

**RETURN BIDS TO:**  
**RETOURNER LES SOUMISSIONS À:**  
**Bid Receiving - PWGSC / Réception des**  
**soumissions - TPSGC**  
**11 Laurier St. / 11, rue Laurier**  
**Place du Portage , Phase III**  
**Core 0A1 / Noyau 0A1**  
**Gatineau**  
**Québec**  
**K1A 0S5**  
**Bid Fax: (819) 997-9776**

**REQUEST FOR PROPOSAL**  
**DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government  
Services Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out therefor.

**Proposition aux: Travaux Publics et Services  
Gouvernementaux Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexée, au(x) prix indiqué(s).

**Comments - Commentaires**

|  |  |
|--|--|
| <b>Title - Sujet</b><br>Syst prop. d'étrave NGCC Earl Grey   |  |
| <b>Solicitation No. - N° de l'invitation</b><br>F7049-140235/A   | <b>Date</b><br>2014-10-14                    |
| <b>Client Reference No. - N° de référence du client</b><br>F7049-140235  |  |
| <b>GETS Reference No. - N° de référence de SEAG</b><br>PW-\$\$ML-044-24730   |  |
| <b>File No. - N° de dossier</b><br>044ml.F7049-140235  | <b>CCC No./N° CCC - FMS No./N° VME</b>       |
| <b>Solicitation Closes - L'invitation prend fin</b><br><b>at - à 02:00 PM</b><br><b>on - le 2014-11-26</b>   |  |
| <b>Time Zone</b><br><b>Fuseau horaire</b><br>Eastern Standard Time<br>EST  |  |
| <b>F.O.B. - F.A.B.</b><br><b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>   |  |
| <b>Address Enquiries to: - Adresser toutes questions à:</b><br>Aussant, Marc   | <b>Buyer Id - Id de l'acheteur</b><br>044ml  |
| <b>Telephone No. - N° de téléphone</b><br>(819) 934-1386 ( )   | <b>FAX No. - N° de FAX</b><br>(819) 956-0897 |
| <b>Destination - of Goods, Services, and Construction:</b><br><b>Destination - des biens, services et construction:</b><br>DEPARTMENT OF FISHERIES AND OCEANS<br>DEPOT 05C DOOR 1<br>13 AKERLEY BLVD<br>DARTMOUTH<br>Nova Scotia<br>B3B1J6<br>Canada |  |

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Marine Machinery and Services / Machineries et services  
maritimes

11 Laurier St. / 11, rue Laurier  
6C2, Place du Portage  
Gatineau  
Québec  
K1A 0S5

|  |  |
|--|--|
| <b>Delivery Required - Livraison exigée</b><br>See Herein  | <b>Delivery Offered - Livraison proposée</b> |
| <b>Vendor/Firm Name and Address</b><br><b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>   |  |
| <b>Telephone No. - N° de téléphone</b><br><b>Facsimile No. - N° de télécopieur</b>   |  |
| <b>Name and title of person authorized to sign on behalf of Vendor/Firm</b><br><b>(type or print)</b><br><b>Nom et titre de la personne autorisée à signer au nom du fournisseur/<br/>de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b> |  |
| <b>Signature</b>   | <b>Date</b>                                  |

| Item Article | Description   | Dest. Code Dest. | Inv. Code Fact. | Qty Qté | U. of I. U. de D. | Destination | Unit Price/Prix unitaire FOB/FAM | Plant/Usine | Delivery Req. Livraison Req. | Del. Offered Liv. offerte |
|--------------|---|------------------|-----------------|---------|-------------------|-------------|----------------------------------|-------------|------------------------------|---------------------------|
| 1            | Work on CCGS Earl Grey's Bow Thruster<br>Contractor shall perform work identified in the CCGS Earl Grey's Bow Thruster RFP SOW # 14-E006-004-4. | F5598            | I-1             | 1       | Each              | \$          | \$                               |             | See Herein                   |                           |

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## **PART 1 - GENERAL INFORMATION**

### **1. Security Requirement**

There is no security requirement applicable to this procurement.

### **2. Requirement**

- 2.1 The Canadian Coast Guard (CCG) has a requirement for the replacement of the OmniThruster Bow thruster system fitted onboard the CCGS Earl Grey. The work will consist of the design, manufacture and factory test a replacement Bow Thruster system and to deliver it ready for installation at the CCG Warehouse in Dartmouth, Nova Scotia, all in accordance with the Annex A, CCGS Earl Grey Bow Thruster Replacement Statement of Work, Specification # 14-E006-004-4.
- 2.2 This requirement includes an option to supply a Replacement Bow Thruster System for the existing Peacock Model 1200 water jet thruster fitted onboard the CCGS Samuel Risley. The work would consist of the design, manufacture and factory test a replacement Bow Thruster system and to deliver it ready for installation at the CCG base in Parry Sound, Ontario, all in accordance with the Annex A, CCGS Earl Grey Bow Thruster Replacement Statement of Work, Specification # 14-E006-004-4. The period where Canada may exercise the option will be from the contract award date plus twelve (12) months.

### **3. Debriefings**

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.

### **4. Trade Agreements**

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT).

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## **PART 2 - BIDDER INSTRUCTIONS**

### **1. Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

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.

The 2003 (2014-09-25) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

### **2. Submission of Bids**

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated on page 1 of the bid solicitation.

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

### **3. Enquiries - Bid Solicitation**

All enquiries must be submitted in writing to the Contracting Authority no later than seven (7) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries 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 Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all bidders. Enquiries not submitted in a form that can be distributed to all bidders may not be answered by Canada.

### **4. Applicable Laws**

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

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.

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## 5. Site Visit - Vessel

It is recommended that the Bidder or a representative of the Bidder visit the work site. Arrangements have been made for the site visit to be held on **October 21 to October 23, 2014 inclusively onboard CCGS Earl Grey** tied up alongside at the Bedford Institute of Oceanography in Dartmouth, Nova Scotia at 1 Challenger Drive.

Bidders must communicate with the Contracting Authority no later than **five (5) working days** before the scheduled visit to confirm attendance and provide the names of the person(s) who will attend. Bidders will be required to sign an attendance form.

**Bidders who do not attend or do not send a representative will not be given an alternative appointment but they will not be precluded from submitting a bid.**

Any clarifications or changes to the bid solicitation resulting from the site visit will be included as an amendment to the bid solicitation. It is the Bidder's responsibility to ensure that all questions and request for clarification are addressed in accordance with the RFP Part 2 clause 3 "Enquiries - Bid Solicitation" in order that they become contractual.

It is the Bidder's responsibility to ensure that all available, accessible or visible information has been seen, noted and validated. Canada will assume that Bidders are in possession of that information, that they validated it and will not consider any request for adjustment related to that information from the successful Contractor once in contract.

Canada will make non-compliant a proposal that will contain caveat(s) and/or assumption(s) that were not raised by the Bidders and accepted by Canada as being part of all Bidder's proposal.

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## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **1. Bid Preparation Instructions**

Canada requests that bidders provide their bid in separately bound sections as follows:

Section I: Technical Bid four (4) hard copies and four (4) soft copies on CD or memory stick,

Section II: Financial Bid one (1) hard copy and one (1) soft copy on CD or memory stick,

Section III: Certifications two (2) hard copies

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

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

Canada requests that bidders follow the format instructions described below in the preparation of their bid:

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

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process Policy on Green Procurement

(<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.tml>). To assist Canada in reaching its objectives, bidders should:

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

#### **Section I Technical Bid**

In their technical bid, bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work.

The technical bid should address clearly and in sufficient depth the points 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 the evaluation of the bid, Canada requests that bidders address and present topics in the order of the evaluation criteria 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.

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Bids shall follow all instructions, general terms, conditions and clauses identified herein by title, number and date. All references to descriptive material, technical manuals and brochures included as part of this Bid should be referenced accordingly.

The Technical Bid shall also include:

- (a) Statement of compliance to the SOW Annex "A", this in a requirements matrix format;
- (b) Duly completed Annex "D", Mandatory Technical Criteria, and Bidders must demonstrate how they meet each Mandatory Technical Criteria of the RFP; and
- (c) Duly completed Annex "E", Point Rated Technical Criteria, and Bidders must demonstrate how they meet each Point Rated Technical Criteria of the RFP.

## **Section II Financial Bid**

Bidders must submit their financial bid in accordance with the Annex F - Financial Bid Presentation Sheet and the Appendix 1 to Annex F - Pricing Data Sheet. The total amount of the applicable taxes must be excluded or shown separately.

### **1. Cost Breakdown**

Bidders must include with their financial bid a complete cost breakdown of its bid price for the Work in accordance with the Appendix 1 to Annex F - Pricing Data Sheet and transfer the total to line item A of the Annex F Financial Bid Presentation Sheet. Once in contract the Pricing Data Sheet will be part of the Basis of Payment Annex B.

### **2. Hourly Rates and Overtime Premiums for Unscheduled Work.**

- i. Bidders must provide hourly rates and if applicable overtime **premiums** in accordance with the line item B of the Annex F.
- ii. Hourly Rates and Overtime Premiums provides will be extended against predetermined amount of hours set out by Canada for evaluation purpose only. Once in contract these Hourly Rates and Premiums will be part of the Contract Basis of Payment Annex B.

### **3. Exchange Rate Fluctuation**

C3011T (2013-11-06), Exchange Rate Fluctuation

## **Section III Certifications**

Bidders must submit the certifications required under Part 5.

## PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

### 4.1 Evaluation Procedures

4.1.1 Bids will be assessed in accordance with the entire requirement of the bid solicitation including the Technical and Financial evaluation criteria.

4.1.2 An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.3 Mandatory Technical Criteria

The Technical mandatory requirements to be met by any Bid is attached hereto as Annex "D", Mandatory Technical Criteria.

4.1.4 Point Rated Technical Criteria

The Point rated requirements to be met by any Bid is attached hereto as Annex "E", Point Rated Technical Criteria.

4.1.5 Financial Evaluation

The price of the bid will be evaluated in Canadian dollars, the Goods and Services Tax or the Harmonized Sales Tax excluded, FOB destination, Canadian customs duties and excise taxes included.

