

Executive Summary

Methane emissions from oil and gas wells remain an important environmental challenge despite substantial progress in methane management. While Alberta has implemented a range of regulatory, industry, and funding initiatives, opportunities remain to expand the financial resources available for methane reduction projects. Methane Monster Quest (MMQ) introduces a complementary approach: inviting the public to participate directly in funding verified methane reduction projects.

This white paper examines the role that alternative funding models can play within Alberta's existing methane reduction landscape. It reviews the nature of the methane challenge, the diversity of methane reduction projects, and the financial and operational factors that can influence when and how methane remediation projects proceed. This paper proposes MMQ as an additional funding mechanism designed to enhance, rather than replace, existing regulatory requirements, industry initiatives, and government funding programs.

MMQ enables individuals, teams, corporations, community organizations, and others to voluntarily help fund methane reduction projects. Contributions are pooled and directed toward eligible methane reduction projects selected for MMQ funding. Remediation work is performed by qualified oil and gas professionals using established industry practices and in accordance with applicable regulatory requirements. Independent third-party methane measurement providers measure and verify methane reductions before and after remediation to objectively demonstrate project outcomes.

A distinguishing feature of MMQ is its integration of public participation, recognition, gamification, and transparency. Public leaderboards and Green Points, both of which reflect contributions, are designed to encourage continued participation. Verified project reporting allows participants to follow the environmental results of the projects they help support.

MMQ also incorporates a 5% giveback model, directing a portion of contributions to a yet-to-be-selected locally operated organization focused on growing and providing affordable, year-round produce to help address food insecurity.

The long-term success of MMQ will be evaluated through verified methane reductions, completed projects, transparent reporting, participant growth, and funds directed toward methane remediation. By combining voluntary private funding, independent verification, and public participation, MMQ provides a practical, transparent, and measurable way for individuals and organizations to contribute to help stop methane leaks.

Background

For more than seventy years, oil and gas development has played an important role in Alberta's economy, providing the energy needed to support homes, businesses, transportation, and industry. During that time, hundreds of thousands of wells were drilled using the industry practices that existed at the time.

As scientific understanding has advanced, so too has our understanding of methane as a greenhouse gas and the environmental impacts of methane emissions. Improvements in methane detection technology, emissions measurement, and monitoring have increased the ability to identify, quantify, and reduce methane emissions across the oil and gas sector.

Natural gas, consisting primarily of methane, is both an important energy resource and, when released unintentionally, a source of greenhouse gas emissions. Natural gas provides a reliable source of energy for heating homes, generating electricity, powering industry, and supporting economic growth.

Public policy, industry practices, and societal expectations regarding methane emissions have evolved considerably. Methane that may once have been viewed as an unavoidable by-product of oil and gas production is now increasingly recognized as a greenhouse gas that should be measured, managed, and, where practical, reduced.

In response, Alberta has introduced regulatory requirements, funding programs, and collaborative initiatives that support methane reduction. Industry has also continued to invest in technologies and operational practices that improve methane detection, measurement, monitoring, and remediation.

This evolving landscape reflects a broader recognition that reducing methane emissions is a shared responsibility requiring the combined efforts of government, regulators, industry, researchers, technology providers, and the public. As Alberta continues to advance methane reduction, opportunities exist to consider compatible approaches that broaden participation and expand the resources available for verified methane reduction projects.

Problem Description

Methane is a naturally occurring greenhouse gas that contributes to climate change by trapping heat in the atmosphere¹. As a result, reducing methane emissions is widely recognized as an important opportunity to slow the rate of near-term warming. Methane released into the atmosphere is both a greenhouse gas emission and the loss of a valuable energy resource.

Canada is home to more than 400,000 oil and gas wells. Independent research estimates that these wells release more than 230 kilotonnes of methane into the atmosphere each year². While methane emissions originate from a variety of sources³, emissions from oil and gas wells represent an opportunity for measurable reductions through detection, remediation, and ongoing monitoring. Although MMQ is

initially focused on Alberta, the national well count illustrates the overall scale of methane emissions from Canada's oil and gas sector.

