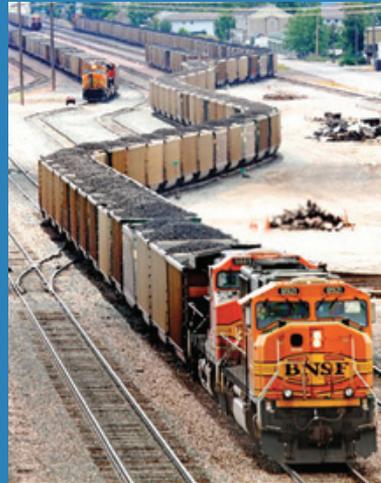


Warning: Montana Coal Exports are Bad Business

Exports face financial, environmental, and regulatory risks.



By Derf Johnson
January 2014



MONTANA ENVIRONMENTAL
INFORMATION CENTER
Protecting Montana's environment since 1973.



“The era of wanton Chinese coal demand growth is approaching an end.”

-Citibank analyst Anthony Yuen.

The Montana Environmental Information Center is a non-profit environmental advocate founded in 1973 by Montanans concerned with protecting and restoring Montana’s natural environment. Nearly 5,000 individuals in Montana and around the country support MEIC as members, both financially and with their activism.

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Cover photos clockwise from upper left: (1) Rosebud coal mine by Kestrel Aerial Services, Inc.; (2) Coal train in Missoula railyard by Chad Harder; (3) Chinese coal plant in Fujian Province by Derf Johnson; and (4) Coal terminal by Paul K. Anderson.

Warning: Montana Coal Exports are Bad Business

The United States is undergoing an unprecedented change in its energy markets. A decrease in the price of renewables and their increasing deployment, historically low natural gas prices, and growing concern over climate change are fueling a switch from traditional fossil fuels to energy sources with a lower carbon output. In particular, the future of coal in the United States is in serious question as it continues to lose market share and is being replaced by cheaper and cleaner alternatives.

The story of coal in the United States is now being projected to be replicated around the world, as nations experience strong demand growth for renewables and begin to tackle serious pollution problems.

These changes in the energy market are outside of Montana's control. But it's high time that Montana policy makers recognize the economic and environmental realities facing the future of energy supply, and begin seriously considering how Montana can increase jobs and supply its region and the world with low carbon energy.

