



April 24, 2023

Testimony of Kelsey A. Krepps  
Senior Campaign Representative, Beyond Dirty Fuels, Sierra Club  
To the House Environmental Resources and Energy Committee

Thank you to Chairman Vitali, Chairman Causer and Members of the Committee for inviting me to testify today on the critical issues of plugging orphaned and abandoned wells and bonding for conventional oil and gas wells. My name is Kelsey Krepps. I'm the Senior Campaign Representative with the Beyond Dirty Fuels Campaign at the Sierra Club. I've lived in Pennsylvania for almost my entire life. I'm currently residing in Pittsburgh but most of my life was spent in northwestern Pennsylvania.

As someone who has grown up in and around the oil towns of this state, I'm deeply familiar with the state's long history of fossil fuel extraction, the ways in which this legacy has influenced the globe, and the backlog of uncapped wells associated with our past that until the recent influx of federal dollars from the Bipartisan Infrastructure Law, we would not have been able to meaningfully address.<sup>12</sup>

Pennsylvania has funding and a program that will address a portion of our backlogs in a way that's unprecedented, but it will take much longer to address the estimated number of wells we have in this state – with estimates ranging from 200,000 to 700,000 wells to find.<sup>3</sup> During my time as a biological surveyor for the Jake's Rocks Epic Mountain Bike Trail in the Allegheny National Forest,<sup>4</sup> we had specific paperwork required if we came upon well infrastructure just in case it was a previously unknown site.

Many of these wells have been consistently leaking methane into our atmosphere. While studying at the University of Pittsburgh at Bradford, I was able to watch Dr. Kang capture emission data from two well sites on the campus grounds.<sup>5</sup> The research collected became a part of the critical study that shows our orphaned wells account for 8% of our state's emissions.

6

---

<sup>1</sup> <https://www.whitehouse.gov/build/guidebook/>

<sup>2</sup> <https://padep-1.maps.arcgis.com/apps/instant/portfolio/index.html?appid=064e373125c34182b2e132dd50d7c619>

<sup>3</sup> <http://www.depgreenport.state.pa.us/elibrary/PDFProvider.ashx?action=PDFStream&docID=1419023&chksun=&revision=0&docName=ABANDONED+AND+ORPHAN+OIL+AND+GAS+WELLS+AND+THE+WELL+PLUGGING+PROGRAM&nativeExt=pdf&PromptToSave=False&Size=411528&ViewerMode=2&overlay=0>

<sup>4</sup> <https://pawilds.com/asset/trails-jakes-rocks/>

<sup>5</sup> <https://www.princeton.edu/news/2014/12/09/abandoned-wells-can-be-super-emitters-greenhouse-gas>

<sup>6</sup> <https://www.pnas.org/doi/abs/10.1073/pnas.1408315111>

But, uncapped wells sitting in our landscapes aren't just a legacy issue.

Current policies in Pennsylvania—including the legislature's decision last year to keep remediation bonds for conventional wells at a tiny fraction of actual costs<sup>7</sup>—actively encourage operators of today to leave non-producing wells uncapped, making it harder for state regulators to address the long list of environmental harms associated with uncapped wells.

This is the current focus of my work.

The influx of federal dollars doesn't address the ongoing practice of operating companies failing to clean up after themselves and adding to the inventory of unplugged wells. Under current Pennsylvania law, operators allow their spent wells to sit unplugged, leaking methane and other harmful emissions into the air and water<sup>8</sup>, harming public health and exacerbating climate change. They mar communities, reduce property values and depress the local tax base.<sup>9</sup> In many cases, these wells become the responsibility of the state to plug, meaning that operating companies exploit Pennsylvania taxpayers and the state as part of their business model, socializing their costs onto the public to fund and clean up their sites<sup>10</sup>.

