



March 24, 2023

U.S. Department of the Interior  
Orphan Well Program Office  
1849 C Street NW  
Washington, DC 20240  
c/o Kimbra Davis, Director

Dear Ms. Davis, and interested parties:

EDF appreciates the opportunity to comment on the Department of Interior's Phase 1 (Fiscal Year 2023) State Formula Grant Guidance of the Bipartisan Infrastructure law Sec. 40601 Orphaned Well Program. We are grateful for DOI's leadership and for taking on the responsibility of formulating and administering this ambitious program. We commend DOI on a comprehensive first draft. Given the scale and cost of the orphan well plugging challenge, we suggest some revisions to the draft and approach, which we believe will strengthen the Federal-State partnership and will ultimately maximize the number of wells plugged nationwide. There is a tremendous opportunity here to leverage both the DOI's and the state regulatory agencies' strengths in oil and gas well management to get the most value out of taxpayer's dollars in plugging the most and worst orphan wells and significantly reducing the risks to the environment, public health, safety and the climate posed by these wells.

While the \$4.7 Billion REGROW funding as part of the Infrastructure Investment and Jobs Act provides a tremendous opportunity to dramatically accelerate our collective efforts to tackle the orphan well problem, the scale of the problem is vast. As a result, it is likely this funding at best will accomplish plugging less than half of the estimated 125 thousand documented orphan wells which have a total estimated actual closure cost of \$8.5 Billion. And this is only a start to solving the larger undocumented orphan well issue with estimates that range from 300 to 800 thousand of these wells, or more. To that end, it is critical that DOI work closely with the state agencies to maximize the efficiency and effectiveness of the State Formula Grants and focus this spending on the well closure work while keeping costs contained as much as possible.

**We recommend DOI work closely with State Agency representatives and the IOGCC to revise the current draft with particular attention paid to the following areas:**

**1. Provide predictability for entire State Formula Grants**

To ensure success for this program, it is critical that state agencies and industry stakeholders understand the approximate size and timing of the funding so they can plan their budgets with as much lead-time as possible. It is not clear in the current draft how DOI is going to inform the state agencies of the amount of funding they can expect and when so that they can effectively plan, and in turn how the states can signal to industry what to anticipate so that the market can respond accordingly. A phased approach where the recipients do not have insight into when or how much they will receive in later phases will hamper their ability to staff up and plan strategically. Expanded state plugging programs will require additional personnel (inspectors, data analysts, etc.), monitoring equipment, and data management and infrastructure, and analysis tools. Service providers will also need to anticipate operating and capital costs in order to provide the trained crews (project engineers, drillers, rig hands, etc.), rigs and materials (cement, piping etc.) in a timely fashion. Recent history has demonstrated the challenges of volatile markets and supply side shocks to the service industry, such as competition and access to drilling rigs and shortages of materials such as cement and iron. The success of the program in large part hinges on the agencies' ability to most efficiently manage resources to maximize the effectiveness of their plugging programs. A lack of certainty and commitment to funding will not provide clear signals to the evolving well plugging market and will potentially drive costs up and increase chances of supply-chain bottlenecks. We urge DOI to work with the states and the IOGCC on the ideal timeline for committing funds to maximize efficiencies and economies of scale.

## **2. Manage program costs and reduce additional costs wherever possible in order to maximize plugging of prioritized wells**

There are some requirements in the current draft that would likely significantly drive up the costs and time needed to plug wells and could materially reduce the number of wells states will be able to plug within the budget and timeframe of the formula grants. Of particular concern is the requirement to measure and quantify methane emissions before and after plugging. While we applaud every opportunity to measure progress on methane emissions reduction, in order to maximize the number of methane-emitting orphaned wells closed through this program, we suggest shifting the approach to get the same benefit but at a much lower cost. Methane emissions are one of a host of environmental risks posed by orphan wells, which can include groundwater and surface water contamination in addition to public health risks posed by a variety of polluting-gases depending on the geology. Collaborating with state agencies and the IOGCC on the most efficient and cost-effective methods for inspecting wells before and after plugging for all environmental, public health and safety risks is strongly advised.

### **o Recommendations for methane emissions quantification**

Methane emissions quantification for orphan wells is more in the science phase than the commercial phase, and for that reason, many states are having trouble finding contractors able to do this work, and when they can, they are often quoted sufficiently high rates as to materially cut into the budget for the actual plugging work. There is also a logistical challenge of combining methane measurement quantification with plugging activities given the current nascent state of the methane measurement industry. When states send crews out to plug the wells, while it will make sense and be cost-effective to have those crews conduct a show/no show test for methane emission with a FLIR camera or equivalent, their immediate next priority

will be to plug the well. The well-plugging crews are not likely to have the expertise or equipment to conduct methane measurement experiments in addition to plugging activities in a cost effective or timely way.