The Unscheduled Work, will be part of the Financial Evaluation. The level of effort used will be as per Annex "F". The amount of person-hours used for the evaluation of the Unscheduled Work Hourly Rates and Overtime Premiums are based on historical experience and there is no minimum or maximum amount of hours for Unscheduled Work nor is there a guarantee of such Unscheduled Work.

### 4.2 Basis of Selection

4.2.1 To be declared responsive, a bid must:

- (a) Comply with all the requirements of the bid solicitation;
- (b) Meet all Mandatory Technical Evaluation Criteria of the Annex "D"; and
- (c) Achieve a minimum of 60 points of the Point Rated Sections of Annex "E".

4.2.2 Bids not meeting 4.2.1 (a) or (b) or (c) will be declared as non-responsive.

4.2.3 The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 30% for the technical merit and 70% for the price.

4.2.4 Total Score will be calculated as follows:

The combined rating technical merit and price will equal to :

= Lowest Total Price for the Project X 70 + Individual Technical Score X 30

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Individual Total Price for the Project

Maximum Technical Score available

- 4.2.5 In case of a tie, the proposal with the Lowest Total Evaluation Price for the Project, as per Annex "F", shall be recommended for award of a Contract.

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## PART 5 - CERTIFICATIONS

Bidders must provide the required certifications and associated information to be awarded a contract.

The certifications provided by bidders to Canada are subject to verification by Canada at all times. Canada 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.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's 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.

### 1. Certifications Required with the Bid

#### 1.1 Integrity Provisions - Associated Information

By submitting a bid, the Bidder certifies that the Bidder and its Affiliates are in compliance with the provisions as stated in Section 01 Integrity Provisions - Bid of Standard Instructions 2003 (2014-09-25). The associated information required within the Integrity Provisions will assist Canada in confirming that the certifications are true.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

#### 1.2 Federal Contractors Program for Employment Equity - Bid Certification

I, the Bidder, by submitting the present information to the Contracting Authority, certify that the information provided is true as of the date indicated below. The certifications provided to Canada are subject to verification at all times. I understand that Canada will declare a bid non-responsive, or will declare a contractor in default, if a certification is found to be untrue, whether during the bid evaluation period or during the contract period. Canada will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply with any request or requirement imposed by Canada may render the bid non-responsive or constitute a default under the Contract.

For further information on the Federal Contractors Program for Employment Equity visit Employment and Social Development Canada (ESDC)-Labour's website.

Date: \_\_\_\_\_ (YYYY/MM/DD) (If left blank, the date will be deemed to be the bid solicitation closing date.)

Complete both A and B.

A. Check only one of the following:

( ) A1. The Bidder certifies having no work force in Canada.

- 
- ( ) A2. The Bidder certifies being a public sector employer.
- ( ) A3. The Bidder certifies being a federally regulated employer being subject to the Employment Equity Act.
- ( ) A4. The Bidder certifies having a combined work force in Canada of less than 100 employees (combined work force includes: permanent full-time, permanent part-time and temporary employees [temporary employees only includes those who have worked 12 weeks or more during a calendar year and who are not full-time students]).
- A5. The Bidder has a combined workforce in Canada of 100 or more employees; and
- ( ) A5.1. The Bidder certifies already having a valid and current Agreement to Implement Employment Equity (AIEE) in place with ESDC-Labour.

OR

- ( ) A5.2. The Bidder certifies having submitted the Agreement to Implement Employment Equity (LAB1168) to ESDC-Labour. As this is a condition to contract award, proceed to completing the form Agreement to Implement Employment Equity (LAB1168), duly signing it, and transmit it to ESDC-Labour.

B. Check only one of the following:

- ( ) B1. The Bidder is not a Joint Venture.

OR

- ( ) B2. The Bidder is a Joint Venture and each member of the Joint Venture must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification. (Refer to the Joint Venture section of the Standard Instructions).

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Signature

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Date

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## PART 6 - RESULTING CONTRACT CLAUSES

### 1. Security Requirement

There is no security requirement applicable to this Contract.

### 2. Requirement

- 2.1 The Canadian Coast Guard (CCG) has a requirement for the replacement of the OmniThruster Bow thruster system fitted onboard the CCGS Earl Grey. The work will consist of the design, manufacture and factory test a replacement Bow Thruster system and to deliver it ready for installation at the CCG Warehouse in Dartmouth, Nova Scotia, all in accordance with the Annex A, CCGS Earl Grey Bow Thruster Replacement Statement of Work, Specification # 14-E006-004-4.
- 2.2 This requirement includes an option to supply a Replacement Bow Thruster System for the existing Peacock Model 1200 water jet thruster fitted onboard the CCGS Samuel Risley. The work would consist of the design, manufacture and factory test a replacement Bow Thruster system and to deliver it ready for installation at the CCG base in Parry Sound, Ontario, all in accordance with the Annex A, CCGS Earl Grey Bow Thruster Replacement Statement of Work, Specification # 14-E006-004-4. The period where Canada may exercise the option will be from the contract award date plus twelve (12) months.

### 3. Standard Clauses and Conditions

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the Standard Acquisition Clauses and Conditions Manual (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### 3.1 General Conditions

- 1 2010A (2014-09-25), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

In section 09, Warranty, in subsection 1, delete the following sentence:

"The warranty period will be 12 months after delivery and acceptance of the Work or the length of the Contractor's or manufacturer's standard warranty period, whichever is longer."

Insert the following:

"The 12 months warranty period for CCGS Earl Grey will begin on or before January 3rd 2016."

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- 2 1031-2 (2012-07-16), Contract Cost Principles, apply to the Unscheduled Work and form part of the Contract

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#### 4. Term of Contract

##### 4.1 Delivery Dates

- 4.1.1 The CCGS Earl Grey Approval Design Package (ADP) for the Replacement Bow Thruster System, as per the SOW Annex "A", 4 weeks after contract award.
- 4.1.2 The Replacement Bow Thruster System for CCGS Earl Grey on or before May 1, 2015.
- 4.1.3 The optional Replacement Bow Thruster System for CCGS Samuel Risley within a period of the same or less duration than the one committed for deliveries on CCGS Earl Grey.

#### 5. Authorities

##### 5.1 Contracting Authority

The Contracting Authority for the Contract is:

**Marc Aussant**  
Supply Team Leader  
Public Works and Government Services Canada  
11 Laurier St, Gatineau, Québec  
K1A 0S5  
Telephone: 819-934-1386  
Facsimile : 819-956-7725  
Email: marc.aussant@tpsgc-pwgsc.gc.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.

##### 5.2 Project Authority

The Project Authority for the Contract is:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

##### 5.3 Contractor's Representative

Name : \_\_\_\_\_

Title : \_\_\_\_\_

Address : \_\_\_\_\_

\_\_\_\_\_

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Telephone : \_\_\_\_\_  
Facsimile : \_\_\_\_\_  
E-mail address : \_\_\_\_\_

## **6. Proactive Disclosure of Contracts with Former Public Servants**

By providing information on its status, with respect to being a former public servant in receipt of a Public Service Superannuation Act (PSSA) pension, the Contractor has agreed that his information will be reported on departmental websites as part of the published proactive disclosure reports in accordance with Contracting Policy Notice 2012-2 of the Treasury Board Secretariat of Canada.

## **7. Payment**

### **7.1 Single Payment**

Canada will pay the Contractor upon completion and delivery of the Requirement in accordance with the payment provisions of the contract if:

- an accurate and complete invoice and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- all such documents have been verified by Canada; and
- the Work delivered has been accepted by Canada.

### **7.2 Basis of Payment**

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price in accordance with the Basis of Payment in Annex B, applicable Taxes extra. Payment for unscheduled work shall be in accordance with Annex B.

No increase in the total liability of Canada or in the price of the Work resulting from any design changes, modifications or interpretations of the Specifications, will be authorized or paid to the Contractor unless such design changes, modifications or interpretations have been authorized in writing, by the Contracting Authority prior to their incorporation in the Work.

### **7.3 Payment for Unscheduled Work**

The Contractor's certification that the price or rate is not in excess of the lowest price or rate charged anyone else, including the Contractor's most favoured customer, for the like quality and quantity of the goods, services or both, is subject to verification by government audit, at the discretion of Canada, before or after payment is made to the Contractor.

The Contractor will be paid its costs reasonably and properly incurred in the performance of the Work, in accordance with Annex "F" and in accordance with Contract Cost Principles 1031-2, as determined by a government audit, plus a profit computed in accordance with Chapter 10, Cost and Profit, of the Supply

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Manual, Public Works and Government Services Canada. The results and findings of the government's audit will be conclusive.

#### **7.4 Limitation of Price**

SACC *Manual* clause C6000C (2011-07-16) Limitation of Price

#### **7.5 Invoicing**

The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

Each invoice must be supported by:

- a copy of the release document and any other documents as specified in the Contract;
- a copy of the invoices; and
- a copy of the monthly progress report.

Invoices must be distributed as follows:

- The original and one (1) copy must be forwarded to the following address for certification and payment.

Canadian Coast Guard

TBD

- One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

#### **7.6 SACC Manual Clauses**

H4500C - Lien - Section 427 of the Bank Act, (2010-01-11)

C2000C - Taxes - Foreign-based Contractor, (2007-11-30)

#### **7.7 Discretionary Audit for Unscheduled Work in the Scope of Work**

1. The following are subject to government audit before or after payment is made:
  - (a) The amount claimed under the Contract, as computed in accordance with the Basis of Payment, including time charged;
  - (b) The accuracy of the Contractor's time recording system;
  - (c) The estimated amount of profit in any firm-priced element, firm time rate, firm overhead rate, or firm salary multiplier, for which the Contractor has provided the appropriate certification. The purpose of the audit is to determine whether the actual profit earned on a single contract if only one exists, or the aggregate of actual profit earned by the Contractor on a series of negotiated contracts containing one or more of the prices, time rates or multipliers mentioned above, during a particular period selected, is reasonable and justifiable based on the estimated amount of profit included in earlier price or rate certification(s); and

- (d) Any firm-priced element, firm time rate, firm overhead rate, or firm salary multiplier for which the Contractor has provided a "most favoured customer" certification. The purpose of such audit is to determine whether the Contractor has charged anyone else, including the Contractor's most favoured customer, lower prices, rates or multipliers, for like quality and quantity of goods or services.
2. Any payments made pending completion of the audit must be regarded as interim payments only and must be adjusted to the extent necessary to reflect the results of the said audit. If there has been any overpayment, the Contractor must repay Canada the amount found to be in excess.

