





## **Bid Solicitation**

### **For the Provision of**

# **R624.1 Comparison of US, international and Canadian reliability and maintenance performance measures for nuclear power plants**



## TABLE OF CONTENTS

### PART 1 – GENERAL INFORMATION

- 1.1 Security Requirement
- 1.2 Statement of Work
- 1.3 Debriefings

### PART 2 – BIDDER INSTRUCTIONS

- 2.1 Standard Instructions, Clauses and Conditions
- 2.2 Submission of Bids
- 2.3 Former Public Servant
- 2.4 Enquiries – Bid Solicitation
- 2.5 Applicable Laws

### PART 3 – BID PREPARATION INSTRUCTIONS

- 3.1 Bid Preparation Instructions

Attachment 1 to Part 3 (Pricing Schedule)

### PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION

- 4.1 Evaluation Procedures
- 4.2 Basis of Selection

Attachment 1 to Part 4 (Mandatory Technical Criteria and Point-Rated Technical Criteria)

### PART 5 – CERTIFICATIONS

- 5.4 Certifications Required with the Bid
- 5.5 Certifications Precedent to Contract Award

### PART 6 – RESULTING CONTRACT CLAUSES

- 6.1 Security Requirement
- 6.2 Statement of Work
- 6.3 Standard Clauses and Conditions
- 6.4 Term of Contract
- 6.5 Authorities
- 6.6 Proactive Disclosure of Contracts with Former Public Servants
- 6.7 Payment
- 6.8 Invoicing Instructions
- 6.9 Certifications
- 6.10 Applicable Laws
- 6.11 Priority of Documents
- 6.12 Intellectual Property
- 6.13 Third-Party Information
- 6.14 Dispute Resolution

#### Annexes:

- Annex A – Statement of Work
- Annex B – Basis of Payment
- Annex C – Security Requirements Checklist



## PART 1 – GENERAL INFORMATION

It is understood that the procurement of services for the Canadian Nuclear Safety Commission (CNSC) falls under the provisions of the *Nuclear Safety and Control Act*, S.C. 1997, c. 9.

### 1.1 Security Requirement

There is a security requirement associated with the requirement. For additional information, consult Part 6 – Resulting Contract Clauses.

1. Before award of a contract, the following conditions must be met:
  - (a) the Bidder must hold a valid organization security clearance as indicated in Part 6 - Resulting Contract Clauses;
  - (b) the Bidder's proposed individuals requiring access to classified or protected information, assets or sensitive work site(s) must meet the security requirements as indicated in Part 6 - Resulting Contract Clauses; and
  - (c) the Bidder must provide the name of all individuals who will require access to classified or protected information, assets or sensitive work sites.
2. Bidders are reminded to obtain the required security clearance promptly. Any delay in the award of a contract to allow the successful bidder to obtain the required clearance will be at the entire discretion of the Contracting Authority.
3. For additional information on security requirements, bidders should refer to the [Industrial Security Program \(ISP\)](http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html) of Public Works and Government Services Canada (<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>) website.

### 1.2 Statement of Work

The work to be performed is detailed in Annex A attached to this contract.

### 1.3 Debriefings

After a contract is awarded, bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the contracting authority within 15 working days of receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.



## PART 2 – BIDDER INSTRUCTIONS

### 2.1 Standard Instructions, Clauses and Conditions (A0000T – 2012-07-16 – modified)

- 2.1.1 All instructions, clauses and conditions incorporated by reference in the bid solicitation (number, date and title) are set out in the [Standard Acquisition Clauses and Conditions \(SACC\) Manual](http://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) ([buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual](http://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual)) issued by PWGSC. All of the clauses of this document are legally binding on the parties.
- 2.1.2 Annexes A, B and C form part of the legally binding agreement between the parties.
- 2.1.3 Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.
- 2.1.4 The 2003 dated (2015-07-03) Standard Instructions – Goods or Services – Competitive Requirements are incorporated by reference into and form part of the bid solicitation. The following changes are made:
- a) Replace references to “Canada” and “Public Works and Government Services Canada” (or “PWGSC”) with “Canadian Nuclear Safety Commission” (CNSC).
  - b) Revise subsection 2d of section 5, Submission of Bids, to read:  
  
*“send its bid only to the CNSC as specified on page 1 of the bid solicitation”.*
  - c) Revise subsection 4 of section 5, Submission of Bids, as follows:  
  
Delete: sixty (60) days  
Insert: three-hundred-and-sixty-five (365) days
  - d) Delete section 8, Transmission by Facsimile, in its entirety.
  - e) Delete subsections 1a and 1b of section 12, Rejection of Bid, and replace with:
    - a) Bidders are advised that the CNSC reserves the right to consider, as part of its evaluation, any unsatisfactory performance in a previous or current project performed by the bidder, proposed subcontractor or individual proposed resource either on contract or under previous CNSC employment.
    - b) Additionally, bidders shall take note that once awarded, the performance of the contractor during and upon completion of the work shall be evaluated by the CNSC. The evaluation may include all or some of the following criteria: quality of deliverables, timeliness of completion of the work, project management, contract management, and cost. Should the contractor's performance be considered unsatisfactory, the contractor may be declared ineligible for future CNSC contracts.
  - f) Add the following paragraphs to section 18, Conflict of Interest – Unfair Advantage:  
  
Conflict of Interest – Performance of the Work
    - i. The CNSC reserves the right to review real, potential or apparent conflict(s) of interest. Bidders must disclose any of their activities related to the subject of the statement of work that are licensed by the CNSC. Bidders are also required to disclose any involvement in previous, current or planned work undertaken for a CNSC licensee that is or may be related to the subject of the statement of work. Such activities or work are not in themselves grounds for rejection; however, proposals to review previous work contributed by the bidder on behalf of a CNSC licensee, and proposals to make recommendations



affecting the CNSC licensing decisions in which the bidder has a financial or non-financial interest may be rejected.

- ii. Bidders must address in detail, in their submitted bids, any real, potential or apparent conflict(s) of interest they may encounter while performing the work, and must substantiate which measures they are taking to prevent the conflict(s). If in doubt about a particular situation, bidders may contact the Contracting Authority before bid closing. The CNSC reserves the right to reject any bids in which a real, potential or apparent conflict of interest exists.

g) Delete subsection 2 of section 20, Further Information, in its entirety.

## **2.2 Submission of Bids**

2.2.1 Bids must be submitted only to the CNSC by the date, time and place indicated on page 1 of the bid solicitation.

2.2.2 Due to the nature of the bid solicitation, bids transmitted by facsimile to the CNSC will not be accepted.

## **2.3 Former Public Servant**

See Part 5 – Certifications, Certification required with the bid and section 6.6 of Part 6 – Resulting Contract Clauses.

