



**REQUEST FOR APPLICATION
Notice to Prospective Applicants**

September 28, 2023

Fugitive Emissions Study of Oil and Gas Wells

The California State Department of Conservation (Department) requires the services of an experienced, independent contractor to conduct a Fugitive Emissions Study on idle, idle-deserted and abandoned oil and gas wells in the state. You are invited to review and respond to this Request for Application (RFA). Department must receive proposals by **December 1, 2023**.

Potential applicants may submit questions regarding intent, expectations, or other topics pertaining to the actual application by contacting Leila Vlasko via email at: Leila.Vlasko@conservation.ca.gov.

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I. Description of Services

A. Overview

The Department of Conservation (Department) requires the services of an experienced, independent contractor to conduct a Fugitive Emissions Study on idle, idle-deserted and abandoned wells in the state. The Department intends to award one (1) service contract for this RFA.

CalGEM will retain the Contractor (independent experts) to measure, estimate, and document emissions of air pollutants from idle, idle-deserted, and abandoned wells in the State, to, among other things, satisfy the requirements of Public Resources Code § 3206.2. The Contractor will conduct a study to identify wells for testing using available data and stakeholder feedback, and measure air emissions, including, but not limited to, greenhouse gases (GHGs), toxic air contaminants (TACs), and volatile organic compounds (VOCs) from a representative sample of wells that can contribute to climate change or endanger occupational and public health and safety through their toxicological properties. The Contractor will conduct a review of methane detection equipment. The Contractor will estimate potential statewide greenhouse gas emission reduction potential from sealing idle, idle-deserted, and abandoned wells in the state. The Contractor selected shall have experience relevant to measuring and documenting air emissions from multiple idle and abandoned wells and well sites, preferably at multiple locations within the state.

The parameters of the study shall utilize existing information and technology tools that allow data collection without disruption to a well site and limit surface disturbance associated with any emissions sampling. The Contractor will develop a study plan, work with the Division in engaging with stakeholders on key methodological design elements, measure emissions according to the plan, and summarize the results in a final report.

B. Period of Performance/Available Funding

The schedule of performance of the Agreement shall be from the date when Department/Department of General Services (DGS) approval is received, through completion of the final report as outlined in the Schedule of Task Completion. The Contractor agrees to start work no later than thirty (30) days after the Department/DGS approval, or a mutually agreed upon time. The Department budgeted **\$750,000** for this study, not including gas detection equipment purchases.

C. Work to be Performed

Contractor agrees to provide to the Department all services as described herein:

1. Task 1: Develop a Study Plan

The Contractor shall first submit a Draft Study Plan, within sixty (60) days of approval of this contract. The Draft Study plan shall include: a proposal outlining how the Contractor will

work with CalGEM to seek input from stakeholders in identifying a stratified random sample of wells. Stakeholders will include independent experts, oil and gas operators and nongovernmental organizations. Additionally, the Draft Study Plan will include a proposed framework for well selection that will result in a comprehensive experimental design that considers all major factors leading to fugitive gas emissions. Criteria that influence fugitive gas emissions from idle and abandoned wells may include but are not limited to: the age of the well, the surrounding geology and soil properties, well characteristics such as depth and diameter, and the condition of the well or well abandonment. The Draft Study Plan should explain the rationale for selection criteria, include potential sources of data, and describe the analysis/process for selecting wells based on the criteria. The sample of wells shall include idle-deserted wells identified by the division, previously abandoned wells, idle wells that are ordered or permitted to be plugged and abandoned by the division, and other idle wells.

The Draft Study Plan shall include: identification of a set of air pollutants to be measured, including, but not limited to, greenhouse gases (GHGs), toxic air contaminants (TACs), and volatile organic compounds (VOCs); the proposed experimental design, measurement methodology, as well as the field data sampling, collection and analysis plan for fugitive gas emissions determination. The elements of the plan shall at a minimum contemplate sampling both the atmosphere and the soil and satisfy the requirements of 3206.2. The study plan shall include technological evaluation of methane detection equipment including an evaluation of current or emerging technologies available across parameters such as: detection levels, usability, cost, accuracy/precision, etc.

