

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

**Application Deadline: 09 August 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](http://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 and demonstration of remote sensing and other monitoring technologies in support of the responsible, sustainable development of Canada's Northern natural resources including the Oil Sands and offshore oil and gas reserves. 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, as well as transportation services and infrastructure that support these industries.

Validation projects are identified through a proposal process. LOOKNorth solicits expressions of interest (Eols) from Canadian SMEs and R&D organizations on priority themes or technical areas of interest that address information needs of the resource sector. Successful Eol applicants are invited to submit a full 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 Atlantic Canada Opportunities Agency (ACOA). Submissions will be accepted from Canadian small and medium enterprises (SMEs) and R&D organizations. Proponents based in Newfoundland and Labrador may be eligible for complimentary funding based on their project's eligibility 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 proposed projects should demonstrate a strong commercialization component.

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

- Demonstration projects are TRL 7 ([http://esto.nasa.gov/files/trl\\_definitions.pdf](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](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.

For NL-based SMEs and R&D organizations the following conditions apply:

- A maximum of \$200,000 of LOOKNorth funds per project with opportunity for collaborative ( RDC, IBRD, and ACOA) funding , supporting up to 75% of eligible costs for qualifying projects,
- A maximum 24 months project duration,
- Co-funding can be a combination of resource sector, SME cash and in-kind contributions. Preference will be given to projects with matching SME or resource sector co-sponsor funding.

### **Intellectual Property**

Any intellectual property developed as a result of a TVP project shall belong exclusively to the Proponent and LOOKNorth will not obtain or attempt to obtain any right, title or interest in the technology or products arising from the Project or in any intellectual property rights inherent therein.

LOOKNorth reserves the rights to access the data and results created as a result of the project for audit purposes.

### **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](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.

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

### **Schedule**

<b>05 July 2013</b>	Expression of Interest (EOI) Publication
<b>09 August 2013</b>	Deadline for EOI submission
<b>23 August 2013</b>	Invitation of full proposals
<b>04 October 2013</b>	Deadline for proposal submission
<b>15 November 2013</b>	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/tvp](http://www.looknorth.org/tvp)

Submissions are accepted until 23:59 hrs, August 09, 2013, Newfoundland Standard Time by email at: [proposals@LOOKNorth.org](mailto:proposals@LOOKNorth.org) or by fax to: 709-864-4021.

### **Clarifications**

Please submit any requests for clarifications to [proposals@LOOKNorth.org](mailto: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.

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### **Contact:**

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## 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 CO<sub>2</sub> and brine leaks for carbon capture system applications.
    - Detection and baselining of hydrocarbon seeps, onshore and/or offshore.



## **Mandatory Requirements**

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

- **Technology readiness:**

The project must utilize and demonstrate a pre-commercial technology or service, or the application of a technology that has not been demonstrated in northern, oil sands or offshore environments. As a general guideline, 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, proposals must demonstrate at least 50% cash or in-kind co-funding 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 for partner funding (RDC, IBRD and ACOA) at least 25% cash or in-kind co-funding should be provided by the industry sponsor and/or the submitter. In-kind 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.
  - c) Preference is given to projects that demonstrate a documented commitment of support from an industry sponsor in the form of cash contributions as well as an interest in using the technology in their operations.
- **Application area:**

The solution must be applicable to Northern resource development in Northern, offshore or oil sands resources. For this EOI, the North refers to the region from the Arctic to the southern extent of discontinuous permafrost.
- **Remote sensing or monitoring technology:**

The project must employ a remote sensing or monitoring technology, application or data product. This can include sensor platforms such as manned and unmanned aircraft and unmanned surface vehicles.
- **Duration:**

The project should 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 Northern, offshore, or oil sands environments.
- **Industry sponsor:**

The submitter must have a resource industry sponsor from one of the following sectors:

- Oil & Gas
- Mining
- Hydro-electric power generation
- Transportation related to these

Expressions of interest should identify the expected source and form of industry support for the proposed project. Invited proposals require a letter of support 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

The EOI must satisfy the mandatory requirements stated above.

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'.

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

BUSINESS CASE CRITERIA		
Description	Point Criteria	Max.
<b>1. Impact of a Successful TVP</b>	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
<b>2. Industry Sponsor Support</b>	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
<b>3. Corporate Experience</b>	The proponent should demonstrate a track record of successful similar projects over the past five (5) years.	20pts
<b>Total</b>		120pts

