

POLICY BRIEF

**PUTTING THE TRUST BACK IN THE
BLACK LUNG DISABILITY TRUST FUND**

SEPTEMBER 30, 2021

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I. INTRODUCTION

Current and former coal miners and their communities face many challenges. The decline of the coal industry and the resulting threat to paychecks and benefits looms large. The waning industry also leaves behind unreclaimed mines, holes in state and local government budgets,¹ and, as we discuss here, the physical scars of work in the coal mines. When miners inhale dust, over time they can develop coal workers' pneumoconiosis, commonly known as CWP or black lung disease. Tiny coal particles inflame and stiffen the lungs, causing cough, shortness of breath, and chest tightness. Worsening disease reduces blood oxygen levels, stressing other parts of the body, including the heart.² The most advanced cases of CWP feature masses of toughened tissue, typically in the upper to middle lungs, known as progressive massive fibrosis (PMF).³ Sufferers can become totally disabled or die prematurely from the disease.

Miners' risks are not only from coal dust. As the mineral resources have played out, some coal seams have gotten thinner and require cutting away more rock to get to the coal. This creates silica dust as well as coal dust, adding the risk of silicosis to the hazards of pneumoconiosis.⁴ This dangerous dual exposure can affect even workers with only five years of mining experience.⁵ Adding to these concerns is the new fear that infection from COVID-19 could hit those with black lung disease and silicosis particularly hard.

Unfortunately, the risk of developing CWP from a coal mining career is high, and in some areas the risk has gotten higher. Currently more than ten percent of coal miners with 25 years or more of mining experience have black lung. The highest prevalence is in central Appalachia, where 20.6 percent of miners suffer from the disease and approximately five percent develop PMF.⁶ This is the highest such incidence on record over the past 25 years.⁷ Appalachian coal miners could be disproportionately at risk for lung disease because of the area's higher proportion of underground mines, but there are other factors influencing the incidence of disease that are still not fully understood.

¹ Adele C. Morris & Noah Kaufman and Siddhi Doshi, 2020, "Revenue at Risk in Coal-Reliant Counties," *NBER Chapters*, in: *Environmental and Energy Policy and the Economy*, 2, p. 83-116

² Carrie Arnold, 2016, "A Scourge Returns: Black Lung in Appalachia," *Environ Health Perspect* 124(1): A13-A18.

³ Kelly J. Butnor MD, Victor L. Roggli MD, "Pneumoconioses" in *Practical Pulmonary Pathology: A Diagnostic Approach* (Third Edition), 2018

⁴ Brent C. Doney, David Blackley, Janet M. Hale, Cara Halldin, Laura Kurth, Girija Syamlal, and Scott Laney, 2019, "Respirable coal mine dust in underground mines, United States, 1982-2017," *Am J Ind Med*, 62(6): 478-485.

⁵ Anna Allen and Carl Wentz, "Black Lung Disease On The Rise: 5 Questions Answered," *The Conversation*, February 16, 2018, <https://theconversation.com/black-lung-disease-on-the-rise-5-questions-answered-91637>

⁶ David J. Blackley, Cara N. Halldin, and A. Scott Laney, 2016, "Continued Increase in Prevalence of Coal Workers' Pneumoconiosis in the United States, 1970-2017," *Am J Public Health* 108(9): 1220-1222.

⁷ U.S. Government Accountability Office, *Black Lung Benefits Program: Improved Oversight of Coal Mine Operator Insurance Is Needed*, GAO-20-21, 2021, p. 7, <https://www.gao.gov/assets/gao-20-21.pdf>

CWP is a workplace injury, so coal mining companies are legally responsible for the care and compensation of their workers and retirees. When they go out of business, the federal government finances benefits through the Black Lung Disability Trust Fund (the Trust Fund). It is funded primarily by an excise tax on coal produced in the United States. Exported coal and lignite coal, respectively about 13 percent and 8 percent of U.S. coal production, are exempt from the tax.⁸ The Trust Fund also receives revenue from reimbursements, interest, fines, and penalties from mine operators and short-term advances from the Treasury.⁹