## 8. Certifications

### 8.1 Compliance

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 Canada 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, Canada has the right, pursuant to the default provision of the Contract, to terminate the Contract for default.

## 9. Applicable Laws

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

## 10. Priority of Documents

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 general conditions 2010A (2014-09-25), General Conditions - Goods (Medium Complexity);
- (c) the 1031-2 (2012-07-16), Contract Cost Principles;
- (d) Annex A Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) Annex C Procedure to Preprocessing Unscheduled Work; and
- (g) the Contractor's bid dated \_\_\_\_\_

## 11. Financial Security

### 11.1 Term of Financial Security

Any bond, bill of exchange, letter of credit or other security provided by the Contractor to Canada in accordance with the terms of the Contract must not expire before 90 days after the end of the Warranty Period indicated in the Contract.

The Contracting Authority may, at its sole discretion, require an extension to the period of the security, for which the Contractor may apply for financial compensation.

The Contracting Authority may, at its sole discretion, return the security to the Contractor before the expiration, provided however that no risk will accrue to Canada as a result of this.

## 11.2 Contract Financial Security

- 11.2.1 The Contractor must provide the Contracting Authority with financial security within seven (7) calendar days after the date of contract award. The financial security must be in the form of a security deposit as defined in clause 11.2.9 in the amount of five (5) percent of the Contract Price for the entire contract period, including any extension and warranty period.
- 11.2.2 If, for any reason, Canada does not receive the security deposit in the amount set out above within the specified period, the Contractor will be in default. Canada may, at its discretion, terminate the Contract for default pursuant to the Contract default provision.
- 11.2.3 If the security deposit is in the form of government guaranteed bonds with coupons, all coupons that are unmatured at the time the security deposit is provided must be attached to the bonds. The Contractor must provide written instructions concerning the action to be taken with respect to coupons that will mature while the bonds are pledged as security, when such coupons are in excess of the security deposit requirement.
- 11.2.4 If the security deposit is in the form of a bill of exchange, Canada will deposit the bill of exchange in an open account in the Consolidated Revenue Fund. Bills of exchange that are deposited to the credit of the Consolidated Revenue Fund will bear simple interest, calculated on the basis of the rates which are in effect during the period the deposit is held. These rates are published monthly by the Department of Finance and are set to be equal to the average yield on 90-day Treasury Bills, less 1/8 of 1 percent. Interest will be paid annually or, when the security deposit is returned to the Contractor, if earlier. The Contractor may, however, request Canada to hold and not cash the bill of exchange, in which case no interest will become payable.
- 11.2.5 Canada may convert the security deposit to the use of Canada if any circumstance exists which would entitle Canada to terminate the Contract for default, but any such conversion will not constitute termination of the Contract.
- 11.2.6 When Canada so converts the security deposit:
- a. the proceeds will be used by Canada to complete the Work according to the conditions of the Contract, to the nearest extent that it is feasible to do so and any balance left will be returned to the Contractor on completion of the warranty period; and
  - b. if Canada enters into a contract to have the Work completed, the Contractor will:
    - i. be considered to have irrevocably abandoned the Work; and
    - ii. remain liable for the excess cost of completing the Work if the amount of the security deposit is not sufficient for such purpose. "Excess cost" means any amount over and above the amount of the Contract Price remaining unpaid together with the amount of the security deposit.

- 11.2.7 If Canada does not convert the security deposit to the use of Canada before completion of the entire contract period, including any extension and warranty period, Canada will return the security deposit to the Contractor within a reasonable time after such date.
- 11.2.8 If Canada converts the security deposit for reasons other than bankruptcy, the financial security must be re-established to the level of the amount stated above so that this amount is continued and available until completion of the entire contract period, including any extension and warranty period.
- 11.2.9 Security Deposit Definition
1. In this Article, "security deposit" means
    - a. a bill of exchange that is payable to the Receiver General for Canada and certified by an approved financial institution or drawn by an approved financial institution on itself; or
    - b. a government guaranteed bond; or
    - c. an irrevocable standby letter of credit, or
    - d. such other security as may be considered appropriate by the Contracting Authority and approved by Treasury Board;
  2. "approved financial institution" means
    - a. any corporation or institution that is a member of the Canadian Payments Association;
    - b. a corporation that accepts deposits that are insured by the Canada Deposit Insurance Corporation or the Régie de l'assurance-dépôts du Québec to the maximum permitted by law;
    - c. a credit union as defined in paragraph 137(6) of the Income Tax Act;
    - d. a corporation that accepts deposits from the public, if repayment of the deposits is guaranteed by a Canadian province or territory; or
    - e. the Canada Post Corporation.
  3. "government guaranteed bond" means a bond of the Government of Canada or a bond unconditionally guaranteed as to principal and interest by the Government of Canada that is:
    - a. payable to bearer;
    - b. accompanied by a duly executed instrument of transfer of the bond to the Receiver General for Canada in accordance with the Domestic Bonds of Canada Regulations;
    - c. registered in the name of the Receiver General for Canada.
  4. "irrevocable standby letter of credit"

- 
- a. means any arrangement, however named or described, whereby a financial institution (the "Issuer"), acting at the request and on the instructions of a customer (the "Applicant"), or on its behalf,
    - i. will make a payment to or to the order of Canada, as the beneficiary;
    - ii. will accept and pay bills of exchange drawn by Canada;
    - iii. authorizes another financial institution to effect such payment, or accept and pay such bills of exchange; or
    - iv. authorizes another financial institution to negotiate, against written demand(s) for payment, provided that the conditions of the letter of credit are complied with.
  - b. must state the face amount which may be drawn against it;
  - c. must state its expiry date;
  - d. must provide for sight payment to the Receiver General for Canada by way of the financial institution's draft against presentation of a written demand for payment signed by the authorized departmental representative identified in the letter of credit by his/her office;
  - e. must provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face amount of the letter of credit;
  - f. must provide that it is subject to the International Chamber of Commerce (ICC) Uniform Customs and Practice (UCP) for Documentary Credits, 2007 Revision, ICC Publication No. 600. Pursuant to the ICC UCP, a credit is irrevocable even if there is no indication to that effect; and
  - g. must be issued (Issuer) or confirmed (Confirmer), in either official language, by a financial institution that is a member of the Canadian Payments Association and is on the letterhead of the Issuer or Confirmer. The format is left to the discretion of the Issuer or Confirmer.

## 12. Project Schedule

The Contractor must revised the project Preliminary Plan and Schedule on an as required basis and submit to Canada for review and concurrence every month. If the revision is due to authorized unscheduled work, the revision must include the unscheduled work, all related schedule impact on the work and impact to the delivery date of the requirement should it be the case.

## 13. Post Contract Award Meeting

A Post Contract Award Meeting will be convened and chaired by the Contracting Authority at the Contractor's facility at a time to be determined. At the meeting the Contractor will introduce the project management personnel supported by an organization chart, and Canada will introduce the Authorities of the Contract. A review of the term and conditions of the Contract will be conducted by the Contracting Authority.

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The Contractor's costs of holding a Post Contract Award Meeting must be included in the price of the bid. Travel and living expenses for Government Personnel will be arranged and paid for by the Canada.

#### 14. Progress Report

1. The Contractor must submit monthly reports on the progress of the Work in an electronic format to the Technical Authority and to the Contracting Authority.
2. The progress report must contain two (2) Parts:
  - (a) PART 1: The Contractor must answer the following three questions:
    - (i) is the project schedule being impacted and if impacted why?
    - (ii) is the project delivery date being impacted and if impacted why?
    - (iii) is the project within budget?
    - (iv) is the project free of any areas of concern in which the assistance or guidance of Canada may be required?
  - (b) PART 2: A narrative report, brief, yet sufficiently detailed to enable the Technical Authority to evaluate the progress of the Work, containing as a minimum:
    - (i) a description of the progress of each task and of the Work as a whole during the period of the report. Sufficient sketches, diagrams, photographs, etc., must be included, if necessary, to describe the progress accomplished.

#### 15. Outstanding Work and Acceptance

1. The Project Authority, in conjunction with the Contractor, will prepare a list of outstanding work at the end of the work period. This list will form the annex to the Work Acceptance form PWGSC-TPSGC1205. A Work Acceptance Meeting will be convened by the Contracting Authority on the work completion date to review and sign off the Acceptance form.

A holdback of twice the estimated value of outstanding work will be held until its completion. The estimated value and the completion date of each outstanding work item will be determined by Canada, at its sole discretion. The Goods and Services Tax or Harmonized Sales Tax, as applicable, will be calculated on this outstanding work holdback amount and paid at the time that the outstanding work holdback is released.

However, at any time after acceptance of the Work, Canada may in its sole discretion decide that one or more of the outstanding work items will not be completed by the Contractor. The Contracting Authority will provide written notice to the Contractor of such a decision. In the event that Canada decides that any outstanding work items will not be completed by the Contractor, the holdback of twice the estimated value of the outstanding work not completed by the Contractor will not be paid to the Contractor and the contract value will be amended accordingly.

2. The Contractor must complete the above form and annex in three (3) copies, which will be distributed by the Inspection Authority as follows:
  - (a) original to the Contracting Authority;
  - (b) one copy to the Technical Authority; and

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(c) one copy to the Contractor.

## 16. Dispute Resolution

The parties agree to follow the procedures below for the settlement of any disputes which may arise throughout the life of this Contract prior to seeking redress through court procedures:

- (a) Disputes arising from this Contract will in the first instance be resolved by the Contracting Authority and the Contractor's Contract Administrator within (15) working days or such additional time as may be agreed to by both parties.
- (b) Failing resolution under (a) above, the Manager of the Machinery and Logistic Support Division of the Marine Systems Directorate at PWGSC and the Contractor's Representative Supervisor will attempt to resolve the dispute within an additional fifteen (15) working days.
- (c) Failing resolution under (a) or (b) above, the Senior Director of the Marine Systems Directorate at PWGSC, and the Contractor's Senior Management will attempt to resolve the dispute within an additional thirty (30) working days.
- (d) Notwithstanding the above procedure, either party may seek a decision through the courts at any time during the dispute.

