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Coal's Consequences

Photographs
by
Les Stone

Text
by
James Castonguay, Ph.D.

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Coal generates half of America's electricity. It is the largest source of global power by at least a 2-to-1 margin over oil, gas, nuclear, and hydraulic alternatives. Already responsible for 40% of the world's carbon emissions, this percentage is predicted to increase substantially through at least 2030. The United States has the largest proven recoverable coal reserves in the world, and environmental and industry experts predict that the demand for coal is going to steadily increase for the foreseeable future. Although it is a relatively cheap source of power and in abundant supply, these economic benefits come at a significant cost to the environment and the health of those who work and live in coal-producing regions.

According to the National Mining Association, in 1923 there were 704,793 miners working in 9,331 U.S. mines to produce 565 million tons of coal. In 2008, 1172 million tons of coal were produced by 83,000 miners at 1,458 mines. The decrease in the number of U.S. mines and

the mining labor force is a result of increased mechanization and the shift from underground mining in Appalachia to surface mining in the western United States. The Energy Information Administration (EIA) reports that Wyoming produced 467, 644 tons of coal in 2008 from 20 mines that employ 6,580 surface miners and just 247 underground workers. West Virginia, the largest coal producing state east of the Mississippi River, produced 157,778 tons of coal. It employed 15,043 miners in 186 underground mines and 6,991 at 115 mountaintop removal (MTR) mining sites. (At the MTR sites the surface of the mountain is pulverized and the waste is deposited in nearby valleys.) Although Appalachia still produces 33% of the coal in the U.S. at its 1,278 mines, Wyoming's 20 surface mines now account for 40% of total U.S. coal production, including the ten most productive mines.

The "International Energy Outlook 2009" (IEO2009) predicts global coal consumption will increase by 49% and international coal trade will grow by 40% from 2006 to 2030. According to the report, "Asia [will] account for 90% of the projected increase" as China alone increases coal consumption by 3.5% per year.

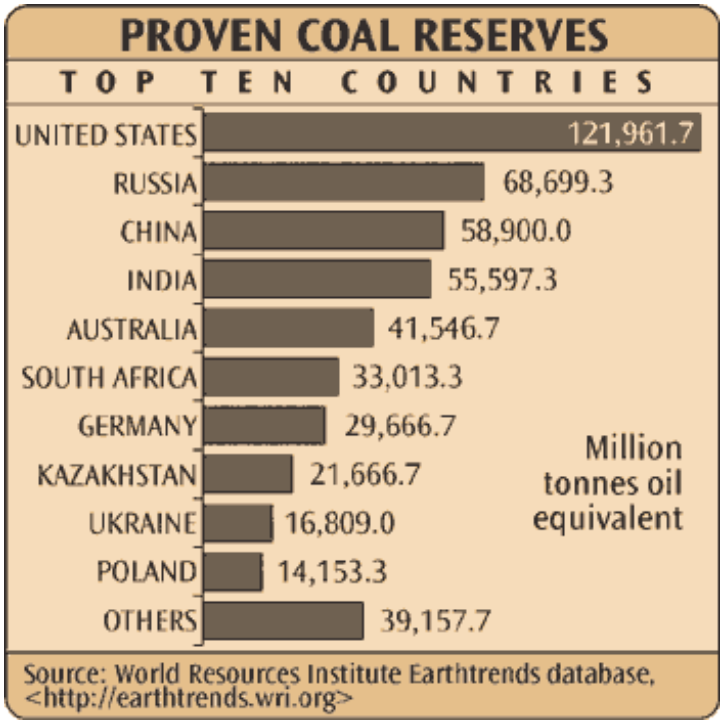
U.S. coal exports increased by over 35% in 2008 due to increased global demand (the first substantive increase since the early 1990s), but the economic recession caused a steep decline in U.S. coal exports according to the EIA's Quarterly Coal Report released in September 2009. In addition, the EIO2009 predicts that with "declining productivity and mining difficulties in Central Appalachia and rising domestic demand for coal, imports are expected to become increasingly competitive for coastal States in the East and Southeast." Consequently, Appalachia might not see a significant economic benefit from the projected increase in global and domestic coal consumption as competition from places like Colombia could increase.

