COVERING COAL:

The Top Insurers of U.S. Coal Mining

PUBLIC CITIZEN 50 YEARS

Insure OUR FUTURE

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Cover Image: The Black Thunder Coal Mine in the U.S. state of Wyoming. Credit: Greenpeace USA

Photo source: [mrdoomits]

EXECUTIVE SUMMARY

- Global insurers AIG, Liberty Mutual, Lloyd's of London, Swiss Re, and Zurich are among the top insurers of U.S. coal mining. In 2022, these five insurers covered the production of at least 245,139,030 short tons of coal, or 41% of U.S. coal production, from just the top 25 U.S. mines.

- These five insurers are among more than a dozen that are enabling ongoing operations in the U.S. coal mining sector, which, in addition to being a major source of carbon dioxide emissions and a driver of climate change, has a long history of air and water pollution and labor and human rights harms.

- Four of these five companies have adopted coal underwriting restrictions, and yet they are still among the top insurers of thermal coal mines. In aggregate, this data exposes the weaknesses of insurers' current coal restriction policies.

- Many of these same insurance companies also provide coverage to homeowners and small businesses. However, in recent years, insurers including AIG, Liberty Mutual, Berkshire Hathaway (also a major coal insurer), and Farmers Insurance Group (an affiliated company of Zurich Insurance Group) have begun withdrawing from certain regions — in some cases, entire U.S. states — that are vulnerable to climate impacts while continuing to cover the industry most responsible for global warming.

- Insurers must strengthen their coal restrictions and quickly phase out support for coal companies that have not made or are not credibly implementing plans to align their businesses with a 1.5°C warming scenario.

Photo source: [Erik McGregor]

INTRODUCTION

Climate science has given us an ultimatum: to have more than a 50% chance of keeping the planet's warming within 1.5°C, thereby avoiding some of the worst impacts of global warming, the world must quickly make deep cuts in greenhouse gas (GHG) emissions. In models that limit global warming to 1.5°C, GHG emissions peak immediately, then drop rapidly, declining 43% by 2030 and 60% by 2035, relative to 2019 levels.[1]

Coal is the most carbon-intensive source of energy[2] and the largest contributor of carbon dioxide emissions. The U.S. is the fourth largest producer of coal worldwide,[3] producing a fuel that is not only a leading driver of climate change but contributes to significant air and water pollution, human health harms, and worker safety concerns.

Over the last several years, more than 200 financial institutions worldwide have exited coal due to its significant contribution to climate change.[4] As of July 2023, this includes 45 insurance companies who have ruled out or restricted coverage for coal, 35 percent of which apply to existing coal operations.[5] More broadly, at least 31 insurance compa-

1 Intergovernmental Panel on Climate Change. "Climate Change 2023 Synthesis Report, Summary for Policymakers." https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf, Table SPM.1 p. 21.
2 U.S. Energy Information Agency. https://www.eia.gov/environment/emissions/co2_vol_mass.php
3 Enerdata. World Energy & Climate Statistics - Yearbook 2023. https://yearbook.enerdata.net/coal-lignite/coal-production-data.html
4 Institute for Energy and Economic Financial Analysis. "200 and counting: Global financial institutions are exiting coal". https://ieefa.org/resources/200-and-counting-global-financial-institutions-are-exiting-coal
5 Insure Our Future. "Number of Companies with Fossil Fuel Exclusion Policies, by Sector." https://global.insure-our-future.com/; Insure Our Future. Insurance company fossil fuel underwriting policy weblinks and extracts. https://docs.google.com/document/d/1B1zuUw6s4Gye6fyNV7cQxhVkwv7lY16z/edit

nies have made commitments to reach net zero carbon emissions and have been or currently are members of the Net Zero Insurance Alliance.

However, too many insurers, including insurers with coal restrictions and net zero commitments, still underwrite coal companies and projects that are not aligned with a pathway to limit global warming to 1.5°C. Many of these same insurers also provide coverage to homeowners and businesses. But several are now exiting entire regions that are experiencing increasingly frequent and severe disasters due to climate change—damage the insurers themselves are fueling by underwriting fossil fuels.

While insurers often publicize commitments to restrict coverage for certain projects as part of broader sustainability messaging, they typically do not disclose which fossil fuel projects they continue to insure, making it difficult to compare companies' public statements with their current underwriting activities. By analyzing data obtained through a series of public record requests, this report provides a rare picture of the insurance companies underwriting the largest coal mines in the United States.