## 17. Failure to Deliver

Time is of the essence of the Contract. Changes in the Completion date not caused by Canada are Contractor defaults, will prejudice Canada and are at the Contractor's expense. The Completion date will not be extended without consideration being provided by the Contractor acceptable to Canada in the form of adjustment to the price, warranty or services to be provided.

## **ANNEX A**

# **CCGS Earl Grey Bow Thruster Replacement Statement of Work**

Specification # 14-E006-004-4

Date: October 1, 2014

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# 1 Scope

## 1.1 Purpose

This Statement of Work (SOW) defines the technical and performance requirements for a Replacement Bow Thruster System for the Canadian Coast Guard Vessel (CCGS) Earl Grey and CCGS Samuel Risley. It is provided with sufficient information such that the Contractor, with this guidance and its own expertise, can design, manufacture, factory test and deliver ready for installation Replacement Bow Thruster Systems that will meet or exceed the requirements as stipulated in this SOW.

## 1.2 Background

The CCGS Earl Grey and Samuel Risley are Type 1050 class vessel operated by Canadian Coast Guard year round, the CCGS Earl Grey on the East Coast of Canada and the CCGS Samuel Risley in the Great Lakes basin. Both vessels perform Search and Rescue, Buoy Tending and Ice Breaking operations. The Bow Thrusters enable the vessels to more easily maneuver at sea in close-quarter situations and during buoy tending operations.

CCGS Earl Grey is fitted with an OmniThruster Bow Thruster system that is original equipment installed on the ship when built in 1985, and has components that are no longer supported. The ship is to undergo a Vessel Life Extension (VLE) in 2015 during which the existing Bow Thruster system will be replaced by the Replacement Bow Thruster System as defined in this SOW.

CCGS Samuel Risley is fitted with a Peacock Model 1200 water jet thruster system and may have it replaced during an upcoming dry-docking by a Replacement Bow Thruster System that would be optionally procured.

## 1.3 Objectives of the Bow Thruster System Replacement

The fundamental objectives of the Bow Thruster System (BTS) replacement are to:

1. Maintain and improve the vessel's manoeuvring capability;
2. Provide the technical information required for the installation and the integration of the Replacement Bow Thruster Systems to the various the ship's existing systems ; and
3. Ensure a service and parts supportability for the Replacement Bow Thruster Systems for at least 15 years.

## 1.4 Optional Replacement Bow Thruster System for CCGS Samuel Risley

As per the contract, Canada may exercise the option to purchase one (1) Replacement Bow Thruster System for the CCGS Samuel Risley within 12 months of contract award.

### **1.5 Implementation phase by a Shipyard**

The intention of Coast Guard is to have both the removal of the old Bow Thruster System and the installation of the Replacement Bow Thruster System included in a VLE specification to Shipyard bidders for the CCGS Earl Grey, and in a Dry-Docking specification to Shipyard bidders for the CCGS Samuel Risley. The Contractor will be identified as the OEM to be on hand for the installation, testing, commissioning, training and trials of the Replacement Bow Thruster System.

## 2 Applicable Documents

The prescribed versions of the following documents are to form a part of this specification to the extent specified herein.

### 2.1 References of CCGS Earl Grey existing Bow Thruster System

#### 2.1.1 Existing Drawings

| Drawings #    | Drawing Name                                   |
|---------------|--|
| VNEA2 389-012 | Earl Grey Bow Thruster Compartment Arrangement |
| VNEA2 131-002 | Lines Plan                                     |
| VNEA2 232-008 | Inner Bottom Unit Frames 39 to 44              |

#### 2.1.2 Applicable Documents

The following supplementary documentation is also applicable to the general performance of these project requirements:

- Canada Shipping Act 2001 and subsequent regulations pertaining to a ship having general particulars as specified under Section 2.1.4 of this specification;
- Rules of a recognized Classification Society e.g. Lloyd's Register Part 5 (Main and Auxiliary Machinery), Lloyd's Register Part 6 (Control and Electrical); Lloyd's Register's Rules for the Manufacture, Testing and Certification of Materials;
- CSA W47.1 1983 – Canadian Welding Bureau Standards for the fusion welding of steel;
- CSA W47.2-M1987(R1998) – Canadian Welding Bureau Standard for the fusion welding of aluminum and aluminum alloys;
- DFO 5781 (18-080-000-SG-001) Welding of Ferrous Materials;
- DFO 5782 (18-080-000-SG-002) Welding of Aluminum and Aluminum Alloys;
- Transport Canada TP 127E Ships Electrical Standards;
- IEEE 45 Recommended Practice for Electric Installations on Shipboard;
- IEC 60092-504 – Electrical Installations in Ships – Part 504: Special Features – Control and Instrumentation;
- CSA C22.1 – 98 Canadian Electrical Code Standard Part I Safety Standard for Electrical Installations;
- CSA C22.2 – No. 0-10 General Requirements – Canadian Electrical Code Part II;
- ULC –S102.4-1987(R1998) – Underwriters Laboratory of Canada Standard for Test for Fire and Smoke Characteristics of Electrical Wiring and Cable;
- DGTE-69 (70-000-000-EU-JA-001) Specification for the Installation of Shipboard Electronic Equipment;
- IEC 60533 – Electrical and Electronic Installations in Ships – Electromagnetic compatibility;
- ISO 2412:1982 - Shipbuilding – Colours of indicator lights;

- ISO 9001:2008, Quality Management Systems – Requirements;
- SOLAS, and the Canadian Supplement to the SOLAS Convention.

### 2.1.3 General Particulars of the CCGS Earl Grey

|              |   |  |
|--------------|---|--|
| Name         | - | CCGS Earl Grey   |
| Type:        | - | Type 1050 Medium Endurance Multitasked Vessel                      |
| Ice Class    | - | Lloyd’s Register ✕100A1 Ice Class 1A Super ✕ LMC<br>Arctic Class 2 |
| Year Built   | - | 1985   |
| Voyage Class | - | Unlimited, beyond 200nm  |
| Builder      | - | Pictou Shipyard, Pictou, NS  |

#### Principal Dimensions:

|                 |   |                  |
|-----------------|---|------------------|
| Length          | - | 69.73 meters     |
| Breadth, molded | - | 13.7 meters      |
| Loaded Draft    | - | 5.817 meters     |
| Tonnage         | - | 1972 GRT, 653 NT |

The CCGS Earl Grey is a four engine twin screw vessel that performs multiple tasks for the Government of Canada, including Search and Rescue, Buoy Tending, Aids to Navigation support and Ice Breaking operations. These operations include the use of the present Bow Thruster for various tasks, including general cargo transfer, docking the vessel, and tending floating navigational aids (buoys) in varying weather conditions.

### 2.2 Order of Precedence

In the event of a conflict between the contents of this document and the applicable portions of the referenced documents, the contractor shall inform the Technical Authority (TA) of the differences and request a resolution.

### **3 Existing Bow Thrusters Systems**

This section provides a general overview of the existing Bow Thruster Systems and information on existing related systems that the Replacement Bow Thruster System will have to be integrated into.

#### **3.1 CCGS Earl Grey existing Bow Thruster System**

##### **3.1.1 Devices and Systems for Replacement**

###### **3.1.1.1 OmniThruster Bow Thruster System**

The OmniThruster is a water jet type bow thruster unit aboard the CCGS Earl Grey.

The OmniThruster Bow Thruster is fitted with the following components:

- a) Soft start thruster motor;
- b) Reduction gearbox;
- c) Impeller pump with two diverting valves for directional control;
- d) Hydraulic pump system for diverter valve operation;
- e) Control system for remote control from bridge and local control at motor starter panel.

The OmniThruster is located in the Bow Thruster Compartment in the bow of the vessel.

##### **3.1.2 Existing Systems for Integration**

The Replacement Bow Thruster System will have to be integrated into the following existing systems. The exiting reference manuals will be made available to the Contractor.

###### **3.1.2.1 Alarm and Monitoring System**

The alarm and monitoring system is a VTS alarm and monitoring system provided by Trihedral Engineering. The existing VTS system shall be retained. All existing communication and functionality between VTS and the Bow Thruster shall be provided with the new system, and additional Bow Thruster condition monitoring points must be provided for programming into the VTS system.

###### **3.1.2.2 Propulsion Control System**

The Earl Grey is presently having a new Wartsila Canada Propulsion Control System installed onboard.

#### **3.2 CCGS Samuel Risley existing Bow Thruster System**

##### **3.2.1 Devices and Systems for Replacement**

###### **3.2.1.1 Peacock Model 1200 Water Jet Thruster**

The existing thruster on the Samuel Risley is a custom built Peacock Model 1200 water jet with similar components to the Earl Grey's OmniThruster. The Samuel Risley has the motor starter cabinet located in the engine room next to the shaft generator switchboard, instead of the bow thruster compartment as it is on the Earl

Grey. The new starter cabinet for the Replacement Bow Thruster System on the Samuel Risley must be placed in the thruster compartment.

### **3.2.2 Existing Systems for Integration**

The Replacement Bow Thruster System will have to be integrated into the following existing systems. The existing reference manuals will be made available to the Contractor.

#### **3.2.2.1 Alarm and Monitoring System**

The Samuel Risley will be equipped with a new Alarm and Monitoring System to be installed by Wartsila Canada.

#### **3.2.2.2 Propulsion Control System**

The Samuel Risley will be equipped with a new Propulsion Control System to be installed by Wartsila Canada.

### **3.3 Bow Thruster Compartments**

Both vessels have existing BTS equipment in identically sized compartments.

## **4 Requirements for the Replacement Bow Thruster Systems**

### **4.1 General**

The requirements for the Replacement Bow Thruster System are supplied to the Contractor outlining the objectives, performance, standards and engineering requirements for the CCGS Earl Grey and CCGS Samuel Risley. The requirement is to design, manufacture and factory test ready for installation by a VLE or a Dry-docking Contractor, a modern Controllable Pitch Tunnel Thruster that will provide the improved functionality and reliability of a system in current production. The Replacement Bow Thruster System must be specifically designed for use on a ship with the Earl Grey's Ice Class notations, and meet as a minimum the system requirements as set out in this SOW.

