

Joyce Brown  
Chapel Hill Town Council Public Hearing  
UNC Cogeneration Facility  
September 19, 2005

*Joyce Clerk copy*  
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It is of great concern that the University continues to use coal to supply heating, cooling and some electricity to its main campus. This is simply environmentally unsound. “‘Clean coal technology’ as touted by the Bush Administration is an oxymoron to most conservationists.” The University cited cost as one of the main factors in its original decision to use coal, yet the true environmental, human and economic, including taxpayer costs are never factored in. An article from the Appalachian Voice gives an idea of the magnitude of those costs.

The University has said that it has no plans to expand beyond the present power plant boundaries, but it doesn't have to if it is allowed to continue expanding its capacity on site.

What I ask of you as a power plant neighbor, a neighborhood preservationist, and a conservationist is that you include in the special use permit modification a stipulation indicating that this is the last onsite expansion in any way at the Cameron Avenue power plant that will be allowed by the Town and echoing the Horace Williams Committee report that coal is an unacceptable source of energy for Chapel Hill.

The Horace Williams Citizens' Committee report stipulated no coal or nuclear for a reason. The Council could begin to embrace that report tonight by stipulating no future expansion of the use of coal.

# The True Costs of Coal: New Study Adds Them Up

by Voicestaff

As the Bush administration touts their Energy Plan and pushes for increases in domestic energy production, conservationists across the Southern Appalachians are today calling their emphasis on coal into question for both economic and environmental reasons.

At the heart of the Bush Energy Plan is "clean coal technology," an oxymoron to most conservationists but a linchpin in Bush's plan to reduce our country's reliance on foreign oil. At \$30 per ton, electricity produced from coal is certainly a bargain at face value. But is that the true cost of burning coal?

That's what two respected economists set out to find when they began a study of coal's ledger sheet. Todd Cherry and Jason Shogren, both university-based environmental economists, found that the true cost of coal is about \$150 per ton when all the social (human and environmental) costs are included.

Cherry and Shogren reached this conclusion based on studies of the impacts of the full coal cycle. The two economists say that if electric consumers look beyond the convenience of flipping on their light switches, they'll find that "coal can also be dangerous and dirty."

What of the impacts to humans and the environment from coal mining? What of the impacts of air pollutants from coal burning? Are these, in some cases severe, impacts taken into account in our monthly electric bill? In a word, no. Cherry and Shogren say consumers are paying only about 20% of the fuel cost for coal-generated electricity.)

## Coal Mining

The extraction of coal from the Appalachian mountains of West Virginia, Kentucky, Pennsylvania, Virginia and Tennessee is a time-honored tradition in the region. Indeed, coal literally fueled the industrial revolution of the 19th century when it became evident that hydropower was not sufficient to meet the burgeoning industrial demands of our nation. Cities such as Pittsburgh grew up in the coal fields because of the energy needs of the steel industry.

Small coal field communities sprang up in the late 19th and early 20th century throughout what we call "Appalachia." Indeed, the term Appalachia and the practice of coal mining became synonymous.

Early coal mining was almost exclusively done in deep shafts that led to thick (5-10 feet) coal seams, which were blasted and picked out and loaded on rail cars to be drawn out of the mine by mules. Miners worked in dark, dusty conditions always at the risk of fatal roof falls and methane gas explosions. Beyond the risk of sudden death or serious injury, miners also faced the prospect of black-lung disease if they spent years in the profession.

Deep mining has indeed come along way. Today, miners use a technique called long-wall mining, which involves

a long (up to a mile) face of an underground coal seam which is dislodged by a saw that runs on tracks along the face. This method is much more efficient at removing thick coal seams than the old blast-and-pick method, and accounts for half to two-thirds of current Appalachian coal production. While some dangers are now less, current underground mining still results in fatal roof fall and explosion accidents.

Surface mining, or strip mining, has become more and more popular in recent decades, especially in removing thinner seams of coal (as little as a foot thick). The most recent innovation in strip mining is known as mountaintop removal. It peels back a mountain, layer by layer, by alternately blasting the thick layers of rock away from the coal seams and then scraping the coal seam out and hauling it away in huge dump trucks. Much of the "overburden" rock (the non-coal layers) is pushed off into adjacent valleys. As much as 500- to 1,000-vertical feet of a mountain may be removed in the process and valleys are filled in to depths of as much as 500 feet by the rubble.

