

Billions of dollars to clean up abandoned oil and gas wells will only make a dent

October 17 2023, by Kevin Hardy, Stateline.org



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An infusion of federal money has helped Louisiana plug nearly 500 abandoned oil and gas wells this year.

That number doesn't come close to the 4,500 abandoned wells that pock the state's terrain, leaving the potential for groundwater contamination and the near-certainty of greenhouse gas emissions. But the money has allowed the state to nearly double the record number of wells it's ever plugged in a year.

"Everything helps," said Patrick Courreges, spokesperson for the Louisiana Department of Natural Resources. "If we didn't have the federal help, we'd be over 5,000 [abandoned wells]."

Louisiana is among 24 states that received millions of dollars for well plugging from the federal Bipartisan Infrastructure Law, which made the largest investment in legacy pollution reduction in American history.

But in many ways, the difficult work is just beginning. Of the \$4.7 billion the law set aside for plugging wells that oil and gas companies have abandoned, \$560 million has gone out so far. The rest will be spent in the coming years.

During the first round of grants, the feds didn't require states to calculate the methane emissions each plug prevents. But from now on, states seeking grants will have to measure methane releases at each well. That will require states to develop new methods and spend more time and money. And the workforce shortage only makes it harder for states to use their grants.

Long-standing state programs to tackle the problem, usually backed by fees from oil and gas companies, generally have targeted the most problematic wells, such as those with visible leaks or spills. But countless others remain, allowing methane or carcinogens to escape.

"It's easy to see a blowout. It's tougher to see 100 small leaks," Courreges said. "I think you're just now seeing regulators figuring out, "OK, how

do we approach that? How do we do that?" Obviously, you're probably going to need more funding for everybody."

In Louisiana, the state generally has \$10 million to \$12 million available each year for well site restoration efforts, Courreges said. The state received \$25 million in its first round of federal funding from the infrastructure law and is primed to receive some \$86 million more.

A well is considered orphaned when the government cannot locate the operator of an idled well or the operator is unable to plug or remediate the well. Beyond blighting property and limiting land use, abandoned wells are a major threat because unseen leaks can allow pollutants into water sources and spew greenhouse gases into the atmosphere.

The [federal government](#) gave states wide latitude on how to prioritize wells for plugging. Aggressive timelines have pushed qualifying states to quickly allocate their first round of grant funds by hiring contractors to plug abandoned oil and [gas wells](#).

"The timeline was so tight that these guys just went out and started plugging wells without any idea," said Curtis Shuck, chair of the Well Done Foundation, an environmental nonprofit. "They just knew it was a hole in the ground and they were going to go dump cement in it and call it a party."

He previously worked in the [energy industry](#) and witnessed firsthand the eyesore and danger of wells left unsealed. His nonprofit has plugged 29 wells since 2019. He said without measuring emissions, states are essentially "flying blind," making it difficult to justify prioritization efforts.

Still, he said the overall effort has been instrumental in raising awareness of the underlying issue of abandoned wells.

"For the longest time, this has just been everybody's dirty little secret," he said. "Whether it's the oil and gas industry, the states or even the federal government, nobody wanted to talk about it."

But the federal funds won't come close to addressing the current inventory of orphaned wells, Shuck said. And it won't prevent new ones from being orphaned by bankrupt operators.

"That's just the nature of the business. These wells have a lifecycle," he said. "There's no silver bullet. There's no magic wand to make it go away. It's just a matter of rolling up your sleeves and tackling a dirty job."

'A significant down payment'

The issue of abandoned wells is nearly as old as the nation's petroleum industry. Major producers sell off rights to wells, usually those producing only marginal amounts. Those wells can transfer multiple times before ending up under control of companies that can easily go belly up in the notoriously boom-and-bust oil and gas markets, making those abandoned wells a problem for states.

A handful of states are trying to prevent wells from being abandoned in the first place, enacting stricter well transfer regulations and financial assurances from producers.

But for those already orphaned, the federal money is making a dent. By the end of June, more than 4,000 wells had been plugged with the first round of funds, said Winnie Stachelberg, senior adviser and infrastructure coordinator at the U.S. Department of the Interior.

"Methane leaking from many of these unplugged wells is a serious safety hazard," she told Stateline. "It's been a significant cause of climate

change."

Methane is more than 25 times as potent as carbon dioxide in trapping heat in the atmosphere, Stachelberg said. The U.S. Environmental Protection Agency has estimated abandoned oil and gas wells are releasing 280,000 metric tons of methane each year. That's equivalent to the greenhouse gas emissions of more than 1.7 million gas-powered passenger vehicles driven for a year, according to an online EPA calculator. The federal government expects the next round of grant money to help quantify the effects of sealing wells.

