



**SUMMER LEE**  
PENNSYLVANIA'S 12<sup>TH</sup> DISTRICT

## **Abandoned Well Remediation Research and Development Act**

### **Fact Sheet**

**Purpose:** This bill will amend the Energy Act of 2005 to create an abandoned wells research, development, and demonstration program at the Department of Energy (DOE) with respect to abandoned wells, and for other purposes.

**In Operation:** The Abandoned Well Remediation Research and Development Act directs the Secretary, in carrying out this program, to focus on a range of key technology areas including remote sensors, laser imaging, detection, and ranging (LiDAR), optical gas imaging, magnetic surveys, technology to understand methane emission rates, low carbon lightweight cement, technology to improve remote plugging, ways to repurpose wells for geothermal power or CCUS, and technology to understand impacts of abandoned wells on groundwater. It requires the Secretary to carry out this work in coordination with other federal and state agencies, universities, the private sector, and the national labs.

**Problem:** Abandoned oil and gas wells are a growing problem in the U.S. as we transition to a clean energy economy. Some unplugged wells date back as early as the 1850s and continually emit methane and cause environmental damage. It is unclear how many abandoned wells there are in the country; estimates range from 700,000 to 3,000,000. The current plugging and remediation process is challenging due to difficulty locating wells, minimal understand of methane emission rates, and cost barriers.

Federal investment is necessary to address these challenges, and the Department of Energy is well equipped to carry out this research, utilizing the Fossil Energy and Carbon Management Office and through the national lab network. Improving the plugging and remediation process for abandoned wells could reduce the costs of plugging these wells, improve the efficiency of remediation, mitigate environmental harms, and reduce methane emissions. This includes

improving the process for plugging remote wells, developing a greater understanding of what causes “super emitters”, researching use of low carbon cement for plugging, and repurposing abandoned wells for geothermal power production and carbon capture, utilization, and storage. The program will also improve technology to pinpoint and map the location of wells, as an understanding of location and number of abandoned wells in the country would be essential to developing a broad plugging program.

### **The problem facing Western Pennsylvanians:**

- Pennsylvania's Department of Environmental Protection says there are tens of thousands of [abandoned gas wells and oil wells](#) documented across the state — and there may be [13 times that many](#) for which there are no records.
- Federal money helped Pennsylvania plug 139 abandoned oil and gas wells last year. That's more than in the eight years before that. Despite the state awarding more than \$23 million in contracts to plug those wells in 2023, the number of abandoned wells continues to grow.
- DEP estimates that there are 27,000 abandoned wells for which they have locations to plug. They estimate an approximately 350,000 additional undocumented abandoned wells exist all across Pennsylvania.
- The United States Environmental Protection Agency (EPA) estimates that methane emissions from over 2 million inactive, unplugged wells, of which documented orphan wells are a subset, range from a CO2 equivalent of 7-20 million metric tons per year (approximately the emissions of 2 to 5 million cars).
- Methane emissions from oil and gas wells – some of which date back as early as the 1850s including orphan wells, remains a significant driver of short-term climate change. [\[EDF\]](#) At least 25% of today's warming is driven by methane emissions from human activities.
- EDF has also calculated that approximately 14 million Americans live within a mile of a documented orphan well, which has no solvent owner of record, can leak oil, gas and other toxic chemicals into our air and water.
- [In addition to methane, abandoned wells release carcinogens and other toxic air contaminants](#) spewing from millions of wells that are no longer even operating. In a [study in the journal ACS Omega](#), researchers have reported the discovery of harmful [cancer-causing benzene and other toxic gases leaking from 48 abandoned wells in Western Pennsylvania](#).
- Abandoned wells also lower property values and land productivity, with one [study](#) in Pennsylvania showing a 50% drop-off in building development in areas with high orphan well concentration.
- The health and economic impact of abandoned wells fall disproportionately on low income and minority communities – [impacting Black and brown communities at twice the rate](#).

### **Solutions Congresswoman Lee is working to deliver:**

Throughout her first term in office Lee has been pushing to expedite federal funding under the Infrastructure and Jobs Act to go to the Pennsylvania Department of Environmental Protection's work plugging abandoned wells in Western PA. This [map](#) shows a total of 120,000 documented orphan wells across 30 states that are eligible for closure funding under the Infrastructure Investment and Jobs Act of 2021.

In July, Rep. Lee introduced the [Bipartisan Abandoned Well Remediation Research and Development Act](#) with Rep. Stephanie Bice (R-OK-12) to address the impact of methane emissions from abandoned oil and gas wells. Her bill [passed through the Committee on Science, Space and Technology in September](#) on a bipartisan unanimous basis.

- Lee's bill addresses challenges around the difficulty of the plugging and remediation process – from locating undocumented wells, minimal understanding of methane emission rates, and cost barriers. Lee's bill will amend the Energy Act of 2005 to create an abandoned wells research, development, and demonstration program at the Department of Energy (DOE) with respect to abandoned wells. It directs the Secretary of DOE to create and carry out this program to focus on a range of key technology areas to better identify abandoned wells, understand methane emission rates, low carbon lightweight cement, technology to improve remote plugging, ways to repurpose wells for geothermal power and technology to understand impacts of abandoned wells on groundwater.
- ***Congresswoman Lee said***, *"Where I grew up in Braddock, our air is already so dirty that we have some of the highest rates of pollution causing childhood asthma and respiratory illnesses in this country. Folks in communities left behind like Western PA simply cannot afford toxic methane from abandoned oil and gas wells leaking into our air and water—yet oil and gas companies are abandoning wells far, far faster than we're able to plug or even identify them. On top of the harm to the health of our loved ones, abandoned wells, [which just so happen to impact Black and brown communities at twice the rate](#), also mean lower property values and land productivity, with one study in Pennsylvania showing a 50% drop-off in building development in areas with high concentrations of abandoned wells. I'm proud to introduce the 'Bipartisan Abandoned Well R&D Act' to protect our communities from abandoned oil and gas wells by creating a new research, development, and demonstration program at the Department of Energy."*

In December, Rep. Lee [announced \\$44,457,220 in federal funding to support industry efforts to cut methane emissions from wells and support environmental restoration of well sites](#).

- ***Rep. Lee said*** *"I'm so proud to deliver over \$44M in funding to cut methane emissions in my district. In regions like Western Pennsylvania, where the legacy of oil and gas extraction is deeply felt, this investment is not just about reducing emissions; it's about justice and health for our communities. This funding will accelerate efforts to measure, monitor, and mitigate methane from nonfederal wells, which is crucial for protecting*

*both the environment and public health. As we've seen in our communities, unchecked methane emissions contribute to climate change and pose serious health risks, especially in marginalized areas. This is a big step towards correcting historical neglect and ensuring a cleaner, healthier future for all."*

- ***Ryan Peay, Deputy Assistant Secretary for the Office of Resource Sustainability in DOE's Office of Fossil Energy and Carbon Management said,*** "Investing in projects and programs that significantly reduce methane emissions is an important priority to slow the harmful effects of climate change. The grants awarded today facilitate critical partnerships between states and the oil and gas sector, addressing a key source of these emissions while generating substantial climate, health, and economic benefits for local communities nationwide."

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