



WHY THE BAY AREA SHOULD SAY NO TO COAL AND PETCOKE EXPORTS

Big coal and oil companies are looking for ways to ship their dirty commodities abroad from U.S. ports. As Northwest communities push back against proposed export terminals in Washington and Oregon, the companies have turned to their next target: the Bay Area. If more coal and petroleum coke-carrying trains come to our area, coal dust from open rail cars will threaten community health by polluting our air, land and water.

Thousands of people on the West Coast are leading a grassroots movement against coal exports. It's time to let big coal and oil know that their exports aren't welcome in California.

To reach Bay Area ports, coal trains from mines in the Powder River Basin (PRB) or the Utah and Colorado region travel through many communities including Sacramento, Richmond, Stockton, Pittsburg, Bakersfield, Fresno, Merced and Modesto. Coal and petcoke trains are already on the move.¹

HEALTH IMPACTS

- By BNSF's own estimates, each open-top coal rail car can lose between 500 pounds to 1 ton of coal. Coal dust creates air pollution, contaminates crops and pollutes nearby water supplies. Tests show that coal dust contains substances known to pose threats to human health, such as arsenic, lead, chromium, nickel, selenium, and other toxic heavy metals.⁸
- Prolonged, direct exposure to coal dust is linked to chronic bronchitis, decreased lung function, emphysema, cancer and death.⁹ Coal dust has also been linked to heart disease in miners.¹⁰

ABOUT PETCOKE

- Petroleum coke, or petcoke, is a solid carbon byproduct that results from oil refining processes. When petcoke is burnt, it emits 5 to 10 percent more carbon dioxide (CO₂) per unit of energy than coal. On average, one ton of petcoke yields 53.6 percent more CO₂ than a ton of coal.²
- Petcoke also emits toxic residues, from heavy metals to sulfur.²
- Petcoke is an extremely dirty refinery waste product, the majority of which is exported to burn overseas.³
- Currently, most petcoke in the U.S. comes from the refining of oil. Tar sands oil is heavier than conventional crude oil and thus more petcoke is produced in the refining process.⁴ More than 79.8

million tons of petcoke are stockpiled in Canada, but petcoke piles are building up in the U.S. as well as we import more oil from tar sands for refining.⁴

- Because oil from Canadian tar sands is relatively inexpensive, it's attractive to California refineries. And with refining comes petcoke: several Bay Area companies produce the dirty byproduct, including the Valero Benicia refinery, Shell Martinez refinery, Chevron Richmond refinery, and the Phillips 66 Rodeo facility.⁵ In addition, there are several proposed crude by rail terminal expansion projects that could significantly increase refinery processing of volatile Bakken crude and tar sands.⁶
- Despite its own strict state emissions laws, California exports 128,000 barrels of petcoke a day, primarily to Asia where it's burned for electricity.⁷

EXPORT PROPOSALS

Port of Oakland Bulk Terminal (Berth 33, Howard Terminal, Roundhouse and other potential locations)

A bulk terminal at the Port of Oakland would potentially bring 2.5-9 million tons per year of coal through Oakland, or an additional eight to 24 trains each week. In February 2014, the Port of Oakland rejected coal proposals from Bowie Resource Partners/Trafigura and CCIG/Kinder Morgan/MetroPorts at the Howard Terminal.

Oakland Army Base Redevelopment Project Berth 7 Bulk Terminal

Developer Phil Tagami and California Capital Investment Group (CCIG) are well into the permitting stage for a bulk terminal that could be used to export dirty coal overseas at the Howard Terminal.

Port of Richmond Terminal 3 or 4

According to Port of Richmond emails, several companies including Manyuan Coal and Next Synergy have proposed possible coal export facilities at Terminal 3 or 4. This site could bring 2 to 6 million tons of coal per year through Richmond, bringing dust and rail traffic with them.

Levin-Richmond Terminal

This terminal already ships some coal and petcoke through its ports. Last year, Levin signed an agreement with Bowie Resources to ship an additional 1.2 million tons of coal per year.

Port of Stockton

As of 2011, the Port of Stockton exported 90,000 tons of coal per year. Recent proposals from Bowie Resources and Metroports would expand that amount more than 30 times, to 3 million tons.

Port of Benicia

The Port of Benicia currently exports petcoke and other petroleum products. It also has the capability to ship coal in the future.

Port of San Francisco

The Port of San Francisco has stated its opposition to exporting coal but has not signed a formal agreement guaranteeing their statement. The Port is currently considering a bulk facility for iron ore that could also be used for coal or petcoke exports.

