



**Congressional White Paper** 

Big Oil's Shell Game: A Highly Subsidized House of Cards

From: Friends of the Earth Fossil Fuels Program

Date: March 2022

Through a January 2021 Executive Order, President Biden paused all new federal oil and gas leasing after ordering a review of the leasing program.<sup>1</sup> The oil and gas industry and its allies coordinated a swift and aggressive pushback. Oil and gas corporations were relentless in their attempts to defend a broken system that rips off taxpayers<sup>2</sup> and causes nearly a quarter<sup>3</sup> of all U.S. greenhouse gas emissions. Closer analysis exposes a potentially perverse motive for oil and gas corporations to stockpile cheap public leases and use them to artificially inflate their bottom line and market valuation, making themselves appear more profitable and desirable to banks and investors.<sup>4</sup>

While the fossil fuel leasing program is riddled with industry giveaways, there are three in particular that corporations exploit at the expense of taxpayers and investors. The first two of these are fairly well known, while the third has largely flown under the radar:

- 1. Below-market royalty rates cost taxpayers over \$700 million in annual revenue.<sup>5</sup>
- 2. Inadequate bonding rates leave taxpayers responsible for cleanup costs of \$280 billion or more from abandoned and orphaned wells.<sup>6</sup>
- **3.** Outdated and flawed SEC regulations allow oil and gas corporations to artificially inflate their bottom line to appeal to investors and banks by stockpiling decades' worth of unused public lands leases.<sup>7</sup>

It is imperative that the Biden administration address these oil and gas corporate handouts by ...

- 1. ending new oil and gas lease sales,
- 2. phasing out oil and gas production on public lands and waters to near zero by 2035,
- 3. addressing inadequate bonding, and
- 4. reexamining and rectifying the 2009 revisions to the Securities and Exchange Commission Modernization of Oil and Gas Reporting rule.

Congress must do its part to end the exploitation of public lands and waters by ...

- 1. cosponsoring and passing the Keep It in the Ground Act,
- 2. raising royalties to levels competitive with state rates and bonding rates to levels sufficient cover all cleanup costs,
- **3.** introducing legislation requiring the Securities and Exchange Commission to reexamine and rectify the 2009 revisions to the Modernization of Oil and Gas Reporting rule, and
- 4. using its authority to investigate and analyze the true costs of the broken leasing program.

<sup>1</sup> Department of the Interior, <u>FACT SHEET: President Biden to Take Action to Uphold Commitment to Restore Balance on Public</u> Lands and Waters, Invest in Clean Energy Future, 1/27/21

<sup>2</sup> The New York Times, Opinion: Oil and Gas Companies Keep Taking From Taxpayers. And Taking., Senator Udall and Senator Grassley, 12/2/20

<sup>3</sup> E&E News, Fossil Fuel Extraction on Public Lands Produces One Quarter of U.S. Emissions, 11/27/18

<sup>4</sup> Center for American Progress, Oil and Gas Companies Gain by Stockpiling America's Federal Land, 8/29/18

<sup>5</sup> Center for American Progress, <u>Federal Oil and Gas Royalty and Revenue Reform</u>, 6/19/15

<sup>6</sup> Carbon Tracker, <u>Without appropriate bonding incentives, taxpayers may be forced to pay billions in clean up costs</u>, 7/15/21

<sup>7</sup> SEC, 17 CFR Parts 210, 211 et al., Modernization of Oil and Gas Reporting; Final Rule, 1/14/09

#### BACKGROUND



Current data provided by the Department of the Interior shows that oil and gas corporations already hold 13.9 million acres of unused public lands leases and over 9.3 million acres of unused offshore leases after the administration's Gulf lease sale in November 2021.<sup>8</sup> Fifty-three percent of onshore and 77% of offshore leases are sitting idle, and some 9,000 approved drilling permits are already in the hands of oil and gas corporations. In addition, oil and gas corporations already have enough unused, approved drilling permits to last over a decade. If existing leases were developed, it would generate an additional 43 billion tons of climate-changing greenhouse gasses, exhausting the U.S.'s fair share of the global carbon budget for keeping the world below a 1.5-degrees Celsius temperature increase.<sup>9,10</sup> Meanwhile, the oil and gas sector is again posting massive profits<sup>11</sup> despite their alarmist rhetoric about the impact of the pause and potential changes to the broken leasing program, which narrowly benefits oil and gas corporations at the expense of taxpayers.