## **2.4 Enquiries – Bid Solicitation**

2.4.1 All inquiries must be submitted in writing to the contracting authority no later than ten (10) calendar days before the bid closing date. Inquiries received after that time may not be answered.

2.4.2 Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the inquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable the CNSC to provide an accurate answer. Technical inquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where the CNSC determines that the inquiry is not of a proprietary nature. The CNSC may edit the questions or may request that the bidder do so, so that the proprietary nature of the question is eliminated, and the inquiry can be answered with copies to all bidders. Inquiries not submitted in a form that can be distributed to all bidders may not be answered by the CNSC.

## **2.5 Applicable Laws**

2.5.1 Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

2.5.2 Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the bidders.



## PART 3 – BID PREPARATION INSTRUCTIONS

### 3.1 Bid Preparation Instructions

3.1.1 The CNSC requests that bidders provide their full company name and address, as well as a contact name, telephone number and fax number.

3.1.2 The CNSC requests that bidders provide copies of their bid in separately bound sections, as follows:

Section I: Technical Bid (4 hard copies)

Section II: Financial Bid (2 hard copies)

Section III: Certifications (1 hard copy)

3.1.3 **Prices must appear in the financial bid only.** No prices must be indicated in any other section of the bid.

3.1.4 The CNSC requests that bidders follow these format instructions in the preparation of their bids:

- a) use 8.5 x 11 inch (216 mm x 279 mm) paper
- b) use a numbering system that corresponds to the bid solicitation

3.1.5 In April 2006, Canada issued the [Policy on Green Procurement \(tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html\)](http://tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html), which directed federal departments and agencies to incorporate environmental considerations into the procurement process. To assist Canada in reaching its objectives, bidders should:

- a) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably managed forest and/or containing minimum 30% recycled content
- b) use an environmentally preferable format, including black and white printing instead of colour printing, printing double-sided/duplex, and staples or clips instead of cerlox, duotangs or binders

#### 3.1.6 Section I: Technical Bid

- a) In their technical bid, bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.
- b) Technical bids should address clearly and in sufficient depth the elements that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate evaluation of bids, the CNSC requests that bidders address and present topics in the order of the evaluation criteria and under the same headings. To avoid duplication, bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.
- c) Technical bids should specifically respond to each of the point-rated technical evaluation criteria.

#### 3.1.7 Section II: Financial Bid

- a) Bidders must submit their financial bids **in Canadian dollars**, in accordance with the pricing schedule detailed in Attachment 1 to Part 3 of this bid solicitation. The total amount of Applicable Taxes must be shown separately, if applicable. Bidders must also reference Annex B, Basis of Payment, when preparing their financial bids.



- b) The financial bid **must** also include costs as follows:
- i. a detailed cost breakdown, including fees for each resource category,
  - ii. an estimate of the general expenses expected to be incurred during the performance of the work, such as equipment, materials and supplies, communication costs, travel costs, and subcontracts.

### 3.1.8 Section III: Certifications

Bidders must submit the certifications required under Part 5 of this bid solicitation.



**ATTACHMENT 1 TO PART 3 – PRICING SCHEDULE**

1. The bidder must complete this pricing schedule and include it in its Financial Bid.

Firm price (professional fees only) for each deliverable.

<b>Deliverable</b>	<b>Delivery date</b>	<b>Firm price (professional fees)</b>
5.2 First Formal Progress Report	4 months from contract award	\$
5.3 Second Formal Progress Report	8 months from contract award	\$
5.5 Draft Final Report	11 months from contract award	\$
5.6 Presentation	12 months after contract award	\$
5.7 Electronic Files used to support the conclusion of the project	14 months after contract award	\$
5.8 Final Report	14 months from contract award	\$
<b>Total bid evaluation price (Applicable Taxes are extra).</b>		\$

The bidder may propose a different deliverables schedule in the bid; however, all payments must be linked to specific deliverables with at least 20 percent reserved for final payment.

**Estimated travel and living expenses (to include all meetings in Ottawa as well as the 2-week period for on-site work to access the protected information)**      \$ \_\_\_\_\_

**Estimated other direct expenses**      \$ \_\_\_\_\_

**Travel breakdown:**

Airfare	\$
Train	\$
Car rental	\$
Personal Vehicle	\$
Taxi	\$
Other transportation*	\$
Accommodation	\$
Meals	\$
Incidentals	\$
Other*	\$
<b>Total</b>	<b>\$</b>



## **PART 4 – EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation, including the technical and financial evaluation criteria.
- (b) An evaluation team composed of CNSC representatives will evaluate the bids.

#### **4.1.1 Technical Evaluation**

##### **a) Point-Rated technical criteria**

Refer to Attachment 1 to Part 4 of this bid solicitation. Point-rated technical criteria not addressed in the bid will be given a score of zero.

#### **4.1.2 Financial Evaluation**

- a) Refer to Attachment 1 to Part 3 of this bid solicitation.
- b) For bid evaluation and contractor(s) selection purposes only, the evaluated price of a bid will be determined in accordance with the Pricing Schedule detailed in Attachment 1 to Part 3 of this bid solicitation.

#### **4.1.3 Evaluation of Price (A0220T – 2014-06-26)**

The price of the bid will be evaluated in Canadian dollars, with Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

### **4.2 Basis of Selection**

#### **4.2.1 Basis of Selection – Highest Combined Rating of Technical and Price (A0027T – 2012-07-16)**

1. To be declared responsive, a bid must:
  - a. comply with all the requirements of the bid solicitation; and
  - b. obtain the required minimum of 82.5 points overall for the technical evaluation criteria which are subject to point rating.  
The rating is performed on a scale of 110 points.
2. Bids not meeting any of the requirements set out above in subsection 1 will be declared non-responsive.
3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 80% percent for the technical merit and 20% for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 80%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 20%.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.



7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

**The table below illustrates an example** where all three bids are responsive and the selection of the contractor is determined by a 60/40 ratio of technical merit and price, respectively. The total available points equal 135 and the lowest evaluated price of \$45,000 (45).

**Basis of selection – Highest combined rating technical merit (60%) and price (40%)**

		<b>Bidder 1</b>	<b>Bidder 2</b>	<b>Bidder 3</b>
<b>Overall technical score</b>		115/135	89/135	92/135
<b>Bid evaluated price</b>		\$55,000.00	\$50,000.00	\$45,000.00
<b>Calculations</b>	<b>Technical merit score</b>	$115/135 \times 60 = 51.11$	$89/135 \times 60 = 39.56$	$92/135 \times 60 = 40.89$
	<b>Pricing score</b>	$45/55 \times 40 = 32.73$	$45/50 \times 40 = 36.00$	$45/45 \times 40 = 40.00$
<b>Combined rating</b>		83.84	75.56	80.89
<b>overall rating</b>		1st	3rd	2nd



### Attachment 1 to Part 4 – Evaluation Procedures

#### 1. Point-Rated Technical Criteria

- 1.1 The Bidder must provide the necessary documentation to demonstrate its qualifications and capabilities in relation to each criterion.
- 1.2 Any bid that fails to obtain the required minimum number of points specified will be declared non-responsive and will receive no further consideration.

