

Request for Proposals: Technology Roadmap to Address Wellbore Leakage

Request

The Canadian Society for Gas Migration (CSGM) and Petroleum Technology Alliance Canada (PTAC) invites you to respond to the subject Request for Proposals (RFP). The CSGM encourages potential project suppliers that can meet a portion of the need outlined in this RFP to make integrated proposals with appropriate co-suppliers.

The CSGM was formed by industry experts with the goal to develop and promote industry best practices to prevent and eliminate surface casing vent flow and gas migration. The CSGM is focused on addressing wellbore leakage in the oil and gas industry. The mission of the CSGM is to present new technologies, procedures and promote science relating to gas migration through wellbore leakage. The society will promote active discussion with all stakeholders with mutual goals of the reducing the environmental impact from current wellbore leakage and prevention of new gas migration.

PTAC is a neutral non-profit industry association that facilitates innovation, collaborative research, and technology development, demonstration and deployment for a responsible Western Canadian upstream hydrocarbon energy industry. PTAC's objective is to improve industry's financial, environmental and safety performance through the application of new technology and research. PTAC utilizes a collaborative approach with input from industry and government technical experts for project direction and oversight.

Background

Wellbore leakage is the unintended migration and release of gas and other formation fluids from oil and gas wells to the atmosphere and subsurface strata. Leakage contributes to greenhouse gas emissions, has resulted in groundwater and soil contamination and has inhibited or delayed oil and gas development in some regions.

While the issue is not new, it has received considerable public attention recently due to news articles, journal publications and various reports, including the Council of Canadian Academies report on the Environmental Impacts of Shale Gas Development.

The various studies done on the subject of wellbore leakage and public concern over the issue, emphasize the need to better understand wellbore leakage, including how it can be reduced and what its environmental impacts are.

In order to ensure that wellbore leakage is addressed in a comprehensive, effective and efficient manner, it is proposed that a technology roadmap be completed.

The technology roadmap process brings together stakeholders to identify research, technology development and best practices that are essential to address wellbore leakage. The Technology Roadmap (TRM) will be led by industry to ensure that the recommended R&D is relevant, implementable and effective.

At the request of Natural Resources Canada (NRCan), the CSGM with the assistance of PTAC, will organize and facilitate a TRM to address wellbore leakage. The wellbore leakage TRM will address the following topics:

1. Improving drilling and completion procedures to avoid or minimize leakage in the new wells.
 - Identify current accepted practices in drilling and cementing practices.
 - Identify completion practices that may contribute to wellbore leakage.
2. Improving leakage source identification and intervention strategies to increase remediation success rates and decrease their costs.
 - Identify current practices to identify the source of the leak.
 - Capture current practices to stop wellbore leakages and their limitations.
3. Improving our understanding of the magnitude and impacts of wellbore leakage, particularly with respect to the shallow subsurface.
 - Identify and capture all current relevant research on the subject.
 - Identify gas migration paths to surface.
4. Improving abandonment processes to increase the wellbore's ability to provide a long term barrier to leakage.
 - Identify current regulations and technologies to stop wellbore leakage.
 - Identify common failure mechanisms and the effect on risk management.
 - Identify ongoing research to verify effectiveness of intervention techniques.

Please note that the funding amount to be allocated to address each of these technology gaps is \$25,000.

Purpose

The CSGM is soliciting proposals that will address each of the major issue of wellbore leakage that are highlight in the Background section.

The successful applicate will be responsible for the following:

1. Provide a concise background for the chosen major issue by documenting the current state of the industry, including literature review.
2. Identify best practices and regulatory changes that will have a positive impact based on current science and technology.
3. Identify knowledge and technology gaps.
4. Provide suggestions on R&D to address the knowledge and technology gaps.
5. Prepare a draft report of findings.
6. Present a summary of the draft report at an issue-specific workshop of comprised of industry experts, regulators, academia and other stakeholders.
7. Review and incorporate feedback from the stakeholders at the workshop and via public website
8. Submit a final report.

Process & Deadlines

CSGM intends to utilize the following process to launch this project.

1. The competition will close on December 18th, 2015. All proposals must be received by this time.
2. The successful applicant will be selected and notified by CSGM no later than January 29th 2016.
3. Draft reports are due March 31st, 2016.
4. Workshop presentation and feedback on draft reports will occur in April 2016.
5. Final report incorporating feedback due June 2016.

Project proposals will be kept confidential to the CSGM for the duration of the competition. Project results will be shared publically via workshop, website, and the final TRM document by CSGM.

Contents of Proposal

The requested proposal should contain a short description of the proposed scope of work, budget and schedule which would be used as the basis of a contract. An appropriate document addressing the following elements must be delivered electronically to the CSGM by the deadline stated above:

- Scope of work
- Deliverables
- Schedule
- Personnel assigned to the project
- Qualifications relating to the subject matter and experience
- Requested payment schedule, if any

The applicant may wish to include documents such as CVs, company description or literature references with the submission.

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RFP Submission Contact

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