Methane emissions can originate from a variety of well types and operating circumstances. Some emissions occur at active wells, while others originate from inactive, abandoned, or orphaned wells. In some cases, the responsible operator no longer exists. In others, the operator remains responsible, but remediation may be influenced by technical complexity, project economics, available funding, or competing operational priorities. The complexity of methane reduction projects varies considerably, with some requiring routine remediation and others involving more extensive technical, financial, and operational considerations. As a result, the time, expertise, and financial resources required to reduce methane emissions vary considerably from project to project.

Reducing methane emissions is therefore not solely a technical or regulatory challenge. It also involves financial, operational, and organizational considerations that differ from project to project. Addressing these varied circumstances may require multiple approaches that supplement existing regulatory requirements, industry initiatives, and funding programs by providing additional sources of funding for verified methane reduction projects.

Solution

Reducing methane emissions in Alberta is supported by a combination of regulatory requirements, industry expertise, funding programs, and collaborative initiatives. Examples include the Alberta Energy Regulator's (AER) methane management requirements, the Technology Innovation and Emissions Reduction (TIER) system, the Methane Reduction Deployment Program (MRDP), and the Canada–Alberta Agreement in Principle (MOU). Together, these initiatives reflect Alberta's multifaceted approach to reducing methane emissions and provide the context within which voluntary funding models such as Methane Monster Quest can build.

Methane Monster Quest (MMQ) was developed to complement Alberta's existing methane reduction initiatives by introducing an additional source of voluntary contributions for verified methane reduction projects. These public contributions are pooled and directed toward eligible methane reduction projects selected for MMQ funding. Remediation work is performed by qualified oil and gas professionals using established industry practices and in accordance with applicable regulatory requirements. Project outcomes are measured by qualified third-party methane measurement and verification companies to independently quantify methane reductions before and after remediation.

In MMQ's initial phase, eligible projects will be identified through partnerships with oil and gas operators who voluntarily engage with the program. To qualify for MMQ funding, a project must involve a measurable methane emission from an oil and gas well or associated infrastructure located in Alberta. The responsible operator must consent to independent third-party methane measurement before and after remediation. Remediation work must be performed by qualified oil and gas professionals in accordance with applicable AER regulatory requirements. Each project must be one where additional private funding would meaningfully support or accelerate remediation that might otherwise be delayed.

As MMQ grows, project selection criteria will be reviewed and refined to reflect operational experience, participant input, and evolving best practices in methane reduction.

A distinguishing feature of MMQ is its use of public participation and recognition to encourage continued engagement. Contributors become Heroes and can choose to have their Hero name displayed on public leaderboards, where Green Points and project badges recognize contributions and record completed methane reduction projects. Links to verified project information allow participants to follow the environmental results of the projects they help support.

Individuals who are not yet ready to become a Hero can choose to join the Future Hero Leaderboard to follow the progress of the Quest and receive project updates.

Planned MMQ features are intended to strengthen engagement by making methane reduction visible, participatory, and rewarding. An interactive methane map is intended to make project activity and progress more visible. Following successful remediation, participants will have the opportunity to name the fallen Methane Monster. Each Hero who contributed to that project will receive the corresponding project badge on the leaderboard. Quest celebrations will recognize completed projects and the Heroes who helped make them possible. Together, these features are designed to encourage hope, belonging, and pride while sustaining public interest and fostering a sense of ownership in methane reduction efforts.

A key execution risk is securing sufficient funding to sustain methane mitigation projects over time. MMQ is designed to build private participation through public recognition, visible project outcomes, gamification and continued evaluation of participant engagement. Opportunities to complement private contributions with other eligible funding sources may also be explored as the model develops.

By expanding who can participate in funding verified methane reduction projects, MMQ provides an additional source of private funding that enhances Alberta's existing methane reduction initiatives. The model is intended to broaden public participation, increase financial support for eligible projects, and contribute to Alberta's ongoing efforts to reduce methane emissions.

Evaluation: Verification and Transparency

Independent verification is fundamental to the credibility of the Methane Monster Quest model. Measuring, verifying, and transparently reporting project outcomes enables participants and other stakeholders to evaluate the environmental results achieved through supported methane reduction projects.

