



Challenge: LCBA – NGIF on Renewable Natural Gas Production and Processing Solutions

Challenge Statement:

NGIF IG is seeking emerging technologies that can improve the environmental and economic performance of the natural gas value chain, including production, transmission and distribution. Renewable natural gas (RNG) production and processing solutions are of particular interest.

Context:

NGIF IG is looking for disruptive RNG production and processing technologies, including:

- Disruptive technologies in RNG production and processing from variety of feedstocks such as agriculture waste, organic materials, landfills, and biosolids. Also, includes RNG production from new pathways such as plastics, etc.
- Examples include advance anaerobic digestion process and gasification.
- New compression and efficient cleanup processes to lower the cost of RNG production and processing is also of interest.

Assumptions and Considerations:

- Small-distributed, medium scale and large centralized solutions are all under consideration.
- Feedstocks may be variable depending on the NGIF member application and can include:
 - Anaerobic digestion
 - Wastewater resources (municipal sewage treatment plants or industrial)
 - Landfill sites
 - Livestock farms (animal manure such as pig, cattle, poultry, others)
 - Woody biomass (The source should be from sustainably managed forests.
 - Organic waste, including woody biomass (typically comes from forest residues, such as logging debris, sawmill residues, and tree tops and limbs that are left behind after harvesting), food waste/scrap and agricultural waste
 - Waste plastics

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. If the technology is at TRL 5, and TRL 6 will be reached imminently then we would be able to consider it.
- Technology/innovation information (describe your solution and how it works (i.e., scientific principles and technology specifications), intellectual property limitations – if any,



competing technologies and any advantages your solution offers, value proposition for your end-users)

- Potential economic and environmental benefits of your solution, including the estimated cost of producing RNG, and or other costs.
- Business model opportunities
- 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.
- Member off-take agreements and other commercial opportunities may be explored with successful applicants.

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 ***