



## **REQUEST FOR INFORMATION (RFI)** **87055-18-0029**

**Date: July 10, 2018**

**File # R690.1**

**Subject:** Request for Information (RFI) regarding Project *“Best Practices for Probabilistic Fracture Mechanics Evaluations”*

### **1. Background and Purpose of this RFI**

The purpose of this RFI is to obtain information before finalizing the requirements definition and procurement strategy for the subject project which is being carried out by the Canadian Nuclear Safety Commission (CNSC).

This project is being undertaken to enhance CNSC’s regulatory guidance in the area probabilistic fracture mechanics evaluations. This study will review current probabilistic fracture mechanics approaches and provide proposed guidelines for best practices including quantification of uncertainties.

The details of the project and requirements are further outlined in Annex “A” – Work Statement to this RFI.

### **2. Nature of this RFI**

This Request for Information (RFI) is simply intended to solicit feedback from industry with respect to the matters described in this RFI and shall not be construed to be a bid solicitation and no agreement/contract will be entered into with/awarded to any vendor based on responses to this RFI, and it shall in no way be considered as authorization by Canada for vendors to undertake any work. This RFI shall in no way be considered as authorization by the CNSC for respondents to undertake any work, which would result in costs to the CNSC. The CNSC shall not be liable for, nor shall it reimburse any of the respondents, or any third-party, for any costs, fees or expenses, incurred in the preparation or submission of a response to this RFI.

Nothing in this RFI shall be construed as a commitment to issue a bid solicitation. Response to this RFI will not create any obligation. The CNSC shall not be bound by anything stated herein. Respondents shall not be bound by any aspect of their response to this RFI.

### **3. Nature and Format of Responses Requested**

Respondents are requested to provide their responses to questions in Section 5.

### **4. Treatment of Responses**

- a) **Use of Response:** Responses will not be formally evaluated. All responses to this RFI will be held by the CNSC on a confidential basis (subject to applicable legislation) and remain the property of the CNSC once they have been received. Respondents are advised, however, that information submitted may be used

in the development of future bid solicitation documents. CNSC will review all responses received by the RFI closing date. CNSC may, in its discretion, review responses received after the RFI closing date. Not responding to this RFI shall in no way penalize bidders to any future bid solicitation.

- b) **Confidentiality:** Respondents should mark any portions of their response that they consider proprietary or confidential. CNSC will handle the responses in accordance with the Access to Information Act.
- c) **Follow-up Activity:** CNSC may, in its discretion, contact any respondents to follow up with additional questions or for clarifications of any aspect of a response.

## 5. Questions to Interested Parties of this RFI

- 1) Would you/your organization be able to provide the services outlined in Annex “A” – Statement of Work (SOW) and be interested in bidding on any solicitation that may be issued related to the SOW?
- 2) Could the work be completed within the estimated dates related to the deliverables/milestones in the SOW and an estimated budget of \$80,000.00 Canadian dollars, excluding applicable taxes but all-inclusive of travel etc.?
- 3) What would the estimated level of effort be to complete the work (in person days)?
- 4) What types of resources (human and otherwise) are required to complete the work including experience and qualifications?
- 5) Is the Statement of Work clear and reasonable?
- 6) Do you have any general comments or concerns regarding the SOW and/or suggestions for improvements to the SOW?

## 6. Submission of Responses to Questions to Interested Parties

- a) **Response addressee:** Responses are to be sent by email to:

Contracting Authority:	Robert Kardum
Title:	Senior Contracting Officer
Email Address:	<a href="mailto:robert.kardum@canada.ca">robert.kardum@canada.ca</a>
Telephone:	(613) 996-6724

- b) **Closing Date for Submission of Responses:** Suppliers interested in providing a response shall submit their responses no later than 5:00 PM (EDT), August 31, 2018.
- c) **Responsibility of Timely Delivery:** Each respondent is solely responsible for ensuring its response is delivered on time per the instructions specified in this RFI.
- d) **Language of Response:** Responses may be in English or French at the preference of the respondent.

## 7. Response Preparation Costs

CNSC will not reimburse any respondent for expenses incurred in responding to this RFI.

**8. Enquiries**

Because this is not a bid solicitation, CNSC will not necessarily respond to enquiries in writing or circulate answers to all potential suppliers/respondents. However, respondents with questions regarding the RFI may direct their enquiries by email to the Contracting Authority identified in section 3 above.

## **ANNEX “A” - WORK STATEMENT**

### **1.0 Background**

Probabilistic fracture mechanics methodologies are gradually introduced into licensing applications. While they typically are powerful and provide new insights the same time they are also of considerable complexity. These methodologies share a lot of common features which could be generalized and unified approaches adopted including quantification of uncertainties. Development of guidelines for best practices for probabilistic fracture mechanics applications should be beneficial for the regulator and the public.