#### **4.1.1 Contractor Responsibility**

During the performance of the Work, the Contractor shall retain Total System Responsibility for the following activities:

- a) Designing, manufacturing, testing and delivery to CCG of the Replacement Bow Thruster Systems;
- b) Approvals from Transport Canada and Marine Safety (TCMS) and the Classification Society for the design, manufacturing and testing of the Replacement Bow Thruster Systems;

### **4.2 Environmental**

The Contractor shall ensure that all environmental requirements imposed by the SOW and by the standards and classification rules referred to in this SOW are met.

### **4.3 Replacement Bow Thruster System Requirements**

#### **4.3.1 Thruster Unit Requirements**

The Thruster Unit must conform to the following requirements:

- 4.3.1.1 The Thruster Unit must be of controllable pitch type tunnel thruster, classification society approved, with structural and mechanical components strengthened in accordance with the CCGS Earl Grey's Lloyd's Class Notation  $\forall 100$  A1 "Ice Class 1A Super" vessel or equivalent.
- 4.3.1.2 Controllable pitch tunnel thruster designed for a maximum of 600 kW shaft input and a minimum of 72 kN of thrust.
- 4.3.1.3 Thruster components must be strengthened and Class certified for operation in ice.
- 4.3.1.4 All Thruster Unit components must be capable of fitting into the vessel through the ship's side cut out for the thruster tunnel, which will include scalloped trailing edges. The Tunnel grids must be designed (orientation

and location) for operation in ice. A cathodic protection system for tunnel and thruster must be included.

- 4.3.1.5 The maximum tunnel outside diameter must not exceed 1.4m. The Thruster Unit must be welded to the tunnel extensions. The Bow Thruster unit must include the required number of supporting brackets, frames or seating to adequately secure the thruster unit to the vessel, and the electric motor in a horizontal mounting arrangement.
- 4.3.1.6 The Thruster Unit must be fitted with a stainless steel wear ring in the tunnel at propeller blade level.
- 4.3.1.7 The Controllable Pitch propeller must be cast in one piece of Nickel Aluminum Bronze, with the propeller blades bolted to the hub mechanism. Kaplan design propeller blades must be made of Stainless Steel or Nickel Aluminum Bronze approved by TCMS and Classification Society requirements for operation in ice. Blades shall be machined, polished, and balanced to the requirements of ISO 484/2 Class 2 (1981).
- 4.3.1.8 The Thruster body and propeller hub are to be completely oil filled, providing adequate lubrication for the propeller mechanism moving parts, as well as an internal over-pressure preventing water from entering if any leakage should occur. Thruster body must be totally submerged in water, providing sufficient cooling of the oil when operating in waters ranging from ice covered to summer temperatures of +30°C.
- 4.3.1.9 Gear housing must be of robust design and provided with flanges to the tunnel. Propeller shaft and pinion shaft must be supported by roller bearings.
- 4.3.1.10 Gear housing must be fitted with a rope guard and stainless steel net cutter.
- 4.3.1.11 Pitch feedback must be mechanically transmitted from the propeller mechanism to Pitch Feedback Unit mounted on the thruster top. Feedback Unit to be shielded, provided with cable gland, and located close to the thruster input shaft.
- 4.3.1.12 Coupling device between the motor and thruster unit must be designed and finish machined for the supplied equipment.
- 4.3.1.13 The Thruster Unit must have a coating system to prevent corrosion during delivery to CCG and for up to 12 months extended storage until installation.

#### **4.3.2 Thruster Electric Motor Requirements**

The Thruster Electric Motor unit must conform to the following requirements:

- 4.3.2.1 The Thruster Electric Motor must be of robust marine three-phase squirrel cage type, with insulation class “F”, enclosure IP 54 Class protection or higher, IC 411 cooling and it must be able to operate at a maximum of 600KW continuous duty on a 600V, 60 Hz, 3 phase system. Motor must meet or exceed Classification Society approval requirements.
- 4.3.2.2 Torsional vibration calculations for electric driven system must be done and approved;
- 4.3.2.3 Sealed vibration-proof motor bearings must be provided.
- 4.3.2.4 The Thruster Electric Motor must be constructed for continuous running. The motor must have the rated output for its intended service. The motor must be capable of continuous operation in ambient temperatures ranging between 0°C and +40°C.
- 4.3.2.5 The Thruster Electric Motor casing shall be fitted with lifting lugs to facilitate the installation of the electric motor and brackets for securing the motor in a horizontally mounted configuration.
- 4.3.2.6 The Thruster Electric Motor must be fitted with two winding temperature sensors per phase at the hot spots of the windings. These must have connections to an alarm and monitoring system.
- 4.3.2.7 The Thruster Electric Motor must be fitted with automatically controlled anti-condensation heaters. The anti-condensation heaters must be controlled by interlocks in the starter cabinet to prevent the heaters from operating while the electric motor is in operation.

### **4.3.3 Bow Thruster Motor Starter Requirements**

The Bow Thruster Motor Starter (BTMS) must conform to the following requirements:

- 4.3.3.1 The BTMS must be supplied with an automatic star/delta soft start electrical starter with overload protection designed to suit the size and load of the supplied electric motor. Starting requirements must be the responsibility of the Contractor and shall be coordinated with the equipment manufacturers. The BTMS must be supplied with local system controls for conducting system testing or emergency operation and sized to fit in the bow thruster compartment. The BTMS must be fitted with thermostatically controlled anti-condensation heaters.
- 4.3.3.2 The BTMS cabinet must be supplied with direct on-line starter and interconnection for electro-hydraulic unit, fitted with thermostatically controlled anti-condensation heaters and a minimum IP44 Class protection;
- 4.3.3.3 The electrical panel must be deck mounted in the Bow Thruster Compartment.
- 4.3.3.4 The BTMS must contain all necessary electrical equipment which may include main contactors, relays, power circuit fuses, current transformer, heating elements, thermistor relays, thruster interface circuits, terminals, and internal wiring required for a complete operational unit.
- 4.3.3.5 The BTMS must be suitable for control via the remote control system as applicable. The starter cabinet must be fitted with a thermostatically controlled anti-condensation heater.
- 4.3.3.6 Main power cable entry must be through the sides of BTMS cabinet. Control wiring may be through the side or top of the BTMS cabinet

#### **4.3.4 Hydraulic Power Unit and Starter Requirements**

The Hydraulic Power Unit and Starter must conform to the following requirements:

- 4.3.4.1 Starter cabinet must be equipped with a direct on line starter (D.O.L) and interconnection for hydraulic power unit for propeller pitch variation. It must contain motor protection relay, transformer, contactors, necessary relays, fuses, terminals, internal wiring and all other required components.
- 4.3.4.2 Cabinet must be frame mounted in the thruster compartment.
- 4.3.4.3 Hydraulic servo pump must have capacity to ensure that an adequate pressure is maintained on the oil seals in the propeller hub to prevent water from entering the pod if the seals develop a leak.
- 4.3.4.4 Servo pump and electric motor must be delivered together on frame; with valve, filter, pressure gauge, junction box with terminal board, internal cabling, internal piping and all other required components with the frame capable to be welded to the deck or bulkhead mounting in the thruster compartment.

- 4.3.4.5 The electric motor must be of enclosure IP54 or higher and IC 411 cooling, and it must be able to operate on a 600V, 60 Hz, 3 phase system.
- 4.3.4.6 The pump motor must be constructed for continuous running. The motor must have the rated output for its intended service. The motor must be capable of continuous operation in ambient temperatures ranging between 0°C and +40°C.
- 4.3.4.7 The Gravity Tank supplied must have a minimum capacity of at least 30 liters, with maximum dimensions to be determined after a mounting location has been identified.
- 4.3.4.8 The Gravity tank for thruster lubrication and servo system will serve as a reservoir for the hydraulic power unit. The Gravity Tank must be fitted with a direct-reading level gauge or sight glass, low level alarm sensor, fill pipe, drain plug, and filtered vent connections, and access covers large enough to permit the Gravity Tank to be cleaned.

#### **4.3.5 Remote Control System Requirements**

The Contractor must ensure that Remote Control Systems are addressed and meet the following requirements:

- 4.3.5.1 All existing communication and functionality between VTS and the Replacement Bow Thruster System shall be provided with the new system, and any additional condition monitoring points must be provided for programming into the VTS system.
- 4.3.5.2 The Remote Control System for the Replacement Bow Thruster System must include as a minimum the following functions:
1. Pitch control, allowing accurate, step less, convenient and reliable control of the propeller pitch;
  2. Remote start and stop of hydraulic pump (hydraulic servo pump);
  3. Interface to drive motor starter (star/delta starter);
  4. Interface for manoeuvring levers and joystick controller;
  5. Emergency stop.
- 4.3.5.3 The Remote Alarm and Monitoring System must provide as a minimum the following functions:
1. Bow Thruster main motor run indication;
  2. Hydraulic tank low level alarm;
  3. Oil temperature indication for tank and system oil return line;
  4. System main oil pressure indication and low pressure alarm;
  5. Pitch feedback failure;
  6. Motor overload alarm and auto stop;
  7. Motor high temperature alarm;
  8. Power failure alarm.

- 4.3.5.4 The control system must incorporate low-voltage protection, and interlocks shall be provided to ensure that the main motor cannot be started unless the pitch control system is in neutral, and that lubricating oil and hydraulic control pressures are available.
- 4.3.5.5 Control Electronics must be assembled in a cabinet for bulkhead or deck mounting. Cable access must be through a cover plate that can be removed for fitting of cable glands.
- 4.3.5.6 The electronic cabinet must contain the following:
1. Power and electronic rack – power supply and all necessary electronic control components;
  2. Distribution unit – a base plate with relays, terminals, and fuses for termination of Contractor supplied cables.
- 4.3.5.7 Alarm unit interfaces must have potential free contact for remote control failure alarm, minor failures, and low hydraulic pressure alarm.
- 4.3.5.8 The remote control panels shall be supplied containing controls, alarms and indicators as follows:
1. Manoeuvring lever;
  2. Pitch indicator;
  3. Alarm lamp for thruster failure;
  4. System power failure alarm;
  5. Pitch feedback failure;
  6. Low servo system pressure;
  7. Auto stop; overload of electric motor;
  8. Overload; high temperature electric motor – early warning;
  9. Low level in oil tank or low oil pressure;
  10. Push button for transfer of control integrated with all other propulsion machinery;
  11. Push button for start and stop of thruster (including hydraulic power unit);
  12. Dimmer for lamps and indicator light.