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Coal mining in surface mine (photo Chalabala)

FINDINGS

U.S. coal mines produced 595 million short tons of coal in 2022.[6] Just 25 mines were responsible for the majority of this production, and 16 insurance companies provided their liability coverage. These insurers are listed below, alongside the total production for which they are responsible. (Note: While multiple insurers sometimes provide coverage for the same mine, the total production of each mine was attributed to each insurer that provided coverage during the period of 2022.) Because this sample only includes the top 25 mines, each company's total mine count and associated production are likely higher. Notable findings regarding individual insurers include the following:

- AIG insures the greatest portion of coal production from the largest 25 mines, at 167 million short tons, or nearly 30% of all U.S. production, from seven of these mines.
- AIG is followed by underwriters at Lloyd's of London, which insured 135 million short tons from 10 mines, and the Starr Group, which insured 103 million short tons from nine mines.
- While European insurers have been more active than U.S. companies in restricting coverage for coal mines, several major European insurers, including Zurich and Swiss Re continue to insure major U.S. coal mines.
- AIG remains a major insurer of coal mines, even as it backs away from U.S. homeowners facing climate harms across the country. Liberty Mutual and Berkshire Hathaway have also begun limiting coverage in climate-vulnerable areas while continuing to insure U.S. coal mines.

6 594,586,000 short tons or 539,399,322 metric tons. (A short ton, commonly known as a "ton" in the United States, is equivalent to 2,000 pounds); EIA, Table 1. U.S. Coal Production 2017-2023 https://www.eia.gov/coal/production/quarterly/pdf/t1p01p1.pdf

Insurer*	Production (short tons)	Mine Count
AIG	167,428,662	7
Underwriters at Lloyd's of London	135,403,277	10
Starr	103,216,997	9
Skyward Specialty	66,914,669	5
James River	36,291,137	3
Westfield	34,120,579	2
Argo Group	31,208,980	4
Zurich	29,320,227	2
AXA	20,948,513	2
Swiss Re	18,233,969	1
Old Republic	18,233,969	1
AEGIS	9,334,585	1
Berkshire Hathaway	8,312,644	1
Aspen	7,431,273	1
Liberty Mutual	7,431,273	1
Cincinnati Financial	7,431,273	1

*The 'Insurer' column refers to companies by brand names.

U.S. coal mines produced 595 million short tons of coal in 2022. Just 25 mines were responsible for the majority of this production, and 16 insurance companies provided their liability coverage.

ANALYSIS AND IMPLICATIONS

Photo source: [Insure Our Future]

Reclaim Finance analyzed the records that Public Citizen obtained to determine whether any insurers among those listed on the insurance certificates are violating their own policies that restrict them from underwriting coal mines or coal producers. Additionally, the companies listed were reviewed for net zero emissions pledges and for recent exits from regions affected by climate impacts.

AIG: Vague coal policy is either toothless or the company is violating it

AIG is listed on nine of the 25 contracts featured in this report, covering multiple coal developers for seven mines, all of which are listed on the 2022 Global Coal Exit List (GCEL). The GCEL is a global database developed by Urgewald which identifies almost 3,000 companies in the thermal coal value chain based on a set of relative, absolute, and expansion-related criteria applying to mining, power, and services.[7]

In March 2022, AIG published its policy restricting coal coverage,[8] with two relevant clauses:

- With immediate effect, committed to no longer invest in or provide insurance for construction of any new coal-fired power plants, thermal coal mines or oil sands;
- With immediate effect, committed to no longer invest in or underwrite new operation insurance risks of coal-fired power plants, thermal coal mines or oil sands for those clients that derive 30 percent or more of their revenues from these industries, or generate more than 30 percent of their energy production from coal

It is unclear how AIG defines “new operation insurance risks of coal-fired power plants, thermal coal mines” and the company has not provided clarification to date. If the company defines “new operation insurance

7 Global Coal Exit List 2022 database. A project of Urgewald. https://www.coalexit.org/
8 AIG. “Our Net Zero Commitments. https://www.aig.com/content/dam/aig/america-canada/us/documents/about-us/report/sustainability-net-zero-fact-sheet.pdf

risks" as contracts signed with new clients only or new insurance risks that arise for existing clients, the data does not represent policy violations. If the company defines "new operation insurance risks" as the renewal of existing contracts and new clients, then there is a policy violation for every renewed contract in 2022.

If AIG is using either of the first two definitions, then its coal policy is effectively toothless and allows the company to renew virtually every contract related to coal mine operation. For every insurance contract renewed in 2022 for the year 2022-2023 where AIG is involved, it was already insuring the client for the year 2021-2022. This means that the coal restriction policy that AIG announced in March 2022 did not change AIG's exposure to the coal sector.

