided among the coal producing counties.

This money is distributed according to each county's production level.

The remaining quarter of the 7% is divided among all counties and municipalities, according to population.

Each county receives an additional share, based on the population of the unincorporated areas of the county.

The total severance tax collections for 2013 amounted to more than $400 million.

A total of $35.5 million was distributed to all counties and municipalities. Of this amount, $27 million represented coal production in the 28 coal producing counties. ♦

2014 Coal Severance Tax 75% Distribution and Reallocation (Coal Producing Counties)

Political Subdivision	75 % Distribution Amount	Reallocation Amount
Barbour County	157,346.02	$48,150.31
Boone County	2,306,038.36	$699,087.58
Braxton County	41,340.76	$12,786.40
Clay County	404,249.20	0
Fayette County	117,761.65	$123,361.15
Grant County	171,276.32	$37,208.06
Greenbrier County	72,341.05	$51,936.35
Harrison County	1,101,913.08	$21,967.65
Kanawha County	627,598.76	$332,844.85
Lincoln County	1,839,949.37	$189,829.19
Logan County	2,109,490.52	$563,654.17
Marion County	4,200,839.55	$395,203.05
Marshall County	703,792.10	$900,276.09
McDowell County	41,893.06	$840,988.41
Mercer County	5,018.45	$12,719.50
Mineral County	1,010,574.46	$1,515.71
Mingo County	635,730.13	$309,368.63
Monongalia County	178,256.98	$191,553.31
Nicholas County	802,891.39	$54,711.31
Ohio County	$1,323,861.18	$245,021.73
Raleigh County	$269,860.60	$405,510.14
Randolph County	$220,742.37	0
Taylor County	$89,300.67	$84,500.42
Tucker County	$269,403.44	$64,883.84
Upshur County	$231,955.57	$26,473.52
Wayne County	$841,583.01	$82,044.98
Webster County	0	$71,124.99
Wyoming County	0	$252,819.63
Total 75 Percent Distribution	**19,775,008.05***	
TOTAL REALLOCATION SEVERANCE TAX		**$6,019,540.97**

Note: Municipalities within producing and non-producing counties also receive a share. See following pages for this distribution. *Randolph County had no production in 2012.

2014 25% Coal Severance Distribution

Political Subdivision	Amount
Barbour County	$39,777.82
Belington	$6,833.58
Junior	$1,849.82
Philippi	$10,550.97
Berkeley County	$308,148.15
Hedgesville	$1,131.20
Martinsburg	$61,281.75
Boone County	$71,814.91
Danville	$2,458.10
Madison	$10,942.31
Sylvester	$569.19
Whitesville	$1,828.47
Braxton County	$42,097.16
Burnsville	$1,814.23
Flatwoods	$985.39
Gassaway	$3,230.05
Sutton	$3,535.97
Brooke County	$43,673.03
Beech Bottom	$1,860.50
Bethany	$3,685.39
Follansbee	$10,622.15
Weirton (Brooke County)	$14,296.81
Wellsburg	$9,978.27
Windsor Heights	$1,504.74
Cabell County	$159,075.68
Barboursville	$14,101.16
Huntington (Cabell County)	$160,840.07
Milton	$8,619.34
Calhoun County	$25,135.93
Grantsville	$1,995.63
Clay County	$31,642.25
Clay	$1,746.66
Doddridge County	$26,242.22
West Union	$2,934.81
Fayette County	$105,488.37
Ansted	$4,994.44
Fayetteville	$10,287.76
Gauley Bridge	$2,184.21
Meadow Bridge	$1,348.19
Montgomery (Fayette County)	$3,447.05

Political Subdivision	Amount
Fayette County	$105,488.37
Mount Hope	$5,030.04
Oak Hill	$27,498.01
Pax	$594.04
Smithers	$2,892.10
Thurmond	$17.79
Gilmer County	$24,890.47
Glenville	$5,467.59
Sand Fork	$565.63
Grant County	$32,656.06
Bayard	$1,031.60
Petersburg	$8,775.89
Greenbrier County	$83,632.25
Alderson (Greenbrier County)	$3,496.81
Falling Springs	$750.59
Lewisburg	$13,624.52
Quinwood	$1,031.60
Rainelle	$5,353.75
Ronceverte	$6,278.63
Rupert	$3,351.01
White Sulphur Springs	$8,694.08
Hampshire County	$77,410.57
Capon Bridge	$1,262.83
Romney	$6,573.87
Hancock County	$40,058.83
Chester	$9,195.64
New Cumberland	$3,923.69
Weirton (Hancock County)	$55,945.79
Hardy County	$39,877.42
Moorefield	$9,049.77
Wardensville	$964.03
Harrison County	$122,421.18
Anmoore	$2,739.10
Bridgeport	$28,988.51
Clarksburg	$58,973.03
Lost Creek	$1,764.40
Lumberport	$3,116.21
Nutter Fort	$5,666.80
Salem	$5,641.86
Shinnston	$7,829.66

CONTINUED ON Page 26

2014 25% Coal Severance Distribution cont.

Political Subdivision	Amount
Harrison County	$122,421.18
Stonewood	$6,424.50
West Milford	$2,241.10
Jackson County	$78,556.02
Ravenswood	$13,788.12
Ripley	$11,568.39
Jefferson County	$144,903.33
Bolivar	$3,717.37
Charles Town	$18,707.89
Harpers Ferry	$1,017.37
Ranson	$15,794.43
Shepherdstown	$6,168.36
Kanawha County	$331,587.21
Belle	$4,482.21
Cedar Grove	$3,546.65
Charleston	$182,845.56
Chesapeake	$5,528.04
Clendenin	$4,364.82
Dunbar	$28,127.55
East Bank	$3,411.45
Glasgow	$3,219.36
Handley	$1,241.47
Marmet	$5,346.63
Montgomery (Kanawha County)	$2,379.86
Nitro (Kanawha County)	$21,422.13
Pratt	$2,141.50
South Charleston	$47,845.76
St. Albans	$39,286.87
Lewis County	$42,164.73
Jane Lew	$1,454.91
Weston	$14,620.52
Lincoln County	$70,448.91
Hamlin	$4,062.44
West Hamlin	$2,753.33
Logan County	$114,552.38
Chapmanville	$4,467.97
Logan	$6,328.47
Man	$2,700.02
Mitchell Heights	$1,148.99
West Logan	$1,508.31

Political Subdivision	Amount
Marion County	$96,118.45
Barrackville	$4,631.64
Fairmont	$66,535.83
Fairview	$1,451.35
Farmington	$1,334.02
Grant Town	$2,180.65
Mannington	$7,338.70
Monongah	$3,713.81
Pleasant Valley	$11,201.95
Rivesville	$3,322.53
White Hall	$2,305.10
Worthington	$562.07
Marshall County	$62,946.55
Benwood	$5,051.39
Cameron	$3,365.24
Glen Dale	$5,428.44
McMechen	$6,851.39
Moundsville	$33,146.99
Wheeling (Marshall County)	$981.83
Mason County	$69,022.41
Hartford	$2,184.21
Henderson	$964.03
Leon	$562.07
Mason	$3,443.49
New Haven	$5,549.39
Point Pleasant	$15,474.27
McDowell County	$55,803.48
Anawalt	$803.92
Bradshaw	$1,198.82
Davy	$1,494.08
Gary	$3,443.49
Iaeger	$1,074.30
Keystone	$1,003.19
Kimball	$690.16
Northfork	$1,526.10
War	$3,066.37
Welch	$8,558.88
Mercer County	$155,187.52
Athens	$3,728.06
Bluefield	$37,163.17
Bramwell	$1,294.87
Matoaka	$807.47

CONTINUED ON Page 27

2014 25% Coal Severance Distribution cont.

Political Subdivision	Amount
Mercer County	$155,187.52
Oakvale	$430.44
Princeton	$22,880.60
Mineral County	$71,192.39
Carpendale	$3,475.46
Elk Garden	$825.28
Keyser	$19,348.20
Piedmont	$3,116.21
Ridgeley	$2,401.21
Mingo County	$77,243.35
Delbarton	$2,059.70
Gilbert	$1,600.79
Kermit	$1,444.23
Matewan	$1,775.07
Williamson	$11,351.38
Monongalia County	$212,616.70
Blacksville	$608.28
Granville	$2,778.26
Morgantown	$105,509.73
Star City	$6,492.07
Westover	$14,168.72
Monroe County	$42,982.95
Alderson (Monroe County)	$715.00
Peterstown	$2,322.90
Union	$2,009.86
Morgan County	$58,371.85
Bath	$2,219.75
Paw Paw	$1,807.11
Nicholas County	$73,316.09
Richwood	$7,296.05
Summersville	$12,706.70
Ohio County	$37,131.20
Bethlehem	$8,889.73
Clearview	$2,009.86
Triadelphia	$2,884.98
Valley Grove	$1,344.63
West Liberty	$5,485.40
Wheeling (Ohio County)	$100,351.62
Pendleton County	$24,808.67
Franklin	$2,564.81

Political Subdivision	Amount
Pleasants County	$17,224.49
Belmont	$3,212.25
St. Marys	$6,616.59
Pocahontas County	$25,299.54
Durbin	$1,042.28
Hillsboro	$924.87
Marlinton	$3,749.41
Preston County	$93,461.16
Albright	$1,063.63
Brandonville	$359.32
Bruceton Mills	$302.36
Kingwood	$10,454.92
Masontown	$1,942.30
Newburg	$1,170.35
Reedsville	$2,109.46
Rowlesburg	$2,077.49
Terra Alta	$5,254.16
Tunnelton	$1,045.84
Putnam County	$147,379.23
Bancroft	$2,088.10
Buffalo	$4,396.84
Eleanor	$5,399.96
Hurricane	$22,354.12
Nitro (Putnam County)	$4,112.28
Poca	$3,464.84
Winfield	$8,185.33
Raleigh County	$206,224.16
Beckley	$62,658.42
Ellenboro	$1,291.31
Harman	$508.67
Lester	$1,237.91
Mabscott	$5,008.68
Rhodell	$615.39
Sophia	$4,781.00
Randolph County	$71,555.20
Beverly	$2,497.26
Elkins	$25,235.53
Harrisville	$6,673.52
Huttonsville	$786.18
Mill Creek	$2,575.50
Montrose	$554.95

CONTINUED ON Page 28

2014 25% Coal Severance Distribution cont.

Political Subdivision	Amount
Randolph County	$71,555.20
Pullman	$547.84
Womelsdorf	$889.35
Ritchie County	$23,147.37
Auburn	$345.07
Cairo	$999.64
Pennsboro	$4,165.60
Roane County	$44,188.90
Reedy	$647.43
Spencer	$8,260.08
Summers County	$40,023.29
Hinton	$9,519.36
Taylor County	$40,620.90
Flemington	$1,109.90
Grafton	$18,369.93
Tucker County	$13,894.84
Davis	$2,347.81
Hambleton	$825.28
Hendricks	$967.58
Parsons	$5,282.63
Thomas	$2,084.55
Tyler County	$21,439.86
Friendly	$469.59
Middlebourne	$2,899.21
Paden City (Tyler County)	$2,981.02
Sistersville	$4,966.03
Upshur County	$66,219.23
Buckhannon	$20,059.64

Political Subdivision	Amount
Wayne County	$113,026.28
Ceredo	$5,158.11
Fort Gay	$2,507.92
Huntington (Wayne County)	$13,958.85
Kenova	$11,440.30
Wayne	$5,026.48
Webster County	$27,277.44
Addison	$2,760.45
Camden-On-Gauley	$601.15
Cowen	$1,924.51
Wetzel County	$29,973.90
Hundred	$1,063.63
New Martinsville	$19,088.48
Paden City (Wetzel County)	$6,385.35
Pine Grove	$1,963.66
Smithfield	$515.79
Wirt County	$17,409.46
Elizabeth	$2,927.69
Wood County	$145,760.63
North Hills	$2,959.66
Parkersburg	$112,026.72
Vienna	$38,237.48
Williamstown	$10,344.62
Wyoming County	$71,768.64
Mullens	$5,545.83
Oceana	$4,958.91
Pineville	$2,376.29
TOTAL 25% DISTRIBUTION	**$6,591,668.18**

2014 Coalbed Methane Severance Gas Tax Distribution

Distributed October 2014

Political Subdivision	Amount
Barbour County Economic Development Authority	65,166.36
Berkeley County Commission	7,923.05
Boone County Commission	7,923.05
Braxton County Commission	7,923.05
Brooke County Commission	7,923.05
Cabell County Commission	7,923.05
Calhoun County Commission	7,923.05
Clay County Commission	7,923.05
Doddridge County Commission	7,923.05
Fayette County Commission	7,923.05
Gilmer County Commission	7,923.05
Grant County Commission	7,923.05
Greenbrier County Commission	7,923.05
Hampshire County Commission	7,923.05
Hancock County Commission	7,923.05
Hardy County Commission	7,923.05
Harrison County Development Authority	11,326.85
Jackson County Commission	7,923.05
Jefferson County Commission	7,923.05
Kanawha County Commission	7,923.05
Lewis County Commission	7,923.05
Lincoln County Commission	7,923.05
Logan County Commission	7,923.05
McDowell County Economic Development Authority	443,652.06
Marion County Commission	7,923.05
Marshall County Economic Development Authority	78,273.23
Mason County Commission	7,923.05
Mercer County Commission	7,923.05

Political Subdivision	Amount
Mineral County Commission	7,923.05
Mingo County Commission	7,923.05
Morgantown Area Economic Partnership	67,951.69
Monroe County Commission	7,923.05
Morgan County Commission	7,923.05
Nicholas County Commission	7,923.05
Ohio County Commission	7,923.05
Pendleton County Commission	7,923.05
Pleasants County Commission	7,923.05
Pocahontas County Commission	7,923.05
Preston County Commission	7,923.05
Putnam County Commission	7,923.05
New River Gorge Regional Development Authority	251,108.13
Randolph County Commission	7,923.05
Ritchie County Commission	7,923.05
Roane County Commission	7,923.05
Summers County Commission	7,923.05
Taylor County Commission	7,923.05
Tucker County Commission	7,923.05
Tyler County Commission	7,923.05
Upshur County Commission	7,923.05
Wayne County Commission	7,923.05
Webster County Commission	7,923.05
Wetzel County Economic Development Authority	22,143.19
Wirt County Commission	7,923.05
Wood County Commission	7,923.05
Wyoming County Economic Development Authority	108,675.95
TOTAL	**1,420,680.81**

Coal Severance Tax Revenue (1969-2014)

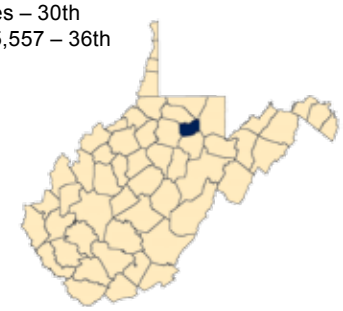
Fiscal Year	Net State Tax Collections	Local Coal Taxes	Total State & Local Coal Severance Tax	Waste Coal	WC Severance	GRAND TOTAL	CY Production
1969-70	$10,563,054	N/A	$10,563,054	NC	NC	$10,563,054	143,132,284
1970-71	$13,495,000	N/A	$13,495,000	NC	NC	$13,495,000	118,317,785
1971-72	$33,488,203	N/A	$33,488,203	NC	NC	$33,488,203	122,856,378
1972-73	$42,363,524	N/A	$42,363,524	NC	NC	$42,363,524	115,239,146
1973-74	$44,633,879	N/A	$44,633,879	NC	NC	$44,633,879	101,713,580
1974-75	$91,806,999	N/A	$91,806,999	NC	NC	$91,806,999	109,048,898
1975-76	$108,607,774	$11,400,000	$120,007,774	NC	NC	$120,007,774	108,793,594
1976-77	$112,474,862	$9,700,000	$122,174,862	NC	NC	$122,174,862	95,405,977
1977-78	$91,896,960	$7,500,000	$99,396,960	NC	NC	$99,396,960	84,697,048
1978-79	$118,453,711	$10,100,000	$128,553,711	NC	NC	$128,553,711	112,380,883
1979-80	$118,663,046	$11,800,000	$130,463,046	NC	NC	$130,463,046	121,583,762
1980-81	$138,120,065	$16,700,000	$154,820,065	NC	NC	$154,820,065	112,813,972
1981-82	$176,605,964	$13,800,000	$190,405,964	NC	NC	$190,405,964	128,778,076
1982-83	$166,059,668	$15,400,000	$181,459,668	NC	NC	$181,459,668	115,135,454
1983-84	$134,973,974	$12,400,000	$147,373,974	NC	NC	$147,373,974	131,040,566
1984-85	$131,910,118	$14,100,000	$146,010,118	NC	NC	$146,010,118	127,867,375
1985-86	$142,721,735	$13,300,000	$156,021,735	NC	NC	$156,021,735	130,787,233
1986-87	$113,387,847	$10,400,000	$123,787,847	NC	NC	$123,787,847	137,672,276
1987-88	$117,062,905	$11,000,000	$128,062,905	NC	NC	$128,062,905	144,917,788
1988-89	$111,987,938	$12,900,000	$124,887,938	NC	NC	$124,887,938	151,834,721
1989-90	$137,443,754	$14,900,000	$152,343,754	NC	NC	$152,343,754	171,155,053
1990-91	$150,102,548	$14,900,000	$165,002,548	NC	NC	$165,002,548	166,715,271
1991-92	$160,921,867	$14,000,000	$174,921,867	NC	NC	$174,921,867	163,797,710
1992-93	$148,066,128	$15,800,000	$163,866,128	NC	NC	$163,866,128	133,700,856
1993-94	$131,987,250	$15,200,000	$147,187,250	NC	NC	$147,187,250	164,200,572
1994-95	$158,203,928	$15,767,500	$173,971,428	NC	NC	$173,971,428	167,096,211
1995-96	$155,989,442	$15,369,144	$171,358,586	NC	NC	$171,358,586	174,008,217
1996-97	$169,508,614	$16,235,242	$185,743,856	NC	NC	$185,743,856	181,914,000
1997-98	$170,013,140	$17,320,805	$187,333,945	NC	NC	$187,333,945	180,794,012
1998-99	$160,750,673	$16,100,529	$176,851,202	NC	NC	$176,851,202	169,206,834
1999-00	$149,068,160	$14,143,308	$163,211,468	NC	NC	$163,211,468	169,370,602
2000-01	$153,228,052	$14,085,239	$167,313,291	NC	NC	$167,313,291	175,052,857
2001-02	$163,823,091	$15,827,722	$179,650,813	$325,578	NC	$179,976,391	163,896,890
2002-03	$157,430,070	$15,519,430	$172,949,500	$358,194	NC	$173,307,694	144,899,599
2003-04	$168,855,591	$15,147,428	$184,003,019	$249,072	NC	$184,252,091	153,631,633
2004-05	$222,488,599	$20,192,425	$242,681,024	$183,396	NC	$242,864,419	159,498,069
2005-06	$259,147,531	$24,190,831	$283,338,362	$319,132	$36,192,252	$319,849,746	158,835,584
2006-07	$271,951,536	$26,019,184	$297,970,720	$191,191	$86,304,922	$384,466,833	161,237,538
2007-08	$307,628,802	$27,364,126	$334,992,928	$327,599	$84,387,752	$419,708,280	165,750,817
2008-09	$343,381,241	$35,615,344	$378,996,586	$1,869,178	$77,275,757	$458,141,521	144,017,758
2009-10	$367,481,270	$34,459,351	$401,940,621	$374,012	$78,873,792	$481,188,425	143,247,932
2010-11	$412,091,626	$37,742,774	$449,834,400	$754,463	$76,983,527	$527,572,390	137,498,509
2011-12	$420,771,746	$39,305,307	$460,077,054	$1,398,481	$71,030,962	$532,506,496	129,107,370
2012-13	$350,950,154	$35,691,233	$386,641,387	$114,567	$65,004,660	$451,760,614	117,518,279
2013-14	$320,243,939	$23,174,978	$343,418,917	$166,912	$63,742,434	$407,328,263	116,900,148
TOTAL	**$7,630,805,979**	**$704,571,900**	**$8,335,377,879**	**$6,631,777**	**$503,760,436**	**$8,981,805,714**	**6,327,069,117**