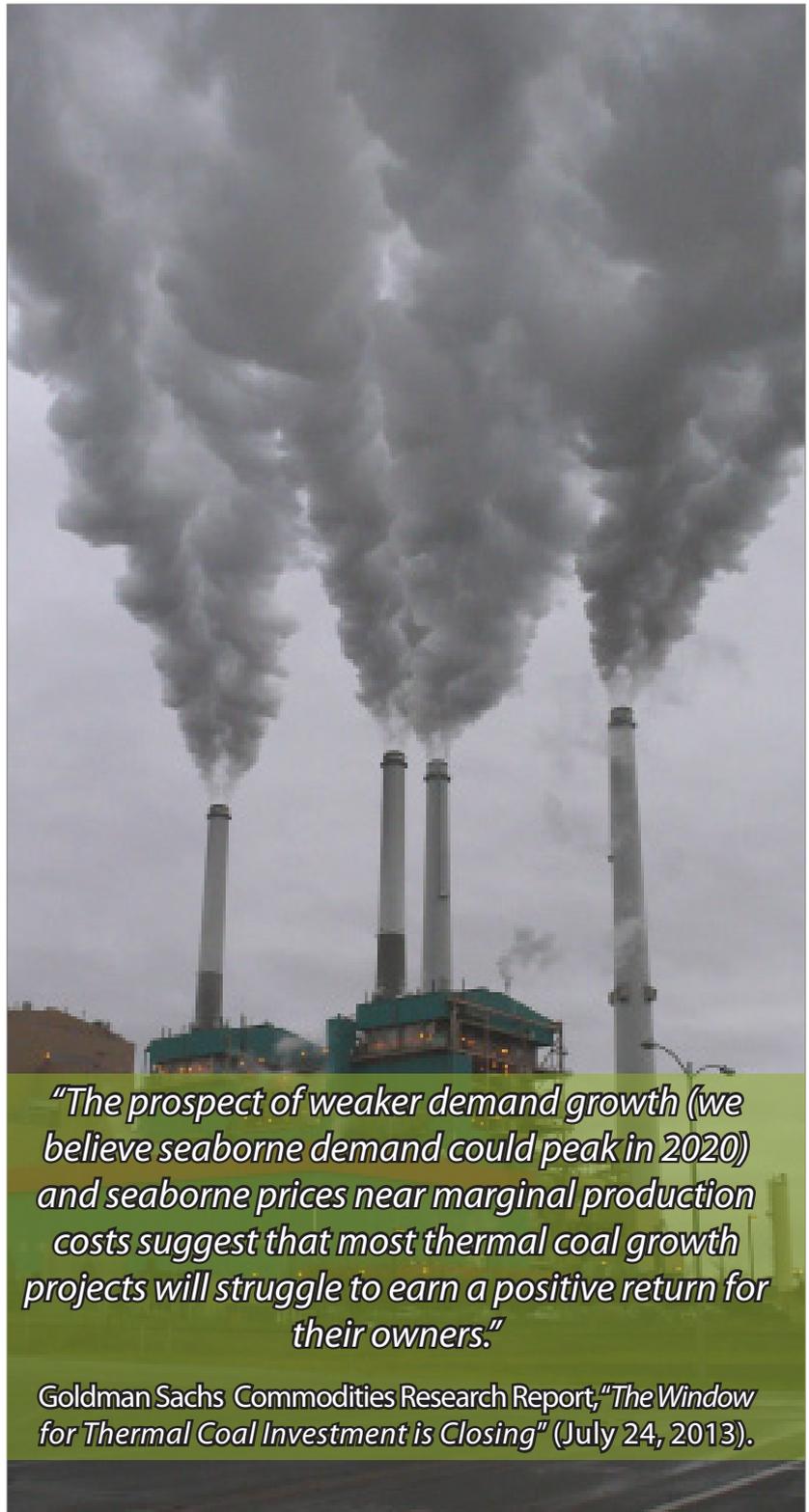
Coal-fired Electricity is Declining in Importance

The source of the largest share of global carbon emissions – coal-fired electricity generation – is now in a permanent state of decline in the United States. Financial analysts know it. Energy experts know it. Major investors know it. Utilities know it.

In the year 2000, coal power represented approximately 52% of the total generation of electricity in the United States. By the end of 2012 coal's share had dropped to 37%, with virtually every projection available showing a further decline.¹

"Old King coal" is slowly but surely being relegated to the halls of history as the U.S. continues to transition to modern, clean, low-carbon, and affordable energy at an unprecedented pace. The cost of different renewable energy systems, particularly wind and solar, is rapidly

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"The prospect of weaker demand growth (we believe seaborne demand could peak in 2020) and seaborne prices near marginal production costs suggest that most thermal coal growth projects will struggle to earn a positive return for their owners."

Goldman Sachs Commodities Research Report, "The Window for Thermal Coal Investment is Closing" (July 24, 2013).

The Colstrip coal-fired power plant in southeastern Montana. Photo by MEIC.

becoming cost-competitive with traditional fossil fuel sources such as natural gas and coal, even when excluding subsidies.² A December 2013 report by Credit Suisse predicted that 85% of new power generation in the United States will come from renewable energy,

“Coal is a dead man walkin’. Banks won’t finance them. Insurance companies won’t insure them. The EPA is coming after them. . . And the economics to make it clean don’t work.” Kevin Parker, global head of asset management and executive committee member, Deutsche Bank, *The Washington Post* (January 1, 2011).

amounting to 100 gigawatts (GW) of new electricity by 2025.³ The year 2013 was a record-shattering one for solar energy, with the addition of 2,528 megawatts (MW) of capacity, second only to natural gas installations.⁴

In 2012 wind power was the leading source of new U.S. electricity generation capacity, accounting for over 43% of additions.⁵

Montana Coal Exports Face Serious Risks

In order to maintain its profit levels, the coal industry in Montana and across the United States is making every effort to develop new markets, with the booming populations and emerging economies of Asia as its last, best hope. The basics of its strategy involve strip mining places such as the Otter Creek valley in Montana, condemning private property to build a private railroad, hauling the coal by rail a thousand miles to the Pacific Northwest, loading the coal at yet-to-be-built deep-water ports, unloading the coal at Asian ports, and again hauling it to destination coal plants.