This paper makes two key points. First, coal production is no longer a reliable source of revenue to fund the Black Lung Program. Second, the problem is going to get worse fast, and policymakers should promptly prepare for that and ensure that coal workers are not left behind. As U.S. coal production falls, two factors strain Trust Fund resources. Coal companies go bankrupt, ceding their benefit liabilities to the federal Black Lung Program. For example, from 2014 to 2016, coal company bankruptcies transferred about \$865 million in benefit liabilities to the Trust Fund.¹⁰ At the same time, lower coal production reduces revenues generated by the federal excise tax on coal that go directly to the Trust Fund. These increasing liabilities and decreasing revenues, along with interest on previous debt, are rapidly undermining the fiscal balance of the black lung benefits program. New policies to reduce greenhouse gas (GHG) emissions in the power sector will reduce coal consumption and production dramatically further, exacerbating the insufficiency of the Trust Fund.¹¹

2. TRENDS AND OUTLOOK FOR THE TRUST FUND

The U.S. federal government's Division of Coal Mine Workers' Compensation, a.k.a. the Black Lung Program, pays claims under the Black Lung Benefits Act. The program administers benefits to coal miners who are totally disabled by pneumoconiosis and related conditions that were caused by work in coal mines. Unfortunately, although the number of people receiving benefits has gone down, the number of people identified with the disease is going up, and that suggests the number of beneficiaries will rise when those with the disease become totally disabled. The

⁸ Lignite's exemption arose from a 1977 amendment. The Senate Finance Committee concluded that there was little or no evidence to connect lignite mining with black lung. See U.S. Energy Information Administration, "Coal Explained: Coal Imports and Exports," <https://www.eia.gov/energyexplained/coal/imports-and-exports.php> and U.S. Energy Information Administration, "Coal Explained: Coal Prices and Outlook,"

<https://www.eia.gov/energyexplained/coal/prices-and-outlook.php#:~:text=Lignite%20accounted%20for%20about%208,States%20in%202018%20was%20subbituminous.>

⁹ U.S. Department of Labor, "Congressional Budget Justification: Black Lung Disability Trust Fund," 2019, p. 7, <https://www.dol.gov/sites/dolgov/files/general/budget/2019/CBJ-2019-V2-08.pdf>

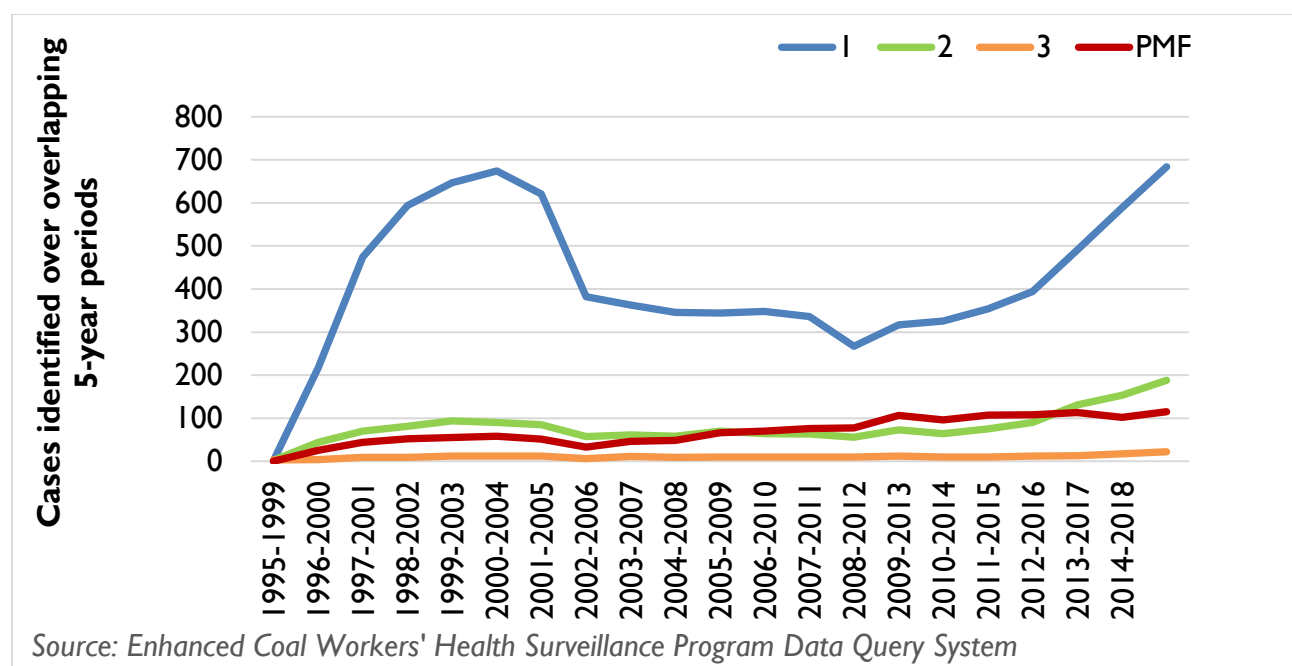
¹⁰ U.S. Government Accountability Office, *Black Lung Benefits Program: Improved Oversight of Coal Mine Operator Insurance Is Needed*, p. 11.