Swiss Re: Violates its coal policy

The analysis found that Swiss Re violates its own coal policy[9] through its underwriting of Buckskin Mine, which is owned by Buckskin Mining Company. Buckskin Mining Company is listed on the 2022 GCEL because at least 90% of the company's revenue comes from coal business, surpassing the coal share of revenue threshold of 20%. The company produces nearly 10 million metric tons of coal annually.

The relevant excerpt from Swiss Re's policy states:

We target a total phase-out of thermal coal related re/insurance and investments in OECD countries by 2030, and in the rest of the world by 2040.

Until the total phase-out, Swiss Re will exclude re/insurance support to:

- *Companies or projects that have more than 30% of exposure to thermal coal for direct and facultative business*

Swiss Re does not define the term "exposure." Under any reasonable definition, Buckskin Mining Company likely exceeds Swiss Re's 30% threshold. "Exposure" may refer to revenue, liability risk, or the value of assets. Buckskin derives 90% of its revenue from coal, far surpassing a 30% revenue threshold. It is exceedingly unlikely that less than 30% of Buckskin's risk or assets are connected to coal. If that were the case, the company would have lines of business that generate less than 10% of its revenue but more than 70% of its risk.

Zurich: Coal policy loophole allows company to insure major thermal coal mines

In 2019, Zurich updated its coal restriction policy[10] to include the following:
The updated position outlines that Zurich generally will no longer underwrite or invest in companies that:

- *generate more than 30% of their revenue from mining thermal coal, or produce more than 20 million tons of thermal coal per year;*
- *generate more than 30% of their electricity from coal;*
- *are in the process of developing any new coal mining or coal power infrastructure*

The certificates show that from 2020 until November 2022, Zurich insured two subsidiaries

9 Swiss Re. "Swiss Re's ESG Risk Framework". https://www.swissre.com/dam/jcr:5863fbc4-b708-4e61-acc7-6ef685461abb/esg-risk-framework.pdf, p. 24.

10 Zurich."Sustainability Risk: Fossil Fuels, Thermal coal, oil sands and oil shales." https://www.zurich.com/sustainability/strategy-and-governance/sustainability-risk

of Alpha Metallurgical Resources — Alpha Coal West and the third largest U.S. coal producer, Alpha Natural Resources — for operation of the Eagle Butte and Belle Ayr mines. While the mines are among the top producers of U.S. thermal coal, Zurich is not violating its coal policy because it applies only to companies involved in the thermal coal business and in this case, the companies involved appear to conduct most of their business in metallurgical coal, not thermal coal. This underscores the need for Zurich, and all insurers, to explicitly address metallurgical coal in underwriting restrictions, since metallurgical coal, which is currently the basis for making steel, is a significant source of carbon emissions and low-carbon alternatives exist.[11]

Lloyd's of London: Contradicting its own net zero pledge

Lloyd's of London (Lloyd's), a marketplace of underwriters (syndicates) represented by managing agents, is the second-largest insurer on this list, insuring 10 of the top 25 U.S. coal mines.

Lloyd's claims it is committed to achieving net zero emissions from underwriting by 2050[12] and that it is "committed to lead the market to a net-zero underwriting position."[13] However, Lloyd's does not mandate or restrict the underwriting decisions of its market members, in any sector, including coal.[14] This is directly at odds with a credible 1.5°C pathway to reduce emissions from coal combustion by 49% by 2025, 79% by 2030, and 100% by 2050, from 2019 levels, as outlined in the One Earth Climate Model (OECM) sectoral pathway.[15] We note that it is Lloyd's name on many of the insurance certificates, not the names of its market members.

Liberty Mutual: Violates its coal policy

The analysis found that Liberty Mutual appears to violate its coal policy through its underwriting of Bull Mountains Mine No. 1, which is owned by Signal Peak Energy. Signal Peak Energy is listed on the 2022 GCEL because at least 90% of the company's revenue comes from coal business[16], surpassing the GCEL's coal share of revenue threshold of 20%.