Beyond the sheer audacity of this strategy as an economic development plan and energy production system, this scheme also requires many stars to align. It involves convincing a multiplicity of local, state, national, and international political bodies and legal jurisdictions that exporting coal is a good idea, lining up investors willing to provide the enormous amounts of capital required, and successfully beating the price of competitors



“Coal will gradually decline in importance ...”

Warren Buffett, CEO of Berkshire Hathaway, *Bloomberg News* (July 25, 2013).

The Rosebud coal mine. Photo by Kestrel Aerial Services, Inc.

(including other coal-exporting countries) to secure long-term contracts.

The problem is that the coal export scheme dreamed up by the industry is becoming riskier, more speculative, and more unlikely by the day. The industry faces a laundry-list of obstacles that stretch from opposition to the proposed mines in Montana and the proposed coal ports on the Pacific Coast, to growing concerns in Asia about coal-caused pollution.

Montana Coal Mining is Becoming More Expensive

Large-scale strip mining in the Powder River Basin (PRB) has been occurring since the 1970s, and mining PRB coal is becoming more expensive.⁶ Most coal companies operate using a least-cost mining approach, meaning that they initially mine the most easily accessible, highest value coal, and gradually work towards coal with a higher “strip ratio,” which increases the cost because more earth must be moved to reach the underlying coal. Mines also have to increase capital investments in additional mining equipment to produce the same amount of

coal. An increase in the cost of mining ultimately translates into decreased ability to compete in the global marketplace

Exporting Montana Coal Faces Uncertainties about Port Capacity

The major bottleneck blocking increased exports of Montana coal is a lack of capacity at the deep-water ports on the

Pacific Coast. Bud Clinch, executive director of the Montana Coal Council, has acknowledged that this will prevent any increased export of Montana coal.⁷ Without increased port capacity the feasibility of increased coal development in Montana declines considerably. The Pacific Northwest offers the most economically practical region for port expansion because of its proximity to Asian markets, but companies must contend with a population in the

“Bill Meister, a St. Louis-based mining consultant with Golder Associates, estimates the PRB strip ratio climbs by a tenth of a percent each year as production

moves westward.” Platts, Powder River Basin Producers Finding it More Costly to Get to Coal Reserves (August 9, 2013).

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“So while we are seeing some signs that coal markets are poised to improve, we aren’t ready to predict that turnaround will occur.”

John Eaves, President and CEO of Arch Coal, Inc., in an Investor Call (October 29, 2013).

Otter Creek, Montana. Photo by Kestrel Aerial Services, Inc.



"Ten years from now, maybe there will be some export capacity on the West Coast, but for right now, what we have is completely full and what has been proposed is probably dead - and not even dead in the water, just dead."

Former Montana Governor Brian Schweitzer, *SNL Energy* (January 17, 2013).

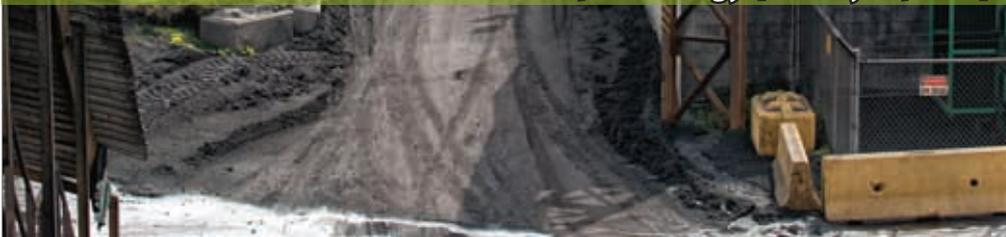


Photo by Paul K. Anderson.

region that is generally opposed to coal exports.