¹¹ Morris and others (2019) describe the likely declines in U.S. coal production that could arise from a carbon tax. See Adele Morris, Noah Kaufman, and Siddhi Doshi, 2019. "The Risk of Fiscal Collapse in Coal-Reliant Communities," Center for Global Energy Policy, Columbia SIPA, <https://www.energypolicy.columbia.edu/research/report/risk-fiscal-collapse-coal-reliant-communities>

Government Accountability Office (GAO) expects that higher rates of the disease in its most severe form, PMF, particularly among Appalachian coal miners, could drive up the number of beneficiaries.¹²

Figure I below shows the number of CWP cases identified from 1999 to 2018 by surveys conducted by the Coal Workers' X-ray Surveillance Program and the Enhanced Coal Workers' Health Surveillance Program in overlapping 5-year periods. The graph partitions cases by increasing severity, from categories one through three to PMF.¹³ The blue curve shows that the greatest recent increases in identified cases have been those with relatively early disease. These data provide something of a preview of new beneficiaries to come. Owing to the progressive nature of the disease, people who now have early disease will likely later shift to higher severity categories and eventually become eligible for disability benefits.

Figure I: Number of U.S. cases of Coal Workers' Pneumoconiosis identified in two voluntary surveys of working miners



Importantly, the surveys shown in Figure I primarily target current miners and offer limited coverage of former miners. In recent decades, the estimated participation in these surveys has been between 30 and 40 percent of the potentially affected population. That means we do not know exactly how many people have CWP and may become disabled by it, and the values in

¹² Ibid, p.10.

¹³ The National Institute for Occupational Safety and Health, *Enhanced Coal Workers' Health Surveillance Program Data Query System*, 2020, <https://webappa.cdc.gov/ords/cwhsp-database.html>

Figure 1 likely significantly underestimate its true prevalence.¹⁴ In sum, based on just the data available, the federal government should prepare at least for increased demands on the Trust Fund that are foreseeable. Depending on the significance of data gaps, ultimate costs could be much higher.

Tax collection outlook

Under current law, future expenses of the program are substantially higher than projected revenues to the Trust Fund. The first factor driving the mismatch is the black lung excise tax (BLET) rates. Tax rates are currently \$1.10 per short ton of coal produced from underground mines (black line) and \$0.55 per short ton from surface mines (blue line), or 4.4 percent of the coal's selling price, whichever is lower.¹⁵ Those dollar-value rates are the same in nominal terms as they were in 1987, a real decline of 68 percent.

Coal excise tax rates fell roughly in half in 2019, back to the same nominal rates applicable in 1978. In 2020, the tax rose back to 2018 levels for the 2020 calendar year only, and legislation in 2021 extended the higher rates through the 2021 calendar year.¹⁶ Unless Congress again enacts an extension, rates will roughly halve again in 2022.¹⁷ If that happens, revenues will also roughly halve, all else equal. To illustrate, the rate cuts in 2019 reduced revenues in FY 2019 by 52.4 percent (\$167.5 million) relative to FY 2018.¹⁸