#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	CROSS-REFERENCE TO BID
R1	The bidder should demonstrate their depth of understanding of the objective and scope.	5	<p><b>0 Points</b> – incorrect understanding of scope and objective</p> <p><b>1 Point</b> – given verbatim from RFP and understanding is not fully demonstrated</p> <p><b>3 Points</b> – good understanding of scope and objectives</p> <p><b>5 Points</b> – in-depth understanding of scope and objective fully demonstrated</p>	x1	
R2	The bidder should identify potential major problems and/or difficulties that could affect the outcome of the work and address how these will be resolved.	10	<p><b>0 Points</b> – fails to identify any potential problems</p> <p><b>1 Point</b> – 1 to 2 major difficulties identified; proposed solutions will not adequately resolve all</p> <p><b>2 Points</b> – 1 to 2 major difficulties identified; proposed solutions adequately resolve</p> <p><b>3 Points</b> – 3 to 4 major difficulties identified; proposed solutions will not adequately resolve all</p> <p><b>5 Points</b> – 3 to 4 major difficulties identified; proposed solutions adequately resolve all</p>	x2	



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	CROSS-REFERENCE TO BID
R3	The Bidder should outline their approach and proposed methodology to meet the research requirements as well as demonstrate the level of success.	10	<b>0 Points</b> – not addressed in proposal <b>1 Point</b> – approach and methodology does not expand from RFP <b>3 Points</b> – approach and methodology address the RFP requirements with adequate level of success <b>5 Points</b> – approach and methodology address the RFP requirements with high level of success	x2	



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	CROSS-REFERENCE TO BID
R4	The bidder should provide a detailed work plan which includes a list of tasks and deliverables. The work plan should identify the: 1) assigned resource for each task, 2) level of effort per task, 3) level of effort of each resource per task, and 4) proposed schedule.	15	<p><u>Work Plan</u></p> <p><b>0 Points</b> – not addressed in proposal</p> <p><b>1 Point</b> – list of tasks and deliverables beyond details stated in RFP</p> <p><b>1 Point</b> – one or more resources are proposed for each task</p> <p><b>2 Points</b> – level of effort for each resource is proposed</p> <p><b>2 Points</b> – level of effort for each task is proposed</p> <p><b>1 Point</b> – proposed schedule conforms with RFP or alternate schedule is proposed with rationale</p> <p><u>Level of Effort</u></p> <p><b>0 Points</b> – not addressed in proposal or work performed by junior level personnel</p> <p><b>4 Points</b> – adequate total level of effort, critical work performed by appropriate mix of junior/senior personnel</p> <p><b>8 Points</b> – adequate total level of effort; critical work performed by personnel with senior level experience</p>	x1	



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	CROSS-REFERENCE TO BID
R5	The Bidder should identify the Project Manager that will be assigned to this requirement, demonstrating position within organization, experience, education, and qualifications. His/her curriculum vitae should also be included.	10	<p><u>Experience</u>  <b>0 Points</b> – no project management experience; experience not demonstrated in proposal  <b>1 Point</b> – 2 to 4 years project management experience  <b>3 Points</b> – 5+ years project management experience</p> <p><u>Education</u>  <b>0 Points</b> – no formal project management training  <b>1/2 Point</b> – formal project management training  <b>1 Point</b> – PMP Certified or MBA</p> <p><u>Qualifications</u>  <b>0 Points</b> – not addressed  <b>1 Point</b> – 2 to 4 successful projects as project manager  <b>2 Points</b> – 5+ successful projects as project manager</p> <p><u>Position</u>  <b>0 Points</b> – not addressed  <b>1 Point</b> – no authority to (re)direct resources  <b>3 Points</b> – authority to (re)direct resources</p> <p><u>Other</u>  <b>1 Point</b> – project management experience in related/relevant nuclear area</p>	x1	



For the specific experience identified in 6.1 through 6.4 please note that the main resource assigned to perform the related task(s) shall be evaluated for the associated experience required. If the main resource has not been identified and two or more resources with different experience levels have been named, the score assigned will be the average of the sum of the individual resource scores (e.g. manager level resource and subject matter expert identified with no clear assignment the score given shall be  $(3+5)/2 = 4$ )

#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	CROSS-REFERENCE TO BID
R6.1	Experience with Probabilistic Safety Assessment on CAFTA platform	10	<b>0 Points</b> - no experience <b>3 Points</b> – more than 5 years’ experience <b>5 Points</b> – 10 or more years’ experience	x2	
R6.2	Experience working on CANDU Nuclear Power plants, design, operation or safety assessment	10	<b>0 Points</b> - no experience <b>3 Points</b> – more than 5 years’ experience <b>5 Points</b> – 10 or more years’ experience	x2	
R6.3	Experience with Canadian regulatory requirements and standards on system and equipment reliability and their application.	10	<b>0 Points</b> – no demonstrated experience <b>1 Point</b> – less than 2 years demonstrated experience <b>2 Points</b> – 2 to 4 years demonstrated experience <b>3 Points</b> – 5 to 6 years demonstrated experience <b>4 Points</b> – 7 to 8 years demonstrated experience <b>5 Points</b> – more than 8 years demonstrated experience	x2	



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	CROSS-REFERENCE TO BID
R6.4	Experience in Maintenance Rule and MSPI application in US plants.	10	<p><b>0 Points</b> – no demonstrated experience</p> <p><b>1 Point</b> – less than 2 years demonstrated experience</p> <p><b>2 Points</b> – 2 to 4 years demonstrated experience</p> <p><b>3 Points</b> – 5 to 6 years demonstrated experience</p> <p><b>4 Points</b> – 7 to 8 years demonstrated experience</p> <p><b>5 Points</b> – more than 8 years demonstrated experience</p>	x2	
R7	The Bidder should include a description of the team, the reporting structure, major subcontractors as applicable, as well as the competence, previous experience and ability of the proposed team to complete the Work.	10	<p><b>0 Points</b> – not addressed in proposal</p> <p><b>1 Point</b> – reporting structure not defined</p> <p><b>2 Points</b> – defined reporting structure; proposed team have no apparent experience working together</p> <p><b>3 Points</b> – well defined reporting structure; proposed team have prior experience working together (less than 2 projects)</p> <p><b>5 Points</b> – well defined reporting structure; proposed team have prior experience working together (2 or more projects)</p>	x2	



