

TITLE: Refinement and Optimization of Computational Fluid Dynamics Models**1. Advance Contract Award Notice (ACAN)**

An ACAN is a public notice indicating to the supplier community that a department or agency intends to award a contract for goods, services or construction to a pre-identified supplier, thereby allowing other suppliers to signal their interest in bidding, by submitting a statement of capabilities. If no supplier submits a statement of capabilities that meets the requirements set out in the ACAN, on or before the closing date stated in the ACAN, the contracting officer may then proceed with the award to the pre-identified supplier.

2. Definition of the requirement

The Department of Natural Resources Canada (NRCan) has a requirement to refine and optimize the CFD (Computational fluid dynamics) models through the use of new empirical data and further assess the suitability of rotating hearth reactor for the DRC (Direct Reduction of Chromite) process. The new study will be a continuation of the study carried out by the previous supplier (XPS) on the optimization of simulation and CFD models for the DRC process. Model platforms and databases used during this study are proprietary to XPS. This new study will be built on the findings of previously conducted experimental and computational studies.

The proposed period of contract is from date of contract award to March 31, 2024, inclusive.

3. Criteria for assessment of the Statement of Capabilities (Minimum Essential Requirements)

Any interested supplier must demonstrate by way of a statement of capabilities that it meets the following requirements:

- **Experience:** Bidder must have:
 - Minimum of ten (10) years of experience in CFD modeling of pyrometallurgical processes
 - Advanced experimental studies at high temperatures
 - Detailed investigations on chromite/ferrochrome.

*Experience must be within the last fifteen (15) years.

- **Knowledge and understanding:** Bidder must have:
 - Appropriate facilities and tools to perform the proposed work (i.e. modelling software and computational platforms.
 - Unrestricted access to modelling platforms and databases used during the study contracted to XPS Expert Process Solutions in 2020 following a competitive bid solicitation process NRCan 5000054626 (NRCan contract No: 3000714270 titled "Optimization of computational fluid dynamics models for the direct reduction of chromite (DRC) process).

4. Applicability of the trade agreement(s) to the procurement

This procurement is subject to the following trade agreement(s) :

- Canadian Free Trade Agreement (CFTA)
- Canada-Chile Free Trade Agreement (CCFTA)

- Canada-Colombia Free Trade Agreement
- Canada-Honduras Free Trade Agreement
- Canada-Korea Free Trade Agreement
- Canada-Panama Free Trade Agreement

5. Justification for the Pre-Identified Supplier

The supplier mentioned in section 10 below is the only known supplier that meets the mandatory criteria set out in section 3 above.

Should Canada receive a statement of capabilities from a supplier that contains sufficient information to indicate that it meets the requirements set forth in this ACAN, a competitive process will be triggered with a technical and financial evaluation methodology of the bids proposed by the potential bidders.

6. Government Contracts Regulations Exception(s)

The following exception(s) to the *Government Contracts Regulations* is (are) invoked for this procurement under subsection:

6(d) - only one person is capable of performing the work).

The identified supplier, XPS Expert Process Solutions, is the only one able to meet all of the criteria identified in paragraph 3 above.

7. Exclusions and/or Limited Tendering Reasons

The following exclusion(s) and/or limited tendering reasons are invoked under the:

- Canadian Free Trade Agreement (CFTA) – Article: 513.1(b) (iii);
- Canada-Chile Free Trade Agreement (CCFTA) – Article(s) Kbis-09 (b), Article Kbis-09 (c)
- Canada-Colombia Free Trade Agreement – Article(s): 1409 (b) (iii);
- Canada-Honduras Free Trade Agreement – Article(s): 17.11 2 (b) (iii)
- Canada-Korea Free Trade Agreement – Article 14.3, Under the Revised GPA - Article XIII, 1 (b) (iii);
- Canada-Panama Free Trade Agreement – Article(s) 16.10 (b) (iii)

8. Ownership of Intellectual Property

Natural Resources Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, for the following reasons: as set out in the [Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts](#), where the main purpose of the Crown Procurement Contract, or the deliverables contracted for, is to generate knowledge and information for public dissemination.

9. Period of the proposed contract or delivery date

- The proposed period of contract is from the date of contract award to March 31, 2024.

10. Cost estimate of the proposed contract

The estimated value of the contract including options is \$148,400.00 (GST/HST extra).

11. Name and address of the pre-identified supplier

XPS Expert Process Solutions
6 Edison Road
Falconbridge, ON P0M 1S0

12. Suppliers' right to submit a statement of capabilities

Suppliers who consider themselves fully qualified and available to provide the goods, services or construction services described in the ACAN may submit a statement of capabilities in writing to the contact person identified in this notice on or before the closing date of this notice. The statement of capabilities must clearly demonstrate how the supplier meets the advertised requirements.

13. Closing date for a submission of a statement of capabilities

The closing date and time for accepting statements of capabilities is June 20, 2023 at 14:00 EDT.

14. Inquiries and submission of statements of capabilities

Inquiries and statements of capabilities are to be directed to:

Name: Nidhi Nigam
Title: Procurement Specialist
Organization: Natural Resources Canada
Address: 5320 122 St NW
Edmonton, AB, T5H 3S5
Telephone: (587) 337-3877
E-mail address: Nidhi.Nigam@NRCan-RNCan.gc.ca