The study plan should address the following specific testing requirements outlined in 3206.2(a)(7) and 3206.2(a)(8):

“For purposes of undertaking the study, for a well that is selected for measurement as part of the sample but which is also scheduled to be plugged, abandoned, or re-abandoned, before the initiation of physical work to plug, abandon, or re-abandon the well the contracted independent experts, with oversight from the division, shall have testing performed for leaks on the well and associated equipment either (A) in accordance with the United States Environmental Protection Agency Reference Method 21, as set forth in Appendix A-7 to Part 60 of Title 40 of the Code of Federal Regulations, as it read on January 1, 2019, (B) by using an optical gas imaging (OGI) instrument that is operated by a technician with a certification or training in basic thermal science, OGI camera operation and safety, and OGI inspections, or (C) in accordance with an alternative methodology developed for the purposes of this study. If a well is found to emit hydrocarbons in an observable plume using an optical imaging device or in concentrations greater than 1 percent by volume using a United States Environmental Protection Agency Reference Method 21 instrument when tested before the initiation of physical work, the contracted independent experts shall ensure the discrete leak point is located and additional testing is performed using a direct measurement method consisting of high volume sampling to determine the flow rate (grams/hour) of atmospheric emissions of total and speciated hydrocarbon pollutants before the initiation of physical work.”

The draft study plan shall include a pre-plug and post-plug sampling schedule for those wells scheduled to be plugged and abandoned, or re-abandoned. Where it is possible to

locate the leak point or characterize the leak type, such data should be collected and included in the results to inform possible solutions for emission reductions.

The draft study plan shall include the proposed plan for analysis of results. Analysis should include appropriate extrapolation of results statewide to estimate greenhouse gas impacts of permanently sealing wells to today's standards. In addition, contingency plans, safety aspects, and any other elements that have been reviewed and approved for inclusion by CalGEM, that the Contractor or CalGEM deem appropriate or required shall be included in the study plan. The Contractor shall then work with CalGEM to further develop the Draft Study Plan including the process in which stakeholders will be selected and engaged. The Draft Study Plan will be shared with stakeholders, and the contractor will facilitate at least two meetings (virtual meetings are acceptable) with stakeholders to solicit and discuss feedback. The Contractor shall then incorporate and/or respond to any outstanding stakeholder comments and submit a Final Study Plan to CalGEM. Once approved by CalGEM, the Final Study Plan shall be used for the remainder of the contract period.

Preliminary site visits may be required. CalGEM will introduce the Contractor to facility owners, if applicable, so they can coordinate future site visits and testing. For some abandoned wells, a facility owner may not exist, in which case permission will be obtained from the surface rights owner. After the initial meetings, the Contractor will be responsible for scheduling subsequent site visits and testing at those facilities. CalGEM may attend site visits to learn more about technologies and evaluate contract progress.

Within thirty (30) days of the approval of the Final Study Plan, the Contractor shall submit a Preliminary Data Report which consists of a blank reporting template and shows how test results will be presented on an ongoing basis. This may also include electronic report formatting for inclusion in a database or spreadsheet program. Once CalGEM approves the Preliminary Data Report format, regular test reports shall be provided in the approved format at intervals described in Task 3.

2. Task 2: Conduct Emissions Measurements

The Contractor shall undertake air pollutant emissions quantification using measurements according to the approved Final Study Plan. The following are subtasks under Task 2:

- a) Perform emissions measurements.
- b) Broadly estimate statewide greenhouse gas emissions by extrapolating the measurement data from the stratified random sample of wells to the total number of idle, idle-deserted, and abandoned wells in the state. An explanation of the methods and assumptions used to extrapolate the data shall be included in the draft and final reports. To the maximum extent possible, the sample shall include emissions data already collected from wells in the state. Additionally, the contractor shall use any before and after methane measurements taken from the CalGEM state abandonment program to estimate program impact and effectiveness.
- c) CalGEM may request an interim progress report describing the status of the study conducted, including, but not limited to, the number of wells where the testing has been completed, the number of wells remaining to be tested, study costs, and preliminary test results, as available. The timeframe for this progress report will be communicated by CalGEM and the report may be posted on CalGEM's internet website.

3. Task 3: Summarize Results

The Contractor shall summarize all collected test data in a table format deemed acceptable by CalGEM in Task 1. All data shall be summarized on an ongoing basis and provided to CalGEM at any time requested. By the deadline in the “Key Reporting Deadlines” section, a full summary shall be submitted to CalGEM. All summarized data shall be included as part of the final report.

4. Task 4: Draft Report

The Draft Final Report should include, but not be limited to, an executive summary of the findings, a description of the results, the findings, and an estimate of GHG emissions from the state’s idle, idle-deserted, and abandoned wells. The report may also include an explanation why the results should be trusted and used in supporting policy making. The Draft Report will be shared with stakeholders that CalGEM deems appropriate including independent experts, nongovernmental organizations, and the operators whose wells were included in the sample. The contractor shall then incorporate and/or respond to any outstanding stakeholder comments.