- In one Virginia community near a large coal terminal, the proportion of residents suffering from asthma was more than twice the city and state averages.¹¹
- Petcoke can also cause serious respiratory problems, particularly for individuals already suffering from heart and lung disease or asthma.¹² Health experts say that petcoke is equivalent to coal in lung disease risk.¹³
- Petcoke's high-carbon composition makes it one of the dirtiest fossil fuels in the world, so exporting the waste to another country does not stop its effects on the global climate.

COMMUNITY IMPACTS¹⁴

- Local businesses along rail lines will suffer as more mile-long trains roll through California communities, creating more traffic congestion, noise, visual impacts and pollution from coal dust.
- More delays at rail crossings can slow down our emergency responders when they're needed most.
- Along coal train lines, homeowners and businesses within 600 feet of rail tracks can expect to lose at least 1% of their property values. In one study, properties near a new coal export facility lost more than \$2.6 million in value.¹⁵
- Coal dust causes rail bed instability and contributes to train derailments, which can pose a public safety hazard, especially with additional oil trains traveling through the area.¹⁶

ENDNOTES

- 1 Burlington Northern Santa Fe Rail Map, October 29, 2013, http://www.bnsf.com/customers/pdf/maps/coal_energy.pdf.
- 2 Stockman, Lorne. "Petroleum Coke: The Coal Hiding in the Tar Sands." Oil Change International: January 2013, http://priceofoil.org/content/uploads/2013/01/OIL_Petcoke_FINAL_SCREEN.pdf.
- 3 Electronic Code of Federal Regulations. "Title 40: Protection of the Environment." <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=926d839990fc96a255b801179de7fe44&ran=div&view=text&node=40.26.01.4.31.1.17.2&idno=40>
- 4 <http://www.marketplace.org/topics/sustainability/chicago-piles-petroleum-coke-suggest-future-canadian-tar-sands-oil>
- 5 Based on data related to proposed oil refineries in the Bay Area.
- 6 Based on data related to proposed oil refineries in the Bay Area.
- 7 Ayers, Christin. "Dirty Substance From California's Oil Refineries Burned Overseas." CBS SF Bay Area: October 1, 2013. <http://sanfrancisco.cbslocal.com/2013/10/01/dirty-substance-from-californias-oil-refineries-burned-overseas/>.
- 8 Aneja, Viney. "Characterization of Particulate Matter (PM10) in Roda, Virginia." 2008. <http://www.sierraclub.org/coal/downloads/2009-YA-particulates.pdf> Executive Summary iv, <http://www.coaltrainfacts.org/key-facts>.
- 9 Citation: "Criteria For a Recommended Standard: Occupational Exposure to Respirable Coal Mine Dust" U.S. Department of Health and Human Services, September 1995, pages 52-116. <http://www.cdc.gov/niosh/docs/95-106/pdfs/95-106.pdf>.
- 10 Landen, Deborah, et al. "Coal Dust Exposure and Mortality from Ischemic Heart Disease Among a Cohort of U.S. Coal Miners". July 2011, American Journal of Industrial Medicine, Vol. 53, Issue 10, page 6. <http://www.cdc.gov/niosh/mining/UserFiles/works/pdfs/cdeam.pdf>.
- 11 "Health Needs Assessment of the Southeast Community City of Newport News 2005," Peninsula Health District, Virginia Department of Health.
- 12 Madigan, Lisa, Illinois Attorney General. "Madigan files suit against petroleum coke site for air pollution." November 4, 2013. http://www.illinoisattorneygeneral.gov/pressroom/2013_11/20131104.html.
- 13 Paulman, Ken. "Documentary: 'Petcoke: Toxic waste in the Windy City.'" February 28, 2014. <http://www.midwestenergynews.com/2014/02/28/video-toxic-waste-in-the-windy-city/>.
- 14 See Eastman Property Value Study, October 12, 2012. <http://www.coaltrainfacts.org/docs/Eastman-Study.pdf>.
- 15 See Eastman Property Value Study, October 12, 2012. <http://www.coaltrainfacts.org/docs/Eastman-Study.pdf>. Study assumed a conservative 1% value loss for all structures within 600 ft of the rail tracks where coal would be shipped. Surface
- 16 Surface Transportation Board Hearing Transcript (STB Hearing Transcript), Re: Arkansas Electric Cooperative Corporation - Petition for Declaratory Order, Docket No. FD 35305 (July 29, 2010) 4618-20.