



Challenge: LCBA – NGIF on Emissions Monitoring and Leak Detection Solutions

Challenge Statement:

NGIF IG is seeking breakthrough technologies that can improve the environmental and economic performance of the natural gas sector. One area of particular interest is continuous emissions monitoring and leak detection and repair (LDAR) solutions.

Context:

NGIF IG is looking for **methane leak detection** solutions that offer continuous surveillance of natural gas operations so that operators can be notified of leaks in real-time. The following categories of surveillance technologies are of interest:

- **Satellite-based systems** - Emerging emissions detection and measurement technologies through satellite monitoring at higher performance, greater reliability, and lower cost including advance analytics and remote sensing. Technologies may include satellites equipped with sensors that can measure methane concentrations in the atmosphere and pinpoint the location and magnitude of major emissions sources.
- **Aerial surveillance monitoring** - Emerging technologies that uses drones, planes, helicopters or balloons equipped with sensors that can fly over areas of interest and detect methane emissions from various sources, such as gas pipelines and gas facilities.
- **Ground-based mobile and fixed-position sensors** - New technologies on fixed sensors, infrared cameras, laser-based instruments, mobile ground labs (MGLs), etc. that can measure methane concentrations near the ground level and identify potential emission sources.

Response Criteria:

In your response, please provide the following information or describe how your solution can meet the requirements of the challenge.

- Your solution falls within TRL 6-8.
- Technology/innovation information (describe your solution and how it works (i.e., scientific principles), intellectual property limitations – if any, competing technologies and any advantages your solution offers, value proposition for your end-users)
- Potential economic considerations such as cost of deployment and data usage, and the servicing and business model compared with the competition
- Financial, and operational readiness of your company, and technical capability of your team.



The Opportunity:

- The LCBA Canada offers the opportunity to **fast-track** your application and secure frontline access to NGIF IG's Natural Gas Industry members and through them, access to millions of natural gas users across Canada ([Global Cleantech Challenge](#)). This competition is offering up to \$1M CAD to support high potential demonstration projects at NGIF energy company industrial operations.
- Opportunity to secure frontline access to NGIF IG's Natural Gas industry members and through them, access to millions of natural gas users across Canada
- Showcase and demonstrate your product or technology to NGIF IG's Natural Gas industry members.

About NGIF:



NGIF Capital Corporation:

NGIF Capital is a Canadian venture capital organization which offers grants and equity financing for startups that provide solutions to the environment and other challenges facing the natural gas sector. NGIF Capital is unique in how it brings Canada's energy industry leadership to each and every investment. It takes new companies and their ideas from concept stage to commercialization. NGIF Capital is linked to the entire gas value chain - from production to end-use, and offers the means to test, develop, and accelerate the commercial implementation of innovative gas technologies wherever they fit within the gas industry. This model benefits consumers, investors, and the Canadian society as a whole. NGIF Capital operates NGIF Industry Grants (the original Natural Gas Innovation Fund), the NGIF Emissions Testing Centre (NGIF ETC), and the NGIF Cleantech Ventures (NGIF CV).

NGIF Industry Grants (NGIF IG):

NGIF Industry Grants is a corporate division of NGIF Capital Corp. ("NGIF Capital") and was established to accelerate cleantech innovation in the gaseous energy value chain. The mandate of NGIF IG is to fill and accelerate technology development gaps in the sector and to invest in enabling solutions for current and emerging challenges facing the industry. Our focus is to advance clean technologies that improve environmental outcomes, increase economic competitiveness, and eliminate or reduce sustainability barriers. NGIF IG is wholly funded by the Canadian natural gas industry. Our natural gas production and transmission participants include Birchcliff Energy Ltd., Canadian Natural Resources Ltd., Cutbank Dawson Gas Resources Ltd. (a wholly owned subsidiary of Mitsubishi Corporation), Perpetual Energy Inc., PETRONAS Energy Canada Ltd., Shell Canada Energy (by its managing partner, Shell Canada Ltd.), Tidewater



Midstream and Infrastructure Ltd., and Tourmaline Oil Corp. The natural gas distribution participants include ATCO Gas (a division of ATCO Gas and Pipelines Ltd.), Apex Utilities, Enbridge Gas Inc., FortisBC Energy Inc., Pacific Northern Gas Ltd., and SaskEnergy Inc.

For more information on NGIF Capital and NGIF Industry Grants, please visit ngif.ca or contact us at info@ngif.ca.

***Only non-confidential information should be included in your response ***