### **2.0 Objectives**

The objective of this project is to review current practices for probabilistic fracture mechanics assessments, and identify best practices for probabilistic fracture mechanics evaluations. The guidelines for best practices for probabilistic fracture mechanics assessments should be drafted.

This investigation will assist the CNSC with formalizing best practices for probabilistic fracture mechanics evaluations in standards and regulatory framework.

### **3.0 Scope of Work**

The scope of work includes the following:

- Literature review of best practices for probabilistic fracture mechanics assessments in nuclear industry and others.
- Identify major common features of probabilistic fracture mechanics evaluations, and areas for improvements.
- Develop draft guidelines for best practices for probabilistic fracture mechanics.
- Present findings in conference proceedings or international journals, the later preferred.

### **4.0 Tasks to be Performed**

1. Develop a detailed work plan that is subject to CNSC review and acceptance.
2. Perform review of current practices for probabilistic fracture mechanics applications in nuclear industry and others.
3. Identify major common features of probabilistic fracture mechanics evaluations, and recognize areas for improvements.
4. Develop draft guidelines for best practices for probabilistic fracture mechanics.
5. Participate in the meetings/teleconferences to discuss proposed best practices for probabilistic fracture mechanics assessments, and drafted guidelines.
6. Prepare reports subject to the CNSC review and acceptance, and disposition of CNSC comments if any.
7. Prepare and give presentations summarizing findings, conclusions and recommendations.

8. Any others as identified in CNSC approved work plan proposed by the supplier.

## 5.0 **Deliverables**

All deliverables are to be submitted to the Project Authority.

### 5.1 Start-up Meeting

Date: Within two (2) weeks of contract award.

Location: Via Tele/Videoconference or CNSC Head Office, Ottawa, as required.

Purpose: To discuss and clarify the proposed approach, work plan and schedule to ensure achievement of the contract objectives. The contractor shall make a presentation with the above purpose in mind.

### 5.2 Progress Meetings

Dates: Bi-monthly.

Location(s): Via Tele/Videoconference. One face-to-face meeting as required.

Purpose: To assess the degree to which the agreed project objectives are being achieved as planned and thus to facilitate timely adjustments (if necessary) to ensure the project success.

### 5.3 Work Plan

Due Date: Two (2) months after contract award.

Copies: One electronic copy via email to the Project Authority.

Format and style requirements: As specified in the Final Report.

### 5.4 Initial Findings Report (subject to CNSC review and acceptance)

The report shall include the following:

- A table of contents
- Discussion of initial findings
- Reference the Work Plan and give a status of work completed to-date

Due Date: Ten (10) months after contract award

Copies: One electronic copy via email to the Project Authority.

Format and style requirements: As specified in the Final Report.

#### 5.5 Draft Final Report

The report shall include the following:

- A table of contents
- Discussion of major findings and achievements, and confirming meeting the project objectives as outlined in Section 2.0
- Reference the Work Plan and confirm the scope of work outlined in Section 3.0 was satisfied
- Reference the Work Plan and confirm the tasks outlined in Section 4.0 were completed

Due Date: Twenty two (22) months after contract award

Copies: One electronic copy via email to the Project Authority.

Format and style requirements: As specified in the Final Report.

#### 5.6 Two (2) Presentations

Presentation 1:

Due Date: ~Sixteen (16) months after contract award.

Location: Toronto, Ontario, CSA N285.8 TSC Meeting

Purpose: To present major project findings and recommendations.

Presentation 2:

Due Date: Twenty two (22) months after contract award.

Location: The CNSC Head Office, Ottawa, Ontario

Purpose: To present the project findings, conclusions and recommendations documented in the Draft Report.

#### 5.7 Final Report

Due Date: Twenty three (23) months after contract award

Copies: One electronic copy via email and one electronic copy on USB drive my mail to the Project Authority. The contractor shall submit the Final Report in a format compatible with Microsoft Word 2010. The contractor shall also submit the Final

Report in PDF format.

Format & style requirements:

To be specified by the Project Authority. The font Times New Roman 12 is to be used. Electronic copies must be provided in a format readable by Word 2010 with minor formatting changes. Any electronic files that cannot be read or require major formatting changes when opened are not acceptable and may be returned to the contractor for correction. The CNSC reserves the right, at its own discretion, to have the final report printed under CNSC cover, and to distribute it publicly. Translation of the abstract into French or English, CNSC report covers and the publication number will be provided by the CNSC.