5. Task 5: Final Report

The contractor shall email an electronic copy of the Final Report to the CalGEM Project Manager incorporating all reasonable alterations and additions requested by CalGEM. After submitting a Final Report, if additional amendments are requested by CalGEM’s Project Manager, the Contractor shall, within two (2) weeks, or an alternative agreed upon timeframe, email a revised electronic copy to CalGEM’s Project Manager. Once the results are final, the contractor will present the findings in one public meeting.

Note: The Contractor shall submit an electronic copy for the Report in a format that is compatible with the American Disabilities Act (ADA).

D. Deliverables and Reporting Requirements

Provide the following deliverables:

1. Task 1: Develop a Study Plan

- a) Draft Study Plan for CalGEM review and stakeholder engagement
- b) Final Study Plan to CalGEM, incorporating and/or responding to CalGEM and stakeholder comments
- c) Preliminary Data Report to CalGEM for review

2. Task 2: Conduct Emissions Measurements

- a) Interim progress report to meet timeframe specified by CalGEM

3. Task 3: Summarize Results

- a) Data summaries to CalGEM upon request
- b) Summary of all collected data to CalGEM after completion of field measurements

4. Task 4: Draft Final Report

- a) Draft report to CalGEM and stakeholders for review

5. Task 5: Final Report

- a) Final report to CalGEM incorporating and/or responding to CalGEM and stakeholder comments.
- b) Present findings in one public meeting.

Deliverable acceptance criteria:

1. It shall be CalGEM's sole determination as to whether a deliverable has been successfully completed and acceptable to CalGEM. There must be a signed acceptance document for each deliverable before invoices can be processed for payment. If the deliverable is not accepted, CalGEM shall provide the rationale in writing within five (5) days of receipt of the deliverable.
2. Submit the deliverables based on the following guidelines:
 - a) Data format: Contractor shall provide data summaries and other related reports in electronic form using either Microsoft Excel or Access.
 - b) Document Format: Contractor shall provide draft and final reports in electronic format using Adobe Acrobat PDF format as well as an editable format such as Microsoft Word. The formatting of the document shall also be compliant with the American with Disabilities Act (ADA).
 - c) Submission of Deliverables and Copies. One electronic softcopy of each deliverable will be submitted to the CalGEM Project Manager.

Other reporting requirements:

1. The Contractor and CalGEM shall have an initial kick off meeting after which they will meet monthly or as needed via Microsoft Teams.
2. The Contractor shall provide written progress reports quarterly and be prepared to submit tabulated test results more frequently if requested by CalGEM. The Contractor shall email an electronic copy of the progress report or tabulated test results to the CalGEM Project Manager. The progress reports shall include in table format:
 - a) A brief narrative account of project tasks completed or partially completed since the last progress report. The task names must match those in the Work to be Performed.
 - b) A brief discussion of problems encountered during the reporting period and how they were or are proposed to be resolved.
 - c) A brief discussion of work planned, by project task, before the next progress report.
 - d) The percent completion of each task.
 - e) The budget progress, including the amount spent during the billing period, the amount spent to date, and the percent completion.
 - f) Any current invoice references.

E. Key Reporting Deadlines

Key reporting deadlines are set by statute and the following schedule allows time to post the information to the CalGEM website. CalGEM shall define specific requirements, timeframes, and priorities for Contractor tasks, in addition to those below.

Reporting Task	Due Date
Test Result Summary	December 1, 2025
Draft Report	July 1, 2026
Final Report	June 30, 2027

//. Proposal Requirements and Information

A. Key Action Dates

The following schedule has been established for informational purposes. Efforts will be made to adhere to this plan, but the Department may adjust the dates as required by circumstances.

<u>Event</u>	<u>Date</u>
RFA available to prospective Proposers	September 28, 2023
Final Date for Proposal Submission	December 1, 2023
Anticipated Award Date	December 2023

B. Work Plan and Work Schedule Requirements

The Proposer shall develop a work plan, identifying each major task, necessary subtask, and/or specific milestones. It shall also include an estimate of time needed for each task, a list of specific objectives and the format of how the Proposer plans to meet those objectives from the *Work to be Performed* described in this RFA. Develop a schedule for task completion by which progress can be measured. Provide approach and methods that will be used to address each task detailed in the proposal. Applicants are strongly encouraged to be as specific as possible when describing their proposed approach and methods (ex: measurement methodology, equipment specifications).