#	RATED CRITERIA	MAX POINTS	SCORES TO BE ASSIGNED BASED ON THE FOLLOWING	WEIGHT FACTOR	CROSS-REFERENCE TO BID
<b>R8</b>	The Bidder should demonstrate the background and experience of its organization, particularly as it relates to this requirement, as well as the background and experience of proposed subcontractors.	<b>10</b>	<b>0 Points</b> – not addressed in proposal <b>1 Point</b> – bidder/subcontractor has experience with 1 to 2 successful prior relevant project <b>3 Points</b> – bidder/subcontractor has experience with 3 to 4 successful prior relevant project <b>5 Points</b> – bidder/subcontractor are well known in field of study with 5+ successful prior relevant projects	x2	
	<b>TOTAL</b>	<b>110</b>			



## PART 5 – CERTIFICATIONS

- 5.1** Bidders must provide the required certifications and associated information to be awarded a contract.
- 5.2** The certifications provided by the bidders to the CNSC are subject to verification by CNSC at all times. CNSC will declare a bid non-responsive, or will declare a contractor in default in carrying out any of its obligations under the Contract, if any certification made by the Bidder is found to be untrue, whether made knowingly or unknowingly during the bid evaluation period or during the contract period.
- 5.3** The Contracting Authority will have the right to ask for additional information to verify bidders' certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority may render the bid non-responsive or constitute a default under the Contract.

### **5.4 Certification Required With the Bid**

By submitting a bid, the Bidder certifies the following:

#### **5.4.1 Status and Availability of Resources (A3005T – 2010-08-16)**

1. The bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by the CNSC representatives and at the time specified in the bid solicitation or agreed to with the CNSC. If for reasons beyond its control, the bidder is unable to provide the services of an individual named in its bid, the bidder may propose a substitute with similar qualifications and experience. The bidder must advise the contracting authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.
2. If the bidder has proposed any individual who is not an employee of the bidder, the bidder certifies that it has the permission from that individual to propose his/her services in relation to the work to be performed and to submit his/her résumé to the CNSC. The bidder must, upon request from the contracting authority, provide a written confirmation, signed by the individual, of the permission given to the bidder and of his/her availability.

#### **5.4.2 Education and Experience (A3010T – 2010-08-16)**

1. The bidder certifies that all the information provided in the résumés and supporting material submitted with its bid, particularly the information pertaining to education, achievements, experience and work history, has been verified by the bidder to be true and accurate.
2. Furthermore, the bidder warrants that every individual proposed by the bidder for the requirement is capable of performing the work described in the resulting contract.

### **5.5 Mandatory Certifications Precedent to Contract Award**

The certifications listed below should be completed and submitted with the bid, but may be submitted afterwards. If any of these required certifications is not completed and submitted as requested, the contracting authority will so inform the bidder and provide the bidder with a time frame within which to meet the requirement. Failure to comply with the request of the Contracting Authority and meet the requirement within that time period will render the bid non-responsive.



## 5.6 Federal Contractors Program for Employment Equity – Bid Certification

- 5.6.1 By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list ([http://www.labour.gc.ca/eng/standards\\_equity/eq/emp/fcp/list/inelig.shtml](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)) available from [Human Resources and Skills Development Canada \(HRSDC\) - Labour's](http://www.hrsdc.gc.ca) website.
- 5.6.2 CNSC will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](http://www.labour.gc.ca/eng/standards_equity/eq/emp/fcp/list/inelig.shtml)" list at the time of contract award.

## 5.7 Former Public Servant – Competitive Bid (A3025T – 2014-06-26)

- 5.7.1 Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, CNSC will inform the Bidder of a time frame within which to provide the information. Failure to comply with CNSC's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

### 5.7.2 Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means, in the context of the fee abatement formula, a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S.C, 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c.S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S.C, 1985, c. C-17, the [Defence Services Pension Continuation Act](#), R.S.C. 1970, c.D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c.R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S.C, 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S.C, 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S.C, 1985, c. C-8.

### Former public servant in receipt of a pension

- Is the bidder a FPS in receipt of a pension as defined above? **Yes ( ) No ( )**
- Is the bidder or the bidder's employee a former CNSC/AECB (Atomic Energy Control Board) employee?  
**Yes ( ) No ( )**



If so, the bidder must provide the following information:

- a. name of former public servant
- b. date of termination of employment or retirement from the Public Service

By providing this information, Bidders agree that the successful bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

### **Workforce Adjustment Directive**

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of a Work Force Adjustment Directive? **Yes** ( ) **No** ( )

If so, the bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

### **5.8 Integrity Provisions – List of Names**

- a) Bidders who are incorporated, including those bidding as a joint venture, must provide a complete list of names of all individuals who are currently directors of the Bidder.
- b) Bidders bidding as sole proprietorship, as well as those bidding as a joint venture, must provide the name of the owner(s).
- c) Bidders bidding as societies, firms or partnerships do not need to provide lists of names.



## PART 6 – RESULTING CONTRACT CLAUSES

It is understood that the procurement of services for the Canadian Nuclear Safety Commission (CNSC) falls under the provisions of the *Nuclear Safety and Control Act*, S.C. 1997, c. 9.

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### 6.1 Security Requirement

The following security requirements (SRCL and related clauses provided by ISP) apply and form part of the Contract.

**6.1.1 The following security clause applies to Canadian bidders only. Before submitting a bid, foreign-based bidders must contact the contracting authority for the appropriate international security clauses, as stated on page 1 of this bid solicitation.**

### SECURITY REQUIREMENT FOR CANADIAN SUPPLIER: PWGSC FILE # 87055-15-0033

1. The Contractor/Offeror must, at all times during the performance of the Contract/Standing Offer, hold a valid **Designated Organization Screening (DOS)**, issued by the Canadian Industrial Security Directorate (CISD), Public Works and Government Services Canada (PWGSC).
2. The Contractor/Offeror personnel requiring access to PROTECTED information, assets or sensitive work site(s) must EACH hold a valid **RELIABILITY STATUS**, granted or approved by CISD/PWGSC.
3. The Contractor/Offeror **MUST NOT** remove any PROTECTED information or assets from the identified work site(s), and the Contractor/Offeror must ensure that its personnel are made aware of and comply with this restriction.
4. Subcontracts which contain security requirements are **NOT** to be awarded without the prior written permission of CISD/PWGSC.
5. The Contractor/Offeror must comply with the provisions of the:
  - (a) Security Requirements Check List and security guide (if applicable), attached at Annex C;
  - (b) Industrial Security Manual (Latest Edition).
- 6.1.2 The contractor is solely responsible for obtaining any security clearance required for the performance of the work under this Contract.
- 6.1.2 The contractor is responsible to return to the CNSC security officer (or other designated person) any building access cards issued related to the contractor's work under this contract. If such cards are not returned to the appropriate authority, the CNSC reserves the right to deduct from the contractor's final invoice an amount sufficient to offset the CNSC's costs to replace any such cards.
- 6.1.3 The CNSC may require the contractor and/or its employees and/or subcontractor(s) performing the contract work to obtain fingerprints for criminal record checks. The contractor and/or its employees and/or subcontractor(s) hereby agrees to release any information required by the CNSC and to obtain their fingerprints by presenting themselves at any of the Commissionaires offices across Canada (<https://www.commissionaires.ca/en/national/home>). Failure to provide the above information will constitute grounds for the CNSC not to award the contract to the contractor – or, if the contract has commenced, to terminate the contract under the provisions of Public Works and Government Services Canada's General Conditions 2010B, incorporated herein by reference.



