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Poisoned Wells

U.S. Taxpayers Could Be on Hook for Up to \$18 Billion Well Cleanup Shortfall

By Alan Zibel

Oil industry lobbyists and their allies on Capitol Hill are working to defeat a proposal to strengthen federal requirements to force fossil fuel companies to cover the cost of cleaning up drilling sites around the country. Without these crucial protections, the oil and gas industry could stick taxpayers with a massive bill of between \$2.9 billion and \$17.7 billion.

For decades, the U.S. oil and gas industry has taken advantage of toothless federal rules that govern drilling on public lands. The federal government has charged woefully inadequate royalties to compensate taxpayers for oil and gas extraction¹ and failed to require that drilling companies provide adequate financial guarantees² to ensure that wells get cleaned up if drillers go bust.

The Biden administration is now working to ensure that fossil fuel companies take responsibility for cleaning up their operations if they fall into financial trouble,³ proposing more stringent drilling and cleanup rules. This new proposal, released in summer 2023, builds on legislation passed in 2022 that hiked the royalties charged to fossil fuel companies for drilling on public lands.

To illustrate the scale of the well-cleanup problem, Public Citizen estimated the potential taxpayer cost of cleaning up nearly 89,350 wells on 23.7 million acres of federal land, based on the Bureau of Land Management's estimate for how many existing wells are capable of production.⁴ As of August 2022, the BLM identified 8,968 wells that are defined as "idle" – meaning that have not been operational for at least four years.⁵

The analysis (**Table 1**) examines these three scenarios for oil and gas companies' public lands cleanup costs under three scenarios outlined by the government. These are: a low-

¹ Zibel, Alan "Royal Ripoff: How Oil Companies Exploiting Public Lands Shortchange American Taxpayers" Public Citizen, 21 June 2022 https://www.citizen.org/article/royal-ripoff/

^{2 &}quot;Federal Oil and Gas Bonding When oil and gas companies do not reclaim wells, taxpayers end up picking up the slack" Taxpayers for Common Sense. August 2023. https://www.taxpayer.net/wp-content/uploads/2023/05/Updated-Oil-and-Gas-Bonding-fact-sheet_April-2023-1.pdf

^{3&}quot;Interior Department Takes Steps to Modernize Oil and Gas Leasing on Public Lands, Ensure Fair Return to Taxpayers." U.S. Department of the Interior 20 July 2023. www.doi.gov/pressreleases/interior-department-takes-steps-modernize-oil-and-gas-leasing-public-lands-ensure-fair.

⁴ U.S. Bureau of Land Management, Proposed Rule Fluid Mineral Leases and Leasing Process 88 Fed. Reg. 47564 (July 24, 2023) https://www.govinfo.gov/content/pkg/FR-2023-07-24/pdf/2023-14287.pdf

⁵ "The Bureau of Land Management Made Progress in Implementing Corrective Actions to Improve Its Idle Well Program" Inspector General, Department of the Interior. 1 Aug 2023. https://www.doioig.gov/sites/default/files/2021-migration/Final%20Inspection%20Report_Idle%20Wells%20Verification%20Review_Public.pdf

end scenario of \$35,000 in cleanup costs per well, a midrange estimate of \$71,000 and a high-end estimate of \$200,000.

The cost estimates were included in the Bureau of Land Management's summer 2023 proposed rulemaking for stricter well cleanup requirements and other oil and gas reforms.⁶ The Public Citizen analysis also incorporates \$2,122 per well in bonds purchased by oil and gas companies to cover cleanup costs — the average coverage estimated by the Government Accountability Office in a 2019 study.⁷

Based on these figures, the analysis arrived at a high-end cleanup estimate of \$17.7 billion, a medium range of \$6.2 billion, and a low-end of \$2.9 billion. Nearly 90% of the potential high-end cleanup bill is in just five states: New Mexico, Wyoming, Utah, Colorado and California, with almost 65% of the potential tab in New Mexico and Wyoming alone.

