



Synopsis:

Waste heat 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 innovative solutions to recover and utilize waste heat from the natural gas upstream operations to usable energy for reducing greenhouse gas (GHG) emissions and improving the overall environmental footprint of the natural gas sector.

Context:

NGIF IG and our natural gas investors are interested in groundbreaking technologies that extract heat from natural sources or exhaust gasses or other sources to produce energy for utilization in upstream natural gas operations.

Various sources of waste heat in the natural gas sector are applicable, including but not limited to industrial/process waste heat, power generation, compressor stations, etc. Lower grade waste heat becomes more challenging to capture and utilize, hence, there is a preference for systems that can capture lower-grade heat, below 150 deg. C.

Response Criteria:

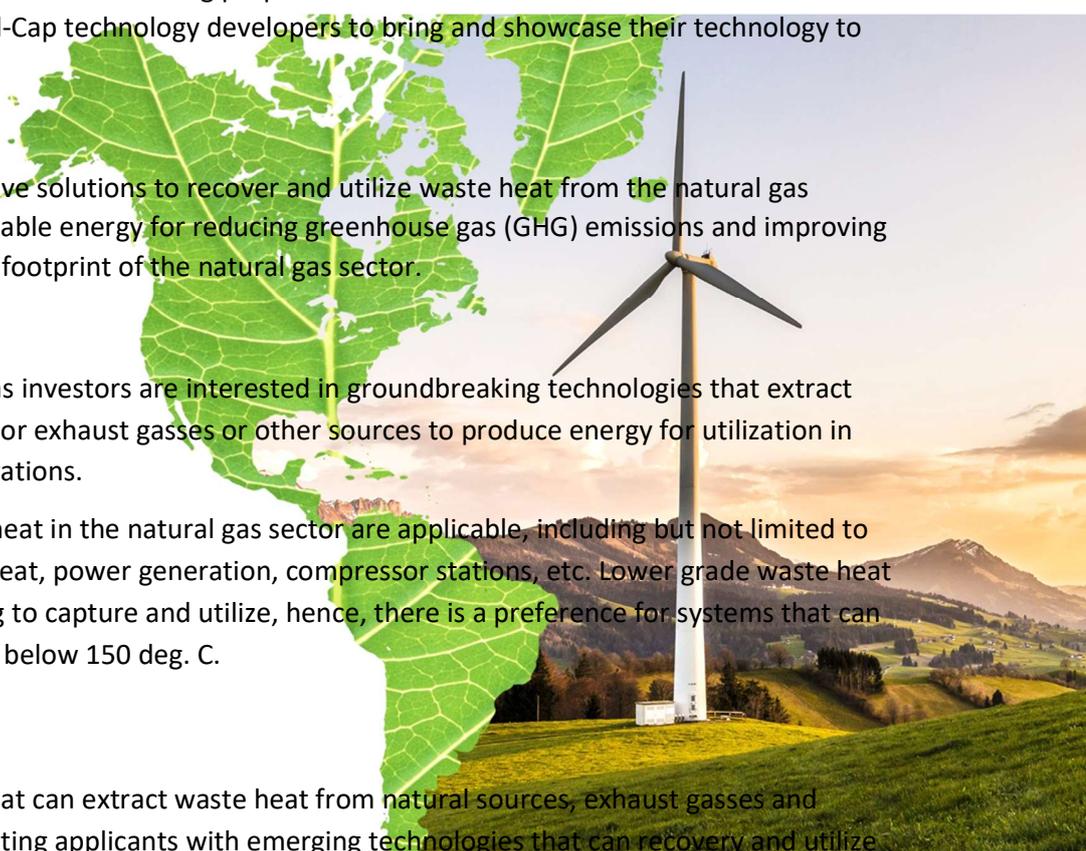
Innovative technologies that can extract waste heat from natural sources, exhaust gasses and ambient air. NGIF IG is inviting applicants with emerging technologies that can recovery and utilize waste heat from, preferably low temperature sources (below 150 deg. C). Waste heat recovery and utilization for sources above 150 deg C is also of importance to NGIF IG.

Some examples include, but are not limited to:

- Near commercial solutions to advancements over current Organic Rankine Cycle (ORC), novel ORC methods, and other thermodynamics cycles to capture heat from various sources
- Reduction or replacement of hostile working fluids and components that do not require regular mechanical maintenance and turbine replacement
- New pathways to utilize waste heat to produce power
- Industrial heat pumps

The Opportunity:

- Opportunity to secure access to capital





This project is funded by
the European Union

- 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 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 ***