The relevant excerpt from Liberty Mutual's policy states:

Liberty Mutual will:

- *No longer accept underwriting risk for companies where more than 25 percent of their exposure arises from the extraction and/or production of energy from thermal coal.*
- *Phase out coverage and investments for existing risks that exceed this threshold by 2023.*[17]

Liberty Mutual does not define "exposure." For the reasons discussed regarding Swiss

11 Reclaim Finance. "Decarbonizing the Steel Sector. The Role of Financial Institutions." March 2023. https://reclaimfinance.org/site/wp-content/uploads/2023/04/Reclaim_Finance_Steel_Decarbonization_2023-2.pdf, p. 4, 9.
12 Lloyd's. "Environmental, Social, and Governance Report 2021." https://lloydsinsureourfuture.com/wp-content/uploads/2023/05/Lloyds_ESG-2021_report_final.pdf, p. 18.
13 Lloyd's. 2023 Lloyd's Market Oversight Plan. p. 16. https://assets.lloyds.com/media/5c2dd5f8-3d34-4932-af4e-8bbe41881736/Lloyd%27s%202023%20Market%20Oversight%20Plan.pdf
14 Lloyd's. "Lloyd's 2023 Market Oversight Plan." https://assets.lloyds.com/media/5c2dd5f8-3d34-4932-af4e-8bbe41881736/Lloyd%27s%202023%20Market%20Oversight%20Plan.pdf. p.16
15 UTS. "How to limit global warming to 1.5C guidance for sectors." https://www.uts.edu.au/isf/news/how-limit-global-warming-1.5degc-guidance-sectors, p. 19
16 Global Coal Exit List 2022 database. A project of Urgewald. https://www.coalexit.org/
17 Liberty Mutual. "Liberty Mutual Insurance Appoints First Chief Sustainability Officer to Oversee Continued Development of Environmental, Social and Governance Agenda." 2019. https://www.libertymutualgroup.com/about-lm/investor-relations/articles/

Re, Liberty Mutual's coverage of Signal Peak Energy, which derives at least 90% of its revenue from coal, likely violates Liberty Mutual's threshold of 25% exposure.

Gaps in Existing Coal Restriction Policies

For the global coal sector, models show that in order to achieve the goal of limiting warming to within 1.5°C, countries that are members of the Organisation for Economic Co-operation and Development (OECD) need to end their use of coal entirely by 2030 and coal plants worldwide need to close by 2040.[18] However, despite the stark warnings, in 2022, global coal production reached an all-time high; the U.S. contributed the fourth-largest share of that record-breaking production.[19]

Even though much of the global insurance industry has adopted some underwriting restrictions for the coal sector, rendering new coal plants outside of China nearly uninsurable,[20] the policies vary widely. Importantly, 29 coal restriction policies out of the existing 45 do not address coverage for existing coal operations; they pertain only to new risks.[21]

While there has been progress to restrict insurance availability for thermal coal, metallurgical coal is often overlooked, as is evident in the loopholes in insurers' coal restriction policies. Metallurgical coal, also called met coal or coking coal, is currently relied upon in steel-making processes, making them very carbon-intensive. The steel sector is the largest industrial emitter of carbon dioxide.[22] Due to its reliance on coal, it produces 7% of global GHG emissions and 11% of global carbon dioxide emissions.[23]

These companies are actively contributing to climate change by enabling the ongoing extraction and burning of coal, but they are abandoning the policyholders who are bearing the brunt of extreme weather events made worse by climate change.

In the case of U.S. coal mining, the top 25 mines ranked by production are all currently operating thermal coal mines that do not appear to be expanding. However, among the larger dataset of U.S. mines, Buchanan Mine #1 is notable as a metallurgical coal mine that is expanding.[24] This reflects the growing

liberty-mutual-insurance-appoints-first-chief-sustainability-officer-oversee-continued-development-environmental-social-and-governance-agenda

18 Paola A. Yanguas Parra et al. Climate Analytics. "Global and regional coal phase-out requirements of the Paris Agreement: Insights from the IPCC Special Report on 1.5°C."https://climateanalytics.org/publications/2019/coal-phase-out-insights-from-the-ipcc-special-report-on-15c-and-global-trends-since-2015/

19 Energy Institute. 2023 Statistical Review of World Energy. https://www.energyinst.org/statistical-review

20 Insure Our Future. "2022 Scorecard on Insurance, Fossil Fuels, and Climate Change". 2022. https://global.insure-our-future.com/2022-scorecard/, p. 15-16.

21 Insure Our Future. Insurance company fossil fuel underwriting policy weblinks and extracts. https://docs.google.com/document/d/1B1zuUw6s4Gye6fyNV7cQxhVkwv7lY16z/edit

22 "Decarbonizing the Steel Sector. The Role of Financial Institutions." Reclaim Finance. March 2023. https://reclaimfinance.org/site/wp-content/uploads/2023/04/Reclaim_Finance_Steel_Decarbonization_2023-2.pdf, p. 4.