Local coal severance tax collections rounded to nearest $100,000 prior to FY1995 Does not include Tax Administration Fees. NC- Not Collected

County Profiles of West Virginia Coal Country

Barbour

Founded – 1843
Named for Virginia Judge Philip Pendleton Barbour
County Seat – Philippi
Area/State Rank – 343 square miles – 30th
Population (2000)/ State Rank – 15,557 – 36th
Incorporated Communities
Philippi, Belington, Junior
Principal Waterways
Tygart River,
Buckhannon River,
Middle Fork River

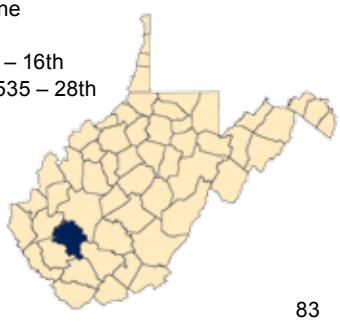


Mines	7
Employees	258
Estimated Direct Wages	$18,576,000
Severance Tax Receipts	$157,346
Production	1,849,304
Underground	1,849,304
Surface	0
Recoverable Reserves – Tons	1,576,708,974

Major Seams
Bakerstown, Kittanning, Pittsburgh, Redstone, Sewickley
Primary Mines
Wolf Run Mining Co., Inc. (Sentinel) 1,849,304

Boone

Founded – 1847
Named for Frontiersman Daniel Boone
County Seat – Madison
Area/State Rank – 503 square miles – 16th
Population (2000)/ State Rank – 25,535 – 28th
Incorporated Communities
Madison, Danville,
Whitesville, Sylvester
Principal Waterways
Coal River, Little Coal River

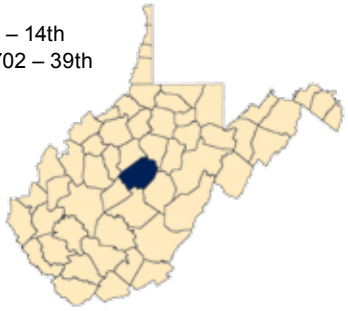


Mines	83
Employees	2,215
Estimated Direct Wages	$159,480,000
Severance Tax Receipts	$2,306,038
Production	11,062,234
Underground	5,547,726
Surface	5,514,508
Recoverable Reserves – Tons	3,615,694,180

Major Seams
Cedar Grove, Chilton, Coalburg, Dorothy, Eagle, Hernshaw, Kittanning, No. 2 Gas, Peerless, Powellton, Stockton-Lewiston, Winefrede
Primary Mines
Elk Run Coal Co., Inc (Black Castle No. 4) 1,510,532
Independence Coal Co. (Twilight MTR/Progress) 1,467,964
Elk Run Coal, Inc. (Hunter Peerless Mine) 711,368
Emerald Processing, LLC (Peerless Rachel Mine) 695,033
Brody Mining, LLC (Brody Mine No. 1) 629,120
Hobet Mining, LLC (West Ridge Surface) 586,279
Raven Crest Contracting, LLC (Boone North No. 2) 574,148

Braxton

Founded – 1836
Named for an American founding father Carter Braxton
County Seat – Sutton
Area/State Rank – 516 square miles – 14th
Population (2000)/State Rank – 14,702 – 39th
Incorporated Communities
Sutton, Gassaway,
Burnsville, Flatwoods
Principal Waterways
Elk River,
Little Kanawha River,
Holley River, Birch River

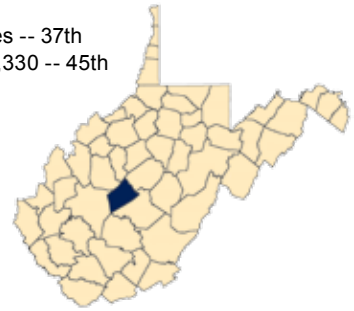


Mines	2
Employees	84
Estimated Direct Wages	$6,048,000
Severance Tax Receipts	$41,340
Production	327,946
Underground	327,946
Surface	0
Recoverable Reserves – Tons	1,110,408,914

Major Seams
Bakerstown, Lower Kittanning, Pittsburgh
Primary Mines
Brooks Run Mining Co., LLC (Jackson Bridge) 259,598
Brooks Run Mining Co., LLC (Mine No. 4) 68,348

Clay

Founded – 1858
Named for U.S. Senator Henry Clay
County Seat – Clay
Area/State Rank – 344 square miles -- 37th
Population (2000)/State Rank – 10,330 -- 45th
Incorporated Communities
Clay
Principal Waterway
Elk River



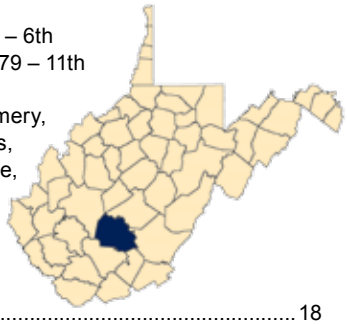
Mines	1
Employees	29
Estimated Direct Wages	$2,088,000
Severance Tax Receipts	$0
Production	0
Underground	0
Surface	0
Recoverable Reserves – Tons	1,823,182,122

Major Seams
Coalburn, Lower Kittanning, Upper Kittanning
No Active Operations
No Production Reported

County Profiles of West Virginia Coal Country

Fayette

Founded – 1831
Named for French General Marquis de Lafayette
County Seat – Fayetteville
Area/State Rank – 668 square miles – 6th
Population (2000)/State Rank – 47,579 – 11th
Incorporated Communities
Oak Hill, Fayetteville, Montgomery, Ansted, Mount Hope, Smithers, Gauley Bridge, Meadow Bridge, Pax, Thurmond
Principal Waterways
Kanawha River, Gauley River, New River



Mines	18
Employees	522
Estimated Direct Wages	$37,584,000
Severance Tax Receipts	$404,249
Production	2,627,275
Underground	1,379,455
Surface	1,247,820
Recoverable Reserves – Tons	1,840,871,467

Major Seams
Bradshaw, Coalburg, Eagle Firecreek, Gilbert, Kittanning, No. 2 Gas, Peerless, Powellton, Sewell, Stockton-Lewiston
Primary Mines

Kingston Mining Inc. (Kingston No. 2)	514,777
Maple Coal Co. (Maple Coal No. 1)	500,641
Revelation Energy, LLC (S7 Surface Mine)	496,005
Kingston Mining, Inc. (Glen Alum Mine)	444,852
Maple Coal Co. (Maple Eagle No. 1)	419,826
Frasure Creek Mining, LLC (Surface Mine No. 5)	251,174

Grant

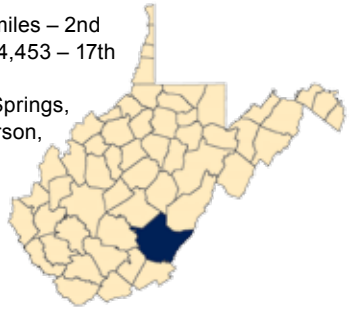
Founded – 1866
Named for U.S. President Ulysses S. Grant
County Seat – Petersburg
Area/State Rank – 480.3 square miles – 19th
Population (2000)/State Rank – 1,937 – 8th
Incorporated Communities
Bayard, Petersburg
Principal Waterways
North Branch of the Potomac River, South Branch of the Potomac River

Mines	1
Employees	3
Estimated Direct Wages	$216,000
Severance Tax Receipts	$117,761
Production	0
Underground	0
Surface	0
Recoverable Reserves – Tons	484,036,352

Major Seams
Bakerstown, Freeport, Kittanning, Mahoning, Pittsburgh
No Active Operations
No Production Reported

Greenbrier

Founded – 1782
Named for reference to local foliage
County Seat – Lewisburg
Area/State Rank – 1,024 square miles – 2nd
Population (2000)/State Rank – 34,453 – 17th
Incorporated Communities
Lewisburg, White Sulphur Springs, Ronceverte, Rainelle, Alderson, Rupert, Quinwood, Falling Springs
Principal Waterways
Greenbrier River
Meadow River



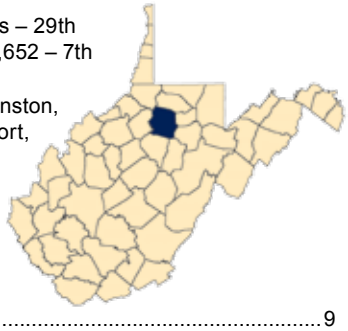
Mines	26
Employees	306
Estimated Direct Wages	$22,032,000
Severance Tax Receipts	$171,276
Production	1,126,588
Underground	449,113
Surface	677,475
Recoverable Reserves – Tons	632,344,840

Major Seams
Beckley, Eagle, Pocahontas, Sewell
Primary Mines

South Fork Coal Co., LLC (Blue Knob Surface)	377,755
Greenbrier Minerals, LLC (Mtnr. Pocahontas No. 1)	255,541
West Virginia Mine Power, Inc. (Midland Trail No. 1)	187,414
Greenbrier Minerals, LLC (Midland Trail No. 2)	112,612
Princess Pollyanna & JCT ENT (No. 1 Surface Mine)	100,882
Greenbrier Smokeless Coal (Pocahontas Mine)	42,799
Greenbrier Minerals, LLC (Mtnr Pocahontas No.3)	38,161

Harrison

Founded – 1784
Named for U.S. President Benjamin Harrison
County Seat – Clarksburg
Area/State Rank – 417 square miles – 29th
Population (2000)/State Rank – 68,652 – 7th
Incorporated Communities
Clarksburg, Bridgeport, Shinnston, Salem, Stonewood, Nutter Fort, Lumberport, Anmore, West Milford, Lost Creek
Principal Waterway
West Fork River



Mines	9
Employees	92
Estimated Direct Wages	$6,624,000
Severance Tax Receipts	$72,341
Production	428,546
Underground	411,836
Surface	16,710
Recoverable Reserves – Tons	487,400,934

Major Seams
Pittsburgh, Redstone
Primary Mines

Ten-Mile Coal Co., Inc. (No. 4)	411,836
Ten-A-Coal Co. (Laurel No. 1)	10,071
DP Southbound Coal, LLC (McMillion/Raikes)	6,015
Ten-A-Coal Co. (Chiefton Mine No. 1)	624

County Profiles of West Virginia Coal Country

Kanawha

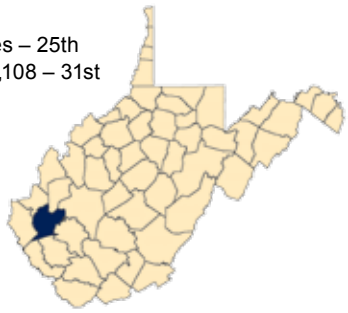
Founded – 1788
Named for an Indian term meaning "place of the white rock," referring to local salt deposits
County Seat – Charleston
Area/State Rank – 911 square miles – 4th
Population (2000)/State Rank – 200,073 – 1st
Incorporated Communities
Charleston, South Charleston, St. Albans, Dunbar, Nitro, Marmet, Chesapeake, Belle, Clendenin, Pratt, East Bank, Cedar Grove, Glasgow, Handley
Principal Waterways
Kanawha River, Elk River, Coal River, Pocatalico River

Mines	45
Employees	1,686
Estimated Direct Wages	$121,392,000
Severance Tax Receipts	$1,101,913
Production	10,314,268
Underground	6,488,453
Surface	3,825,815
Recoverable Reserves – Tons	2,624,393,800

Major Seams
Cedar Grove, Coalburg, Eagle, Hernshaw, Kittanning, No.2 Gas, Peerless, Powellton, Stockton-Lewiston, Winefrede
Primary Mines

Speed Mining, Inc. (American Eagle Mine)	2,732,344
Catenary Coal Co., (Samples Mine)	2,485,450
Midland Trail Energy, LLC (BC No. 1)	1,230,989
Remington LLC (Winchester Mine)	965,050
Mammoth Coal Co. (Slabcamp)	939,270
JMAC Leasing, Inc. (Briar Mountain)	400,199
Selah Corporation (Mine No. 2)	357,623
Hanover Resources, LLC (Four Mile No. 2)	318,552
Emerald Processing, LLC (Eagle Mine)	263,177

Lincoln



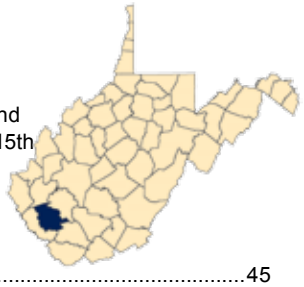
Founded – 1867
Named for U.S. President Abraham Lincoln
County Seat – Hamlin
Area/State Rank – 439 square miles – 25th
Population (2000)/State Rank – 22,108 – 31st
Incorporated Communities
Hamlin, West Hamlin
Principal Waterways
Guyandotte River

Mines	1
Employees	196
Estimated Direct Wages	$14,112,000
Severance Tax Receipts	$627,598
Production	2,014,289
Underground	0
Surface	2,014,289
Recoverable Reserves – Tons	1,041,727,693

Major Seam
Lower Kittanning
Primary Mines

Hobet Mining Inc. (West Ridge III)	2,041,289

Logan



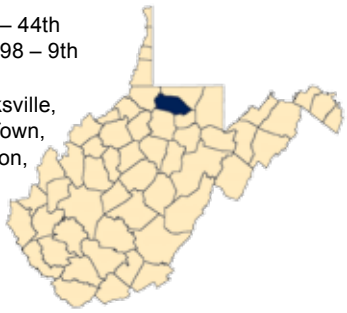
Founded – 1824
Named for Mingo an Indian Chief
County Seat – Logan
Area/State Rank – 456 square miles – 22nd
Population (2000)/State Rank – 37,710 – 15th
Incorporated Communities
Logan, Chapmanville, Man, West Logan, Mitchell Heights
Principal Waterways: Guyandotte River

Mines	45
Employees	1,676
Estimated Direct Wages	$120,672,000
Severance Tax Receipts	$1,839,949
Production	9,818,155
Underground	4,931,246
Surface	4,886,909
Recoverable Reserves – Tons	3,449,124,124

Major Seams
Alma, Belmont, Buffalo Creek, Cedar Grove, Chilton, Coalburg, Dorothy, Eagle, Kittanning, Winifrede, Stockton-Lewiston
Primary Mines

Mingo Logan Coal Co. (Mountaineer II Mine)	1,950,162
Aracoma Coal Co., Inc. (Aracoma Alma No. 1)	1,096,971
Cliffs Logan County Coal, LLC (Toney's Fork Surface)	944,419
Highland Mining Co. (Reylas Surface)	872,795
Cliffs Logan County Coal, LLC (Powellton No. 1 Mine)	773,946
Highland Mining Co. (Rockhouse Branch Sur.)	656,013
Eagle Creek Mining, LLC (Spruce No. 1 Mine)	635,228
Aracoma Coal Co., Inc. (Hernshaw Mine)	403,252
Aracoma Coal Co., Inc. (Cedar Grove 2)	391,847
Road Fork Dev. Co., Inc. (Rockhouse Branch Surface)	351,016
Highland Mining Company (West Fork Surface)	302,794
Eagle Creek Mining, LLC (Eagle Creek No. 5)	284,565

Marion



Founded – 1842
Named For American Revolution Officer Francis Marion
County Seat – Fairmont
Area/State Rank – 311 square miles – 44th
Population (2000)/State Rank – 56,598 – 9th
Incorporated Communities
Fairmont, Mannington,Barracksville, Monongah, Rivesville, Grant Town, White Hall, Fairview, Farmington, Worthington
Principal Waterways
Monongahela River, Tygart River, West Fork River

Mines	16
Employees	1,297
Estimated Direct Wages	$93,384,000
Severance Tax Receipts	$4,200,839
Production	13,244,409
Underground	13,119,584
Surface	124,825
Recoverable Reserves – Tons	1,385,412,002

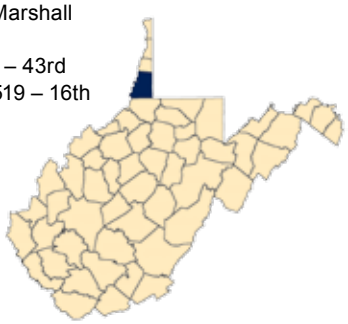
Major Seams
Kittanning, Pittsburgh, Redstone
Primary Mines

Murray Energy (Marion County Mine)	6,744,989
Murray Energy (Harrison County Mine)	6,364,595
L.P. Mineral, LLC (Ralph Six)	124,825

County Profiles of West Virginia Coal Country

Marshall

Founded – 1835
Named for U.S. Chief Justice John Marshall
County Seat – Moundsville
Area/State Rank – 312 square miles – 43rd
Population (2000)/State Rank – 35,519 – 16th
Incorporated Communities
Moundsville, Pleasant Valley, McMechen, Benwood, Glen Dale, Cameron
Principal Waterway
Ohio River



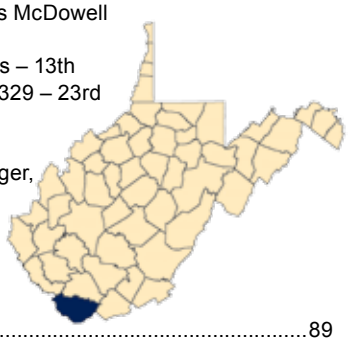
Mines	2
Employees	1,735
Estimated Direct Wages	$124,920,000
Severance Tax Receipts	$703,792
Production	16,891,996
Underground	16,891,996
Surface	0
Recoverable Reserves – Tons	1,830,243,690

Major Seam
Pittsburgh
Primary Mines

Murray Energy (Marshall County Mine)	10,307,075
Murray Energy (Ohio County Mine)	6,584,921

McDowell

Founded – 1858
Named for Virginia Governor James McDowell
County Seat – Welch
Area/State Rank – 535 square miles – 13th
Population (2000)/State Rank – 27,329 – 23rd
Incorporated Communities
Welch, Gary, War, Northfork, Keystone, Kimball, Davy, Iaeger, Bradshaw, Anawalt
Principal Waterway
Tug Fork River



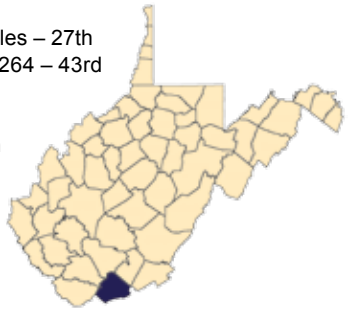
Mines	89
Employees	1,074
Estimated Direct Wages	$77,328,000
Severance Tax Receipts	$2,109,490
Production	3,380,526
Underground	2,162,733
Surface	1,217,793
Recoverable Reserves – Tons	1,630,771,141

Major Seams
Beckley, Ben's Creek, Bradshaw, Eagle, Fire Creek, Gilbert, Pocahontas, Powellton, Red Ash
Primary Mines

Extra Energy, Inc. (Easter Ridge)	608,716
XMV, Inc. (Mine No. 42)	361,491
Spartan Mining Co. (Lower War Eagle)	237,372
XMV, Inc. (Mine No. 39)	210,095
Extra Energy, Inc. (Low Gap Surface Mine)	203,797
Brooks Run Mining Co., LLC (Cucumber Mine)	196,913
Brooks Run Mining Co., LLC (Horse Creek No. 1)	183,239
XMV, Inc. (Mine # 40)	172,738

Mercer

Founded – 1837
Named for Revolutonary War Gen Hugh Mercer
County Seat – Princeton
Area/State Rank – 420.8 square miles – 27th
Population (2000)/State Rank – 67,264 – 43rd
Incorporated Communities
Athens, Bluefield, Bramwell, Matoaka, Oakvale, Princeton
Principal Waterways
New River, Bluestone River, East River



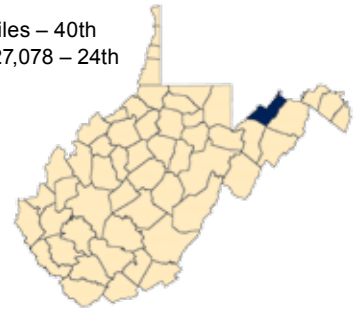
Mines	5
Employees	25
Estimated Direct Wages	$1,800,000
Severance Tax Receipts	$41,893
Production	221,858
Underground	0
Surface	221,858
Recoverable Reserves – Tons	99,635,628

Major Seams
Beckley, Bradshaw, Eagle, Fire Creek, Gilbert, Pocahontas, Powellton, Red Ash
Primary Mines