## 6.2 Statement of Work (B4007C – 2014-06-26)

The contractor must perform the work in accordance with the statement of work in Annex A and the contractor's technical bid entitled \_\_\_\_\_, dated \_\_\_\_\_ (*insert date*).

## 6.3 Standard Clauses and Conditions (A0000C – 2012-07-16 – modified)

6.3.1 All clauses and conditions incorporated by reference in the contract (number, date and title) are set out in the *Standard Acquisition Clauses and Conditions (SACC) Manual* ([buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual](http://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual)) issued by Public Works and Government Services Canada. All of the clauses of this document are legally binding on the parties. The following changes are made:

Wherever “Public Works and Government Services Canada” or “Canada” appears in any of the standard clauses or the general or supplemental general conditions, replace with “Canadian Nuclear Safety Commission” (or “CNSC”).

6.3.2 Annexes A, B and C form part of the legally binding agreement between the parties.

### 6.3.3 General Conditions

2010B (2015-09-03), General Conditions – Professional Services (Medium Complexity) apply to and form part of the contract. The following change is made:

- a) Replace section 27 with the following:
  - i. The contractor acknowledges that individuals who are subject to the provisions of the *Conflict of Interest Act* (S.C. 2006, c. 9, s. 2) the *Conflict of Interest Code for Members of the House of Commons*, the *Values and Ethics Code for the Public Sector*, the *Treasury Board Policy on Conflict of Interest and Post-Employment*, the *CNSC Values and Ethics Code* or the *CNSC Conflict of Interest and Post-Employment Policy* cannot derive any direct benefit resulting from the contract. Post-employment procedures apply to individuals who have left the public sector.
  - ii. The CNSC Values and Ethics Code and CNSC Conflict of Interest and Post-Employment Policy can be found at <http://www.nuclearsafety.gc.ca/eng/about-us/values-and-ethics/index.cfm>

### 6.3.4 Supplemental General Conditions

4007 (2010-08-16) Canada to Own Intellectual Property Rights in Foreground Information, apply to and form part of the Contract.

## 6.4 Term of Contract

### 6.4.1 Period of the Contract (A9022C – 2007-05-25)

The period of the contract is from date of contract to \_\_\_\_\_ inclusive (*fill in end date of the period*).



## 6.5 Authorities

### 6.5.1 Contracting Authority

The contracting authority for the contract is:

Dan Simard  
Senior Contracting Officer  
Canadian Nuclear Safety Commission  
Corporate Services Branch  
P.O. Box 1046, Station B  
280 Slater Street  
Ottawa, Ontario K1P 5S9  
Canada

Telephone: 613-996-6784  
Fax: 613-995-5086  
Email: dan.simard@canada.ca

The contracting authority is responsible for the management of the contract and any changes to the contract must be authorized in writing by the contracting authority. The contractor must not perform work in excess of or outside the scope of the contract based on verbal or written requests or instructions from anybody other than the contracting authority.

### 6.5.2 Project Authority

*Remark to contracting authority: If applicable, insert the following clause and fill in at contract award only.*

The project authority for the contract is:

Name:

Title:

Canadian Nuclear Safety Commission  
P.O. Box 1046, Station B  
280 Slater Street  
Ottawa, Ontario K1P 5S9  
Canada

Telephone: 613-9xx-xxxx (*insert applicable telephone number*)  
Fax: 613-995-5086  
Email: \_\_\_\_\_@canada.ca

The project authority is the representative of the CNSC and is responsible for all matters concerning the technical content of the work under the contract. Technical matters may be discussed with the project authority; however the project authority has no authority to authorize changes to the scope of the work. Changes to the scope of the work can only be made through a contract amendment issued by the contracting authority.



### 6.5.3 Contractor's Representative

*Remark to contracting authority: If applicable, insert the following clause and fill in at contract award only.*

Name:

Title:

Telephone:

Fax:

Email:

### 6.6 Proactive Disclosure of Contracts with Former Public Servants (A3025C – 2013-03-21)

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#), R.C.S. 1985, c. P-36 pension, the contractor has agreed that this information will be reported on departmental Web sites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

### 6.7 Payment

#### 6.7.1 Basis of Payment

For the satisfactory performance of the contract, the contractor shall be paid in accordance with the basis of payment, which is found in Annex B attached to this contract.

#### 6.7.2 Method of Payment – Deliverables Payments

Payment will be made in accordance with the schedule of deliverables set out in Annex B attached to this contract plus any applicable travel expenses.

#### 6.7.3 T1204 – Information Reported by Contractor (A9116C – 2007-11-30 - modified)

6.7.3.1 Pursuant to paragraph 221 (1)(d) of the [Income Tax Act](#), R.S.C. 1985, c.1 (5<sup>th</sup> Supp.), payments made by departments and agencies to contractors under applicable services contracts (including contracts involving a mix of goods and services) must be reported on a T1204 Government Service Contract Payments slip.

6.7.3.2 To enable departments and agencies to comply with this requirement, the contractor must provide the following information prior to signature of the contract:

- a. the legal name of the contractor, i.e. the legal name associated with its business number or social insurance number (SIN), as well as its address and postal code;
- b. the status of the contractor, i.e. an individual, a sole proprietorship, a corporation, or a partnership;
- c. the business number of the contractor if the contractor is a corporation or a partnership and the SIN if the contractor is an individual or a sole proprietorship. In the case of a partnership, if the partnership does not have a business number, the partner who has signed the contract must provide its SIN;
- d. in the case of a joint venture, the business number of all parties to the joint venture who have a business number or their SIN if they do not have a business number.

6.7.3.3 The information must be sent to the contracting authority. If the information includes a SIN, the information should be provided in an envelope marked "Protected".