Table 1: Projected Potential Taxpayer Liability from Oil and Gas Drilling on Federal Lands

State	Wells	Bond Coverage	Low (\$35k/well)	Medium (\$71K/well)	High (\$200k/well)
New Mexico	31,186	\$66,176,692	\$1,025,333,308	\$2,148,029,308	\$6,171,023,308
Wyoming	26,794	\$56,856,868	\$880,933,132	\$1,845,517,132	\$5,301,943,132
Utah	8,352	\$17,722,944	\$274,597,056	\$575,269,056	\$1,652,677,056
Colorado	7,427	\$15,760,094	\$244,184,906	\$511,556,906	\$1,469,639,906
California	6,319	\$13,408,918	\$207,756,082	\$435,240,082	\$1,250,391,082
North Dakota	2,931	\$6,219,582	\$96,365,418	\$201,881,418	\$579,980,418
Montana	2,443	\$5,184,046	\$80,320,954	\$168,268,954	\$483,415,954
Ohio	583	\$1,237,126	\$19,167,874	\$40,155,874	\$115,362,874
Texas	546	\$1,158,612	\$17,951,388	\$37,607,388	\$108,041,388
Other	2,769	\$5,875,818	\$91,039,182	\$190,723,182	\$547,924,182
Total	89,350	\$189,600,700	\$2,937,649,300	\$6,154,249,300	\$17,680,399,300
Pct Cleanup Costs Covered			6.5%	3.1%	1.1%

Source: Public Citizen analysis of Bureau of Land Management <u>Fiscal Year 2022 data</u> for drilling on federal lands. Cleanup cost calculations assume \$2,122 per well in bonding coverage, as <u>estimated</u> by the Government Accountability Office in 2019.

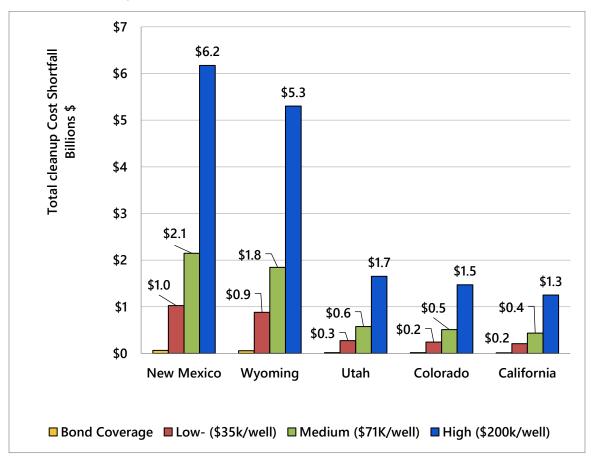
As shown in **Table 1**, average bonding coverage under current rules is far below what would be needed to pay for the cleanup of oil wells on federal lands, even at a low-end cleanup cost of \$35,000 per well. Bond coverage would cover about 6.5% of cleanup costs

⁶ U.S. Bureau of Land Management, Proposed Rule Fluid Mineral Leases and Leasing Process 88 Fed. Reg. 47581 (July 24, 2023) https://www.govinfo.gov/content/pkg/FR-2023-07-24/pdf/2023-14287.pdf

^{7 &}quot;Bureau of Land Management Should Address Risks from Insufficient Bonds to Reclaim Wells" Government Accountability Office 18 Sep 2019. https://www.gao.gov/products/gao-19-615

under the lowest-cost scenario and only 1.1% for the highest-cost scenario, raising the prospect that taxpayers would be forced to make up the difference.

Figure 1: Projected Cleanup Cost Shortfall from Oil and Gas Drilling on Federal Lands in Five Key States (\$Billions)



Under the Bureau of Land Management's proposal, companies must post a bond of at least \$150,000 per oil lease, covering up to two wells. They would no longer be allowed to secure a nationwide bond to cover cleanup costs. However, they would still be able to post a cleanup bond of \$500,000 for all leases in a state, up from the current level of \$25,000 — which was established in the 1950s and has not been adjusted for inflation.8

Without adequate financial guarantees from oil and gas companies, the government would be forced to rely on taxpayers to clean up old wells. The scale of this problem is unclear. Oil industry lobbyists claim the problem is limited, pointing to small numbers of "orphaned" wells that have no known owner and are cleaned up at taxpayer cost. But that significantly underplays the scale of the problem, which may be enormous.