- 4.3.5.9 One thruster control panel is to be supplied for each of the wing bridge control consoles. A new terminal block for wiring to each panel shall be supplied. Electric power and control cabling between supplied components must be supplied.
- 4.3.5.10 The Remote Control System must be capable of integration with a new joystick controller at the aft bridge console as part of the propulsion control system upgrade being performed on the CCGS Earl Grey.
- 4.3.5.11 Complete electronic “follow-up” remote control system comprising electronic cabinet, two control panels for installation on the bridge wing consoles and ability to integrate with a joystick propulsion control system must be supplied.
- 4.3.5.12 The Contractor must supply a start and stop push button and a thermistor reset button if required by the starting controls for the Thruster Unit on the Electrical Remote Control panel in the Control Room.

#### **4.4 Other Requirements**

##### **4.4.1 Spare Parts and Tools Requirement**

The Spare Parts and Tools must conform to the following requirements:

- 4.4.1.1 The Contractor must supply one (1) set of spare parts as recommended by the manufacturer, which must include as a minimum:
1. One spare set of propeller blades;
  2. One set of propeller blade seals;
  3. One set of propeller hub seals;
  4. Hydraulic filters (2 of);
  5. All parts required for overhaul of the hydraulic pump, and;
  6. One each of every type of relay, sensor and solenoid in the system.
- 4.4.1.2 The Contractor must supply one (1) complete set of maintenance and overhaul specialty tools.

##### **4.4.2 Approval Design Package (ADP) Deliverables**

The Contractor must submit an approval design package (ADP) within four (4) weeks of contract award to the IA and TA for Canadian Coast Guard review and comment prior to Class and TCMS approval. The Package must include all components of sections 4.4.2.1 to 4.4.2.4 inclusive.

###### **4.4.2.1 Approval Design Package Details**

The Contractor’s ADP must contain the following documentation and design details to allow the Canadian Coast Guard the ability to provide feedback at an early stage of design:

- a) Project schedule including design, production, testing and delivery of the Replacement Bow Thruster System;

- b) Shipyard installation instructions as noted in 4.4.2.2;
- c) Document and Drawing Management Plan;
- d) Integration Management Plan for new and retained systems and components;
- e) Operator control station layouts;
- f) Component and system installation, operation and maintenance manuals;
- g) System bills of Materials;
- h) General arrangement drawings of system;
- i) Control system functional descriptions, including safety systems;
- j) Environmental specifications of all components and assemblies to be used;
- k) Training regime for both operators of the system and those required to perform maintenance;
- l) Specific details of the Factory Acceptance Test regime; and
- m) Commissioning, Dock trial and Sea Trial test programs.

#### 4.4.2.2 ADP Shipyard Installation Instructions

The Contractor's ADP must include the following minimum Shipyard Installation Instruction requirements:

- a) Provide sufficient detail of the thruster's structural requirements to allow a shipyard to design the supports for the thruster tunnel, thruster motor, starter cabinet and hydraulic systems, such that a shipyard can provide firm price quotations for labour and materials;
- b) Provide sufficient detail of installation requirements of all equipment and cabling including a bill of materials for shipyard implementation such that a shipyard can provide firm price quotations for labour and materials. It is anticipated that the successful shipyard will perform cable runs, wiring terminations, and perform the structural work required for the installation of the new thruster unit components, tunnel extensions, structural reinforcement, electrical control panels and motor seats; and
- c) Provide details of the new bridge control consoles to allow the shipyard to lay out control stations integrating the new Propulsion Control System and existing control equipment.

#### 4.4.2.3 Quality Assurance Inspections

The Contractor must submit a QA Inspections, Tests, and Trials Plan for the installation phase of the project no later than four (4) weeks after contract award.

#### 4.4.3 Commissioning Tests and Trials Agenda

The Contractor must be able to deliver the Set to Work Test and Trials agenda and planning for integration into the VLE plan and schedule no later than four (4) weeks after contract award.

#### **4.4.4 Training Agenda**

The Contractor must be able to deliver the Training agenda and planning for integration into the VLE plan and schedule no later than four (4) weeks after contract award.

#### **4.4.5 Mandatory Attendances to the Bidder's Conferences for the Earl Grey VLE and the Samuel Risley Dry Dock**

The Contractor must attend the VLE Bidder's conference and upon Canada's request answer questions and provide clarification on the Bow Thruster work to be done aboard the CCGS Earl Grey during the VLE contract.

If Canada exercises the option, the Contractor must attend Dry Dock Bidder's conference for the CCGS Samuel Risley and upon Canada's request answer questions and provide clarification on the Bow Thruster work to be done aboard the vessel during the dry dock.

### **4.5 Inspections, Test and Trials**

#### **4.5.1 Factory Acceptance Test**

The Contractor must conduct Factory Acceptance Tests of the Replacement Bow Thruster System in the presence of the attending Classification Society and TCMS surveyors. TCMS physical attendance will not be mandatory if the Contractor obtains documentation that TCMS will accept the Classification Society acceptance of the Factory Acceptance Tests.

#### **4.5.2 Tests and Trials**

The Contractor must be able to deliver the dock trials and sea trials agenda and planning of the Replacement Bow Thruster System for integration with the VLE plan and schedule no later than 4 weeks after the contract award. These Tests and Trials will have to demonstrate the satisfactory operation of all components and functions to the requirements of Classification Society and TCMS.

### **4.6 Documentation**

#### **4.6.1 Documents**

##### **4.6.1.1 Document Formats**

The Contractor must provide the following documentation over the course of the contract:

- a) Three (3) paper copies and three (3) electronic copies on CD ROM or USB format of the Proposal. The electronic copy shall be in Adobe PDF format, and be accompanied by a table of contents;
- b) Three (3) paper copies and one (1) electronic copy on CD ROM or USB format of the Shipyard Installation Instructions. These shall be in Microsoft Office compatible electronic format (Word, Excel, etc.);

- c) The Class Certification and TCMS Approval documentation for the Bow Thruster system, and certificates for all materials;
- d) All system equipment and system manuals as noted in Section 4.4.2.1;
- e) A Bill of Materials of all system components (including make and model numbers and quantity in the system);
- f) A list of all system critical spare parts (including make and model numbers and quantity in the system), and;
- g) Warranty documentation for the system and its components.

#### 4.6.1.2 Electronic Protection

Drawings and documents must not be electronically protected so as to be Read Only files.

#### 4.6.1.3 Electronic Labelling

All electronic media must be clearly labelled with the CCG project number, file names and drawing numbers. If a complete listing exceeds the label size, a "readme.txt" file in ASCII format must be provided with each disk. A printed copy of the Readme file must accompany each disk.

### 4.6.2 Drawings

#### 4.6.2.1 Drawing Formats

4.6.2.1.1 The Contractor must provide one (1) paper copy and two (2) electronic copies on CD ROM or USB format of the following drawings over the course of the contract:

- a) Each of the Approval Design Drawings;
- b) The system line drawings, system interconnection drawings and integration drawings with all non-OEM components.

4.6.2.1.2 All drawings must be standard ANSI paper size and must be in AutoCAD 2008 DWG format, and conform to the CCG National CAD Standard [MECTS-#2860606-v1-National\_Cad\_Standards].

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## ANNEX B - BASIS OF PAYMENT - FIRM PRICE

Annex B will form the Basis of Payment for the resulting Contract and must not be filled in at the bid submission stage.

### B1 Contract Firm Price

|            |   |           |
|------------|---|-----------|
| <b>A)</b>  | <b>Known Work</b><br>For work as stated in Article 2 Requirement, Specified in Annex "A" SOW and detailed in the attached Pricing Data Sheets, Appendix 1 to Annex "B" for a FIRM PRICE of: | <b>\$</b> |
| <b>B)</b>  | <b>Tx as applicable</b>   | <b>\$</b> |
| <b>C)</b>  | Cost of Financial Security as per Clause 11   |           |
| <b>D))</b> | <b>Total Firm Price applicable Tx included</b>  | <b>\$</b> |

### B2 Unscheduled Work

The Contractor will be paid for unscheduled work arising, as authorized by Canada. The authorized unscheduled work will be calculated as follows:

"Number of hours (to be negotiated) X \$\_\_\_\_\_ being the Contractor's firm hourly charge-out labour rate which includes overhead, consumable, and profit, plus net laid-down cost of materials to which will be added a markup of 10%, plus Goods and Services Tax or Harmonized Sales Tax, if applicable, of the total cost of material and labour. The firm hourly charge-out labour rate and the material markup will remain firm for the duration of the Contract and any subsequent amendments."

**B2.1:** Notwithstanding definitions or usage elsewhere in this document, or in the Contractor's Cost Management System, when negotiating hours for unscheduled work, PWGSC will consider only those hours of labor directly involved in the production of the subject work package.

Elements of Related Labour Costs identified in B2.2 below, will not be negotiated, but will be compensated for in accordance with B2.2.

**B2.2:** Allowance for Related Labour Costs such as: Management, all Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, Estimating and Preparing Unscheduled Work Submissions will be included as Overhead for the purposes of determining the Charge-out Labour Rate entered in line B2 above.

**B2.3:** The 10% markup rate for materials will also apply to subcontracted costs. The markup rate includes any allowance for material and subcontract management not allowed for in the Charge out Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.



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## ANNEX C - PROCEDURE FOR PROCESSING UNSCHEDULED WORK

### 1. Purpose

The Unscheduled Work Procedure has been instituted for the following purposes:

- A) To establish a uniform method of dealing with requests for Unscheduled Work;
- B) To obtain the necessary Technical Authority approval and Contracting Authority authorization before Unscheduled Work commences;
- C) To provide a means of maintaining a record of Unscheduled Work requirements including Serial Numbers, dates, and accumulated cost the Contractor shall have a cost accounting system that is capable of assigning job numbers for each Unscheduled Work requirement so that each requirement can be audited individually.