With 245 million acres of public lands and some 700 million acres of subsurface mineral assets administered, the Bureau of Land Management (BLM) is the largest public natural resource and lands agency in the federal government. BLM is tasked with managing these lands for the benefit of and in the public's interest. BLM is guided in this process by the 1976 Federal Land Policy and Management Act (FLPMA) and the Mineral Leasing Act of 1920. The Bureau of Ocean Energy Management (BOEM) administers oil and gas leasing within the 1.7 billion acres of submerged lands on the Outer Continental Shelf (OCS). The vast majority of the OCS oil and gas development occurs in the Gulf of Mexico but also includes Alaskan and Pacific coastal area offshore leasing and development.

<sup>8</sup> Department of the Interior, FACT SHEET: President Biden to Take Action to Uphold Commitment to Restore Balance on Public Lands and Waters, Invest in Clean Energy Future, 1/27/21

<sup>9</sup> Friends of the Earth, As Biden Prepares to Issue New Rules for Oil & Gas Drilling on Public Lands, Millions of Americans, Hundreds of Groups Call for Permanent Ban on Fracking, 1/25/21

<sup>10</sup> The Guardian, US auctions off oil and gas drilling leases in Gulf of Mexico after climate talks, 11/17/2021

<sup>11</sup> Oilprice.com, U.S. Shale Patch Reports Blowout Earnings, 11/6/21

# THE BIDEN ADMINISTRATION: PROMISE TO END NEW OIL AND GAS LEASING

After President Biden announced his Executive Order on Tackling the Climate Crisis at Home and Abroad, front-groups funded by oil and gas corporations quickly activated their typical disinformation campaign regarding the temporary pause on leasing. Groups like the fledgling Western Energy Alliance (WEA)<sup>12</sup> even engaged and funded academic sympathizers<sup>13,14,15</sup> to "cook the books" on a widely criticized study on the alleged impacts of ending public oil and gas leasing.<sup>16,17</sup> In reality, federal oil and gas leasing and development provide only nominal revenue for impacted states, comprising 9.33% of all state spending in Wyoming, 3.28% in New Mexico, and less than one percent in all other onshore federal oil- and gas-producing states.<sup>18</sup> The oil and gas industry's disinformation campaign<sup>19</sup> was even used to bolster<sup>20</sup> their lawsuit challenging the leasing moratorium.

A U.S. District Court judge in Louisiana imposed a preliminary injunction<sup>21</sup> on the leasing pause, concluding that the Interior Department did not have authority to issue a wholesale, national pause on all federal leasing. Notably, the judge contrasted the "huge difference" between the national pause and "the discretion to stop or pause a lease sale because the land has become ineligible for a reason such as an environmental issue." Despite having no legal obligation,<sup>22</sup> the administration chose to resume public lease sales instead of requesting a stay of the adverse ruling or waiting for the appeal to play out, breaking Biden's campaign promise to "ban new oil and gas leasing on public lands and waters."<sup>23</sup> In November, the Department of Interior's BOEM held the largest offshore oil and gas lease sale in U.S. history, putting some 80 million acres in the Gulf of Mexico on the auction block. Shortly after, the Interior Department and the BLM announced an onshore 2022 Q1 lease sale of up to 700,000 acres of public lands. The rushed Gulf lease sale has already been invalidated by the courts for failing to accurately disclose and consider greenhouse gas emissions, violating bedrock environmental law.<sup>24</sup>