Community effects of both underground and strip mining are myriad

and devastating. What were once bustling communities in the coal fields are now ghost towns. This is partly because impacts that include blasting and coal hauling make community life all but impossible and partly because employment in the coal fields has shrunk nearly 90% over the last four decades.

"Between blasting (surface mining)

and long wall mining impacts, lives are disrupted and emotional well-being is destroyed," says Beverly Braverman, an activist with the Mountain Watershed Coalition near Pittsburgh, PA. "Things like cracks in foundations, loss of water in wells, having to move out of your house and still trying to get your kids on the bus every morning at the abandoned home site."

"There's a war being waged against the innocent men, women and children of Appalachia," says Julia Bonds, of Rock Creek, West Virginia, a hotbed of mountaintop removal. "It's a war directed by the greed of the coal industry and encouraged and accelerated by the Bush administration."

In southern West Virginia, until recently the lead coal-producing state in the country (now second to Wyoming), coal mine employment in the 1950's was about 120,000. Today, with more machine-intensive underground technologies and with modern mountaintop removal methods which rely on huge, \$30 million machines called draglines, coal mining jobs are down to about 13,000, despite the fact that tons of coal produced has actually gone up. Thus it's the rare coal field community that doesn't have many if not most of the previous businesses torn down, boarded-up, or teetering on bankruptcy.

Other major human impacts include highway accidents caused by overweight, out-of-control coal trucks. Truckers are paid by the ton of coal hauled to the rail head, and frequently are hauling twice the legal limit. "Coal truck drivers say that 'reject' coal (thin seam coal from mountaintop removal mines) is so contaminated with rock that they can't haul it within the legal weight limits," says Bonds.

Another major impact is that of increased flooding, which is at least partly if not mostly caused by various coal mining processes. When one coal sludge (the by-product of coal washing) dam broke in the 1970's, 125 people in Logan County, West Virginia died. Today at least one sludge dam sits just above an elementary school near Sundial, West Virginia.

## Losing Productivity

Many biologists believe coal mining represents the most severe destruction of natural ecosystems at this scale in North America. Underground mining causes acidification of streams as well as building destroying subsidence on the human scale. Whole streams are rendered "dead" by acid mine drainage.

Mountaintop removal brings an abrupt end to the productive capacity of vast acreages of especially West Virginia, Kentucky, and Virginia. Hundreds of square miles of highly productive forests are rendered useless by the mining; as many as 1 million acres in the several states may have already been wiped out. Add to this the thousands of miles of streams that are buried alive under overburden across the region, and you get some impression of the scale of the environmental and economic cost of



Buckeye leaves damaged by ozone

**"There's a war being waged against the innocent men, women and children of Appalachia," says Julia Bonds, of Rock Creek, West Virginia**

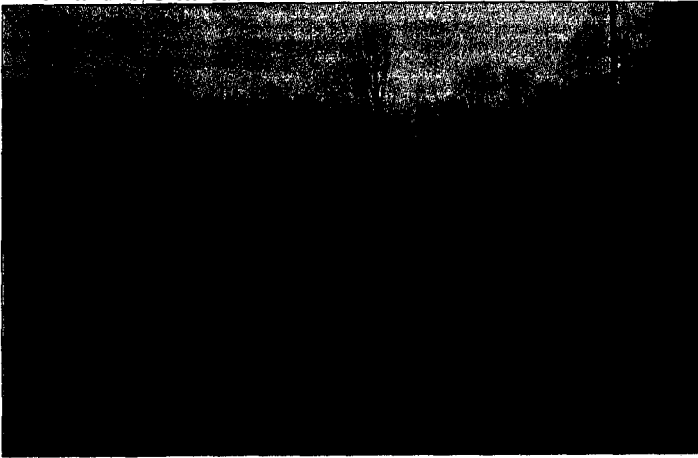


Photo: Matt Wesson

Terraces of sterile rock where deep soils, forest, and wildlife once dwelled

# Should Be \$150 Per Ton, Not \$30 As Purported

## The Land Is Cleared...



mountaintop removal.

What is the cost of these sizeable impacts of coal mining? How do we put the cost of a life lost or a stream destroyed into dollars? How could we value the destruction of a community economy, or the productive capacity of forest lands forever lost? Some of these are not that hard to compute (lost forest growth per year per acre) while others (lost function of a stream) are harder to calculate in dollar figures.