23 "Decarbonizing the Steel Sector. The Role of Financial Institutions." Reclaim Finance. March 2023. https://reclaimfinance.org/site/wp-content/uploads/2023/04/Reclaim_Finance_Steel_Decarbonization_2023-2.pdf,, p. 4

24 Sarah Vogelsong. Virginia Mercury. "Buchanan metallurgical coal mine to expand after deal with Virginia,"https://www.

global demand for steel, the production of which uses metallurgical coal. Decarbonizing the steel sector is key to keep the 1.5°C target within reach.

Insuring coal mining is at odds with companies' net zero pledges and a 1.5°C pathway

Among the insurers who are covering U.S. coal mines, AIG, Lloyd's of London, Swiss Re, and Zurich have all made net zero emissions commitments that include emissions associated with their underwriting portfolios.[25] It is directly at odds with a commitment to achieve net zero carbon emissions by 2050 to insure coal mines without a plan to phase out coverage in the very near term, or to insure coal mining companies that lack transition plans aligned with the Paris Agreement's goal of staying within 1.5°C warming. Credible 1.5ºC pathways need to give a higher than 50% chance of limiting global warming to 1.5ºC, should not rely on offsets, and should only rely on negative emissions to a minimal degree, as reflected in the One Earth Climate Model. According to the OECM's sectoral pathways report, which was commissioned by the United Nations–convened Net-Zero Asset Owners Alliance, under a credible 1.5°C pathway the emissions from coal combustion must be reduced 49% by 2025, 79% by 2030, and 100% by 2050, from 2019 levels.[26]

Insurers are withdrawing from climate-affected communities but supporting U.S. coal

Climate impacts — notably hurricanes, floods, wildfires, and hailstorms – are becoming more severe across North America, presenting significant losses to property and casualty insurers. As a result, several companies have become insolvent. In states including California, Colorado, Connecticut, Louisiana, Florida, Oregon, and Virginia, several insurers — among them AIG, Liberty Mutual, Berkshire Hathaway, and Farmers Insurance Group, an affiliated company of Zurich Insurance Group — have announced that they are withdrawing their business for property insurance for certain areas or for certain lines of business across an entire state.[27] [28] [29] [30] These companies are actively contributing to climate change by enabling the ongoing extraction and burning of coal, but they are abandoning the policyholders who are bearing the brunt of extreme weather events made worse by climate change.

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virginiamercury.com/blog-va/buchanan-metallurgical-coal-mine-to-expand-after-deal-with-virginia/

25 AIG. "Our Net Zero Commitments. "https://www.aig.com/content/dam/aig/america-canada/us/documents/about-us/report/sustainability-net-zero-fact-sheet.pdf, p. 1; Swiss Re. "Swiss Re's ESG Risk Framework." https://www.swissre.com/dam/jcr:5863f-bc4-b708-4e61-acc7-6ef685461abb/esg-risk-framework.pdf, p. 3.;Zurich. "Net-zero in underwriting." https://www.zurich.com/en/sustainability/planet/net-zero-in-underwriting; Rebekah Clement. Lloyd's of London. "Insuring an orderly, but urgent transition." https://www.lloyds.com/about-lloyds/responsible-business/esgreport/climate, Foreword; Liberty Mutual. 2022 Task Force on Climate-Related Financial Disclosures Report. https://www.libertymutualgroup.com/documents/lm-tcfd-report-2022.pdf p. 30.

26 UTS. "How to limit global warming to 1.5C guidance for sectors." https://www.uts.edu.au/isf/news/how-limit-global-warming-1.5degc-guidance-sectors, p. 19.

27 Jean Eaglesham. The Wall Street Journal. Home Insurers Curb New Policies in Risky Areas, https://www.wsj.com/articles/home-insurers-curb-new-policies-in-risky-areas-nationally-c93abac0; Reinsurance News. "AIG and Farmers join other insurers in pulling back from climate and cat exposed property" risks https://www.reinsurancene.ws/aig-and-farmers-join-other-insurers-in-pulling-back-from-climate-and-cat-exposed-property-risks/

28 Steve Hallo. PropertyCasualty360."Liberty Mutual pulling BOP line in California" https://www.propertycasualty360.com/2023/07/27/liberty-mutual-pulling-bop-lines-in-california/

29 Mike Pangilian. Insurance Business Magazine. Insurers retreat from Coastal Virginia as climate risks soar https://www.insurancebusinessmag.com/us/news/catastrophe/insurers-retreat-from-coastal-virginia-as-climate-risks-soar-453197.aspx

30 Jordan Valinsky. CNN. "Farmers Insurance Pulls out of Florida." https://www.cnn.com/2023/07/12/business/farmers-insurance-florida/index.html

IMPACTS OF COAL

Photo source: [bilanol]

In addition to the aforementioned contribution to climate change from burning coal, coal extraction and production contributes significantly to public health harms, causes air and water pollution, and imposes direct threats to worker safety. By underwriting these mines and thus contributing to these harms, insurers contradict their own missions of protecting communities and mitigating risks, and the values behind being good corporate citizens.