Policymakers have long recognized the problems created by inadequate revenue for the program. Even in 1977, when Congress debated the establishment of the coal excise tax, lawmakers knew the tax would probably not raise enough to support disabled miners fully. At the time, they believed that would motivate future Congressional action. One 1977 report wrote: "The Committee estimates that the proceeds of the tax will be less than the amount of benefits payable from the trust fund...this need for a general revenue contribution to the trust fund will call the attention of the Senate to the size of the cost involved in this program."¹⁹

¹⁴ Blackley and others, "Continued Increase in Prevalence of Coal Workers' Pneumoconiosis in the United States, 1970–2017," p. 1221

¹⁵ One rationale for the different tax rates on surface and underground coal lies in the higher likelihood of the disease from work in underground mines. For more on rates, see U.S. Internal Revenue Service, "Change in Rate for Coal Excise Tax," <https://www.irs.gov/businesses/small-businesses-self-employed/change-in-rate-for-coal-excise-tax#:~:text=The%20section%204121%20rate%20of,Excise%20Tax%20Return%2C%20IRS%20Nos> and Department of the Interior, "Coal Excise Tax," <https://revenue.data.doi.gov/how-it-works/coal-excise-tax/>

¹⁶ U.S. House, *Consolidated Appropriations Act*, 2021, HR 133, 116th Cong, 2021, <https://www.gpo.gov/fdsys/pkg/CRECB-2001-pt14/pdf/CRECB-2001-pt14-Pg20400-3.pdf>

¹⁷ U.S. Senate, Committee on Finance, *Black Lung Benefits Revenue Act of 1977 Report* (to Accompany S. 1538), S. Rep. 95-336, 95th Cong, 1977, <https://www.finance.senate.gov/imo/media/doc/srpt95-336.pdf>

¹⁸ U.S. Department of Labor, *Agency Financial Report*, 2019, p. 27, <https://www.dol.gov/sites/dolgov/files/OPA/reports/2019annualreport.pdf>

¹⁹ Tax Aspects of Black Lung Legislation S. 1538, 1977, <https://www.jct.gov/CMSPages/GetFile.aspx?guid=b29e5c71-0268-4b7c-9f73-94c1f0e7cea0>

Even if Congress stabilizes the tax rates at their current level, the Trust Fund is ultimately still fatally tied to coal production. The challenge of this linkage is clear over the past decade or so. Figure 2 below reports annual BLET collections since 1999 and projected revenue (as of 2020) from 2020 to 2024. During the 41.3 percent decline from 2007 to 2018, tax rates were constant and coal prices were fairly stable. The steep drop in BLET revenue stemmed largely from falling coal production.

Figure 2: Black lung excise tax collections (millions of dollars, nominal)