A meaningful preventative mechanism to this problem of unfunded well abandonment is to set bond amounts for oil and gas wells at levels that reflect the actual costs of clean-up, ensuring that DEP has enough money to plug a well should the operator pass that liability on to the state. Higher bonds also incentivize operators to prioritize plugging of wells at the end of their lifespan in order to free up capital.<sup>11</sup> Faster plugging of unprofitable wells brings less of the environmental and public health burdens previously discussed.

Currently, individual bonds for conventional operators are \$2,500 per well<sup>12</sup> and blanket bonds are capped at 25,000 per company, making the bonds even lower for companies that have a multitude of wells. The actual costs to plug a well are closer to an average of \$33,000, with some wells costing considerably more. Complications such as excess debris can cause the cost to plug these wells to increase up to \$800,000.<sup>13</sup> This is a significant gap in funding. If this were a bar graph, it would be quite the visual.

---

<sup>7</sup> <https://www.legis.state.pa.us/cfdocs/legis/li/uconsCheck.cfm?yr=2022&sessInd=0&act=96>

<sup>8</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0048969720336251?via%3Dihub>

<sup>9</sup> Harleman, Max and Harleman, Max and Weber, Jeremy and Berkowitz, Daniel, Environmental Hazards and Local Investment: A Half-Century of Evidence from Abandoned Oil and Gas Wells (September 14, 2020). USAEE Working Paper No. 20-470, Available at SSRN: <https://ssrn.com/abstract=3692098> or <http://dx.doi.org/10.2139/ssrn.3692098>

<sup>10</sup> <http://paenvironmentdaily.blogspot.com/2022/02/new-abandoned-wells-dep-records-show.html>

<sup>11</sup> <https://www.worc.org/worc-releases-a-roadmap-for-managing-the-oil-and-gas-industrys-orphaned-wells-and-left-behind-infrastructure/>

<sup>12</sup> <https://www.legis.state.pa.us/cfdocs/Legis/LI/uconsCheck.cfm?txtType=HTM&yr=2012&sessInd=0&smtHLwInd=0&act=87>

<sup>13</sup> <https://www.dep.pa.gov/OurCommonWealth/pages/Article.aspx?post=91>

Pennsylvania also has a statute that wells drilled before April 18, 1984 - despite some having identifiable owners - require no bonds.<sup>14</sup> Plugging costs and obligations are borne entirely on the Commonwealth if these wells are abandoned to the state. These wells make up around 60% of the active conventional wells in Pennsylvania.

In scale, the results of Pennsylvania's underbonding is staggering.

Carbon Tracker Initiative estimates that it would cost \$14.58 billion to plug *all* wells in Pennsylvania, and that the state has only about \$50 million in bonding available to plug these wells – a bond coverage ratio of 0.3% – which leaves a budget shortfall of \$14.53 billion dollars.

<sup>15</sup>

This shortfall is not a far off problem for the conventional wells in this estimate: in 2021, 43% of Pennsylvania's conventional wells produced below the low threshold that the Pennsylvania Game Commission and PA DCNR have stated indicates a well that is uneconomic to maintain and operate on public land.<sup>16</sup>

In attempts to confront this issue, Sierra Club and partners Clean Air Council, Earthworks, Mountain Watershed Association, PennFuture and Protect Penn-Trafford filed two rulemaking petitions to address bond amounts at the Environmental Quality Board in the fall of 2021. The amounts we petitioned around were from an expert report from Dr. Jeremy Weber at the University of Pittsburgh. The conventional petition called for:<sup>17</sup>

- Well bonds to be set at \$38,000 which is more in line with actual plugging costs
- Bonds to be retroactively applied to existing wells drilled after the 1984 statute
- Make blanket bonds based on a per well rate.
- Lastly, the petition asked for bond amounts to be revisited regularly to account for lower plugging costs or inflation costs

By filing the petitions for rulemaking, and the EQB voting to accept the petitions for study, this gave DEP time to examine the issue of bonds for conventional industry based on these petition requests.<sup>18</sup> If this process had moved forward without intervention, a report from DEP would have been produced with recommendations to address our petition. The EQB could have voted to begin a rulemaking process following the report and eventually, a rulemaking process could have begun which would - like all rulemakings do - public comment periods and public hearings