### 2. Definitions and Particulars

- A) An Unscheduled Work Procedure is a contractual procedure whereby changes to the scope of Work under the Contract may be defined, priced and contractually agreed to. Such changes may arise from;
  - i. "Work Arising" from opening up of machinery and/or surveys of equipment and material, or
  - ii. "New Work" not initially specified but required on the Vessel.
- B) The procedure does not allow for the correction of deficiencies in the Contractor's Proposal.
- C) No unscheduled work may be undertaken by the Contractor without written authorization of the Contracting Authority except under emergency circumstances described in Sub. Paragraph 3(b). Unscheduled Work.
- D) Work undertaken without written Contracting Authority authorization will be considered the Contractor's responsibility and cost.
- E) The appropriate PWGSC form is the final summary of the definition of the Unscheduled Work requirement, and the costs negotiated and agreed to.

### 3. Procedures

- A) The procedure involves the electronic form PWGSC-TPSGC 1379 (10/2011) for refit and repair and will be the only form for authorizing all Unscheduled Work.
- B) Emergency measures required to prevent loss or damage to the Vessel which would occur if this procedure were followed, shall be taken by the Contractor on its own authority. The responsibility for the cost of such measures shall be determined in accordance with the terms and conditions of the Contract.
- C) The Technical Authority will initiate a work estimate request by defining the Unscheduled Work requirement. It will attach drawings, sketches, additional specifications, other clarifying details as appropriate, and allocate their Serial Number for the request.

- 
- D) Notwithstanding the foregoing, the Contractor may propose to the Technical Authority in writing, either by letter or some type of Defect Advice Form (this is the Contractor's own form) that certain **Unscheduled Work** should be carried out.
- E) The Technical Authority will either reject or accept such Proposal, and advise the Contractor and Contracting Authority. Acceptance of the Proposal is not to be construed as authorization for the work to proceed. If required, the Technical Authority will then define the **Unscheduled Work** requirement in accordance with Sub. Paragraph 3.(c).
- F) The Contractor will electronically submit its Proposal to the Contracting Authority together with all price support, any qualifications, remarks or other information requested.

The price support shall demonstrate the relationship between the scope of work, the Contractor's estimated costs and its selling price. It is a breakdown of the Contractor's unit rates, estimates of person hours by trade, estimate of material cost per item, for both the contractor and all of its subcontractors, estimates of any related impact and an evaluation of the contractor's time required to perform the **Unscheduled Work**.

- G) The Contractor shall provide copies of purchase orders and paid invoices for Subcontracts and/or materials, including stocked items, in either case. The Contractor shall provide a minimum of two quotations for Subcontracts or materials. If other than the lowest, or sole source is being recommended for quality and/or delivery considerations, this shall be noted. On request to the Contractor, the Contracting Authority shall be permitted, to meet with any proposed Subcontractor or material supplier for discussion of the price and always with the Contractor's representative present.
- H) After discussion between the Contracting Authority and the Contractor and if no negotiation is required, the Contracting Authority will seek Technical Authority confirmation to proceed by signing the form. The Contracting Authority will then sign and authorize the **Unscheduled Work** to proceed.
- I) In the event the Technical Authority does not wish to proceed with the work, it will cancel the proposed **Unscheduled Work** through the Contracting Authority in writing.
- J) In the event the negotiation involves a Credit, the appropriate PWGSC form will be noted as "credit" accordingly.
- K) In the event that the Technical Authority requires **Unscheduled Work** of an urgent nature or an impasse has occurred in negotiations, the commencement of the **Unscheduled Work** should not be unduly delayed and should be processed as follows, in either case. The Contractor will complete the appropriate PWGSC 1379 form indicating the offered cost and pass it to the Contracting Authority. If the Technical Authority wishes to proceed, the Technical Authority and the Contracting Authority will sign the completed PWGSC form with the notation, "CEILING PRICE SUBJECT TO DOWNWARD ADJUSTMENT", and allocate a Serial Number having the suffix "A". The work will proceed with the understanding that following an audit of the Contractor's actual costs for completing the described work, the cost will be finalized at the ceiling price or lower, if justified by the audit. A new PWGSC form will then be completed with the finalized costs, signed and issued with the same Serial Number without the suffix "A", and bearing a notation that this form is replacing and cancelling the form having the same Serial Number with the suffix "A".

Solicitation No. - N° de l'invitation

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No./N° VME

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NOTE: PWGSC forms bearing Serial Numbers with a suffix "A" shall not to be included in any contract amendments, and therefore no payment shall be made until final resolution of the price and incorporation into the contract.

4. Amendment to Contract or Formal Agreement.

The Contract will be amended from time to time in accordance with the Contract terms to incorporate the costs authorized on the appropriate PWGSC forms.

## ANNEX "F"

### Mandatory Technical Criteria

| Item # | Criteria   | Compliant |    | Reference to applicable page and paragraph of Proposal |
|--------|--|-----------|----|--|
|        |  | Yes       | No |  |
| 1      | <p><b>The proposal must provide in writing how the Bidder will :</b></p> <p>A) Design, manufacture, test and trials and deliver to CCG a modern Replacement Controllable Pitch Tunnel Thruster System that is Class approved for use on the CCGS Earl Grey and meets or exceeds the all the requirements of the SOW Annex "A". This must be achieved by submitting a Statement of compliance to the SOW in a requirements matrix format;</p> <p>B) Develop the detailed shipyard installation instructions for the system during the CCGS Earl Grey's VLE project; and</p> <p>C) Develop the detailed commissioning, testing and trials plan of the Replacement Bow Thruster System.</p> |           |    |  |
| 2      | <p><b>Classification Society</b></p> <p>The Bidder must demonstrate that the Replacement Bow Thruster System will be assessed and approved by a Classification Society listed in the Marine Machinery Regulations Section 2 (1) of the Canada Shipping Act 2001, and provide the name of the intended Classification Society</p>   |           |    |  |
| 3      | <p><b>Track Record</b></p> <p>The Bidder must demonstrate that it has successfully completed at least three (3) similar Bow Thruster Systems Replacement projects in the last five (5) years with thruster units similar in fit, form and function. The objective evidence may be in the form of reference letters from clients</p>  |           |    |  |
| 5      | <p><b>Supportability</b></p> <p>The Bidder must indicate the ability to support the Replacement Bow Thruster System with Factory Service</p>   |           |    |  |

|    |   |  |  |  |
|----|---|--|--|--|
|    | Representatives (FSR) available on site at the request of the Canadian Coast Guard within a minimum 48 hours to the vessel anywhere in Canada.  |  |  |  |
| 6  | <p><b>Electronics</b></p> <p>The Bidder must demonstrate the Bow Thruster is of new, modern, electronic based technology in current production and is able to integrate with an upgraded propulsion control system supplied by Wartsila Canada. The Contractor must indicate the international environmental standards to which the electrical equipment is constructed</p>   |  |  |  |
| 7  | <p><b>Alarm, monitoring and propulsion control systems interface.</b></p> <p>The Bidder in its engineering proposal must provide a detailed list of the proposed interface for the alarm, monitoring and propulsion control systems. This will consist of the type of signal provided or required.</p>  |  |  |  |
| 8  | <p><b>Sample Instructions</b></p> <p>The Bidder must provide sample shipyard installation instructions for evaluation purposes from a previous thruster installation project</p>  |  |  |  |
| 9  | <p><b>Sample Manuals</b></p> <p>The Bidder must provide a sample of a thruster installation, operation and troubleshooting manuals for evaluation purposes from a previous thruster installation project.</p>   |  |  |  |
| 10 | <p><b>Document Management Plan</b></p> <p>The Bidder must describe the Document Management Plan for drawings and specifications, including the details for Regulatory approvals and Client Feedback</p>   |  |  |  |
| 11 | <p><b>Preliminary Plan and Schedule</b></p> <p>The Bidder must provide with its proposal a preliminary plan and schedule for the CCGS Earl Grey Bow Thruster system which will indicate in working days the duration of each of the following activities with links associated to their respective predecessors and successors. The Bidders must also confirm in its proposal that same plan and same or less duration apply to the procurement of the CCGS Samuel Risley Bow Thruster system where dates will adjusted in accordance with the confirmation's date of option's exercise;</p> <ol style="list-style-type: none"> <li>1. Contract award date: Day 1,</li> <li>2. Development of the Approval Design Package (ADP) (4 weeks) detailed as per the SOW 4.4.2,</li> </ol> |  |  |  |

|    |   |  |  |  |
|----|---|--|--|--|
|    | <p>3. Submission of ADP including Shipyard instructions (4 weeks after contract award),</p> <p>4. Review by Canada of the ADP (assume a period of 5 working days),</p> <p>5. Period of approval by Classification Society, and TCMS,</p> <p>6. Period of manufacturing and procurement of components,</p> <p>7. Period of Factory assembly of components,</p> <p>8. Period of Factory Acceptance Tests,</p> <p>9. Delivery of the Replacement Bow Thruster System for the CCGS Earl grey to the CCG, May 1, 2015 the latest,</p> <p>10. Warranty period (Begins on January 3, 2016 the latest + 12 months).</p> |  |  |  |
| 12 | <p><b>Milestone schedule for progress review</b></p> <p>The Bidder must provide with its proposal a sample Gantt chart indicating the milestones for the formal progress reviews based on the activities listed in the Preliminary Plan and Schedule.</p>   |  |  |  |
| 13 | <p><b>Quality Management System</b></p> <p>The Bidder must provide with their proposals objective evidence that they have in place a Quality Management System registered to ISO 9001:2008 or a Quality Management System modelled on ISO 9001:2008 which will include:</p> <p>A) if registered, its valid ISO 9001:2008 certification;</p> <p>B) an example of its Quality Control Plan (QCP) as applied on previous projects of the same nature and complexity of this RFP; and</p> <p>C) a sample of an Inspection and Test Plan ( ITP) developed in accordance with the QCP in B) above.</p>                |  |  |  |
| 14 | <p><b>Evidence of on time delivery</b></p> <p>The Bidder must confirm and provide objective evidence that;</p> <p>A) All engineering, manufacturing, shop test and acceptance, spare parts, components for installation, supplied wiring etc., as described in the SOW, for the CCGS Earl Grey can be completed and delivered to the</p>  |  |  |  |

CCG Warehouse in Dartmouth, Nova Scotia on or before May 1, 2015;

B) The Replacement Bow Thruster System installation instructions can be delivered no later than 4 weeks after contract award;

C) The Commissioning Tests, Trials, and Training agendas and planning can be delivered on no later than four (4) weeks after contract award; and

D) All engineering, manufacturing, shop test and acceptance, spare parts, components for installation, supplied wiring etc., as described in the SOW, for the CCGS Samuel Risley can be completed and delivered to the CCG base, 28 Waubeek Street, Parry Sound, Ontario within a period of the same or less duration than the one committed for on the CCGS Earl Grey.