"That will give us and the states a more full picture of the impact of these wells and how much methane we're removing by cleaning them up," Stachelberg said.

But most states haven't begun methane measuring.

Oklahoma only performs methane testing on select wells close to buildings or as part of explosive testing, said Matt Skinner, spokesperson for the Oklahoma Corporation Commission, which regulates the state's oil and gas industry. The state is preparing a methane monitoring program for the next round of federal grant funding.

Like many energy regulators, Oklahoma charges fees on active well operators for well remediation efforts. That means the state's fund varies wildly depending on the health of the industry—and the price of energy.

Traditionally, the agency has sought to maintain a healthy reserve fund so it can tackle emergency well repairs, Skinner said. But conserving its funds for the most serious problems can result in a ballooning inventory of wells that need plugging.

Oklahoma's \$25 million in the first round of federal funding allowed the

state to award contracts to tackle 523 wells—far higher than the number of wells the state traditionally is able to remediate, Skinner said. Between the 2017 and 2021 fiscal years, Oklahoma plugged a total of 462 abandoned wells.

"We were able to move aggressively to radically reduce the backlog," he said.

By the time the infrastructure bill passed in 2021, the country had some 125,000 documented abandoned wells and another estimated 800,000 undocumented ones, said Adam Peltz, a director and senior attorney at the advocacy nonprofit Environmental Defense Fund.

"Because every state regulates its own industry, it hasn't been a national issue, despite being a national problem," he said.

The federal funds won't come close to fixing all the documented abandoned wells, let alone the undocumented ones. But Peltz said the program represents "a significant down payment on a long-ignored problem."

The industry says it's also tackling the problem.

The American Petroleum Institute, an oil and gas trade group, said in a statement the industry is constantly working to address the permanent closure and remediation of historic oil and natural gas wells. The institute released new standards in 2021 providing guidance for design, placement and verification of plugs used in wells.

Challenging work

With only about 90 days to form their \$25 million grant application last year, Kansas regulators initially focused on addressing "shovel-ready"

wells, said Ryan Hoffman, director of conservation at the Kansas Corporation Commission.

Those are wells that already had been scrutinized by the agency. But even then, finding contractors to tackle the work proved challenging.

In the remote stretches of Western Kansas, for example, the state received no bids on plugging two wells near the Colorado border. Crews can spend upward of \$1 million plugging the most complex wells, though the Environmental Defense Fund says the average well plugging costs about \$75,000.

To make the work more attractive, the state sought to group similarly constructed and nearby wells. In the more populated portions of Northeastern Kansas, the state grouped hundreds of wells in the counties outside of Kansas City under a single project umbrella.

"We prioritize those because of the population growth in those areas," Hoffman said. "But we also wanted to make sure that we can make this attractive to contractors to bid on, because we're competing with the [oil and gas] industry for their services."

In the past, Kansas has never plugged more than 700 wells per year, Hoffman said. Since January, the state has more than doubled that number, filling more than 1,600 of its 11,000 abandoned wells.

Hoffman said the state has increased its compliance efforts, resulting in fewer wells getting abandoned. But the nature of the extraction business makes it difficult, particularly as wells become less profitable.

A handful of states are upping scrutiny of well transfers or increasing financial assurance measures that aim to ensure each operator has the money to seal wells once they're done pumping.

In September, California legislators passed a bill that would require well owners to set aside more cash to properly seal wells once they are out of use. The bill faced skepticism from Democratic Gov. Gavin Newsom, whose finance department warned it could unintentionally cause more wells to be abandoned by increasing financial burdens on already at-risk operators, the Los Angeles Times reported. But Newsom signed the legislation on Oct. 7.

In New Mexico, regulators are discussing potential changes with the oil and gas industry. And the state is taking a closer look at well transfer requests.

"We are scrutinizing some of those transactions a little harder," said Dylan Fuge, general counsel for New Mexico's Energy, Minerals and Natural Resources Department.

New Mexico has been measuring [methane emissions](#) at the wells it targets before and after filling. So far, the state has found each well on average emits nearly a ton in greenhouse gas emissions per year—roughly the annual equivalent greenhouse emissions of six gas-powered vehicles, the EPA calculator estimates.

Overall, the federal dollars have allowed the state to seal five times as many wells as normal, about 100 of its 1,700 documented abandoned wells.

"I think we're starting to make meaningful progress on the ground," Fuge said. But "even at the rate we're plugging with the resources we can reasonably project out, I still don't see a certain pathway where we get all 1,700 by any stretch."

Stateline is part of States Newsroom, a national nonprofit news organization focused on state policy.

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Citation: Billions of dollars to clean up abandoned oil and gas wells will only make a dent (2023, October 17) retrieved 29 April 2024 from <https://phys.org/news/2023-10-billions-dollars-abandoned-oil-gas.html>

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