In many cases, mining devastates the land and pollutes the environment.

Millions of tons of coal are shipped each day from U.S. mines to domestic and global markets.

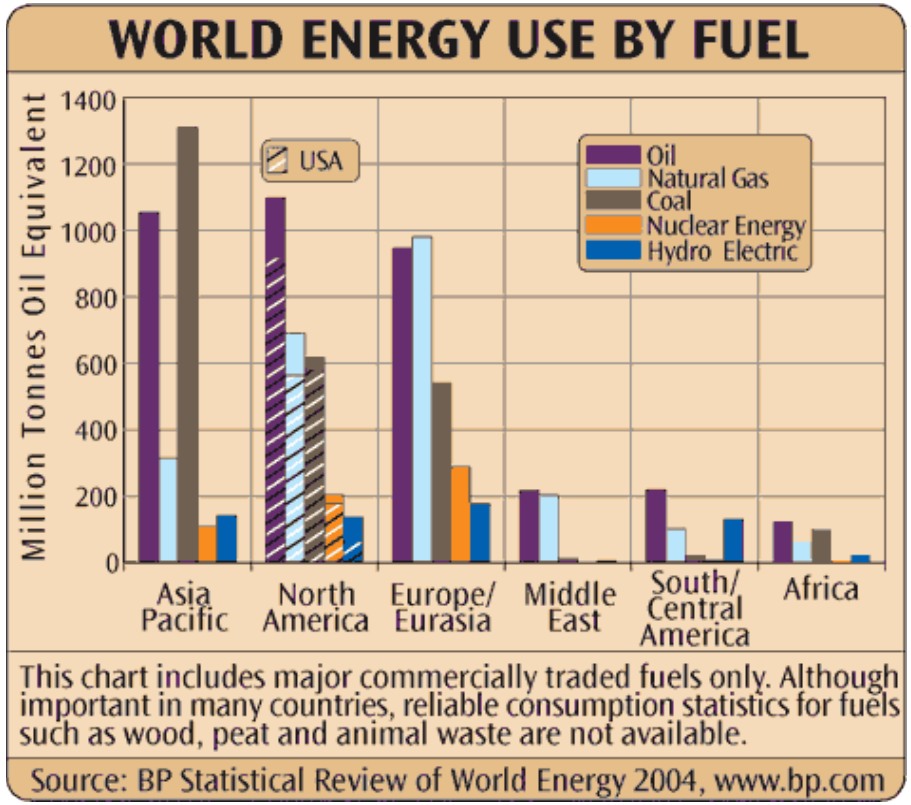
There are approximately 174,000 blue-collar, full-time jobs related to coal in the U.S.: mining (83,000), transportation (31,000), and power plant employment (60,000).

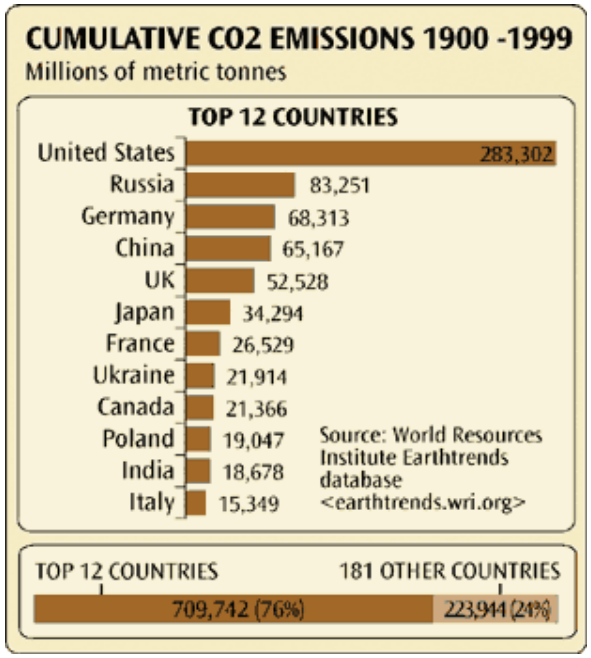
-- Labor Force Statistics from the Current Population Survey, U.S. Department of Labor



The U.S. has the largest share of the world's proven coal reserves at 27% followed by Russia (17%), China (13%), India (10.2%), and Australia (8.6%).

