



Synopsis:

Carbon capture storage and utilization is a key innovation theme for NGIF Industry Grants (“**NGIF IG**”), a division of NGIF Capital Corporation. NGIF IG is seeking purposeful collaborations with EU Small and Medium Enterprise (SMEs) and Mid-Cap technology developers to bring and showcase their technology to the Canadian market.

Challenge Statement:

NGIF IG is seeking a range of innovative solutions to sequester post-combustion CO₂ with or without CO₂ storage and utilization to value-added products from the upstream, midstream, downstream, and end-use natural gas value-chain in Canada. The focus is on the small to mid-size capture solutions (1 tCO₂ to 100 tCO₂ per day) having technologies in the TRL scale 6 – 8

Context:

CO₂ emissions from post-combustion sources are wide in scope within the natural gas value chain, ranging from natural gas extraction, processing, transmission and distribution to residential, commercial, and industrial end-use. Carbon capture, storage, and utilization is regarded as one of the key technological drivers needed to reduce greenhouse gas emissions and help in achieving Canada’s CO₂ reduction targets for the immediate and long-term future.

As such, NGIF IG and our natural gas industry members are interested in systems and technologies that leverage advanced materials, equipment, and processes to reduce the cost of CO₂ capture with or without CO₂ storage and conversion to value-added products within natural gas operations.

Response Criteria:

NGIF invites applicants with next-generation CO₂ capture solutions with or without CO₂ storage and utilization solutions that are more efficient and lower-cost, enabling low-carbon natural gas extraction, processing, transmission, distribution, and end-use in the TRL range 6 - 8.

Some examples include, but are not limited to:

- Step improvements over the existing amine-based process with respect to capital and operating costs.
- Membranes for purifying CO₂, and cryogenic separation of CO₂
- Innovative technologies in greenhouses, forestation, and afforestation to improve the uptake or sequestration of CO₂



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- Enhanced geological sequestration of CO₂ and other greenhouse gases including processes to allow for large volumes of CO₂ to be injected in deep subsurface aquifers with improved mixing and dissolving.
- Capture and utilization of CO₂ with preferably natural gas as a feedstock to produce fuels, hydrocarbons, plastics, or other value-added products

Applications could also focus on modular systems suited for small to mid-sized (1-100 tCO₂/day) capture units.

The Opportunity:

- Opportunity to secure access to capital
- 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 in Canada.
- Explore new markets and customers

About NGIF:

NGIF Capital Corporation

NGIF Capital is a Canadian venture capital ("VC") firm offering grants and equity financing for startups that deliver solutions to the environmental and other challenges facing the natural gas sector. NGIF Capital is unique in how it brings Canada's energy industry leadership to every investment. NGIF Capital operates NGIF IG (the original Natural Gas Innovation Fund), the NGIF Emissions Testing Centre ("**NGIF ETC**"), and NGIF Cleantech Ventures ("**NGIF CV**").

NGIF Industry Grants (IG):

NGIF IG was created to advance cleantech innovations in the natural gas value chain. NGIF IG has the mandate to fill technology development gaps in the sector and 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/ reduce prolonged sustainability barriers.

NGIF IG is funded by the Canadian natural gas industry. Our Natural Gas Production investors include Birchcliff Energy Ltd., Canadian Natural Resources Limited, Cutbank Dawson Resources Ltd. (a 100% subsidiary of Mitsubishi Corporation), CSV Midstream Solutions, Perpetual Energy Inc., PETRONAS Energy Canada Ltd., Shell Canada Limited, and Tourmaline Oil Corp. Our Natural Gas



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Distribution investors include ATCO, Enbridge Gas Inc., FortisBC Inc., Pacific Northern Gas Ltd., and SaskEnergy. 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 ***