Resuming new lease sales is not the only way President Biden has gone back on his word. His administration also failed to follow through on measures in Biden's executive order mandating a comprehensive review of the leasing program by failing to mention and address climate change.<sup>25</sup> The Department of Interior's long-delayed report,<sup>26</sup> quietly released the day after Thanksgiving, ignored the climate impacts of the leasing program.<sup>27</sup>

While the Biden administration's current failure to meaningfully act on leasing could have devastating climate impacts, it is not too late to change course. Interior still can conduct a full analysis<sup>28</sup> of the leasing program, which must include the impacts of climate change, and initiate a public process for real reforms, including ending new leasing.

- 12 E&E News, Western Energy Alliance loses a third of its members, 2/24/21
- 13 Casper Star Tribune, University of Wyoming professor draws scrutiny for energy industry-funded analysis, 7/24/2021
- 14 Western Energy Alliance Profile, DeSmog\_Blog, accessed 2/9/22
- 15 Western Energy Alliance Profile, Money Trails, accessed 2/9/22
- 16 Casper Star-Tribune, University of Wyoming professor draws scrutiny for energy-funded study, 6/24/10
- 17 Casper Star-Tribune, The Biden oil and gas decision's effect on Wyoming, explained, 1/27/21
- 18 Headwaters Economics, Federal Fossil Fuel Disbursements to States, 6/21
- 19 House Committee on Oversight and Reform, <u>Fueling the Climate Crisis: Exposing Big Oil's Disinformation Campaign to Prevent</u> <u>Climate Action</u>, 10/28/21
- 20 The Washington Post, Louisiana judge blocks Biden administration's oil and gas leasing pause, 6/15/21
- 21 U.S. District Court, Western District of Louisiana, Case No. 2:21-CV-00778, 6/15/21
- 22 The Guardian, Revealed: Biden administration was not legally bound to auction gulf drilling rights, 12/13/21
- 23 Biden Harris, <u>9 Key Elements of Joe Biden's Plan For a Clean Energy Revolution</u>, 2020
- 24 The Washington Post, Judge throws out massive Gulf of Mexico oil and gas lease sale, 1/27/22
- 25 Executive Order, Tackling the Climate Crisis at Home and Abroad, 1/27/21
- 26 E&E News, <u>3 takeaways from Deb Haaland's Senate appearance</u>, 7/28/21
- 27 The New York Times, Interior Dept. Report on Drilling Is Mostly Silent on Climate Change, 11/26/21
- 28 HNRC, Chair Grijalva Statement: Offshore Oil and Gas Lease Sale, 11/16/21

## ARTIFICIALLY LOW LEASE, RENTAL, AND ROYALTY RATES

For onshore leasing, oil and gas corporations bid on parcels that can be either competitive companies bid against each other, pushing per-acre prices higher—or noncompetitive—there are no bids, and companies can pick up leases after auction for the statutorily minimum rate of just \$2 per acre.<sup>29</sup> Corporations awarded leases then pay rent on the lease until oil or gas production begins. Rental rates of just \$1.50 per acre are charged for the first five years, and then \$2.00 per acre for the final six to ten years of a lease. In total, about 30% of all public lands leased have been awarded to oil and gas corporations at the statutory minimum rate,<sup>30</sup> which represents another massive giveaway to the oil industry at taxpayers' expense.

The century-old Mineral Leasing Act establishes the royalty rate that fossil fuel and mining corporations pay when they develop the public's natural resources. The royalty rate of public lands oil and gas development of 12.5% has remained unchanged since the law's inception in 1920, representing another massive taxpayer-backed subsidy for oil and gas corporations. BOEM reduced offshore rates in 2017 to 12.5% in waters shallower than 200 meters and maintained a rate of 18.75% for depths greater than 200 meters.<sup>31</sup> Both onshore and offshore royalty rates are well under the private market rate, and even lower than rates set by state governments (royalty rates are as high as 25% on state lands in Texas).<sup>32</sup>

