

A HIDDEN

COST OF COAL

EXPORTING OUR COAL TO ASIA



Northern Plains Resource Council's campaign to protect Montana communities and natural resources from the impacts of expanded coal strip mining and exports.

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A coal train leaves Decker, Montana.

With domestic coal markets shrinking in the last few years, the U.S. coal industry has actively sought ways to keep customers of this 19th century fuel hooked well into the 21st century.¹

Coal companies intend to move and expand their operations in the West, particularly in the Powder River Basin of Wyoming and Montana, in order to export the coal to Asian countries.²

The current level of U.S. coal exports is 13 million tons

per year; the coal industry looks to expand this to 140 million tons.

The strip mines of the Powder River Basin produce more coal than anywhere else in the nation (mostly the portion in Wyoming because of geological differences).³ Strip mining lays a huge price on the land, water, and air.

Over the years, coal mines in Montana have reclaimed a startlingly small portion of the land they have disturbed.

Coal companies increasing exports to Asia

In the past decade, coal's share of U.S. energy generation has declined.⁴ According to the Energy Information Administration, "Coal-fired electric generation declined 11.6 percent between 2008 and 2009. With this decline, coal's share of electricity generation reached its lowest level since 1978: 44.5 percent of electricity generation in 2009, down from 48.2 percent in 2008." (Figure 1)

But growth in Asian coal demand is expected to lead to an increase in world coal consumption by 2030.⁴ The U.S. Energy Information

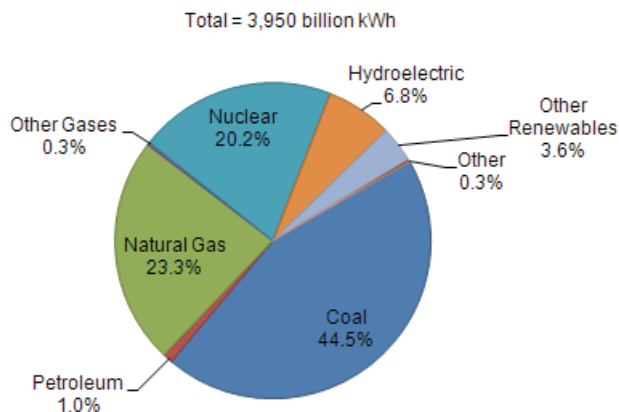
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¹ U.S. Energy Information Administration, *International Energy Outlook 2010*, <http://www.eia.doe.gov/oiaf/ieo/coal.html>

² *Exporting Powder River Basin Coal: Risks and Costs*, Western Organization of Resource Councils (WORC) January 2011, page 1.

³ U.S. Energy Information Administration, *Coal Transportation Issues, 2007*, <http://www.eia.doe.gov/oiaf/aeo/otheranalysis/cti.html>

⁴ U.S. Energy Information Administration, *Electric Power Annual, 2009*, http://www.eia.doe.gov/cneaf/electricity/epa/epa_sum.html#_ftnref11



Electric Utility Plants = 60.1%

Independent Power Producers and Combined Heat and Power Plants = 39.9%

Figure 1:

U.S. Electric Power Industry Net Generation for 2009

<http://www.eia.doe.gov/cneaf/electricity/epa/figes1.html>

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Administration predicts that nearly 90% of that increased consumption will be attributed to China.⁵

Today, over 99% of the coal mined in the Powder River Basin is consumed in domestic coal markets. Between

Montana mines at center of export boom

A number of mines in Montana already do a small amount of coal exporting and have big plans to do more.

In November 2010, in a *Billings Gazette* article, Cloud Peak Energy (owner of the Spring Creek coal mine near the Montana-Wyoming border) announced an increase in coal exports. "Officials from the nation's third largest coal producer [Cloud Peak] say Montana coal exports to Asia are expected to top 3 million tons this year, nearly double last year's level. And millions of additional tons could cross the Pacific within a few years if developers succeed in expanding port facilities along the West Coast."⁷

Arch Coal CEO Steven Leer said, "With our superior operating position in the Powder River Basin and Western Bituminous Region, we have the capability to service growing coal demand in Asia, the world's largest and fastest-growing coal market."⁸ The company has repeatedly stated the importance of Asian exports to its future plans.⁹ Even more telling is Arch's recent purchase of a 38% share in Millennium Bulk Logistics, the company that has submitted a permit to build a coal export facility in Longview, Washington.¹⁰

Additionally, in a *Billings Gazette* article in March 2010, Nick Shakesby, Chief Operating Officer of Maple Carpenter Creek, a proposed coal mine 50 miles northeast of Billings, said a new mine could be running by 2014.

