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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
Public Works and Government Services Canada - Pacific Region
401 - 1230 Government Street
Victoria, B. C.
V8W 3X4

Title - Sujet CCGS Eckaloo - Navigation Lights	
Solicitation No. - N° de l'invitation F7049-220154/A	**Amendment No. - N° modif.** 002
Client Reference No. - N° de référence du client F7049-220154	**Date** 2022-09-22
GETS Reference No. - N° de référence de SEAG PW-$XLV-176-8398	
File No. - N° de dossier XLV-2-45040 (176)	**CCC No./N° CCC - FMS No./N° VME**

Solicitation Closes - L'invitation prend fin
at - à 02:00 PM Pacific Daylight Saving Time PDT
on - le 2022-10-07 Heure Avancée du Pacifique HAP

F.O.B. - F.A.B.
Plant-Usine: ☐ **Destination:** ☑ **Other-Autre:** ☐

Address Enquiries to: - Adresser toutes questions à: Godin, Andre	**Buyer Id - Id de l'acheteur** xlv176
Telephone No. - N° de téléphone (250) 216-2504 ( )	**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**

SOLICITATION AMENDMENT 002

This Amendment is raised to address questions and revise the solicitation.

No.	Question	Answer
1	The supplied power provided for the navigation lights is two (2) 115VAC circuits and the SOW indicates a navigation light configured for a 115 voltage. The navigation light we have on offer is configured for a voltage of 230VAC 50/60Hz. Can the 2 existing 115VAC circuits accommodate a 230VAC service?	**No. Canada requires 115V AC solution as per technical specification.**
2	The specifications for the navigation light fixture material indicates a polycarbonate glass fiber housing with anodized aluminum lid. The navigation light we have on offer is composed of an anodized aluminum housing with a 316 stainless steel non-magnetic base (all mounting materials are 316 stainless). Can this requirement be amended to allow an anodized aluminum housing with a 316 stainless steel base?	**Yes, the specification has been amended as follows:** C.2.2 Individual navigation lights must meet the following specifications a) Arctic LED, Port IMO, Red lens Navigation light, 112.5 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. b) Arctic LED, Starboard IMO. Green lens Navigation light. 112.5 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. c) Arctic LED, Masthead IMO, White lens Navigation light, 225 degree, degree, 6NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

		d) Arctic LED, Stern IMO, White lens Navigation light, 135 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. e) Arctic LED, All Round White IMO, White lens Navigation light, 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. f) Arctic LED Masthead IMO, White lens Navigation light, 225 degree, 6NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. g) Arctic LED, All Round Red IMO, Red lens Navigation light, 360 degree, 3NM 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. h) Arctic LED, All Round White IMO, White lens Navigation light, 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.
3	The specifications indicate a Fresnel lens is required on the navigation lights. This type of optical lens would have been beneficial where incandescent lamps were used as the light source, however modern LED arrays no longer require refracting surfaces to bend the light to a common focal length, and the well glass employed on modern nav light is	**Yes, the specification has been amended as follows:** C.2.2 Individual navigation lights must meet the following specifications a) Arctic LED, Port IMO, Red lens Navigation light, 112.5 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. b) Arctic LED, Starboard IMO. Green lens Navigation light. 112.5 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and

	typically a clear, single curved surface, borosilicate glass lens. Can this requirement be amended to allow a non-Fresnel lens?	Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. c) Arctic LED, Masthead IMO, White lens Navigation light, 225 degree, degree, 6NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. d) Arctic LED, Stern IMO, White lens Navigation light, 135 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. e) Arctic LED, All Round White IMO, White lens Navigation light, 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. f) Arctic LED Masthead IMO, White lens Navigation light, 225 degree, 6NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. g) Arctic LED, All Round Red IMO, Red lens Navigation light, 360 degree, 3NM 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C. h) Arctic LED, All Round White IMO, White lens Navigation light, 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

4	Regulation & Standards section B.3.3 indicates that there is an ABS requirement to provide inspection services for the installation, testing, and operational tests, of the navigation lights. Could you please clarify who is responsible for these ABS inspection activities?	The Canadian Coast Guard is responsible for ABS inspection. The ABS inspection is for information only, it will be undertaken after install and is not considered part of this statement of work.
5	Can you provide the guidance drawings indicated in section B.2.1? Required to determine the dimensions for the five (5) watertight brass ganged receptacles and the six (6) watertight JB (junction box)	Yes. The drawings are contained within the electronic file: “F7049-220154A-TDP_Vol01.zip” Bidders must contact the Contracting Authority identified in Article 6-5.1 and make arrangements to obtain a copy of the drawings.

