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Gatineau

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K1A 0S5

Bid Fax: (819) 997-9776

**SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Marine Chartering Services Directorate/Direction des

services d'affrètements maritime

11 Laurier St./ 11, rue Laurier

Place du Portage, Phase III, 6C2

Gatineau

Quebec

K1A 0S5

Title - Sujet Diesel Gensets - CCGS Earl Grey	
Solicitation No. - N° de l'invitation F7049-210251/A	Amendment No. - N° modif. 003
Client Reference No. - N° de référence du client F7049-210251	Date 2022-04-28
GETS Reference No. - N° de référence de SEAG PW-\$\$MB-009-28644	
File No. - N° de dossier 009mb.F7049-210251	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Daylight Saving Time EDT on - le 2022-05-19 Heure Avancée de l'Est HAE	
F.O.B. - F.A.B.	
Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Girard, Maude	Buyer Id - Id de l'acheteur 009mb
Telephone No. - N° de téléphone (418) 571-4028 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

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

AMENDMENT 003

Solicitation Amendment 003 is raised to:

1. Respond to questions from the industry;
2. Modify the related sections of the Bid Solicitation in accordance with the answers provided;
3. Modify the Technical Reference Sheet to add a numbering system.

QUESTIONS AND ANSWERS

Question 1:

DEF consumption for financial evaluation

As per requirement 3.4.1.2 of the TSOR, the engines must meet IMO tier III exhaust emissions. As you may know, exhaust system aftertreatment is required to achieve IMO-III. The current exhaust system aftertreatment for engines of this size is using the Selective Catalytic Reduction (SCR) technology with Urea injection. This urea is called Diesel Exhaust Fluid (DEF) in North American and is a consumable. For the purpose of the total financial evaluation, should there be a DEF consumption table added to compliment the oil and fuel consumption?

Answer 1:

Please delete all reference to IMO Tier III referenced in Amendment #001 and Section 3.4.1.2 of the TSOR. The supplied diesel generator sets must meet a minimum of IMO Tier II standards.

Due to the age, design and physical characteristics of the Vessel, the supplied diesel generator sets must not require an exhaust aftertreatment/SCR system and must fit within the sizing envelopes detailed in the TSOR. Therefore, DEF requirements and associated costs are not necessary.

Question 2:

Data missing in operational profile

In appendix 2 to attachment 3, part 1, the operational profile state a load of 85% for 50% of the time for transit operation.

Question : What is the load % for the other 50% of the time?

Answer 2:

These numbers are based on 100% operation split between the two (2) Generator units (50% each).

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MODIFICATION #1 TO THE BID SOLICITATION

Related to the Answer to Question 1 above, reference Annex A, TSOR is amended as follows:

Delete: Section 3.4.1.2 in its entirety;

Insert: The new engines must, as a minimum, meet the Pollution Prevention Regulations under the Canada Shipping Act and IMO MARPOL 73/78 Annex VI. This requirement sets limits for NOx emissions from marine engines with power outputs more than 130 kW that have either been installed on a ship constructed on or after January 1, 2000, or have had major conversions on or after January 1, 2000. At a minimum, the Diesel Generator sets being supplied under this contract must meet IMO Tier II standards.

MODIFICATION #2 TO THE BID SOLICITATION

Related to the Answer to Question 1 above **Appendix 1 to Attachment 3 – Part 1 - Technical Reference Sheet** is amended as follows:

Delete: The Gensets must, as a minimum, meet the Pollution Prevention Regulations under the Canada Shipping Act and IMO MARPOL 73/78 Annex VI and Tier III Environmental requirements as per Section 3.4.1.2 of the TSOR.

Insert: The Gensets must, as a minimum, meet the Pollution Prevention Regulations under the Canada Shipping Act and meet IMO Tier II Standards.

MODIFICATION #3 TO THE BID SOLICITATION

In order to facilitate reference to the technical requirements, the Technical Reference Sheet in **Appendix 1 to Attachment 3 – Part 1** is amended to add a numbering system. The bid solicitation is therefore amended as follows:

Delete: "Appendix 1 to Attachment 3 – Part 1 - Technical Reference Sheet" in its entirety;

Insert: "Appendix 1 to Attachment 3 – Part 1 - Technical Reference Sheet" provided below.

ALL OTHER TERMS AND CONDITIONS REMAIN UNCHANGED

**APPENDIX 1 TO ATTACHMENT 3 – PART 1
 TECHNICAL REFERENCE SHEET**

The Bidders must provide evidence describing how their proposed Gensets meet all listed requirements, in accordance with the Annex A and must reference where this evidence is located within their technical documentation.

Canada may require that the Bidder provide additional certification to demonstrate any features, functionality and capabilities described in this bid solicitation or in its bid, in order to verify compliance with the requirements of this bid solicitation.