According to an analysis in 2015, artificially low public lands royalty rates cost taxpayers over \$700 million in annual revenue.<sup>33</sup> Federal lease sales and royalties revenues are shared with state governments. Despite the oil and gas industry's rhetoric, only nominal revenues trickle down into state government coffers in the majority of Western oil- and gas-producing states.<sup>34</sup> Federal revenue sharing from oil and gas production represents less than one-half of one percent of all state spending outside of the natural-resource-dependent states of Wyoming (9.33%) and New Mexico (3.28%), creating the false perception that without federal oil and gas revenue, the majority of Western states would be hamstrung financially.



- 29 Taxpayers for Common Sense, <u>The Federal Oil and Gas Leasing Process</u>, 2018
- 30 Center for Western Priorities, STORY MAP: AMERICA'S PUBLIC LANDS GIVEAWAY, 4/16/20
- 31 BOEM, BOEM Completes Analysis Of Royalty Rates For Offshore Oil And Gas Leases, 7/6/21
- 32 Center for Western Priorities, Royalties and Public Revenues From Energy Development On American Lands, 7/15
- 33 Center for American Progress, Federal Oil and Gas Royalty and Revenue Reform, 6/19/15
- 34 Headwaters Economics, Fossil Fuel Disbursements to States, 6/21

# INADEQUEATE BONDING LEAVES TAXPAYERS WITH THE BILL

Abandoned and orphaned oil and gas wells are a growing problem for taxpayers and the climate, emitting an inadequately quantified but large amount of damaging methane gas.<sup>35</sup> A conservative estimate puts the number of orphaned and abandoned wells at 3.2 million that leak the equivalent of 6.9 million metric tons of carbon dioxide. The EPA knows the problem is up to three times worse due to incomplete data, estimating that another 2 million wells were improperly capped and are still leaking methane and other pollution.<sup>36</sup>

Over the last century, oil and gas speculators and developers have drilled wells across the country. When a well becomes unproductive or runs "dry," the operator moves on after purportedly reclaiming the site and capping the well. Whether the developer claims bankruptcy or the bonding levels for capping a well are insufficient, too often oil and gas corporations pass the cleanup costs along to taxpayers. If a well is orphaned, there is no longer a known responsible party for the well, while an abandoned well typically has a known owner who has not capped the well.

Onshore bonding rates for oil and gas development have not been altered since 1951, allowing a corporation to post a bond of just \$150,000 for its entire public lands portfolio, creating a massive orphaned and abandoned well cleanup liability cost in the range of \$280 billion.<sup>37</sup> In effect, industry pays rock-bottom rates to develop our public resources, then leaves taxpayers with the cleanup bill. While the new orphaned well grant program announced by the Interior Department to administer the \$4.7 billion in federal taxpayer funds allocated in the bipartisan infrastructure law is a first step,<sup>38</sup> it is woefully insufficient given the scope of the problem.



<sup>35</sup> Grist, Abandoned oil well counts are exploding - now that there's money on the table,1/21/22

<sup>36</sup> Reuters, <u>Special Report: Millions of abandoned oil wells are leaking methane, a climate menace</u>, 7/16/20

<sup>37</sup> Carbon Tracker, Without appropriate bonding incentives, taxpayers may be forced to pay billions in clean up costs, 7/15/21

<sup>38</sup> U.S. Department of the Interior, <u>Interior Department Releases Implementation Guidance to States on Infrastructure Law Efforts to</u> Address Legacy Pollution, 12/17/21

#### THE SEC AND LEASE STOCKPILING SHELL GAME

There are more hidden and perverse reasons why oil and gas corporations activate their public relations machine and army of lobbyists to Capitol Hill anytime the idea of fixing or ending this broken system is even broached: Corporations can increase their market worth simply by acquiring and holding cheap public oil and gas leases.