## 6.8 Invoicing Instructions

6.8.1 Invoices can be emailed to [cnsf.finance-finance.ccsn@canada.ca](mailto:cnsf.finance-finance.ccsn@canada.ca) **OR** be mailed to the following address:

Canadian Nuclear Safety Commission  
Finance Division  
P.O. Box 1046, Station B  
Ottawa, ON K1P 5S9  
Canada

6.8.2 Original receipts are required for reimbursable travel expenses if these expenses are included in the basis of payment found in Annex B attached to this contract. The Contractor must identify the actual travel costs separately on any invoice issued pursuant to the Contract. Travel costs must be itemized by: airfare, train, car rental, personal vehicle, other transportation, accommodation, meals, incidentals, and other.

6.8.3 The Contractor shall include the contract number and appropriate Applicable Taxes registration number on all invoices pertaining to the contract.

6.8.4 The last and final invoice under the contract shall be clearly marked “final invoice”.

## 6.9 Certifications

### 6.9.1 Instructions to Bidders/Contractors (A3015C – 2008-12-12)

The continuous compliance with the certifications provided by the Contractor in its bid and the ongoing cooperation in providing associated information are conditions of the Contract. Certifications are subject to verification by the CNSC during the entire period of the Contract. If the contractor does not comply with any certification, fails to provide the associated information, or if it is determined that any certification made by the Contractor in its bid is untrue, whether made knowingly or unknowingly, the CNSC has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

### 6.9.2 SACC Manual Clauses

*A9014C -- Specific Person(s)*  
*G1005C – Insurance*  
*A2000C – Foreign Nationals (Canadian Contractor)*  
*A2001C – Foreign Nationals (Foreign Contractor)*  
*C2000C - Taxes - Foreign-based Contractor*  
*A7017C – Replacement of Specific Individuals*  
*B9028C – Access to Facilities and Equipment*

## 6.10 Applicable Laws

The contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.



## 6.11 Priority of Documents

The following documents form part of the legally binding agreement between the parties. If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the Supplemental General Conditions 4007 (2010-08-16) Canada to Own Intellectual Property Rights in Foreground Information;
- (c) the General Conditions 2010B (2015-09-03) – General Conditions – Professional Services (Medium Complexity);
- (d) Annex A – Statement of Work;
- (e) Annex B – Basis of Payment;
- (f) Annex C – Security Requirements Checklist; and
- (g) the contractor's bid dated (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award: “, as clarified on \_\_\_\_\_” or “, as amended on \_\_\_\_\_” and insert date(s) of clarification(s) or amendment(s)*)

## 6.12 Intellectual Property

### 6.12.1 Canada to Own Intellectual Property Rights in Foreground Information (4007 – 2010-08-16)

- 1. Supplemental General Conditions 4007 shall form part of the contract.
- 2. The CNSC has determined that any intellectual property arising from the performance of the work under the contract will vest in Canada, for the following reason:
  - a) where statutes, regulations, or prior obligations of the Crown to a third party or parties preclude contractor ownership of the foreground information

### 6.12.2 Publication Rights (K3053C – 2008-05-12)

- 1. In this section,
  - (a) "copyright work" means any work in which a copyright may subsist, produced in or as a result of performing the Contract;
  - (b) "publication" or "publish" do not include disclosure to an academic supervisor or appraiser, for the sole purpose of academic evaluation.
- 2. Canada grants to the contractor and to the author a royalty-free non-exclusive license to publish or have published any copyright work in the course of the normal dissemination of knowledge in the subject field. The contractor or the author must not however publish or have published any copyright work during the performance of the contract or for a period of 1 year after without obtaining before the written consent of Canada.
- 3. Any copyright work published by or on behalf of the contractor or the author must acknowledge that the work was performed under the contract with Canada, unless specified otherwise by Canada.

### 6.12.3 License to Intellectual Property Rights in Foreground Information (K3305C – 2008-05-12)

- 1. Subject to subsection 2, if the contractor wishes to make use of the foreground information for purposes of its commercial exploitation or further development, the contractor may make a written request for a license to the



CNSC. Such a request should be made within thirty (30) working days following the performance of the work. The Contractor must give the CNSC an explanation as to why such a license is required. The CNSC must respond in writing to the request within a reasonable period of time. If the request is refused the response must provide an explanation for the refusal. If the CNSC agrees to grant the license, it will be on conditions to be negotiated between the contractor and the CNSC.

2. When the work under the contract involves the preparation of a database or other compilation using information or data supplied by the CNSC, or personal information (as this term is defined in the *Privacy Act*, R.S.C, 1985, c. P-21) collected by the contractor as part of the work, then the license referred to in subsection 1 will be restricted to the intellectual property rights in foreground information that are capable of being exploited without the use of such information or data or personal information.

#### 6.12.4 No Right for Contractor to Sub-License (K3310C – 2008-05-12)

The contractor does not have the right to sub-license or otherwise authorize any party to exercise any of the intellectual property rights in the foreground information.

#### 6.12.5 License to Intellectual Property Rights in Canada-owned Information (K3315C –2008-05-12)

If the contractor wishes to make use of certain Canada-owned information for purposes of the commercial exploitation or further development of the foreground information licensed to the contractor, the contractor may make a written request to the CNSC for a licence to exercise the required intellectual property rights in such Canada-owned information. The contractor must give the CNSC an explanation as to why such a license is required. The CNSC must respond in writing to any request for such a licence within a reasonable period of time. If the CNSC agrees to grant such a licence, it will be on conditions to be negotiated between the contractor and the CNSC. It is understood that those conditions may include payment of compensation to Canada.

### 6.13 Third-Party Information

6.13.1 The contractor acknowledges that all third-party technical documents supplied for the purpose of this contract belong to the third party. The contractor shall return these technical documents to the originator upon completion of the contract.

6.13.2 The contractor acknowledges that proprietary third-party technical documents belong to the third party and shall be treated as confidential. No physical copies or digital records of technical documents shall be retained by the contractor after completion of the contract.

6.13.3 Upon completion of the contract, the contractor shall immediately return all proprietary technical documents to the originator, and shall provide the CNSC with a certificate of a senior officer of the contractor certifying such return and that no copies of proprietary technical documents, or any part thereof, in any form remain in the possession or control of the contractor.

### 6.14 Dispute Resolution

6.14.1 The parties must first attempt to resolve disputes arising in connection with this contract through direct good-faith negotiations. Such negotiations shall be undertaken for a maximum period of 30 working days unless resolved earlier. The parties may agree to an extension of the 30 working day period upon agreement in writing by each party.

6.14.2 All disputes, questions or differences arising in connection with this contract which cannot be resolved by the parties as set out in subsection 1 shall be resolved in an efficient and cooperative manner through mediation or any other such third-party assistance process as may be appropriate and agreed upon. Such a process shall be undertaken for at least 20 working days unless resolved earlier. The parties may agree to an extension of this 20 working day period upon agreement in writing by each party.