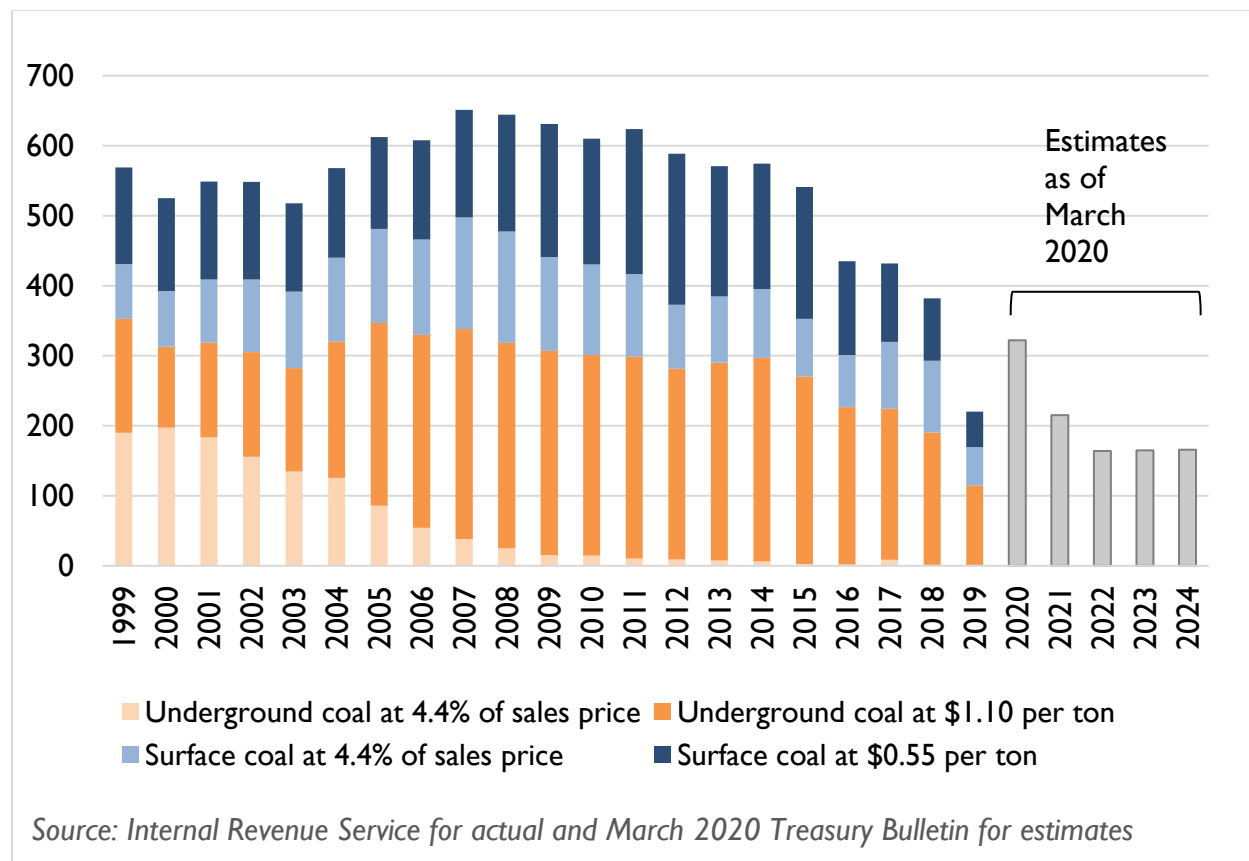
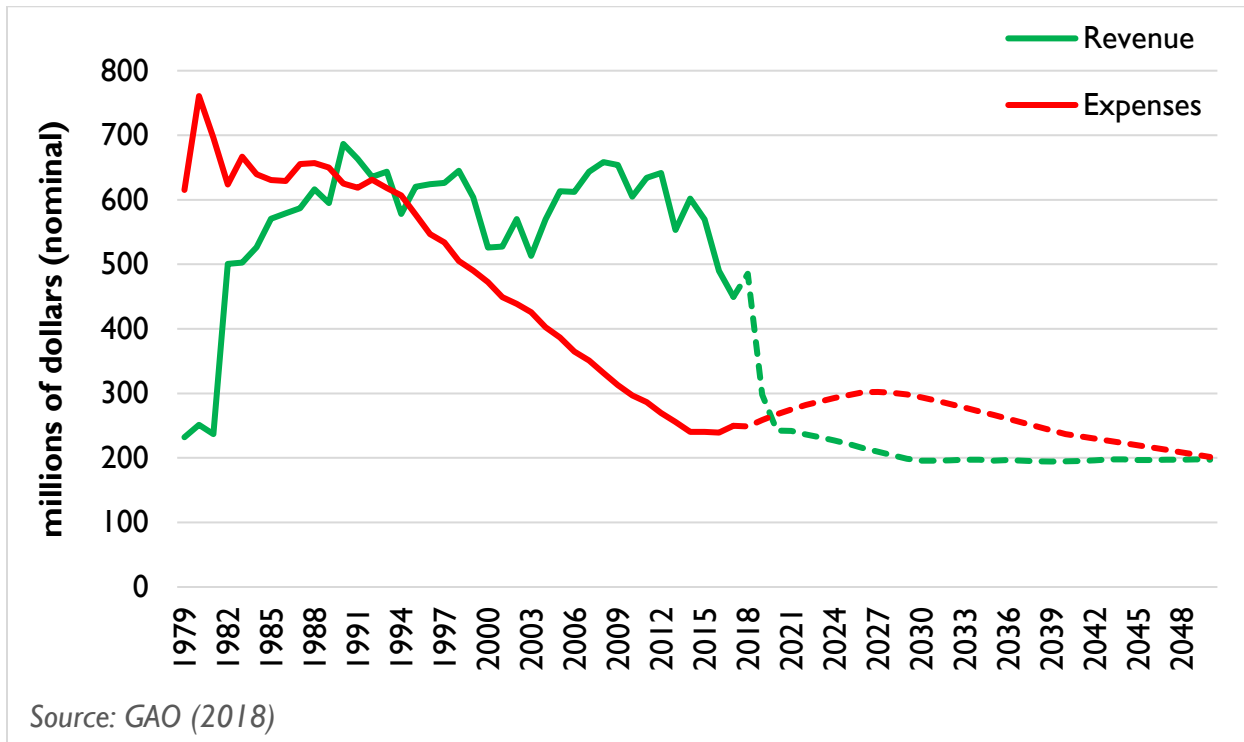