## ANNEX "E"

### Point Rated Technical Criteria

| Item # | REQUIREMENTS   | Maximum Score Points | Actual Score | Rational |
|--------|--|----------------------|--------------|----------|
| 1      | <b>Delivery Improvement for CCGS Earl Grey (max 10 points)</b><br>- Commitment supported by an objective evidence to a delivery between April 13, 2015 and April 30, 2015 inclusively. | 2                    |              |          |
|        | - Commitment supported by an objective evidence to a delivery between March 2, 2015 and April 12, 2015.  | 6                    |              |          |
|        | - Commitment supported by an objective evidence to a delivery prior to March 2, 2015   | 10                   |              |          |
| 2      | <b>Thruster Unit Thrust (max 25 points)</b><br>- Full load thrust rating >72 kN and ≤ 75 kN at 600KW maximum shaft input,  | 10                   |              |          |
|        | - Full load thrust rating >75 kN and ≤ 80 kN at 600KW maximum shaft input,   | 15                   |              |          |
|        | - Full load thrust rating >80 at 600KW maximum shaft input   | 25                   |              |          |
| 3      | <b>Supportability (max 5 points)</b><br>- Declaration of the location of the FSR in North America and their availability to be on site support within 48 hours.                        | 2                    |              |          |
|        | - Declaration of the location of the FSR in North America and their availability to be on site support within 24 hours   | 5                    |              |          |
| 4      | <b>Commercial-off-the-shelf (max 5 points)</b><br>- Demonstration that commercially available subcomponents are available in North America, with delivery within 1 week of order.      | 2                    |              |          |
|        | - Demonstration that commercially available major components are available from the OEM, with delivery within 4 weeks of order   | 5                    |              |          |
| 5      | <b>System Supportability from OEM (max 10 points)</b><br>- Demonstration of a 10 year service guarantee  | 5                    |              |          |
|        | - Demonstration of a 15 year service guarantee   | 10                   |              |          |

|   |  |    |  |  |
|---|--|----|--|--|
| 6 | <b>Component Supportability from OEM (max 10 points)</b>   |    |  |  |
|   | - Demonstration of a 10 year parts availability guarantee  | 5  |  |  |
| 7 | - Demonstration of a 15 year parts availability guarantee  | 10 |  |  |
|   | <b>Proven corporate track record (max 15 points)</b>   |    |  |  |
|   | - Provide objective evidence of an experience in bow thruster systems design, manufacturing and installation that is >5 and ≤ 10 years.                              | 5  |  |  |
| 8 | - Provide objective evidence of an experience in bow thruster systems design, manufacturing and installation that is >10 and ≤ 20 years.                             | 10 |  |  |
|   | - Provide objective evidence of an experience in bow thruster systems design, manufacturing and installation that is >20 years.                                      | 15 |  |  |
| 8 | <b>Experience in Classification Society approved Ice Class Bow Thruster Systems. (max 10 points)</b>   |    |  |  |
|   | - Provide examples supported by objective evidence of Classification Society approved Ice Class Bow Thrusters Systems design, manufactured and installed on vessels; |    |  |  |
|   | - 3 examples   | 2  |  |  |
|   | - 4 to 8 examples  | 5  |  |  |
|   | - more then 8 examples   | 10 |  |  |

## ANNEX F - FINANCIAL BID PRESENTATION SHEET

### F1 Price for Evaluation

|           |   |   |
|-----------|---|---|
| <b>A)</b> | <b>Known Work</b><br>For work as stated in Part 1 Clause 2 Requirement, Specified in Annex "A" SOW and detailed in the attached Pricing Data Sheets Appendix 1 of Annex "F", for a FIRM PRICE of:   | <b>\$</b>                                   |
| <b>B)</b> | Unscheduled Work Contractor Labour Cost: Estimated labour hours at a firm Charge-out Labour Rate, including overhead and profit for evaluation purpose only: 100 person hours X \$_____ per hour for a PRICE of: See Article F2.1 and F2.2 below.<br><br>Overtime premium for time and one half:<br>Estimated hours for evaluation purposes only: 40 person hours X \$_____ per hour for a PRICE of: See Article F3 below.<br><br>Overtime premium for double time:<br>Estimated hours for evaluation purposes only: 24 person hours X \$_____ per hour for a PRICE of: See Article F3 below. | <b>\$</b><br><br><b>\$</b><br><br><b>\$</b> |
| <b>C)</b> | Cost of Financial Security as per Part 6 - 11<br><br>Type of Contract Financial Security: _____   | <b>\$</b>                                   |
| <b>D)</b> | EVALUATION PRICE TX EXCLUDED,<br><br>(A + B+C):<br><br>For an EVALUATION PRICE of (Tx excluded):  | <b>\$</b>                                   |

### F2 Unscheduled Work

The Contractor will be paid for unscheduled work arising, as authorized by Canada. The authorized unscheduled work will be calculated as follows:

"Number of hours (to be negotiated) X \$\_\_\_\_\_, being the Contractor's firm hourly charge-out labour rate which includes overhead, consumable, and profit, plus net laid-down cost of materials to which will be added a markup of 10 %, plus Goods and Services Tax or Harmonized Sales Tax, if applicable, of the total cost of material and labour. The firm hourly charge-out labour rate and the material markup will remain firm for the duration of the Contract and any subsequent amendments."

**F2.1:** Notwithstanding definitions or usage elsewhere in this document, or in the Contractor's Cost Management System, when negotiating Hours for unscheduled work, PWGSC will consider only those hours of labour directly involved in the production of the subject work package.

Elements of Related Labour Costs identified in F2.2 below, will not be negotiated, but will be compensated for in accordance with Note F2.2. It is therefore incumbent upon the bidder to have bid appropriately which will result in fair compensation, regardless of their Cost Management System.

**F2.2:** Allowance for Related Labour Costs such as: Management, all Supervision, Purchasing and Material Handling, Quality Assurance and Reporting, Estimating and Preparing Unscheduled Work Submissions will be included as Overhead for the purposes of determining the Charge-out Labour Rate entered in line F2 above.

**F2.3:** The 10% markup rate for materials will also apply to subcontracted costs. The markup rate includes any allowance for material and subcontract management not allowed for in the Charge out Labour Rate. The Contractor will not be entitled to a separate labour component for the purchase and handling of materials or subcontract administration.

#### **Prorated Prices Unscheduled Work**

Hours and prices for unscheduled work shall be based on comparable historical data applicable to similar work at the same facility, or shall be determined by prorating the quoted Work costs in the Contract when in similar areas of the vessel.

### **F3 Overtime**

The Contractor must not perform any overtime under the Contract unless authorized in advance and in writing by the Contracting Authority. There will be no overtime payment for Known Work. Any request for payment must be accompanied by a copy of the overtime authorization and a report containing the overtime performed pursuant to the written authorization. Payment for authorized overtime will be calculated as follows:

For unscheduled work, the Contractor will be paid the authorized overtime hours at the quoted charge-out labour rate plus the following **premium** rates:

For Time and one half:           \$ \_\_\_\_\_ per hour; or,

For Double time                       \$ \_\_\_\_\_ per hour

The above premiums will be calculated by taking the average hourly direct labour rate premiums, plus certified fringe benefit, plus profit on labour premium and fringe benefits. These rates will remain firm for the duration of the Contract, including all amendments and are subject to audit if considered necessary by Canada.

### **C4 Pricing Data Sheets**

Parameters from the Pricing Data Sheets will be used at Canada's sole discretion in the determination of unscheduled work price.

Solicitation No. - N° de l'invitation

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

Client Ref. No. - N° de réf. du client

File No. - N° du dossier

CCC No./N° CCC - FMS No./N° VME

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\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

**APPENDIX 1 TO ANNEX F - PRICING DATA SHEET - REPLACEMENT BOW THRUSTER SYSTEMS - RFP # F7049-140235/A**

|                             | A   | B           | C   | D   | E   | F  |   |
|-----------------------------|---|-------------|---|---|---|--|---|
| Pricing Data Sheet Item No. | Description   | Total Hours | Total Labour Profit Included - \$CAD - Tax Excluded | Total Material Profit Included - \$CAD - Tax Excluded | Total Sub-Contractor Profit Included - \$CAD - Tax Excluded | Total FSR Profit Included - \$CAD - Tax Excluded | Total Cost Profit Included - \$CAD - Tax Excluded = (B+C+D+E) |
| <b>A</b>                    | <b>REPLACEMENT BOW THRUSTER SYSTEM FOR CCGS EARL GREY</b>                               |             |   |   |   |  |   |
| 1                           | ENGINEERING   |             |   |   |   |  | \$0   |
| 2                           | CLASSIFICATION SOCIETY APPROVAL   |             |   |   |   |  | \$0   |
| 3                           | MANUFACTURING AND FACTORY ACCEPTANCE TEST OF THE REPLACEMENT BOW THRUSTER SYSTEM        |             |   |   |   |  | \$0   |
| 4                           | DELIVERY OF THE RBST TO CCG BASE IN DARTMOUTH N.S.                                      |             |   |   |   |  | \$0   |
|                             | <b>TOTAL ITEM A1 TO A4</b>  |             |   |   |   |  | <b>\$0</b>  |
| <b>B</b>                    | <b>OPTIONAL REPLACEMENT BOW THRUSTER SYSTEM FOR CCGS SAMUEL RISLEY</b>                  |             |   |   |   |  |   |
| 1                           | ENGINEERING   |             |   |   |   |  | \$0   |
| 2                           | CLASSIFICATION SOCIETY APPROVAL   |             |   |   |   |  | \$0   |
| 3                           | MANUFACTURING AND FACTORY ACCEPTANCE TEST OF THE REPLACEMENT BOW THRUSTER SYSTEM (RBTS) |             |   |   |   |  | \$0   |
| 4                           | DELIVERY OF THE RBST TO CCG BASE IN PERRY SOUND ONTARIO                                 |             |   |   |   |  | \$0   |