China was the world's biggest consumer of coal in 2007 (used mostly for electricity and steel making) at 2.9 billion tons followed by the U.S. (1.13 billion), India (579 million), Germany (276 million), Russia (261 million), and South Africa (203 million).





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West Virginia Mining

Few places in the United States have their history as inexorably linked to coal as the region of Southern West Virginia. West Virginia became the 35th state during the Civil War when several counties chose to join the Union rather than secede along with Virginia's more aristocratic (and predominantly slave-holding) counties to the east. As West Virginia became increasingly accessible through the aggressive expansion of the railroad monopolies into the region, Wall Street bankers and industrialists gained economic control over the Appalachian coal reserves. In partnership with local capitalists, J.P. Morgan, the Vanderbilts, and the Rockefellers shaped coal policy and created an oppressive work environment. Management politically disempowered the miners by exerting control over almost every aspect of their lives through geographically isolated "company towns" that had company run stores, schools, police, and even specific currency or "scrip."

The history of mining labor before the forming of unions in the 1930s was one of profound exploitation, including low pay, unsafe and unhealthy working conditions, and inadequate housing, clothing, and food for coal miners' families. It wasn't until 1891 that child labor laws were passed forbidding boys under the age of twelve from working in the mines. And despite the creation of safety statutes in the late 19th century, in 1907 alone, 3,242 miners were killed on the job as a result of roof falls, haulage accidents, and explosions.

These atrocious working and living conditions for southern West Virginia miners resulted in one of the most significant chapters in U.S. labor history as miners began to organize. The coal industry's suppression of union activity led to the deadly "mine wars" of the early 20th century. Early attempts to organize miners and strikes (that included the participation and imprisonment of legendary labor activist, Mother Jones) led to armed conflicts between miners and anti-union law enforcement supported by the coal companies private detectives (or "gun thugs"). This culminated in the 1921 Bat-

A great deal of underground mining is done in dark and cramped conditions.

New technology allows mining to be done in narrower seams of coal that were previously ignored. The results generate a larger concentration of lethal dust.

tle of Blair Mountain in which hundreds were killed or injured. Although the coal companies continued to suppress widespread union membership through the 1920s, President Roosevelt's New Deal afforded miners adequate protection to organize and collectively bargain with management.

Under the leadership of United Mine Workers of America (UMWA) President John L. Lewis, miners negotiated for periodic benefit and wage increases, and passed legislation intended to improve mine safety. Increased mechanization led to a drastic decrease in mining jobs in the 1950s and 1960s, and although electric utilities increased their consumption of coal during the 1970s, the broader economic recession drastically decreased the demand from other industries, most notably the need for coked coal to make steel.

Underground work is not only dirty, it can be extremely dangerous.

Dust fills the air as a miner operates rock crushing machinery below the earth's surface.

Exhausted miners leave the work site at day's end (above). Another dust covered miner makes his way out of the mine at the end of his shift (right).

McDowell County, West Virginia

Formerly knows as Miner's City, the City of War in McDowell County is an appropriate name for an entire region that has been embattled by social, environmental, and economic challenges for over a century.

West Virginia has the lowest college-educated population in the country, and its median household income of under $17,000 —like its state gross domestic product (per capita)--both rank second to last. In 2009, McDowell County, once the largest producer of coal in the country, is the poorest county in West Virginia and the eight poorest in the United States.

McDowell County's financial woes were exacerbated in the 1980s when U.S. Steel closed its operations in southern West Virginia. During the 1990s, corruption, financial mismanagement, and risky subprime lending by the First National Bank of Keystone, one of McDowell County's largest financial institutions, led to a major FDIC bailout and an economic crisis that on a smaller scale anticipated the global financial meltdown a decade later.