"We're not interested in sitting on it. We're interested in developing it and putting in a mine," he said. "We're marketing it offshore – Asia and India."¹¹

⁵ Scott Learn, "Mining companies aim to export to China through Northwest ports," *The Oregonian*, September 8, 2010.

⁶ U.S. Energy Information Administration, *U.S. Coal Exports, January 2011*, <http://eia.doe.gov/cneaf/coal/quarterly/html/t7p01p1.html>

⁷ *Billings Business*, "Cloud Peak Energy Officials optimistic about boosting coal exports to Asia", November 2010, http://billingsgazette.com/business/article_23a03acc-53be-5ed3-a2fb-ff75909c3f34.html

⁸ Dustin Bleizeffer, "Coal industry seeks exports to Asia while U.S. market falters," *Wyofile*, Jan. 18, 2011. <http://wyofile.com/2011/01/coal-policy/>

2009 and 2010, however, US coal exports to Asia increased from 3.8 million tons to 13 million tons, a 240% increase.⁶ If sufficient port and rail capacity can be built, numerous coal companies are looking to increase coal sales to Asian markets. Arch Coal expects half the global trade for coal will go to China and India by 2012.



The Port of Longview on the Columbia River.

Arch Coal buys into port expansion

According to an article in the January 12, 2011, *St. Louis Post-Dispatch*, Arch Coal paid \$25 million for an interest with Millennium Bulk Terminals-Longview LLC, which owns a terminal near Longview, Washington, on the Columbia River. Millennium Bulk Terminals, a unit of Australia's Ambre Energy, is trying to get necessary approval and permits to complete dredging and other upgrades to handle coal shipments to Asia. Under the agreement, Arch will control 38 percent of the terminal's 5 million-ton annual capacity. "This transaction gives us a direct stake in participating in the growth of U.S. coal exports off the West Coast," said Arch CEO Steven Leer.

Almost all the major coal-producing companies at this point are investing in coal export mines, ports, and companies.

⁹ Arch coal press release, "Arch Coal secures state-controlled Otter Creek coal reserves in Montana", March 18, 2010, <http://investor.archcoal.com/phoenix.zhtml?c=107109&p=irol-newsArticle&ID=1403818&highlight=>

¹⁰ Arch coal press release, "Arch Coal acquires equity interest in West Coast terminal," January 12, 2011, <http://news.archcoal.com/phoenix.zhtml?c=107109&p=irol-newsArticle&ID=1515428&highlight=>

¹¹ *Billings Gazette*, "Coal mines pursued northeast of Billings," March 1, 2010, http://billingsgazette.com/news/state-and-regional/montana/article_627cd1ac-257e-11df-a999-001cc4c002e0.html

Coal strip mining damages air, water, land

Feeding these export plans will mean the expansion of coal strip mining, and that expansion will lead to greater damage to water quality and quantity, air quality, land use, wildlife, and the health of the surrounding communities.

Current existing Montana coal mines have disturbed 37,500 acres with strip mining, but only 50 acres have attained final reclamation.¹² Why is this final reclamation important? Montana requires reclamation of the groundwater in the area of the coal mine and, in many places in Montana, these coal companies cannot replace this vital resource. The coal seam is often itself the aquifer. Much of this land will never be returned to productive agricultural land if the area is not fully reclaimed.

Coal-fired power plants require water for cooling machinery and slurring the coal. If a proposed coal-to-liquids facility ever becomes a reality, it will require vast

amounts of water to operate, more than a typical power plant. This is water that eastern Montana doesn't have to spare.

Coal strip mining also affects the quality of water quality. At the Rosebud Mine in Colstrip, for example, there has been an incidence of water contamination by what is believed to be seepage from the mine. A rancher in the area has had cattle die from this contaminated water. Coal mining liberates heavy metals and other toxins from the coal beds, and that pollution often migrates to surface waters.

Coal strip mining also worsens air quality. By disturbing large quantities of dirt with heavy machinery, particulate levels and gases (nitrogen oxides, sulfur dioxides, and methane) can dramatically increase. These can lead to increased incidence of ailments such as asthma and bronchitis.¹³

Increased coal trains will snarl traffic

The new push to export coal will spread and intensify the impacts of coal mining to more communities along the proposed rail routes to the West Coast.

Communities along the route coal trains take to the West Coast will face up to 50 unit trains a day, which could significantly delay traffic and emergency responders.¹⁴

In Billings, the train tracks cut off most of the south side of town; the airport and hospitals could be cut off from direct access to the Interstate highway.