In the past few years, six proposals for new coal export facilities have surfaced. Three of these projects have already been dropped, citing economic concerns and local opposition. The remaining three proposals are on tenuous ground.⁸

"Any increased production would have to come from increased exports of coal, and right now that is bottlenecked." Bud Clinch, executive director, Montana Coal Council, *Billings Gazette* (January 1, 2012).

The viability of all three proposals is largely conditioned on Asian prices, which have declined more than 30% in the past year.

A representative of the financially shaky Ambre Energy recently went on the record stating that exports would struggle to make any profit, and that "we could break even at best."⁹

The proposed Millennium Bulk Terminal, near Longview, WA, in which Arch Coal owns a large percentage share, has not yet received an expansion permit. The proposed port recently went through a public comment process regarding the scope of its environmental analysis, and there were over 200,000 comments, more than for any other project in the state's history. The vast majority of the comments were opposed to the project.¹⁰ The proposal has also been criticized for its higher costs relative to other, already established, export facilities in the Northwest.¹¹

The Gateway Pacific terminal at Cherry Point, near Bellingham, WA, has not yet received a permit for expansion. Most importantly, the port faces oversight and a vote from an unfavorable county commission, following a bruising November 2013 election in which anti-coal commissioners took all the open seats on the commission. The county commission has the authority to deny the permit necessary for construction of the

export facility, effectively preventing increased coal export at Cherry Point.¹² The unfavorable election result probably influenced international investment bank Goldman Sachs to divest its 49% share in the port in January 2014.¹³

Montana Coal Exports Will Face Stiff Competition from Other Supplying Countries

Montana and the rest of the United States are not the only players in the coal export game. China is increasing its coal mining and transport infrastructure, Indonesia has traditionally exported large volumes of coal to other Asian markets, and Australia is better positioned and has traditionally supplied most of Asian demand. Citi Research notes that several different supplying countries will

have to compete in a maturing, and ultimately declining, market.¹⁴ Australian coal companies are currently attempting to increase their exports of coal to Asia. As a case in point, recently the Australian government approved a massive new coal mine, aptly named China First, in Queensland.¹⁵

Asian Demand for Coal is Projected to Level and then Decline

The underlying assumption that is driving the attempt to export coal to Asia is that demand for coal in Asia will grow steadily over the next several decades. But anyone even vaguely familiar with the serious air pollution in Asian mega-cities would be correct to question the assumption that these countries will continue poisoning their own citizens. A recent public health study noted that Chinese citizens in certain regions die as much as 5 years sooner because of air pollution from coal. China is finally becoming serious about tackling its air pollution problems, with coal being public enemy #1. The Chinese government has begun implementing a series of reform measures that will have a significant impact on the country's use of coal:

- It recently banned new coal-fired power plants in three of its most populous coastal cities¹⁶;
- It has started to put a price on carbon emissions, and recently opened the world's second-largest carbon trading market¹⁷;
- It has set 2017 targets for reducing overall use of coal¹⁸; and
- It is also the largest investor in clean energy in the world.¹⁹

American and international investors have been carefully watching China's energy decisions, and are taking them seriously. Recently Citi Financial, Goldman Sachs, and Bernstein Research forecast that demand for coal in China may peak, as early as 2015.²⁰ The coal industry is now recognizing this reality, and is beginning to drastically scale back its export dreams.