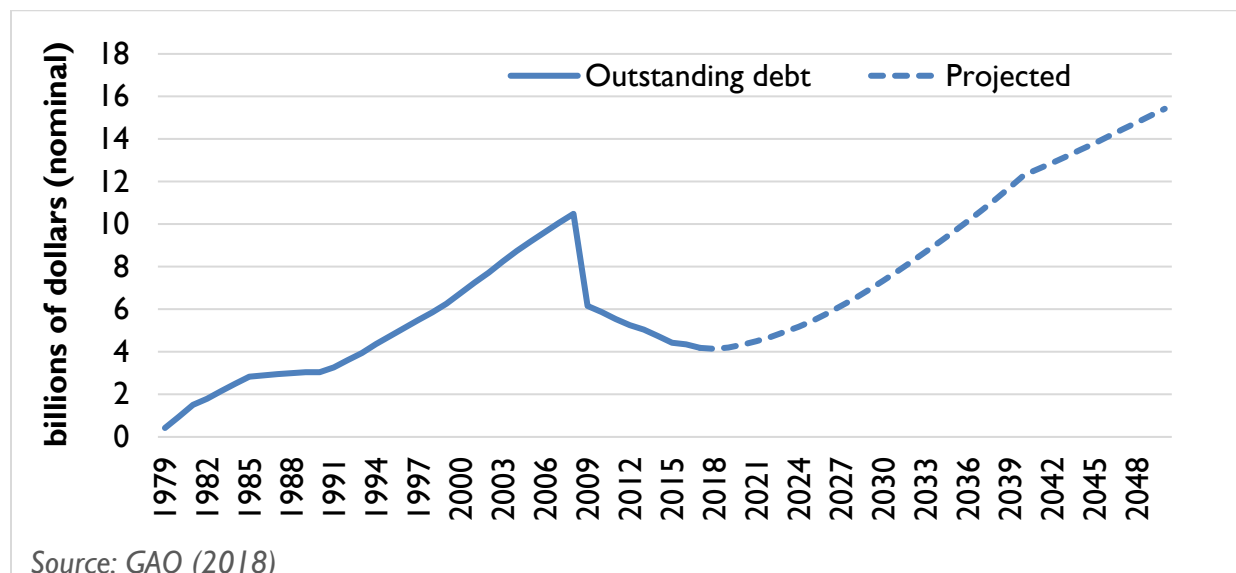
Figure 3 below shows total Trust Fund revenues (in green) and expenditures (in red) since 1979. It also shows GAO's projections for those values from 2017 to 2050, assuming coal excise tax rates remain at the lower levels initiated in 2019. Actual values are the solid lines, and dashed lines are projections. Total revenue includes interest payments and fines and fees paid by mine operators, but not new loans from the Treasury to cover deficits. Expenses do not include interest payments to the Treasury, just principal payments.

**Figure 3: GAO's estimated Trust Fund revenues and expenditures:
Actual and projected**



From Figure 3, Trust Fund revenues, even at the lower tax rates prevailing in 2019, look like they should have been covering expenses in recent years. However, a problem has lurked in numbers not included in Figure 3: loans from the Treasury and the consequent interest payments back to the Treasury. Figure 4 below shows the principal debt owed by the Trust Fund to the Treasury's General Fund as reported by GAO (in nominal dollars). The figure shows that outstanding debt rose continuously from the establishment of the Trust Fund through 2008, when Congress enacted a one-time appropriation of \$6.5 billion in debt forgiveness. However, as of September 2019, Trust Fund debt still totaled \$5.85 billion. The more-debt-from-existing-debt dynamic continues.