6.14.3 All disputes, questions or differences arising in connection with this contract, which the parties cannot resolve themselves through direct negotiations or the appropriate dispute resolution efforts discussed in subsection 2 shall be finally settled by binding arbitration.

6.14.4 The parties shall appoint a single arbitrator. The appointment of an arbitrator shall occur within 30 calendar days of the decision to proceed to binding arbitration. If such appointment has not occurred within this 30 calendar day period, then the parties shall apply to a Justice of the Ontario Court (General Division) in Ottawa to have an arbitrator appointed.

6.14.5 The arbitration shall be in accordance with the *Commercial Arbitration Act*, R.S.C., 1985,c.17 and shall take place in Ottawa, Ontario.

6.14.6 The arbitrator may appoint a secretary with the prior written permission of the parties. The fees of the sole arbitrator and of the secretary shall be shared equally by each of the parties. Notwithstanding the above, the arbitrator shall be authorized to require any party to pay the whole or part of the fees, costs and expenses. In such case, payments shall be made in accordance with the award and the award shall be final and shall not be subject to appeal.

6.14.7 This section does not apply in respect of the interpretation or application of constitutional, administrative, criminal or tax law or other law as may be determined and agreed upon by the parties. Except with respect to the laws expressly listed herein, if no agreement is reached regarding this article's application with respect to other areas of law, then the matter shall be subject to binding arbitration.

6.14.8 The parties understand that the Procurement Ombudsman appointed pursuant to subsection 22.1(1) of the *Department of Public Works and Government Services Act* will, on request, and consent of the parties, to participate in an alternative dispute resolution process to resolve any dispute between the parties respecting the interpretation or application of a term and condition of this contract and their consent to bear the cost of such process, provide to the parties a proposal for an alternative dispute resolution process to resolve their dispute. The Procurement Ombudsman will also review a complaint filed by the Contractor respecting administration of this contract if the requirements of subsection 22.2(1) of the *Department of Public Works and Government Services Act* and Sections 15 and 16 of the *Procurement Ombudsman Regulations* have been met, and the interpretation and application of the terms and conditions and the scope of the work of this contract are not in dispute. The Office of the Procurement Ombudsman may be contacted by telephone at 1-866-734-5169 or by e-mail at [boa.opo@boa.opo.gc.ca](mailto:boa.opo@boa.opo.gc.ca).



## ANNEX A – STATEMENT OF WORK

### 1.0 Background

The Canadian Nuclear Regulator has been a pioneer in setting reliability performance targets for select Nuclear Power Plant systems. Over time these performance measures have evolved and are supported by the use of modern computer based fault tree analysis, generally derived from plant-specific probabilistic safety assessments (PSAs).

The current Canadian nuclear regulatory framework concerning system reliability and maintenance aspects addresses reliability requirements, maintenance requirements and reporting requirements. This includes establishing yearly reliability targets for systems important to safety (based on the RD/GD-98 reliability program), as well as reporting on a number of performance indicators, such as Predicted Future Unavailability (PFU), Actual Past Unavailability (APU), system impairments and their effects.

Other international approaches are used to achieve similar objectives in equipment reliability and maintenance. For instance, both the Maintenance Rule and the Mitigating System Performance Index (MSPI) developed by the United States Nuclear Regulatory Commission (US NRC) are also adopted in other countries.

This study proposes to compare the present-day Canadian approach to reliability and maintenance indicators with the U.S. Maintenance Rule and MSPI. The study will also propose areas for further enhancement in the reliability program and future areas of research and development.

This project fits under the Fitness for Service Program Area ([E-DOCS-#4401886](#)) in the Equipment Reliability Sub-Program Area.

### 2.0 Objectives

The objective of this research project is to compare the Canadian regulatory requirements of nuclear power plant reliability program with the US NRC approach (Maintenance Rule (a(1) and a(2)) and MSPI). This comparison will identify the benefits and limitations of each approach. This study will also outline potential future avenues to explore with respect to reliability and maintenance requirements and performance measures. The study should also propose further potential areas of research and development.

### 3.0 Scope of Work

By using the CANDU plant specific fault tree system model and probabilistic safety assessment (PSA) model, the project will compare the Canadian reliability requirements and performance measures to the requirements of the US NRC Maintenance Rule (a (1) and a (2)) and MSPI. In order to do so, application of the Maintenance Rule and MSPI to a Canadian plant will be performed.

The successful contractor shall examine the Canadian regulatory reliability targets and requirements, (such as Predicted Future Unavailability, Actual Past Unavailability...) and the US NRC Maintenance Rule (a(1) and a(2)) and MSPI requirements to provide a thorough and comprehensive comparison of the two approaches. Furthermore, potential improvements or future area of research and development should be identified.



## 4.0 Tasks to be Performed

4.1 Review and familiarize oneself with the CNSC and USNRC maintenance and reliability requirements found in Ref 1-7 and other relevant information as applicable, if not already done.

4.2 From the Plant Annual Reliability Report and the system fault tree models<sup>1</sup>, extract the information on the Canadian reliability performance measures (predicted future unavailability, actual past unavailability, etc.), for the Emergency Coolant Injection (ECI) and the Class III power system. Extract the failure data of these systems to be used in task 4.3

4.3 Apply the US NRC Maintenance Rule<sup>2</sup> and MSPI to the selected CANDU mitigating systems (ECI and Class III power)

4.3.1 Use the CANDU system information (flow sheet and design information) and create a system model to be used for the application of the USNRC maintenance rule and MSPI.

4.3.2 Establish the performance criteria as described in the Maintenance Rule, to the appropriate components/trains of the system.

4.3.3. Develop a process for establishing the baseline data to be used for the MSPI from the Annual Reliability Reports Data provided.

4.3.4 Use the actual data from the Annual Reliability Report (the data used in 4.2) to apply the maintenance rule (using the performance criteria established in 4.3.2)

4.3.5 Use the actual data from the Annual Reliability Report (the data used in 4.2) to apply the MSPI (using the baseline data established in 4.3.3)

**Note:** The data in Annual Reliability Reports may not be sufficient to apply the US NRC maintenance rule and MSPI, if that is the case, the contractor is expected to develop a set of hypothetical data to apply fully the MSPI and MR. The rationale for the use of the hypothetical data should be discussed and sensitivity case should be performed if needed.

4.4. Compare the results of the two regulatory approaches (from Tasks 4.2. and 4.3), and discuss with supporting rationale, the benefits and limitations of each method. Potential enhancements of each approach can also be discussed.

4.5 Based on the review of the Canadian and US approach; propose further areas of research or development in reliability and maintenance program.