---

<sup>14</sup><https://www.legis.state.pa.us/cfdocs/Legis/LI/uconsCheck.cfm?txtType=HTM&yr=1997&sessInd=0&smt hLwInd=0&act=57>

<sup>15</sup><https://www.google.com/url?q=https://carbontracker.org/reports/billion-dollar-orphans/&sa=D&source=docs&ust=1682188198559819&usg=AOvVaw2yBGeEwxleBfyQRrUuvBn>

<sup>16</sup><https://www.google.com/url?q=https://docs.google.com/document/d/1KBveKIKu9VnlnN5ySxFdaTVdSLcSvYXSMYzqLcvZtqE/edit&sa=D&source=docs&ust=1682188198615088&usg=AOvVaw0PawQQadF8F4qXTrYjOwp1>

<sup>17</sup><https://www.sierraclub.org/sites/default/files/blog/Sierra%20Club%20et%20al%20Conventional%20Wells%20Bonding%20Increase%20Filing%20to%20EQB.pdf>

<sup>18</sup><https://www.pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/025/chapter23/chap23toc.html>

where stakeholders from across the Commonwealth would speak on the issue before a final rule was ever adopted.

By the next budget cycle, however, the state legislature halted efforts to adjust bond amounts for conventional drillers through the passage of Act 96. That law removed the authority of the Environmental Quality Board and Department of Environmental Protection to raise bond amounts, locking in the current staggeringly low bond amounts for the next 10 years. Following recent trends and production values of active wells, the likelihood of further abandonment during this window of time is high<sup>19</sup>

Just last Friday, we received the official report from the DEP stating that our rulemaking petition for conventional industry was denied because Act 96 is on the books.

In Governor Wolf's lapsing statement of Act 96<sup>20</sup>, he directed the DEP to review the existing processes and procedures and produce a report with evaluations and recommendations regarding the DEP's oversight of the conventional oil and gas industry in Pennsylvania.

The report, released at the end of last December, detailed the "culture of noncompliance" from this industry.<sup>21</sup>

The report stated that the most frequent violation of the industry was abandonment of their own wells, the very issue Sierra Club and partners were trying to address. Included in the report is also the fact that bonds are often so low that DEP doesn't even go after them because they are so administratively costly to obtain.

The report also stated companies often had a total lack *or* lack of proper reporting for hydrocarbon and waste production and mechanical integrity assessments. This nonexistent or skewed data set denies DEP and the public critical information about the operating status of individual wells, making what we think we know about the industry only a partial truth.

In the report, DEP stated that if provided the adequate resources - particularly more field inspectors and enforcement personnel such as Compliance Specialists - they'd be able to utilize the authority and tools already at their disposal to deal with abandonment and the current culture such as administrative orders, permit denials, civil penalty assessments, bond forfeiture, entry and docketing of liens, criminal referrals when appropriate, and increased scrutiny of permit transfer and regulatory inactive status requests.

The industry issues that we're dealing with have pragmatic solutions and we have a room full of active stakeholders who have been thinking about this issue for a long time, proposing solutions that differentiate our current legacies from those we inherited.

---

<sup>19</sup> <https://grist.org/regulation/pennsylvania-legislature-abandoned-oil-wells/>

<sup>20</sup> <https://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol52/52-31/1138.html>

<sup>21</sup> [https://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/Governor's\\_Lapsing\\_Statement\\_Report\\_2022-12-29.pdf](https://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/Governor's_Lapsing_Statement_Report_2022-12-29.pdf)

Prices for oil and gas are not stable<sup>22</sup>. The markets for fossil fuels are full of risks and booms and busts. In order for the state to ensure they will have the means to support a massive abandoning of conventional wells when prices fluctuate, the state has to have the funds in place and not rely on Pennsylvania taxpayers to bear the burden.

---

<sup>22</sup> <https://rooseveltinstitute.org/publications/energy-price-stability/>