Onyx Energy, LLC (Weyanoke Surface)	221,858

Mineral

Founded – 1866
Named for local natural resources
County Seat – Keyser
Area/State Rank – 329 square miles – 40th
Population (2000)/State Rank – 27,078 – 24th
Incorporated Communities
Keyser, Piedmont, Carpendale, Ridgely, Elk Garden
Principal Waterways
North Branch, Potomac River



Mines	2
Employees	6
Estimated Direct Wages	$432,000
Severance Tax Receipts	$5,018
Production	6,186
Underground	0
Surface	6,186
Recoverable Reserves – Tons	360,786,316

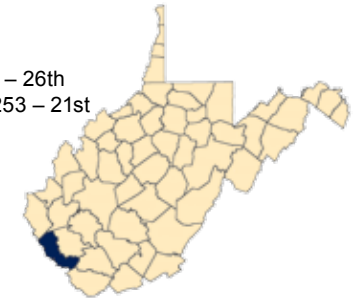
Major Seams
Bakerstown, Elk Lick, Harlem, Kittanning, Mahoning
Primary Mines

Duckworth Coal, Inc. (Piedmont)	6,078
D. & L. Coal Co., Inc. (Jones Remine)	108

County Profiles of West Virginia Coal Country

Mingo

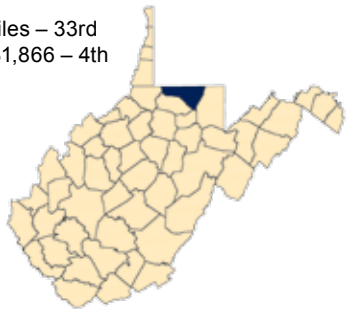
Founded – 1895
Named for former Indian tribe
County Seat – Williamson
Area/State Rank – 424 square miles – 26th
Population (2000)/State Rank – 28,253 – 21st
Incorporated Communities
Williamson, Matewan, Delbarton, Gilbert, Kermit
Principal Waterways
Tug Fork River



Mines 47
Employees 968
Estimated Direct Wages $69,408,000
Severance Tax Receipts $1,010,574
Production 7,086,015
Underground 1,505,125
Surface 5,580,890
Recoverable Reserves – Tons 2,992,388,303
Major Seams
Alma, Cedar Grove, Coalburg, Eagle, Freeport, No. 2 Gas, Williamson, Winifrede
Primary Mines
Phoenix Coal-Mac Mining, Inc. (Holden No. 22 Surf.) ... 2,793,637
Consol of Kentucky, Inc. (Twin Branch Surf.) 2,133,009
Spartan Mining Co. (Ruby Energy) 1,091,579
Rockhouse Creek Development Co. (No. 8) 338,906
Central Appalachia Mining, LLC (Remining No. 3) 178,931
Alex Energy (West Fork Surface) 169,957
Central Appalachia Mining, LLC (Grapevine Fork Surf.) ... 146,243
Central Appalachia Mining, LLC (Grapevine East Surf.) 83,645
Central Appalachia Mining, LLC (Mill Seat Surf. Mine) 83,386
Glen Alum Operations, LLC (Upper Cedar Grove No. 5) 29,884

Monongalia

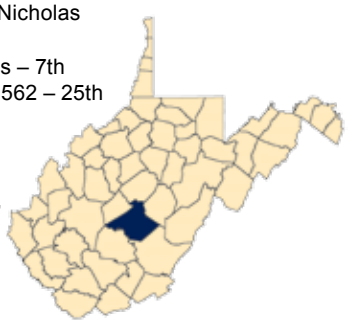
Founded – 1776
Named for a derivative of the Monongahela River, and Delaware Indian word for "river of falling banks"
County Seat – Morgantown
Area/State Rank – 366 square miles – 33rd
Population (2000)/State Rank – 81,866 – 4th
Incorporated Communities
Morgantown, Westover, Star City, Granville, Blacksville
Principal Waterways
Monongahela River, Cheat River



Mines 13
Employees 1,245
Estimated Direct Wages $89,640,000
Severance Tax Receipts $635,730
Production 8,933,948
Underground 8,507,817
Surface 426,131
Recoverable Reserves – Tons 947,895,412
Major Seams
Bakerstown, Kittanning, Redstone, Sewickley
Primary Mines
Murray Energy (Monongalia County Mine). 4,695,938
Eastern Associated Coal Corp. (Federal No. 2) 2,484,399
Dana Mining Co., Inc. (Prime No. 1) 979,434
LP Mineral, LLC (Humphrey No. 7) 404,328
Red Bone Mining Co. (Crawdad #1 Portal B) 348,046
SCJL Co-Leasing Corp. Inc (Laurita Mine No. 1) 11,855
Shafer Brothers Constr. Inc. (Bucy 3) 9,948

Nicholas

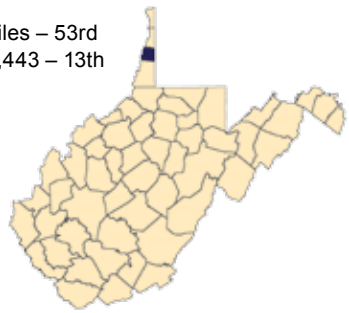
Founded – 1843
Named for Virginia Governor Cary Nicholas
County Seat – Summersville
Area/State Rank – 654 square miles – 7th
Population (2000)/State Rank – 26,562 – 25th
Incorporated Communities
Summersville, Richwood
Principal Waterways
Gauley River, Meadow River, Cranberry River, Cherry River, Birch River



Mines 18
Employees 222
Estimated Direct Wages $15,984,000
Severance Tax Receipts $178,256
Production 635,263
Underground 602,675
Surface 32,588
Recoverable Reserves – Tons 3,358,743,337
Major Seams
Campbell Creek, Dorothy, Eagle, Gilbert, Kittanning, McQueen, Peerless, Powellton, Sewell
Primary Mines
Alex Energy, Inc. (Jerry Fork Eagle) 490,204
White Buck Coal Co. (Hominy Creek) 64,012
White Buck Coal Co. (Grassy Creek No. 1) 48,459
Spring Creek Energy Co. (Rock Camp Sur. No. 1) 32,588

Ohio

Founded – 1776
Named for Ohio River
County Seat – Wheeling
Area/State Rank – 108.9 square miles – 53rd
Population (2000)/State Rank – 44,443 – 13th
Incorporated Communities
Bethlehem, Clearview, Valley Grove, West Liberty, Wheeling
Principal Waterways
Ohio River

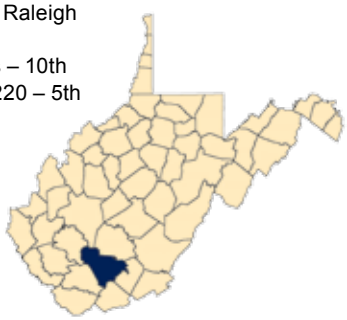


Mines 1
Employees 483
Estimated Direct Wages $34,776,000
Severance Tax Receipts $802,891
Production 5,400,000
Underground 5,400,000
Surface 0
Recoverable Reserves – Tons 325,161,888
Major Seams
Pittsburgh
Primary Mines
Tunnel Ridge, LLC. (Tunnel Ridge) 5,400,000

County Profiles of West Virginia Coal Country

Raleigh

Founded – 1850
Named For – Englishman Sir Walter Raleigh
County Seat – Beckley
Area/State Rank – 609 square miles – 10th
Population (2000)/State Rank – 79,220 – 5th
Incorporated Communities
Beckley, Mabscott, Sophia, Lester, Rhodell
Principal Waterways
Coal River, Clear Fork River, Marsh Fork River



Mines	39
Employees	1,583
Estimated Direct Wages	$113,976,000
Severance Tax Receipts	$1,323,861
Production	7,304,555
Underground	4,152,143
Surface	3,152,412
Recoverable Reserves – Tons	1,601,367,392

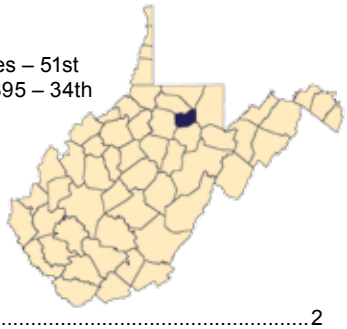
Major Seams
Beckley, Eagle, Fire Creek, Hernshaw, No. 2 Gas, Pocahontas, Powellton, Sewell, Stockton-Lewiston

Primary Producers

Elk Run Coal Co. Inc., DBA Rep. En. (Republic Energy)	1,123,659
Pocahontas Coal Co., LLC (Affinity Mine)	1,097,167
ICG Beckley, Inc. (Beckley Pocahontas)	973,859
Alex Energy, Inc. (Edwight Surface Mine)	920,789
Simmons Fork Mining, Inc., (Ewing Fork No. 1)	717,047
Marfork Coal Co., Inc. (Slip Ridge Cedar Gro)	554,210
Marfork Coal Co., Inc. (Brushy Eagle)	403,788
Marfork Coal Co., Inc. (Horse Creek Eagle)	400,042
Marfork Coal Co., Inc. (Allen Powellton Mine)	309,872
Marfork Coal Co., Inc. (Workman Surface Mine)	247,551

Taylor

Founded – 1844
Named for U.S. Senator John Taylor
County Seat – Petersburg
Area/State Rank – 175.6 square miles – 51st
Population (2000)/State Rank – 16,895 – 34th
Incorporated Communities
Fleminton, Grafton
Principal Waterways
Tygart Valley River, Three Fork Creek



Mines	2
Employees	424
Estimated Direct Wages	$30,528,000
Severance Tax Receipts	$269,860
Production	2,821,095
Underground	2,820,875
Surface	220
Recoverable Reserves – Tons	611,140,335

Major Seam
Bakerstown, Freeport, Kittanning, Mahoning, Pittsburgh

Primary Producers

ACI Tygart Valley (Leer Mine)	2,820,875
Rebekah Coal Co., Inc. (Rager Surface Mine)	220

Tucker

Founded – 1856
Named for Virginia Judge Henry St. George Tucker
County Seat – Parsons
Area/State Rank – 421 square miles – 27th
Population (2000)/State Rank – 7,321 – 53rd
Incorporated Communities
Parsons, Davis, Thomas, Hendricks, Hambleton
Principal Waterways
Cheat River, Blackwater River

Mines	4
Employees	234
Estimated Direct Wages	$16,848,000
Severance Tax Receipts	$220,742
Production	1,912,474
Underground	1,907,274
Surface	5,200
Recoverable Reserves – Tons	170,741,680

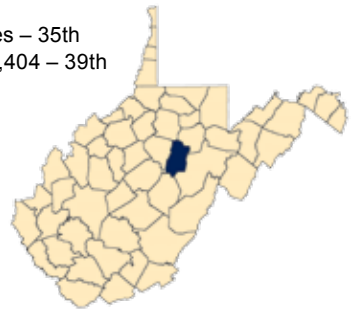
Major Seam
Upper Freeport

Primary Producers

Mettiki Coal, LLC (WV) (Mettiki E Mine)	1,907,274
Keystone Coal Reserves, LLC (Beacon Knob Mine)	5,200

Upshur

Founded – 1851
Named for U.S. Cabinet Secretary Abel Parker Upshur
County Seat – Buckhannon
Area/State Rank – 355 square miles – 35th
Population (2000)/State Rank – 23,404 – 39th
Incorporated Communities
Buckhannon
Principal Waterways
Little Kanawha River, Buckhannon River, Middle Fork River



Mines	5
Employees	142
Estimated Direct Wages	$10,224,000
Severance Tax Receipts	$89,300
Production	813,372
Underground	786,540
Surface	26,832
Recoverable Reserves – Tons	1,667,473,429

Major Seams
Alma, Elk Lick, Kittanning, Peerless, Pittsburgh, Redstone

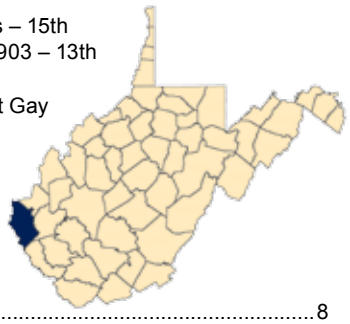
Primary Producers

Carter Roag Coal Co. (Pleasant Hill)	786,540
Nesco, Inc. (Lane Ridge Surface)	26,832

County Profiles of West Virginia Coal Country

Wayne

Founded – 1842
Named for American Revolution General "Mad" Anthony Wayne
County Seat – Wayne
Area/State Rank – 512 square miles – 15th
Population (2000)/State Rank – 42,903 – 13th
Incorporated Communities
Kenova, Ceredo, Wayne, Fort Gay
Principal Waterways
Ohio River, Big Sandy River



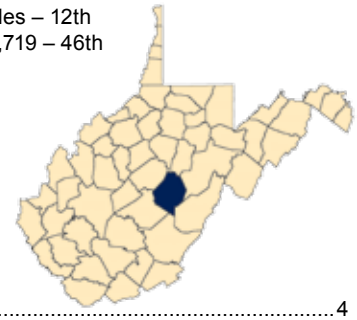
Mines	8
Employees	416
Estimated Direct Wages	$29,952,000
Severance Tax Receipts	$269,403
Production	2,309,634
Underground	2,309,634
Surface	0
Recoverable Reserves – Tons	777,122,104

Major Seam
Coalburg
Primary Producers

Rockspring Dev., Inc. (Camp Ck. Mine No. 1)	2,308,211
Appalachian Mining & Rec. (Stonecoal)	1,423

Webster

Founded – 1860
Named for U.S. Senator Daniel Webster
County Seat – Webster Springs
Area/State Rank – 556 square miles – 12th
Population (2000)/State Rank – 9,719 – 46th
Incorporated Communities
Webster Springs, Cowen, Camden-On-Gauley
Principal Waterways
Gauley River, Elk River, Williams River



Mines	4
Employees	189
Estimated Direct Wages	$13,608,000
Severance Tax Receipts	$231,955
Production	1,734,582
Underground	692,052
Surface	1,042,530
Recoverable Reserves – Tons	3,646,195,428

Major Seams
Eagle, Kittanning, Peerless, Pocahontas, Sewell, Stockton-Lewiston
Primary Producers

Brooks Run Mining Co., LLC (Seven Pines)	1,042,530
Brooks Run Mining Co., LLC (Poplar Ridge No. 1)	483,435
Brooks Run Mining Co., LLC (Cove Mountain Deep)	208,617

Wyoming

Founded – 1850
Named for Delaware Indian word meaning "wide plain"
County Seat – Pineville
Area/State Rank – 502 square miles – 17th
Population (2000)/State Rank – 25,708 – 27th
Incorporated Communities
Mullens, Oceana, Pineville
Principal Waterways
Guyandotte River

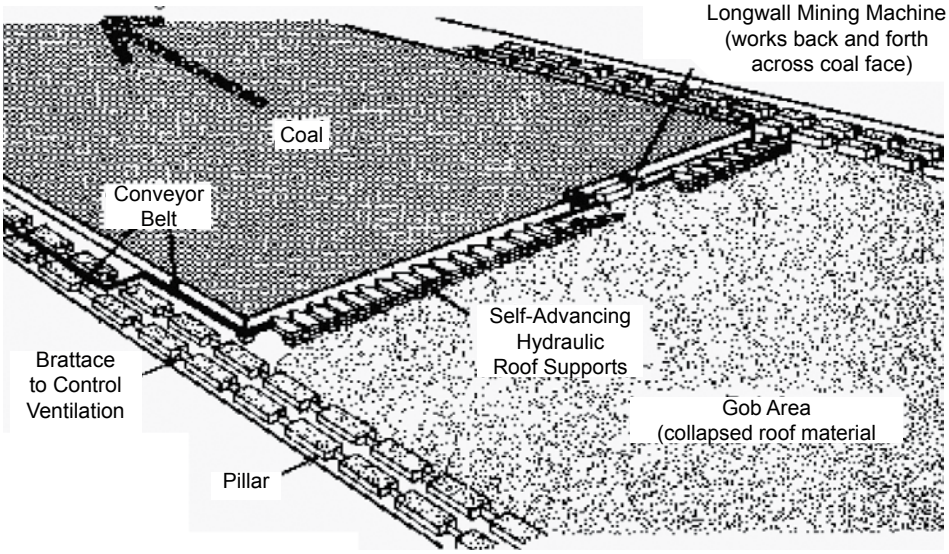
Mines	21
Employees	1,053
Estimated Direct Wages	$75,816
Severance Tax Receipts	$841,583
Production	4,635,222
Underground	4,604,542
Surface	30,680
Recoverable Reserves – Tons	2,397,914,257

Major Seams
Alma, Beckley, Ben's Creek, Cedar Grove, Douglas, Eagle, Gilbert, Kittanning, Matewan, Pocahontas, No. 2 Gas, Red Ash, Sewell, Stockton-Lewiston
Primary Producers

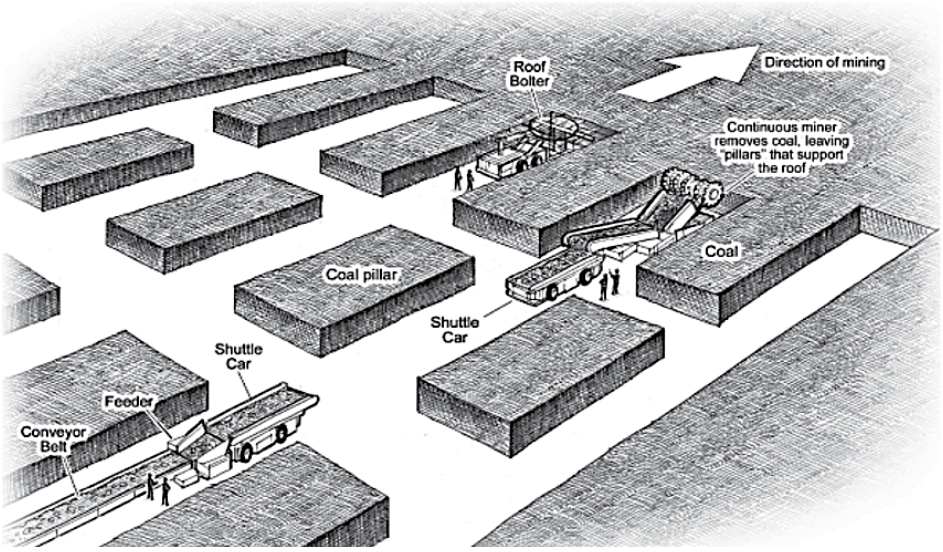
Pinnacle Mining Co., LLC (Pinnacle Mine)	2,747,256
Cliffs Logan County Coal, LLC (Lower War Eagle Mine)	757,030
Spartan Mining Co (Road Fork #51 Mine)	448,299
Rhino Eastern, LLC (Eagle No. 3)	212,524
Brooks Run Mining Co. (Wyoming No. 2)	203,087
Brooks Run Mining Co. (Still Run No. 3)	187,863
Chief Mining, Inc.(No. 3)	47,969
Dynamic Energy, Inc. (Coal Mtn. No. 1 Surf.)	30,680

Friends of Coal

A Portrait of Underground Mining: The Process in Photos



Longwall Mining *In longwall mining, a horizontal cut is made across a long section of the coal seam, with the machinery moving along to create a large open void underground.*



Room and Pillar *In room-and-pillar mining, large "rooms" are cut out of the seam leaving "pillars" in place to support the roof.*

Longwall shear

Underground continuous miner

Underground continuous miner

Surface Mining Rules and Regulations

BY JASON BOSTIC
Vice President
West Virginia Coal Association

CHARLESTON -— Coal mining is one of the most heavily-regulated industrial activities that occurs anywhere in the world. Mining operations must obtain multiple permits from multiple state and federal regulatory agencies before coal extraction can begin. These permits cover everything from basic geologic principles that govern the design of the operation, to the coal mining techniques and practices used to recover the coal through the close out and final reclamation of a mining site. The most important environmental programs related to coal mining include the Surface Mining Control and Reclamation Act and various sections of the Clean Water Act.