C. Statement of Qualifications/ Resumes of Applicant and Sub-Contractor(s)

Applicants are encouraged to create a team to best carry out this work and the proposer shall list key personnel who will be working on the project.

The primary contractor must be qualified to enter into an Interagency Agreement and must perform the majority of the work. Sub-contractors are allowed and will not need to meet this requirement.

As part of the application, Applicants must include a resume for each professional (showing their current titles and institutional affiliations) and a statement summarizing their role on the proposed project.

Additionally, applicants must provide a statement of qualifications on why they are best suited to carry out the work, and proof that at a minimum, a member of their team meets or exceeds the below minimum qualifications:

1. Independent expert with experience in measuring, documenting, and quantifying air emissions from sources and with published articles in a peer reviewed journal;
2. Researcher with knowledge of oil and gas wells or sites.

Substitute personnel must meet the same minimum qualifications as described in this RFA. During performance of the Agreement, the Contractor must request prior written approval from the Department in advance of substitutions.

D. References

Provide three (3) references with a brief description of work performed. References must be provided using the attached *Applicant References Form*.

E. Submission of Proposal

1. All proposals may include the documents identified in the Attachment Checklist.
2. Email the proposal to the following address:
3. Costs incurred for developing proposals and in anticipation of award of the agreement are entirely the responsibility of the Proposer and shall not be charged to the State of California.

F. Disposition of Proposals

1. Upon application receipt, all documents submitted in response to this RFA will become the property of the State of California and will be regarded as public records under the California Public Records Act (Government Code Section 6250 et seq.) and subject to review by the public.

III. Required Attachments

Attachment 1: Required Attachment Checklist

A complete proposal package should include all of the items identified below.

Complete and return this checklist to confirm the items in your proposal. Place a check mark or "X" next to each item that you are submitting to the State. For your proposal to be responsive, all required attachments should be returned, and this attachment shall be signed.

Attachment		Attachment Name/Description
<input type="checkbox"/>	Attachment 1	Required Attachment Checklist (this page or a copy of this page)
<input type="checkbox"/>	Attachment 2	Budget for Project Period
<input type="checkbox"/>	Attachment 3	References (3)
<input type="checkbox"/>	Work Plan and Work Schedule	
<input type="checkbox"/>	Statement of Qualifications/ Resumes of Applicant and Subcontractor(s)	

Printed Name: _____

Title: _____

Signature: _____

Attachment 2: Budget for Project Period

An estimated budget for the project period shall be submitted with your proposal package in a similar format of the example below.

From: To:	7/1/2023 6/30/2024 Year 1	7/1/2024 6/30/2025 Year 2	7/1/2025 6/30/2026 Year 3	7/1/2026 6/30/2027 Year 3	TOTAL
BUDGET CATEGORY					
PERSONNEL: <i>Salary and fringe benefits.</i>	\$0	\$0		\$0	\$0
TRAVEL	\$0	\$0	\$0	\$0	\$0
MATERIALS & SUPPLIES	\$0	\$0	\$0	\$0	\$0
EQUIPMENT	\$0	\$0	\$0	\$0	\$0
CONSULTANT	\$0	\$0	\$0	\$0	\$0
SUBRECIPIENT	\$0	\$0	\$0	\$0	\$0
OTHER DIRECT COSTS (ODC)	\$0	\$0	\$0	\$0	\$0
TOTAL DIRECT COSTS	\$0	\$0	\$0	\$0	\$0
Indirect (F&A) Costs					
<u>Rate</u>	<i>\$0</i>	\$0	\$0	\$0	<i>\$0</i>
<u>F&A Base MTDC *</u>	\$0	\$0	\$0	\$0	\$0
TOTAL COSTS PER YEAR	\$0	\$0	\$0	\$0	
TOTAL COSTS FOR PROPOSED PROJECT PERIOD					\$0

Attachment 3: References

Proposer shall list at least three (3) references that can speak to their competency and ability to perform work similar to the description of services described in this RFA that are to be performed in the Agreement.

REFERENCE 1			
Name			
Street Address	City	State	Zip Code
Telephone Number		Email	
Dates of Work		Value or Cost of Work if applicable	
Brief description of work performed			
REFERENCE 2			
Name			
Street Address	City	State	Zip Code
Telephone Number		Email	
Dates of Work		Value or Cost of Work if applicable	
Brief description of work performed			
REFERENCE 3			
Name			
Street Address	City	State	Zip Code
Telephone Number		Email	
Dates of Work		Value or Cost of Work if applicable	
Brief description of work performed			