It is premature given the state of the science and of the methane measurement industry to require states to quantify methane emissions from every orphan well with a methane show. DOI should instead work with DOE, the IOGCC, state agencies and other relevant stakeholders to develop workable methodologies and protocols for assessing methane emissions and identifying the biggest emitters. We also recommend DOI work with the nascent methane measurement industry to determine and optimize methodologies, costs and services. DOI can work with its partner agencies and stakeholders to develop pilot projects along these lines in advance of a more comprehensive solution. This recommendation does not preclude DOI and state agencies from requiring their plugging contractors to do a show/no show analysis on the orphan wells to at least identify methane emitters for future analysis and monitoring.

- **Recommendations for surface and groundwater monitoring**

An additional concern for managing costs and timelines for maximizing plugging is the requirement for before and after surface and groundwater monitoring. While we agree this is of upmost importance as protecting and restoring drinking water supplies and ecosystems is at the heart of the mission, we suggest a phased and measured approach to both accomplish monitoring while also maximizing the number of contaminating and potentially future contaminating wells plugged. We encourage DOI to work with state agencies to identify the most cost-effective methods for assessing surface water impacts, such as before and after site photographs or affordable remote sensing/imaging. Ground water monitoring presents a number of challenges and ideally requires access to functioning on-site or nearby monitoring wells which may or may not exist. In addition, dedicated specialized field and lab personnel, such as hydrogeologists and geochemists are required to evaluate groundwater conditions and perform pump tests, geochemical analyses, groundwater modeling, etc. We suggest that DOI form a separate working group with agencies with groundwater expertise such as the USGS, GWPC and state agencies, to identify and evaluate the best and most cost-effective methods for monitoring groundwater in the vicinity of orphaned wells.

- **Skilled labor costs and job-training**

Access to skilled plugging crews at affordable prices is already a challenge for state agencies and will be increasingly difficult as competition for plugging crews ramps up. Costs are rising rapidly due to labor shortages, supply chain shortages (e.g., cement) and competition for skilled labor in a market that is currently saturated. We encourage DOI to think creatively in its approach to minimize these challenges and consider working collaboratively with states and other parts of the administration such as the Department of Labor as well as with industry associations to think through how to best train people to participate in what is clearly a growing industry. DOI might consider forming working groups with a variety of stakeholders to both understand and figure out how best to grow the pipeline for skilled well-plugging labor, particularly in communities within oil and gas producing regions. This issue undoubtedly overlaps with labor needs in other subsurface areas of the energy transition such as enhanced geothermal, CCS and hydrogen storage, and it would be strategic to explore the synergies of building a multi-purpose workforce

from the recently laid-off oil and gas workers, before they move on to other trades, and for the younger generation entering the work force. In addition to the shared goal of meaningful job creation in oil and gas producing regions, a larger labor pool will also lower overall costs of well-plugging and maximize this opportunity.

- **Cost Recovery**

Documented orphan wells are by definition no longer associated with a solvent owner. If, however in the process of evaluating orphan wells, a solvent owner was identified, the assumption is the state agency would pursue recovering plugging and other closure costs. While we agree that agencies should pursue cost recovery from solvent parties whenever plausible, we also hope the priority will stay focused on plugging the at-risk wells. Cost recovery can always come later. We encourage DOI to keep the program structured such that the plugging of prioritized wells is not delayed while recovering costs at this phase of the program. We commend DOI on its requirements for data collection and reporting which will both add transparency and facilitate tracking and analysis of well plugging activities for government agencies and for civil society.

**Some final thoughts**

We commend DOI on forming the Orphan Well Program Office and positioning itself to strategically to lead the Orphan Well Program. We encourage DOI to consider structuring the State Formula Grants similarly to cooperative agreements, where the states are given a certain amount of leeway to design how they spend the grants, and the agreements can be implemented through collaborative oversight between DOI and the state agencies. We think the ingredients for success of this program will require a true partnership with the federal implementing agency and the states. Substantive provisions should be worked out collaboratively whenever possible, so no one is taken by surprise. For example, we encourage DOI to work with state agencies and the IOGCC on reviewing and potentially strengthening the Data Collection and Reporting section to further leverage and expand on the use of existing data reporting and management tools such as the GWPC RBDMS system. Encouraging and supporting digital transformation of these systems will both increase the transparency of the reporting and facilitate analysis and communication of the results.

Thank you again for leading this effort. We look forward to constructive engagement with DOI as it works to ensure that state oil and gas regulatory agencies have the funds needed for plugging prioritized orphan wells across the nation, creating jobs and reducing climate impacts and environmental, safety and health risks.

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