According to Cherry and Shogren's study, a human life lost is usually valued at about \$6 million. Adding up deaths from coal mining, overweight coal truck accidents, and life lost from increased floods and sludge dam failures, they came up with a rough estimate. Loss of life probably represents a large percentage of any impact estimate.

But, in fact, nobody has pulled the data together on coal-related deaths, or of loss of productive land capacity, or of destruction of streams and community economics, to name only a few. "The need to do so is obvious, but perhaps we don't want to know," said Dr. Harvard Ayers, chairman of Appalachian Voices, a regional group fighting mountaintop removal.

## Coal's Deadly Impacts

Ever since coal was burned in England centuries ago to produce heat for homes, the combustion byproducts of it have been killing people, forests and water bodies. Only recently have scientists and economists teamed up to gain a broad understanding of the nature and amount of the resulting impacts to humans and the environment.

The main effect of coal burning is occurring as a result of electricity generation. According to Cherry and Shogren, coal accounts for just over half of all electricity generated in the United States. Most of the coal burning power plants are in the East. Western electricity fuel sources are much more heavily nuclear, natural gas and hydro.

Coal-burning air pollution harms human health in several different ways.

## Mined, The Waste Dumped...



Tiny particles of sulfur and nitrogen from coal burners lodge deep in our lungs, causing as many as 30,000 premature deaths per year, according to the most up-to-date study by EPA consultant Abt Associates. Ozone derived from coal burning as well as from cars and trucks, causes or makes worse thousands of cases of asthma, and results in other heart and lung related maladies. Mercury from coal burning gets in the food chain mainly through fish and causes serious neurological and developmental problems for humans.

The forests, lakes and streams of the are also seriously

(rain, snow, fog), ozone, and nitrogen (helpful as a fertilizer. In small quantities but harmful in amount emitted by coal-burning) all kill or at least reduce the growth of forests. Acid precipitation acidifies lakes and streams, rendering thousands of lakes, for instance in the Adirondack Mountains of New York, lifeless.

While trees are severely impacted by air pollution from coal at all elevations, mountain forests are the hardest hit. This damage has been clearly seen in the spruce and fir forests of the Blue

Ridge and Smoky Mountains of the southern Appalachians. "To allow one of the world's greatest centers of biodiversity to be destroyed by air pollution is at best irrational and is probably immoral," says Dr. Robert Bruck of N.C. State University, who has studied the issue for 20 years.

Scientists and mappers hired by Appalachian Voices have further found that mountain hardwood forests with trees such as yellow birch, beech, and sugar maple are becoming sick and dying. The group has mapped tens of thousands of acres of such declining forests in the mountains of West Virginia, Pennsylvania, Virginia, Tennessee and North Carolina.

Finally, an important economic impact of coal burning is reduced visibility. Tourists who come to the mountains of areas like the Great Smoky Mountains National Park come largely to see the views. What they find in the summer season is haze. Views that should

average 60 miles are cut mainly by coal pollution, to about 15 miles, and to as little as 1 mile on some bad days every summer.

"Air pollutants emitted from sources across the US. are severely impacting streams, soils, public health, and visibility at Great Smoky Mountains National Park," says Jim Renfro, Air Quality Specialist with the National Park Service. "To solve this problem, reductions of at least 80% of nitrogen and sulfur emissions are necessary to protect these resources."

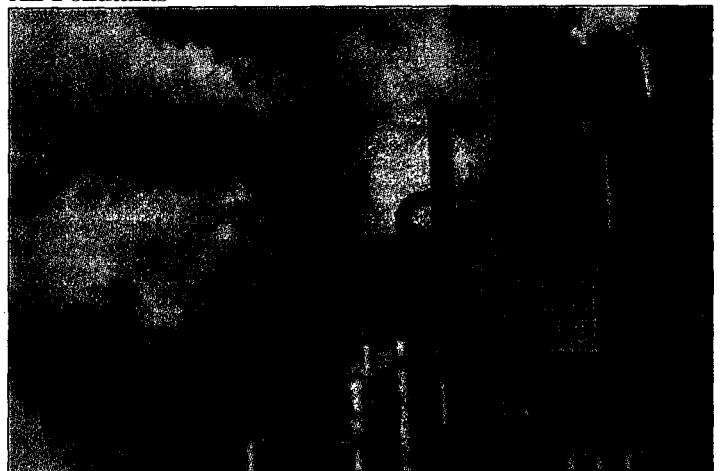
Whereas coal mining impacts have not been put into dollars to any extent, economists do have a growing body of studies of coal air pollution impact estimates. According to the Cherry/Shogren study, while the numbers for forest, stream/lake, crop and visibility damage are significant, the largest values come from human death and disease impacts. At \$6 million per human life lost, we easily top \$150 billion per year if we use the death figure (30,000/year) from the Abt Associates study.