Public Entities are Drawing the Line on Subsidies

Coal has historically received large government

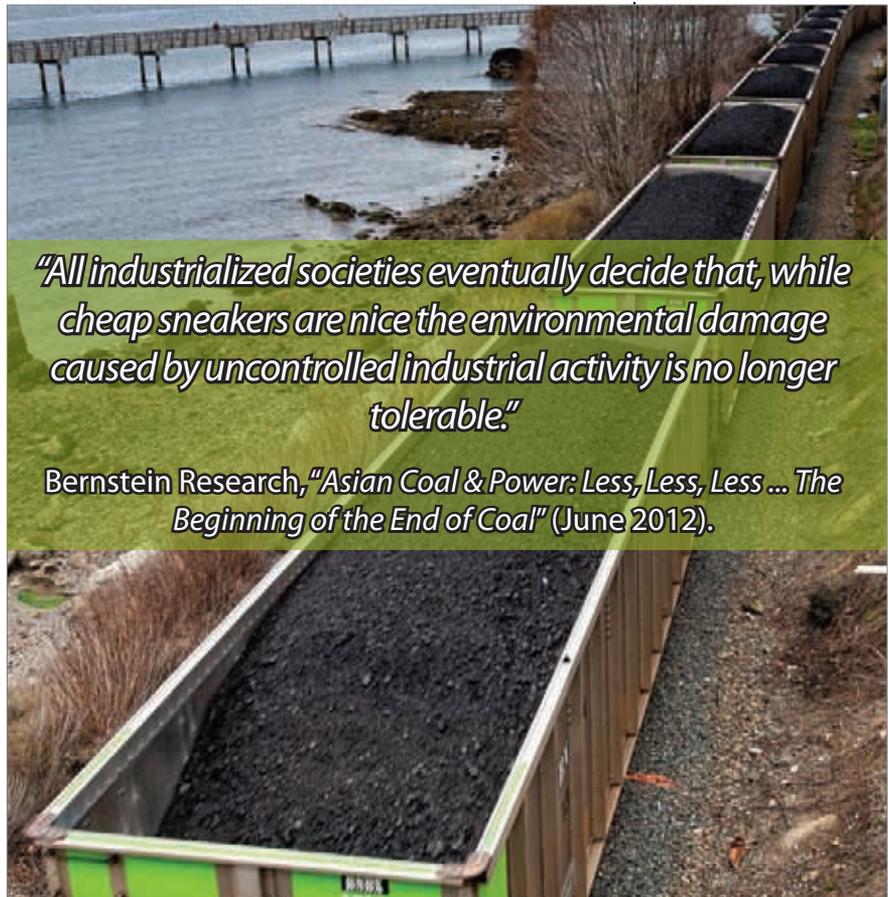


Photo by Paul K. Anderson.

"All industrialized societies eventually decide that, while cheap sneakers are nice the environmental damage caused by uncontrolled industrial activity is no longer tolerable."

Bernstein Research, "Asian Coal & Power: Less, Less, Less ... The Beginning of the End of Coal" (June 2012).

subsidies, even at the international level. But as climate change and air pollution are increasingly being recognized as major problems, governments and international bodies are becoming more reluctant to finance new coal-fired power projects. In the past few months, the U.S. Export-Import Bank and the U.S. Treasury Department have stopped financing overseas coal projects (except in rare circumstances).²¹ The European Bank for Reconstruction and Development, the World Bank, Denmark, Finland, Iceland, Norway, Sweden and the United Kingdom all adopted very similar policies in 2013.²²

"Senior research staff at China's National Development and Reform Commission – the powerful economic planning body of the country – suggested the possibility of peak coal demand by 2015. Severe air pollution is prompting a reassessment of the economic growth strategy that has so far relied on coal."

Citi Research: Commodities, "The Unimaginable: Peak Coal in China" (September 4, 2013).

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Montana's Future Lies in Another Direction

The hoped-for increase in exports of Montana coal faces significant financial, regulatory, and environmental constraints that ultimately cloud the future viability of any export plans. The coal industry and its supporters are gambling on a market that, more than likely, will no longer exist in the near future.

Montana policy makers and state and local government representatives should view the feasibility of coal exports as an unlikely scenario that is fraught with uncertainty and financial risk. However, significant opportunities currently exist for increased economic growth in the clean energy sector. The transition to clean energy is already well underway, and Montana would be wise to capitalize on this growth sector through policies that encourage a clean energy economy.



Photos by MEIC.

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