McDowell County's overall population has decreased from over 98,000 in 1950 to less than 23,000 in 2008, the largest decrease of the State's 55 counties. "78,000 people have left to find employment elsewhere," says City of War Mayor Tom Hatcher. "When our kids graduate from high school they have no other option but to leave because there is no employment here."

Within this bleak economic context, coal mining remains one of few well-paying jobs in the region and consequently many miners accept the health risks as a necessary sacrifice in order to make a living and support their families. "I personally do not see the possibility of any industry in this area other than the coal industry," says Mayor Hatcher. Vernon Bailey was a miner for twenty-one years. "If you want to provide for your family

there wasn't much you can do ... I settled for the coal mines," he says. Vernon Bailey now has black lung disease. Although coal continues to be important to the culture, economy, and politics of West Virginia, his illness is just one example of the profoundly negative effects the mining industry has on the health of West Virginians and the environment.

Recent studies conducted by West Virginia University researcher Dr. Michael Hendryx found that after factoring out the variables of poverty, smoking, education, sex, race, and health insurance, "age-adjusted mortality rates remain significantly elevated in areas where coal mining is heaviest." Hendryx also found significant increases in chronic heart, lung and kidney disease, as well as lung cancer caused by exposure to coal mining by products in southern West Virginia. Health care and wellness in the region are thus inextricably connected to coal as a source of chronic illness not only for miners, but their families and other residents living in coal mining communities.

As McDowell County resident Dennis Robertson recalls, "When I was a kid, near the coal processing plant where my father worked, we'd see a dark black cloud coming out of the holler, but it pales next to the massive exposure that coal miners had." Robertson now works to improve the health and wellness of his community as an Outreach and Benefits Counselor at the Tug River Health Association Clinic in Gary.

The Tug River staff faces challenges that are all too common to rural health care in the United States. According to U.S. census reports, the number of uninsured in West Virginia rose to 271,000 in 2008 from 226,000 in 2001. The percentage of 19 – 64 year olds without insurance increased from 18.1% to 22.2% from 2001 to 2008 and over 21% of working West Virginians are currently without health insurance. Patients often wait until there are very ill or have several health problems before seeking care, and others remain unaware of the support services that are available to them. To combat these challenges, Tug River emphasizes outreach, education, and prevention in addition to diagnosis and treatment.

Four year old Mckenzie Fatony gets a check-up.

Living in close proximity to a mine has repercussions that are felt by the entire community.