Item #	Technical Requirements	Bid Reference to applicable page and paragraph
1.0	The Gensets must be of a marine design with proven reliability and be in compliance with the required Acts and Regulations in accordance with the Canada Shipping Act 2001 and comply with all additional Regulations, Standards, Guidelines and Codes referenced in Section 2.3-2.10 of the TSOR.	
2.0	The Gensets must possess Marine IACS class approval	
3.0	General Gensets requirements as per section 3.1-3.2 of the TSOR	
3.1	General technical requirement as per 3.1.1	
3.2	General technical requirement as per 3.1.2	
3.3	General technical requirement as per 3.1.3	
3.4	General physical requirements as per 3.2.1	
3.5	General physical requirements as per 3.2.2	
4.0	Unit Technical and Physical Specifications as per Section 3.3 of the TSOR	
4.1	General technical requirement as per 3.3.1	
4.2	General technical requirement as per 3.3.2	
4.3	General technical requirement as per 3.3.3	
4.4	General technical requirement as per 3.3.4	
4.5	General technical requirement as per 3.3.5	
4.6	General technical requirement as per 3.3.6	
4.7	General technical requirement as per 3.3.7	
4.8	General technical requirement as per 3.3.8	
5.0	Diesel Engine requirements as per section 3.4. of the TSOR.	
5.1	3.4.1.1(a)	
5.2	3.4.1.1(b)	
5.3	3.4.1.1(c)	
5.4	3.4.1.1(d)	
5.5	3.4.1.1(e)	
5.6	3.4.1.1(f)	
5.7	3.4.1.1(g)	
5.8	3.4.1.1(h)	
5.9	3.4.1.1(i)	
5.10	3.4.1.1(j)	
5.11	3.4.1.1(k)	
5.12	3.4.1.1(l)	
5.13	3.4.1.1(m)	

5.14	The Gensets must, as a minimum, meet the Pollution Prevention Regulations under the Canada Shipping Act and meet IMO Tier II Standards.	
5.15	At a minimum, each engine must be provided and fitted with an on-skid air start system capable of operating at a maximum supply air pressure of twenty-five (25) Bar. Starter motor that must be capable of operating either locally or remotely from the local or remote-control panel as per Section 3.4.2.1 of the TSOR.	
5.16	The Gensets must come complete, assembled with an engine driven, pump circulated lubrication system Section 3.4.3 of the TSOR.	
5.17	Each engine's dual water cooling system (Sea Water and fresh water) must be cooled using raw water coolers constructed for high ambient/engine temperatures. The coolers must be capable of cooling the engine when the diesel alternator set is delivering full rated load at a raw water temperature of 35°C and an ambient air temperature of up to 50°C in the engine room area as per Section 3.4.4.1 of the TSOR.	
5.18	Cooling requirement as per 3.4.4.1(a)	
5.19	Cooling requirement as per 3.4.4.1(b)	
5.20	Cooling requirement as per 3.4.4.1 (c)	
5.21	Cooling requirement as per 3.4.4.1 (d)	
5.22	Cooling requirement as per 3.4.4.1 (e)	
5.23	Cooling requirement as per 3.4.4.1 (f)	
5.24	The Gensets must come complete, assembled with compatible exhaust piping sections as per Section 3.4.5 of the TSOR.	
5.25	The Gensets must come coated and insulated as per Section 3.4.6 of the TSOR.	
5.26	Insulation and coating requirement as per 3.4.6	
5.27	Each Genset must be equipped with a thermostat controlled coolant immersion heater as per section 3.4.7 of the TSOR.	
5.28	The Gensets must include an electronic governor system to maintain automatic isochronous frequency regulation as per Section 3.4.8.1 of the TSOR.	
5.29	The engines shall be designed for operation on Ultra Low Sulfur Diesel (ULSD) fuel (≤ 0.5 % m/m sulfur) and meet as a minimum the MARPOL Annex VI Fuel Sulfur Limits for 2020. They must be capable of operating continuously on the same diesel fuel requirements of the Vessel's main engines Naval Distillate Fuel, CGSB-3.11-2017 Type 11, (max. -6°C pour point Apr. 1 – Oct. 31), Type 15 (max. -18°C pour point Nov 1, - Mar. 31) or commercial equivalent as per Section 3.4.9 of the TSOR.	
6.0	Alternator requirements as per section 3.5 of the TSOR	
6.1	The engines must be directly coupled to a rotating, brushless, synchronous, 600V, 60Hz, 3 phase electrical alternator with a power output between 515 kVa/412 kw to 531 kVa/425 kW, continuous rating, and must meet all remaining technical requirements detailed in section 3.5.1.1 of the TSOR.	
6.2	Alternator requirement as per 3.5.1.2	
6.3	Alternator requirement as per 3.5.1.3	
6.4	Alternator requirement as per 3.5.1.4	
6.5	Alternator requirement as per 3.5.1.5	
6.6	Alternator requirement as per 3.5.1.6	
6.7	The alternator must be Class 'H' to ABS/TP 127 as per Section 3.5.2 of the TSOR.	
6.8	Alternator excitation system requirement as per 3.5.3.1	
6.9	Alternator excitation system requirement as per 3.5.3.2	
6.10	Alternator excitation system requirement as per 3.5.3.3 (a-c)	
6.11	Alternator AVR requirements as per 3.5.4	

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6.12	Each Genset supplied must be capable for synchronization/integration with the vessel's existing Easy Gen Control system as per Section 3.5.5.1	
6.13	Control system requirements as per 3.6.1 (a – c)	
6.14	Control system requirements as per 3.6.2.1	
6.15	Control system requirements as per 3.6.2.2	
6.16	Control system requirements as per 3.6.2.3	
6.17	Control system requirements as per 3.6.2.4 (a – c)	
6.18	Control system requirements as per 3.6.2.5 (a – m)	
6.19	Control system requirements as per 3.6.2.6.1 (a - d)	
6.20	Control system requirements as per 3.6.2.6.2	
6.21	Protection system requirements/Voltage monitoring as per 3.6.3	
6.22	Nameplate requirements as per 3.7	