Surface Mining Control and Reclamation Act

Passed by Congress in 1977, this all-encompassing regulatory program addresses every environmental facet of surface and underground mining operations. The Surface Mining Control and Reclamation Act (SMCRA), created an entire federal regulatory program specifically for coal mining operations. SMCRA also created a new federal regulatory authority, the Office of Surface Mining Reclamation & Enforcement (OSM), to permit and inspect mining operations across the country. SMCRA's permitting requirements are comprehensive and require the submission of detailed information regarding all aspects of mine design, operation and reclamation.

SMCRA also established a process by which states could assume the primary authority for the environmental regulation of mining activities through a process referred to as "primacy". In a primacy state, the permitting and regulation of mining operations is maintained by a state environmental protection agency with oversight from OSM.

State primacy programs must meet the standards established under SMCRA with respect to program stringency, permitting requirements and environmental inspection frequency.

If a state fails to meet these SMCRA requirements, OSM can revoke primacy and takeover the inspection and permitting of mines within that state. West Virginia has primacy under the federal surface mining laws and maintains its own set of detailed and comprehensive statutes and regulations.

The West Virginia Department of Environmental Protection's (WV DEP) Division of Mining & Reclamation administers West Virginia's mining regulatory program. In addition to meeting the requirements of SMCRA, West Virginia's mining regulatory program is considerably more stringent than the federal regulations. West Virginia has more stringent controls on reclamation, post-mining land uses and disturbed areas than OSM or our surrounding states. West Virginia also has more stringent requirements on blasting, with an entire division of WV DEP dedicated solely to inspection and monitoring of surface mine production and underground mine development blasting.

In addition to regulating active mining, SMCRA imposes strict requirements on reclamation of mined areas. For example, SMCRA requires that all surface mined areas be returned to approximate original contour (AOC), unless a mine operator can demonstrate that leaving a mine site configured with flat, or more gentle relief will lead to a beneficial post-mining land use such as industrial or housing development.

SMCRA also requires that all mine operators furnish financial instruments to guarantee the completion of reclamation and land restoration following the completion of coal recovery. Coal companies typically post bonds with the agency to cover the cost of reclamation should an operator go out of business. Any shortfall between the actual cost of reclamation and the bonds is covered by a bonding pool that is funded with a tax on active coal production. The bonds are not released by the agency until the company has demonstrated compliance with the approved reclamation plan.

Clean Water Act

In addition to SMCRA, the coal mining industry is subject to three separate regulatory programs established under the federal Clean Water Act: The section 402 water discharge program, the section 404 "dredge and fill" program and the section 401 water quality certification programs which are explained below.

Clean Water Act Section 402

Under section 402 of the 1972 Clean Water Act, coal mining is categorized as a "point source" category meaning that all discharges from mining operations must comply with established water quality effluent limitations. Any and all discharges must comply with these effluent limitations which are established by individual states to protect the existing use of streams. Mining companies must obtain section 402 permits before initiating any activity that will result in a discharge to a stream. The majority of the discharges from coal mines are simply storm water runoffs which must be routed to a discharge point where compliance with a section 402 permit is monitored. The federal Environmental Protection Agency has delegated administration of the section 402 program to the State of West Virginia.

Clean Water Act Section 404

Section 404 of the Clean Water Act regulates the placement of dredged or fill material into waters of the United States. Coal mining operations that result in the construction of valley fills or coal refuse structures must obtain permits from the U.S. Army Corps of Engineers for these activities, if they affect navigable waters. The Corps, with oversight from the federal Environmental Protection Agency, administers this regulatory program. The permit review for a section 404 activity includes a detailed analysis of alternatives to assure that the same activity could not be accomplished without the placement of fill material in streams. The section 404 regulations also require that an applicant minimize the amount of fill material that is placed in a stream.

Clean Water Act Section 401

Referred to as "state water quality certification", section 401 of the Clean Water Act is a state-administered program related to the federally-administered section 404 program. Under section 401, certification no placement of fill material can occur under a section 404 permit unless the state certifies that the placement of that fill material will not result in a violation of applicable state water quality standards. In order to construct valley fills or coal refuse structures, the coal industry must obtain section 401 certification after the Corps has issued a section 404 permit. ♦

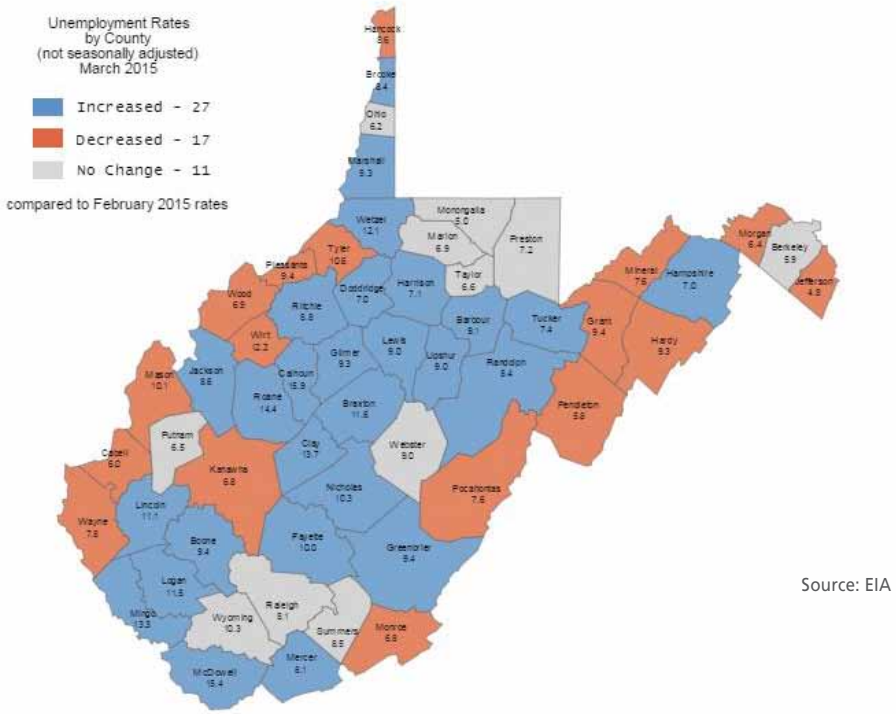
Current Status of the West Virginia Coal Mining and Support Industries

The West Virginia coal mining industry is currently six years into a downturn in production. During this time period, coal production in the state has declined by 28 percent – from 168 million tons in 2008 to just 122 million tons today. Along with that decline in production, direct coal mining employment has fallen from approximately 23,000 to just 16,000 today. (See chart below) The workforce reductions have translated into declines in state payrolls – with direct payrolls dropping from $1.66 billion to $1.15 billion.

Utilizing the economic multiplier of five established in 2010 by a joint study of the industry by West Virginia University and Marshall University, it can be projected that the decline in direct employment led to a further decline of 35,000 support jobs. Using the state's average per capita wage of $38,000, this decline in support jobs has resulted in a further loss of $1.33 billion or a total of $2.48 billion dollars.

This reality is visible in recent unemployment reports from the Workforce West Virginia and the Department of Commerce. While the state's overall unemployment rate is approximately 6.7 percent, most of the large coal-producing counties are reporting unemployment rates of greater than 11 percent, with Mingo and McDowell County reporting the highest rates of 13.3 and 15.3 percent respectively.

West Virginia Data County Emphasis

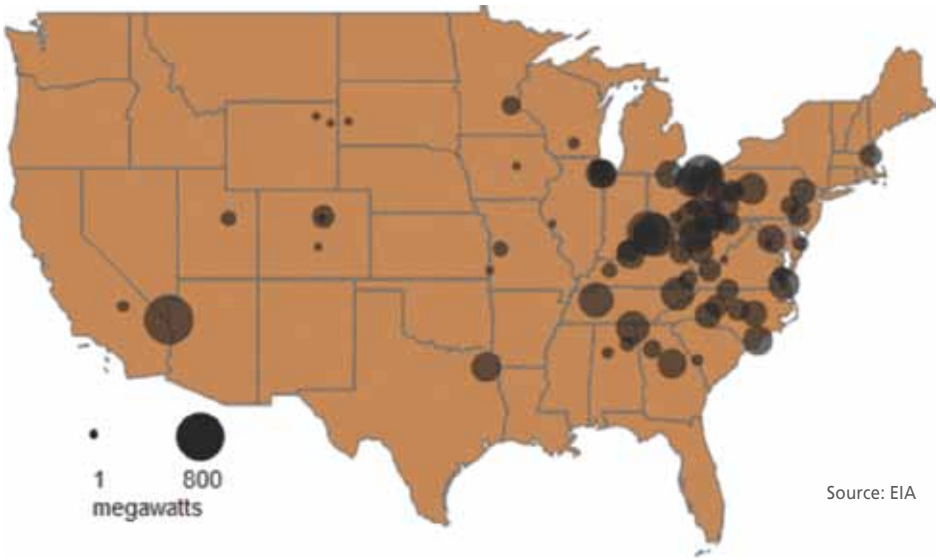


Source: EIA

UNDERGROUND PRODUCTIVITY	
Year	Underground Production/Employee
2009	5,959.66 tons
2014	6,758.44 tons
% Increase/Decrease Over Period	10% Increase in Raw Productivity
SURFACE PRODUCTIVITY	
Year	Surface Production/Employee
2009	10,005.4 tons
2014	7,354.89 tons
% Increase/Decrease Over Period	16.5% Decrease in Raw Productivity

Source: EIA

Reported Coal-fired Generator Retirements, 2012 - 2016



Source: EIA

Causes for the Recent Downturn

The decline of the state's coal industry can be attributed to one primary factor – the federal regulatory assault known as the Obama War on Coal. The direct impact of this regulatory assault has come with the shuttering of hundreds of coal-fired power plants across the country, with many of the closures coming in areas traditionally served by West Virginia coal, as made clearly evident by the map at right. Each of the black dots indicate power plants closed or to be closed as a result of the Administration's regulatory assault on coal. (Note: The larger the circle, the more kilowatt hours of electricity production is being retired.)

Historically, approximately 60 percent of West Virginia's coal production has been thermal coal for use in electric production. The other 40 percent has been higher quality metallurgical coal used in the making of steel. Given that the majority of coal-fired power plant closures are in historic markets for West Virginia's coal, the impact on coal production in the state is magnified.

It is important to note that West Virginia's metallurgical coal is the best quality in the world and there is no real replacement for coal in the steel-making process, so that por-

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tion of the state's coal market is secure except for the normal cyclical economic factors such as are being experienced today with the ongoing sluggishness of the world economy.

While the impact of regulations being imposed by the Obama Administration are the primary cause of the decline in West Virginia coal production, there are several other factors that are exacerbating the current downturn.

These factors include:

♦ An increasingly difficult and expensive-to-mine reserve base;

♦ Competition from artificially low-priced natural gas;

♦ A worldwide decline in demand for metallurgical coal as a result of a faltering world economy;

♦ Recent declines in exports of steam coal; and,

♦ Competition from other coal producing regions.

Increasingly Difficult to Mine and Expensive Reserve Base

Coal has been mined in West Virginia since before the Civil War, and mined on an industrial scale since just before the turn of the 20th Century. During the past 130 years, approximately 2.2 billion tons have been produced in West Virginia's coal mines. The state has approximately 51 billion tons of proven recoverable reserves remaining. However, much of the low-cost, larger seam coal has been mined.

This does not mean that, as is often reported or implied in the media, West Virginia's reserve base is "rapidly declining." What is does mean is that to remain competitive, the industry will have to find ways to lower the cost of mining through innovations in technology, improved productivity and reductions in expenses.

To use an analogy, 20 years ago most experts considered most of the eastern gas fields to be depleted. With the advent of horizontal drilling, deep-well drilling and fracking, those same fields are now among the nation's most productive.

Looking at productivity, West Virginia's coal industry made tremendous strides in improving productivity during the past few decades, but those improvements have been stymied over the past few years.

In 1980, for example, West Virginia coal miners produced approximately 2,180 tons per miner per year. In 2008, West Virginia coal miners produced 7,885 tons per miner per year – an increase of 361 percent. This was accomplished through increased automation along with wider use of surface mining and longwall underground mining.

Since 2008, productivity in West Virginia, however, has been reduced to 6,022 tons per miner per year – a loss of 24 percent. This was another result of the Administration's regulatory assault, which has made surface mining in Appalachia extremely difficult.

To regain its competitiveness, the state's coal industry must improve productivity. And in order to do so, it must be able to take advantage of the economies of scale allowed by large scale surface and underground operations.

Competition from Natural Gas

West Virginia's coal industry does face major competition from the increased availability of low-priced natural gas. However, contrary to the popular perception, natural gas is not cheaper than coal, even at today's unsustainably low prices. In fact, the primary factor driving the switch by utilities to natural gas is not price but is rather the need to find an alternative fuel for baseload generators in light of the regulatory burden placed on domestic coal.

The following chart shows the current comparative prices of the major coal markets compared with natural gas and each other. The prices reflected are for the week of May 7, 2015.

The chart clearly shows that natural gas prices, as determined by the spot market price on the Henry Hub versus the current spot market prices of coal produced in the major domestic coal markets are significantly higher than even the highest priced coal (Central Appalachian) on a per million BTU basis.

It is important to note that natural gas has historically been much more volatile in price, trading in a much broader range of prices (between $1.09 and $15 per million BTU in just the past couple of years). Coal, meanwhile, has historically traded between $2 and $3.50 per million BTU.

In addition, at current prices, much of the domestic gas production is uneconomic. While the break even price of gas production is coming down, for most reserves it remains at approximately $4-5 per million BTU, which would mean a switch to natural gas by utilities

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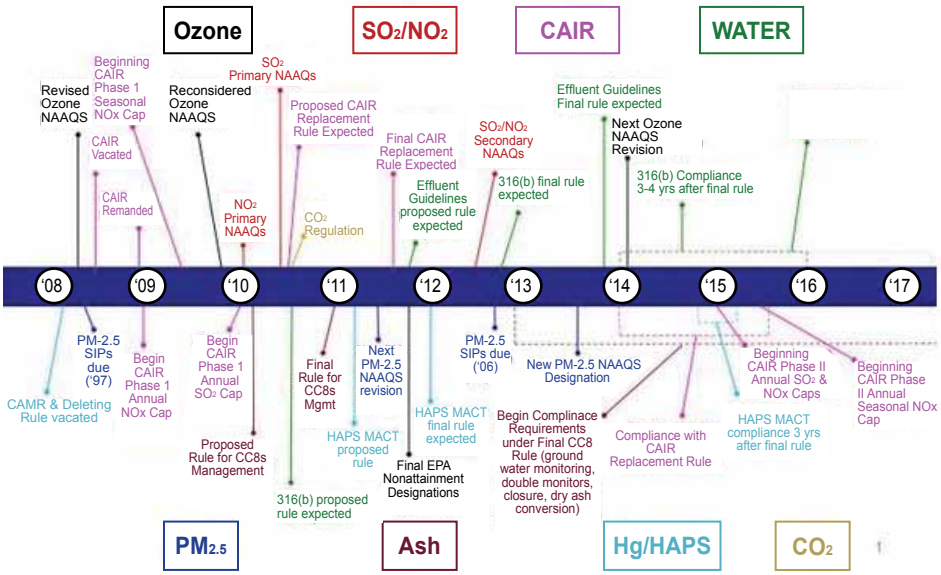
The EPA Regulatory Train Wreck:
Regulatory Timeline for Coal-Fueled Power Plants



Source: EIA

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at current low prices essentially locks in an inflation factor of a nearly 100 percent.

Natural gas does have two advantages over coal in the current regulatory environment – zero mercury emissions and the ability to meet the CO2 standards being imposed by the Obama Administration. In addition, building natural gas combined cycle power plants is cheaper than a comparable coal-fired plant and requires far fewer employees.

However, natural gas also has several equally strong negatives.

As noted, natural gas is unsustainably cheap at its current price level. If it becomes the dominant fuel in electric generation, prices will necessarily rise past the break even point in order to recoup already sunk costs, leading to a high level of built in price inflation for electric generation. Some studies have pointed to as much as a 50-75 percent increase in end-user electric bills. It is doubtful that the price would go that high in the foreseeable future, but an increase of 35-40 percent is highly likely. This would lead to severe hardship for people on fixed incomes, the elderly, poor and even the middle class absent some type of government subsidy to reduce costs.

Another problem with natural gas is that it has limited storage potential onsite, which essentially restricts the ability of the utility to ramp up electric production to meet demand. In essence, the power plant's capacity is limited by the size of the pipe and the amount of gas readily available on the market at that particular time. Anyone who has tried to get propane or natural gas deliveries in the middle of a harsh winter knows all too well the shortages that happen even in the midst of a glut of natural gas.

Still another problem for natural gas is its own environmental footprint. The same forces that are attacking coal have begun attacking natural gas and oil production. They are fighting fracking, horizontal drilling and even pipeline construction and rail transport of natural gas as environmentally damaging and potentially hazardous, pointing to pipeline explosions, the release of methane during the drilling procedure, the Injection into the ground of fracking fluid. In essence, the war on coal has become a war on all fossil fuel use. So utilities are hesitant to invest in a long-term build out of natural gas capacity. In fact, most of the switch from coal to natural gas-fired generation has been done through expanded use of inefficient small "peaker" plants rather than construction of the new and efficient natural gas combined cycle plants.

Worldwide Decline in Demand for Metallurgical Coal

West Virginia's metallurgical coal is recognized worldwide for its quality. It is quite simply the coal-of-choice for steel manufacturing worldwide. West Virginia's metallurgical coal production has historically accounted for about 40 percent of its annual production of coal – between 50 and 60 million tons annually. Metallurgical coal also accounted for a large percentage of the state's coal exports.

Coal Commodity Region/Fuel	Avg. BTU	SO2	Price	Price/mmBTU
Central Appalachia	12,500	1.2	$52.85	$2.11
Northern Appalachia	13,000	3	$60.90	$2.34
Illinois Basin	11,800	5	$40.45	$1.71
Powder River Basin	8,800	0.8	$11.55	$0.66
Uinta Basin	11,700	0.8	$39.30	$1.68
Natural Gas (Henry Hub)	n/a	0.01	n/a	$2.72

Source: EIA

Recently, given the worldwide economic slowdown of the past seven years, demand for metallurgical coal has been slipping. For several years it was buoyed by demand from the fast-growing Chinese and Indian economies (which were surging to meet internal demand), but as the Chinese economy has slowed, West Virginia's sales of metallurgical coal have followed, declining fairly quickly over just the past two years.

While the decline in demand for metallurgical coal is exacerbating an already difficult coal market for West Virginia, it is important to note that there is a major difference between the slackening of demand for metallurgical coal and the decline of the market for steam coal. The difference is that the slackening of demand for metallurgical coal is part of a normal market cycle, whereas the decline in the market for steam coal is a structural one based on policy decisions by our federal government.

West Virginia will mine and market metallurgical coal successfully for many years to come, so the 50-60 million tons of annual metallurgical production can be seen as the absolute floor of West Virginia coal production for the foreseeable future.

Declines in Exports of Steam Coal

Coal plays an important role in the global energy mix, representing 29 percent of total primary energy demand in 2012, according to the International Energy Agency's (IEA) World Energy Outlook 2014.

While this percentage is expected to decline to 24 percent in 2040, the IEA projects global coal demand on a tonnage basis will increase 15 percent by 2040.

The fortunes of coal, however, differ dramatically by region. Coal demand declines in all OECD regions, particularly in the United States where a sharp reduction in coal-fired electricity generation falls by nearly one third in the IEA's forecast, owing to increased regulation and competition from other fuels, especially unconventional gas and renewables. Coal demand in developing countries, on the other hand, is expected to increase by one third by 2040, with significant growth in Southeast Asia, India, Africa, and Brazil (China's coal demand is expected to peak in 2030).

Global coal production and pricing trends in the next 25 years will be led by Asia, where coal is going to be more competitive than gas for some time. The IEA highlights that China, India, Indonesia, and Australia will account for 70 percent of global coal production by 2040. Illustrative of the competitiveness of coal is the example of Malaysia. This is a gas rich country with no coal resources and yet, according to IEA, most incremental energy demand will be met by coal, reflecting that it is more profitable to export its gas and import coal.

Competition from Other Coal Producing Regions

Taking a second look at the coal price chart from above, in addition to the relative cost of natural gas, it also clearly shows the relative cost structure of coal from the various domestic producing regions. The chart clearly reveals what is perhaps the greatest single long-term threat to the West Virginia coal industry – its high cost relative to coal produced in other regions across the country. This is especially true of Central Appalachian coal (southern West Virginia lies in the Central Appalachian region whereas northern West Virginia is the in Northern Appalachian region).