In 2001, the Bush administration formed an energy task force, led by then-Vice President Dick Cheney, to develop a national energy policy designed to help the private sector. The outcome of the task force's policy recommendations included a Securities and Exchange Commission (SEC) rule called the Modernization of Oil and Gas Reporting.<sup>39</sup>

The intent of the rule was straightforward: give investors and shareholders clearer insight into an oil and gas corporation's purported natural resource reserves that, in part, determine a corporation's asset holdings and overall market worth. The more oil and gas reserves held by a corporation, the more attractive the corporation would be to potential investors.

It sounds simple enough, but the unexpected impact of the new rule was much more nefarious. Although the SEC intended to provide investors with more transparency, the rule actually allows corporations to artificially inflate their bottom lines by snapping up below-market leases of public lands. A detailed analysis on the topic done by the Center for American Progress identifies the problem. Buried within the final 2009 SEC rule was a broadened definition of "proved undeveloped reserves" linked with "proved reserves" under a new standard that allows speculative, undeveloped oil and gas resources to add value to a corporation's balance sheet and overall market valuation.<sup>40</sup> This rule means oil and gas corporations can report cheap public leases' "proved undeveloped reserves" to banks, shareholders, and investors as actual assets, thus increasing the oil and gas corporation.<sup>41</sup>

The publication of the rule opened a proverbial public leasing land grab<sup>42</sup> by creating a perverse incentive to do what is exactly occurring to this day: Oil and gas corporations are stockpiling cheap public leasing assets at the taxpayer's expense to boost their balance sheets.<sup>43</sup> The rule changes have had harmful, real-world implications and consequences for taxpayers, public and private resources, financial markets, shareholders, investors, and the environment.<sup>44</sup>

Perhaps the best case study of one corporation taking advantage of the revisions to the SEC's Modernization of Oil and Gas Reporting rule is Diversified Energy Company. Over the last four years, Diversified has amassed over 61,000 old and dwindling existing privately held gas wells, according to an analysis by Bloomberg. By amassing underperforming wells, Diversified's stock has outperformed every other U.S. oil and gas corporation during a four-year period, including oil and gas majors like ExxonMobil and Chevron. While Diversified's stock rose, production grew by only 10.48% last year.<sup>45</sup> The existing wells Diversified acquired have been a boon for the corporation and shareholders, raising its value under the revised reasonable certainty definition.<sup>46</sup>

45 Diversified Energy Company PLC, Interim Report 2021, 8/5/21

<sup>39</sup> SEC, 17 CFR Parts 210, 211 et al., Modernization of Oil and Gas Reporting; Final Rule, 1/14/09

<sup>40</sup> SEC, Oil and Gas Reporting Modernization, Small Entity Compliance Guide, accessed 12/23/21

<sup>41</sup> Center for American Progress, Oil and Gas Companies Gain by Stockpiling America's Federal Land, 8/29/218

<sup>42</sup> The New Republic, Trump's Fire Sale of Public Lands for Oil and Gas Drillers, 12/9/20

<sup>43</sup> The Wilderness Society, Can public lands help solve the climate crisis?, 11/9/21

<sup>44</sup> BuzzFeed News, We're Talking About The Cost Of Climate Change All Wrong, 11/6/21

<sup>46</sup> SEC, Oil and Gas Rules, Questions and Answers of General Applicability, 5/16/2013

This is because low-production wells are being counted as "proved undeveloped resources" and "proved resources" that could come to fruition at a future undetermined date, despite evidence that it is unlikely the reserves would be profitable if fully developed.<sup>47</sup>

Diversified's CEO appears to be keenly aware of how he must portray the corporation's new well holdings, explaining that the corporation's figures show that the majority of wells could produce for an additional 50 years by squeezing more gas out of wells that previous owners deemed uneconomical. The corporation now has the ability to raise its overall market value using these production assumptions because of the flaws in the "reasonable certainty" test. In fact, according to the corporation's own financial reports, it was able to secure \$1 billion in investment to expand its business model in 2020<sup>48</sup> and paid out \$62 million to shareholders through the first two quarters of 2021.<sup>49</sup> Diversified's massive gas play is likely to have an outcome that we've seen time and time again: The oil and gas corporation fails to meet investors' production expectations, leading to a market devaluation before the corporation declares bankruptcy, abandoning wells and leaving the cleanup bill for taxpayers.<sup>50</sup>