### References:

- 1- CNSC Regulatory Document, RD/GD-98, *Reliability Programs for Nuclear Power Plants*, June 2012, [http://www.nuclearsafety.gc.ca/pubs\\_catalogue/uploads/June-2012-RDGD-98-Reliability-Programs-for-Nuclear-Power-Plants\\_e.pdf](http://www.nuclearsafety.gc.ca/pubs_catalogue/uploads/June-2012-RDGD-98-Reliability-Programs-for-Nuclear-Power-Plants_e.pdf) 2-CNSC Regulatory Document,

<sup>1</sup> Both the Annual Reliability Report and the System Fault tree will be provided to the successful bidder under a Non-Disclosure Agreement.

<sup>2</sup> The CANDU plant PSA will be provided for application of the maintenance rule.



- 2- CNSC RD/GD-210, *Maintenance Programs for Nuclear Power Plants*, November 2012, [http://www.nuclearsafety.gc.ca/pubs\\_catalogue/uploads/20121212-RDGD-210-maintenance-programs-nuclear-power-plants-eng.pdf](http://www.nuclearsafety.gc.ca/pubs_catalogue/uploads/20121212-RDGD-210-maintenance-programs-nuclear-power-plants-eng.pdf)
- 3- CNSC Regulatory Document, CNSC REGDOC 3.1.1, Section 3.7, *Reporting Requirements for Nuclear Power Plants*, May 2014, [http://www.nuclearsafety.gc.ca/pubs\\_catalogue/uploads/REGDOC-3-1-1-Reporting-Requirements-for-Nuclear-Power-Plants.pdf](http://www.nuclearsafety.gc.ca/pubs_catalogue/uploads/REGDOC-3-1-1-Reporting-Requirements-for-Nuclear-Power-Plants.pdf)
- 4- USNRC 10CFR 50.65, *Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants*, <http://www.nrc.gov/reading-rm/doc-collections/cfr/part050/part050-0065.html>
- 5- Nuclear Energy Institute, *Regulatory Assessment Performance Indicator Guideline*, NEI 99-02 Rev. 7, August 2013, <http://pbadupws.nrc.gov/docs/ML1326/ML13261A116.pdf>
- 6- CANDU NPP samples of Annual Reliability Report
- 7- COG-05-9011 Rev, "Guidelines for CANDU Nuclear Plant Reliability Programs", June 2012

\*Access to the system fault trees and the associated reliability reports will be limited to CNSC premises only, and only to the successful bidder after they have been successfully security cleared. Anticipate a two-week visit to the CNSC for this activity. The CNSC will provide access to the CAFTA software to the contractor while on-site.

## 5.0 Deliverables

**All deliverables are to be submitted to the Project Authority.**

### 5.1 Start-up Meeting

- Date: Within 2 weeks of contract award
- Location: CNSC Head Office in Ottawa or Via Tele/Videoconference
- Purpose: To discuss 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 First Formal Progress Report (Subject to CNSC review and acceptance)

This report shall address Task 4.2 and 4.3.3 and include a discussion of all findings, conclusions and recommendations.

- Due Date: 4 months from contract award
- Copies: One electronic copy via email to the Project Authority
- Format and style requirements: The font Times New Roman 12 is to be used.



### **5.3 Second Formal Progress Report (Subject to CNSC review and acceptance)**

This report shall address Task 4.3.4 and 4.5 and include a discussion of all findings, conclusions and recommendations.

Due Date: 8 months from contract award

Copies: One electronic copy via email to the Project Authority

Format and style requirements: The font Times New Roman 12 is to be used.

### **5.4 Progress Meetings**

#### **5.4.1 First Progress Meeting**

Date: 5 months from contract award

Location: CNSC Head Office in Ottawa or Via Tele/Videoconference

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.

#### **5.4.2 Second Progress Meeting**

Date: 9 months from contract award

Location: CNSC Head Office in Ottawa or Via Tele/Videoconference

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.

### **5.5 Draft Final Report (Subject to CNSC review)**

This report shall address the completion of all tasks, and include a discussion of all findings, conclusions and recommendations.

Due Date: 11 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 Presentation

Due Date: 12 months after contract award

Location: CNSC Head Office, Ottawa

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

## 5.7 Electronic Files used to support the conclusion of the project

This deliverable shall provide the all the electronic files (included but not limited to CAFTA files) associated with the projects analysis and results.

Due Date: 14 months after contract award

Copies: One electronic copy to the Project Authority

## 5.8 Final Report (Subject to CNSC review and acceptance)

The Final Report deliverable shall address any comments and recommended edits supplied by CNSC as it pertains to the Draft Final Report.

Due Date: 14 months after contract award

Copies: One electronic copy via email to the Project Authority and one bound copy

Format & style requirements:

The font Times New Roman 12 is to be used. Electronic copies must be provided in a format readable by Word 2003 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.



## ANNEX B – BASIS OF PAYMENT

### 1.0 Basis of Payment – Firm Price – Deliverables (H1001C)

#### 1.1 Deliverable Schedule

In consideration of the contractor satisfactorily completing all of its obligations under the contract, the contractor will be paid the following firm price for professional fees in accordance with the following deliverable schedule. Customs duties are included and Applicable Taxes are extra.

Firm price (professional fees only) for each deliverable.

Deliverable	Delivery date	Firm price (professional fees)
5.2 First Formal Progress Report	4 months from contract award	\$
5.3 Second Formal Progress Report	8 months from contract award	\$
5.5 Draft Final Report	11 months from contract award	\$
5.6 Presentation	12 months after contract award	\$
5.7 Electronic Files used to support the conclusion of the project	14 months after contract award	\$
5.8 Final Report	14 months from contract award	\$
<b>Total price</b> (Applicable Taxes are extra).		\$

#### 1.2 Travel and Living Expenses

- The contractor will be reimbursed its authorized travel and living expenses reasonably and properly incurred in the performance of the work, at cost, without any allowance for profit and administrative overhead, in accordance with the meal, private vehicle and incidental expenses provided in Appendices B, C and D of the *Treasury Board Travel Directive*, and with the other provisions of the directive referring to "travellers", rather than those referring to "employees".
- All travel must have the prior written authorization of the Project Authority. All payments are subject to government audit.
- In accordance with the Treasury Board Special Travel Authorities, only original receipts will be accepted for travel-related expenses.

**Estimated cost:** \$ \_\_\_\_\_

#### 1.3 Other Direct Expenses

The contractor will be reimbursed for the direct expenses reasonably and properly incurred in the performance of the work. These expenses will be paid at actual cost without mark-up, upon submission of an itemized statement supported by receipt vouchers.

**Estimated cost:** \$ \_\_\_\_\_ (Applicable Taxes are extra)



#### **1.4 Limitation of Price (C6000C – 2011-05-16)**

Canada will not pay the Contractor for any design changes, modifications or interpretations of the work unless they have been approved, in writing, by the contracting authority before their incorporation into the work.



## ANNEX C – SECURITY REQUIREMENTS CHECKLIST