Each methane reduction project funded through MMQ is intended to follow a consistent verification process. Methane emissions are independently measured before remediation to establish a baseline and measured again following project completion to quantify the methane reduction achieved. Remediation work is performed by qualified oil and gas professionals using established industry practices and in accordance with applicable regulatory requirements. Independent third-party methane measurement providers measure and verify project outcomes. Where ongoing monitoring is required, it is conducted in

accordance with applicable regulatory requirements to provide continued assurance that completed remediation projects continue to perform as intended.

Transparent public reporting is intended to provide participants a clear understanding of both how contributions are used and the measurable outcomes they help achieve. Information on contribution allocation, the status of supported projects, independently verified methane reductions, and the environmental results achieved will be publicly reported.

The long-term effectiveness of MMQ will be evaluated using objective measures, including the number of projects completed, verified methane reductions achieved, funds directed toward remediation, participant growth, and the extent to which the model contributes additional private funding for independently verified methane reduction projects. Independent verification and transparent reporting will enable participants and other stakeholders to evaluate the effectiveness of the MMQ model over time.

Recommendations

For readers seeking a practical way to contribute to measurable methane reduction, Methane Monster Quest provides an opportunity to help fund independently verified methane reduction projects. By introducing an additional source of private funding, MMQ provides an opportunity to enhance existing methane reduction efforts while expanding the financial resources available for eligible projects.

By pooling voluntary contributions, MMQ enables participants to collectively help fund methane reduction projects. MMQ will focus on projects whose remediation may be delayed or more difficult to advance because of financial considerations.

Independent third-party methane measurement, transparent reporting, and ongoing evaluation should remain fundamental components of the MMQ model. These elements provide objective evidence of environmental outcomes, enable participants to understand how contributions are allocated and the results they help achieve, and support continued confidence in the model.

MMQ also recommends incorporating gamification to encourage continued participation. Hero status, Green Points, project badges, and public leaderboards provide visible recognition of individual, team, and corporate contributions and collective progress. Together, these elements demonstrate collective progress while fostering a sense of belonging and friendly competition. By making methane reduction visible, MMQ seeks to transform environmental action into an activity that people can follow and share.

MMQ further recommends allocating 5% of contributions to a yet-to-be-selected locally operated organization that grows and provides affordable, year-round produce to help address food insecurity.

As the initiative grows, MMQ should continue to be evaluated and refined using objective measures, including verified methane reductions, projects completed, funds directed toward remediation, participant growth, and continued engagement. Ongoing evaluation will enable the model to evolve while remaining focused on its primary objective: increasing voluntary contributions for independently verified methane reduction projects.

Conclusion

Methane emissions from oil and gas wells represent a measurable, addressable environmental challenge — one for which Alberta already has considerable expertise, infrastructure, and regulatory commitment. The remaining question is not whether methane can be reduced further, but how to expand the financial resources available to do it.

Methane Monster Quest proposes one answer: invite the public in. By combining voluntary contributions, independent verification, transparent reporting, and public recognition, MMQ introduces a funding model that does not duplicate existing efforts but enhances their reach. It provides a mechanism for individuals, teams, corporations, and community organizations to participate directly in verified methane reduction - and to see the results of that participation reflected in real project outcomes.

The long-term success of MMQ will depend on continued participation, measurable environmental results, and the confidence of participants and other stakeholders. Independent verification, transparent reporting, and ongoing evaluation are intended to ensure that the model remains accountable while demonstrating the environmental outcomes achieved.

MMQ's long-term vision is a future where stopping methane leaks is something anyone can join, follow, and take pride in - turning measurable environmental progress into a shared achievement.

Works Cited

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- [2] Louise A. Klotz, Liam Woolley, Bianca Lamarche, Jade Boutot, Mary Kang; Correction to “Sevenfold Underestimation of Methane Emissions from Non-producing Oil and Gas Wells in Canada”. *Environ. Sci. Technol.* 14 April 2026; 60 (14): 11135–11137. <https://doi.org/10.1021/acs.est.6c03137>
- [3] National Aeronautics and Space Administration, Methane – Earth Indicator. Retrieved August 6, 2026, from NASA Science website: <https://science.nasa.gov/earth/explore/earth-indicators/methane/>