Public health

Coal mines pose significant health risks to workers and surrounding communities, contributing to health problems including cardiovascular disease, cancer, reproductive problems, and neurological disorders. Soot, a by-product of coal mining, is one of the deadliest air pollutants.[31] Soot is composed of particles of mixed metals that are easily inhaled into the lungs.[32] West Virginia University examined air samples around mountaintop mines and found high levels of silica, a toxic heavy metal, that promotes cancerous tumor growth.[33]

The risks to coal miners are so great that the term "coal mine-dust disease"[34] was coined to capture the various lung and heart diseases coal miners face including: bronchitis, emphysema, congestive heart failure, and heart attacks.[35]

31 Center for American Progress. "Soot Pollution 101."https://www.americanprogress.org/article/soot-pollution-101; Sarah Saadoun. Human Rights Watch. "The Coal Mine Next Door." https://www.hrw.org/report/2018/12/10/coal-mine-next-door/how-us-governments-deregulation-mountaintop-removal-threatens
32 Sierra Club. "How Coal and Gas Damages Your Health." https://coal.sierraclub.org/the-problem/how-coal-and-gas-damages-your-health
33 Sarah Saadoun. Human Rights Watch. "The Coal Mine Next Door." https://www.hrw.org/report/2018/12/10/coal-mine-next-door/how-us-governments-deregulation-mountaintop-removal-threatens
34 Juciano Gasparotto, Katia Da Boit Martinello. "Coal as an energy source and its impacts on human health." https://doi.org/10.1016/j.engeos.2020.07.003
35 Sierra Club. "How Coal and Gas Damages Your Health." https://coal.sierraclub.org/the-problem/how-coal-and-gas-damages-your-health

In recent years, cases of black lung disease have begun rising again in miners. Black lung disease is caused by exposure to hazardous coal mine dust and is completely preventable.[36] A report by the National Institute for Occupational Safety and Health found that one in ten underground coal miners who worked in mines for at least 25 years developed black lung disease.[37] The numbers are highest in Appalachia, with as many as one in five having evidence of black lung.[38] Since 2005, black lung cases have tripled in Appalachia, and progressive massive fibrosis has risen tenfold among long-term miners.[39]

Exposure to air pollutants also has long term effects on male and female reproductive systems. This includes decreased sperm count, disruption of menstrual cycles, and increased risk of infertility. Air pollution also correlates to low birth weight, premature birth, and increases the risk of miscarriage. Studies have found a significant decrease in sperm count, semen volume, and seminal viscosity in male coal miners.[40]

In 2022, five U.S. Senators called on MSHA to release new Occupational Safety and Health Administration (OSHA) standards for the level of exposure to silica that miners face. Current regulation exposes miners to levels twice as high as other industries.[41]

Water and air pollution

As coal's accessibility through surface mining has decreased, the coal industry has increased the practice of mountaintop removal. Mountaintop removal is a highly destructive form of surface mining that greatly harms air quality and surrounding waterways. The process involves clearcutting forests, removing vegetation, and using explosives to remove and level the mountaintops, causing debris to fall into nearby valleys and streams.[42] Throughout West Virginia, Kentucky, Virginia, and Tennessee, more miles of stream have been buried from mountaintop removal than the length of the Mississippi River. This water pollution greatly affects birds, insects, bacteria, and fish. A U.S. Geological Survey found that streams affected by mining pollution had half as many fish species and one third as many fish than non-impacted streams.[43]

Worker safety

The coal industry has a long history of failing to protect its workforce, especially at the point of production. Two examples, of many, are below.

