

Call for Expressions of Interest:
Pre-TVP Call, Northern Environment and Monitoring

Application Deadline: March 26st, 2012

LOOKNorth is soliciting Expressions of Interest (EOIs) from small and medium sized enterprises (SMEs) and academia for a review of technologies that can provide significant positive impacts for the sustainable development of Canada's northern and oil sands resources.

About LOOKNorth

LOOKNorth is a national Centre of Excellence for Commercialization and Research (CECR) under the Government of Canada's Network of Centres of Excellence program (www.nce-rce.gc.ca). LOOKNorth validates and commercializes innovative remote sensing technologies that can support responsible, sustainable development of Canada's northern natural resources.

Funding for LOOKNorth is provided by the Government of Canada (through the CECR Program) and by the Province of Newfoundland & Labrador (through the Department of Innovation, Business and Rural Development and the Research & Development Corporation).

Program Description

LOOKNorth's Technology Validation Program (TVP) promotes implementation of remote sensing technologies to provide breakthroughs in the responsible, sustainable development of Canada's northern natural resources and oil sands. The TVP demonstrates and validates remote sensing and other monitoring technologies for use in the north and oil sands, and is intended as a precursor to long-term implementation of these technologies to support resource development. Sectors of interest are oil & gas, mining and hydro-power, and related transportation industries.

Validation projects are identified through a proposal process. LOOKNorth solicits EOIs from Canadian Small and Medium Sized Enterprises (SMEs) on a defined theme or technical area of interest addressing the information needs of the resource sector. Successful EOIs will be invited to submit a proposal. R&D activities are not eligible for funding.

Funding for successful proposals will be administered through a non-repayable contribution agreement.

Winter-2012 Call for Expressions of Interest

This call provides the opportunity for remote sensing technology experts and subject matter experts to gain an understanding of the science and the current state of technology development in the areas of oil leak detection, mammal monitoring and gas emission, as they may apply to Northern resource development issues.

Overview

- These projects will engage subject matter and technology experts to review and report on the current state-of-the-art technological capabilities to address the needs of the thematic areas.
- The solutions evaluated must make use of remote sensing technologies (e.g. laser fluorescence, optical and hyper-spectral imagery), defined as technologies that monitor from a distance with no local infrastructure requirements. These sensors can be mounted on a variety of platforms as deemed suitable, such as AUVs or aerial platforms.
- The technological solutions must address the specific needs of harsh remote environments such as Canada's Arctic.
- The technologies reviewed should be close to a pre-commercial technology or service, or the application of a technology that has not been demonstrated in the northern environment and is ready for commercial validation or demonstration to industry.
- The final project report will include a characterization of the parameters to be measured, a comparison of possible technological solutions, along with limitations, cost comparisons and level of technological and commercial readiness.
- Projects can have a total value of up to \$50k. These will be funded up to 50% by LOOKNorth. The remaining funding can be provided from an industry sponsor, or through cash or in-kind contribution from the EOI proponent.
- Promising technological solutions will be matched with industry needs to form Technology Validation Projects. These projects aim to bring technologies into commercial use by industry. Responders will not be restricted from submitting proposals to work on these projects.

Priority Development Areas

- **Theme 1: Oil Leak Detection**
 - Detection of the presence of oil and/or oil-saturated earth under snow cover.
 - Detection of small leaks of oil from pipelines.
- **Theme 2: Mammal Monitoring**
 - Marine Mammals
 - Monitoring marine mammals (e.g. seals, walrus, whales, etc.) for estimation of populations and/or mapping of breeding and wintering locations and/or migration paths.
 - Additional environmental characterization is a benefit.
 - Large Land Mammals
 - Monitoring of land mammals (e.g. caribou, elk, deer, moose) for estimation of populations and/or mapping of habitat, seasonal locations and/or migration paths.



- Discrimination between species (e.g. coastal, boreal woodland and barren ground caribou).
- Additional environmental characterization is a benefit.
- **Theme 3: Gas Emission**
 - Detection of gas emissions from natural seeps, permafrost and leaks from transportation pipelines or man-made or geological storage facilities.
 - Characterization and baseline of natural gas emissions.
 - Detection of small quantities of hydrocarbon gases.
 - Detection of small quantities of green house gases (e.g. carbon dioxide).
 - Detection of small quantities of noxious gases (e.g. hydrogen sulphide).