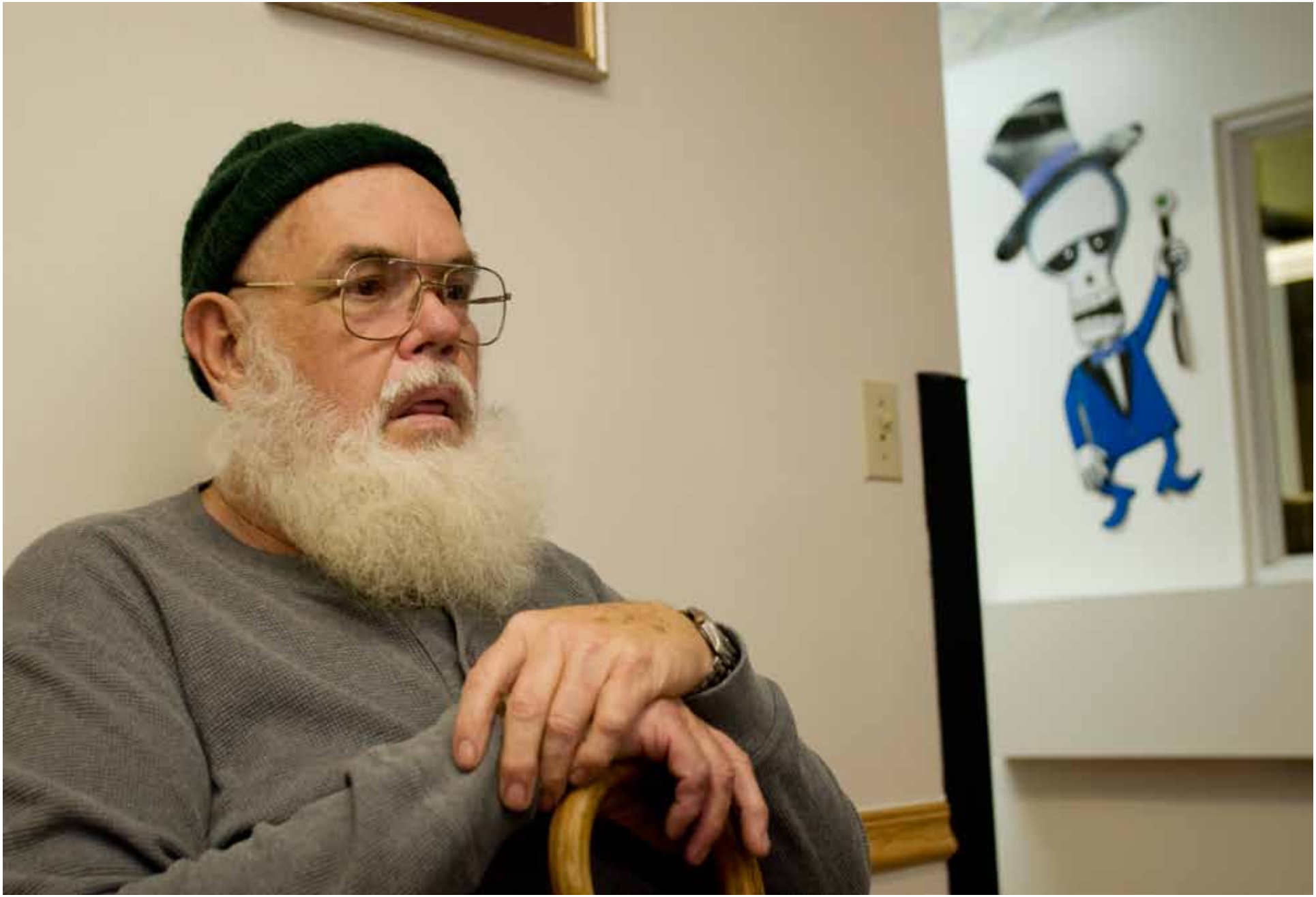
An old coal chute sits idle.

Brenda Basset, a hospice care nurse, visits with Lottie Messinger to assess her condition. Ms. Messinger has heart disease.

Religion plays a strong role within the Appalachian community.

Coal trains continually run through McDowell County.

Testing for Black Lung



Harold Lane, a coal miner for two decades, sits in the waiting room of the Tug River Clinic. He is about to undergo testing for black lung disease.

Tug River participates in the federal and state Black Lung Clinic Program, which provides screening and diagnostic services for miners with respiratory illnesses. Miners who meet the criteria for being "totally disabled" under the Black Lung Benefits Act (BLBA) are eligible for medical benefits and other compensation. One of the more disturbing health trends in West Virginia has been the recent increase in the percentage of underground miners suffering from serious respiratory diseases, including those who have been on the job less than twenty years. After the passing of the Federal Coal Mine Safety & Health Act, there was a period of steady decline in confirmed black lung cases (coal workers' pneumoconiosis) in the 1970s and 1980s. Since the 1990s, however, researchers from the National Institute of Occupational Safety and Health (NIOSH) have documented an alarming increase in the proportion of miners with black lung in the Appalachia region.

The most likely explanation for the resurgence of the disease is the exposure to more lethal coal dust as a result of new mining technologies, methods, and conditions that have increased the intensity of the dust while also changing its composition to include more harmful particles like silica.

Dr. Forehand examines Harold Lane. Mr. Lane will undergo a battery of tests in order to determine his health status.

As Dr. John Forehand, a Department of Labor examining physician for the federal black lung program explains, "Guys who work right at the face ... aren't just cutting coal, they're cutting hard rock above and below the seam ... and that's silica [which] induces a vigorous inflammatory response in the lungs, which leads to scarring, which interferes with getting oxygen into the body."

For Anita Wolfe, a Public Health Analyst with NIOSH who also coordinates Coal Workers' Health Surveillance Program (CWHSP) in Morgantown, black lung disease hits very close to home. "As a third generation coal miner's daughter, sometimes I get accused of making [the job] too personal," says Wolfe, whose father died from black lung disease in 1999. "I want to do anything I can to help our nation's coal miners."