Coming to a railroad crossing near you: more long, traffic-stopping coal trains from the Powder River Basin of Wyoming and Montana headed for Asia via the West Coast.

In downtown Billings, there are virtually no areas where it is easy to cross the tracks, and very little room to build any overpasses or underpasses. This

problem could be replayed in communities across Montana.

The big unanswered question is the impact of

a five-fold increase in coal train traffic (from 10 coal trains per day to 50 coal trains) on the overall rail system.

Most of Montana's track is currently within capacity. However, the scale of traffic increase brought about by increasing coal exports could create disruptions for other rail traffic, as well as vehicular traffic.

Increasing capacity could involve strategies such as running trains faster, longer, or closer together. Track could be upgraded or curves straightened.

¹²U.S. Office of Surface Mining Reclamation and Enforcement, *Annual Evaluation Summary Report for the Montana Regulatory Program, Evaluation Year 2010*

¹³ Sharma, Partha Das, "Coal Mining Pollution and its control measures"

<http://www.docstoc.com/docs/6608086/Coal-Mining-Pollution>

¹⁴ *Exporting Powder River Basin Coal: Risks and Costs*, Western Organization of Resource Councils (WORC) January 2011, page 9.

Coal infrastructure

Coal mining needs infrastructure, including railroads. Getting new coal to market will inevitably lead to the use of eminent domain to condemn Montana ranchland. Mining the Otter Creek coal could lead to construction of the Tongue River Railroad, a proposed project which has hung over the heads of Tongue River valley landowners since 1980. Just this one railroad would cut ranches in half for 130 miles, complicating day-to-day operations, reducing property values, bringing in weeds, and starting fires.

Coal dust and diesel

Each coal railcar loses roughly 500 pounds of coal dust during each trip to the coast – more than 30 tons per train on average. This coal dust goes into air, water, and land. It also accumulates on the tracks, increasing the risk of derailments.¹⁵ In addition to coal dust, all of these trains are powered by diesel engines. In areas where the trains will be idling (e.g., Laurel, Montana), the unhealthy increase in diesel emissions could be substantial.¹⁶

Carbon impacts

Every ton of coal, when burned, puts roughly two tons of carbon dioxide into the atmosphere.¹⁷ Shipping that coal by rail a thousand miles to a port, then thousands more miles by ship, will increase the proportion of greenhouse gases added to the atmosphere. Even when that coal is burned in China, the jet stream will carry it back across the ocean and across the Northern Hemisphere.

Wherever it is burned, the Otter Creek coal will add carbon dioxide totaling approximately 280 million tons per year to the atmosphere.¹⁸

¹⁵ "Railroads, Utilities clash over dust from coal trains," *New York Times*, January 25, 2010, <http://www.nytimes.com/gwire/2010/01/25/25greenwire-railroads-utilities-clash-over-dust-from-coal-55265.html>

¹⁶ *Exporting Powder River Basin Coal: Risks and Costs*, Western Organization of Resource Councils (WORC) January 2011, page 13.

¹⁷ U.S. Energy Information Administration, *Carbon Dioxide Emission from the Generation of Electric Power in the United States*, July 2000, http://www.eia.doe.gov/cneaf/electricity/page/co2_report/co2report.html

¹⁸ *Exporting Powder River Basin Coal: Risks and Costs*, Western Organization of Resource Councils (WORC), January 2011, page 11.

Keep informed! Join Northern Plains

Northern Plains Resource Council is a conservation and family agriculture group that organizes Montana citizens to protect our water quality, family farms and ranches, and unique quality of life.

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Coal's long-term costs

Exporting this dirty, 19th century fuel is not an effective or sustainable path to prosperity or energy security in the 21st century. Coal exported overseas doesn't keep lights on or homes warm in Montana, Washington, or in the United States.

Exporting coal means we have to deal with the on-the-ground impacts here in Montana, including water and air pollution, damaged aquifers, condemnation of private property for coal infrastructure, large increases in rail traffic across Montana.

The increase in rail traffic that would be created by the additional trains to deliver coal to the facility at Longview could seriously disrupt vehicle traffic, slow emergency response vehicles, and cause more pollution and public safety problems in cities and towns along railroad lines across the Northwest.

Wherever the coal is burned, the skies above Montana will be polluted. We will be adding substantially to the load of carbon dioxide in the earth's atmosphere. In the process, we will be undermining all of our efforts to curb air pollution in America.

Every dollar America invests in new coal development is a dollar that can't be spent to develop clean energy jobs and true energy independence for our nation.

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