

## Why are we still using coal?

By Patricia Goldman/ Special To The Tab  
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### Book Review

"Big Coal" By Jeff Goodell

When I was a child growing up in Pennsylvania in the 1940s, my father had to shovel dirty black lumps of coal into a fire in our basement furnace to heat our home. By 1950 we had switched to natural gas heat, but electricity was powering our many post-war appliances, from dishwasher to freezer to TV. I have always assumed that coal hasn't been used for ordinary energy since then.

In fact, dirty coal is powering a significant percentage of electric plants across this country, even in Massachusetts, far from Appalachian, Midwestern, and Wyoming coal mines. This electricity comes into our homes to power 21st century computers, stereos, DVD players and microwaves.

Why are we still using coal, which we know to be polluting, instead of cleaner, renewable sources of energy? That is the question answered in Jeff Goodell's fascinating new book, "Big Coal: the dirty secret behind America's energy future" ((c) 2006, Houghton Mifflin).

Goodell, a veteran journalist, spent three years researching and writing "Big Coal." It is a colorful narrative, with extensive footnotes, that takes you along on his trips down into an Appalachian coal mine, blasting the top off a Wyoming strip mine, riding on one of the mile long trains incessantly hauling coal across the country, visiting power plant managers, engineers, scientists, company executives, lobbyists and government officials.

Big Coal is a huge industry, wielding extraordinary influence in Washington and state capitols, with legions of lobbyists and millions of dollars in campaign contributions. As we worry about our dependence on overseas oil, it turns out that the biggest fossil fuel reserves in the world (25 percent of the world's recoverable reserves) are buried within the U.S. As of 2005, more than 120 new coal powered energy plants were planned or under construction in the U.S. The coal industry wins huge government subsidies, succeeds in choking environmental regulations, while its PR spinmasters promote the message that coal is safe and cheap.

Since the passage of the 1970 Clean Air Act, emissions per unit of energy from American coal plants have dropped, but the total "volume of pollution released by coal plants remains staggering." Coal plants are responsible for nearly 40 percent of U.S. emissions of carbon dioxide (the main greenhouse gas), plus sulfur dioxide, nitrogen dioxide, particulates, and some sixty varieties of what the EPA terms 'hazardous air pollutants', including toxins such as lead, chromium, arsenic and mercury" - and solid waste equal to three times as much as all municipal garbage in the country, laced with heavy metals. The coal-powered electricity industry was born in 1882, when Thomas

Edison invented a dynamo in lower Manhattan that heated coal in four big boilers and used the steam to activate generators that produced enough current to light up 1200 lamps in the neighborhood. Black smoke and soot poured into the air and nearby residents immediately began to complain.

Edison realized that to capitalize financially on producing electric power, he had to locate the dirty dynamos out of sight and out of mind. Instead of simply selling the dynamos, he wanted to build the power plants, lay the wires, and make money by selling the electric current. Edison put Samuel Insull in charge of moving Edison Electric's operation to Schenectady, New York. Later, it became General Electric.

Insull moved on to take over Chicago Edison. He understood that "power plants are expensive to build but comparatively cheap to run." He convinced fellow power industry executives not to waste money building duplicate power plants. He argued that power companies would do better as monopolies regulated by the state. With Chicago's corrupt political machine at the time, there was little interference from regulators. Insull's strategy for growth (still pursued today) was to keep prices low, encourage consumption, and "promote electricity as clean and sanitary: no more soot from the coal stove!" He and Edison created a nation of "electricity junkies."

As the power companies grew into multi-state empires, reformers called for public ownership. Instead, Congress passed the 1935 Public Utility Holding Company Act, which broke up the huge companies and forbade competition among them. The Act established "cost-plus pricing", which guaranteed utilities a fixed return on their investments. The more electricity is used, the more the utilities earn. The utilities were required to pass 100 percent of any efficiency gains on to customers, so there was no incentive for them to spend money to develop more efficient and cleaner energy. The coal companies, the railroads hauling the coal and the power plants liked the income they were producing the old way.

Goodell points out that the cheap "cost" to customers does not include "the social, environmental and public health costs of burning dirty coal... the devastated mountains of West Virginia, the heart attacks and asthma caused by air pollution, the pumping of greenhouse gases into the atmosphere" or the dead coal miners. These costs are "all offloaded onto the public." According to the ten-year ExterneE study, if the market accurately reflected these true costs, "old coal burners would be shut down because the price of the power they generated would be too high for the market to bear."

Recent events have favored Big Coal. Concerned that, if elected, Al Gore would work to regulate pollutants, Big Coal threw its money behind George W. Bush, who won and immediately began staffing regulatory agencies with former coal industry executives and lobbyists. The lobbyists have cynically worked to portray global warming as theory rather than fact. Big Coal has failed to pursue technologies to make coal energy cleaner and more efficient, such as coal liquefaction and sequestering CO2 underground.

Says Goodell, "The key debate today is not whether pollution from coal plants kills people. It indisputably does..." The question is, "Are we willing to put the earth's climate at risk to save ten bucks on our utility bills?"... Goodell also asks, "What can I

do to lighten the load?...I simply believe that it's within our grasp to figure out less destructive ways to create and consume the energy we need."

*Patricia Goldman was Executive Director of the Asthma & Allergy Foundation of America/New England Chapter, until she retired in 2004. She was also a contributing editor for the Newton Times.*

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