

Call for Expressions of Interest:
*Monitoring Technologies for
Northern, Offshore & Oil Sands Environments*

Application Deadline: 30-Jan 2013

LOOKNorth is soliciting Expressions of Interest (EOIs) from small and medium sized enterprises (SMEs) based in Canada which have developed remote sensing and other monitoring technologies that can provide significant positive impacts for the sustainable development of Canada's Northern, offshore, 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 supports responsible, sustainable development of Canada's Northern natural resources through implementation of innovative remote sensing technologies.

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 deployment of remote sensing and other technologies to provide breakthroughs in the responsible, sustainable development of Canada's Northern natural resources and oil sands. The TVP demonstrates and validates technology applications, and is intended as a precursor to long-term implementation of these technologies to support resource development. Sectors of interest are oil & gas, mining, hydro-electric power generation, and related transportation industries.

Validation projects are identified through a proposal process. LOOKNorth solicits EOIs from Canadian SMEs and R&D organizations on a defined theme or technical area of interest (see Priority Development Areas) that address the information needs of the resource sector. Successful EOI applicants will be invited to submit a proposal.

This call for EOIs includes collaboration with the following partners: the Province of NL Innovation, Business and Rural Development (IBRD), the Research & Development Corporation (RDC) Newfoundland and Labrador, and Atlantic Canada Opportunities Agency (ACOA). Submissions will be accepted from Canadian small and medium enterprises (SMEs) and R&D organizations. Those based in NL may be eligible for increased funding based on their project's suitability with the collaboration partner programs. LOOKNorth will coordinate the submission with the partner organizations to support a collaborative funding approach.

Interested applicants are strongly encouraged to consult with LOOKNorth to determine suitability of the project and optimize the submission process.

Eligibility

This proposal process is open to Canadian SME and R&D organizations. All organizations will require a strong commercialization component to the project.

There are two streams for this CFP - the TVP Demonstration or the TVP Development stream:

- Demonstration projects are TRL 7 (http://esto.nasa.gov/files/trl_definitions.pdf) or above. Suitable performance metrics for successful projects and commercialization impacts can be defined. This stream is better suited for SMEs.
- Development projects are TRL 4 (http://esto.nasa.gov/files/trl_definitions.pdf) or above. These projects advance technology to higher TRL levels that are closer to a commercial ready state. An end user defined gap and a commercialization strategy is critical to the success of these projects. This stream is better suited for R&D organizations.

Funding

For Canadian SME and R&D organizations the following conditions apply:

- A maximum of \$200,000 of LOOKNorth funds per project, supporting up to 50% of eligible costs,
- A maximum of 24 months project duration, and
- Preference given to projects with resource sector co-sponsors that match LOOKNorth funds.

Provincial and other federal sources of funding may be leveraged for larger projects:

- In NL, funding sources may include RDC, IBRD, ACOA, or others, supporting higher project funding amounts and a higher percentage of eligible costs.
- Strong preference is given to projects with matching SME or resource sector co-sponsor funding.
- An initial consultation with LOOKNorth prior to EoI submission is strongly encouraged.

Intellectual Property

Any intellectual property that is developed during the course of projects arising from this solicitation will remain with the originator.

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 (i.e., payroll costs plus a maximum of 20% burden); materials and supplies; and travel and accommodations for on-site demonstrations/validations.

Other costs may be considered as eligible depending on collaboration partner guidelines for NL based submissions and can be discussed on a case-by-case basis.



Schedule

<i>19 Dec 2012</i>	Expression of Interest (EOI) Publication
<i>31 January 2013</i>	Deadline for EOI submission
<i>15 February 2013</i>	Invitation of full proposals
<i>15 April 2013</i>	Deadline for proposal submission
<i>14 June 2013</i>	Notification of results and funding agreement negotiation

Submission Instructions

Interested proponents must fill in the EOI template and Environmental Assessment Checklist located at the LOOKNorth website. Instructions are included with the EOI template located at:

www.looknorth.org/typ

Submissions are accepted until 23:59 hrs, January 30th, 2013, Newfoundland Standard Time by email to proposals@LOOKNorth.org or by fax to 709-864-4021.

Clarifications

Please submit any email 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.

Note that consultations are strongly encouraged. Please feel free to contact the Program Director at the details provided below.

Contact:

Neil Cater
Program Director
Neil.Cater@LOOKNorth.org

LOOKNorth
Capt. R. Bartlett Bldg,
Morrisey Road, St. John's, NL
A1B 3X5
+1 709 864 7808

Priority Development Areas

This EOI call solicits projects with environmental themes identified in the Priority Development Areas below. These areas have been identified through sector assessments conducted with the oil and gas, mining, and hydro-electric power generation industries.