^{8 &}quot;Federal Oil and Gas Bonding When oil and gas companies do not reclaim wells, taxpayers end up picking up the slack" Taxpayers for Common Sense. Aug. 2023. https://tinyurl.com/2vwx5jb4

A Boom-and-Bust Industry

The oil and gas industry is infamous for its boom-bust cycles. The industry's current wave of record-breaking profits⁹ due to high oil prices is unlikely to last. Severe losses and bankruptcies battered the industry from 2015 through 2020, when more than 600 oil and gas companies filed for bankruptcy, including 274 oil and gas exploration and production companies, according to the energy industry law firm Haynes and Boone.¹⁰

An oil and gas industry crisis is not a far-fetched outcome. Overall production in the U.S. is expected to peak, then gradually decline in the coming years. ¹¹ Parts of the country that fueled the fracking boom of the early 2010s, such as North Dakota, have gone into long-term decline. Production in the Permian basin, the largest oil patch in the U.S., may be nearing a peak, with the highest-producing wells already drilled. ¹²

If U.S. oil prices crash due to an economic downturn, surge in OPEC+ oil production, or a drop in consumer demand due to the adoption of electric vehicles, the result could be disastrous for fossil fuel companies that fail to diversify their operations.¹³ The International Energy Agency projected in fall 2023 that global demand for coal, oil and methane gas will peak by 2030, partly due to increased adoption of solar power and electric vehicles.¹⁴ Fitch Ratings warned in fall 2023 that oil and gas companies could face credit rating downgrades due to their high exposure to climate transition risk. The reason is simple: Oil and gas assets would be far less valuable in a clean energy economy.¹⁵

U.S. oil and gas drillers could be especially vulnerable as they typically have higher production costs than much of the world and rely on expensive fracking and horizontal drilling technology to extract fuel from shale rock deep in the ground. If the fossil fuel industry experiences a severe downturn, oil and gas companies could face a massive bill for cleaning up old oil and gas infrastructure after wells are no longer viable.

An analysis by the Carbon Tracker Initiative estimated that cleaning up after California's oil and gas industry, which has declined for several decades and has more than 107,000

⁹ Meredith, Sam. "Big Oil Rakes in Record Profit Haul of Nearly \$200 Billion, Fueling Calls for Higher Taxes." CNBC, 2023, www.cnbc.com/2023/02/08/big-oil-rakes-in-record-annual-profit-fueling-calls-for-higher-taxes.html.

¹⁰ Haynes and Boone Oil Patch Bankruptcy Monitor January 2022. https://www.haynesboone.com/-/media/project/haynesboone/haynesboone/pdfs/energy_bankruptcy_reports/oil_patch_bankruptcy_monitor.pdf?rev=e57d 3129b7504ea190df5d33dbacae44&hash=F461E4FE13446BE821B8A

¹¹Eaton, Collin, and Benoît Morenne. "U.S. Shale Boom Shows Signs of Peaking as Big Oil Wells Disappear." Wall Street Journal, 8 Mar. 2023, https://www.wsj.com/articles/u-s-shale-boom-shows-signs-of-peaking-as-big-oil-wells-disappear-2adef03f?st=fmsceuwhv7llq8h&reflink=desktopwebshare_permalink

¹² Messler, David, "The Imminent Peak in Permian Oil: What Does it Mean For Investors?" OilPrice.com, 31 Jul 2023. https://oilprice.com/Energy/Crude-Oil/The-Imminent-Peak-In-Permian-Oil-What-Does-it-Mean-For-Investors.html

¹³ Coffin, Mike and Guy Prince "Navigating Peak Demand" Carbon Tracker Initiative 8 November 2023 https://carbontracker.org/reports/navigating-peak-demand/

¹⁴ International Energy Agency World Energy Outlook 2023, IEA, Paris 24 Oct 2023. https://www.iea.org/reports/world-energy-outlook-2023.