**Figure 4: Trust Fund debt to Treasury's General Fund:
Actual and projected**



Without new policies, GAO projects trust fund debt will rise through the middle of the century. How much worse would the debt be if policies reduce coal production even further? To investigate this, we look to U.S. coal production projections from the Department of Energy's Energy Information Administration (EIA).²⁰ EIA did both reference projections (which assume no new policies and projections under policy scenarios in which a fee is applied to the carbon content of fossil fuels used in the electricity sector).²¹ The fees begin in 2021 and increase by five percent over inflation each year thereafter. Over the decade following 2019, EIA's reference scenario projects that U.S. coal production declines by about 20 percent. In the CO₂ fee scenarios, coal production falls far more. The fee beginning at \$15 per ton of CO₂ projects coal production would decline by about three quarters over the next decade.

Figure 5 shows estimates of BLET revenue with and without the fee starting at \$15 that EIA modeled, in red and blue, respectively. The scenarios in Figure 5 specify the BLET rate paths applicable. Solid lines reflect extending current BLET rates and dashed lines let rates fall as scheduled. In green, the figure also reports total revenue projections from GAO (2018), including interest and fees from mining operators, assuming rates drop.

²⁰ John Larsen, Kate Larsen, Whitney Herndon, Peter Marsters, Hannah Pitt, and Shashank Mohan, 2018, "Taking Stock 2018," Rhodium Group, <https://rhg.com/research/taking-stock-2018/> and see Energy Information Administration, "In 2018, U.S. Coal Production Declined as Exports and Appalachian Region Prices Rose," Today in Energy, 2019, <https://www.eia.gov/todayinenergy/detail.php?id=38132>

²¹ See Energy Information Administration, "Annual Energy Outlook 2021," 2021, https://www.eia.gov/outlooks/aeo/tables_side.php