Cherry and Shogren believe the \$150/ton that coal should cost as compared to \$30/ton that it now costs, is conservative.

## The Coal Summit

On June 20-22 of 2002, several local, regional and national environmental and community groups are presenting the Coal Summit in Charleston, West Virginia. The purpose of the Coal Summit is to offer environmentalists, politicians, the media and the general public an accurate, first-hand picture of the true cost of the full coal cycle. Experts will speak to the myriad impacts and the public will be encouraged to join in discussions of these issues. Field trips by air and by ground will offer a first-hand view of the devastation by coal mining and also of the forest damage of coal-derived air pollution. People interested in attending the Coal Summit should contact Melissa Davis at 828-262-1500 or toll-free at 1-800-277-8642. Information about the Coal Summit is also available at [www.appvoices.org](http://www.appvoices.org).

## Then Coal Is Burned, Creating Air Pollutants



**Statement for the Westside Neighborhood Association — Jayce Brown**  
UNC Cogeneration Facility Public Hearing  
September 19, 2005

It is almost 20 years since the Town Council approved the Special Use Permit for what one Council member described as an industrial sized power plant in a residential neighborhood. From the beginning the power plant has been a source of both noise and light pollution for the adjacent neighborhoods. While the University worked to mitigate both the noise and light problems, this plant is a still burden for the nearby neighborhoods.

The plant is also a source of air pollutants and greenhouse gases. It is understood that this plant is cleaner than the previous plant and cleaner than other coal plants in the state, but harmful materials are still being emitted.

The University has said that it has no plans for expansion beyond the present boundaries, yet it actually has expanded into an adjacent neighborhood with a large parking lot replacing needed housing in an adjacent neighborhood. This gives all neighborhoods cause for concern.

When the University has come to the Council asking for modifications to the SUP, we can't remember the Town asking for modifications for the Town. We think the time has come for the Town to request some things in return for the requested modifications. Following are what the Westside Neighborhood Association feels warranted in return for Council approval of the University's current requests for modifications:

1. The University is required to comply with the current Town noise ordinance.
2. The University is required to annually publish in all local newspapers the most recent NCDNR, Division of Air Quality, Air Pollutant Point Source Emissions Inventory for the University Power Plant.
3. The University is required to publish on this same page the greenhouse gas emissions. This would be a separate listing because these are not considered pollutants by the US and therefore are not measured by the State of North Carolina.

We would appreciate your serious consideration of our request.

# WESTSIDE NEIGHBORHOOD ASSOCIATION

407 Ransom Street  
Chapel Hill, NC 27516

TO: Mayor, Town Council, and Town Manager

FROM: Baird Grimson, President, Westside Neighborhood Association

SUBJECT: Compliance with the Current Noise Ordinance as a condition for approval of the Special Use Permit Modification of the UNC Cogeneration Facility

DATE: September 19, 2005

In light of the proposal to modify the special use permit governing the UNC Cogeneration Facility, which will allow it to substantially increase its power production, the Westside Neighborhood Association is requesting that the current Chapel Hill Noise Ordinance be applied to this facility as a condition for approval. Currently the facility's non-conformance with the new noise ordinance is grandfathered.

The current Chapel Hill Noise Ordinance clearly addresses the decibel noise levels for different primary use categories (residential, business, commercial, office and institutional, shopping center and industrial), and how these decibel levels are altered when boundaries are shared by different primary use categories.

Compliance with the current Chapel Hill Noise Ordinance as a condition for approval of the modification of the special use permit, will contribute to an improvement of the public health, safety, quality of life, and general welfare in the nearby neighborhoods. It will also enhance or maintain the value of nearby properties.