¹⁵Naik, Gautam "Oil and Gas Companies Face an Era of Credit Downgrades, Fitch Warns." Bloomberg .News, 31 Oct. 2023, www.bloomberg.com/news/articles/2023-10-31/credit-downgrades-loom-large-as-fitch-zeroes-in-on-oil-issuers.

unplugged well bores, could cost between \$13.2 billion and \$21.5 billion. The lack of sufficient cleanup regulations in many states ensures that the problem will continue to grow into the future, raising the threat that the oil and gas industry could wind up relying on taxpayers for well-cleanup.

Without stricter regulations, wells will be transferred between owners without any guarantee that they will be cleaned up. In fall 2023, California lawmakers, concerned about the costs of decommissioning the state's aging oil fields, recently passed legislation¹⁷ that would force the companies that acquire oil and gas assets to fund well cleanup before they acquire them.

Big Oil Must Not Leave Taxpayers on the Hook

To determine which companies could be most on the hook for cleanup bills in the event of a fossil fuel industry bust, Public Citizen separately examined 16,000 drilling permits¹⁸ approved by the federal Bureau of Land Management since 2017. These permits, which are required for drilling on federal and tribal lands, are concentrated in New Mexico, Wyoming and Colorado.

The analysis found that wells drilled by the top 10 public lands drillers since 2017 could leave taxpayers on the hook for between \$257 million and \$1.5 billion in cleanup costs for public lands drilled since 2017 alone. During that period, Trump administration policies encouraged the U.S. oil and gas industry to lease millions of acres of public lands for exploitation, stockpiling thousands of permits for future drilling in the ensuing years.¹⁹



¹⁶ Purvis, Dwayne "There Will Be Blood: Decommissioning California's Oilfields." Carbon Tracker Initiative, 18 May 2023 https://carbontracker.org/reports/there-will-be-blood/

¹⁷ Plachta, Ari "New California Law Makes Oil Companies More Accountable for Cleaning, Plugging Idle Wells." Yahoo News, 7 Oct. 2023. https://news.yahoo.com/california-law-makes-oil-companies-212723304.html

¹⁸ The Bureau of Land Management maintains a database of federal permits granted to oil and gas companies for drilling but does not publish public data on oil and gas wells, other than annual summary data that does not include corporate details.

¹⁹ Brown, Matthew and Cathy Bussewitz, "Oil Companies Stockpile Drilling Permits, Challenging Biden on Climate." Associated Press as published in the Denver Post, 10 Jan. 2022. https://www.denverpost.com/2021/01/10/oil-companies-drilling-permits-biden-climate/

Table 2: Major Oil and Gas Companies' Projected Cleanup Costs on Federal Lands from Drilling Permits Approved Since 2017

Company	Wells	Bond	Low-	Medium	(High -
		Coverage	(\$35k/well)	(\$71K/well)	\$200k/well)
EOG Resources	2,047	\$4,343,734	\$67,301,266	\$140,993,266	\$405,056,266
Inc.					
Devon Energy	1,166	\$2,474,252	\$38,335,748	\$80,311,748	\$230,725,748
ExxonMobil	984	\$2,088,048	\$32,351,952	\$67,775,952	\$194,711,952
Mewbourne Oil	671	\$1,423,862	\$22,061,138	\$46,217,138	\$132,776,138
Со					
Occidental	648	\$1,375,056	\$21,304,944	\$44,632,944	\$128,224,944
Petroleum					
Terra Energy	564	\$1,196,808	\$18,543,192	\$38,847,192	\$111,603,192
ConocoPhillips	530	\$1,124,660	\$17,425,340	\$36,505,340	\$104,875,340
Chevron	419	\$889,118	\$13,775,882	\$28,859,882	\$82,910,882
Matador	391	\$829,702	\$12,855,298	\$26,931,298	\$77,370,298
Resources					
Continental	390	\$827,580	\$12,822,420	\$26,862,420	\$77,172,420
Resources					
Grand Total	7,811	\$16,574,942	\$256,810,058	\$538,006,058	\$1,545,625,058