Revision 1

Replace

Annex A- Requirement in its entirety

With

ANNEX A – REQUIREMENT

CCGS ECKALOO NAVIGATION LIGHT TECHNICAL PERFORMANCE SPECIFICATION

A Identification

A.1 The Canadian Coast Guard Ship (CCGS) Eckaloo is a 49m Special Navaids Vessel operating in the Great Slave Lake and Mackenzie River area of the North West Territories. The vessel's current fit is a Prime Mover Controls, 8010, Navigation Control panel and Aqua Signal, Type 70D, navigation lights.

A.2 Canada requires a replacement set of LED navigation lights and a navigation light control panel to operate the navigation lights.

A.3 The control panel and lights will be installed on the CCGS Eckaloo under a separate contract.

B References

B.1 Equipment Data

B.1.1 Electrical:

a) The fitted control panel located in the Bridge operates off two 115vac supplies.

b) The fitted navigation lights are as follows;

i) Wheelhouse Top

NL2 - 1 x Double Stbd Navigation Light 60w Green – Watertight Ganged Receptacle/Screw Cap/Chain/Watertight Plug

NL3 - 1 x Double Port Navigation Light 60w Red – Watertight Ganged Receptacle/Screw Cap/Chain/Watertight Plug

ii) Mast

NL1 – 1 x Double Masthead Navigation Light 60w White - Watertight Ganged Receptacle/Screw Cap/Chain/Watertight Plug

NL5 – 1 x Double Anchor Navigation Light 60w White - Watertight Ganged Receptacle/Screw Cap/Chain/Watertight Plug

NL8 – 2 x Double NUC Navigation Light 60w Red – Watertight JB

NL9 – 2 x Double RIAM Navigation Light 60w White – Watertight JB

NL10 - 2 x Double NUC Navigation Light 60w Red – Watertight JB

iii)Stern

NL4 - 1 x Double Stern Navigation Light 60w White – Watertight Ganged Receptacle/Screw Cap/Chain/Watertight Plug

B.2 Drawings

B.2.1 The following drawings are to be considered as guidance drawings:

Drawing Number	DRAWING TITLE	Number of Sheets
E08-117-410	Navigation Lighting, Floodlights and Searchlights Arrangement	1
E08-117-191	General Arrangement Rev E	1
E08-117-25	E08-117-25-CCGS Eckaloo Mast Structure Rev D	1

B.3 Regulations and Standards

B.3.1 The following Standards and Regulations apply to work carried out. The Contractor must ensure all work completed in this section meets these Standards and Regulations as well as any other pertinent Federal/Territorial Regulation or Standard:

#	REGULATION / STANDARD TITLE
ISO 9000	International Standards Organization (ISO) ISO 9000
N/A	International Protection Marking IEC standard 60529
N/A	Canada Shipping Act (CSA) CSA 2001
TP 127	Ships Electrical Standards
N/A	Rules and Regulations for the Classification of Ships of a Transport Canada Recognized Organizations (RO) such as; American Bureau of Shipping (ABS).
IMO MSC/83/28/Add 3	Adoption of the Performance Standards for Navigation Lights, Navigation Light Controllers and Associated Equipment
COLREGS	Convention on the International Regulations for Preventing Collisions at Sea, 1972

B.3.2 The CCGS Eckaloo is not classed under a classification societies member of International Association of Classification Society (IACS). ABS, is acting as an inspection authority under the Delegated Ship Inspection Program (DSIP) for Transport Canada Marine Safety and Security (TCMSS)

B.3.3 ABS will be requested to provide inspection services for the installation, testing and operational tests of the navigation lights to the standards outlined in this technical statement of requirements.