Wolfe oversees the CWHSP's successful Mobile Occupational

Safety and Health Unit, which, since its introduction in 2006, has increased miner participation in the early detection programs. It also facilitates preventive measures to reduce lung disease among coal miners.

In response to the increase in black lung disease documented by Wolfe and her NIOSH colleagues, attorney Steve Sanders, Director of the Appalachian Citizens' Law Center, has petitioned the Mine Safety and Health Administration (MSHA) to reduce the allowable level of coal mine dust by half. "There is a misconception that black lung is a thing of the past," said Sanders in a press release. "The disease is preventable--it results from breathing too much dust."

Patients are examined for black lung disease.

Looking for black lung.

Dr. John Forehand (left) and Tug River Clinic Outreach Coordinator, Dennis Robertson (right), work with Odell Mahone during a test for black lung.

The Miner's Scourge - Black Lung Disease

Brian McKinney, suffering from black lung looks at his recent X-ray that shows his lungs filled with coal dust. He's 63 years old and worked in the mines for 37 years.

John Thomas Sr. lies in bed in the family home close to death. He entered the final stage of Black Lung disease. John is comforted by his wife, Alice Thomas. He died shortly after this photo was taken.

Ollie Bishop moves his respirator from one room to another.

Two Men Living with a Deadly Disease

Ollie Bishop and Vernon Bailey are two former miners who were diagnosed with black lung at the Tug River Clinic. As former MSHA employee Dr. Celeste Monforton observes, "We continue to see pictures of the stripped mountaintops and sometimes underground miners on the job, but we don't see images of them at home wearing respirators and struggling to walk from the kitchen to the living room." Indeed, Bishop's and Bailey's stories serve as stark reminders of the human toll that coal mining takes on miners and their loved ones. Their experience also illustrates the many obstacles miners face when they attempt to receive benefits for their disability from this occupational disease.

Mr. Bishop worked in the mines for over twenty years and feels a sense of betrayal after his respiratory illness made it impossible for him to work. "You're makin' a livin' between two rocks. I took pride in coal mining. ... I crave to mine. It's in your blood ... But safety comes first. If safety comes first, production will take care of itself ... A lot of men I worked with done smothered out and gone on and I'm comin' right up behind 'em. ... You're just turned out to pasture," he says. Mr. Bailey feels

Vernon Bailey needs to use his oxygen twenty-four hours a day.

For many years, the mines were Ollie's connection to his livelihood. Today that connection is to a solitary machine that enables him to breathe.

a similar sense of abandonment by an industry to which he devoted twenty-one years of his life. "It was an honest day's work and an honest day's pay, but when you get where you ain't workin' to get a ton of coal for the man, you're not worth much to him anymore."

Like Bailey, who must wear an oxygen mask 24 hours a day and rarely leaves his home, Bishop suffers with each breath. "I fight this

Vernon cannot travel alone. He becomes exhausted after even the smallest amount of activity.

day and night," he says. "You can't get no relief from it. You're dying by degrees. Little by little. Many times you need medical help that you can't get. Little by little, you're leavin'."

Bailey and Bishop were part of the small percentage of miners whose claims had initially been approved to receive compensation under the federal Black Lung Benefits Program. Recently both men received a letter rescinding their compensation and benefits as a result of the appeal process through which the coal operators and the insurance companies wage a relentless campaign to deny and reverse the claims. Bailey and Bishop are now caught in a medical and legal Catch 22 that can go on indefinitely, sometimes approaching twenty years and rarely being resolved in less than seven (and overwhelmingly in the coal company's favor). Bishop says people are consistently asking him, "Why can't this man get his black lung benefits?" He can't breathe. The man's dyin,'" they say according to Bishop. While it is common for miners to say "everyone who works in the mines long enough gets black lung," according to the Department of Labor's Division of Coal Mine Workers' Compensation (DCMWC), in 2008, out of 4,416 claims only 560 were approved for benefits at the initial level.