In 2010, 29 miners were killed in an explosion at the Upper Big Branch Mine in West Virginia. An independent investigation found that the mine's owner, Massey Energy, had not maintained basic safety standards at the

36 National Institute for Occupational Safety and Health. Press release. https://www.cdc.gov/niosh/updates/upd-07-20-18.html
37 David J. Blackley, Cara N. Halldin, A. Scott Laney, "Continued Increase in Prevalence of Coal Workers' Pneumoconiosis in the United States, 1970–2017", American Journal of Public Health 108, no. 9 (September 1, 2018): pp. 1220-1222. https://doi.org/10.2105/AJPH.2018.304517
38 Ibid.
39 Taylor Sisk. "Protecting Miners Amid a Black Lung Resurgence." https://undark.org/2023/03/21/protecting-miners-amid-a-black-lung-resurgence/
40 Juciano Gasparotto, Katia Da Boit Martinello. "Coal as an energy source and its impacts on human health." https://doi.org/10.1016/j.engeos.2020.07.003
41 Taylor Sisk. "Protecting Miners Amid a Black Lung Resurgence." https://undark.org/2023/03/21/protecting-miners-amid-a-black-lung-resurgence/
42 Union of Concerned Scientists. "Coal and Water Pollution." December 6, 2017. https://www.ucsusa.org/resources/coal-and-water-pollution#:~:text=Exposure%20to%20coal%20ash%20is,and%20other%20serious%20health%20conditions
43 Sarah Saadoun. Human Rights Watch. "The Coal Mine Next Door." https://www.hrw.org/report/2018/12/10/coal-mine-next-door/how-us-governments-deregulation-mountaintop-removal-threatens

mine, despite multiple citations. The investigation ultimately cited 'corporate culture' as the root cause of the accident and pointed to Massey's years-long efforts to intimidate miners into not reporting the dangerous working conditions.[44] [45]

In June of 2022, the Mine Safety and Health Administration proposed nearly $1.2 million in fines to M-Class Mining LLC, which operates the MC#1 Mine after an underground fire. Operators continued coal production, did not evacuate miners, and failed to notify the MSHA of the fire.[46] In total in 2022, MSHA reported 10 fatalities from U.S. coal mining operations.[47] [48]

Exposure to air pollutants also has long term effects on male and female reproductive systems. This includes decreased sperm count, disruption of menstrual cycles, and increased risk of infertility.

44 West Virginia Office of Miners' Health & Training and Mine Safety and Health Administration. Upper Big Branch Mine Disaster Report, Executive Summary. https://minesafety.wv.gov/PDFs/Performance/EXECUTIVE%20SUMMARY.pdf

45 U.S. Department of Labor. Press Release. "U.S Labor Departments MSHA cites corporate culture as root cause of Upper Big Branch Mine disaster." https://www.dol.gov/newsroom/releases/msha/msha20111206

46 Mine Safety and Health Administration. https://www.msha.gov/news-media/general/2022/06/17/us-department-labor-finds-illinois-mine-operator-tried-conceal

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Photo source: [lcrms]

CONCLUSION

Insurers have a crucial role to play in aligning with a 1.5ºC pathway, and their public commitments are an essential piece of information about their plans and ability to align their underwriting with this path. Yet the data from coal insurance certificates reveals serious gaps between insurers' public statements and their underwriting. The presence of insurers such as Zurich and Swiss Re in coal underwriting shows that even the strongest purported commitments within the industry remain insufficient, while other insurers' policies remain so weak as to be ineffective.

As climate change threatens to make certain parts of the world "uninsurable," these insurers continue to undermine their own markets by prioritizing continued coverage for coal mines. The contradictions between insurers' sustainability statements and their continued support for coal raises questions about their seriousness regarding the climate crisis and their related commitments, their ability to evaluate and act on long-term risks from climate change, and the need for stronger regulatory oversight.

Going forward, all insurance companies must:

- Immediately cease insuring new and expanded coal mines or coal power infrastructure projects.

- Immediately stop insuring any new clients from the coal sector which are not aligned with a credible 1.5ºC pathway, and stop offering any insurance services which support the expansion of coal production with existing clients.
- By the end of 2024, phase out all insurance services for existing coal sector clients which are not aligned with a credible 1.5°C pathway.
- Immediately divest all assets, including assets managed for third parties, from coal companies that are not aligned with a credible 1.5ºC pathway.

Methodology

To determine which insurance companies are insuring U.S. coal mines across the U.S., Public Citizen filed public record requests for the insurance certificates with nine states: Wyoming, Montana, Pennsylvania, West Virginia, Kentucky, North Dakota, Texas, Indiana, and Illinois. To select which mines to analyze, production data was drawn for coal from the Mine Employment and Coal Production 2022 dataset via the Mine Safety and Health Administration's Mine Data Retrieval System. The top 25 producing mines were selected for analysis, representing more than 60% of total U.S. coal production.