<sup>47</sup> Bloomberg Green, <u>An Empire of Dying Wells</u>, 10/12/2021

- 48 Diversified Energy Company PLC, Annual Report 2020, 4/1/2020
- 49 Diversified Energy Company PLC, Interim Report 2021, 8/5/2021
- 50 Carbon Tracker Initiative, Without appropriate bonding incentives, taxpayers may be forced to pay billions in clean up costs, 7/15/21

Inflating "proved undeveloped reserves" and "proved reserves" under a new reasonable certainty standard isn't unique to Diversified. Recently, the SEC filed a lawsuit against Heartland Group Ventures oil and gas corporation alleging a Ponzi scheme that defrauded investors of millions of dollars by claiming the two wells Heartland Group owned in the Permian Basin held and were producing substantially more oil than actual output. While Diversified, which was granted three approved public lands drilling permits in 2018,<sup>51</sup> and Heartland Group Ventures appear to operate primarily on private lands, exploiting this perverse incentive also applies to oil and gas corporations operating on public lands and in waters.

A review of recently leased public lands and drilling permits approved by the BLM demonstrates how oil and gas corporations stockpile leases and drilling permits to improve their market valuation. EOG Resources, formerly Enron, acquired 2,868 applications for a permit to drill (APDs) and amassed 65,206 acres of leased public lands over the last four years. EOG Resources' enterprise value jumped from \$32 billion at the end of 2020 to an estimated \$54 billion by the end of 2021, a 69% increase over just one year.<sup>52</sup> Similarly, Devon Energy, which was awarded 1,437 APDs and leased an additional 2,917 acres of public lands in the last four years, saw its enterprise values skyrocket from just under \$9 billion to over \$33 billion by the end of 2021, an increase of 281%.<sup>53</sup> The value of billionaire fracker Harold Hamm's Continental Resources' enterprise nearly doubled in the last year after having 425 drilling permits approved and leasing 13,600 acres of public lands since 2017. The largest recipient of public lands leases over the previous four years was the Anschutz Exploration Corporation and its subsidiaries, which gobbled up some 355,912 acres of public land and were awarded 425 APDs over the same period. Anschutz is privately held, but if it tracks with other publicly held oil and gas corporations, the corporation has certainly improved its worth.<sup>54</sup>

The oil and gas industry's hoarding of 13.9 million acres of unused public lands leases and 9.3 million acres of unused offshore leases locks up public resources and lands for decades with little to no return to taxpayers and maintains the existential threat of additional greenhouse gas pollution further contributing to climate change. This practice also allows the oil and gas industry to reap short-term profits from market overvaluation on public resources that may never be developed, causing the all-too-familiar boom-bust cycle that is a hallmark of the oil and gas sector.

<sup>51</sup> BLM Land and Mineral Reports System, Approved APDs and Public Leases, accessed 12/31/21

<sup>52</sup> Yahoo Finance, EOG Resources, Inc. Statistics, accessed 1/11/22

<sup>53</sup> Yahoo Finance, <u>Devon Energy Corporation Statistics</u>, accessed 1/11/22

<sup>54</sup> BLM Land and Mineral Reports System, Approved APDs and Public Leases, accessed 12/31/21

## **POLICY RECOMMENDATIONS**

**The Biden administration** should use its authority to immediately end new oil and gas leasing and phase out oil and gas production on public lands and waters through a managed decline to near zero by 2035.