Coal produced in the Illinois Basin – including Illinois, Indiana and western Kentucky fields – is close enough in terms of quality of burn (BTU) and in terms of proximity to the primary power generation market area of West Virginia coal to displace West Virginia coal in the market. Its current price structure relative to Appalachian coal (both northern and central Appalachian) has led to an erosion of traditional markets for Appalachian coal in terms of steam generation.

Another growing competitor for Appalachian coal is coal produced in the Powder River Basin (PRB). Though West Virginia coal is far superior in terms of quality of burn (2X the BTU), its low cost of production (thick seams of up to 100 feet just below the surface in the largely flat Wyoming prairie) makes it attractive. However PRB coal is a fraction of the price per BTU of Appalachian coal.

PRB coal is limited by its lengthy rail transport to eastern markets and by the limitations of rail capacity for PRB coal. If these limitations are overcome, PRB coal will likely displace most of the coal produced domestically.

Looking at the relative prices of coal from the various domestic producing regions provides a picture of the challenge faced by West Virginia's coal industry. It must reduce costs sufficiently to bring its market price down to a level competitive with its primary rival – Illinois Basin coal – in order to protect as much

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as possible of its share of the steam coal marketplace. This would essentially require a 19 percent reduction in the cost of production.

How can this be accomplished?

There are four potential sources of savings — improved productivity, decreased taxes, decreased pay for miners, and reduced transportation costs.

Clearly productivity can be improved. As noted earlier, since 2008, productivity in West Virginia has been reduced to 6,022 tons per miner per year — a loss of 24 percent. So the industry must reclaim most of that loss in order to compete.

Another source of savings is decreasing the tax burden on the state's coal producers. One place to start is to repeal the 56 cents/ton special severance tax that has helped the state retire the worker's compensation debt. The debt will be repaid later this year and it is time to restore that money to the industry that worked as a partner with the state to solve its debt crises.

Also, the state currently has one of the highest base rates of severance taxes in the nation at 5 percent of the sale price of coal. Competing coal producing states have substantially lower severance taxes and one (Pennsylvania) has no severance tax at all. The state can move to bring severance taxes in line with those charged by our competitors.

Third, the state can reduce the property taxes charged to coal companies. Currently coal producers pay exorbitantly high rates of property taxes on both producing and nonproducing properties. Reduction of property taxes should be a major part of the broader discussion of tax reform as the state moves toward the 2016 Legislative session.

And last, the state could look at ways to reduce the cost of transport of West Virginia coal to market – through investments in port facilities, rail rate reductions, or improvements to truck transport routes. In essence, none of these options can be seen in isolation, each of them in some combination will likely be required to improve the state's competitive position in the coal marketplace. ♦

Table 1. Estimated recoverable reserves (Energy Information Administration, 2000a) by sulfur content in northern and central Appalachian Basin and in the Illinois Basin (millions of tons).

Basin	Low sulfur	Medium sulfur	High sulfur	Total
APPALACHIAN				
Pennsylvania	280	5,747	5,609	11,635
Ohio	249	1,379	10,044	11,672
West Virginia	6,997	6,657	5,668	19,322
E. Kentucky	2,180	3,101	1,469	6,750
Virginia	782	508		1,290
Total	10,488	17,392	22,790	50,669
ILLINOIS				
Indiana	308	850	3,130	4,287
Illinois	234	1,947	36,025	38,206
W. Kentucky		155	9,072	9,227
Total	542	2,952	48,227	51,720

Source: EIA

America Needs Coal to Ensure Electric Grid Stability

BY CHRIS HAMILTON
Senior Vice President
West Virginia Coal Association

CHARLESTON – During his campaign for the presidency in 2008, Barack Obama told a reporter that "under his plan the cost for electricity would necessarily skyrocket" and he made clear his plans to basically make any new coal-fired power plants impossible to construct, saying. "If someone wants to build a new coal-fired power plant, they can, it's just that it will bankrupt them."

His words were clear then and they are crystal clear today.

We all know too well that President Obama has moved quickly to implement his goal of ending coal-fired power generation in the United States, but what impact is that having on the nation's electric grid and, also, what impact is that push likely to have on the American public?

The Background

When Obama took office as president in January 2009, he moved quickly through his EPA and a then-friendly Congress to try to put in place a cap-and-trade system and a regulatory regime that essentially made building new coal-fired plants impossible as well as forcing existing coal-fired power plants to close prematurely.

To date nearly 400 coal-fired electric units across the country have closed or announced closure including 50+ plants that use West Virginia coal.

In West Virginia, 18 coal-fired power units have either closed or are set to close in the American Electric or First Energy service areas as the power generation companies work to meet the new EPA regulations. In fact, a significant portion of the total MW hours to be retired is occurring along the Ohio River corridor between Pittsburgh and Cincinnati.

The Obama Administration and its friends in the national media have argued that the closure of coal-fired power plants would both aid in the reduction of CO2 emissions and reduce cost to consumers as electric generation capacity was switched to natural gas and renewable. Critics argued, however, that this forced shift would lead to substantially higher electric prices and potentially shortages as the grid struggled to meet the demand.

Over the past year, as these shutdowns have begun to be felt, the arguments of the critics of the Obama Administration's regulatory assault on coal-fired electric generation have been validated as Americans have watched electric bills see double-digit increases and the nation's power grid be pushed to "voluntary" rolling brownouts to meet demand.

Economic Factors

Between 2007 and 2009, the world's economy suffered a near-collapse. The result was a significant slowdown in energy demand across the board. Real GDP in the US was in freefall from the end of 2007 through the 2nd quarter of 2009, with economic growth falling to a post-World War II low of a -5 percent from a previous level of a positive 3 percent growth per year.

In conjunction with this loss of GDP, the nation saw its manufacturing sector crumble as durable goods orders fell in pace with the loss of GDP.

Also as a result of this economic decline, we saw demand for energy fall in most of the world, except for the Asian rim nations, such as China and India. US demand for energy fell rapidly.

At the same time this was happening, the US was seeing a revolution in the production of natural gas with the development of deep shale gas deposits through horizontal drilling and fracking technology. This resulted in a sudden price shock to the natural gas markets with the price of natural gas falling from highs of $14 per million Btu to approximately $1.09 per million Btu before settling back to its current $2.60 per million Btu in just a few years. The rapid decline and supply glut in natural gas combined with the regulatory assault on coal made it appear that switching to natural gas as the primary baseload fuel for electric generation made sound economic sense, however at those levels the price of natural gas was unsustainable in the marketplace. Energy experts put the minimum sustainable market price at approximately $5 per million Btu.

It is only common sense to realize that switching to natural gas during a worldwide economic downturn and at a time when there was artificially and unsustainably low prices for the fuel was setting the stage for a major increase in fuel costs for electric generation and higher electric bills for consumers.

Those cost increases are already being felt across the country, but most especially in areas where there has historically been low electric rates due to the availability of coal-fired capacity.

American Electric Power, one of the country's largest coal-burning electricity generators, said in 2011 it plans to retire nearly a quarter of its coal-fueled generating capacity and that it will spend up to $8 billion to retrofit remaining units to meet regulations that start taking effect in 2014.

"The sudden increase in electricity rates and impacts on state economies will be significant at a time when people and states are still struggling,'' AEP Chairman and CEO Michael G. Morris said in a 2011 interview.

While the amount of increase is still uncertain, the Illinois Power Agency has estimated that by 2017 the energy portion of bills could jump 65 percent from what they were in 2011. Projected Henry Hub spot natural gas prices are forecast to average $4.17 per million btu in 2014 and $4.11 per million in 2015. By contrast, the EIA projects average steam coal prices to remain stable between $2.35 and $2.38 per million btu through 2015. Steam coal has historically been a much more price stable fuel than natural gas.

The result of this recent run up in prices has been a shift by utilities back to more coal. The EIA says coal will increase its electric generation share from 4.1 billion KWH/day in 2012 to 4.4 billion KWH/day in this year. Meanwhile, EIA projects natural gas utilization to fall from 3.4 billion KWH/day in 2012 to 3.1 billion KWH/day in 2015.

Clearly, even with the intrusion of government regulation on the electric marketplace, the energy markets recognize the need for the ability to shift between fuel loads as market prices dictate. The forced permanent closure of thousands of megawatts of coal-fired power generation removes much of that ability to shift and will result in higher prices for the end-use consumer.

This is particularly true since the EIA also projects a substantial long-term increase in energy demand between now and 2040, from 4.1 trillion KWH annually in 2012 to an estimate 5.3 trillion KWH annually in 2040 – a 23 percent increase over the period. Without the ability to grow the coal portfolio, the nation will be forced to rely on renewables and natural gas, resulting in further price increases for the end user.

While the "percentage"of the pie of the electricity market is projected to grow substantially, the actual tonnage demand for coal for electric generation is projected to remain fairly stable even as the market share decreases.

Stability of the Grid

Electric price inflation is not the only concern with locking in increased dependency on natural gas. Unlike coal, which can be stockpiled easily at the utility, natural gas supplies are dependent on limited pipeline capacity or high pressure storage facilities. The potential for grid failure is exponentially increased by reliance on natural gas.

Three times in recent months, PJM Interconnections and their constituent companies such as Appalachian Power and First Energy have requested consumers participate in what they refer to as "voluntary demand response" — which is essentially a rolling "voluntary brownout" for institutional users such as schools, hospitals and other large facilities — in order to reduce overall power demand in the face of a shortfall in supply in order to avoid a wholesale blackout of segments of the grid.

Clearly the grid's capacity is pushing its limits and this is happening despite the continuing economic uncertainty and decreased electric demand. Removing additional coal-fired capacity will only worsen this situation and endanger the stability of the entire grid.

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West Virginia is Not a Planet

BY CHRIS HAMILTON
Senior Vice President
West Virginia Coal Association

West Virginia is not a planet; neither is the United States.

President Obama's Environmental Protection Agency recently issued unprecedented climate rules which, if implemented, will have no real effect on climate change or in the reduction of global carbon dioxide (CO2) emissions. .

The entire coal-fired power generating fleet in the U.S. is responsible for less than 4 percent of our planet's carbon emissions while China and India alone account for over 90 percent of today's emissions. The president's plan calls for a 30 percent reduction in coal use, which in essence can be boiled down to reducing less than 1 percent of our emissions. Stop and think about that for a moment. Less than 1 percent of global emissions reduced, and at what cost?

There have been several preliminary estimates of the economics of the Presidents' plan. The U.S. Chamber of Commerce calculated a $10 billion dollar impact on the southeastern states alone and upwards of 500,000 jobs lost across the country. The United Mine Workers of America completed an assessment that concludes Obama's plan will result in the loss of 75,000 jobs by 2020 and twice that by 2030.

Again, these disastrous economic consequences are being levied in exchange for a reduction of less than 1 percent of global emissions. Rest assured, we all will pay, every single West Virginian and every American. Higher utility bills, fewer taxpayers, fewer tax dollars and the thousands who will lose their jobs and ability to take care of their families.

By the way, 1 percent of global emissions equates to a temperature decrease of about 0.015 percent and a sea level decrease of 1/20 of 1 percent or the thickness of three sheets of paper.

It is pure nonsense, to think for a moment that other countries will follow our lead in reducing CO2 emissions. The media may try to paint a picture that the whole world automatically will do what America does, but in reality, it simply will not happen.

When I hear President Obama, EPA Administrator Gina McCarthy and their supporters rant about the United States providing climate leadership for other countries to follow, I shake my head. This is akin to following "F" Troop into battle or McHale's Navy at sea or the Keystone Cops in a street fight. It simply will not happen!

For the sake of this writing we'll not examine the leadership qualities or the ill-conceived plan in question. I will, however, simply observe that the U.S. electric utility industry has continuously made improvement through costly upgrades to its entire fleet over the past 30 plus years to reduce sulfur, ground level ozone, nitrogen dioxides, mercury and particulate matter to the tune of achieving over a 90 percent reduction in total air emissions while tripling the percentage of coal combustion throughout this same period. Has the president even bothered to acknowledge this incredible progress? Of course not.

The cost of these upgrades has been in the hundreds of billions of dollars that domestic consumers already have paid for because these dollars have been channeled back through the rate base.

But while America's industrial bedrock has made real progress in reducing air emissions over the last couple decades, the real kicker in this summation is that China, India and other large consumers of coal have not followed our lead by making any of these improvements designed for reducing pollution to improve human health. Not the first filter or scrubber, not the first after-treatment system of any dimension to control or mitigate pollutants, nothing even close to the level of progress achieved in the United States.

Germany is a shining example of a country that tried to move away from coal-fired power, and the results were a near economic disaster. That nation now is switching back to using coal as much as possible as quickly as it can.

Germany's experiment shows us a valuable lesson and explains the hubris that is the downfall of the Obama administration. The president will have the United States risk its entire economic structure, electric grid security and the health and welfare of its most vulnerable citizens for such questionable, minute results. And Obama expects other nations to follow us? To put it simply, it ain't gonna happen!

While the United States government shuts down its most reliable and affordable energy source, other nations will continue to burn coal happily – and they'll probably develop even cleaner ways to burn it than we have now and outpace our economy entirely.

If you believe climate change is occurring that's okay for it very well may be. But to believe changes in weather patterns and storm severity are because the United States uses coal-fired power is highly questionable. Weather does not recognize geopolitical boundaries. Global climate change is a global challenge requiring a global solution. It simply does no good for one country to risk so much for such little result. ♦

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Prescription for the Future

We believe the marketplace rather than the government that determines the energy mix based on market drivers such as price and reliability. We believe that permanent, forced retirement of thousands of megawatts of coal-fired capacity is a mistake that will result in higher prices for consumers, hurt our manufacturing competitiveness and potentially push the nation back into recession.

We further believe it is in the nation's best interest to take the steps needed to make our energy mix as nimble and diversified as possible – with coal-fired capacity remaining the primary fuel for our electric needs due to its reliably stable low price combined with our ample domestic supply.

The current policies pursued by the Obama Administration and the EPA are highly questionable and potentially destructive of our national energy security. They are based on, we believe, intentionally unachievable standards with the intent of shutting down coal-fired electric generation.

We believe further, that a proper standard would be to use the emissions profile of the 5 or 10 most efficient current coal-fired power plants as the standard for new plants and grandfather in existing plants, providing them a more realistic timeframe for retrofitting or retirement without endangering the grid.

America is positioned to reassert true energy independence and regain its world prominence in manufacturing. In order to do so, we must make the fullest and best use of all our resources, including oil, natural gas, renewable and most importantly coal. Taking coal out of the energy mix is essentially robbing ourselves of this opportunity to gain energy independence and, with it, rebuild our nation's economy.

West Virginia's coal industry stands ready to lead. We have the best coal miners, management, engineers, environmental technicians and support in the world. We also have some of the best quality reserves available. We are ready to do our part to rebuild our nation's economy and put our people back to work. All we ask is for the federal government to allow us to do our jobs and mine coal. ♦

Friends Of Coal Ladies Auxiliary: "We Don't Stop!"

BECKLEY – The Friends of Coal Ladies Auxiliary was founded in 2007 by Regina Fairchild. This non-profit organization, headquartered in Beckley, W.Va., seeks to inform those about the importance of coal and to support coal miners and their families. There were initially 2,000 members located in West Virginia. Today, the membership of the Ladies Auxiliary is more than 5,000 in West Virginia alone, and because of the dedicated support and positive feedback from families and individuals, the Friends of Coal Ladies Auxiliary has grown into a nationwide organization of many thousands of members.

Coal is an integral part our nation's success. More than half of the nation's electricity is generated from mined coal, and 98 percent of West Virginia's electricity comes from coal use. Coal was first discovered in West Virginia by John Peter Salley in 1742. As this state leads the country in its underground production of coal, the primary goal of the Friends of Coal Ladies Auxiliary is to raise awareness about the positive benefits of coal and the individuals who work to mine it for the country.

Since its formation, the Friends of Coal Ladies Auxiliary has worked to become active participants in charity, supporting troops in Iraq with donations of food and supplies and supporting local conservation projects. Among these projects, members work hard by donating their time and efforts to raise money for coal awareness.

The members of the Friends of Coal Ladies Auxiliary come from a variety of backgrounds, professions, and economic statuses. Membership is free, and all are welcome to join the Friends of Coal Ladies Auxiliary in making West Virginia and the United States a better, safer place to live. Through dedication of time, personal resources, and energy the members have:

- Created an on-line store, website and a brochure (www.friendsofcoalladies.com)
- Worked with local businesses for support.
- Set-up booths at numerous coal shows with information concerning coal.
- Worked with the Women's Resource Center, Salvation Army, Burlington House, Chili Night, Christmas Parades, Women's Expo, the Coal Classic, and the Chamber of Commerce.
- Published a "Friends of Coal" cookbook.
- Designed "Mr. Coal" – a stuffed black dog distributed to nurseries, pre-schools, the sick and elderly, as well as, used as a tool in the classroom.
- Designed a vanity "Friends of Coal" license plate for West Virginia citizens' to purchase.
- Designed and copyrighted a workbook for 3rd and 4th graders entitled "Coal in the Classroom.'
- Work each year at the "Friends of Coal" Auto Fair.
- Recorded several DVD's promoting coal.
- Provide internet for the residents at the Beckley Veterans Hospital.
- Decorated the 4th floor at the Beckley Veterans Hospital and now are decorating the 6th floor.
- Keep the "Treasure Chest" at the Beckley Veterans Hospital stocked.
- "Giving Hearts" project providing assistance to fire, flood, military, miners, and military families throughout the year.
- Completed renovation at the Beckley Exhibition Coal Mine to bring it up to the 21st century with assistance from the Citizens Conservation Commission (CCC).
- Send "goodies" to military out-posts throughout the year.
- Help to sponsor the "Strike Out" bowling tournament to benefit diabetes.
- Sponsor the Red Cross Blood Drive at the Beckley Auto Fair.
- Food drives to benefit local organizations.

Combating Drug Abuse

As the years go by, so do the needs of the community, and the Friends of Coal Ladies Auxiliary tries to meet needs of a current nature.

The drug epidemic has hit West Virginia in a harsh way. Reality tells us that each of us has been touched by someone transformed in the worst way by this addiction. No one on drugs wants to live that kind of life, but once it takes hold, the addiction is hard to break.

It takes resources and education and most of all professional help. Many of these addicts are good people fighting to be normal. While there are very few resources in our area to provide that "chance" to an addict, Beckley and Raleigh County have been fortunate to have a successful place that can give that one "chance" to individuals.

Brian's Safehouse is known for its success.

It takes many resources financially to operate a successful rehabilitation center. Recently, Brian's Safehouse volunteer Amber Pease contacted the Friends of Coal Ladies Auxiliary. Amber works with the Safehouse computers, printer, fax machines, etc. She informed us that the printer and copier they were using was on its last legs. It had been repaired many times. She wanted to know if the Friends of Coal Ladies Auxiliary could help in any way.

The goal of the FOCLA is to help the community, and what better way than to help with the drug epidemic in our area, if only to purchase a printer/copier for their day to day office work.

Amber is not only a volunteer. She has a special interest in Brian's Safehouse. She is married to Daniel Pease — a very successful graduate of Brian's Safehouse. Who better to know their needs than these two people?

Needless to say the FOCLA got on the ball and purchased a printer/copier — a small way to help fight drugs in our area.

Coal In The Classroom & Beckley Exhibition Mine

"Coal in the Classroom" is a curriculum is a six-week program with speakers from coal industries teaching children exactly how coal is obtained, what it is used for and how valuable it is to all of us. The program ends with a field trip to the Beckley Exhibition Coal Mine where the students are served lunch in the old school house, tour the church and coal home and end by going underground into coal mine.

The mine and Friends of Coal Ladies' Auxiliary recently completed a major renovation of the Friends of Coal Depot. The additions aim to teach the site's 50,000 annual visitors about the modern methods of coal mining.

"They will show a program with modern mining, how they mine coal today with the big machinery like the long-wall," said Renda Morris, director of the mine. Morris said the exhibition mine opened June 23, 1962, and the new programming shows visitors how mining has changed since the early '60s.