To produce the table of insurers and their associated coal production, the production data listed for each insurer is based on the production of all the mines for which they provided at least part of the insurance coverage during 2022 (excluding pollution and workers compensation). In some cases, multiple insurers are listed per mine. In these cases, the full production for that mine is attributed to each insurer. Where subsidiary companies are listed on insurance certificates, the mines and production are attributed to the parent company in the table and identified by the parent company's brand name. For example, "AIG" is listed for the mines insured by Lexington Insurance and National Union Fire Insurance Company Pittsburgh, PA, which are subsidiaries of American International Group, Inc. Insurers providing coverage to a mine for exclusively workers compensation or pollution liability were excluded from analysis.

In addition to the top 25 companies analyzed in the findings section, the data from additional insurance certificates collected through the public record requests, covering ten additional mines, is included below.

The contradictions between insurers' sustainability statements and their continued support for coal raises questions about their seriousness regarding the climate crisis and their related commitments, their ability to evaluate and act on long-term risks from climate change, and the need for stronger regulatory oversight.

Appendix

	Mine Name	State	Insurer (Identified by the parent company)	Production (short tons)
1	Black Thunder	WY	AIG	62,181,557
2	North Antelope	WY	AIG, Underwriters at Lloyd's of London	60,389,761
3	Antelope Coal	WY	Skyward Specialty, Starr, Westfield	21,656,666
4	Buckskin	WY	Swiss Re, Old Republic	18,233,969
5	Eagle Butte	WY	Zurich, James River	15,062,345
6	Belle Ayre	WY	Zurich, Skyward Specialty, James River	14,257,882
7	Freedom Mine	ND	AXA, Starr	13,422,628
8	Cordero Rojo Mine	WY	Skyward Specialty, Westfield, Starr	12,463,913
9	Caballo Mine	WY	AIG, Underwriters at Lloyd's of London	12,055,977
10	Bailey Mine	PA	Starr	11,567,919
11	Spring Creek Mine	MT	Starr, Skyward Specialty	11,565,298
12	Rawhide Mine	WY	AIG, Underwriters at Lloyd's of London	10,335,565
13	River View Mine	KY	Starr	10,158,148
14	Marshall County Mine	WV	Underwriters at Lloyd's of London, Argo Group	9,640,814
15	Kosse Strip	TX	AEGIS	9,334,585
16	Tunnel Ridge Mine	WV	Starr, Berkshire Hathaway, AIG, Underwriters at Lloyd's of London	8,312,644
17	Mach #1	IL	Underwriters at Lloyd's of London, Argo Group	7,715,724
18	Falkirk Mine	ND	Starr, AXA	7,525,885
19	Bull Mountains Mine No. 1	MT	AIG. Cincinnati Financial, Aspen, Liberty Mutual	7,431,273
20	Harrison County Mine	WV	Underwriters at Lloyd's of London, Argo Group	7,039,318
21	Rosebud Mine & Crusher/Conveyor	MT	Skyward Specialty, James River	6,970,910
22	Marion County Mine	WV	Argo Group, Underwriters at Lloyd's of London	6,813,124
23	Bear Run Mine	IN	AIG, Underwriters at Lloyd's of London	6,721,885
24	Lively Grove	IL	Starr	6,543,896
25	MC #1 Mine	IL	Underwriters at Lloyd's of London	6,378,465

Ten additional mines

Production Rank	Mine Name	State	Production	Parent Company
26	Ohio County Mine	WV	6,368,730	Argo Group
27	Enlow Fork Mine	PA	6,291,939	Starr
28	Harvey Mine	PA	6,074,719	Starr
29	Cumberland Mine	PA	5,381,422	Skyward Specialty, AIG
31	Mine No. 1 (aka Hamilton Mine No. 1, previously known as White Oak Mine)	IL	4,693,251	Starr, Berkshire Hathaway, AIG, Underwriters at Lloyds of London
32	Deer Run Mine	IL	4,469,223	Argo Group, Underwriters at Lloyds of London,
33	West Elk Mine	CO	4,355,703	AIG, Aspen
34	Buchanan Mine No. 1	VA	4,309,238	Chubb
35	Prairie Eagle Underground	IL	4,271,659	Skyward Specialty
36	Cardinal	KY	4,115,682	Starr

Public Citizen is a nonprofit advocacy organization championing the public interest in the halls of power.

Insure Our Future is an international campaign calling on insurance companies to exit coal, oil, and gas in line with a pathway limiting global warming to 1.5°C.

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