Source: Public Citizen analysis of Bureau of Land Management data from Jan 1, 2017 to June 30, 2023. Cleanup cost calculations assume \$2,122 per well in bonding coverage.²⁰

Over the past two years, Republican lawmakers on Capitol Hill, backed by sizeable oil and gas campaign contributions, pushed to derail any reforms of the nation's public lands leasing and exploration system. Numerous studies have identified serious flaws in this system, including a 2021 report from the Interior Department finding that the federal oil and gas leasing program does not provide a fair return to taxpayers and fails to account properly for environmental harms.²¹

Nevertheless, Republicans on Capitol Hill have backed industry-friendly legislation to force the Interior Department to lease all lands nominated by the fossil fuel industry for oil drilling automatically and at least four times a year. They have tried unsuccessfully to repeal commonsense reforms passed in 2022 to ensure oil and gas companies pay a reasonable rate to drill on public lands. The American Petroleum Institute, along with 13 other oil and gas groups, attacked the Biden administration's 2023 public lands

²⁰ Among the nearly 16,000 drilling permits analyzed, about 3,800 drilling permits, or 24 percent were listed in BLM's database as connected to wells that are not actively drilling or producing oil and gas. We estimated how many of these undrilled wells would likely proceed to drilling based on a historical average number of well bores drilled (spud) for every drilling permit approved by state in recent years. Those averages are New Mexico (45%), Wyoming (41%), North Dakota (68%), Colorado (56%), California (55%), Utah (29%).

²¹ U.S. Department of the Interior "Report on the Federal Oil and Gas Leasing Program" November 2021. https://www.doi.gov/sites/doi.gov/files/report-on-the-federal-oil-and-gas-leasing-program-doi-eo-14008.pdf

rulemaking proposal, with the group's vice president of upstream policy claiming that "overreaching land management regulations place our domestic energy supply at risk."

Rep. Lauren Boebert (R-Colo.), who introduced legislation²² to block the Interior Department's oil and gas rule, falsely claimed during a House hearing that "Joe Biden is using every tool in his administration to dismantle American energy production" — even though U.S. oil production on public lands has grown to the highest level on record (Figure 2) under the Biden administration. At the same House hearing, a Wyoming oil and gas regulator, Tom Kropatsch, claimed that many oil and gas companies would not be able to afford higher bonding rates. "This proposed rule will result in oil and gas production being forced out of Wyoming," he said in written testimony.²³ Nevertheless, a study by Accountable.US showed Wyoming oil and gas producers have been able to boost production even after tighter bonding requirements were imposed at the state level in 2015.²⁴ Republican lawmakers also have tried to depict themselves as defenders of American oil and gas workers. "We must also make sure that we produce energy here instead of relying on foreign adversarial nations that are hostile towards the United States and that have weak environmental, labor and safety standards," Rep. Pete Stauber (R-Minn) said at the same hearing.



Rep. Pete Stauber (R-Minn.) criticized the Biden administration's energy policies at a House hearing.

^{22 &}quot;Congresswoman Boebert's Restoring American Energy Dominance Act Receives Key Hearing" Rep. Lauren Boebert (R-Co.) 25 Oct. 2023, https://boebert.house.gov/media/press-releases/congresswoman-boeberts-restoring-american-energy-dominance-act-receives-key

²³ Written statement of Tom Kropatsch, Wyoming Oil and Gas Conservation Commission for House Natural Resources subcommittee hearing 10 Oct 2023 https://boebert.house.gov/sites/evo-subsites/boebert.house.gov/files/evo-media-document/testimony-kropatsch-10-25-2023.pdf

²⁴ "Oil & Gas Bonding Reform Is A Common-Sense Solution to A Significant Problem: Just Look At Wyoming" Accountable.US, 21 Sep. 2023 https://accountable.us/wp-content/uploads/2023/09/20230918-Wyoming-Bonding-Case-Study-FINAL.docx.pdf

These complaints are disingenuous at best. U.S. oil production on federal lands, which represents about 10% of domestic oil production, has more than tripled over the past decade (**Figure 2**) to the highest level on record. Methane gas production on public lands, representing about 8% of total U.S., production, has been relatively constant (**Figure 3**).