As Sparkle Bonds from the Virginia chapter of the National Black Lung Association recalls, by the mid 1980s it had become so difficult for miners to receive disability benefits that many were ready to give up. "People were so frustrated," says Bonds, "that they wanted to do away with the entire program. The only people who were benefiting were the attorneys for the coal companies and insurance companies, along with the doctors who were doing all these examinations. It wasn't the coal miners and their families."

Although the approval rates for claims at the initial decision level have increased from under three percent in 1985 to approximately thirteen percent in 2008 as a result of 2001 reforms, Bonds points out that the majority of those approved claims are overturned at the next step in the process when an Administrative Law Judge rules on the coal company's appeal. According to Sandra Fogel, an attorney who has represented miners for over twenty years, "It's important for Americans to understand that miners are the only people in the country who die or become totally disabled from this disease, and right now it's too hard for them to get their compensation."

The vast majority of black lung disability benefits claims are denied because the legal procedure and federal guidelines are prejudiced against the miners and their families seeking compensation. The overall criteria for receiving benefits are extremely high and stringent. In addition, the application process, the diagnostic procedures, and the appellate system are stacked heavily against the miners and their advocates. As Dr. Paul Little from the Tug River Clinic elaborates:

"We do various tests [at the Tug River Clinic] that determine that [the miner] has black lung. Unfortunately, he then has to go to Charleston ... where the decisions are made in terms of him getting any kind of disability or benefits. ... They repeat some of the tests ... and then it seems they do not have the opinion we have. ... So then the miner gets denied any type of benefit or any type of claim.

Ollie Bishop, Granville Mullins, and Riley Roberts attend a service at the High Knob Church. All need to use oxygen in order to get through the day.

Then he has to live with respiratory problems and doesn't get any kind of support. ... Unfortunately it's become a kind of political problem. Then the lawyers get involved and they ... fight to determine what actually is the case. ... But if a guy has been in the mines for thirty years, he's going to have coal dust in his lungs. There's no denying that. I'm hoping that something politically is going to be done to help some of these people."

It is nearly impossible for miners to retain legal assistance due to the relative lack of remuneration for lawyers and the length of the appeal process, which can drag on for decades. Tug River benefits counselor Dennis Robertson expresses his frustration with what he calls the "adversarial" approach taken by coal companies toward miners' claims. Within this legal battlefield, "one side has the most modern weaponry—the tank, the gun, the ammunition--and the other side has very little," he notes.

Many miners find the entire process of applying for black lung benefits intimidating and demoralizing. There is "too much paperwork" associated with the process, says Dr. Forehand, especially for miners who did not finish high school. Consequently, Robertson says they often assist applicants through the complex process by "filling out the forms for them line by line." Robertson's dedication is indicative of the profound and personal commitment the Tug River staff has toward their patients and the community. "It's a labor of love," he explains. "My dad filed for his black lung benefits in the mid-1980s and initially got them, but then they were taken back. He went back and got retested but died three months later. I can't do anything to help my dad, but I can still help as many coal miners as I can."

Steve Sanders, an attorney who has successfully represented miners and their families with their black lung benefits claims, is hopeful that by tackling the problem at the level of regulation that they can protect current and future underground miners. Dr. Celeste Monforton, who left MSHA to become a research professor at Washington University's School of Public Health, endorsed the ACLC petition to lower dust levels, and is optimistic that "this new administration [can] fix this problem once and for all. Our goal [should be] to phase out the federal black lung program by eradicating this 100% preventable occupational disease."

In addition to Sanders and Monforton's important attempt to lower allowable dust levels, we must also ensure that currently disabled ex-miners like Vernon Bailey and Ollie Bishop receive the health care assistance they need and the financial compensation they deserve after decades of mining the coal to support the lifestyles of millions of other Americans living out-of-state. The Black Lung Benefits Act and its administration needs to be reformed to better accomplish its stated goals and purpose.

Carole Bass, who reported on the rise of black lung for the *New Haven Independent,* unfortunately finds there is "a fair amount of interest in environmental health, but nobody cares about workplace health."