"For almost 50 years, we've been depicting the early mining era, which was the pick

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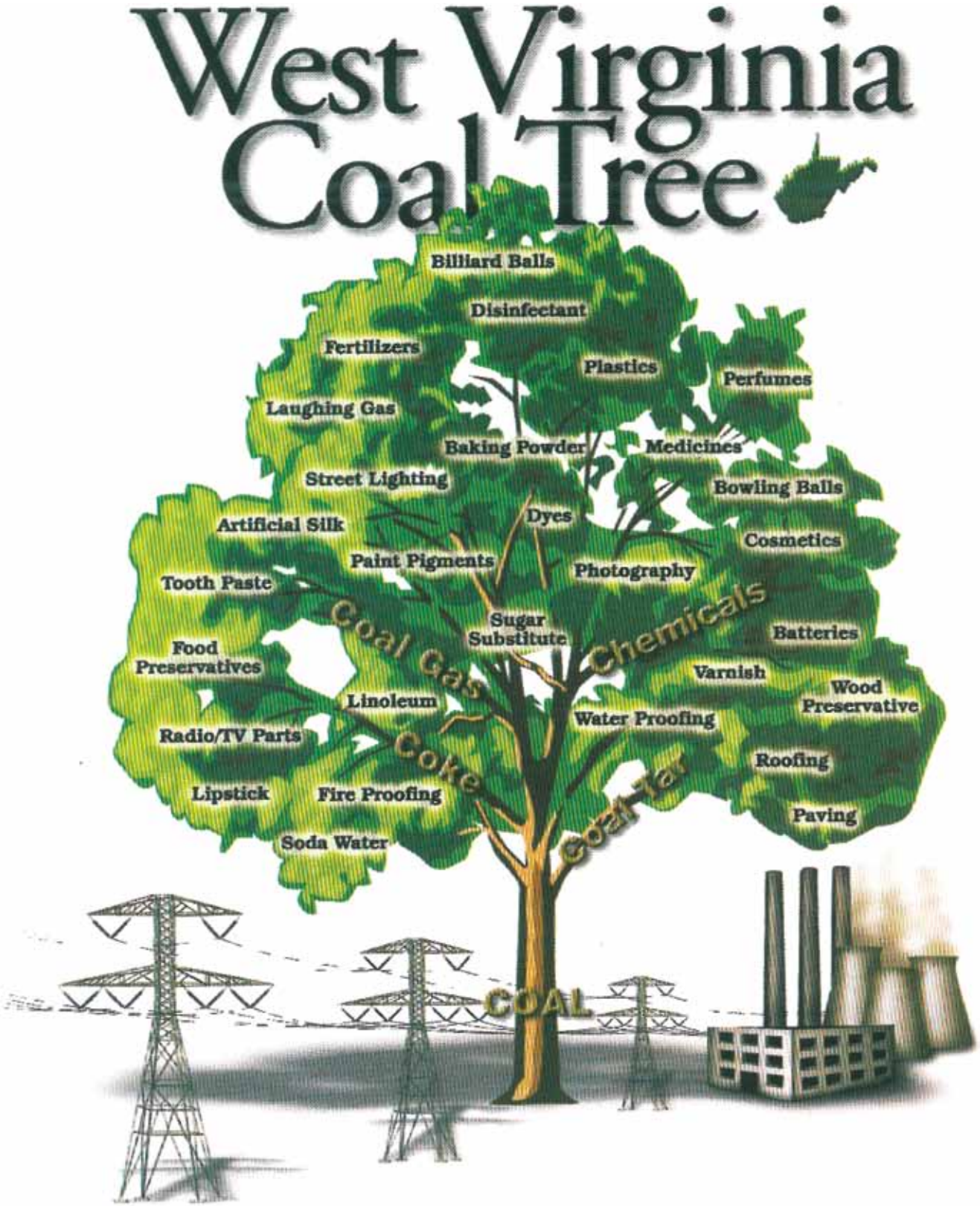
Friends of Coal Ladies Auxiliary Founder Regina Fairchild discusses the Beckley Exhibition Coal Mine with elementary schoolers who are about to tour the facility.

A group of students, teachers and friends head underground at the Beckley Exhibition Coal Mine.



This coal tree illustrates just a small portion of the vital role coal plays in the manufacturing of thousands of products. Coal has been a major part of this country's development and that is still true today. Americas industries rely heavily on the products and so do you. Coal continues to be the largest resource for the production of electricity in the United States. It is more plentiful than oil or natural gas, making up about 95% of the nation's fossil energy reserves. Nationwide, about 40% of the energy used for electric generation comes from coal. In West Virginia, we have the sixth lowest electricity costs in the nation and more than 89% of our electricity is generated from coal. As you can see, it would be difficult to live a day without using products made from coal. Coal is a major part of West Virginia's economy. ♦

Coal Will Remain a Significant Part of West Virginia's Economic Foundation

BY CHRIS HAMILTON
Senior Vice President
West Virginia Coal Association

Coal plays a significant role in our state and across the country, and despite the current challenges we face, West Virginia stands to be a global energy leader.

Coal long has been one of the West Virginia's leading industries. In fact, a year ago, as we were celebrating our state's 150th birthday, it came to me that we have been mining for all of those years and for at least 100 years earlier. For decades, coal mining has provided thousands of good-paying jobs, millions of dollars into local and state economies and provided low-cost household and industrial electricity.

Presently, due to a variety of factors ranging from an abundance of inexpensive shale gas, a declining reserve base and unprecedented over-regulation West Virginia has experienced a loss of coal markets and a decrease in coal production. The president's climate rules will result in additional decline.

The industry is attempting to weather one of the fiercest political assaults that any American industry has ever experienced.

Coal Severance Boosts Budget

It was only a few years ago that the coal industry was responsible for an unprecedented share of state tax revenues and prosperity throughout all facets of state and local governments.

According to a report by the West Virginia University and Marshall University business research facilities, the coal industry provides more than $3.4 billion in wages and a total economic impact of $26 billion for the state each year.

Resulting from significant and sustained increases in coal severance and other business taxes, the state was one of a few states to have balanced budgets during the current recession years from 2008 to today. West Virginia's "Rainy Day" climbed to unprecedented levels because of annual budget surpluses that were driven in large part by coal severance tax revenues.

West Virginia's coal severance tax is levied based on the sale price of coal, so naturally those revenues reflect strong market pricing. But, even with the current downturn, coal severance collections have more than doubled from 2007 to 2012 to an all-time record high of $500 million. Property and income taxes from coal have made similar gains during this period.

In addition to severance tax revenues, coal and electric utilities account for over 60 percent of all business taxes.

Coal severance dollars are distributed to all 55 counties, which in turn fund education and social programs — and that's after the first $22 million goes to infrastructure projects.

Clearly, the positive impact coal has on West Virginia's economy is undeniable.

Despite all the gloom and doom, we believe coal will continue to play an important role in our country's energy mix for decades to come, and coal will remain viable throughout the world. It continues to be the largest source of electric power generation among all fuels — over 90 percent in West Virginia and 40 percent in the United States. Domestic and world electric demand and steel production continues to grow — and these demands cannot be met without coal.

Today, as an industry, our role is critically important to our nation's quest to become energy independent and break that unholy grip of our dependence on foreign oil. Coal holds the key to our country's ability to become energy independent, secure our borders and bolster our nation's defense system.

Renewable fuel sources have a role to play, but they cannot cannot power America 24 hours a day, seven days a week, rain or shine. And they don't produce steel! Those who claim otherwise are simply uninformed, or have some other agenda to promote.

Opportunities Remain Overseas

Without question, coal use will increase around the world. In fact is it already happening.

Gov. Earl Ray Tomblin recently announced that for the fourth consecutive year West Virginia exports reached record levels — with growth led by coal exports.

Coal remained the state's leading export and West Virginia remains the nation's top coal exporting state according to data just released by the West Virginia Department of Commerce.

Last year, West Virginia exported approximately $4.4 billion of coal to nations around the world.

The total value of West Virginia exports, which exceeded $8.4 billion, according to figures released from the U.S. Census Bureau.

Coal Use Grows Worldwide

Sea borne coal tonnage will continue to grow over the foreseeable future, and we have to position ourselves to capitalize on that opportunity by cutting costs, becoming more efficient, influencing public policies affecting coal.

Coal is predicted to surpass oil as the world's energy of choice by 2017 according to the International Energy Agency.

China, India, Africa and other growing regions are using more coal. Why? A big reason is because steel production is up worldwide, and you cannot make steel without coal. This growth is driving increases in metallurgical coal supplies into developing countries. These nations are growing and consuming steel in developing their basic infrastructure. That work requires more power. More steel plus more power means more coal — it's a simple equation.

Other nations see coal the way America used to view this resource, as an abundant, low-cost and reliable fuel. America became a manufacturing superpower thanks to coal, and it can't be a coincidence that our global domination waned when we stopped fostering coal development.

Thankfully, other nations are not making this mistake. West Virginia is the epicenter of the coal industry, so the opportunity is ripe for us not only to satisfy our domestic energy needs but to capitalize on rising worldwide coal demand.

Seizing the Opportunity

The United States will continue to use coal for years. That is a fact borne out by basic base-load power demands. And globally, coal use will continue to grow. The real questions today are where the coal will come from and who will benefit from the mining jobs and production revenues. Will it be West Virginia or somewhere else? There is no valid reason that it shouldn't be West Virginia!

West Virginia's coal industry is well-situated to meet the demands of tomorrow, but not without overcoming major challenges on the horizon. The industry has great capacity, committed management, aggressive business plans, a qualified, experienced workforce and a strong will to succeed.

As a state, we have the potential to become the nation's center for energy and commerce. We have it here if we can compete effectively and sustain our presence in domestic and world markets. We have that opportunity now — if we approach it correctly — with reason, intelligence and common sense.

Challenges Remain

Now, the reality: The coal industry is being attacked on many fronts today by government and special interests. And although the industry has always had its share of challenges, never have they been as serious or threatening as they are today.

Even a cursory glance at the "national energy agenda" reveals an agenda that is out of whack and has led to power plant closings, lost coal production, increased utility rates and fuel switching. These are real threats that have a negative impact on

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all coal mining in our region and occupy a lot of time within other various legislative and public forums. These are political issues requiring political solutions.

Closer to home we have our own challenges in addition to the regulatory assault by federal agencies. Reports of West Virginia's declining reserve base have been well documented. Higher production costs and greater geologic and technical challenges are presented with thinner seams and reserves that are more difficult to access. In simple terms, we have mined the easy stuff. But West Virginia has plenty of coal left, and our industry is working hard to bring it to market safely and efficiently.

Time to Capitalize

To retain its viability in domestic and world markets, West Virginia's coal industry must become more efficient than ever before. The industry is committed to operating in the safest and most efficient manner possible with uncompromising detail to environmental quality.

Coal production may not return to 165 million tons of annual production anytime soon, but it should plateau around the 100- to 120-million-ton level, which, in and of itself, is strong and assures that coal will continue to be a major economic driver in our state.

Yes, the coal industry has its challenges at home and abroad, but West Virginia coal can provide for our families, protect America and power the world. The opportunity is before us, and we must work together and make West Virginia the global energy leader we know it can be. ♦

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and shovel day," she said. "We've had a lot of people who have asked about modern mining today and tour guides do talk about that, but we've never been able to really show people what modern mining consists of with the longwall miner and the machinery."

Two monitors are displayed at the mine's entrance, which is now covered, with three more monitors at the end of the tracks. Linda Henderson, corporate media producer for Joy Global Inc., said each monitor location will display different messages.

"They'll have an introduction video before you go on the tour like you might see at Disney, 'Before you get on the tour... ' that type of thing, safety type information," she said. "And then at the end of the tour there'll be a video more about modern mining compared to what they saw before. You think about how much cars have changed since the 1960s; the machines have changed an awful lot, too, as well as the methods of mining, and so they want to tell the rest of the story."

In addition, a monitor has been placed in the museum within the Company Store, along with a mine simulator.

Renovation work on the Friends of Coal Depot cost more than $70,000 to complete, with labor provided by the Civilian Conservation Corps. The new programming will help visitors understand true professional mining. ♦

The wonderful ladies of the Friends of Coal Ladies Auxiliary at a recent golf outing.

Coal and Steel

BY JASON BOSTIC
Vice President
West Virginia Coal Association

The steel industry is the second largest coal user in the United States. About 80 million tons of coal are used each year to make coke, an essential element in the steelmaking process. For West Virginia's coal industry, metallurgical coal production constitutes about 40 percent of our annual production. West Virginia has some of the best metallurgical coal found anywhere in the world.

But before coal can be used to make steel, it must be converted to a product called "coke."

In the blast furnace, coke serves as a fuel, an oxygen-reducing agent and a means of infusing steel with carbon to strengthen it. About two-thirds of a ton of coal is needed to produce a ton of steel.

The requirements of coals purchased for coke making are much different from those used in other processes such as electricity generation. Only a certain class of coals – bituminous -- possessing very specific properties and composition are suitable for the making of a quality coke for blast furnace use. Bituminous coals used to make coke are classified as "metallurgical." To make coke for the blast furnace, high, medium and low volatile metallurgical coals are blended to obtain the desired chemical composition and coking properties. The appropriate blends of metallurgical coal are very specific to the individual coke and steel facilities where it is used.

Not all types of bituminous coal are adaptable to coke-making and among the types that are, not all yield the type of coke required in the modern blast furnace.

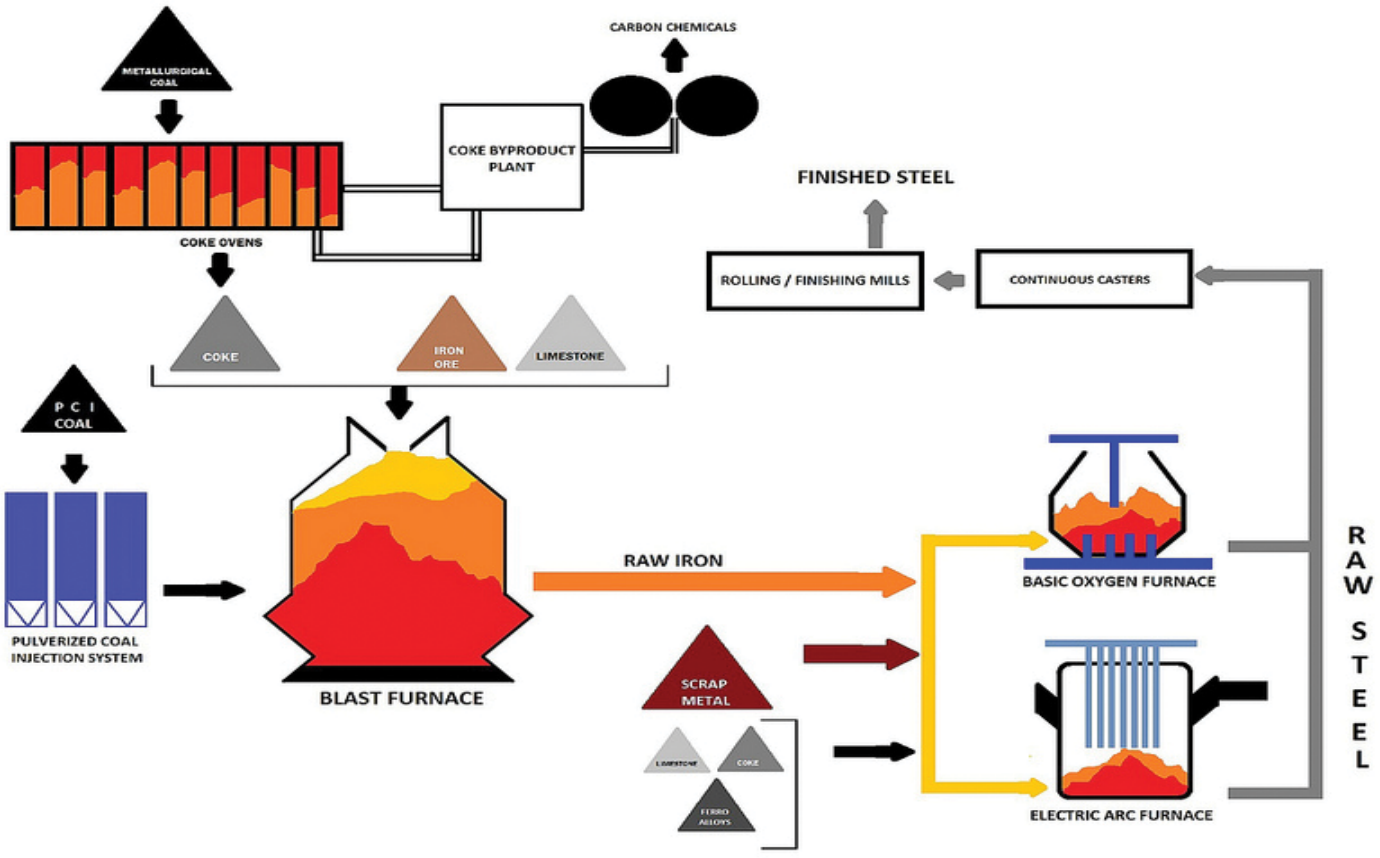
For efficient blast furnace operation, coke should be strong and suitably sized. It should also contain minimum quantities of ash and sulfur.

Metallurgical coal is converted to coke by "cooking" the coal in special facilities called "coke ovens" where the coal is heated to around 1000-1100ºC in the absence of oxygen to drive off the volatile compounds. The physical properties of coking coal cause the coal to soften, liquify and then re-solidify into hard but porous lumps when heated in the absence of air. It requires 12 to 36 hours to make coke in the coke ovens. When the process is completed, the remaining coke is almost pure carbon.

An Overview of the Process of Making Steel

In the blast furnace, coke serves as a fuel and an oxygen-reducing agent. During the iron-making process, a blast furnace is fed with the iron ore, coke and small quantities of material known as "fluxes" (minerals, such as limestone, which are used to collect impurities referred to as steel slag). The combination of raw materials is referred to as a blast furnace "charge" .Air which is heated to about 1200°C is blown into the furnace through nozzles in the lower section. The air causes the coke to burn, producing carbon monoxide which reacts with the iron ore, as well as heat to melt the iron. Coal may be used at this stage to simply heat the blast furnace charge of iron ore, coke and limestone. A system called "pulverized coal injection" or simply "PCI" is used to blow pulverized coal into the blast furnace along with air where its combustion helps heat the blast furnace charge to produce raw iron. The PCI process can use coal of a lesser quality than what is required to make coke and its use reduces the amount of coking coal and coke that is needed in the steelmaking process. Once the charge has melted and reached the correct temperatures, a tap hole at the bottom of the furnace is opened and molten iron and slag (impurities) are drained off. The molten iron from the blast furnace is further refined in special furnaces to produce steel. In the steel furnaces the molten iron is further heated and scrap metal is added to the iron (by recycling scrap metal, less raw iron from the blast furnace is needed to make steel). Coke is added to the steel furnace charge to infuse the raw steel with carbon to strengthen it. Ferroalloys such as magnesium, manganese, molybdenum, which are used to strengthen the steel and give certain physical properties, are added in the steel furnaces according to the quality and type of steel being produced. Fluxing stone is used in the steel furnaces to collect steel slag. Once the iron has been converted in the steel making furnaces, the molten steel is sent to finishing mills where it is cooled, shaped and cut for shipment to the customer.