Figure 2: Oil Production on Federal and Native American Lands 2012-2022 (Millions of Barrels)

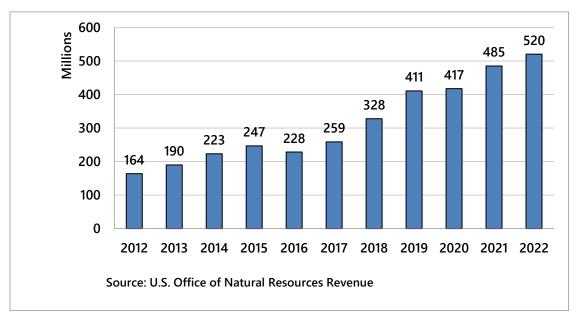
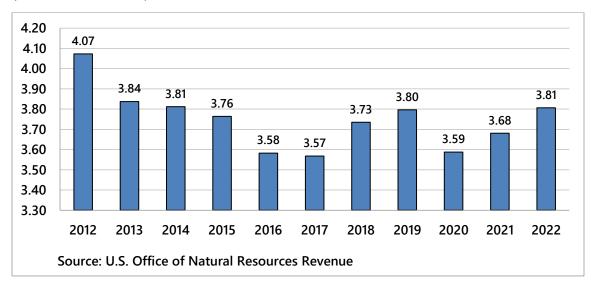


Figure 3: Gas Production on Federal and Native American Lands, 2012-2022 (Billion Cubic Feet)



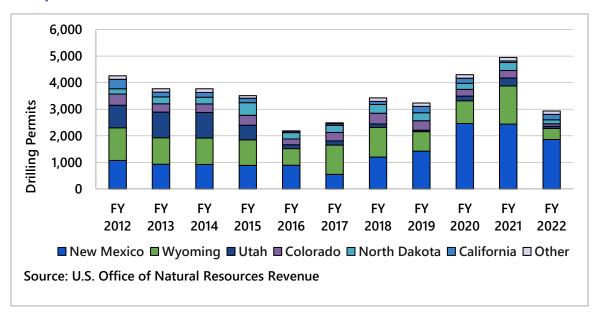


Figure 4: Annual Number of Drilling Permits Approved on Federal Lands (Fiscal Year)

Industry lobbyists have been minimizing the problem of managing the cleanup of oil infrastructure. Kathleen Sgamma, president of the Western Energy Alliance, said in written Congressional testimony in September 2023 that the administration's bonding proposal "raise costs unnecessarily for the vast majority of companies who are responsible and fulfill their reclamation obligations." ²⁵

Despite these protestations, oil wells and extraction equipment have long been abandoned by oil and gas drillers, left rusting and often unsealed around the country.²⁶ The public already bears the burden of cleaning up old oil wells, as the federal infrastructure bill signed into law in 2021 contained \$4.7 billion in funding²⁷ for well-plugging.

Inactive wells can leak pollutants and can contaminate water.²⁸ The U.S. Environmental Protection Agency estimates there are about 3.7 million abandoned oil and gas wells nationwide, including about 2.2 million that have yet to be plugged.²⁹ Scientific research

²⁵ Testimony of Kathleen Sgamma, Western Energy Alliance, House Natural Resources Committee 19 September 2023 https://naturalresources.house.gov/uploadedfiles/testimony_sgamma.pdf

²⁶ Dennis, Brady. "There Could Be Millions of Abandoned Wells in the U.S. Plugging Them Is a Monumental Task." The Washington Post. 12 Apr. 2023. https://www.washingtonpost.com/climate-solutions/2023/04/11/plugging-abandoned-oil-wells/

²⁷ Peischel, Will. "Pay and Plug: Federal Funds Spur Cleanup of Lost Oil Wells." The New York Times, 22 Feb. 2023, www.nytimes.com/2023/02/22/science/plugging-oil-wells.html.