**Figure 5: Projected BLET revenue,
With and without a CO₂ fee and with different BLET tax rates**

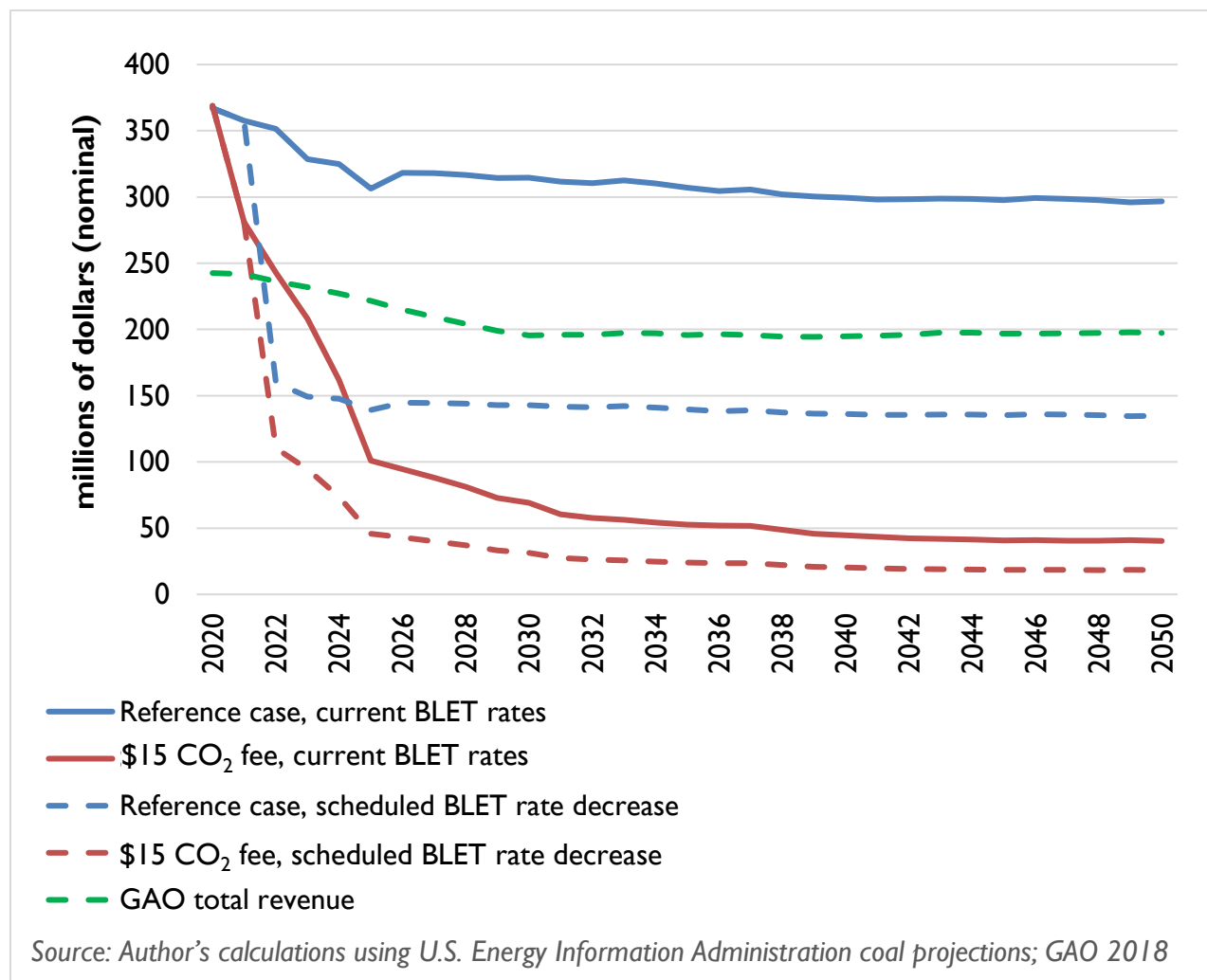


Figure 5 shows how climate policy could dramatically reduce BLET revenue, whether or not the BLET rate falls. Comparing the solid red line (with the CO₂ fee) and the dashed blue line (with the rate decrease) shows that imposing the CO₂ fee lowers annual revenue by significantly more than lowering BLET tax rates. Allowing BLET rates to fall and imposing the CO₂ fee (the dashed red line) would lower BLET revenue by about 90 percent by 2030 relative to doing neither.

3. RECOMMENDATIONS

This paper emphasizes the fiscal challenges to the Black Lung Disability Trust Fund, particularly if policymakers adopt meaningful new policies to reduce CO₂ emissions from the power sector. Most urgently, we recommend prioritizing and acting on research to explain why so many miners are still getting sick, including from relatively short service in the mines. Preventing new cases of black lung is the best way to improve the finances of the program. Second, policymakers could make all these decisions easier by gathering better data on current and former miners, identifying those with CWP, and tracking their illness as it progresses. These surveys are important to help current miners avoid worse disease by catching it early and limiting further dust exposure. Surveys that actively engage former miners could help them get the benefits they deserve and reduce guesswork in program projections.

Also urgent is more vigorous oversight by the Department of Labor, which is responsible for ensuring that coal mine operators adequately insure their black lung liabilities. Asset values of the coal industry are likely to erode further, so there is no time to waste to prevent their liabilities falling into the laps of taxpayers. Congress should also reform the protracted and financially-conflicted system miners face in accessing benefits. Ailing miners should not have to struggle to receive their due assistance, and physicians' propensity to diagnose a coal workplace illness should not depend on who is paying them.

To resolve the decrepit fiscal condition of the black lung program, policymakers could allow the Treasury to adjust the coal tax rate periodically to cover current and projected federal black lung expenses and gradually retire the trust fund's debt. This would adapt the program to changing coal production levels and disease trends and keep the responsibility on coal companies. Further, mine operators would know that if they declare bankruptcy at one facility, the tax rate on their coal produced elsewhere will rise, reducing the incentive to restructure.

Soon, however, U.S. coal production may fall to levels insufficient to fund black lung benefits appropriately. As the coal industry's dust settles, an obvious option that would serve multiple goals is a fee on the carbon content of all climate-damaging fossil fuels. If imposed economy-wide, a small fraction of a single year's proceeds could fund robust benefits for coal miners and their families and retire the trust fund debt. It could also help coal-reliant areas cope with other costly legacies of the industry, such as abandoned mines and hollowed out revenue systems.

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