See "Coal and Steel" Page 51



COAL AND STEEL from Page 50

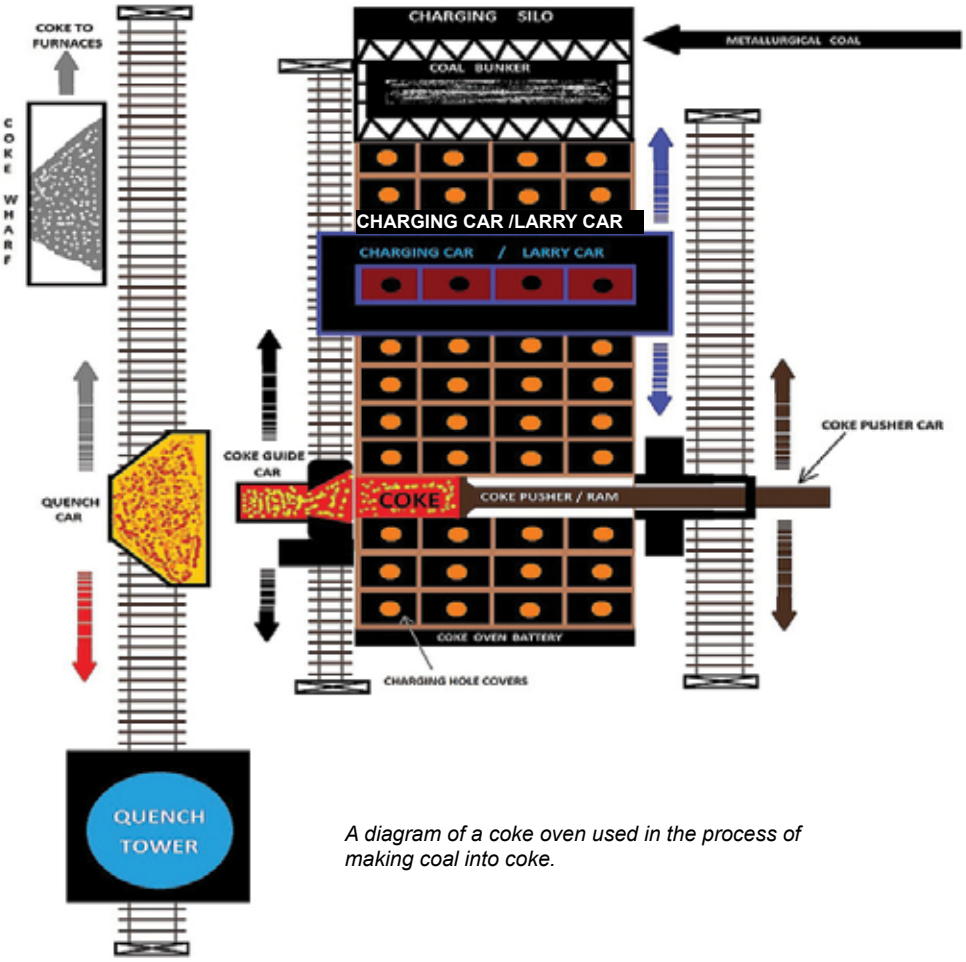
The Coke Process

A coke battery is made up of scores of individual ovens which average about 40 feet in length, up to 20 feet high and about 8 inches in width. Metallurgical coals are pulverized and blended before they are sent to the charging silo at the coke battery. From the silo, the mix is loaded into a larry car (a machine that travels on rails on top of the battery). The larry car pours or discharges 12 to 35 tons of coal mix into each oven through charging holes. Coke oven gas is burned in the flues and the walls between the ovens, where it heats the coal, in the absence of air and for 18 hours or longer, to about 2,000 degrees Fahrenheit. During that time the coal becomes liquid, the volatile matter is driven off and the fluid coal resolidifies into coke – a gray, porous high carbon material.

The volatile gases that evolve from the coal during coking are carried away from each oven through a network of pipes associated with the battery. They are piped to a by-product plant where useful chemicals are recovered and cleaned gas is returned to the battery to be burned in the flues.

After the coal is "coked", doors at both ends of the oven are removed. The "pusher ram" shoves the coke through the coke guide and into a waiting "quench car," which takes the hot coke to the quench tower where it is sprayed with cooling water to extinguish the hot coke and then allowed to drain. The coke is then taken to a "coke wharf" where it dries and cools further. Then it is sized and loaded into railroad cars, trucks or continues on to the blast furnace.

Creating Coke from Coal



A diagram of a coke oven used in the process of making coal into coke.

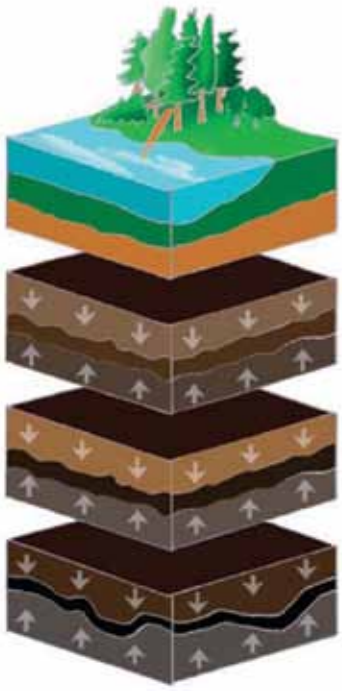
Origins of Coal

Coal is the primary form of energy used in the United States each day, accounting for one-third of the nation's total energy production. It is the source of 42 percent of the electricity generated nation wide. It is by far the most abundant American energy source, accounting for 90 percent of America's fossil energy reserves.

In the Industrial Revolution, coal was the fuel that powered the transformation of the United States from an agricultural society into the greatest economic power in the world. Today, it is the direct and indirect source of hundreds of thousands of jobs and billions of dollars in economic impact. Abundant and affordable, coal-fired electricity is the life force of the American economy. It is "America's best friend."

American coal was used at least 1,000 years ago by Hopi Indians in present day Arizona to bake clay pottery. Europeans discovered the mineral in the Illinois River basin in the 1670s. The first coal mining occurred before the American Revolution, along the Potomac River near the modern border of West Virginia and Maryland. Coal was first discovered in West Virginia in 1742 in Boone County.

Technically, coal is not a mineral. Like petroleum and natural gas, coal is a fossil fuel, formed from once living organic materials. Coal was formed from the remains of trees, ferns and other plant life that thrived in the age of dinosaurs, from 400 million to a billion years ago. Each foot of a coal seam represents the accumulation of about 10,000 years of plant remains. Over time, geological processes compressed and altered the plant remains, gradually increasing the carbon content and transforming the material into coal



Due to varying levels of geologic pressure, coal deposits are of four types: lignite, subbituminous, bituminous and anthracite. Each succeeding type is higher in heating value, as measured by British Thermal Units, or BTU's. Lignite is found primarily in the southwest and subbituminous in the upper west. Anthracite is limited primarily to certain areas of Pennsylvania. Considering quality and quantity, bituminous coal is the nation's most valuable coal resource. Bituminous coal is found primarily in the Appalachian states and in the midwest.

Western coals were formed 50 to 70 million years ago. Eastern and midwestern coals were formed 200 to 250 million years ago. America is in no danger of running out of coal. Recoverable U.S. reserves total over 290 billion tons, nearly three centuries worth at current production levels. ♦

State Mining Operations Honored for Environmental Stewardship

Xinergy, Ltd.'s South Fork Coal Company Clearco Preparation Plant Receives Greenlands Award and Mingo Logan Coal Company's Left Fork Surface Mine Claims National Wild Turkey Federation Award

CHARLESTON – Xinergy Ltd.'s South Fork Coal Company Clearco Preparation Plant in Greenbrier County claimed the state's top award for environmental stewardship – the Greenlands Award – at the West Virginia Coal Association's 42st Annual West Virginia Mining Symposium held January 28th-30th in Charleston.

Also during the Symposium, twelve other operations were recognized for their commitment to the environment as being some of the nation's top operations.

In presenting the Greenlands Award to Xinergy's Clearco Preparation Plant, West Virginia Coal Association Vice President Jason Bostic said, "This award is for their work to maximize protection of the regional ecosystem while considering the welfare, concerns, and issues of residents."

Mingo Logan Coal Company's Left Fork Surface Mine in Boone and Logan Counties received the National Wild Turkey Federation Award for its work in restoring former surface mine land for wildlife habitat. Bostic said Mingo Logan's work goes "above and beyond normal reclamation requirements in an effort to attract wild turkey and a variety of other wildlife species to the reclaimed sites through the development of food sources, water and areas of cover."

"These winners demonstrate the importance our industry places on being environmentally responsible," Bostic said. "Our companies are at the cutting edge of the science of environmental reclamation, recognized the world over for their work."

"We congratulate Xinergy, Mingo Logan and all the other companies who were recognized for their hard work and responsible reclamation," said Bill Raney, president of the West Virginia Coal Association. "Each of these companies goes far beyond what is required to restore former mine lands. We always say our West Virginia coal miners are the real environmentalists. When you look at the work that is actually done there is no doubt about the accuracy of that statement."

The following companies also took home individual awards for environmental restoration at the Symposium:

RECLAMATION AWARDS

Greenlands Award
Xinergy Ltd/South Fork Coal Company
Clearco Preparation Plant – Greenbrier County

National Wild Turkey Federation Award
Mingo Logan / Left Fork Surface Mine –
Boone & Logan Counties

Good Neighbor and Community Outreach Award
Coal-Mac, Inc. / Pine Creek No. 1 Surface Mine –
Mingo County

AML Award
Eastern Arrow / Whitman Barbie Highwall #1 –
Monongalia County

AML Award
Green Mountain Company / Colliers Sportsman Club Highway –
Brooke County

Refuse Reclamation / Northern Region
Arch Coal Co./ Sentinel Complex –
Barbour County

Refuse Reclamation / Southern Region
Greenbrier Smokeless Coal Co. / Buck Lilly Mining Complex –
Greenbrier County

Haulroad Construction
Consol of Kentucky, Inc. / Twin Branch Surface Mine –
Mingo & Logan Counties

Surface Reclamation / Southern Region
Alpha Natural Resources/
Republic Energy No. 2 Surface Mine –
Kanawha, Fayette & Raleigh Counties

Surface Reclamation / Southern Region
Met Resources LLC/
McComas No. 2 Surface Mine –
Mercer County

Surface Reclamation / Southern Region
Coal-Mac, Inc./Phoenix No. 4 Surface Mine –
Mingo & Logan Counties

Valley Fill Construction / Southern Region
Catenary Coal Co./Samples Surface Mine –
Kanawha, Boone & Raleigh Counties

Valley Fill Construction / Southern Region
Alpha Natural Resources/
Republic Energy Empire Surface Mine –
Kanawha County

Water Treatment
Alpha Natural Resources /
Road Fork Development Turkey Creek Refuse Area –
Wyoming County

Impoundment Construction / Southern Region
Alpha Natural Resources/
Kepler Processing Wallace Cabin Branch Impoundment –
Wyoming County

Impoundment Construction / Southern Region
Alpha Natural Resources/Power Mountain Coal Company
Sugarcamp Refuse Impoundment –
Nicholas County

56 Coal Industry Firms Recognized for Commitment to Workplace Safety

Catenary Coal Co. Samples Mine Wins the Barton B. Lay Award and Murray Energy's Harrison County Mine Wins the Eustace Frederick Award

CHARLESTON -- Mine safety is a central focus of West Virginia's coal industry. At Thursday's session of the 42nd Annual West Virginia Mining Symposium in Charleston, 56 mining and service companies were recognized for their commitment to exemplary safety performance in 2014.

Topping the list of award winners was Catenary Coal Company's Sample Mine, which took home the Barton B. Lay Milestones of Safety Award and Murray Energy's Harrison County Mine wins the Eustace Frederick Milestones of Safety Award.

"Our member companies strive each day to provide their employees with the safest possibly workplace," said Chris Hamilton, senior vice president of the West Virginia Coal Association. "They have set a standard with their focus on reducing workplace injuries and getting everyone home at the end of their shifts. We applaud their hard work and dedication to this, our most important responsibility."

The Mountaineer Guardian Awards are presented each year to mining companies that have demonstrated a commitment to safety standards. Inspectors for the West Virginia Office of Mine Health Safety and Training nominate the companies based on numerous criteria. ♦

Mountaineer Guardian Award Winners:

BARTON B. LAY AWARD

Catenary Coal Company, Samples Mine, Kanawha County

EUSTACE FREDERICK AWARD

Murray Energy's Harrison County Mine, Marion County

Independent Contractor

Walker Machinery, Statewide

Underground Mines

Company	Mine	County
Red Bone Mining Company	Crawdad #1	Monongalia
Ten Mile Coal Company, Inc	Ten Mile #4 Mine	Harrison
Tunnel Ridge, LLC	Sentinel Mine	Ohio
XMV, Inc	#35 Mine	McDowell
Spartan Mining Company	Lower War Eagle	McDowell
Spartan Mining Company	Road Fork #51 Mine	Wyoming
Raw Coal Mining Inc.	Sewell R	McDowell
Pinnacle Mining Co. LLC	Pinnacle Mine	Wyoming
Mingo Logan Coal Company	Mountaineer II	Logan
Emerald Processing, LLC	Eagle Mine	Boone
Elk Run Coal Company, Inc.	Round Bottom Powellton	Boone
Aracoma Coal Company, Inc.	Hernshaw Mine	Logan
Elk Run Coal Company, Inc.	Rockhouse Powellton	Boone
Maple Coal Company	Maple Eagle No. 1	Fayette
Selah Corporation	Mine No. 2	Kanawha
ICG Beckley, LLC	Beckley Pocahontas	Raleigh
Kingston Mining	Kingston #1 Mine	Fayette
Speed Mining	American Eagle	Kanawha

Surface Mines

Company	Mine	County
L.P. Minerals, LLC	Humphrey No. 7	Monongalia
L.P. Minerals, LLC	Ralph Six	Marion
Extra Energy, Inc.	Low Gap Surface Mine	McDowell
Chestnut Land Holding, LLC	Dalton Branch Refuse	McDowell
Onyx Energy, LLC	Weyanoke Surface	Mercer
Extra Energy, Inc.	State Line Surface	McDowell
Extra Energy, Inc.	Easter Ridge Surface	McDowell
Independence Coal Company	Twilight MTR/Progress Surface	Boone
Highland Mining Company	Reylas Surface	Logan
Coal River Mining	Mine #6	Boone
Cliffs Logan Co. Coal, LLC	Tony's Fork Surface	Logan
Thunder Hill Coal Co.	Callisto Mine	Boone
Maple Coal Company	Maple Coal #1	Fayette
JMAC Leading, Inc.	Briar Mountain	Kanawha
ARJ Construction Co.	#1 Surface Mine	Greenbrier
South Fork Coal Co., Inc.	Blue Knob Surface	Greenbrier
Remington LLC	Winchester	Kanawha

Preparation Plants

Company	Mine	County
ACI Tygart Valley	Leer Prep Plant	Taylor
Carter Roag Coal Co.	Star Bridge Plant	Randolph
Tunnel Ridge, LLC	Prep Plant	Ohio
Pinnacle Mining Co. LLC	Pinnacle Pre Plant	McDowell
Litwar Processing Co. LLC	Easter Ridge Surface	Wyoming
Emerald Processing LLC	South Hollow Plant	Boone
Coal River Processing, LLC	Fork Creek Prep Plant	Boone
Cliffs Logan Co. Coal, LLC	Saunders Prep Plant	Logan
Maple Coal Company	Maple Prep Plant	Fayette
ICG Beckley, LLC	Beckley Pocahontas Plant	Raleigh
Brooks Run Mining Co.	No. 1 Prep Plant	Webster
Simmons Fork Mining, Inc.	Pax Loadout	Fayette
Catenary Coal Company	Tom's Fork Loadout	Kanawha
Murray Energy	Marshall County Coal Loadout	Marshall County

Quarries

Company	Mine	County
L.P. Minerals, LLC	Humphrey Quarry #1	Monongalia
Boxley Aggregates of WV	Beckley Plant	Raleigh

Contractors

Company	Mine	County
Keyrock	Energy, Inc.	Statewide

Calvin R. Kidd and L. Newton Thomas, Jr.

Inducted into the 2014 Class of West Virginia Coal Hall of Fame

Calvin R. Kidd was born in Montgomery, WV, November 21, 1947 to Frank J. and Mary C. Kidd. Family including second son "Perk" moved to Oak Hill in 1952. Attended public schools in Fayette County, graduating from Collins High School in 1966. Calvin has served on the Board of Directors for Oak Hill High School/ Collins High School Alumni Association for several years and was a member of the first class distinguished alumni in 2008. He then attended both Marshall and Mountain State University and fulfilled his six year military obligation in the National Guard and Army Reserves obtaining rank of SGT.E5.

CALVIN R. KIDD

DIRECTOR, BUSINESS DEVELOPMENT MINING DIVISION QUAKER CHEMICAL CORPORATION, OAK HILL, WV

He began his career in the mining industry with Long-Airdox Company in 1967 where he worked inside sales until 1975. He was then promoted to Field Sales for Southern West Virginia and eleven months later was made District Manager for the entire state of West Virginia. He was then sales manager for the entire U.S. Mining Industry becoming V.P. Sales from 1986 to 1997.

He then Continental Conveyor and Equipment Company and began a ten year career as an Account Specialist and in 2008 was named Manager of Field Sales and Service. Continental was acquired by Joy Mining Machinery in 2009 at which time he was named Strategic Alliance Manager responsible for Cline Resources and remained there until 2012.

He joined Quaker Chemical Corporation immediately following MinExpo of 2012 as Director for Business Development in the Mining Division. For the record, he works for Kevin Dickey, Executive V.P. Global Mining and a 1992 alumnus of WVU Mining Engineering. They actually met during this time and have remained friends. Incidentally, Calvin has worked with the mining engineering students at WVU each year since 1976.

During Calvin's career he has been an active member and served on the Board of Directors of most coal mining institutes. He is a member of the Old Timers Club, King Coal Club, Careers In Coal, Special Advisor to Board of WV Coal Mining Institute, Kanawha Valley Mining Institute – Board of Director – elected to KVMI Coal Hall of Fame in 2011, Tug Valley Mining Institute, WV Coal Association. Was Outstanding Young Man of America in 1985, honored member of Who's Who in 1995, National Nominating Committee for 1998 Outstanding Young Man of America, Society of Mining Engineering (associate member) since 1984, former member/chairman of the Planning and Zoning for the City of Oak Hill.

A Calvin Kidd Fellowship Award was established in 2006 and is awarded annually by WVU Mining Engineering Department, Board of Directors Fellowship of Christian Athletics, William N. Poundstone Lecture 2014-2015 and trustee for the Jones Avenue Church of God where he and his wife Carol are active members.

During Calvin's forty-eight year career he has traveled several hundred thousand miles in the US coal industry with trips to England and several to Australia. In his introduction in September 2014 by the late Dr. Chris Bise at the Poundstone Lecture, Dr. Bise said "When I weigh trying to think of an appropriate introduction for our Poundstone lecture, the phase, "this gentlemen needs no introduction" kept coming to mind. Oftentimes, the statement is followed by the audience turning to the person seated next to them, whispering, "who is he or she?" Well, I feel confident that of all the people I know in the coal industry, this gentleman truly needs no introduction, particularly to the WV Mining Engineering Community! I have known Calvin as far back as the Long-Airdox days, and there are few people who are as committed to the education of the future generations of mining engineers as Calvin."

Calvin married his grade school and high school sweetheart, Carol Rakes on October 19, 1968. They are the parents of daughter Melissa who works at the Fayette County Prosecutors Office and son David who is a certified electrician and the fourth generation Kidd in the coal industry. They are proud grandparents of our grandsons, Tyler 21, Austin 14, Scott Mikel 13 and David Graison 8. Both Calvin and Carol are 1966 alumni of Oak Hill High School Red Devils and are equally proud that each grandson will also become a Red Devil.

Calvin became a Christian in March 2010 and will not hesitate telling you this is the most important decision you will make in your entire life. It is not just a life changing decision but most importantly a lifesaving decision that will carry you to and through eternal life. On the back of his business card it reads; If you meet me and forget me, you've lost nothing. If you meet Jesus Christ and forget him, you've lost everything. He is very proud to tell you the Lord has surely blessed and protected him. Christian parents, a beautiful wife of almost 47 years, a daughter and son, four grandsons, good health, blessing of a job my entire life, the friends made thoughout the coal industry and the opportunity to serve God. All of these are gifts, none deserved but gratefully received, are all temporary.

Christ showed his love by dying for us; we show ours by living for him, you cannot look back at the "what ifs". Whatever obstacles you face or whatever decision you may have to make are much easier to face with God on your side.

L. Newton "Newt" Thomas, Jr. is a native West Virginian, who spent 20 years of his life in Carbon, WV (Cabin Creek) and grew up in a family engaged in the coal industry. He attended Cornell University, graduating in 1951 with a BCE Degree in Civil Engineering, and later awarded an MSCE, and commissioned as an Officer in the United States Air Force, which postponed plans for entering the construction industry. After serving two years in the military, including one year in Korea and reaching the rank of First Lieutenant, he returned to civilian life and explored career opportunities.