"People are concerned about what's coming out of the factory smokestack, what's in their drinking water, what chemicals are in the products they buy," Bass contends. "But when it comes to the workers inside the factory, the workers who are exposed to the chemicals while

Ollie rarely leaves his home. He spends his days in silence, fearful about his constant need for oxygen.

During his lifetime, Vernon moved tons of stone and coal. Today, he can barely move himself from one side of the bed to the other.

they're making those products, there isn't the same level of interest."

Outside of the public eye in rural communities like War, West Virginia, coal miners are still sacrificing the quality of their lives to supply Americans with electricity. While it is certainly understandable that the communities and families most affected by coal mining would become involved with assisting miners, those of us who consume coal for our electricity should not turn a blind eye toward these miners. Even a northeastern state like Massachusetts, which claims to be a leader in

the use of green energy technologies, still relies on its twelve coal- burning plants to generate a quarter of its electricity.

As 2009 draws to a close, the many dedicated people who work tirelessly on behalf of miners and their families have reason to be optimistic that positive changes and reform are imminent. Under its new leadership, MSHA is considering ways to improve the monitoring of dust levels, including the use of Personal Dust Monitors (PDMs) to more accurately measure individual miners' level of exposure. Although the United Mine Workers and other groups have long argued in favor of PDMs, the political will and the technological solutions may finally be in place to implement these devices.

In addition, an October 2009 Government Accountability Office report confirmed what miners and their advocates have been saying for years about the obstacles and difficulties they face when trying to secure benefits. The report makes several recommendations to improve the Black Lung Benefits Program, including enhancing incentives for claimants' attorneys, improving medical testing practices, and streamlining the way doctors' opinions are documented. The report also calls for decreasing the number of cases remanded, improving scheduling for hearings, and overhauling data management and tracking systems.

These promising developments suggest there is good reason to be optimistic that improvements will be made to the benefits program and regulatory process.

In a press release, West Virginia Senator Jay Rockefeller, who requested the report, "urge[d] the Department of Labor to act quickly to consider and implement needed reforms," and stated he "plan[s] to introduce legislation that makes the structural changes necessary to be sure the program will work for our miners and our families."

As U.S. energy companies are applying for billions in federal funding to defray the costs of modifying their existing plants for carbon-capture and sequestration (CCS), the global economic recession has exacerbated the fiscal and political barriers to implementing these greener technologies in the short and long term. Regardless of whether or not power plants implement cleaner technology, "dirty coal" is going to be supplying electricity for generations of Americans. And if and when these CCS power plants do go online, the demand for coal will only become greater. "Coal is what turns our lights on at night," Ollie Bishop reminds us. "That's our source of living. We got to have coal, but we need to take care of the coal miner."

ADDITIONAL RESOURCES

Energy Information Administration Coal Resources:
http://www.eia.doe.gov/fuelcoal.html

Department of Labor Black Lung Benefits Information:
http://www.dol.gov/compliance/laws/comp-blba.htm

Faces of Black Lung (National Institute for Occupational Safety and Health video)
http://www.cdc.gov/niosh/docs/video/2008-131

Corbin, David Alan. Life, Work, and Rebellion on the Coal Fields: The Southern West Virginia Miners, 1880-1922. University of Illinois Press, 1990.

Derickson, Alan. Black Lung: Anatomy of a Public Health Disaster. Cornell University Press, 1998.

Global Education Project:
http://www.theblobaleducationproject.org.

Mine Safety & Health Administration
"End Black Lung" Initiative:
http://www.msha.gov/S&HINFO/BlackLung/Homepage2009.asp

United States Government Accountability Office Report on the Black Lung Benefits Program:
http://www.gao.gov/new.items/d107.pdf

This project is a production of

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Vision Project is an organization dedicated to the development of documentary photography, multimedia, investigative journalism and education.

The goal of Vision Project is to produce documentary material and educational programs that encourage understanding and awareness about a broad variety of social issues. This information and programming are made available to the general public with a particular focus on members of the younger generation.

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For further information contact:

Richard Falco
Vision Project Inc.
P. O. box 230
North Salem, NY 10560
USA
www.visionproject.org
rfalco@visionproject.org
(914) 277-8850