C Statement of Work

C.1 The Contractor must supply a set of navigation lights and navigation light controller.

C.2 The navigation lights must meet the following general specifications;

a) The navigation light controller and navigation lights must meet the regulatory requirements listed in the IMO resolution MSC/83/28/Add 3.

b) The navigation light controller and navigation lights must meet the electrical standards listed in TP127.

c) The Arctic rated LED Navigation Lights must be maintenance free and rated for 110, 000 hrs duration minimum.

d) The Arctic rated LED lights must be rated for -40 Deg Celsius minimum and must be designed specifically for Arctic going vessels incorporating thermal management properties and lighting protection.

e) The Arctic LED lights must have integral heating circuit requiring no separate power supply contained within the light which must turn on automatically when the temperature drops below 0 Deg Celsius for maintenance free de-icing.

f) The Arctic rated LED lights must seamless integrate into the control panel allow internal monitoring of hours and temperature variances within the navigation light causing alarm on the control panel when limits are reached.

C.2.2 Individual navigation lights must meet the following specifications

a) Arctic LED, Port IMO, Red lens Navigation light, 112.5 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

b) Arctic LED, Starboard IMO. Green lens Navigation light. 112.5 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

c) Arctic LED, Masthead IMO, White lens Navigation light, 225 degree, degree, 6NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

d) Arctic LED, Stern IMO, White lens Navigation light, 135 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

e) Arctic LED, All Round White IMO, White lens Navigation light, 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

f) Arctic LED Masthead IMO, White lens Navigation light, 225 degree, 6NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

g) Arctic LED, All Round Red IMO, Red lens Navigation light, 360 degree, 3NM 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

h) Arctic LED, All Round White IMO, White lens Navigation light, 360 degree, 3NM Visibility, 115VAC (Reserve 115VAC), IP67, Main and Standby in single housing, 110,000 Hour life on LED's, Suitable down to -45C.

C.2.3 The contractor must provide a watertight brass receptacle, double gang, fitted with brass plug and chain for those lights shown in B.1.1.

C.2.4 The navigation light controller must have the following functions;

a) ability to control up to 12 main and 12 standby lights plus 2 others,

b) overload protection and means to disconnect / isolate power from light;

c) indication of primary and secondary electrical supplies on/available/failed;

d) ability to manually switch to secondary electrical supply;

e) ship and mast symbol and coloured diodes representing ship's lights showing on/off and failure;

f) indication of 'A' or 'B' light in use;

g) visible and acoustic fault alarms.

h) Dimmable indicator lamps

C.3 Warranty

C.3.1 Warranty period must be the later of last 12 months from commissioning.

C.3.2 For the purpose of the installations, the various components may need to be separated and subsequently reassembled. If separation and reassembly is required, this practice must not void the warranty.

C.3.3 The Contractor must indicate if warranty requires Field Service Representative installation and commissioning.

D Proof of Performance

D.1 Inspection Points

D.1.1 The Contractor must provide to the Technical Authority the Factory Acceptance Testing procedures and results for the delivered units that were carried out at the manufacturer's facility.

D.2 Testing/Trials

D.2.1 The Contractor must indicate if any tests must be conducted upon installation in order to qualify the equipment warranty and must provide a plan for any such tests.

D.3 Certification

D.3.1 The Contractor must supply RO (Class) Approval Certificate documentation at the bid stage. The current RO for Eckaloo is ABS.

D.4 Documentation

D.4.1 Documentation listed below must be provided electronically in English and French, as follows: One electronic copy of each document in both PDF format and in the original source editable format, latest version of either Word or Excel or AutoCAD, via memory stick or FTP site (not email). The Contractor must supply the following documentation within one month after Contract award:

a) navigation light housing mounting arrangement and dimensions (may be part of general arrangement);

b) navigation light controller mounting arrangement and dimensions;

c) electrical diagram;

d) commissioning check list;

e) maintenance instructions;

f) operating instructions;

g) installation instructions/procedures;

h) list of consumable spares;

i) list of parts;

j) list of life cycle spares if any;

k) list of special tools if any; and

l) fault finding procedures.

ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME