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CCST Report Provides an Initial Assessment of California's Potential Orphan Oil and Gas Well Liabilities

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Responding to a request from the Division of Oil, Gas, and Geothermal Resources, now the California Geologic Energy Management Division (CalGEM), under the California Department of Conservation, the **California Council on Science and Technology (CCST)** conducted a study entitled “Orphan Wells in California: An Initial Assessment of the State’s Potential Liabilities to Plug and Decommission Orphan Oil and Gas Wells.” This independent assessment is available for download at CCST’s website: <https://ccst.us/reports/orphan-wells-in-california/>.

Orphan wells are wells that have no known responsible operator or no financially viable operator capable of plugging the well and decommissioning the well’s production facilities. An active or idle well can potentially become an orphan well when deserted by a financially insolvent operator. Responsibilities for plugging and decommissioning these wells may ultimately fall to the State. As the United States’ fourth largest producer of crude oil and fifteenth of natural gas, with approximately 107,000 active and idle wells in the state, the issue of ensuring that resources exist to properly plug and decommission every well is significant for California.

The CCST study team reviewed the best available information to assess the State’s potential orphan well liabilities and provides seven recommendations for further, more in-depth study based on the initial results. The report’s findings and conclusions are based on a review of published literature and official databases provided by CalGEM. Terence Thorn, President of JKM Energy and Environmental Consulting in Houston, TX served as Steering Committee Chair for the report.

The lead author of the report is Judson Boomhower, Assistant Professor of Economics at UC San Diego and an expert on energy, environmental economics, and applied microeconomics.

“As with all states where oil and gas drilling takes place, there are policies in place to protect the State from the potential liabilities of orphan wells,” said Boomhower. “California, like many other states, has recently taken steps to enhance these policies, primarily by requiring more financial assurance from well operators. However, our initial analysis implies that the potential cost to the state still substantially exceeds the value of these assurances.”

The CCST report uses broad categorizations to screen for wells that may already be orphaned or that are at high risk of becoming orphan wells in the near future. The analysis finds that 5,540 wells in California may already have no viable operator, and that the potential net liability for the State appears to be about \$500 million, after subtracting available bonds. An additional 69,425 economically marginal and idle wells could become orphaned in the future.

“Orphan wells are a concern in every state and region that produces oil and gas,” said Amber Mace, PhD, Executive Director of CCST. “We are proud to have been able to work with CalGEM to produce this initial, important analysis of a complex issue whose parameters can be challenging to assess.”

A CCST Expert Briefing for the Capitol community will be held at a later date, to be announced.

Modeled after the National Research Council, which responds to the United States government, CCST responds to requests from California’s State Legislature, the Governor, and State entities, and provides expert advice from California’s scientists and research institutions on public policy issues involving science and technology.

About the California Council on Science and Technology

The California Council on Science and Technology is a nonpartisan, nonprofit organization established via the California State Legislature in 1988. CCST engages leading experts in science and technology to advise state policymakers – ensuring that California policy is strengthened and informed by scientific knowledge, research, and innovation. Find CCST on Facebook at [facebook.com/ccstorg](https://www.facebook.com/ccstorg), on Twitter [@CCSTorg](https://twitter.com/CCSTorg), and on [LinkedIn](https://www.linkedin.com/company/ccst). Discover how CCST makes California’s policies stronger with science at www.ccst.us.

CCST Orphan Wells Project Page:

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