Mandatory Requirements

This section describes the mandatory requirements for the EOI. Submissions must meet all mandatory requirements to be considered for proposal submission.

- **Remote sensing technology:**

The project must evaluate remote sensing (RS) technologies or RS-based data products. *Remote sensing* refers to monitoring from a distance with no local infrastructure requirements.
- **Application area:**

The project must evaluate technologies that address one or more of the thematic areas. These themes have been identified as critical areas for measuring and monitoring by mining, oil & gas and hydro-power operators.
- **Duration:**

The project should be less than six months.
- **Eligible organizations:**

The submitter must be a Canadian SME (i.e. Small-Medium Sized Enterprise, having 500 or fewer full-time employees and revenue less than \$50M per annum). Canadian technologies are preferred but not mandatory.
- **Commercial Interest:**

The submitter must disclose whether they have a vested interest in the success of a technology related to the theme(s) they are responding to.
- **Co-Funding Requirement:**

At least 50% cash or in-kind co-funding must be provided from an industry sponsor and/or the submitter. LOOKNorth reserves the right to determine the reasonableness of the in-kind contributions based on the project details.

Evaluation Criteria

The EOI must address the mandatory requirements stated above.

EOIs meeting the mandatory requirements will be assessed and ranked according to their **Technical** and **Business & Industry** merit; criteria are outlined below. For a more detailed description of the criteria, please refer to the EOI submission form 'LN-EOI Submission Form Winter 2012.pdf'. *Note that this fillable PDF form limits the amount of space for each response. Additional material outside of the space given on the form or appended to it will not be considered.*

Projects must show technical and business feasibility. The following criteria are described in more detail in the appendix of the EOI submission form.

TECHNICAL CRITERIA		
Description	Point Criteria	Max.
1. Theme(s) to be investigated	Describe the themes to be addressed and demonstrate knowledge of the subject matter.	20pts
2. Technological Solutions	Describe the technological areas to be investigated and the bidder experience with these technological areas.	20pts
2. Ranking Criteria	Describe the ranking criteria that are expected to be used to compare the suitability of one technology to another.	20pts

BUSINESS CASE CRITERIA		
Description	Point Criteria	Max.
1. Project Plan	Describe the plan to implement the project and the resources used to fulfill the contract.	20pts
2. Sponsor Support	Describe the source of the 50% co-funding. In-kind funding is permitted, but a commitment of 50% co-funding from a third party sponsor, preferably industry, is preferred.	20pts
3. Corporate Experience	The proponent demonstrates a track record of successfully completing similar projects in the past.	20pts

Intellectual Property

The deliverable of the project will be a report outlining the analysis undertaken, the results gathered and conclusions. This report will be the intellectual property of LOOKNorth.

Eligible Costs

LOOKNorth will co-fund up to a maximum of \$25,000 of eligible costs. Eligible costs are defined in the Tri-Agency Financial Administration Guide which can be found at:

http://www.nserc-crsng.gc.ca/Professors-Professeurs/FinancialAdminGuide-GuideAdminFinancier/FundsUse-UtilisationSubventions_eng.asp.

As an example, eligible costs include reasonable costs associated with performing the project, such as: salaries for technical and professional staff (payroll costs plus a maximum of 20% burden); materials and supplies; and travel and accommodations for on-site demonstrations/validations. Please note that costs related to R&D are NOT considered eligible.

Schedule

1 March 2012	Expression of Interest (EOI) Publication
26 March 2012	Deadline for EOI submission
2 April 2012	Invitation of full proposals
30 April 2012	Deadline for proposal submission
15 June 2012	Notification of results and funding agreement negotiation

Submission Instructions

Interested proponents should fill in the EOI template located at the LOOKNorth website. Instructions are included with the EOI template located at www.looknorth.org/tvp

Submissions are accepted until March 26th, 23:59 Newfoundland Time via proposals@LOOKNorth.org or fax to 709-864-4021.

Clarifications

Please submit any requests for clarifications to proposals@LOOKNorth.org. LOOKNorth will respond to all questions. However, only clarifications relevant to other submitters will be published on the website at the address above.

Contact:

Stephen Churchill
Program Director
Stephen.Churchill@LOOKNorth.org

LOOKNorth
400 March Road
Suite 210
Kanata, Ontario
+1 613 592 7700 x229