The extraction and burning of fossil fuels from public lands accounts for nearly a quarter of U.S. climate emissions. Holding new lease sales is a violation of Biden's campaign promise and international climate commitments, locking us into even more emissions the world cannot afford. After failing to account for climate impacts in its report on the leasing program stemming from the January 2021 presidential executive order, Interior still can and must conduct a full analysis<sup>55</sup> of the leasing program, including the impacts of climate change, and initiate a public process for real reforms, including ending new leasing. But it is not enough to end new lease sales. The Biden administration must begin a planned drawdown of the entire leasing program by 2035, as more than 360 climate, tribal, religious, and conservation groups called for in a legal petition earlier this year.<sup>56</sup> While this work is ongoing, the administration should do its part to remove subsidies and incentives in the leasing program by addressing inadequate bonding, which leaves taxpayers responsible for cleanup costs, and by reexamining and rectifying the 2009 revisions to the Securities and Exchange Commission Modernization of Oil and Gas Reporting rule, which incentivizes lease stockpiling by oil and gas corporations in order to artificially inflate their bottom lines.

**Members of Congress should** first and foremost support the effort to end new oil and gas leasing by passing the Keep It in the Ground Act,<sup>57</sup> which would end new fossil fuel production on public lands and waters, introduced by Senator Jeff Merkley and Representative Jared Huffman.

Members of Congress should cosponsor and pass the Orphaned Well Cleanup and Jobs Act of 2021,<sup>58</sup> the Oil and Gas Bonding Reform and Orphaned Well Remediation Act,<sup>59</sup> and the Bonding Reform and Taxpayer Protection Act of 2021.<sup>60</sup> Congress must hold industry accountable by raising royalty and bonding rates. There is no excuse for allowing oil and gas companies to exploit our public lands at the taxpayer's expense or for allowing industry to pass their billions in cleanup costs on to the public. Raising royalty rates to align with private and state rates will not solve the climate impacts of the leasing program, but it will remove some of the burden from taxpayers. Similarly, Congress should address inadequate bonding, which leaves taxpayers footing the bill for cleanup.

Congress should also fix the SEC rules that incentive lease stockpiling and allow oil and gas corporations to manipulate the market. This could be accomplished through introducing legislation requiring the Securities and Exchange Commission to reexamine and rectify the 2009 revisions to the Modernization of Oil and Gas Reporting rule.

Finally, Congress should use its authority to investigate and analyze the leasing program and its true costs, including air pollution, habitat destruction, climate change, reclamation and cleanup costs shifted onto taxpayers, and additional externalities. The physical costs of climate change-induced extreme weather amount to over \$145 billion in damages in 2021 alone. But the social costs of climate change—costing lives, impacting health, destroying livelihoods and homes, and threatening food sources and clean water—are far greater. With conservative estimates putting carbon emissions' societal costs at \$100 per metric ton and upward of \$800 per metric ton,<sup>61</sup> the immediate need to begin phasing out all public oil and gas leasing—reducing carbon emissions by an estimated 280 million tons per year—is clear.

60 H.R.1505, Bonding Reform and Taxpayer Protection Act of 2021, introduced 3/2/21

<sup>55</sup> HNRC, Chair Grijalva Statement: Offshore Oil and Gas Lease Sale, 11/16/21

<sup>56</sup> Center for Biological Diversity, Petition to Reduce the Rate of Oil and Gas Production on Public Lands and Waters to Near Zero by 2035, 1/19/22

<sup>57</sup> H.R.2519, S.1115, <u>Keep It in the Ground Act of 2021</u>, introduced 04/14/21

<sup>58</sup> H.R.2145, Orphaned Well Cleanup and Jobs Act of 2021, introduced 4/8/21

<sup>59</sup> S.4642, Oil and Gas Bonding Reform and Orphaned Well Remediation Act, introduced 9/22/20

<sup>61</sup> Friends of the Earth U.S. & Applied Economics, <u>Comments on 2021 Guidance Towards Updating the U.S. Social Cost of Greenhouse</u> <u>Gasses</u>, 6/21/21