L. NEWTON THOMAS, JR.

SENIOR VICE PRESIDENT, ITT CARBON INDUSTRIES, INC. CHARLESTON, WV

Having become acquainted with a number of people in the industry and being impressed with their character and work ethic, he was persuaded to choose coal mining as a career.

Wanting to learn the basics, he elected to begin as an underground miner and member of the union for a year, followed by a succession of management positions and the development of an industrial engineering department. His primary role as a middle manager was to modernize, expand and develop new coal operations, which led to mining ventures in several counties in West Virginia and Kentucky.

During his long career with Carbon Industries, Inc., a privately-owned company, which was acquired by ITT Corporation in 1977, he served in various professional and management positions culminating with the position of Corporate Senior Vice President. He assisted in the development of ITT Carbon Industries, Inc. to become one of the most successful coal companies headquartered in West Virginia. The company was early in the adoption of new technology, being the initial site for the application of a continuous mining machine developed by Bituminous Coal Research, a research entity of the National Coal Association, and application of one of the first longwall systems in the United States, which was manufactured by a German company, Westfalia Lunen. In the late 1970's and early 1980's he was engaged in expanding the company westward acquiring reserves in Illinois, Colorado and Montana.

Thomas served in leadership positions during his professional career including President of Kanawha Valley Mining Institute, Kanawha Coal Operators Association and Southern Coal Producers Association. He served on the Board of Directors of the Bituminous Coal Operators Association and a member of a select committee of UMWA District Presidents and coal industry officials to seek consensus on the resolution of differences regarding union contract issues prior to the next contract renewal.

Following retirement many years ago, he has been actively engaged in numerous statewide, civic and charitable activities. He has chaired

See "Hall of Fame" Page 56

HALL OF FAME from Page 55

BIDCO, now the Charleston Area Alliance, a regional economic and community development organization, the West Virginia Air Pollution Control Commission, the Greater Kanawha Valley Foundation, the Daywood Foundation, the Buckskin Council Boy Scouts of America, the United Way of Central West Virginia, the Charleston Area Medical Center Foundation, Davis and Elkins College Board of Trustees, and was Vice President of the West Virginia Symphony.

He has served on the Board of Directors of the Federal Reserve Fifth District in Richmond, the Mountain Institute, the National Institute for Chemical Studies, the YMCA of Kanawha Valley, the West Virginia Foundation for Independent Colleges, the Martin Luther King Holiday Commission, the West Virginia Air Pollution Control Commission, and the West Virginia University College of Engineering Visiting Committee.

Thomas has served as the initial Chairman of the Board for the construction of the Clay Center for the Arts and Sciences of West Virginia and for the construction of Edgewood Summit, a continuous care retirement community.

He currently serves as a member of the West Virginia Public Port Authority, the Advisory Board of the West Virginia University School of Medicine, Vision Shared (a statewide economic development organization), the National Youth Science Foundation, Mid-Atlantic Technical Research and Innovation Center, the Education Alliance, the Chemical Alliance Zone, Imagine West Virginia (a public policy research group), and the West Virginia Roundtable. He is also a Trustee of five private charitable foundations.

Several honors have been awarded to him over the years including being named to the WVU Business Hall of Fame, recipient of the Distinguished West Virginian, the Lorenelle White Lifetime Achievement Award from the State Journal and the Lou McManus Award from the Education Alliance of West Virginia.

"Newt" and his wife Nancy are the very proud parents of five children and grandparents of fourteen grandchildren. When he finds spare time, he enjoys family time together, outdoor activities, gardening and being with friends. ♦

West Virginia Coal Hall of Fame

CLASS OF 1998
B. R. "Bobby" Brown
C. E. "Jim" Compton*
Lawson W. Hamilton, Jr.*
James H. "Buck" Harless*
Tracy W. Hylton, Sr.
James C. Justice, Sr.*
E. Morgan Massey
Allen S. Pack*
Robert H. Quenon*
Raymond E. Salvati*

CLASS OF 1999
Herbert E. Jones, Jr.
F.B. "Fil" Nutter*
John L. Schroder, Jr.*

CLASS OF 2000
Benjamin C. Greene
John E. "Jack" Katlic
James R. Thomas, II*

CLASS OF 2001
Stonie Barker, Jr.*
James L. Magro*
Joseph L. McQuade*

CLASS OF 2002
James W. "Bill" Anderson*
C. Wes McDonald
Garold R. Spindler*

CLASS OF 2003
Victor N. Green*
Robert H. "Bob" Jeran*
Joseph F. Joy*

CLASS OF 2004
James O. Bunn
Jack Fairchild, Sr.*
Marshall S. Miller

CLASS OF 2005
Josef Ehrengurber
William N. Poundstone
Stephen G. Young*

CLASS OF 2006
Eustace Frederick*
Frank L. Gaddy*
Elmo J. Hurst

CLASS OF 2007
Omar M. Bunn
Richard C. Mullins
Syd S. Peng

CLASS OF 2008
Charles T. Jones
Royce J. Watts

CLASS OF 2009
J. Brett Harvey
Kenneth D. "Don" Nicewonder

CLASS OF 2010
Thomas W. Howard*
James L. Laurita, Sr.

CLASS OF 2011
James Herbert Fletcher*
Johnson Camden McKinley*
Purnal L. "Judge" McWhorter
Robert L. Raines

CLASS OF 2012
Charles T. "Charlie" Holland*
Paul Morton*
Benjamin M. Statler
Gary G. White

CLASS OF 2013
Peter B. Lilly
John B. Long*

CLASS OF 2014
Peter B. Lilly
Andrew B. Jordon
Ronald G. Stovash

CLASS OF 2015
Calvin R. Kidd
L. Newton "Newt" Thomas, Jr.

*Deceased

Glossary of Terms

Air split - The division of a current of air into two or more parts in underground mining.

Anemometer - Instrument for measuring air velocity.

Angle of dip - The angle at which strata or mineral deposits (coal) are inclined to the horizontal place.

Anthracite - The hardest classification of coal, almost pure carbon, used mainly for heating homes. Anthracite is mined primarily in Pennsylvania.

Auger mining - Mining which employs a large auger, which functions much like a carpenter's wood drill. The auger bores into a coal seam and discharges coal out of the spiral onto waiting conveyor belts. After augering is completed, the openings are covered and regraded. This method of mining is usually employed to recover any additional mineral left in areas that cannot be reached economically by other types of surface mining.

Approximate original contour - The surface configuration achieved by backfilling and grading of the mined area so that the reclaimed area, including any terracing or access roads, closely resembles the general surface or configuration of the land prior to mining and blends into and compliments the drainage pattern of the surrounding terrain, with all highwalls and spoil piles eliminated.

Aquifer - A water-bearing bed or porous rock, often sandstone.

Backfill - Operation of refilling an area with the dirt and rock that has been removed, including the grading of the refilled excavation. Also, the material placed in an excavation in the process of backfilling.

Glossary of Terms

Barricading - Enclosing part of an underground mine to prevent inflow of noxious gases from a mine fire or an explosion.

Bed - A stratum of coal or other sedimentary deposit.

Belt conveyor - A looped belt on which coal or other materials can be carried, constructed of flame-resistant material or reinforced rubber.

Bituminous - A medium soft classification of coal, the most common and useful type mined in the U.S. It is used primarily for electric generation and for coke making for the steel industry.

Bottom - Floor or underlying surface of an underground mine.

BTU - British Thermal Unit. A measure of the energy required to raise the temperature of one pound of water one degree Fahrenheit. On average, coal contains 25 million BTU's per ton.

Cannel coal - A non-caking block coal with a fine, even grain, burns with a long, yellow flame and is very easy to ignite.

Canopy - A protective covering of a cab on a mining machine.

Captive mine - A mine in which the production is used wholly or primarily by the mine owner or subsidiary.

Chain pillar - The pillar of coal left to protect the gangway or entry and the parallel airways in an underground mine.

Coalbed Methane - The principal component of natural gas, is frequently encountered in underground coal mining operations, and is kept within safe limits through the use of extensive mine ventilation systems. Coalbed methane has now been recognized as an important energy resource. Increased efforts are underway to expand its extraction from coal seams.

Coal gasification - The conversion of coal into a gaseous fuel.

Coal seam - A bed or stratum of coal. The term is usually applied to a large deposit of coal.

Coal Cleaning - The process of separating coal of various sizes, densities and shapes by allowing them to settle in a fluid. The washing process plays an important role in improving coal quality by removing rock, other impurities and some organic sulfur. Washing takes place at preparation plants, usually located at the mine or shipping site.

Coal Refuse -- Non-coal shale or other rock partings and instrusions within a coal seam that are extracted along with the coal and later separated at the preparation plant.

Coke - A hard, carbon substance produced by heating coal to a very high temperature in the absence of air. Coke is used in the manufacture of iron and steel.

Continuous mining - The most common method of underground coal mining currently in use in the U.S. This process utilizes a continuous mining machine that totally mechanizes the coal extraction process by cutting or removing the coal from the seam using a large steel drum with many huge teeth and loading the cut coal into a shuttle car or a continuous haulage system for removal from the mine.

Contour - An imaginary line that connects all points on a surface having the same elevation.

Conventional mining - This type of mining involves the insertion of explosives into the coal seam, blasting the seam and removal of the coal onto a conveyor or shuttle car by loading machine. Once the most common form of deep mining, conventional mining now accounts for only a small proportion of coal production.

Core Sample - A cylindrical sample generally 1-5 inches in diameter, drilled out of ore to determine the geological and chemical analysis of the overburden of coal.

Cover - The overburden of any deposit.

Crosscut - A passageway between the entry and its parallel air course or air courses for ventilation purposes in an underground mine. Also, a tunnel driven from one seam to another through or across the intervening measures; sometimes called "crosscut tunnel", or "breakthrough."

Cross entry - An entry running at an angle with the main entry.

Deep mine - An underground mine.

Demonstrated reserve base - Coal deposits which are economically feasible to mine with existing technology.

Dip - The inclination of a geologic structure (bed, vein, fault, etc.) from the horizontal; dip is always measured downward at right angles to the strike.

Dragline - A large earthmoving machine which uses a giant bucket suspended from cables to remove the overburden from a coal seam in surface mining.

Drift mine - A coal mine entered directly through a horizontal opening drilled into the side of a hill or mountain. This method of mining is used in hilly or mountainous areas.

Face - The exposed area of a coalbed from which coal is extracted.

Fluidized bed combustion - A process that removes sulfur from coal during combustion. Crushed coal and limestone are burned together in a boiler. Sulfur gases from the coal combine with the limestone to form a solid compound that is recovered with the ash.

Fossil fuel - Any naturally occurring fuel of an organic nature, such as coal, crude oil and natural gas.

Fly ash - The finely divided particles of ash resulting from the combustion of coal.

Fossil fuel - Any naturally occurring fuel of an organic nature, such as coal, crude oil and natural gas.

Haul road - Shot rock or asphalt road constructed or utilized to transport coal by truck from the mine to the tipple, or to rail or barge facilities.

Haulageway - Any underground entry or passageway that is designed for transport of mined material, personnel, or equipment, usually by the installation of track or belt conveyor.

Highwall - Excavated face of exposed overburden and coal in a surface mine. Highwalls must be recontoured following the extraction of coal.

Highwall miner - A highwall mining system consists of a remotely controlled continuous miner which extracts coal and conveys it via augers, belt or chain conveyors to the outside. The cut is typically a rectangular, horizontal cut from a highwall bench, reaching depths of several hundred feet or deeper.

Hopper Cars - Open freight cars with a floor sloping to one or more hinged doors for discharging bulk materials including coal.

Inby - Moving into an underground mine the direction of the working face.

In situ - In the natural or original position. Applied to a rock, soil, or fossil when occurring in the situation in which it was originally formed or deposited.

Intake - The passage through which fresh air is drawn or forced into an underground mine or to a section of a mine.

Lignite - The softest classification of coal, with the highest moisture content. It is mined primarily in the western U.S. and used for some electric generation and for conversion to synthetic gas.

Liquefaction - The process of converting coal into a synthetic liquid fuel, similar in nature to crude oil and/or refined products, such as gasoline.

Longwall mining - Longwall mining employs a steel plow or rotating drum, which is pulled mechanically back-and-forth across a face of coal that is usually several hundred feet long. The loosened coal falls onto a conveyor for removal from the mine. Longwall operations include a hydraulic roof support system that advances as mining proceeds allowing the roof to fall in a controlled manner Longwall mining is an underground mining technique, that is highly productive, and generally improves mine safety. West Virginia is the leading longwall mining producer in the United States.

Man Car/Man Trip - The vehicle that transports miners to working sections of a deep mine.

Metallurgical coal - The types of coal carbonized to make coke for steel manufacture, typically high in BTU value and low in ash content.

Methane - A potentially explosive gas formed naturally from the decay of vegetative matter, similar to that which formed coal.

Mine mouth power plant - A steam-electric power plant built close to a mine. Because of this proximity, the coal is often delivered to the plant by conveyor. The plant delivers its electricity output to distant points through large transmission lines.

Mountaintop mining - Surface mining technique which removes overburden at the top of the mountain in order to recover 100% of the mineral.

Outcrop - Coal which appears near or at the surface.

Overburden - Layers of native rock and soil covering a coal seam. Overburden is removed prior to surface mining and replaced after the coal is taken from the seam. The excess of this material is often placed in valley fills.

Panel - A coal mining block that generally comprises one operating unit in a longwall mining operation.

Pillar - An area of coal left to support the overlying strata in a mine; sometimes left permanently to support surface structures.

Portal - The structure surrounding the immediate entrance to a mine; the mouth of a tunnel.

Post-Mine Land Use - The utilization of

Glossary of Terms

former mine sites for economic or community development, such as the construction of residential areas, shopping centers, industrial parks, recreational facilities, airports and other facilities. This is a common practice thorughout the coalfields, where flat, developable land is at a premium.

Preparation Plant - Usually located on a mine site, although one plant may serve several mines. A preparation plant is a facility for crushing, sizing and washing coal to prepare it for use by a particular customer. The washing process has the added benefit of removing some of the coal's sulfur content.

Productivity - The amount of coal produced by one worker in one workday. Productivity is calculated by dividing the total number of worker/days into total coal production. The productivity of underground and surface mining operations is calculated in the same manner, using the specific man day and production totals.

Reclamation - The restoration of land and environment after the coal is extracted. Reclamation operations are usually underway where the coal has already been taken from a mine, even as mining operations are taking place elsewhere on the site. The process commonly includes recontouring or reshaping the land to its approximate original appearance, restoring topsoil and planting native grasses and ground covers. Reclamation is closely regulated by both state and federal law, and the coal industry's outstanding effort in this area has resulted in millions of acres of restored productive land throughout the country.

Recoverable reserves - The amount of coal that can be recovered from the Demonstrated Reserve Base. There are about 486 billion tons of recoverable reserves in the U.S., enough to last nearly 250 years at current consumption levels.

Recovery - The proportion or percentage of coal or ore mined from the original seam or deposit.

Red dog - a nonvolatile combustion product of the oxidation of coal or coal refuse. Most commonly applied to material resulting from uncontrolled burning of coal or coal refuse piles. It is similar to coal ash.

Reserve - That portion of the identified coal resource that can be economically mined at the time of determination. The reserve is derived by applying a recovery factor to that component of the identified coal resource designated as the reserve base.

Respirable dust - Dust particles 5 microns or less in size.

Return - The air or ventilation that has passed through all the working sections of a split.

Rib - The side of a pillar or the wall of an entry. The solid coal on the side of any underground passage.

Rider - A thin seam of coal overlying a thicker one.

Rock dusting - The process of coating the tunnels in deep mines with powdered limestone, for the purpose of diluting potentially unhealthy or dangerous concentrations of coal dust and to help minimize explosion hazards.

Roof bolting - A method of supporting the ceilings of underground mines by inserting long steel bolts into holes bored into the strata forming the roof.

Room and pillar mining - A method of deep mining in which approximately half of the coal is left in place to support the roof of the active mining area. Large "pillars" are left while "rooms" of coal are extracted.

Run-of mine coal - Coal as it comes directly from the mine, not processed by a preparation plant.

Safety lamp - A lamp with steel wire gauze covering every opening from the inside to the outside so as to prevent the passage of flame should explosive gas be encountered.

Sandstone - A sedimentary rock consisting of quartz sand united by some cementing material, such as iron oxide or calcium carbonate..

Scrubber - (A)Any of several forms of chemical/physical devices that remove sulfur compounds formed during coal combustion. These devices, technically known as flue gas desulfurization systems, combine the sulfur in gaseous emissions with another chemical medium to form inert "sludge which must then be removed for disposal. (B) A unit on a continuous mining machine that removes the dust during underground mining operations.

Seam - A stratum or bed of coal.

Secondary roof - The roof strata immediately above the coalbed, requiring support during the excavating of coal.

Section - A portion of the working area of an underground mine.

Self-contained self-rescuer (SCSR) - A self-contained supply of oxygen used during rescue work from coal mine fires and explosions

Self-rescuer - A small breathing device carried by a coal miner underground, either on his belt or in his pocket, to provide him with immediate protection against carbon monoxide and smoke in case of a mine fire or explosion. It is a small canister with a mouthpiece directly attached to it. The wearer breathes through the mouth, the nose being closed by a clip. The canister contains a layer of fused calcium chloride that absorbs water vapor from the mine air. The device is used for escape purposes only, because it does not sustain life in atmospheres containing deficient oxygen. The length of time a self-rescuer can be used, usually between 30 minutes and one hour, is governed mainly by the humidity in the mine air.

Shaft - A primary vertical or inclined opening through mine strata used for ventilation or drainage and/or for hoisting of personnel or materials; connects the surface with underground workings.

Shaft mine - An underground mine in which the main entry or access is by means of a vertical shaft.

Shale - A rock formed by consolidation of clay, mud, or silt, having a laminated structure and composed of minerals essentially unaltered since deposition.

Shear - A mining machine for longwall faces that uses a rotating action to "shear" the coal from the face as it progresses along the face.

Shift - The number of hours or a specified part of the workday.

Shuttle car - A self-discharging truck, generally with rubber tires or caterpillar-type treads, used for receiving coal from the loading or mining machine and transferring it to an underground loading point, mine railway or belt conveyor system.

Slack - Small coal; the finest-sized soft coal, usually less than one inch in diameter.

Slate - A miner's term for any shale or slate accompanying coal. Geologically, it is a dense, fine-textured metamorphic rock, with excellent parallel cleavage so that it breaks into thin plates or pencil like shapes.

Slip - A fault. A smooth joint or crack where the strata have moved on each other.

Slope mine - A mine with an opening that slopes upward or downward to the seam, with adjoining vertical shafts for air ventilation and emergency use.

Sounding - Knocking on a mine roof to test its stability and strength.

Split - Any division or branch of the ventilating air current in an underground mine.

Steam coal - Coal used primarily for electricity production, generally lower quality value than metallurgical coal.

Stripping ratio - The unit amount of overburden that must be removed to gain access to a similar unit amount of coal or mineral material.

Subbituminous - Classified between bituminous and lignite, with low fixed carbon and high volatility and moisture.

Subsidence - The planned gradual sinking, or sometimes abrupt collapse, of the rock and soil layers into an underground mine. .

Support - The vital function of keeping the mine workings open. As a verb, it refers to this function; as a noun it refers to all the equipment and materials- timber, roof bolts, concrete, steel, etc.- that are used to carry out this function.

Surface mine - A mine in which the coal lies near the surface and can be extracted by removing the covering layer of native rock and soil.

Short Ton - Standard American measurement, equal to 2,000 pounds. Conversely, a long or British ton is 2,240 pounds, and a metric ton is approximately 2,205 pounds.

Timber - A collective term for underground wooden supports.

Tipple - Originally the place where the mine cars were tipped and emptied of their coal, and still used in that same sense, now refers to the surface structures of a mine, including the preparation plant and loading tracks.

Top - An underground mine roof.

Trip - A train of mine cars.

Underground mine - Also known as a deep mine. Usually located several hundred feet below the earth's surface. Most underground mines are located east of the Mississippi River.

Unit train - A single, long train of between 60 and 150 hopper cars, carrying coal between a mine and a destination. A typical unit train can carry at least 10,000 tons of coal in a single shipment.

Working face - Any place in a mine where mineral is extracted.

Working section - The area from the faces to the point where coal is loaded onto belts or rail cars in an underground mine.

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