- *Water Characterization*
 - *Water Quality*
 - Detection/ quantification of contamination of water supplies. Indicators of water quality include sediments, brine content and hydrocarbons.
 - *Water Quantity*
 - Baseline quantification of surficial water levels and flows.
- *Air Characterization*
 - *Air Quality*
 - Baseline and monitoring of air quality. Indicators of air quality include green house gases, methane, and ozone, as well as characterization and tracking of airborne contaminants or industrial by-products and their interaction with the ecosystem.
- *Surface Cover*
 - *Vegetation*
 - Mapping of abundance, diversity, and quality of forests, ground cover, and mammal habitats.
 - *Footprint disturbance*
 - Mapping of anthropogenic changes, revegetation growth, health and natural vegetation secession of linear features and area disturbances.
 - *Wetlands*
 - Map permanent and ephemeral wet areas, classification of wetland types.
 - *Surficial sediment maps*
 - Map bedrock, clays, organics, silts, aggregates, etc.
- *Mammal Monitoring*
 - *Abundance, movements, trends:*
 - *Marine mammals such as whales, seals, etc.*
 - *Terrestrial mammals such as caribou, deer, and predators.*
- *Trace Hydrocarbon Detection*
 - *Leak Detection*
 - Detection of oil and/or oil saturated earth under snow cover.
 - *Seepage Detection*
 - Detection of CO₂ and brine leaks for carbon capture system applications.
 - Detection and baselining of hydrocarbon seeps, onshore and/or offshore.
- *Studies*
 - Studies in the thematic areas that characterize the parameters under investigation and can support the development of monitoring programs and the definition of information gaps that result from these studies. Studies are typically smaller projects with shorter timelines.



Mandatory Requirements

Submissions must meet all mandatory requirements below to be considered for proposal submission.

- **Technology readiness:**
The project must employ a pre-commercial technology or service, or the application of a technology that has not been demonstrated in northern or oil sands environments. The solution must be ready for commercial demonstration to industry for the TVP Demonstration stream. In general the technology should be at a TRL 7 for the TVP Demonstration stream and TRL 4 for the TVP Development stream.
- **Co-Funding Requirement:**
 - a) For Canadian SMEs and R&D organizations, at least 50% cash or in-kind co-funding must be provided from the industry sponsor and/or the submitter. In-kind co-funding is limited to incremental activities directly associated with the project. LOOKNorth reserves the right to determine the reasonableness of the in-kind contributions based on the project details.
 - b) For NL SMEs & R&D organizations that are also eligible to apply to other funding organizations such as RDC, IBRD, and ACOA, co-funding requirements may vary by project.
 - c) Strong preference is given to projects with cash contributions.
- **Application area:**
The solution must be applicable to resource development in Canada's Northern, offshore or oil sands resources. For this EOI, the North refers to the region from the Canadian Arctic to the southern extent of discontinuous permafrost. Priority areas have been previously suggested.
- **Remote sensing or monitoring technology:**
The project should employ a remote sensing or monitoring technology/data product. *Remote sensing* refers to monitoring from a distance with no local infrastructure requirements. Example platforms include satellite, aircraft and other aerial vehicles; example sensors include radars, optical, and laser.
- **Duration:**
The project must be less than two years.
- **Eligible organizations:**
The bidder must be either a SME (*i.e.*, having 500 full-time employees or fewer and revenue less than \$50M per annum) or an R&D organization based in Canada.
- **Location:**
The demonstration location must be in or representative of either the Canadian Northern, offshore, or oil sands environments.
- **Industry sponsor:**
The submitter must have a Canadian industry sponsor from one of the following sectors:
 - Oil & Gas
 - Mining
 - Hydro-electric power generation
 - Transportation related to theseA letter of support is required from the sponsor at the proposal stage, indicating the following:
 - the anticipated impact of the technology or service
 - readiness to adopt a successfully demonstrated technology or service
 - co-funding commitment to the project.

- **Environmental Assessment Checklist:**
The Environmental Assessment Checklist included in the [Environmental Assessment Process](#) must be filled out and submitted with the EOI.

Evaluation Criteria

EOIs meeting the mandatory requirements will be assessed and ranked according to their Technical and Business & Industry merit criteria described below. For a more detailed description of the criteria, please refer to the EOI submission form 'LN-EOI Submission Form Fall 2011.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.*

LOOKNorth is seeking projects that have significant positive impacts on sustainable resource development, SMEs and Northern communities. Demonstrable impacts are the leading criteria for the selection of projects for funding.

TECHNICAL CRITERIA		
Description	Point Criteria	Max.
1. Information Gap	Demonstrate an understanding of the issues by describing the challenge for the industry and defining the information gap.	25pts
2. Suitability of the Proposed Solution	a) <i>Technical solution:</i> Describe how the proposed solution will overcome the challenge.	25pts
	b) <i>Technology limitations:</i> Describe the limitations of the base technology and the proposed solution in addressing the challenge.	10pts
3. Industry Gap	Describe the current solutions or sources of information and indicate why these are inadequate to meet industry needs.	20pts
Total		80pts

BUSINESS CASE CRITERIA		
Description	Point Criteria	Max.
1. Impact of a Successful TVP	Describe the successful project contribution to: a) sustainable resource development (permits, cost, etc); b) benefit to SME (sales, jobs, etc); and c) socio-economic benefits to Northern communities.	60pts
2. Industry Sponsor Support	A commitment of 50% or more co-funding from the industry sponsor is preferred. However, a combination from the industry sponsor and project proponent co-funding will be accepted when necessary.	40pts
3. Corporate Experience	The proponent should demonstrate a track record of successful similar projects over the past five (5) years.	20pts
Total		120pts

EOIs which do not meet the mandatory criteria or which score under 100 points will not be invited to submit a proposal.