²⁸ Ho, Jacqueline, et al. Plugging the Gaps in Inactive Well Policy Plugging the Gaps in Inactive Well Policy, Resources for the Future 2016. https://media.rff.org/documents/RFF-Rpt-PlugginglnactiveWells.pdf

²⁹ Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021. U.S. Environmental Protection Agency, EPA https://www.epa.gov/system/files/documents/2023-04/US-GHG-Inventory-2023-Main-Text.pdf

identified more than 123,000 "orphaned" wells — wells with no known owner as of April 2022, across the U.S., with the highest numbers in Ohio, Pennsylvania, Oklahoma, Kentucky and Texas.³⁰ These wells are a significant source of climate-warming emissions, emitting about 294,500 tons of methane in 2021 — as much annual climate-warming emissions as bout 1.5 million cars. ³¹ One study found that a single county in Colorado was home to a small number of 'super-emitting' wells that leak massive quantities of methane, far more than the average unplugged well in the state.³²

Conclusion

Despite oil industry and Republican pushback, public protections for oil and gas drilling are sorely needed. Irresponsible practices are common in the oil and gas industry³³, with numerous oil and gas companies abandoning wells, selling off assets and delaying legally required environmental cleanup for years³⁴. The involvement of private equity firms, which have been purchasing U.S. oil and gas assets, also raises concerns that oil and gas investors may evade their responsibility to perform environmental cleanup.³⁵

Under President Biden, the federal government has made progress toward enacting a better approach for managing public lands, fulfilling the Bureau of Land Management's mandate to put conservation and wildlife protection on equal footing with oil and gas extraction. This policy is a welcome reversal from the Trump administration, which employed oil and gas lobbyists to run federal agencies and promoted climate change denial. The Interior Department's long-overdue rules for oil and gas well cleanup would hold those who seek to drill on federal and tribal land to a minimum standard of corporate responsibility – and protect the public from paying for corporate recklessness. The Biden administration must quickly finalize these rules, which will be a welcome change from the longstanding status quo of giveaways to the oil and gas industry.



³⁰ Jade Boutot, Adam S. Peltz, Renee McVay, and Mary Kang Documented Orphaned Oil and Gas Wells Across the United States Environmental Science & Technology 2022 https://pubs.acs.org/doi/pdf/10.1021/acs.est.2c03268

³¹This estimate was derived using U.S. Environmental Protection Agency greenhouse gas equivalencies calculator based the EPA's estimate of 231.1 kilotons of methane emissions from abandoned oil wells and 63.4 kilotons of methane emissions from abandoned gas wells in 2021 https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results

³² Jaffe, Mark. ""Super-Emitting" Oil Wells near Denver Are Releasing 142% More Pollution per Hour than State Average, CSU Study Finds." The Colorado Sun, 23 Oct. 2023. https://coloradosun.com/2023/10/23/methane-emissions-super-emitting-oil-gas-adams-county/?utm_medium=email

³³ Lutz, Mariel and Jenny Rowland-Shea "How the Federal Government Can Hold the Oil and Gas Industry Accountable." Center for American Progress, 19 Sept. 2023, www.americanprogress.org/article/how-the-federal-government-can-hold-the-oil-and-gas-industry-accountable/.

³⁴ Morgan, Peter. "New Lawsuit Targets Fraudulent Transfer of Oil and Gas Wells to Evade Cleanup Obligations." 15 Jul 2022. www.sierraclub.org/articles/2022/07/new-lawsuit-targets-fraudulent-transfer-oil-and-gas-wells-evade-cleanup-obligations.

³⁵Zibel, Alan "Private Profits, Public Risks" Public Citizen, 8 Aug. 2023. https://www.citizen.org/article/private-profits-public-risks/